NOTICE OF NEIGHBORHOOD MEETING

Dear Neighbor,

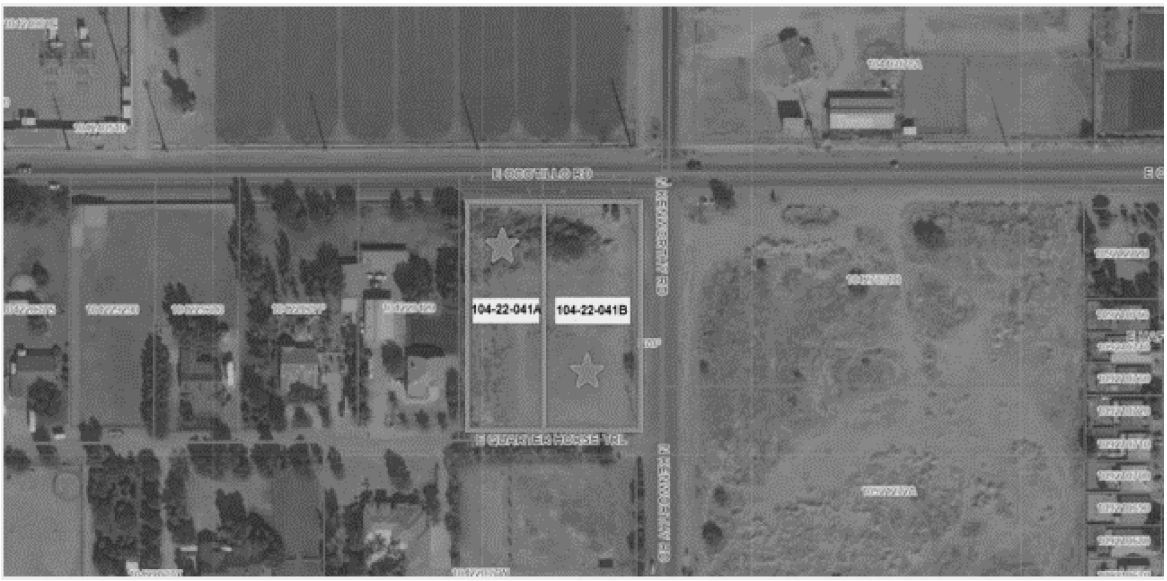
A project is being proposed within your vicinity in Pinal County at the site listed below. As required by the County, this notice is being sent to you because a property listed in your name is located within 1,200 feet of the site. This notice is being sent to you to inform you of this proposal and to provide you with an opportunity to relay any questions, issues, or concerns regarding this proposed project to the contact person listed below. This site has not yet been formally submitted to the County for a rezone.

Request: Rezoning with a PAD request to rezone the site from GR to C-3 PAD for retail shops and an indoor batting cage facility.

Proposal: Rezone to allow commercial use of indoor batting cage facility and retail shops.

Location: Located at the southwest corner of the intersection of Ocotillo Rd and Kenworthy Rd.

Size: 2.65 acres

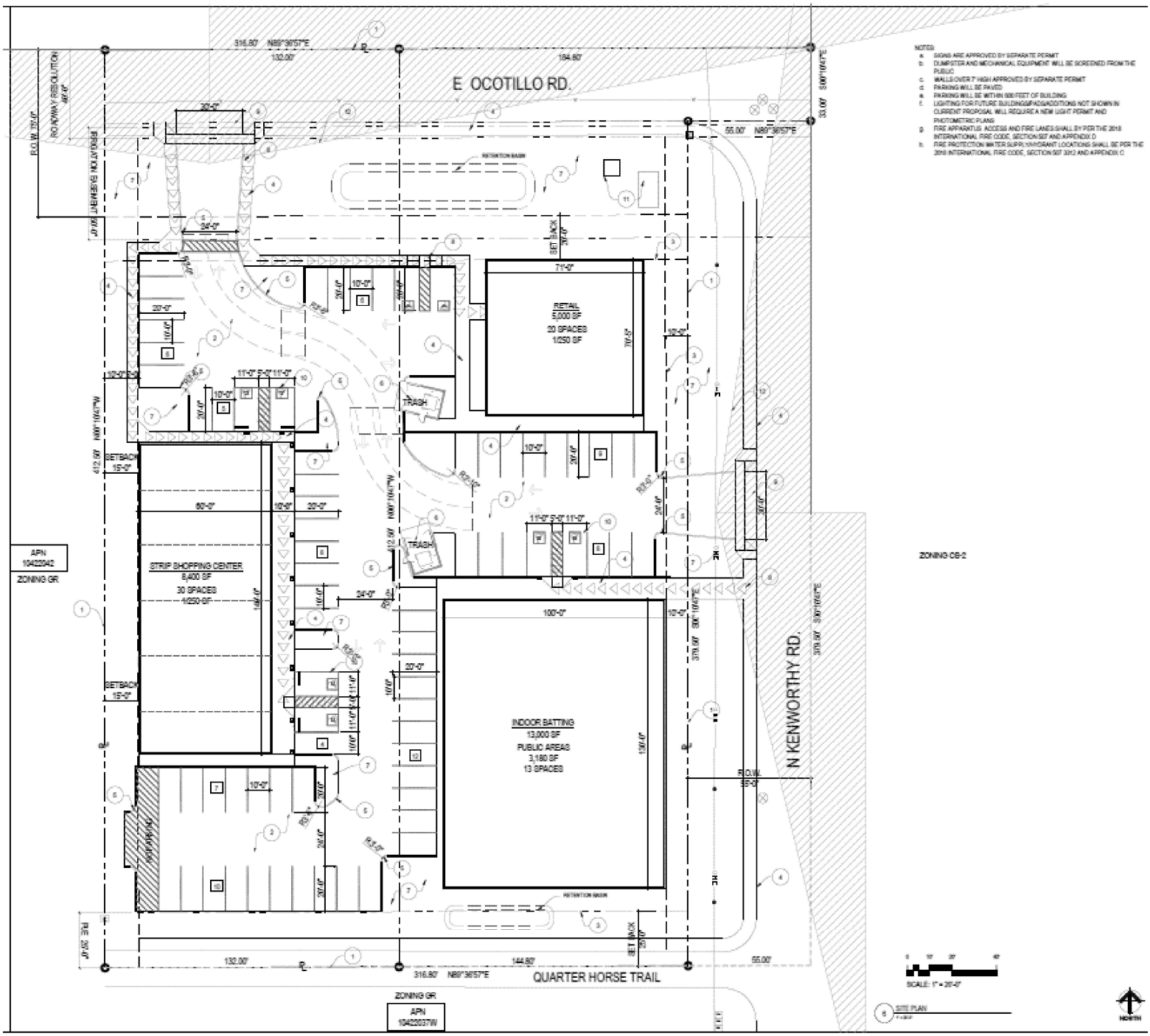


You are cordially invited to a neighborhood meeting regarding this proposed rezoning in your area.

Tuesday, November 15th, 2022
5:30 pm
Simonton Elementary; Multi-Purpose Room
40300 N Simonton Blvd, San Tan Valley, AZ 85140

If you have any questions regarding this Neighborhood Meeting please contact Jessica Sarkissian at Jessica@UpfrontPlanning.com or by phone at: (480) 221-6150.

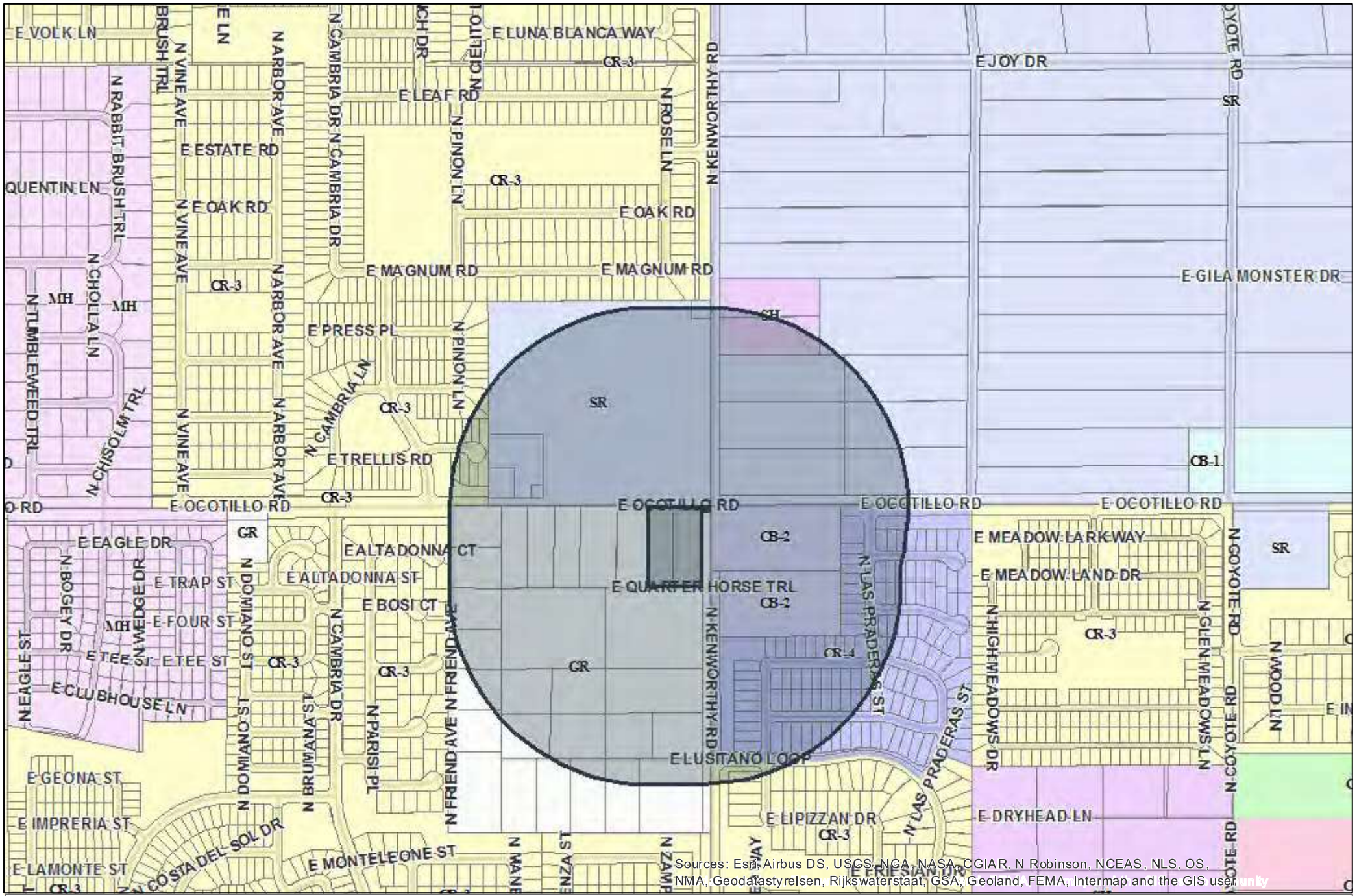
THIS IS NOT A NOTICE OF A PUBLIC HEARING WITH THE PLANNING AND ZONING COMMISSION OR CITY COUNCIL. HOWEVER, YOU MAY RECEIVE SUCH A NOTICE AT A FUTURE DATE IF THE APPLICATION IS SUBMITTED OR SCHEDULED FOR HEARING.



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PINAL COUNTY
WIDE OPEN OPPORTUNITY

1200' Buffer Map



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user...

Disclaimer: Pinal County does not guarantee that any information contained within this dataset or map is accurate, complete, or current. This data is for informational use only and does not constitute a legal document for the description of these properties. The Pinal County disclaims any responsibility or liability for any direct or indirect damages resulting from the use of this data. The boundaries depicted within this dataset or map are for illustrative purposes only. Users should independently research, investigate, and verify all information before relying on this map or using this map in the preparation of legal documents.

Pecan 3 Commercial

Neighborhood Meeting Sign-In Sheet

Tuesday, November 15, 2022; 5:30 pm

Simonton Elementary Multi-Purpose Room: 40300 N Simonton Blvd, San Tan Valley, AZ 85140

NAME	ADDRESS	PHONE	EMAIL
Amber Knapp	1811 S Alma School Rd #283, Mesa, AZ 85210		Amber@upfrontplanning.com
Jessica Sarkissian	1811 S. Alma School Rd #283, Mesa, AZ 85210	480-221-6150	Jessica@upfrontplanning.com
Pete Acquisto		505-235-8070	minisilver@aol.com
Dave Hanson	1649 E Paint Horse PL 85140	480-226-0746	
Dd Dimarco	1547 Dobbs	45-794-0042	
Alex Botsford	3371 W Goldmine Mine Cir		
Travis Barnby	1714 E Quarter Horse Trl	480 694 8040	
Kimberly Barnby	1714 E. Quarter Horse Trail 85140	480 694 8040	
Amado de la Rua	1620 E Quarter Horse trail	602 573-1037	
Jill Germaine	1535 E Paint Horse Pl	602-885-1348	jagermaine8@gmail.com
Rich Germaine	1535 E Paint Horse Pl	602-478-1410	
Mike Summers	1611 E Quarterhouse Trl	602-828-2076	
Eastman	Moon Shadow	253-266-6563	AE9577xx@aol.com - Banjoed@aol.com
BRIAN MATHUS	1526 E QUARTER HORSE TRAIL SAN TAN VALLEY AZ	480 229 7171	CBMATHUS@GMAIL
Courtney Mathus	1526 E. Quarter Horse Trl SVL, AZ 85140	480 329 7249	Cbmathus@Gmail.com

Pecan 3 Commercial

Neighborhood Meeting Sign-In Sheet

Tuesday, November 15, 2022; 5:30 pm

Simonton Elementary Multi-Purpose Room: 40300 N Simonton Blvd, San Tan Valley, AZ 85140

NAME	ADDRESS	PHONE	EMAIL
Denis McNamara	43528 N JACKRABBIT Rd	480 797 8549	dcmac1977@gmail.com

UPFRONT
Planning & Entitlements, LLC

San Tan 3 Commercial Rezone and PAD Request
Neighborhood Meeting held at Simonton Elementary:
40300 N Simonton Blvd, San Tan Valley, AZ 85140
November 15, 2022
5:30 PM Start Time

In attendance:
Jessica Sarkissian, UpFront Planning & Entitlements, LLC
Amber Knapp, UpFront Planning & Entitlements, LLC
Dave Hanson, Resident
DD Dimprco, Resident
Alex Botsford, Resident
Travis Barnby, Resident
Kimberly Barnby, Resident
Amado De La Riva, Resident
Jill Germaine, Resident
Rick Germaine, Resident
Mike Summers, Resident
Castinam, Resident
Brian Mathus, Resident
Courtney Mathus, Resident
Denis McNamara, Resident

Meeting Notes:

This meeting is part of the neighborhood outreach process as required by the County of Pinal and all neighbors within 1,200 feet were invited to this meeting. The meeting was held on Wednesday November 15, 2022 at 5:30pm at Simonton Elementary School Multi-Purpose Room. The meeting materials included four large displays, two arial maps with the location highlighted as well as two site plans to show residents what the proposed Indoor Baseball Complex, retail shop and parking would look like.

A presentation was presented to attendees:

Jessica Sarkissian opened the meeting at 5:30 PM to attendees and began the presentation at 5:35 PM. She began going over the meeting materials that were presented.

Jessica presented a following large displays and details:

- A context location map; E Ocotillo Rd and N Kenworthy Rd
- An aerial display showing the site and surrounding properties; The Request is for an indoor baseball facility with a retail shop on site.
- A proposed project layout showing lotting and landscape and open space; The proposed area will have the indoor baseball facility along N Kenworthy Rd, and retail shops along E Ocotillo Rd. The site plan shows where the walls and trees are proposed on site.

Jessica Sarkissian then opened the meeting to attendee's questions or comments.

The following is a list of questions and comments from the neighbors in attendance.

Neighbor Question: What about the sound coming from this and the neighbors surrounding the property, baseball is loud, even indoors.

- *Response: There will be a block wall along the west side of the property, protecting the residence from the sound. The proposed wall will be 7 ft.*

Neighbor Question: There isn't going to be enough parking for all of the people this will bring.

- *Response: The amount of parking correlates with the Pinal County zoning code.*

Neighbor Question: We don't want an indoor batting cage because people will be parking on E Quarter Horse Trl and blocking up Kenworthy.

- *Response: The amount of parking correlates with the Pinal County zoning code.*

Neighbor Question: Ocotillo won't support the traffic and it's not going to be widened because it leads to nowhere.
Response: Ocotillo is in the process of being acquired.

Neighbor Question: Is Queen Creek Water on Site already?

- *Response: Yes.*

Neighbor Question: Is there already Sewer on Kenworthy?

- *Response: Yes.*

Neighbor Question: If you rezone this to commercial what happens when the indoor baseball facility closes? What will go here?

- *Response: It goes through a site plan. Let's make a list of what you would like to see here.*

Jessica Question: What is something that you would like to see here?

- *Response: Nothing, keep it as it is. If that's not an option a house. Or RV storage.*

Jessica then asked if there were any further questions or comments and seeing none, concluded by again reiterating the contact information for herself and to communicate any additional questions or concerns.

Meeting End Time: 6:15 PM


SIMONTON


SIMONTON

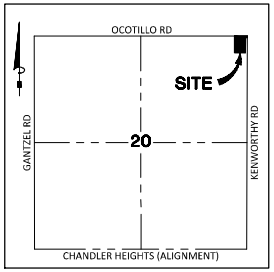

Ocotillo Rd
E Ocotillo Rd
SITE
Context Map
UPFRONT


Vicinity Map
UPFRONT


UPFRONT
Bowman

ALTA/NSPS LAND TITLE SURVEY
APN 104-22-041A & 104-22-041B

LOCATED IN THE NORTHEAST QUARTER OF SECTION 20,
TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN,
PINAL COUNTY, ARIZONA.



VICINITY MAP
N.T.S.

SHEET INDEX

1 COVER, NOTES, SCHEDULE 'B' ITEMS
2 SITE DETAIL & EASEMENTS

NOTES

1. PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD WHETHER SHOWN HEREON OR NOT.

2. PURSUANT TO TABLE "A", ITEM NUMBER 1, MONUMENTS WILL BE PLACED (OR A REFERENCE MONUMENT OR WITNESS TO THE CORNER) AT ALL MAJOR CORNERS OF THE BOUNDARY OF THE PROPERTY, UNLESS ALREADY MARKED OR REFERENCED BY EXISTING MONUMENTS OR WITNESSES.

3. PURSUANT TO TABLE "A", ITEM NUMBER 2, THE CURRENT ADDRESS IS NOT AVAILABLE

4. PURSUANT TO TABLE "A", ITEM NUMBER 3, ACCORDING TO THE FLOOD INSURANCE RATE MAP #04021C0475E, DATED DECEMBER 4, 2007 THIS PROPERTY IS LOCATED IN FLOOD ZONE "X": AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

5. PURSUANT TO TABLE "A", ITEM NUMBER 4, THE GROSS AREA OF THE SUBJECT PARCEL AS DESCRIBED IN THE LEGAL DESCRIPTION IS XXXXXX SQUARE FEET OR XXXX ACRES, MORE OR LESS.

6. PURSUANT TO TABLE "A", ITEM NUMBER 6(A) THE CURRENT ZONING CLASSIFICATION HAVE NOT BEEN PROVIDED BY THE INSURER.

7. PURSUANT TO TABLE "A", ITEM NUMBER 7(A), THERE ARE NO BUILDINGS EXISTING ON THE SURVEYED PROPERTY.

8. PURSUANT TO TABLE "A", ITEM NUMBER 8, SUBSTANTIAL FEATURES OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY SUCH AS PARKING LOTS, BILLBOARDS, SIGNS, SWIMMING POOLS, LANDSCAPED AREAS, SUBSTANTIAL AREAS OF REFUSE, ETC ARE SHOWN HEREON.

9. PURSUANT TO TABLE "A", ITEM NUMBER 11, VISIBLE SURFACE UTILITIES WITHIN THE SUBJECT PARCEL ARE SHOWN HEREON. NO RECORD MAPS FROM UTILITY OPERATING AGENCIES WERE REVIEWED. LOCATION OF UNDERGROUND UTILITIES ARE UNKNOWN.

10. PURSUANT TO TABLE "A", ITEM NUMBER 13, NAMES OF ADJOINING OWNERS OF PLATTED LANDS ACCORDING TO CURRENT PUBLIC RECORDS ARE SHOWN HEREON.

11. PURSUANT TO TABLE "A", ITEM NUMBER 16, AND TO THE BEST OF MY KNOWLEDGE, THE SURVEYOR HAS NOT OBSERVED EVIDENCE OF EARTH MOVING WORK OR SITE CONSTRUCTION UNDERWAY OR RECENTLY COMPLETED (EXCEPT AS SHOWN HEREON.) THE SURVEYOR AND FIELD PERSONNEL UNDER THE SURVEYOR'S DIRECTION ARE NOT TRAINED OR QUALIFIED CONTRACTORS AND CANNOT ACCURATELY IDENTIFY RECENT CONSTRUCTION. INTERESTED AND AFFECTED PARTIES SHOULD SEEK CONSULTATION FROM A REGISTERED CONTRACTOR OR OTHER QUALIFIED PARTY.

12. ALL DIMENSIONS SHOWN HEREON ARE MEASURED AND RECORD UNLESS OTHERWISE NOTED.

TITLE REPORT SCHEDULE B - REVIEW

THE TITLE DOCUMENTS FOR THE SURVEYED PROPERTY HEREIN DESCRIBED WERE PROVIDED BY MAGNUS TITLE AGENCY LLC, ESCROW NO. 099-10127-?, EFFECTIVE DATE: July 19, 2023, AND WITH RESPECT TO THE ITEMS IDENTIFIED AS EXCEPTIONS ON SCHEDULE B OF CONDITION OF TITLE REPORT WITH RESPECT TO THE SURVEYED PROPERTY:

(a) THE SURVEYOR'S REVIEW OF DOCUMENTS REFERENCED IN THE CONDITION OF TITLE REPORT AS SCHEDULE "B" ITEMS IS LIMITED TO THE SURVEYOR'S SCOPE-OF-SERVICES AS IDENTIFIED IN THE CERTIFICATION HEREON. ADDITIONALLY THE SURVEYOR'S SCOPE-OF-SERVICES IS LIMITED TO PROVIDING SERVICES IN A MANNER CONSISTENT WITH THE DEGREE OF CARE AND SKILL ORDINARILY EXERCISED BY MEMBERS OF THE SAME PROFESSION CURRENTLY PRACTICING UNDER SIMILAR CONDITIONS. SCHEDULE "B" ITEM DOCUMENTS MAY CONTAIN ENCUMBRANCES WHICH AFFECT THE SUBJECT PROPERTY WHICH THE SURVEYOR IS NOT QUALIFIED TO INTERPRET AND/OR ARE NOT WITHIN THE SURVEYOR'S SCOPE-OF-SERVICES. IT IS RECOMMENDED THAT INTERESTED AND AFFECTED PARTIES OBTAIN CONSULTATION WITH QUALIFIED LEGAL COUNSEL RELATIVE TO THE INTERPRETATION OF ALL SCHEDULE "B" DOCUMENTS REFERENCED IN THE TITLE REPORT.

(b) THE FOLLOWING ITEMS OF THE SPECIAL EXCEPTIONS ARE SURVEY RELATED MATTERS, PERTAIN TO THE SURVEYED PROPERTY AND ARE SHOWN ON THE SURVEY OR UNLESS OTHERWISE EXPLAINED AS HOW THEY AFFECT THE SURVEYED PROPERTY, (NON SURVEY RELATED ITEMS ARE NOT LISTED):

(xx) (c) DENOTES SCHEDULE B ITEMS SHOWN HEREON.

(6)	ITEM 6	PROPERTY IS SUBJECT TO AN EASEMENT FOR PUBLIC HIGHWAY AND RIGHTS INCIDENTAL THERETO, RECORDED IN DOCKET 163, PAGE 277. (ITEM IS SHOWN HEREON)
(7)	ITEM 7	PROPERTY IS SUBJECT TO ALL MATTERS AS SET FORTH IN NOTICE OF EXERCISE OF RESERVED RIGHT-OF-WAY, RECORDED IN DOCKET 1416, PAGE 845 AND AGREEMENT RECORDED IN DOCKET 1444, PAGE 38. (ITEM IS SHOWN HEREON)
(9)	ITEM 9	PROPERTY IS SUBJECT TO AN EASEMENT FOR INGRESS, EGRESS AND PUBLIC AND RIGHTS INCIDENTAL THERETO, RECORDED IN 1996-015035. (ITEM IS SHOWN HEREON)
(10)	ITEM 10	PROPERTY IS SUBJECT TO AN EASEMENT FOR PUBLIC UTILITIES AND IRRIGATION AND RIGHTS INCIDENTAL THERETO, RECORDED IN 1996-019539. (ITEM IS SHOWN HEREON)
(11)	ITEM 11	PROPERTY IS SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS AND RIGHTS INCIDENTAL THERETO, RECORDED IN 1996-019540. (ITEM IS SHOWN HEREON)
(13)	ITEM 13	PROPERTY IS SUBJECT TO A RESOLUTION BY THE COUNTY BOARD OF SUPERVISORS, RECORDED IN 2006-003298 PURPORTING TO ESTABLISH A COUNTY ROADWAY. (ITEM IS SHOWN HEREON)
	ITEM 15	PROPERTY IS SUBJECT TO ALL MATTERS AS SHOWN ON RECORD OF SURVEY MINOR LAND DIVISION RECORDED DECEMBER 16, 2020, IN INSTRUMENT NO. 2020-131725, RECORDS OF PINAL COUNTY, ARIZONA. (ITEM IS BLANKET IN NATURE)

BASIS OF BEARINGS

NORTH 89°36'57" EAST ALONG THE north LINE OF THE NORTHEAST QUARTER OF SECTION 20, TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, ACCORDING TO THE MINOR LAND DIVISION RECORDED IN FEE NO. 2020-131725, PINAL COUNTY RECORDS.

LEGAL DESCRIPTION PER TITLE COMMITMENT

PARCEL NO. 1:

A PORTION OF THE NORTHEAST QUARTER OF SECTION 20, TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS CAP, IN HAND HOLE, MARKING THE NORTHEAST CORNER OF SECTION 20, FROM WHICH A PINAL COUNTY HIGHWAY DEPARTMENT BRASS CAP, FLUSH TO THE PAVEMENT, MARKING THE NORTH QUARTER OF SECTION 20, BEARS SOUTH 89 DEGREES 36 MINUTES 57 SECONDS WEST, A DISTANCE OF 2640.14 FEET, AND FROM WHICH A ½-INCH REBAR WITH TAG, STAMPED #32778, MARKING THE EAST QUARTER OF SECTION 20, BEARS SOUTH 00 DEGREES 10 MINUTES 47 SECONDS EAST, A DISTANCE OF 2640.62 FEET.

THENCE SOUTH 89 DEGREES 36 MINUTES 57 SECONDS WEST, ALONG THE NORTH BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 184.80 FEET TO A SET P.K. NAIL WITH TAG, R.L.S. #49864, MARKING THE NORTHEAST CORNER OF SAID PARCEL "A" AND ALSO BEING THE POINT OF BEGINNING;

THENCE SOUTH 00 DEGREES 10 MINUTES 47 SECONDS EAST PARALLEL TO AND 184.80 FEET WEST OF THE EAST BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 412.50 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING THE SOUTHEAST CORNER OF SAID PARCEL "A";

THENCE SOUTH 89 DEGREES 36 MINUTES 57 SECONDS WEST PARALLEL TO AND 412.50 FEET SOUTH OF THE NORTH BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 132.00 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING THE SOUTHWEST CORNER OF SAID PARCEL "A";

THENCE NORTH 00 DEGREES 10 MINUTES 47 SECONDS WEST PARALLEL TO AND 316.80 FEET WEST OF THE EAST BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 412.50 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING THE NORTHWEST CORNER OF SAID PARCEL "A";

THENCE NORTH 89 DEGREES 36 MINUTES 57 SECONDS EAST ALONG THE NORTH BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 132.00 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING THE NORTHEAST CORNER OF SAID PARCEL "A" AND ALSO BEING THE POINT OF BEGINNING.

PARCEL NO. 2:

A PORTION OF THE NORTHEAST QUARTER OF SECTION 20, TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS CAP, IN HAND HOLE, MARKING THE NORTHEAST CORNER OF SECTION 20, FROM WHICH A PINAL COUNTY HIGHWAY DEPARTMENT BRASS CAP, FLUSH TO THE PAVEMENT, MARKING THE NORTH QUARTER OF SECTION 20, BEARS SOUTH 89 DEGREES 36 MINUTES 57 SECONDS WEST, A DISTANCE OF 2640.14 FEET, AND FROM WHICH A ½-INCHE REBAR, MARKING THE EAST QUARTER OF SECTION 20, BEARS SOUTH 00 DEGREES 10 MINUTES 47 SECONDS EAST, A DISTANCE OF 2640.62 FEET, THE SAID BRASS CAP, IN HAND HOLE, MARKING THE NORTHEAST CORNER OF SECTION 20 IS ALSO THE POINT OF BEGINNING;

THENCE SOUTH 00 DEGREES 10 MINUTES 47 SECONDS EAST ALONG THE EAST BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 33.00 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING A CORNER OF SAID PARCEL "B";

THENCE SOUTH 89 DEGREES 36 MINUTES 57 SECONDS WEST PARALLEL TO AND 33.00 FEET SOUTH OF THE NORTH BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 40.00 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING A CORNER OF SAID PARCEL "B";

THENCE SOUTH 00 DEGREES 10 MINUTES 47 SECONDS EAST PARALLEL TO AND 40.00 FEET WEST OF THE EAST BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 379.50 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING THE SOUTHEAST CORNER OF SAID PARCEL "B";

THENCE SOUTH 89 DEGREES 36 MINUTES 57 SECONDS WEST PARALLEL TO AND 412.50 FEET SOUTH OF THE NORTH BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 144.80 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING THE SOUTHWEST CORNER OF SAID PARCEL "B";

THENCE NORTH 00 DEGREES 10 MINUTES 47 SECONDS WEST PARALLEL TO AND 184.80 FEET WEST OF THE EAST BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 412.50 FEET TO A SET PK NAIL WITH TAG R.L.S. #49864, MARKING THE NORTHWEST CORNER OF SAID PARCEL "B";

THENCE NORTH 89 DEGREES 36 MINUTES 57 SECONDS EAST ALONG THE NORTH BOUNDARY OF THE NORTHEAST QUARTER OF SECTION 20, A DISTANCE OF 184.80 FEET TO A BRASS CAP, IN HAND HOLE, MARKING THE NORTHEAST CORNER OF SECTION 20, AND ALSO BEING THE POINT OF BEGINNING.

SURVEYOR'S CERTIFICATE

TO: FERN VASL;
PETE ACQUISITO;
MAGNUS TITLE AGENCY LLC;

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2021, AND INCLUDES ITEMS 1, 2, 3, 4, 6A, 7A, 8, 11A, AND 13 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 6/15/23.

DOUGLAS B. TONEY — R.L.S. #55030 — 8/16/23 DATE
dtoney@bowman.com

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
55030
DOUGLAS B.
TONEY
ARIZONA U.S.A.

Bowman
Bowman Consulting Group, Ltd.
1600 N Desert Drive, #220
Tempe, AZ 85281
Phone: (480) 629-8830
Fax: (480) 629-8841
www.bowmanaz.com

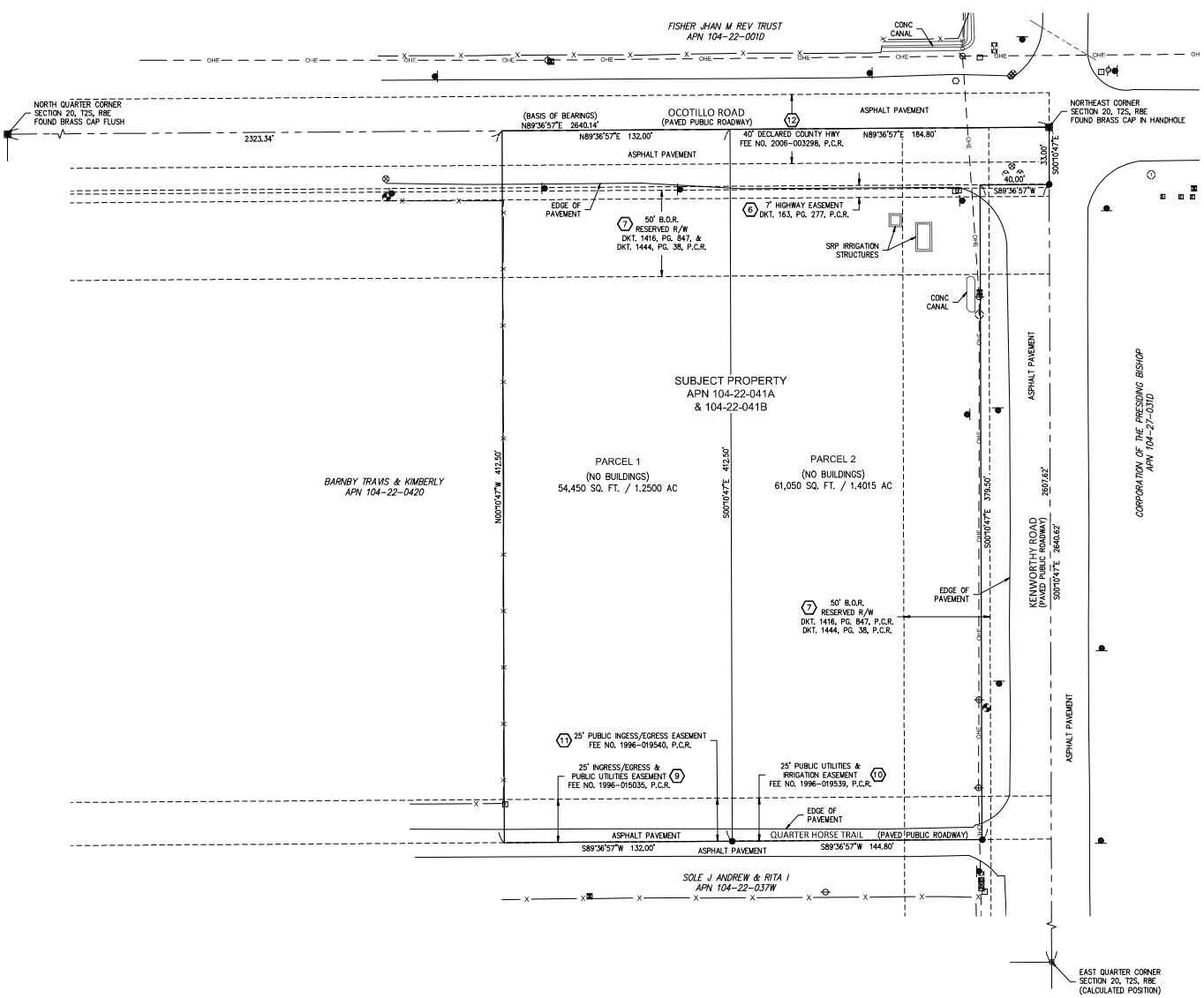
ALTA/NSPS LAND TITLE SURVEY
APN 104-22-041A & 104-22-041B
SAN TAN VALLEY, ARIZONA

REVISION	DATE

© Bowman Consulting Group, Ltd.

DATE: 8/16/23
PROJ NO: 051368-01
TASK NUM: 001
DRAWN BY: TL
CHECKED: DT
QUALITY:
CLIENT NO:
SCALE
N.T.S.

File: K:\051368 - San Tan 2-acre Commercial Site\051368-01-001\Survey_MXD\051368-01-ALTA.dwg Printed: Aug 16, 2023



Bowman
Bowman Consulting Group, Ltd.
1600 N Desert Drive, #230
Tempe, AZ 85281
Phone: (480) 629-8830
Fax: (480) 629-8841
www.bowmanlla.com

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
55030
DOUGLAS B. TONEY
ARIZONA U.S.A.

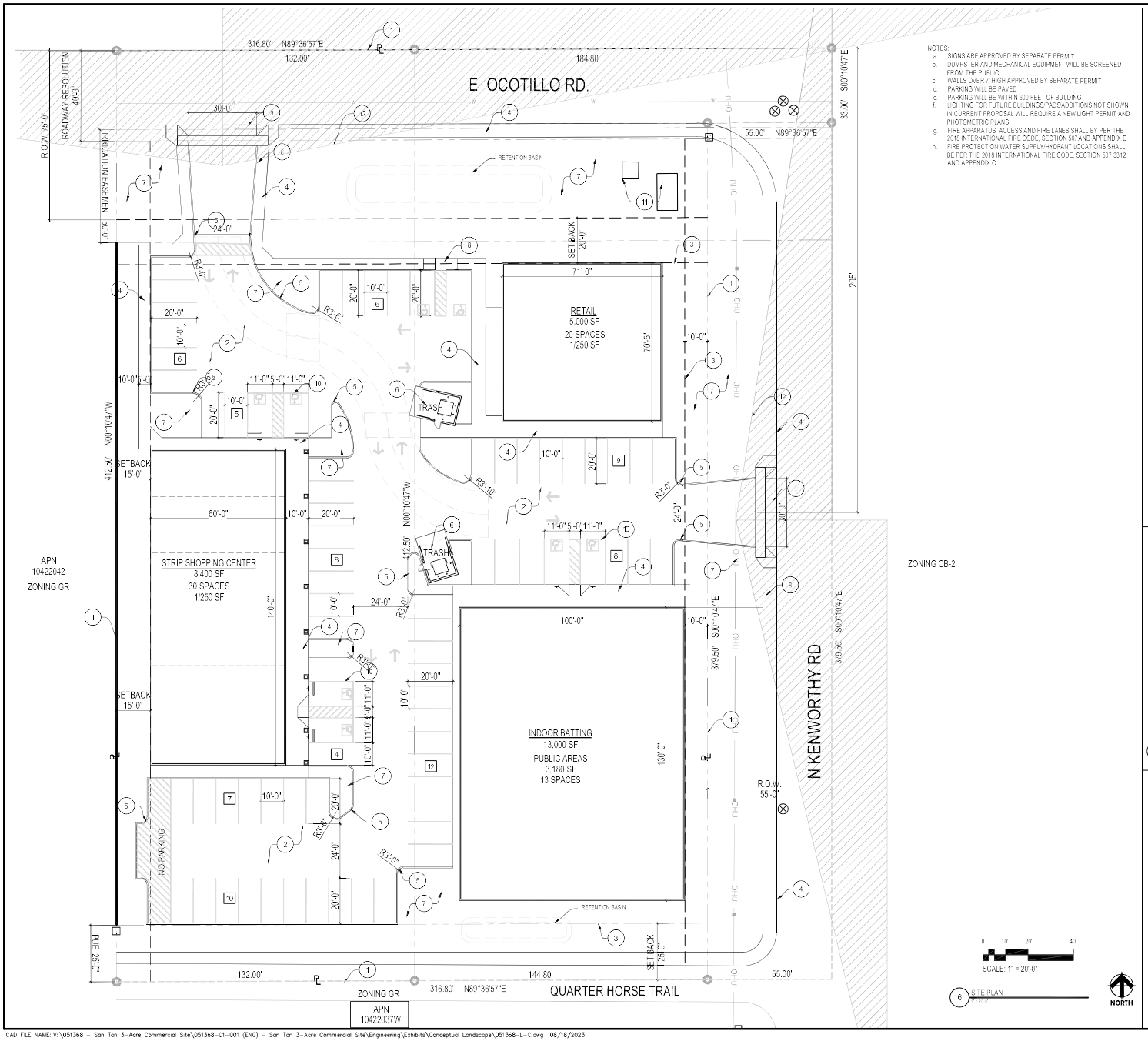
ALTA/NSPS LAND TITLE SURVEY
APN 104-22-041A & 104-22-041B
SAN TAN VALLEY, ARIZONA

REVISION	DATE

© Bowman Consulting Group, Ltd.

DATE: 8/16/23
PROJ NO: 051368-01
TASK NUM: 001
DRAWN BY: TL
CHECKED: DT
QUALITY:
CLIENT NO:
SCALE
1" = 30'

File: K:\051368 - San Tan 2-Acre Commercial Site\051368-01-CDP (SUP)\Survey_DWG\051368-01-ALTA.dwg Plotted: Aug 16, 2023



NOTES:

a. SIGNS ARE APPROVED BY SEPARATE PERMIT
b. DUMPSTER AND MECHANICAL EQUIPMENT WILL BE SCREENED FROM THE PUBLIC
c. WALLS OVER 7' HIGH APPROVED BY SEPARATE PERMIT
d. PARKING WILL BE PAVED
e. PARKING WILL BE WITHIN 600 FEET OF BUILDING
f. LIGHTING FOR FUTURE BUILDINGS/PADS/ADDITIONS NOT SHOWN IN CURRENT PROPOSAL WILL REQUIRE A NEW LIGHT PERMIT AND PHOTOMETRIC PLANS
g. FIRE APPARATUS ACCESS AND FIRE LANES SHALL BY PER THE 2018 INTERNATIONAL FIRE CODE, SECTION 507 AND APPENDIX D
h. FIRE PROTECTION WATER SUPPLY/HYDRANT LOCATIONS SHALL BE PER THE 2018 INTERNATIONAL FIRE CODE, SECTION 507.3.3.12 AND APPENDIX C

PROJECT LOCATION	NEW RETAIL DEVELOPMENT E. OCOTILLO RD. & N. KENWORTHY RD. PINAL COUNTY, ARIZONA 85296
PROJECT NARRATIVE	SHOPPING CENTER , RESTAURANT AND INDOOR BATTING
UTILITIES	WATER : QUEEN CREEK WATER SEWER : SAN TAN VALLEY ELECTRIC : SRP GAS : SOUTHWEST GAS
HEALTH DEPARTMENT	PINAL COUNTY HEALTH DEVELOPMENT 866-791-0933
ZONING	GR
PROPOSED ZONING	C-3 PAD
PROPERTY DESCRIPTION	A PORTION OF THE NORTHEAST QUARTER OF SECTION 20, TOWNSHIP 02 SOUTH, RANGE 08 EAST, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SECTION 20; THENCE WEST A DISTANCE OF 184.80 FEET, TO THE POINT OF BEGINNING; THENCE SOUTH A
ASSESSOR PARCEL #	APN 104-22-041A & 104-22-041B
SITE AREA COVERAGE	SITE : 115,499 S.F. OR 2.65 AC. NET @ 50% =57,749.5 S.F. RETAIL : 5,000 S.F. BATTING CAGE : 3,180 S.F. SHOPPING CENTER 8,400 S.F. 12,000 S.F. 10.40% LOT COVERAGE

SITE ACREAGE (SITE SQUARE FOOTAGE/SOURCE)
NET 2.65 ACRES (115,499 S.F.)

NEW BUILDING DATA :
- BUILDING NORTH "NEW RETAIL" NEW 1-STORY COMMERCIAL BUILDING (5,000 S.F.) 20'-0" HEIGHT
- BUILDING WEST "SHOPPING CENTER" NEW RETAIL BUILDING (8,400 S.F.) 20'-0" HEIGHT
- BUILDING SOUTH "BATTING CAGE" NEW BUILDING (13,000 S.F.) 20'-0" HEIGHT

NEW BUILDINGS GROSS FLOOR AREA : 12,000 SQUARE FEET

NUMBER OF FLOORS/STORIES : ONE STORY

MAX. HEIGHT 40 FEET ALLOWABLE

MAX. HEIGHT 20'-0" PROVIDED

LANDSCAPE CALCULATIONS
LOT SIZE ..... 115,499 S.F.
LANDSCAPE AREA ..... 54,598 S.F. 29.61%
PAVING/LOT AREA ..... 60,773.99 S.F.

IMPERVIOUS SURFACE EXISTING ..... 190,99.5 S.F.
IMPERVIOUS SURFACE PROPOSED ..... 32,773.99 S.F.

FLOOD ZONE X

PARKING CALCULATIONS
NEW RETAIL ..... 5,000 S.F. @ 250 = ... 20 SPACES
"BATTING CAGE" ..... 3,180 S.F. @ 250 = (12.72) 13 SPACES
"SHOPPING CENTER" ..... 8,400 S.F. @ 250= ..... 34 SPACES
TOTAL REQUIRED ..... 68 SPACES
PROVIDED ..... 75 SPACES

3 SITE PROJECT DATA

BOUNDARY LINE
MONUMENT LINE
~~SIDE~~ ~~RING~~ SETBACK LINE
WATER SERVICE LINE
SEWER LINE
~~OVERHEAD~~ UTILITY LINE
FENCE LINE
CARPORT LINE
SEWER CLEAN OUT
WM WATER METER WATER
SERVICE OUTLET
GAS METER

2 SITE PLAN LEGEND

1 PROPERTY LINE
2 NEW ASPHALT PAVING
3 SETBACK LINE
4 NEW CONCRETE SIDEWALK
5 NEW CONCRETE CURB
6 NEW TRASH ENCLOSURE (PHOENIX STANDARD DETAIL)
7 NEW LANDSCAPING AREA
8 ADA ACCESSIBLE ROUTE
9 CONCRETE SITE ACCESS
10 NEW ADA PARKING SPACES
11 IRRIGATION CONCRETE CONTROL BOX
12 SIGHT VISIBILITY TRIANGLES

5 SITE PLAN KEYNOTES

0 1/7 2/7 4/7
SCALE: 1" = 20'-0"

6 SITE PLAN
1" = 20'-0"

NORTH

Bowman
Bowman
3275 W. Ina Road, Suite 220
Tucson, Arizona 85741
Phone: (520) 463-3000
Phone: (866) 690-8660
www.bowman.com
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SITE PLAN
NEW RETAIL DEVELOPMENT
E. OCOTILLO DR. & N. KENWORTHY RD.
PINAL COUNTY, ARIZONA 85296
APN: 10422041

051368-01-001
PROJECT NUMBER

PLAN STATUS

DATE	DESCRIPTION

TJ DESIGN	RO DRAWN	TJ CHKD
SCALE H: V:		

JOB No. 051368-01-001
DATE : 08/15/23

SHEET 01 OF 01

CAD FILE NAME: V:\051368 - San Tan 3-Acre Commercial Site\051368-01-001 (ENG) - San Tan 3-Acre Commercial Site\Engineering\Exhibits\Conceptual Landscape\051368-L-C.dwg 08/18/2023



NOTES:

a. SIGNS ARE APPROVED BY SEPARATE PERMIT
b. DUMPSTER AND MECHANICAL EQUIPMENT WILL BE SCREENED FROM THE PUBLIC
c. WALLS OVER 7' HIGH APPROVED BY SEPARATE PERMIT
d. PARKING WILL BE PAVED
e. PARKING WILL BE WITHIN 600 FEET OF BUILDING
f. LIGHTING FOR FUTURE BUILDINGS/PADS/ADDITIONS NOT SHOWN IN CURRENT PROPOSAL WILL REQUIRE A NEW LIGHT PERMIT AND PHOTOMETRIC PLANS
g. FIRE APPARATUS ACCESS AND FIRE LANES SHALL BY PER THE 2018 INTERNATIONAL FIRE CODE, SECTION 507 AND APPENDIX D
h. FIRE PROTECTION WATER SUPPLY/HYDRANT LOCATIONS SHALL BE PER THE 2018 INTERNATIONAL FIRE CODE, SECTION 507.3312 AND APPENDIX C

CONCEPTUAL PLANT PALLETE

TREES



Prosopis glandulosa 'AZT' 'AZT Thornless Honey Mesquite' 24" Box

Chilopsis linearis 'AZT Desert Amethyst' Desert Amethyst Desert Willow 24" Box

Fraxinus velutina 'Arizona' Arizona Velvet Ash 24" Box

Pistacia chinensis 'Red Push' Red Push Chinese Fistache 24" Box

SHURBS / ACCENTS / GROUNDCOVER

- Eremophila maculata 'Valentine' / Valentine Spotted Emu Bush 5 gal.
- Calliandra x 'Maricopa Red' / Maricopa Red Fairy Duster 5 gal.
- Lantana camara 'Radiation' / Radiation Lantana 5 gal
- Tecoma x 'Orange Jubilee' / Orange Jubilee Yellow Bells 5 gal.
- Verbena goodingii / Scented Verbena 5 gal.
- Hesperaloe funifera / Giant Hesperaloe 5 gal
- Hesperaloe parviflora / Red Yucca 5 gal.
- Pedilanthus bracteatus / Slipper 5 gal.

ZONING CB-2

SCALE: 1" = 20'-0"

6 SITE PLAN

NORTH

PROJECT LOCATION:	NEW RETAIL DEVELOPMENT E. OCOTILLO RD & N KENWORTHY RD PINAL COUNTY, ARIZONA 85140
PROJECT NARRATIVE:	SHOPPING CENTER , RESTAURANT AND INDOOR BATTING
UTILITIES:	WATER - QUEEN CREEK WATER SEWER - SAN TAN VALLEY ELECTRIC - SRP GAS - SOUTHWEST GAS
HEALTH DEPARTMENT:	PINAL COUNTY HEALTH DEPARTMENT 000-000-0000
ZONING:	CR
PROPOSED ZONING:	C-3 PAD
PROPERTY DESCRIPTION:	A PORTION OF THE NORTHEAST QUARTER OF SECTION 20, TOWNSHIP 02 SOUTH, RANGE 08 EAST, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SECTION 20; THENCE WEST A DISTANCE OF 184.80 FEET, TO THE POINT OF BEGINNING; THENCE SOUTH A
ASSESSOR PARCEL #:	APN 104-22-041A & 104-22-041B
SITE AREA COVERAGE:	SITE - 115,499 S.F. OR 2.65 AC. NET @ 50% =57,749.5 S.F. RETAIL - 5,000 S.F. BATTING CAGE - 3,180 S.F. SHOPPING CENTER - 8,400 S.F. 16,580 S.F. 14.48% LOT COVERAGE
SITE ACREAGE (SITE SQUARE FOOTAGE/SOURCE NET:	2.65 ACRES (115,499 S.F.)

NEW BUILDING DATA:

- BUILDING NORTH "NEW RETAIL" - NEW 1-STORY COMMERCIAL BUILDING (5,000 S.F.) 28'-6" HEIGHT
- BUILDING WEST "SHOPPING CENTER" NEW RETAIL BUILDING (8,400 S.F.) 28'-9" HEIGHT
- BUILDING SOUTH "BATTING CAGE" NEW BUILDING (13,000 S.F.) 28'-9" HEIGHT

NEW BUILDINGS GROSS FLOOR AREA : 12,000 SQUARE FEET

NUMBER OF FLOORS/STORIES : ONE STORY

MAX. HEIGHT : 40 FEET ALLOWABLE

MAX. HEIGHT: 28'-6" PROVIDED

LANDSCAPE CALCULATIONS:

LOT SIZE	115,499 S.F.
LANDSCAPE AREA	34,649.8 S.F. 29.91%
PARKING LOT AREA	32,773.86 S.F.
IMPERVIOUS SURFACE EXISTING	199,06.6 S.F.
IMPERVIOUS SURFACE PROPOSED	32,773.86 S.F.

FLOOD ZONE : X

PARKING CALCULATIONS:

"NEW RETAIL"	5,000 S.F. @ 250 =	20 SPACES
"BATTING CAGE"	3,180 S.F. @ 250 = (12.72)	13 SPACES
"SHOPPING CENTER"	8,400 S.F. @ 250=	33 SPACES
	TOTAL REQUIRED	66 SPACES
	PROVIDED	75 SPACES

3 SITE PROJECT DATA

- BOUNDARY LINE
- MONUMENT LINE
- BUILDING SETBACK LINE
- WATER SERVICE LINE
- SEWER LINE
- OVERHEAD UTILITY LINE
- FENCE LINE
- CARPORT LINE
- SEWER CLEAN OUT
- WM WATER METER WATER
- SERVICE OUTLET
- GAS METER

2 SITE PLAN LEGEND

1. PROPERTY LINE
2. NEW ASPHALT PAVING
3. SETBACK LINE
4. NEW CONCRETE SIDEWALK
5. NEW CONCRETE CURB
6. NEW TRASH ENCLOSURE (PHOENIX STANDARD DETAIL)
7. NEW LANDSCAPING AREA
8. ADA ACCESSIBLE ROUTE
9. CONCRETE SITE ACCESS
10. NEW ADA PARKING SPACES
11. IRRIGATION CONCRETE CONTROL BOX
12. SIGHT VISIBILITY TRIANGLES

5 SITE PLAN KEYNOTES

Bowman

Bowman
3275 W. Ina Road, Suite 220
Tucson, Arizona 85741
Phone: (520) 903-3000
Phone: (561) 907-5900

www.bowman.com

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PRELIMINARY LANDSCAPE PLAN

NEW RETAIL DEVELOPMENT

E. OCOTILLO DR. & N. KENWORTHY RD.

PINAL COUNTY, ARIZONA 85296

APN: 10422041

051368-01-001
PROJECT NUMBER

PLAN STATUS

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TJ DESIGN	RO DRAWN	TJ CHKD

SCALE H:
V:

JOB No. 051368-01-001

DATE : 08/15/23

SHEET 01 OF 01

CAD FILE NAME: V:\051368 - San Tan 3-Acre Commercial Site\051368-01-001 (ENG) - San Tan 3-Acre Commercial Site\Engineering\Exhibits\Conceptual Landscape\051368-L-C.dwg 08/18/2023

TRAFFIC IMPACT ANALYSIS

San Tan 3
(New Retail Development and Indoor Batting Cages)
Southwest Corner of Kenworthy Road and Ocotillo Road
Pinal County, Arizona

PREPARED FOR
Mr. Pete Acquisto
1741 West Green Tree Drive
Queen Creek, Arizona 85142

PREPARED BY

UCG
United Civil Group

APPROVED BY:

_____ _____
PINAL COUNTY ENGINEER DATE
PINAL COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVAL EXPIRES: _____ DATE

County Case Number: PZ-PD-001-23

TRAFFIC IMPACT ANALYSIS

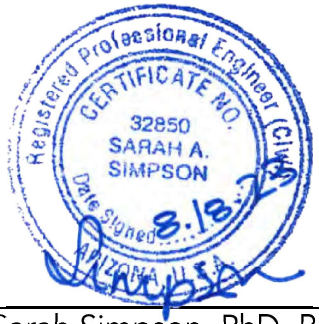
San Tan 3
(New Retail Development and Indoor Batting Cages)
Southwest Corner of Kenworthy Road and Ocotillo Road
Pinal County, Arizona

October 12, 2022
Revision #1: August 18, 2023

UCG Project Number: TR22095

PREPARED FOR
Mr. Pete Acquisto
1741 West Green Tree Drive
Queen Creek, Arizona 85142

PREPARED BY
United Civil Group
2803 N. 7th Avenue
Phoenix, Arizona 85007
602-265-6155



CONDUCTED BY _____
Sarah Simpson, PhD, PE
President

TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY 4

A. Purpose of the Report 4
B. Study Objectives 4
C. Conclusions and Recommendations 5

II. PROPOSED DEVELOPMENT 7

A. Site Location 7
B. Land Use 7
C. Phasing and Timing 7
D. Site Accessibility 7

III. STUDY AREA CONDITIONS 11

A. Study Area 11
B. Study Area Land Use 11
C. Anticipated Future Development and Planned Improvements 11

IV. EXISTING ROADWAY CONDITIONS 12

A. Physical Characteristics 12
B. Existing Traffic Volumes 13
C. Existing Traffic Observations and Issues 15
D. Crash Data 15
E. Intersection Level of Service Analyses 16
E.1 HCM Capacity Analyses and Levels of Service 16

V. PROJECTED TRAFFIC 19

A. Trip Generation 19
B. Trip Distribution 20
C. Projected Background Traffic 22

VI. TRAFFIC AND IMPROVEMENT ANALYSIS 24

A. Accessibility to Proposed development 24
B. Roadway and Intersection Geometric Improvements 24
C. Auxiliary Lane Analyses 25
C.1. Right Turn Lane Warrants 25
C.2. Right Lane Queue and Storage Length Analysis 25
D. Traffic Signal Warrant Analysis 26
E. Intersection Sight Distance 28
F. Total Traffic 28

VII. CONCLUSIONS AND RECOMMENDATIONS 33

VIII. LIMITATIONS 34

IX. SOURCES 36

LIST OF TABLES

TABLE 1: CRASH SEVERITY SUMMARY – OCOTILLO ROAD/KENWORTHY ROAD 15
TABLE 2: COLLISION MANNER SUMMARY 15
TABLE 3: INTERSECTION LEVELS OF SERVICE AND DELAY 16
TABLE 4: 2022 EXISTING CONDITIONS INTERSECTION LEVELS OF SERVICE 18
TABLE 5: PROPOSED DEVELOPMENT TRIP GENERATION 19
TABLE 6: TRIP DISTRIBUTION PERCENTAGES 20
TABLE 7: 2025 BACKGROUND CONDITIONS INTERSECTION LEVELS OF SERVICE 22
TABLE 8: RIGHT TURN LANE ANALYSIS 26
TABLE 9: 2025 TOTAL CONDITIONS INTERSECTION LEVELS OF SERVICE (WITHOUT IMPROVEMENTS) 29
TABLE 10: 2025 TOTAL CONDITIONS INTERSECTION LEVELS OF SERVICE (WITH IMPROVEMENTS) 29
TABLE 11: LOS COMPARISONS FOR KENWORTHY ROAD/OCOTILLO ROAD 29

LIST OF FIGURES

FIGURE 1: VICINITY MAP 8
FIGURE 2: AERIAL VIEW 9
FIGURE 3: SITE PLAN 10
FIGURE 4: EXISTING CONDITIONS – YEAR 2021 14
FIGURE 5: SITE GENERATED TRAFFIC AND TRIP DISTRIBUTION – FULL BUILDOUT 21
FIGURE 6: FUTURE BACKGROUND TRAFFIC – YEAR 2025 23
FIGURE 7: TOTAL TRAFFIC – YEAR 2025 31
FIGURE 8: RECOMMENDATIONS 32



APPENDIX A . . . Traffic Counts
APPENDIX B . . . Capacity Analyses
APPENDIX C. . . Other Known Development
APPENDIX D. . . Signal Warrant
APPENDIX E. . . Comments and Responses

I. INTRODUCTION AND SUMMARY

A. PURPOSE OF THE REPORT

United Civil Group was retained by Mr. Pete Acquisto to perform this Traffic Impact Analysis (TIA) for the proposed San Tan 3 (New Retail Development and Indoor Batting Cages) located on the southwest corner of Kenworthy Road and Ocotillo Road in Pinal County, Arizona. The development is planned on approximately 2.65 acres of vacant land and will include a strip retail plaza, retail outparcel and indoor batting cages.

United Civil Group performed this TIA in general accordance with the requirements as specified in the Pinal County *Traffic Impact Assessment Guidelines & Procedures* dated January 2007, locally accepted standards, and industry practice. Based on the Pinal County TIA Guidelines, this development falls under a Category I – Small Development with less than 500 peak hour trips. The study horizon for this development includes the opening year of the development. The minimum study limits include all site accesses, all state highways, signalized intersections, and/or major unsignalized street intersections within 1/2 mile of the site boundary.

B. STUDY OBJECTIVES

This study is intended to investigate the existing and future traffic conditions and identify any potential roadway improvements necessary to serve San Tan 3. Major study objectives of this traffic report are as follows:

- Determine the existing morning and evening peak hour traffic volumes at the study area intersection of Kenworthy Road/Ocotillo Road.
- Analyze the existing study area intersections as well as the planned site access intersections for the development.
- Where applicable, recommend safety, intersection and/or roadway improvements sufficient to meet the needs of the development and adjacent roadway network due to the additional site generated traffic volumes.

C. Conclusions and Recommendations

The proposed San Tan 3 (New Retail Development and Indoor Batting Cages) is a planned commercial/retail development located on the southwest corner of Ocotillo Road and Kenworthy Road. The commercial/retail development will include a strip retail plaza, retail outparcel, and indoor batting cages and is planned to be constructed in one phase with full occupancy by 2025. Full buildout (2025) was analyzed based on Pinal County Traffic Impact Analysis Guidelines & Procedures to identify any foreseen traffic impacts after the site is fully constructed and occupied.

The proposed San Tan 3 Development is planned to have two accesses. Access A, a right in/right out driveway, is the primary access into the development and planned to be located on Ocotillo Road approximately 280 feet west of Kenworthy Road, measured center of roadway to center of driveway. Access B will be the secondary access and is planned as a full movement driveway. Access B located on Kenworthy Road approximately 200 feet south of Ocotillo Road, measured center of roadway to center of driveway.

After full build-out of the development, per ITE's *Trip Generation Manual 11th Edition*, the New Retail Development with Indoor Batting is forecasted to 1,015 total daily trips, with 35 trips in the morning peak hour and 118 trips in the evening peak hour.

Kenworthy Road and Ocotillo Road will be the main routes to the New Retail Development and Indoor Batting Cages. Per the Pinal County Community Development website, Kenworthy Road is classified as a minor arterial with 110 feet of right of way. In the future, Kenworthy Road will be developed with two lanes of traffic in each direction separated by a raised median. Therefore, half street improvements are planned along the site's eastern boundary. The half street cross section includes Kenworthy Road as a minor arterial roadway with 55 feet of right of way measured centerline to right of way line. Per the Pinal County Community Development website, Ocotillo Road is classified as a principal arterial with 150 feet of right of way. In the future, Ocotillo Road will be developed with three lanes of traffic in each direction separated by a raised median. Therefore, half street improvements are planned along the site's southern boundary. The half street cross section includes Ocotillo Road as a principal arterial roadway with 75 feet of right of way measured centerline to right of way line.

Using 2023 existing traffic counts, a traffic signal is warranted at the intersection of Kenworthy Road/Ocotillo Road. Therefore, a traffic signal at this intersection was analyzed in the background and total traffic conditions for the year 2025.

Through the 2025 total traffic conditions, all study area intersections operate at an acceptable LOS C or better. For the intersection of Kenworthy Road/Ocotillo Road, it was assumed that the signal will be installed as an interim condition and that ultimate

widening of the intersection will not yet have occurred. When the intersection is constructed to its ultimate geometry, the LOS at this intersection will improve.

Proper intersection sight distance and sight triangles shall be provided and maintained at all site access driveways of the proposed development to give drivers exiting the site a clear view of oncoming traffic. The landscape and hardscape (monument signs) within the sight triangles must not obstruct the driver's view of the adjacent travel lanes.

Based on this TIA, the following roadway and intersection improvements are proposed.

BUILDOUT – 2025
By the New Development and Indoor Batting Cages

- Construct half street improvements on Kenworthy Road (minor arterial) along the site's eastern boundary. This improvement should provide 55 feet of right of way, measured from centerline to right of way line.
- Construct half street improvements on Ocotillo Road (principal arterial) along the site's northern boundary. This improvement should provide 75 feet of right of way, measured from centerline to right of way line.
- Construct a raised median on Ocotillo Road along the site's boundary. The raised median will limit Access A to right-in/Right-out only.
- Install a continuous right turn deceleration lane on Ocotillo Road from Kenworthy Road west of Access A.
- Install a right turn deceleration lane on Kenworthy Road at Access B. Due to the configuration of the site and the available frontage on Kenworthy Road between Ocotillo Road and Quarter Horse Trail, the turn lane should be reduced to 50 feet of storage with an 80-foot taper.
- Install an interim two way left turn lane on Kenworthy Road within the vicinity of the site to accommodate northbound left turning vehicles at Ocotillo Road.
- Developer to contribute 25% to the cost of the signal at the intersection of Kenworthy Road/Ocotillo Road.

By Others

- Per the approved TIA for Elux Multifamily Development, the developer of the property is to contribute 25% toward the cost of the signal at the intersection of Kenworthy Road/Ocotillo Road. It is anticipated that Pinal County will contribute the remaining 50% of the signal cost because no known development is planned for the northeast or southeast corners of the intersection at this time.

II. PROPOSED DEVELOPMENT

A. Site Location

The proposed New Retail Development and Indoor Batting Cages is planned for a vacant parcel of land located on the southwest corner of Kenworthy Road and Ocotillo Road in Pinal County, Arizona. **Figures 1 and 2** present the location of the proposed Development within the context of the immediate area and its location within Pinal County.

B. Land Use

The approximately 2.65-acre development is currently vacant land. In the future, the New Retail Development and Indoor Batting Cages is planned to consist of an 8,400 square strip retail plaza, 5,000 square foot retail outparcel, and 13,000 square foot indoor batting cages.

C. Phasing and Timing

The New Retail Development and Indoor Batting Cages are planned to be constructed in one phase with completion by 2025.

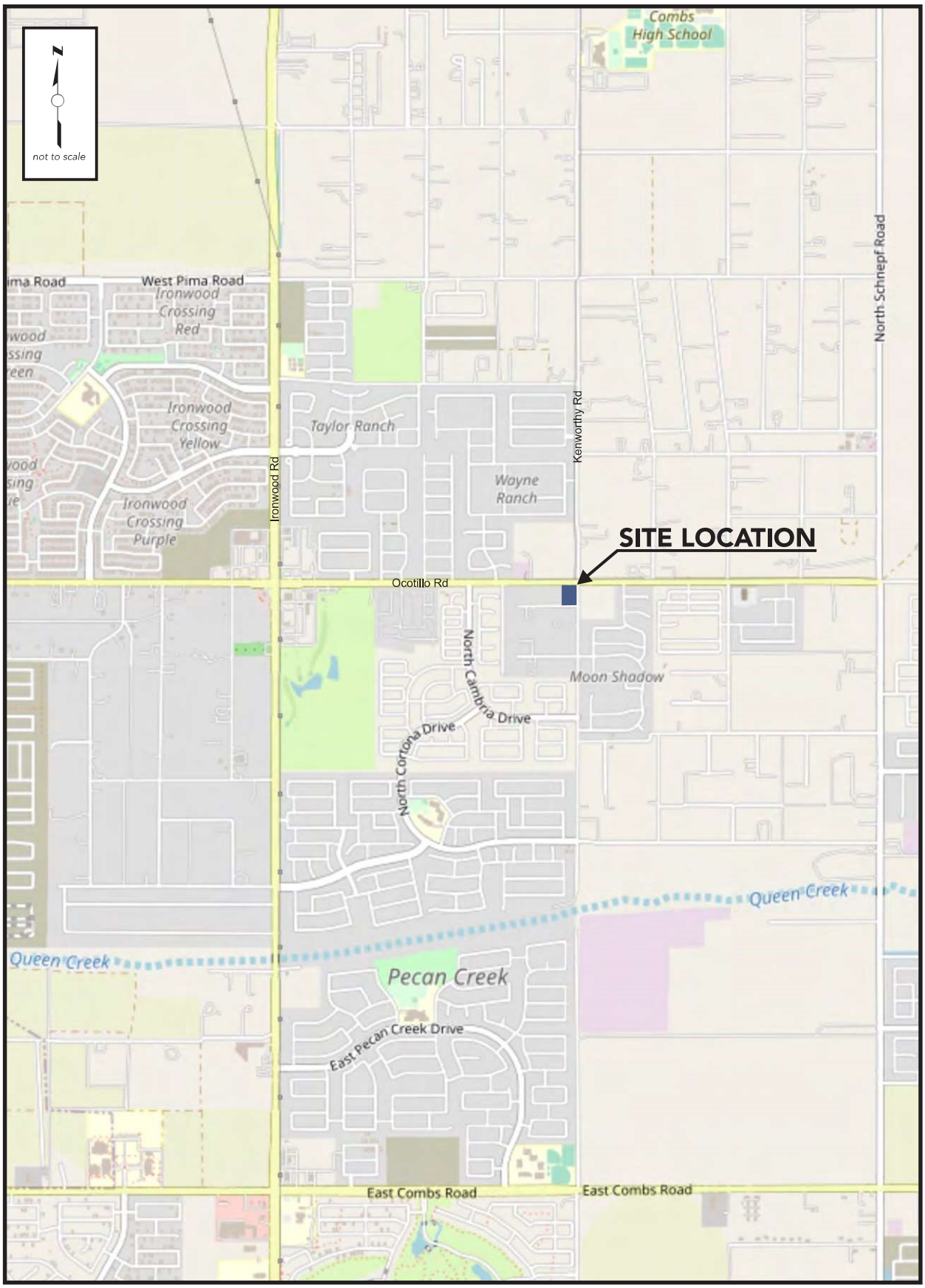
D. Site Accessibility

The San Tan 3 Development is planned to have two accesses as follows:

- **Access A** is located on Ocotillo Road approximately 280 feet west of Kenworthy Road and is planned as a right in/right out only movement driveway.
- **Access B** is located on Kenworthy Road approximately 200 feet south of Ocotillo Road and 215 feet north of Quarter Horse Trail and is planned as a full movement driveway.

All site access points should be designed per Pinal County Subdivision & Infrastructure Design Manual. Per the Pinal County Access Management Manual Final Report dated February 2017, driveway spacing criteria per Table 1 (Access Management Manual) is met for Access A proposed. Access B does not meet the requirements for full access; therefore, a waiver is requested to allow full access to provide better site circulation and reduce possible U-turn movements at the Ocotillo Road/Kenworthy Road intersection.

Figure 3 illustrates the layout of the proposed development in relation to the location of the site access points.



ArcGIS - 2022

Figure 1: Vicinity Map

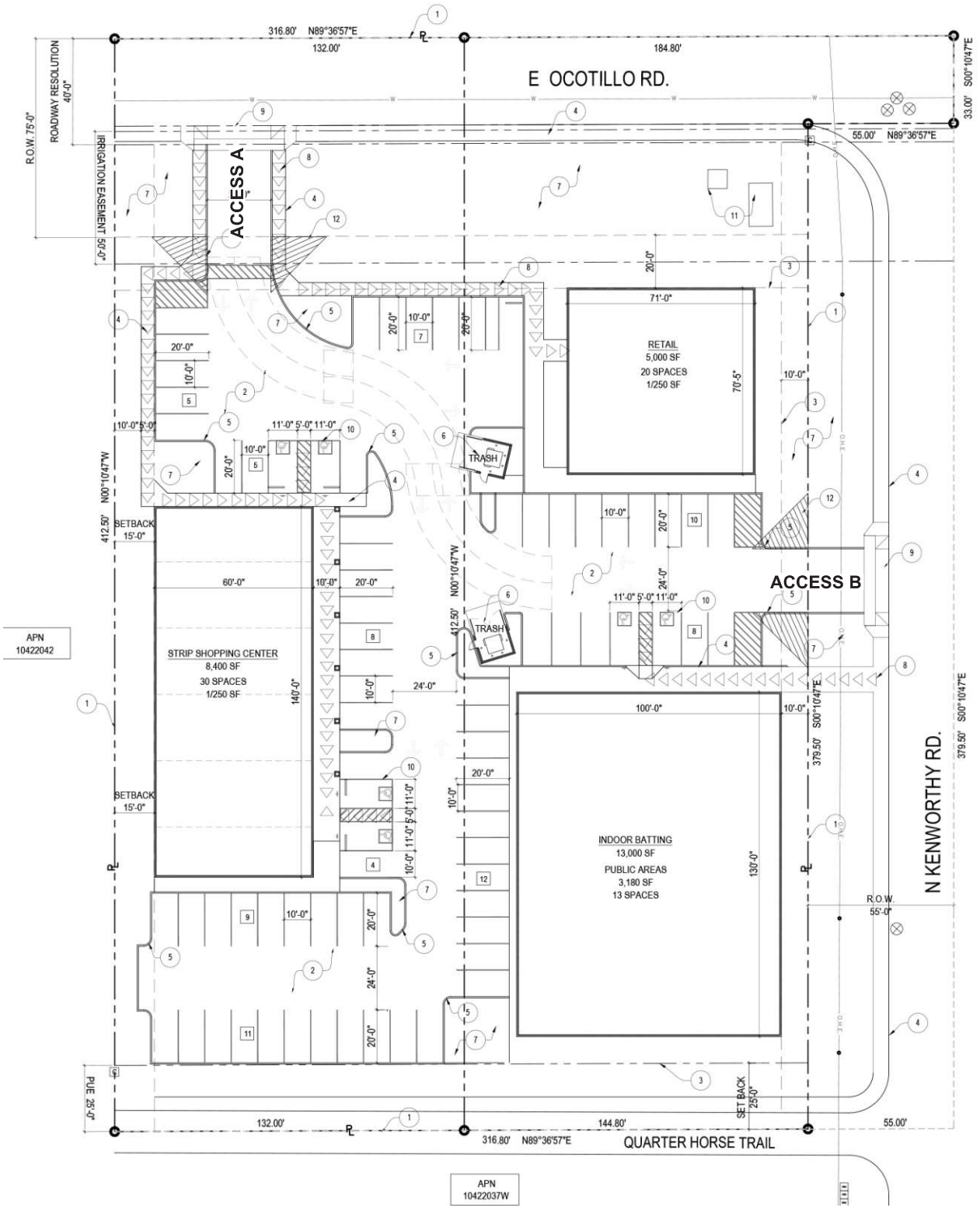
United Civil Group



Permission for commercial use granted by Google Earth

Figure 2: Aerial View

UCG
United Civil Group



not to scale

United Civil Group

Figure 3: Site Plan

III. STUDY AREA CONDITIONS

A. Study Area

Based on the forecasted trip generation of New Retail Development and Indoor Batting Cages, the proposed development falls under Category I – Small Development with less than 500 peak hour trips. The minimum study limits include all site accesses, all state highways, signalized intersections, and/or major unsignalized street intersections within 1/2 mile of the site boundary. According to these guidelines, the study area includes the existing intersections of:

- Kenworthy Road/Ocotillo Road
- All site access intersections

B. Study Area Land Use

The following describes the existing land uses near the subject site.
SUBJECT SITE: vacant land
NORTH: Ocotillo Road followed by vacant land planned for multifamily development
SOUTH: Quarter Horse Trail followed by single-family homes
EAST: Kenworthy Road followed by vacant land
WEST: single-family homes

C. Anticipated Future Development and Planned Improvements

Two future developments are anticipated within the vicinity of proposed development and included in the background trip generation estimates.

The Elux at Ocotillo Development will be located on the northwest corner of Kenworthy Road and Ocotillo Road in Pinal County, Arizona. The approximate 23.75-acre development is currently agricultural land. In the future, the Elux at Ocotillo Development is planned as a multifamily residential community with 254 dwelling units. After full build-out of the development, Elux at Ocotillo is forecasted to generate 1,712 total daily trips, with 102 trips in the morning peak hour and 130 trips in the evening peak hour

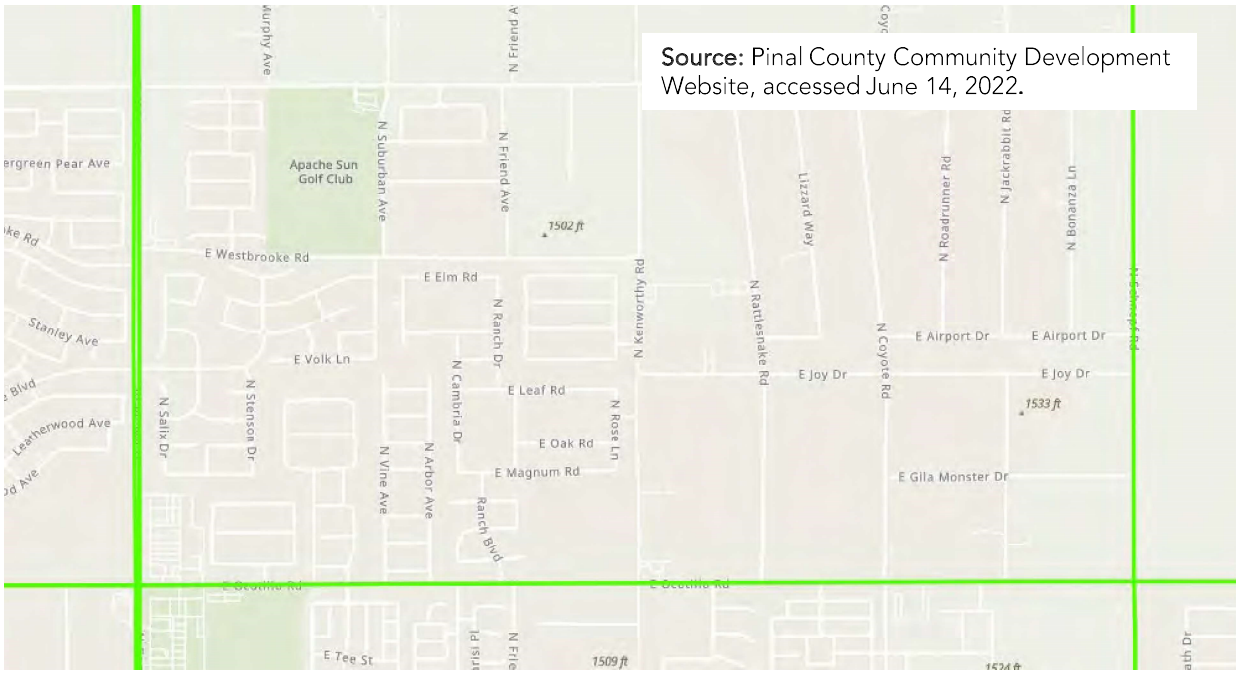
Wales Ranches is proposed within the vicinity of the site. Therefore, trips generated by the Wales Ranches development were included in this TIA. Wales Ranches is a proposed mixed land use development located on approximately 640 acres on the northwest corner of Schnepf Road/Combs Road. Overall, the site is planned to contain an elementary school, 1,905 single family dwelling units, 340 multi-family dwelling units, approximately 52.9 acres of industrial and approximately 18.5 acres of commercial development. Phase 1 of the Wales Ranches development is planned to be constructed and occupied by the year 2025 and will consist of 710 single family homes. Trips forecasted to be generated from Phase 1 of the Wales Ranches development are included in the background traffic for this TIA.

Excerpts from the development TIAs are included in **Appendix C.**

IV. EXISTING ROADWAY CONDITIONS

A. PHYSICAL CHARACTERISTICS

Ocotillo Road is an east-west roadway consisting of one lane in the eastbound and westbound directions separated by a two-way left turn lane within the vicinity of the site. Ocotillo Road is not constructed with curb, gutter, or sidewalk. Within the Pinal County Small Area Transportation Study 2006 and the Regionally Significant Routes Report for Safety and Mobility Update 2017, Ocotillo Road is shown as a route of regional significance and classified as a principal arterial. The posted speed limit on Ocotillo Road is 35 mph. Pinal County controls, operates, and maintains Ocotillo Road within the vicinity of the site.



Source: Pinal County Community Development Website, accessed June 14, 2022.

Kenworthy Road is a north-south roadway consisting of one lane in both the northbound and southbound directions within the vicinity of the site. Kenworthy Road is not constructed with curb, gutter, or sidewalk. The posted speed limit on Kenworthy Road is 25 mph. Pinal County controls, operates, and maintains Kenworthy Road within the vicinity of the site.

The intersection of **Kenworthy Road/Ocotillo Road** operates as an all way stop-controlled intersection. The north- and southbound approaches consist of one shared lane. The westbound approach consists of an exclusive left turn lane and a through right lane. The eastbound approach consists of an exclusive left turn lane, a through lane and a dedicated right turn lane. Pinal County controls and maintains this intersection.

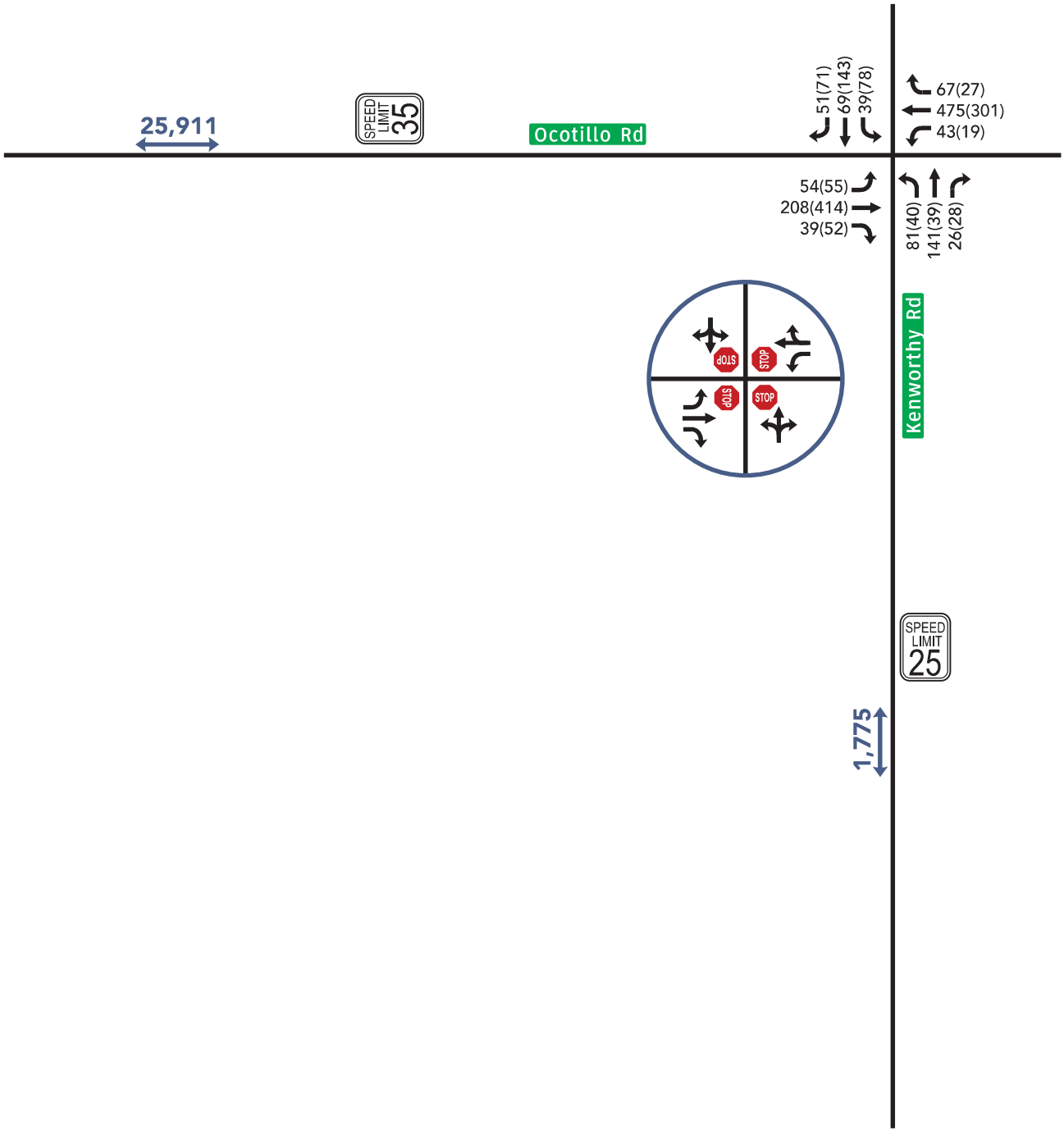
Figure 4 graphically depicts the existing intersection geometry.

B. Existing Traffic Volumes

Existing turning movement counts in 15-minute intervals were collected at the study area intersections on Tuesday August 9, 2022. Data was collected during the morning peak period (7:00AM – 9:00AM) and evening peak period (4:00PM – 6:00PM).

Average daily traffic volumes (ADT) were determined from the Arizona Department of Transportation (ADOT) Transportation Data Management System for Ocotillo Road and Kenworthy Road. The ADT volumes were collected in 2022 and the website was accessed on August 16, 2023.

The resulting morning and evening peak hour traffic volumes along with the ADTs at the study area intersections are presented in **Figure 4.** Complete traffic volume data can be found in **Appendix A.**



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

Average Daily Traffic (ADT)

not to scale

United Civil Group

Figure 4: Existing Conditions

C. Existing Traffic Observations and Issues

Traffic conditions and operations were observed during the study's morning and evening peak periods and no traffic issues were noted.

D. Crash Data

Three years of crash data (January 2019 – December 2021) were obtained from the Arizona Department of Transportation (ADOT) Arizona Crash Information System (ACIS). The data was queried for the intersection of Ocotillo Road/Kenworthy Road. An offset of 200 feet was used on all legs of each intersection. A total of 10 crashes were reported during the 3-year period. The crash data are summarized in **Tables 1 and 2.** The ADOT crash database was accessed on September 28, 2022.

Table 1: Crash Severity Summary – Ocotillo Road/Kenworthy Road

Year	Fatal	Serious Injury	Suspected Minor Injury	Possible Injury	No Injury	*Total*
2019					1	*1*
2020			1	1	3	*5*
2021			2	1	1	*4*
TOTAL	*0*	*0*	*3*	*2*	*5*	*10*

Table 2: Collision Manner Summary

Year	Single Vehicle	Angle	Left Turn	Rear End	Head On	Sideswipe Same Direction	Sideswipe Opposite Direction	Rear to Side	Total
2018			1						1
2019		2		3					5
2021		2	1	1					4
Total	*0*	*4*	*2*	*4*	*0*	*0*	*0*	*0*	*10*

Over the 3-year analysis period, rear end crashes account for 40% of the crashes and angle account for 60% of the crashes at the Ocotillo Road/Kenworthy Road intersection. 50% of the crashes were noted as having no injury.

Based on the data provided, no specific trends or potential safety hazards that can be corrected by intersection geometric modifications were discerned. An examination of individual crash records would be required for this type of analysis.

E. Intersection Level of Service Analyses

E.1 HCM Capacity Analyses and Levels of Service

Intersection capacity analysis is a principal tool used in traffic engineering. Operation is characterized according to the amount of delay at an intersection approach and quantified into a level of service (LOS). The intersection LOS was determined using the methodologies presented in the Transportation Research Board's Highway Capacity Manual (HCM). The LOS grades quantify and categorize a driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. Per the HCM, the signalized and unsignalized (all-way stop controlled or two-way stop-controlled intersection) delay and associated LOS is presented in **Table 3**.

Pinal County strives to obtain a level of service C or better for both signalized and unsignalized intersection overall operations. Intersections having a LOS D, E, or F may warrant improvements or traffic reductions.

Table 3: Intersection Levels of Service and Delay

Level of Service	Description	Signalized Delay (Sec/Veh)	Unsignalized Delay (Sec/Veh)
A	Minimal control delay, traffic operates at primary free flow conditions, unimpeded movement within traffic stream	≤ 10	≤ 10
B	Minor control delay at signalized intersections, traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream	> 10 and ≤ 20	> 10 and ≤ 15
C	Moderate control delay, movement within traffic stream more restricted than LOS B, formation of queues contributes to lower average travel speeds	> 20 and ≤ 35	> 15 and ≤ 25
D	Considerable control delay that may be substantially increased by small increases in flow, average travel speeds continue to decrease.	> 35 and ≤ 55	> 25 and ≤ 35
E	High control delay, average travel speed no more than 22 percent of free flow speed	> 55 and ≤ 80	> 35 and ≤ 50
F	Extremely high control	> 80	> 50

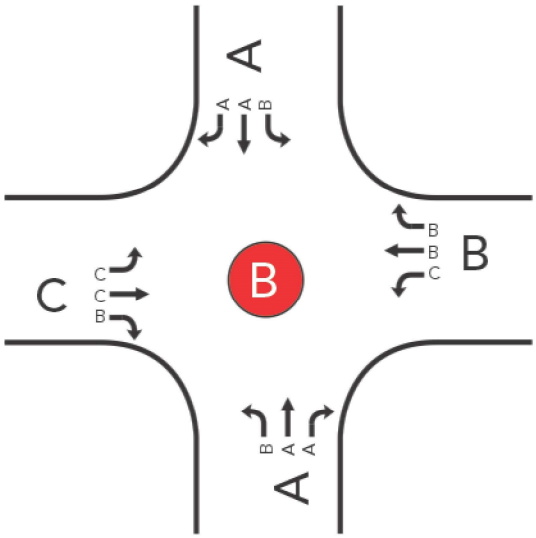
Source: Highway Capacity Manual 2010

For signalized and all-way stop controlled intersections, LOS is calculated for a movement (e.g., left, through, right), for the approach (e.g., northbound, southbound, eastbound, westbound) and for the overall intersection.

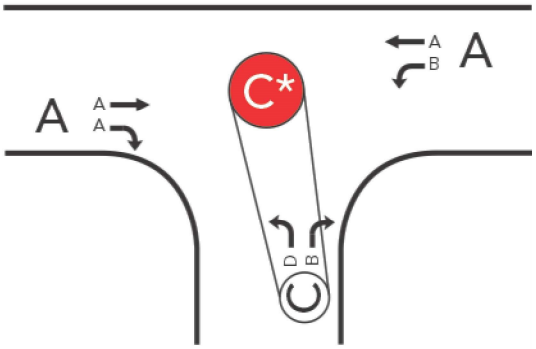
For two-way stop-controlled intersections, LOS is calculated for a movement and for the approach. However, for the overall intersection, LOS is reported as the lowest approach within the intersection. This is because most drivers are on the major roadway and do not experience delay traversing through the intersection. The example below illustrates the various LOS calculations completed for intersections.

EXAMPLE:

Signalized & All-Way Stop Controlled



Two-Way Stop Controlled



*Reported as approach LOS

Source: United Civil Group, 2021

E.2 EXISTING INTERSECTION LEVEL OF SERVICE

The level of service (LOS) and average delay at the existing study area intersections were evaluated using the 2022 intersection volumes, lane geometry, and existing traffic control as presented in Figure 4. PTV Vistro traffic modeling software, employing the methodologies as presented in the Highway Capacity Manual (HCM), was utilized for the capacity analyses to obtain the existing conditions levels of service. Summaries of the Vistro output calculations are included in *Appendix B: Capacity Analyses*.

The results of the existing levels of service analysis are presented in **Table 4**.

TABLE 4: 2022 EXISTING CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Kenworthy Road/Ocotillo Road – All-Way Stop Controlled																	
AM Peak Hour	C	C	C	C	C	C	C	C	C	C	C	C	F	F	F	F	73.86 F
PM Peak Hour	C	C	C	C	D	D	D	D	E	E	E	E	E	E	E	E	38.66 E

As shown in Table 4 above, the study area intersection of Kenworthy Road/Ocotillo Road currently operates at a level of service, LOS F, in the morning peak hour and a level of service, LOS E, in the evening peak hour. The delay is experienced predominantly in the east- and westbound directions given the number of vehicles traveling through the intersection.

V. PROJECTED TRAFFIC

A. Trip Generation

Estimates of the traffic volumes that will be generated by the development were determined from transportation planning data taken from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition, 2021*. The ITE rates are based on studies that measure trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type.

The ITE land use code utilized for the New Retail Development and Indoor Batting Cages is as follows:

Batting Cages (LUC 433): A batting cage is an area for batting practice that is enclosed by fencing or netting. The facility may consist of one or more individual batting cages. The facility may include limited game rooms or refreshment services. This land use is a stand-alone facility and is not part of a larger multipurpose entertainment or recreational facility.

Strip Retail Plaza (LUC 822): A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area of the building.

Table 5 presents the estimated daily and peak hour vehicle trips generated by the New Retail Development and Batting Cages for a typical weekday after full build out.

Table 5: Proposed Development Trip Generation

Land Use	ITE Code	Units	Total Size	Daily	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
Batting Cages	433	Cages	10	220*	-	-	-	22	12	10
Strip Retail Plaza	822	1,000 sqft	13.4	795	35	21	14	96	48	48
TOTAL				1,015	35	21	14	118	60	58

*ITE trip generation is not available. Therefore, assumed that peak hour is 10 percent of total daily traffic

On a typical weekday, after full build-out, the development is forecasted to generate 1,015 total daily trips, with 35 trips in the morning peak hour and 118 trips in the evening peak hour.

B. Trip Distribution

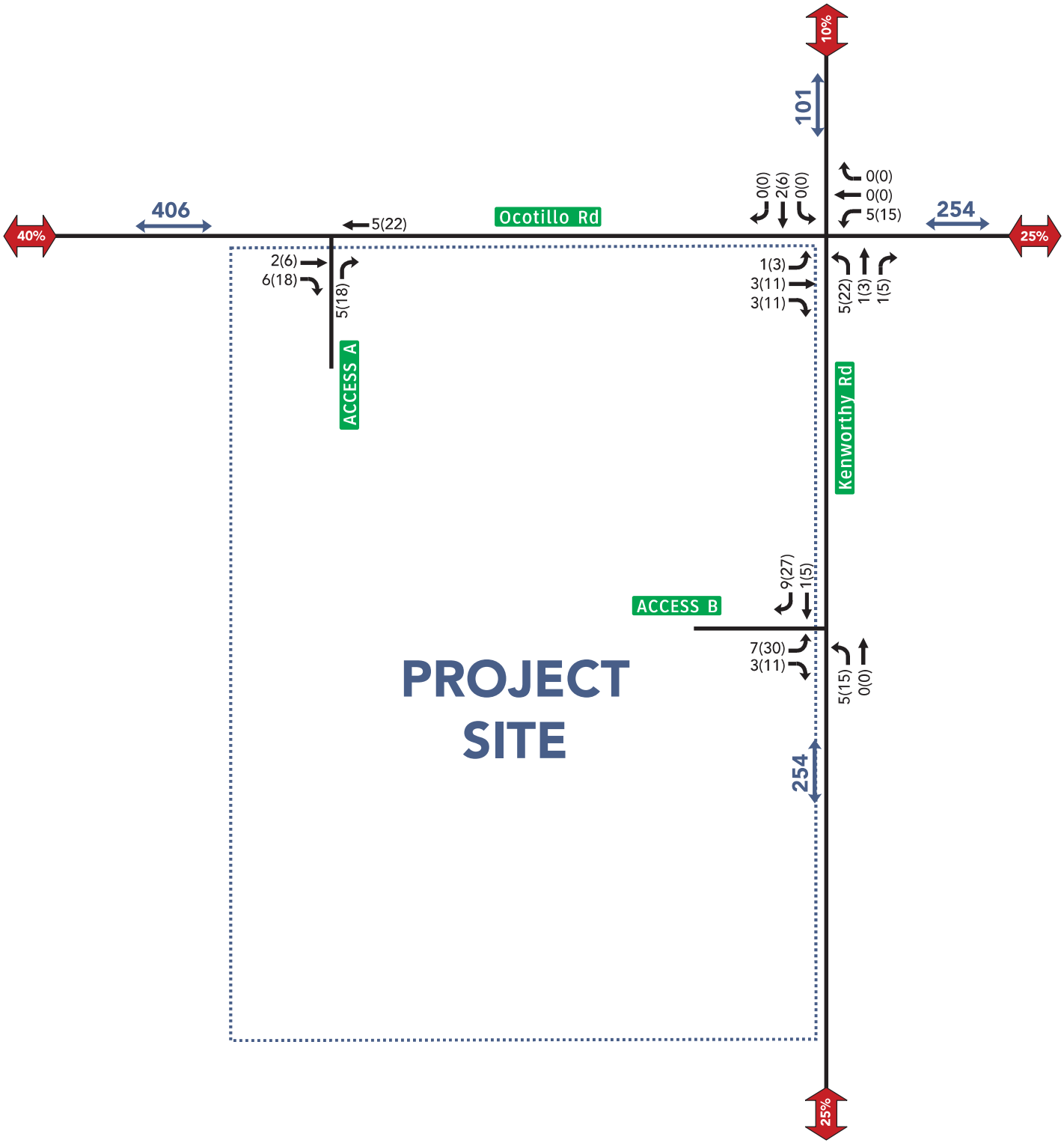
The trip distribution procedure determines the general pattern of travel for vehicles entering and leaving the subject site and the study area. The assumed trip distribution percentages for the development are shown in **Table 6**. For a development of this type, these percentages are mainly based on the type of land uses of the development, the location of the site within Pinal County, and the connectivity of the site to the region.

For the development, distribution of the trips is generally based on the roadway connectivity, residential areas, and employment centers within 15 miles of the development. Pinal County's Small Area Study was utilized to determine future land use surrounding the proposed development. Trips generated by the retail development were routed to and from future residential and employment areas.

Table 6: Trip Distribution Percentages

Direction	Distribution
Ocotillo Road west of the site	40%
Ocotillo Road east of Kenworthy Road	25%
Kenworthy Road north of Ocotillo Road	10%
Kenworthy Road south of site	25%

Figure 5 presents the assigned site generated traffic for full buildout of the proposed development.



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

X% Trip Distribution Percentage Daily

Daily Site Traffic

not to scale

UCG United Civil Group

Figure 5: Site Generated Traffic and Trip Distribution

C. Projected Background Traffic

Non-site or background traffic volumes representing the amount of traffic estimated to be on the area roadway network without the proposed development within the study area were projected for buildout of the development, year 2025. A yearly ambient growth rate for the area of three percent was assumed through each horizon year in addition to the two known future developments within the study area.

Capacity analyses at the existing study area intersections were performed for the forecasted background traffic for the horizon years of the study, as presented in **Figure 6**. **Table 7** below presents the background levels of service at the study area intersection without the proposed development.

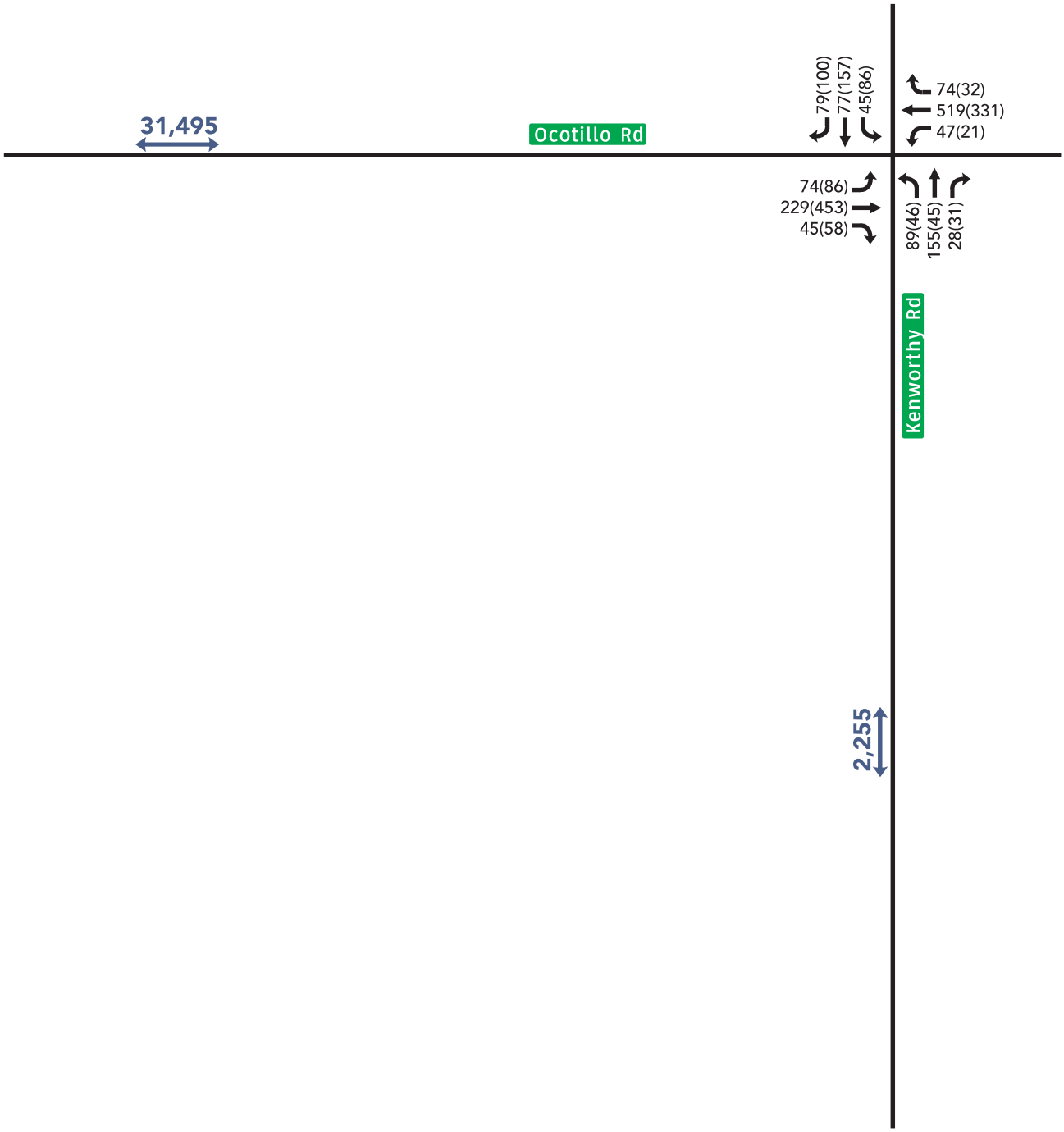
By 2025, it is assumed that the intersection of Kenworthy Road/Ocotillo Road will be signalized because the intersection currently meets signal warrants.

Complete capacity analyses are provided in **Appendix B.**

Table 7: 2025 Background Conditions Intersection Levels of Service

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Kenworthy Road/Ocotillo Road – Signalized																	
AM Peak Hour	C	D	D	D	C	D	D	D	A	A	A	A	A	B	B	B	20.92 C
PM Peak Hour	C	C	C	C	C	D	D	D	A	B	A	B	A	B	B	B	20.00 B

As background volumes continue to grow and intersection geometric improvements are made at the intersection of Kenworthy Road/Ocotillo Road, the study area intersection will operate at an acceptable LOS C or better, the morning and evening peak hours through the 2025 background condition year.



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

Average Daily Traffic (ADT)

N

not to scale

UCG
United Civil Group

Figure 6: Background Traffic - Year 2025

VI. TRAFFIC AND IMPROVEMENT ANALYSIS

The purpose of this section is to show the relations between traffic operations and roadway geometrics; identify needs pertaining to progressive traffic flow and safety; and identify alternatives for further consideration, where applicable.

A. Accessibility to Proposed development

Access to the New Retail Development and Indoor Batting Cages is provided by Kenworthy Road and Ocotillo Road:

- **Access A** is located on Ocotillo Road approximately 280 feet west of Kenworthy Road and is planned as a right in/right out only movement driveway.

- **Access B** is located on Kenworthy Road approximately 200 feet south of Ocotillo Road and 215 feet north of Quarter Horse Trail and is planned as a full movement driveway.

All site access points should be designed per Pinal County Subdivision & Infrastructure Design Manual. Per the Pinal County Access Management Manual Final Report dated February 2017, driveway spacing criteria per Table 1 (Access Management Manual) should be followed.

For full access, 360 feet is required on major and minor arterial roadways. Because 360 feet is not provided for driveway spacing or corner clearance, driveway A is limited to right in/right out only to avoid left turning conflicts on Ocotillo Road.

To provide site circulation and reduce U-turn conflicts at the intersection of Ocotillo Road/Kenworthy Road, Access B is proposed as a full movement driveway. For this access a waiver is requested to allow all movements.

Consideration was given to providing access on Quarter Horse Trail from the development. However, because this is a local residential road, approximately 16 feet in width and terminates to the west as a dead end with no cul-de-sac, this option is not viable or recommended.

Figure 8 illustrates the layout of the proposed development in relation to the location of the site access points.

B. Roadway and Intersection Geometric Improvements

The half-street cross section along Kenworthy Road on the site's eastern boundary should be constructed as part of the development. Kenworthy Road is noted as a minor arterial roadway on the mile segment. Therefore, per the Pinal County

Subdivision and Infrastructure Design Manual, Kenworthy Road should provide 55 feet of right-of- way measured centerline to right of way line.

The half-street cross section along Ocotillo Road on the site's northern boundary should be constructed as part of the development. Ocotillo Road is noted as a principal arterial roadway on the mile segment. Therefore, per the Pinal County Subdivision and Infrastructure Design Manual, Ocotillo Road should provide 75 feet of right-of- way measured centerline to right of way line.

With the construction of all new accesses, sight triangles shall be provided and maintained at all site accesses per the most current edition of the American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets and the Pinal County TIA Guidelines.

C. Auxiliary Lane Analyses

C.1. Right Turn Lane Warrants

Per Pinal County Traffic Impact Assessment Guidelines & Procedures dated January 2007, right-turn lanes are warranted based on the right lane warrant chart which incorporates the right turn volume, the design hourly volume of the roadway and the posted speed.

Utilizing 2025 total traffic volumes, exclusive right turn lanes are recommended on eastbound Ocotillo Road at Kenworthy Road, eastbound Ocotillo Road at Access A and on southbound Kenworthy Road at Access B.

C.2. Right Lane Queue and Storage Length Analysis

Per *Section 5.12 Queuing Analysis* of the Pinal County Traffic Impact Assessment Guidelines & Procedures dated January 2007, desirable minimum storage lengths for right turn lanes on arterials were calculated per Pinal County requirements. The queuing analysis was conducted for all turn lanes under stop or signal control using the methodology presented by the County.

Table 8 presents the calculated minimum queue lengths and recommended storage lane lengths for the right turn deceleration lanes at the study intersections and site accesses.

TABLE 8: RIGHT TURN LANE ANALYSIS

Location		Turn Volume 2025	Calculated Storage (feet)	Recommended Storage (feet)	Taper (feet)
On	At				
Ocotillo Road	Kenworthy Road	EB Right (69)	86	250	Continuous Turn Lane
Ocotillo Road	Access A	EB Right (33)	31	100	120
Kenworthy Road	Access B	SB Right (27)	25	50*	80*

*Reduced right turn storage and taper due to location of driveway.

D. TRAFFIC SIGNAL WARRANT ANALYSIS

The 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) was used as the primary tool to determine if a traffic signal is warranted at the intersection of Kenworthy Road/Ocotillo Road.

There are nine specific signal warrants in the MUTCD; however, not all warrants are applicable to this study. The warrants used in this analysis include:

Warrant 1 – Eight-Hour Vehicular Volume
Warrant 2 – Four-Hour Vehicular Volume

Appendix E presents the results of the signal warrant analyses.

Warrant 1 – Eight-Hour Vehicular Volume

The Minimum Vehicular Volume, Condition A, is intended for application where the volume of intersecting traffic from a side street or driveway is the principal reason for considering installation of a traffic signal. In this condition, the warrant would be satisfied when, for each of any eight hours of an average day, the traffic volumes on the major and minor approach are equal to or exceeds specified limits located on *Table 4C-1 Warrant 1 Eight-Hour Vehicular Volume* in the *MUTCD 2009*.

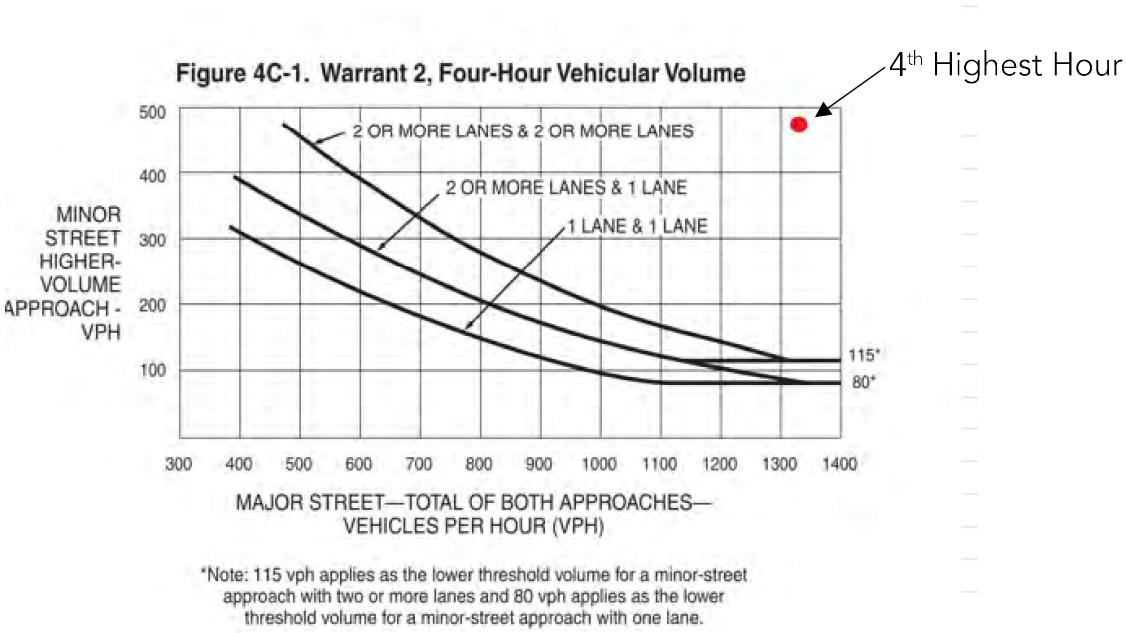
The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that the traffic on a minor intersection street or driveway has excessive delay or hazard in entering or crossing the major street. This warrant is met when, for each of any eight hours of an average day, the traffic volumes on the major and minor approach is equal to or exceeds specified limits located on *Table 4C-1 Warrant 1, Eight-Hour Vehicular Volume* in the *MUTCD 2009*.

Volume projections for the eight highest hours on an average day were determined by applying hourly adjustment factors calculated from the available peak hour turning movement count data.

Warrant 1 Results:
Kenworthy Road/Ocotillo Road – Warrant 1 is **met** for both Condition A and Condition B in the existing condition year of 2021.

Warrant 2 – Four-Hour Vehicular Volume

The four-hour vehicular volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. This warrant is satisfied when, for each of any four hours of an average day, plotted points representing vehicles per hour on the major street (total of both approaches) and the vehicles per hour on the minor street approach (one direction only) all fall above the appropriate curve located on *Figure 4C-2 Warrant 2, Four-Hour Vehicular Volume* in the *MUTCD 2009*.



Warrant 2 Results:
Kenworthy Road/Ocotillo Road – Warrant 2 is **met** in the existing condition year of 2021.

Signal Warrant Summary

Using existing traffic volumes for 2022 a traffic signal is warranted at the intersection of Kenworthy Road/Ocotillo Road.

The traffic signal warrant analyses within this TIA are based on existing traffic volumes and conceptual land plans, site access, and assumed land uses.

The developer is responsible for the completion of the signal design plans for the intersection. Developer is responsible for their proportional share of the signal costs based on the development: Ocotillo Road/Kenworthy Road – 25%

Geometric improvements may be necessary outside the project boundary to complete a signal design and accommodate exclusive left turn lanes on all approaches to the intersection.

E. Intersection Sight Distance

Proper intersection sight distance and sight triangles shall be provided and maintained at all site access driveways of the proposed development to give drivers exiting the site a clear view of oncoming traffic. The landscape and hardscape within the sight triangles must not obstruct the driver's view of the adjacent travel lanes. To ensure adequate sight distances and sight distance triangles are provided at the site access driveways per the most current edition of the American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets and the Pinal County TIA Guidelines.

F. Total Traffic

Total traffic projections for the horizon years were determined by adding the proposed development's site's generated traffic to the forecasted background traffic volumes for the corresponding phase. **Figure 7** presents the total traffic volumes during the morning and evening peak hours.

Capacity analyses at the study area intersections and site access intersections were performed using the recommended geometric infrastructure and forecasted total traffic for each horizon year of the study.

For the intersection of Ocotillo Road/Kenworthy Road a traffic signal is proposed but may not be installed by the study horizon 2025, therefore the unsignalized LOS is presented in **Table 9**. **Table 10** presents the total levels of service utilizing the recommended improvements. Complete capacity analyses are provided in **Appendix B**.

TABLE 9: 2025 TOTAL CONDITIONS INTERSECTION LEVELS OF SERVICE (WITHOUT IMPROVEMENTS)

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Kenworthy Road/Ocotillo Road – Unsignalized All Way Stop																	
AM Peak Hour	C	C	C	C	C	C	C	C	C	C	C	C	F	F	F	F	92.20 F
PM Peak Hour	B	B	B	B	C	C	C	C	F	F	F	F	F	F	F	F	65.29 F

*The overall LOS letter grade for one– and two-way stop-controlled intersections is shown as the worst approach.

TABLE 10: 2025 TOTAL CONDITIONS INTERSECTION LEVELS OF SERVICE (WITH IMPROVEMENTS)

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Kenworthy Road/Ocotillo Road – Signalized																	
AM Peak Hour	C	D	D	D	C	D	D	D	A	A	A	A	A	B	B	B	20.97 C
PM Peak Hour	C	C	C	C	C	D	D	D	A	B	B	B	A	B	B	B	20.61 C
Access A/Ocotillo Road – One-Way Stop Controlled																	
AM Peak Hour	-	-	B	B	-	-	-	-	-	A	A	A	-	A	-	A	10.37 B*
PM Peak Hour	-	-	B	B	-	-	-	-	-	A	A	A	-	A	-	A	13.05 B*
Kenworthy Road/Access B – One-Way Stop Controlled																	
AM Peak Hour	A	A	-	A	-	A	A	A	B	-	A	B	-	-	-	-	11.91 B*
PM Peak Hour		A	-	A	-	A	A	A	-	-	A	A	-	-	-	-	9.89 A*

*The overall LOS letter grade for one– and two-way stop-controlled intersections is shown as the worst approach.

Table 11 provides a comparison of the unsignalized intersection LOS to the signalized LOS and estimated delay for the approaches only at the intersection of Kenworthy Road/Ocotillo Road.

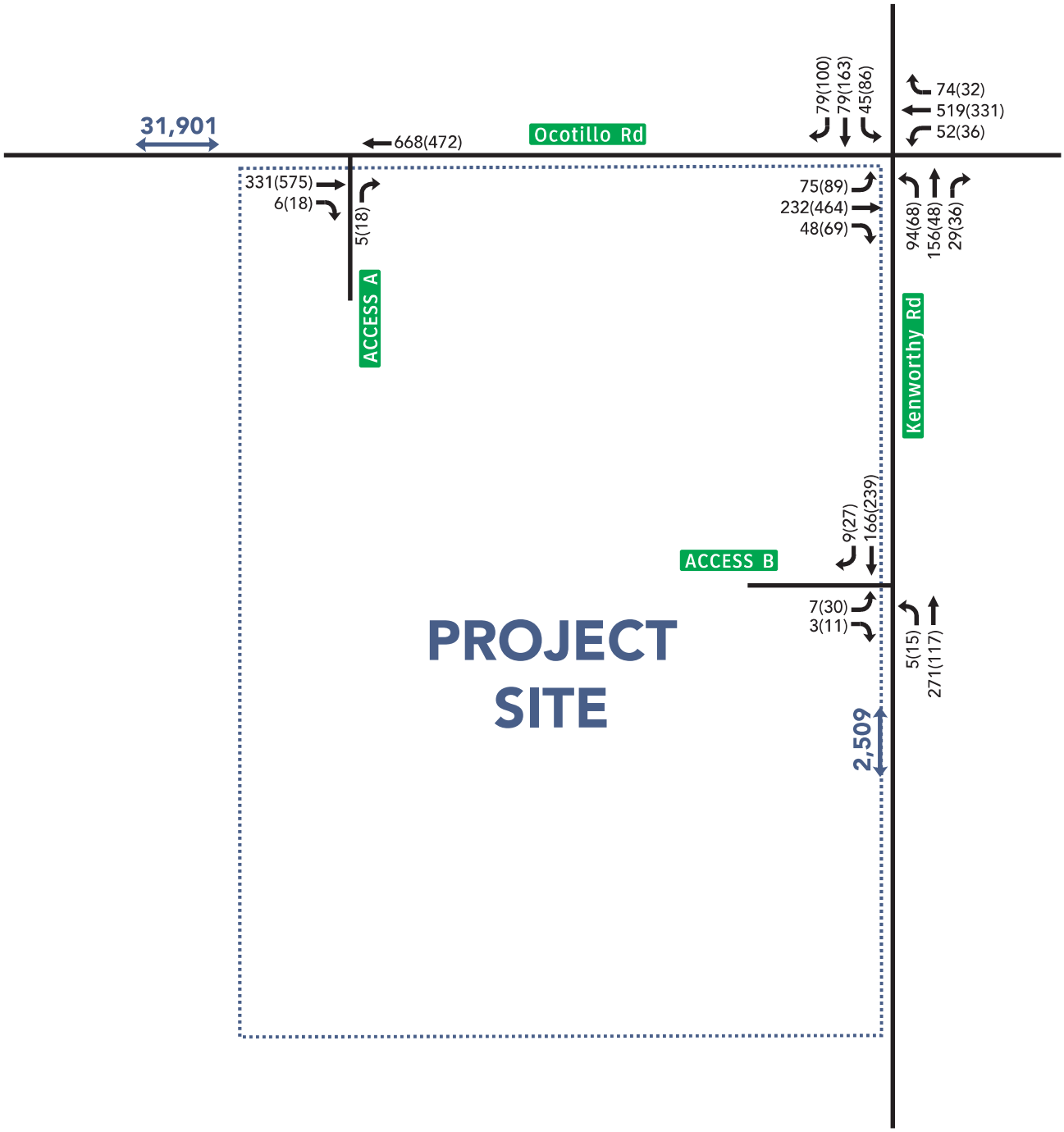
TABLE 11: LOS COMPARISONS FOR KENWORTHY ROAD/OCOTILLO ROAD

Intersection Location	NB Delay/LOS	SB Delay/LOS	EB Delay/LOS	WB Delay/LOS	Overall Intersection
Kenworthy Road/Ocotillo Road – Unsignalized All Way Stop					
AM Peak Hour	16.54 C	15.24 C	18.73 C	189.43 F	92.20 F
PM Peak Hour	14.82 B	24.49 C	108.00 F	53.38 F	65.29 F
Kenworthy Road/Ocotillo Road – Signalized					
AM Peak Hour	36.74 D	41.96 D	8.98 A	14.13 A	20.97 C
PM Peak Hour	**29.73 C**	**38.85 D**	**12.88 B**	**13.26 B**	**20.61 C**

The intersection of Kenworthy Road/Ocotillo Road will continue to operate with unacceptable delay if the traffic control remains as an all way stop as shown in Table 9.

Using the projected total traffic volumes for 2025 along with the recommended roadway improvements, the study area intersections are forecasted to operate at an LOS C or better during the peak periods.

For the intersection of Kenworthy Road/Ocotillo Road, it was assumed that in 2025 the signal would be installed as an interim condition and that interim widening of the intersection will include an exclusive left turn lane with a through right lane on the north-, south- and westbound approaches to the intersection. The eastbound approach to the intersection was modeled as its existing condition with an exclusive left, one through and dedicated right turn lane. When the intersection is constructed to its ultimate geometry the LOS at this intersection will improve when using the forecasted traffic volumes.



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

Average Daily Traffic (ADT)

N

not to scale

UCG United Civil Group

Figure 7: Total Traffic - Year 2025

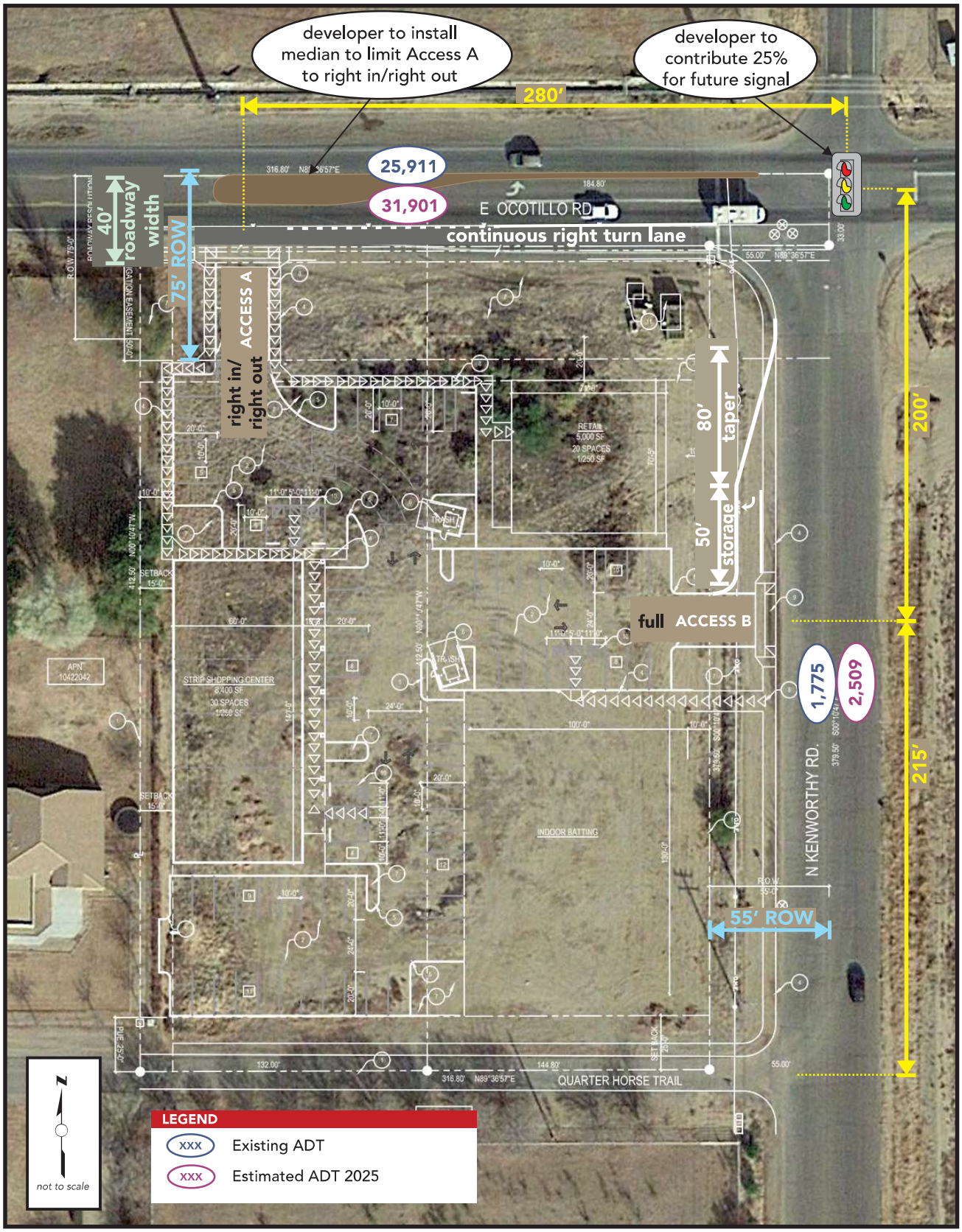


Figure 8: Driveway Spacing

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VII. CONCLUSIONS AND RECOMMENDATIONS

The proposed San Tan 3 (New Retail Development and Indoor Batting Cages) is a planned commercial/retail development located on the southwest corner of Ocotillo Road and Kenworthy Road. The commercial/retail development will include a strip retail plaza, retail outparcel, and indoor batting cages and is planned to be constructed in one phase with full occupancy by 2025.

The proposed San Tan 3 is planned to have two accesses. Access A, a right in/right out driveway, is the primary access into the development and planned to be located on Ocotillo Road approximately 280 feet west of Kenworthy Road, measured center of roadway to center of driveway. Access B will be secondary access and is planned as a full movement driveway. Access B located on Kenworthy Road approximately 200 feet south of Ocotillo Road, measured center of roadway to center of driveway.

After full build-out of the development, per ITE's *Trip Generation Manual 11th Edition,* San Tan 3 is forecasted to 1,015 total daily trips, with 35 trips in the morning peak hour and 118 trips in the evening peak hour.

Kenworthy Road and Ocotillo Road will be the main routes to San Tan 3. Per the Pinal County Community Development website, Kenworthy Road is classified as a minor arterial with 110 feet of right of way. In the future, Kenworthy Road will be developed with two lanes of traffic in each direction separated by a raised median. Therefore, half street improvements are planned along the site's eastern boundary. The half street cross section includes Kenworthy Road as a minor arterial roadway with 55 feet of right of way measured centerline to right of way line. Per the Pinal County Community Development website, Ocotillo Road is classified as a principal arterial with 150 feet of right of way. In the future, Ocotillo Road will be developed with three lanes of traffic in each direction separated by a raised median. Therefore, half street improvements are planned along the site's southern boundary. The half street cross section includes Ocotillo Road as a principal arterial roadway with 75 feet of right of way measured centerline to right of way line.

Using 2022 existing traffic counts, a traffic signal is warranted at the intersection of Kenworthy Road/Ocotillo Road. Therefore, a traffic signal at this intersection was analyzed in the background and total traffic conditions for the year 2025.

Through the 2025 total traffic conditions, all study area intersections operate at an acceptable LOS C or better. For the intersection of Kenworthy Road/Ocotillo Road, it was assumed that the signal will be installed as an interim condition and that ultimate widening of the intersection will not yet have occurred. When the intersection is constructed to its ultimate geometry, the LOS at this intersection will improve.

Proper intersection sight distance and sight triangles shall be provided and maintained at all site access driveways of the proposed development to give drivers exiting the site a clear view of oncoming traffic. The landscape and hardscape (monument signs) within the sight triangles must not obstruct the driver's view of the adjacent travel lanes.

Based on this TIA, the following roadway and intersection improvements are proposed.

BUILDOUT – 2025
By the New Development and Indoor Batting Cages

- Construct half street improvements on Kenworthy Road (minor arterial) along the site's eastern boundary. This improvement should provide 55 feet of right of way, measured from centerline to right of way line.
- Construct half street improvements on Ocotillo Road (principal arterial) along the site's northern boundary. This improvement should provide 75 feet of right of way, measured from centerline to right of way line.
- Construct a raised median on Ocotillo Road along the site's boundary. The raised median will limit Access A to right-in/right-out only.
- Install a continuous right turn deceleration lane on Ocotillo Road from Kenworthy Road west of Access A.
- Install a right turn deceleration lane on Kenworthy Road at Access B. Due to the configuration of the site and the available frontage on Kenworthy Road between Ocotillo Road and Quarter Horse Trail, the turn lane should be reduced to 50 feet of storage with an 80-foot taper.
- Install an interim two way left turn lane on Kenworthy Road within the vicinity of the site to accommodate northbound left turning vehicles at Ocotillo Road.
- Developer to contribute 25% to the cost of the signal at the intersection of Kenworthy Road/Ocotillo Road.

By Others

- Per the approved TIA for Elux Multifamily Development, the developer of the property is to contribute 25% toward the cost of the signal at the intersection of Kenworthy Road/Ocotillo Road. It is anticipated that Pinal County will contribute the remaining 50% of the signal cost because no known development is planned for the northeast or southeast corners of the intersection at this time.

VIII. LIMITATIONS

Our professional services have been performed using the degree of skill ordinarily exercised, under similar circumstances, by reputable transportation engineering firms practicing in this locality. No other warranty, expressed or implied, is made.

The contents of this report are intended for the sole use of the addressee and his/her designees. In completing this report, data was obtained from a variety of sources (i.e., City, County, State and Federal sources); United Civil Group has assumed these sources to be reliable and accurate. Should deviations from this report be noted, this firm shall be contacted for review of the area of concern.

A reasonable attempt was made to acquire recent traffic impact studies, traffic projections and/or data that may be helpful in more accurately projecting traffic volumes. United Civil Group is not responsible for incorporating data made available after this document has been finalized.

This report is issued with the understanding that it is the responsibility of the owner to see that its provisions are carried out or brought to the attention of those concerned. If any changes to the proposed project are planned, the conclusions and recommendations contained in this report shall be reviewed and the report shall be modified or supplemented, as necessary.

IX. SOURCES

Arizona Department of Transportation Traffic Engineering Guidelines and Processes, June 2015.

A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2018.

Highway Capacity Manual, HCM, Transportation Research Board, 2016.

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Pinal County Access Management Manual, February 24, 2017.

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Pinal County Small Area Transportation Study Final Report, August 2006.

Pinal County Subdivision & Infrastructure Design Manual.

Pinal County Traffic Assessment Guidelines & Procedures, January 2007.

Trip Generation, 11th Edition, Institute of Transportation Engineers, 2021.

Appendix A

United Civil Group

Turning Movement Count

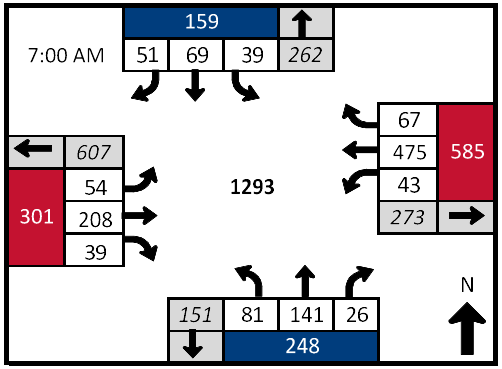
Project No: TR22095

Location: Kenworthy Road and Ocotillo Road

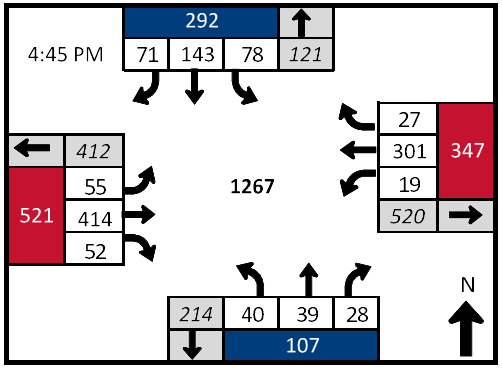
Intersection Configuration: Unsignalized

August 9, 2022 (Tuesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	25						1	
Southbound	25						1	
Eastbound	35	1		1		1		
Westbound	35	1			1			



	Kenworthy Road Northbound				Kenworthy Road Southbound				Ocotillo Road Eastbound				Ocotillo Road Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	21	37	8	0	9	19	14	0	21	48	8	0	17	109	16	0	327	
7:15 AM	27	45	4	0	7	15	10	0	6	43	13	0	7	114	11	0	302	
7:30 AM	15	34	6	0	6	25	13	0	11	51	7	0	12	130	22	0	332	
7:45 AM	18	25	8	0	17	10	14	0	16	66	11	0	7	122	18	0	332	1293
8:00 AM	17	11	4	0	13	13	25	0	13	70	10	0	7	90	5	0	278	1244
8:15 AM	7	7	6	0	4	9	13	0	8	59	6	0	5	73	9	0	206	1148
8:30 AM	20	9	3	0	9	7	6	0	6	65	6	0	10	81	8	0	230	1046
8:45 AM	11	9	4	0	6	4	5	0	5	66	7	0	6	79	5	0	207	921
Peak Hour Total	**81**	**141**	**26**	**0**	**39**	**69**	**51**	**0**	**54**	**208**	**39**	**0**	**43**	**475**	**67**	**0**	**1293**	



	Kenworthy Road Northbound				Kenworthy Road Southbound				Ocotillo Road Eastbound				Ocotillo Road Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	7	11	7	0	27	31	17	0	15	92	16	0	6	76	2	0	307	
4:15 PM	4	15	9	0	19	32	22	0	13	98	14	0	9	60	5	0	300	
4:30 PM	18	16	3	0	20	30	16	0	17	99	14	0	8	64	7	0	312	
4:45 PM	6	7	6	0	22	30	16	0	15	96	10	0	8	66	7	0	289	1208
5:00 PM	17	11	9	0	11	36	16	0	9	104	9	0	4	74	5	0	305	1206
5:15 PM	9	14	3	0	25	39	25	0	17	112	14	0	3	81	7	0	349	1255
5:30 PM	8	7	10	0	20	38	14	0	14	102	19	0	4	80	8	0	324	1267
5:45 PM	10	4	9	0	13	25	13	0	13	83	8	0	5	73	6	0	262	1240
Peak Hour Total	**40**	**39**	**28**	**0**	**78**	**143**	**71**	**0**	**55**	**414**	**52**	**0**	**19**	**301**	**27**	**0**	**1267**	

Appendix B

Intersection Level Of Service Report
Intersection 1: Kenworthy Road & Ocotillo Road

Control Type:	All-way stop	Delay (sec / veh):	73.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.252

Intersection Setup

Name	Kenworthy Road			Kenworthy Road						Ocotillo Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Kenworthy Road			Kenworthy Road						Ocotillo Road		
Base Volume Input [veh/h]	81	141	26	39	69	51	54	208	39	43	475	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	141	26	39	69	51	54	208	39	43	475	67
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	39	7	11	19	14	15	58	11	12	132	19
Total Analysis Volume [veh/h]	90	157	29	43	77	57	60	231	43	48	528	74
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	473	463	452	482	532	445	602
Degree of Utilization, x	0.58	0.38	0.13	0.48	0.08	0.11	1.25

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.67	1.77	0.46	2.55	0.26	0.36	24.38
95th-Percentile Queue Length [ft]	91.72	44.29	11.39	63.85	6.57	9.00	609.55
Approach Delay [s/veh]	20.78	15.53	15.09			142.48	
Approach LOS	C	C	C			F	
Intersection Delay [s/veh]	73.86						
Intersection LOS	F						

Intersection Level Of Service Report
Intersection 1: Kenworthy Road & Ocotillo Road

Control Type:	All-way stop	Delay (sec / veh):	38.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.955

Intersection Setup

Name	Kenworthy Road			Kenworthy Road						Ocotillo Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Kenworthy Road			Kenworthy Road						Ocotillo Road		
Base Volume Input [veh/h]	40	39	28	78	143	71	55	414	52	19	301	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	39	28	78	143	71	55	414	52	19	301	27
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	11	8	22	40	20	15	115	14	5	84	8
Total Analysis Volume [veh/h]	44	43	31	87	159	79	61	460	58	21	334	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	412	456	450	482	533	404	432
Degree of Utilization, x	0.29	0.71	0.14	0.96	0.11	0.05	0.84

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.17	5.56	0.47	11.85	0.36	0.16	8.19
95th-Percentile Queue Length [ft]	29.18	139.12	11.64	296.35	9.10	4.10	204.65
Approach Delay [s/veh]	15.21	28.22	48.10			40.45	
Approach LOS	C	D	E			E	
Intersection Delay [s/veh]	38.66						
Intersection LOS	E						

Intersection Level Of Service Report
Intersection 1: Kenworthy Road & Ocotillo Road

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

Intersection Setup

Name	Kenworthy Road			Kenworthy Road						Ocotillo Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Kenworthy Road			Kenworthy Road						Ocotillo Road		
Base Volume Input [veh/h]	81	141	26	39	69	51	54	208	39	43	475	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0927	1.0927	1.0927	1.0927	1.0927	1.0927	1.0927	1.0927	1.0927	1.0927	1.0927	1.0927
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	1	0	2	2	23	15	2	2	0	0	1
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	89	155	28	45	77	79	74	229	45	47	519	74
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	43	8	13	21	22	21	64	13	13	144	21
Total Analysis Volume [veh/h]	99	172	31	50	86	88	82	254	50	52	577	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	25	0	9	20	0	11	47	0	9	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	21	13	21	11	61	54	54	61	53
g / C, Green / Cycle	0.23	0.15	0.23	0.12	0.68	0.60	0.60	0.68	0.59
(v / s)_i Volume / Saturation Flow Rate	0.07	0.11	0.04	0.10	0.09	0.14	0.03	0.05	0.36
s, saturation flow rate [veh/h]	1420	1821	1341	1717	880	1870	1589	1140	1830
c, Capacity [veh/h]	332	267	308	213	529	1113	946	820	1074
d1, Uniform Delay [s]	28.63	36.88	27.88	38.44	7.81	8.54	7.62	4.97	12.01
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	4.43	0.24	7.56	0.62	0.48	0.11	0.03	2.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.76	0.16	0.82	0.15	0.23	0.05	0.06	0.61
d, Delay for Lane Group [s/veh]	29.12	41.31	28.12	46.01	8.44	9.02	7.73	5.01	14.63
Lane Group LOS	C	D	C	D	A	A	A	A	B
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.76	4.55	0.87	4.17	0.53	2.27	0.40	0.27	8.20
50th-Percentile Queue Length [ft/ln]	44.00	113.63	21.84	104.35	13.25	56.80	10.03	6.71	205.05
95th-Percentile Queue Length [veh/ln]	3.17	8.04	1.57	7.51	0.95	4.09	0.72	0.48	12.90
95th-Percentile Queue Length [ft/ln]	79.19	201.04	39.32	187.84	23.86	102.24	18.05	12.08	322.47