



**PUBLIC NOTICE
PLANNING & ZONING COMMISSION**

Meets

Wednesday, January 15, 2025

6:00 PM

**ELOY CITY COUNCIL CHAMBERS
595 NORTH C STREET
ELOY, ARIZONA 85131**

AGENDA

- I. Call to Order**
- II. Roll Call**
- III. Pledge of Allegiance**
- IV. Motion to approve the December 18, 2024, meeting minutes of the Planning and Zoning Commission**
 - A. December 18, 2024, Regular Meeting Minutes of the Planning and Zoning Commission.
- V. New Business: Possible discussion and/or action on the following:**
 - A. Case No. CSP2024-001: Exceptional Health Care Hospital-Comprehensive Sign Package and Master Sign Program. Conduct a public hearing and make recommendations to the Eloy City Council on the applicant's request for a Comprehensive Sign Package and Master Sign Program proposed to be used on an approximately 10-acre site zoned Light Industrial (I-1) Zoning District, and located at 340 E. Milligan Road.
 - B. Case No. RZPAD2024-006: Sonoran Crossing: Conduct a public hearing and make a recommendation to the Eloy City Council on an application request to rezone approximately 122 acres located at the southwest corner of W. Houser Road and N. Estrella Road from General Industrial (I-2) to General Industrial (I-2) with the Planned Area Development (PAD) Overlay.
- VI. Non-action: Presentation and possible discussion and public comments on the following:**
 - A. Update to the Airport Master Plan
- VII. Informational Item:**
 - A. Planning and Zoning Commission members and staff will give updates on relevant events and activities they have attended since the last meeting and any future events, activities, and potential agenda items. These items are for information only - no action will be taken.
- VIII. Motion to Adjourn**

POSTED BY FRIDAY, JANUARY 10, 2025, AT ELOY CITY HALL, ELOY POST OFFICE, AND CITY WEBSITE: www.elayaz.gov

THE FACILITY WILL BE OPEN TO THE PUBLIC 30 MINUTES PRIOR TO THE START OF THE MEETING AND SEATING WILL BE AVAILABLE FOR “REASONABLY ANTICIPATED ATTENDANCE.”

A handwritten signature in black ink, reading "Mary Myers", is written over a horizontal line.

Mary Myers, MMC, CPM
City Clerk

INDIVIDUALS WITH SPECIAL ACCESSIBILITY NEEDS MAY CONTACT LORENA LaSALDE-RIOS, ADA COORDINATOR FOR THE CITY OF ELOY AT 520-466-9201 OR 520-466-7455 (TDD). IF POSSIBLE, SUCH REQUESTS SHOULD BE MADE 72 HOURS IN ADVANCE. ONE OR MORE MEMBERS OF THE COMMISSION AND/OR STAFF MAY PARTICIPATE BY TELEPHONIC OR VIDEO MEANS.

CITY OF ELOY
REQUEST FOR COUNCIL ACTION

Agenda Item: **IV.A.**

Date: **1/15/2025**

Date submitted:
01/06/2025

Action: Other

Subject: December 18, 2024, Regular
Meeting Minutes of the Planning and
Zoning Commission.

Date requested:
1/15/2025

TO: Planning and Zoning Commission

FROM:

RECOMMENDATION:

DISCUSSION:

FISCAL IMPACT:



**ELOY PLANNING AND ZONING COMMISSION
CITY HALL
595 NORTH C STREET
ELOY, AZ 85131
Regular Meeting
WEDNESDAY, DECEMBER 18, 2024
SUMMARIZED MEETING MINUTES**

PRESENT:

Chairperson Steven Paulson
Vice-Chairperson Conrad Tolson
Commissioner Edward Saucedo
Commissioner Allen Crawford (Via-telephone)

ABSENT: Ex-Officio Andrew Sutton (Excused)

STAFF: Dan Symer, Community Development Director
Belinda Cota, Planner

I. Call to Order

Chairperson Steven Paulson called the meeting to order at 6:01 p.m.

II. Roll Call

*One or more Planning and Zoning Commission members may attend by telephone.
As stated above, a formal roll call was conducted to confirm the members present.

III. Pledge of Allegiance

Chairperson Paulson led the recitation of the Pledge of Allegiance.

IV. Motion to approve the September 18, 2024, regular meeting minutes of the Planning and Zoning Commission

Chairperson Paulson asked for a motion to approve the Planning and Zoning Commission's September 18, 2024 meeting minutes. Commissioner Saucedo moved to approve the September 18, 2024, Regular meeting minutes, seconded by Vice-chairperson Crawford; the motion was carried out by a vote of three (3) to one (1). Yes: Chairperson Paulson, Commissioner Saucedo, and Commissioner Crawford. Nays: Vice-Chairperson Toldson (did not attend the meeting.)

V. New Business: Possible discussion and/or action on the following:

Note: These are summary action minutes only. A complete copy of the meeting audio is available on the City of Eloy website, search agendas, minutes and public notices: [Agendas, Minutes & Public Notices | Eloy, AZ - Official Website \(loyaz.gov\)](https://www.loyaz.gov)

- A. Request by the applicant to continue Case No. RZPAD2024-006: Sonoran Crossing to the January 15, 2025, Planning and Zoning Commission hearing. The application is a request to rezone approximately 122 acres located at the southwest corner of W. Houser Raod and N. Estrella Road from General Industrial (I-2) to General Industrial (I-1) with a Planned Area Development Overlay (PAD).**

Commissioner Crawford moved to continue Case No. **RZPAD2024-006**. Second, by Commissioner Saucedo, the motion was carried out by a vote of four (4) to zero (0) by Chairperson Paulson, Vice-chairperson Toldson, Commissioner Crawford, and Commissioner Saucedo.

- B. Conduct a public hearing and make a recommendation to the Eloy City Council on Case No. RZPAD2006-037.A1: Picacho View I Planned Area Development-Poblano Solar Project, proposing an Amendment to the Picacho View I Planned Area Development to permit Solar, Utility Scale Generation, and Battery Energy Storage System facilities as an allowed land use in all underlying zoning districts of the PAD. The development will be located on approximately 816 acres of land.**

Chairperson Paulson opened the public hearing. Mr. Andrew Yancey with Bergin, Frakes, Smalley & Oberholtzer, PLLC introduced himself and gave a PowerPoint presentation. After there were no further questions, Chairperson Paulson closed the public hearing.

Commissioner Crawford moved to approve Case No. **RZPAD2006-037.A1**. Second, by Commissioner Saucedo, the motion was carried out by a vote of three (3) to one (1) by Chairperson Paulson, Commissioner Crawford, and Commissioner Saucedo. Nays: Commissioner Toldson.

- C. Conduct a public hearing and make a recommendation to the Eloy City Council on Case No. RZPAD2024-001.A2: Eloy Valley Specific Plan PAD-Poblano Solar, proposing an Amendment to the Eloy Valley Specific Plan Planned Area Development to permit Solar, Utility Scale Generation, and Battery Energy Storage System facilities as an allowed land use in all underlying zoning districts of the PAD. The development will be located on approximately 122 acres of land.**

Chairperson Paulson opened the public hearing. Mr. Andrew Yancey with Bergin, Frakes, Smalley & Oberholtzer, PLLC introduced himself and gave a PowerPoint presentation. After there were no further questions, Chairperson Paulson closed the public hearing.

Commissioner Crawford moved to approve Case No. **RZPAD2024-001.A2**. Second, by Commissioner Saucedo, the motion was carried out by a vote of three (3) to zero (0) by

Chairperson Paulson, Vice-chairperson Toldson, Commissioner Crawford, and Commissioner Saucedo.

VI. Old Business: Possible discussion and/or action on the following:

None.

VII. INFORMATIONAL ITEM:

A. Planning and Zoning Commission members and staff will give updates on relevant events and activities they have attended since the last meeting and any future events, activities, and potential agenda items. These items are for information only – no action will be taken.

- The City is accepting letters of interest to serve the new Planning and Zoning Commission. Those who are interested should email Mrs. Belinda Cota. The sub-commission is anticipated to be formed in January, with appointments in February, and the first meeting in March will be held with the new Planning and Zoning Commission.
- Staff thanked the Commissioners for their participation and attendance at the meetings.
- General Plan Update
 - Monday, January 13, 2025, approval of the General Plan Update contract
 - Wednesday, January 29, 2025, kick-off meeting.
 - Third Wednesday in February or March 2025, New Planning Commission meeting.
- RFQ for the City of Eloy Airpark Area. One of the first actions by the new Planning Commission will be the approval of the Master Plan for the Airpark.

VIII. MOTION TO ADJOURN

With no further business to discuss, the Planning and Zoning Commission meeting adjourned at 6:31 p.m.

CITY OF ELOY

REQUEST FOR COMMISSION ACTION

Agenda Item: **V.A.**

Date: **1/15/2025**

Date submitted:
01/03/2025

Action: Other

Subject: Case No. CSP2024-001:
Exceptional Health Care Hospital-
Comprehensive Sign Package and
Master Sign Program. Conduct a
public hearing and make
recommendations to the Eloy City
Council on the applicant's request for
a Comprehensive Sign Package and
Master Sign Program proposed to be
used on an approximately 10-acre site
zoned Light Industrial (I-1) Zoning
District, and located at 340 E. Milligan
Road.

TO: Planning and Zoning Commission

FROM: Dan Symer, Belinda Cota

RECOMMENDATION:

Staff recommends that the Planning and Zoning Commission provide a recommendation of approval to the City Council for Case No. CSP2024-001: Exceptional Health Care Hospital-Comprehensive Sign Package and Master Sign Program.

DISCUSSION:

Request

The applicant, Associated Sign Company (c/o Jason Shano) on behalf of S9942, LLC, is requesting approval of a Comprehensive Sign Package and Master Sign Program that contains a freeway pylon sign and modification to the sign development standards. In accordance with Section 21-4-3.9.G.1. zoning ordinance, the comprehensive sign packages that include freeway pylon sign(s) are required to receive approval from the City Council, as does amendments to sign development standards of a Master Sign Program (Section 21-6-10.3). The proposed plan requests a Freeway Polyon sign on a modified site area of approximately 10-acre site (ordinance minimum is 20 acres), to allow two signs facing Milligan Road (ordnance allows one per street frontage) and, as indicated in the table below, modifications to the maximum sign height and an approximate 6% increase (20 square feet (sf)) in size area.

SIGN TYPE	SIGN COPY	SIGN SIZE	PROPOSED SIGN HEIGHT STANDARD	ORDINANCE ALLOWED SIGN HEIGHT STANDARD	PROPOSED SQUARE FEET
Freeway Pylon	Exceptional Health Community Hospital Emergency	8' X 12'	80'	80'	96 sf
Wall Mounted	Exceptional Health Community Hospital	4.75' X 25.66'	26'-6"	25'	121.89 sf
Wall Mounted	Ambulance	1.15' X 10'	15'-0"	25'	11.50 sf
Wall Mounted	ER	7.5' X 4'	34'-6"	25'	30 sf
Wall Mounted	ER	7.5' X 4'	34'-6"	25'	30 sf
Free Standing / Directional	Hospital / Ambulance	3' X 5'	3'X3"	8'	15 sf
Free Standing / Directional	Hospital / Ambulance	3' X 5'	3'X3"	8'	15 sf
				Total Square Feet of Area Proposed:	319.39 sf
				Total Square Feet of Area Allowed by Ordinance:	300 sf

Master Sign Program Required Findings:

The Planning and Zoning Commission may recommend, and City Council approve a Master Sign Program as submitted or modified only upon making the following findings (Staff analysis of the considerations included in bold italic text and the applicant's analysis is included in their narrative, attached):

A. The proposed sign program only amends provisions in section 21-4-3, "Signage", of this chapter and does not violate any other provisions of this chapter or any other City ordinance.

- ***The proposed amendment and the allowance of the Freeway Pylon Sign are limited to the sign regulations of the Zoning Ordinance.***

B. The appearance, scale, materials, design and graphics, and orientation of signs are in keeping with the character of the site and buildings, and the surrounding neighborhood.

- ***The proposed design of the signs, their locations, and their size preserves the intent of the sign ordinance and provides a proportional relationship with the building, its features, and the surrounding area. Furthermore, the addition of a Freeway Pylon Sign allows for the hospital and emergency room signage to be visible from Interstate 10 and maintains a consistent height with other Freeway Pylon Signs.***

C. Approval of the master sign program would not be detrimental to the public interest, health, safety, convenience, or welfare, or materially injurious to persons, property, or improvements in the vicinity in which the project is located.

- ***The proposed sign plan is not anticipated to be detrimental to the public interest, health, safety, convenience, or welfare, or materially injurious to persons, property, or improvements in the vicinity.***

FISCAL IMPACT:

There is no anticipated fiscal impact from this request.

Comprehensive Sign Package
Case No. CSP2024-001



SITE

S Sunshine Blvd

E Milligan Rd



SIGN PERMIT APPLICATION

GENERAL DATA REQUIRED

Development/Project Name:
EXCEPTIONAL HEALTH

Assessor's Parcel Number(s):
41110021D,41110020D,41110017K

Current General Plan Land Use Designation:

Gross Area (Acre/Sq. Ft.):
110.88 ACRES

Current Property Zoning:
COMMERCIAL

Project Location
340 E MILLIGAN ROAD ELOY, AZ 85131

Current Land Use:
VACANT

Description of Project
EMERGENCY ROOM

Proposed Land Use:
COMMERCIAL

PROPERTY OWNER INFORMATION

Owner Name:
S9942 LLC

Company:
S9942 LLC

Street Address:
3514 CEDAR SPRINGS RD

Phone:
972-739-6547

City:
DALLAS

State:
TX

Zip Code:
75219

E-Mail:
JROBERTSON@PATTISONID.COM

APPLICANT / AGENT REPRESENTATIVE INFORMATION

Name:
JASON SHANO

Company:
ASSOCIATED SIGN COMPANY

Street Address:
3335 W. VERNON AVE

Phone:

City:
PHOENIX

State:
AZ

Zip Code:
85009

E-Mail:
JMS@ASCOSIGNS.COM

Applicant Signature:
Jason Shano

Date:
11/19/2024

A pre-application request must be submitted, and a pre-application meeting must be held before the submission of this application (Section 21-6-2.1.A. of the Eloy Code) — unless the Zoning Administrator waives a pre-application in writing per section 21-6-2.1.D. of the Eloy Code. Before submitting an application, the applicant must receive a submittal checklist signed and dated by the Community Development Director or the City Planner. Applications submitted without the aforementioned will be deemed incomplete, and not accepted for review.

FOR OFFICE USE ONLY

Accepted By:

Submittal Date:
12/26/2024

Fees:
\$900

CASE NO:
CSP2024-001

Receipt Confirmation No.

218662448

Fees Paid:
12/26/2024 - 3:58:16 PM MT

GL# 10-319-0120

Property Owner's Permission Form

**If multiple property owners exist, each owner shall complete an Owner's Permission Form.*

Property address: 340 E MILLIGAN ROAD ELOY, AZ 85131

A.P.N.(s): 41110021D,41110020D,41110017K

I, the undersigned, I am the owner of the land specified above, or I am the duly and lawfully appointed agent of the owner of the land and have authority from the owner to sign this affidavit on the owner's behalf. I do hereby grant permission act on my behalf for the planning and zoning/permit application to the following Applicant / Agent Representative(s):

Authorized Owner(s)/Representative Name (Print or Type): Robert Kunkel

Authorized Owner/Representative's (Print or Type): _____

Company, Corporation, Trust, etc. Name (Print or Type): Exceptional Healthcare

Signature: _____

STATE OF TEXAS)

) ss

County of DALLAS)

On this 22nd day of November 2024, before me, the undersigned Notary Public, personally appeared Robert Kunkel, known to me to be the person(s) whose name is subscribed to the within this instrument and acknowledged that _____

executed the same.

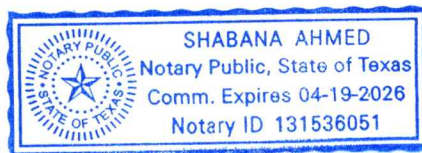
IN WITNESS WHEREOF, I hereto set my hand and official seal.

My commission expires:

04/19/2026

Shabana

Notary Public





Exceptional Community Hospital - Eloy, AZ
MSP Narrative

We are requesting approval of a master sign plan for the Exceptional Community Hospital development located at 340 E Milligan Rd. This is a new development of a community hospital and emergency room. Given the nature of a hospital and emergency room signage is extremely important in guiding people in the right direction as time is a factor. We are requesting approval of a MSP to include a freeway pylon sign that is 80 feet tall to help guide traffic coming in from the I-10 freeway. The sign face will be 8 feet tall by 12 feet wide so the site can be easily identified. In addition to the pylon sign there will be (2) small directional signs located at each entry drive into the Hospital to guide traffic as you near the entry points. The sign package will also include (4) building mounted wall signs. One of those signs will brand the hospital by name over the main entrance. There will be (2) ER signs located on the building fin element to let people know it is an emergency facility. Lastly, there will be an ambulance sign over the ambulance entry point to help guide emergency vehicles to the correct location to get emergency care.

This MSP would only amend the provisions in section 21-4-3 and does not violate any other provisions of this chapter. The appearance of the signs are keeping with the character of the hospital development, the sizing of the signs are appropriate for the areas of the building they occupy and colors are complimentary to the building. Approval of the MSP will in no way be detrimental to the public interest, health, safety, convenience, or welfare or materially injurious to persons, property, or improvements within the vicinity in which the project is located. In fact the approval of the MSP will be a direct benefit to the public health and safety interests as it will provide the necessary identification and wayfinding for a hospital emergency room.

We formally request approval of the MSP as submitted. Please feel free to contact me with any questions.

Respectfully,

A handwritten signature in black ink that reads "Jason Shano". The script is fluid and cursive, with the first letter of "Jason" being a large, stylized capital 'J'.

Jason Shano
P: 602-278-8464
E: jms@ascosigns.com

SIGN TYPE	SIGN DESIGNATION	SIGN HEIGHT	SIGN DIMENSIONS	ILLUMINATED	SIGN COPY
PYLON	A	80'	8' X 12'	Y	EXCEPTIONAL HEALTH COMMUNITY HOSPITAL EMERGENCY
GROUND DIRECTIONAL	G	3.25'	3' X 5'	Y	HOSPITAL / AMBULANCE
GROUND DIRECTIONAL	H	3.25'	3' X 5'	Y	HOSPITAL / AMBULANCE
BUILDING WALL SIGN	B		4.75' X 25.66'	Y	EXCEPTIONAL HEALTH COMMUNITY HOSPITAL
BUILDING WALL SIGN	C		7.5' X 4'	Y	ER
BUILDING WALL SIGN	D		7.5' X 4'	Y	ER
BUILDING WALL SIGN	F		1.15' X 10'	Y	AMBULANCE

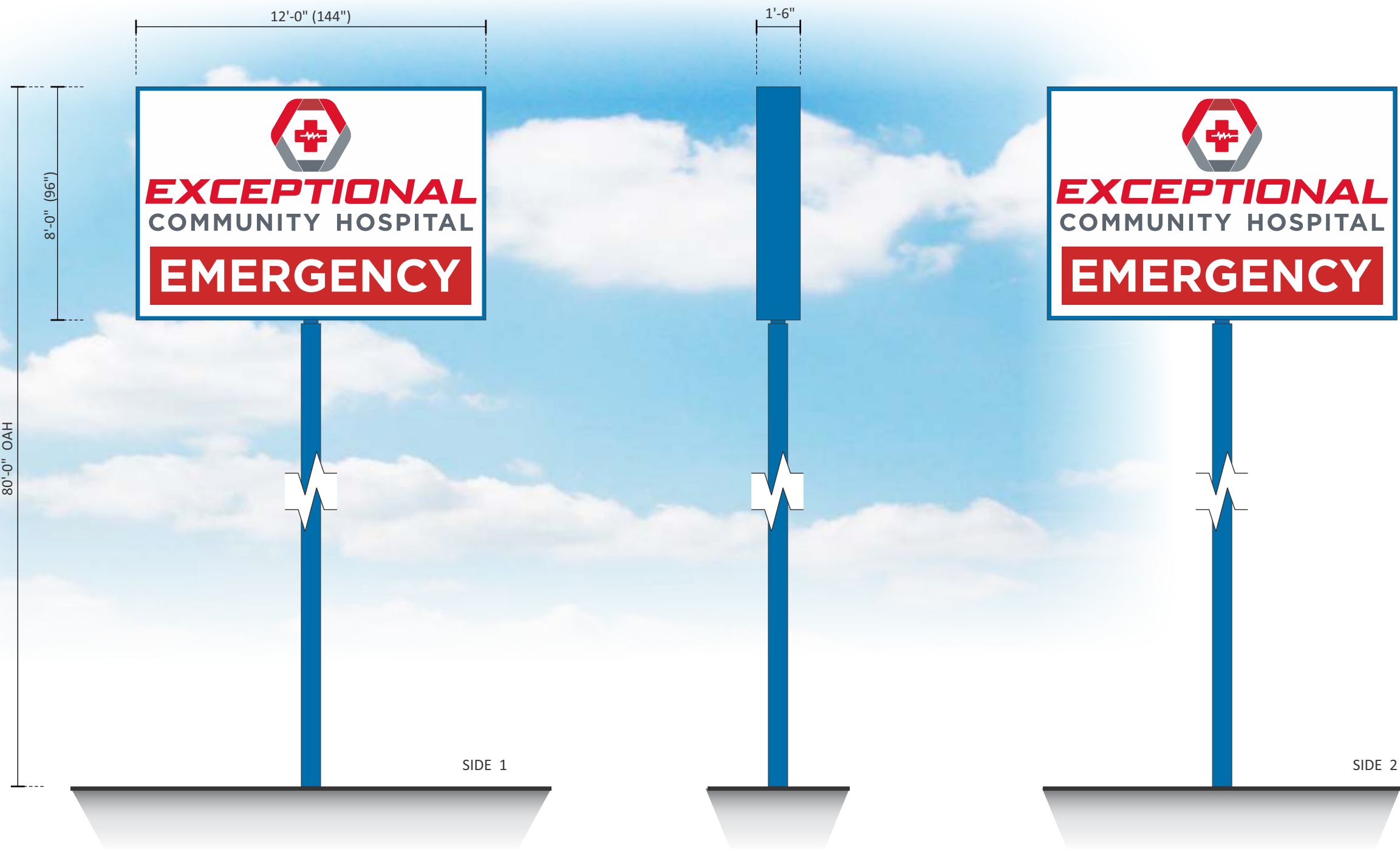
EXCEPTIONAL
COMMUNITY HOSPITAL

Design Proposal

PROJECT ID:	042464A
CLIENT:	EXCEPTIONAL COMMUNITY HOSPITAL
ADDRESS:	340 E. MILLIGAN RD ELOY, AZ
DATE:	09/26/2024
CONTACT:	WF / JR
DESIGNER:	SDM



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214.902.2000 chandlersigns.com



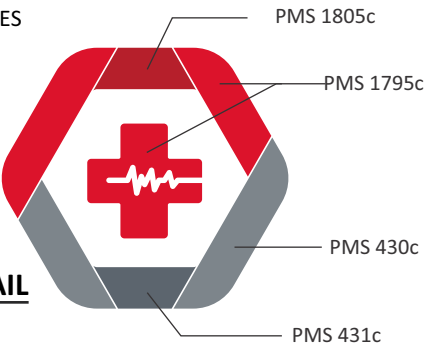
A D/F ILLUMINATED PYLON SIGN SCALE: 1/4" = 1'-0"
ONE [1] REQUIRED - MANUFACTURE & INSTALL 96.00 Sq.Ft.

12' X 8' FLEX FACE PYLON SIGN TO BE PAINTED SW6959 BLUE CHIP
18" WIDE CABINET WITH RETAINERS PTM BLUE CHIP
FLEX FACES (DOUBLE SIDED) WHITE ILLUMINATION WITH
SIGN COMP EXTRUSION CLIP SYSTEM
NEW STEEL POLE PAINTED BLUE CHIP TO MATCH BRAND STANDARDS
3M WHITE FLEXIBLE BLEED SUBSTRATE w/ 1st SURFACE DIGITALLY-PRINTED
GRAPHICS & UV OVERLAMINATE - 7 YEAR WARRANTY (SEE COLORS)
REMOTE POWER SUPPLIES - PRIMARY TO POLE LOCATION BY GC

SIDE SECTION
REMOTE POWER SUPPLIES

OPPOSITE SIDE VIEW

LOGO COLOR DETAIL



- 3M 6959 BLUE CHIP
- PMS 1795
- PMS 1805
- WHITE

Project ID
042464Ar1

**EXCEPTIONAL
COMMUNITY HOSPITAL**
340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024

Contact: WF / JR

Designer: SDM

Sign Item

ILLUM. PYLON SIGN

Scale: 1/4" = 1'-0"

Revision Note

R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site
plan

**Information Required
for Production**

Customer Approval

Signature

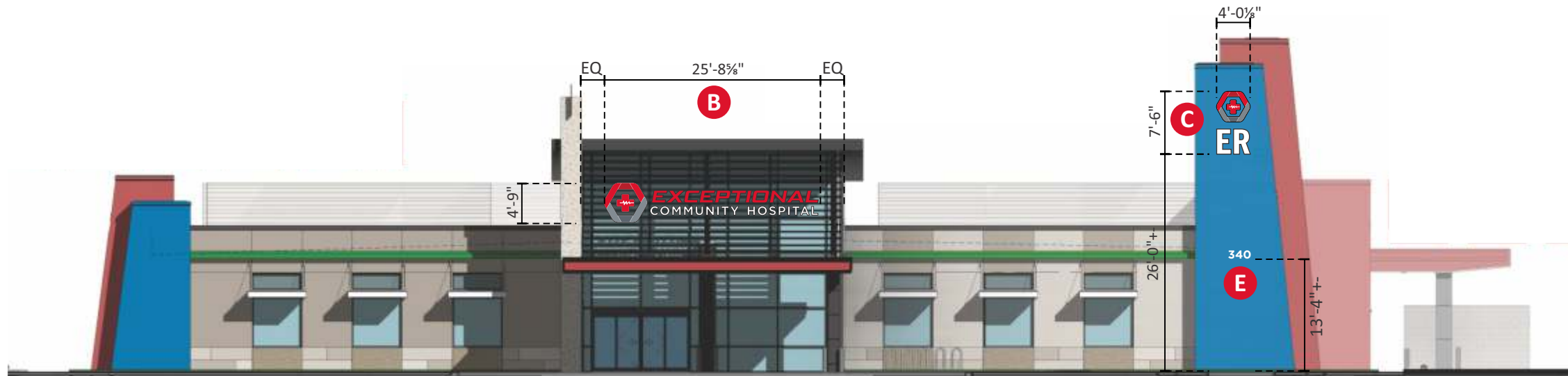
MM/DD/YYYY

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It is the Customer's responsibility to ensure that the sign installation location is suitable to accept and support the installation of the signs being ordered. Notify Pattison ID immediately if further details are required.



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214.902.2000 chandler signs.com



SOUTH ELEVATION SCALE: 1/16"=1'-0"



EAST ELEVATION SCALE: 1/16"=1'-0"



NORTH ELEVATION SCALE: 1/16"=1'-0"

Project ID
042464Ar1

**EXCEPTIONAL
COMMUNITY HOSPITAL**
340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024
Contact: WF / JR
Designer: SDM

Sign Item

ELEVATIONS

Scale: 1/16" = 1'-0"

Revision Note

R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site
plan

**Information Required
for Production**

Customer Approval

Signature

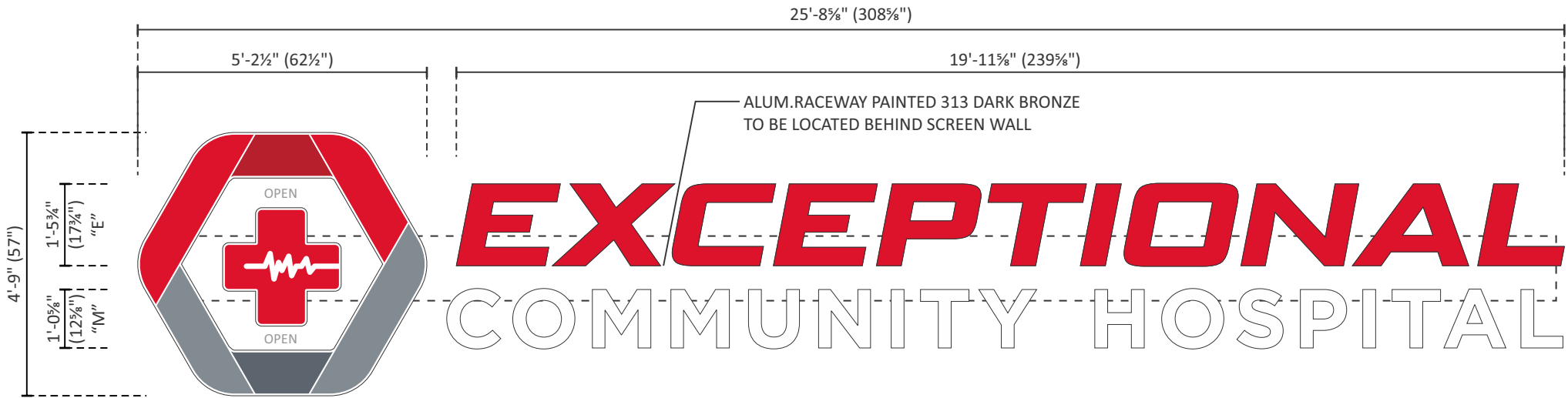
MM/DD/YYYY

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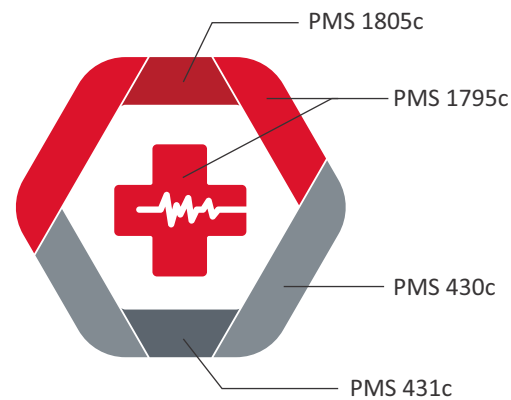
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214.902.2000 chandlersigns.com



B FACE-LIT CHANNEL LOGO/LETTERS SCALE: 3/8" = 1'-0"

ONE [1] SET REQUIRED - MANUFACTURE & INSTALL 70.95 Sq.Ft.

ENGINEERING NOTE: REFERENCE WO# 0420100 FOR SAME SIGN @ PRESCOTT, AZ LOCATION

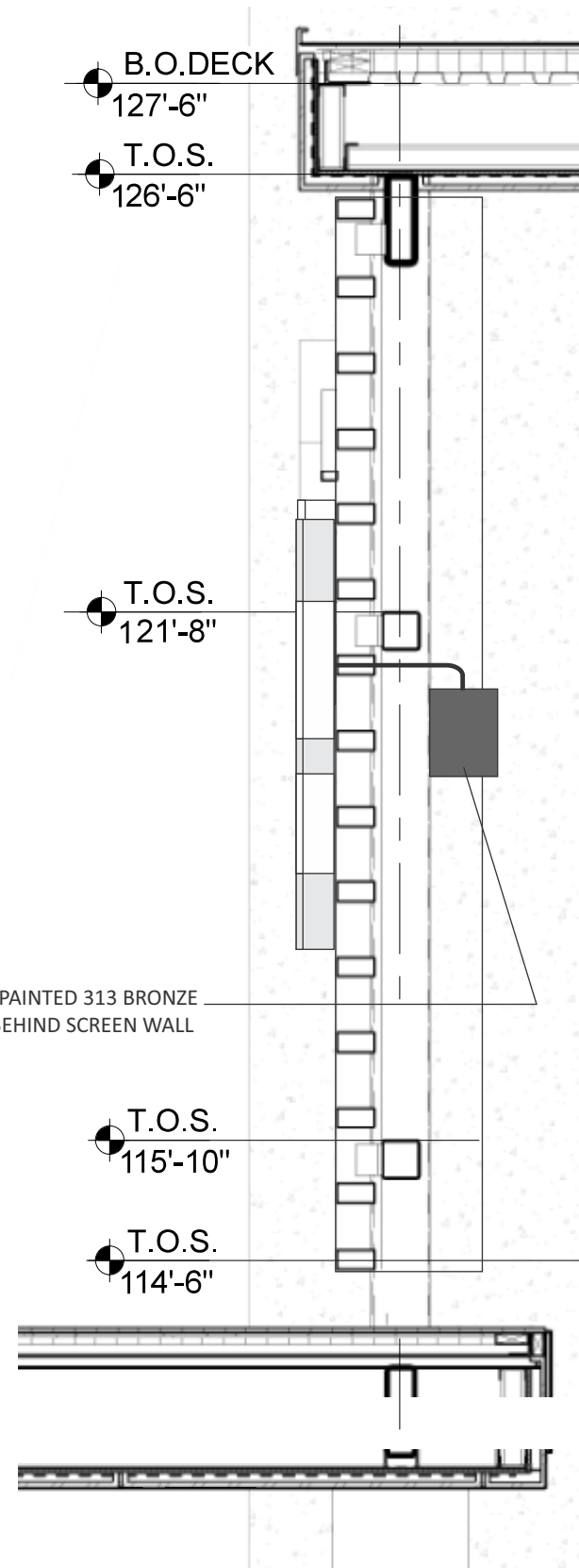


LOGO COLOR DETAIL

ALUM. RACEWAY PAINTED 313 BRONZE TO BE LOCATED BEHIND SCREEN WALL

END VIEW

SCALE: 1/2" = 1'-0"



Project ID
042464Ar1

**EXCEPTIONAL
COMMUNITY HOSPITAL**
340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024
Contact: WF / JR
Designer: SDM

Sign Item

BUILDING LTRS
Scale: 3/8" = 1'-0"

Revision Note
R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site plan

**Information Required
for Production**

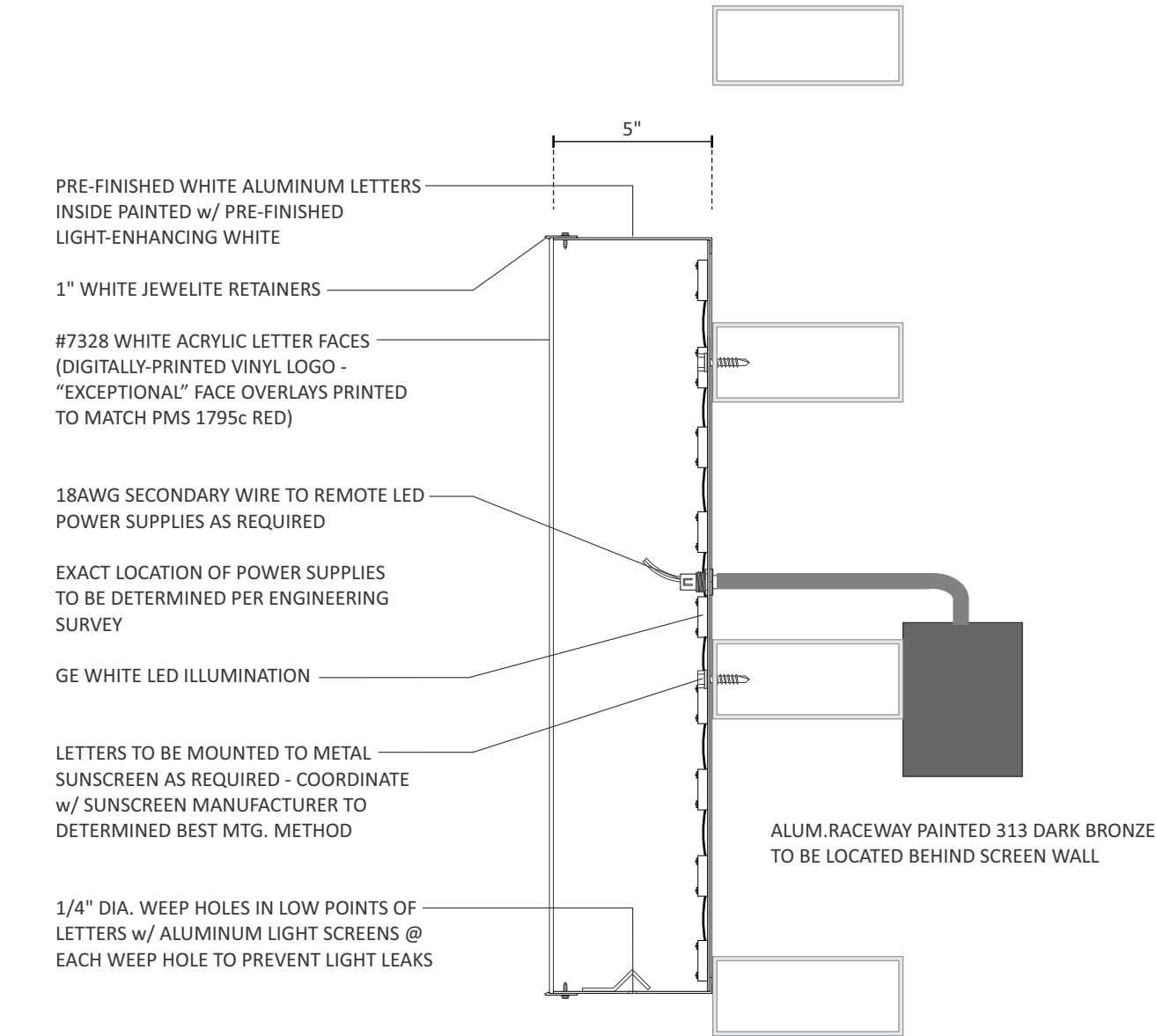
Customer Approval

Signature

MM/DD/YYYY

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B LETTER SECTION DETAIL 3/16" = 1"
REMOTE POWER SUPPLY

Project ID
042464Ar1

**EXCEPTIONAL
COMMUNITY HOSPITAL**
340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024

Contact: WF / JR

Designer: SDM

Sign Item

BUILDING LTRS

Scale: 3/16"=1"

Revision Note

R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site
plan

**Information Required
for Production**

Customer Approval

Signature

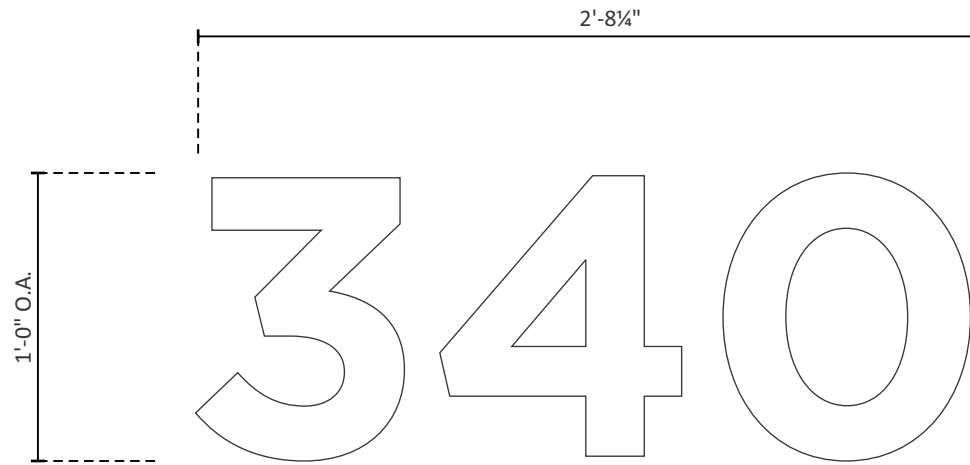
MM/DD/YYYY

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214.902.2000 chandlersigns.com



E

BUILDING ADDRESS FCO's

ONE [1] SET REQUIRED - MANUFACTURE & INSTALL:

1/4" FLAT CUT-OUT ALUMINUM NUMERALS & COPY PAINTED WHITE

STUD-MOUNTED FLUSH TO WALL AS REQUIRED

SCALE: 1½" = 1' - 0"

Project ID

042464Ar1

EXCEPTIONAL
COMMUNITY HOSPITAL

340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024

Contact: WF / JR

Designer: SDM

Sign Item

BLD'G ADDRESS

Scale: 1½" = 1'-0"

Revision Note

R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site plan

Information Required
for Production

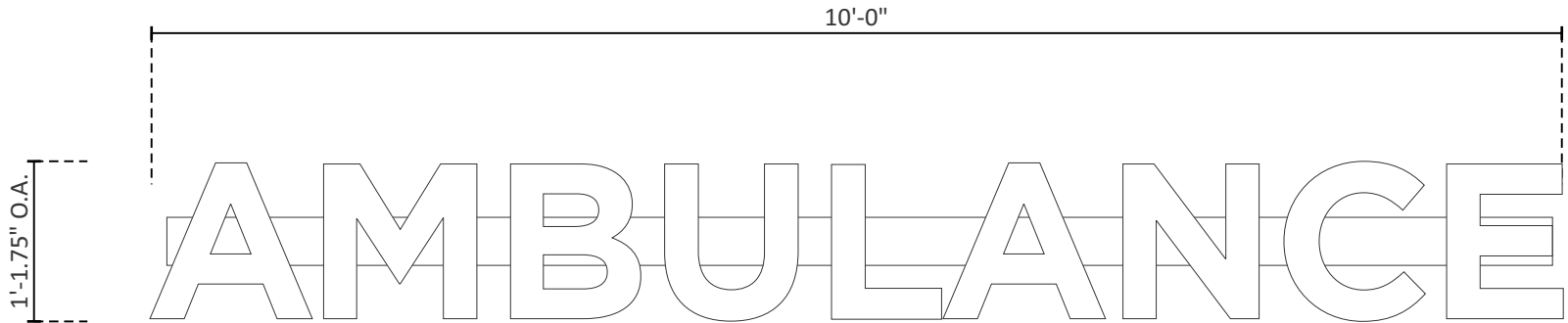
Customer Approval

Signature

MM/DD/YYYY

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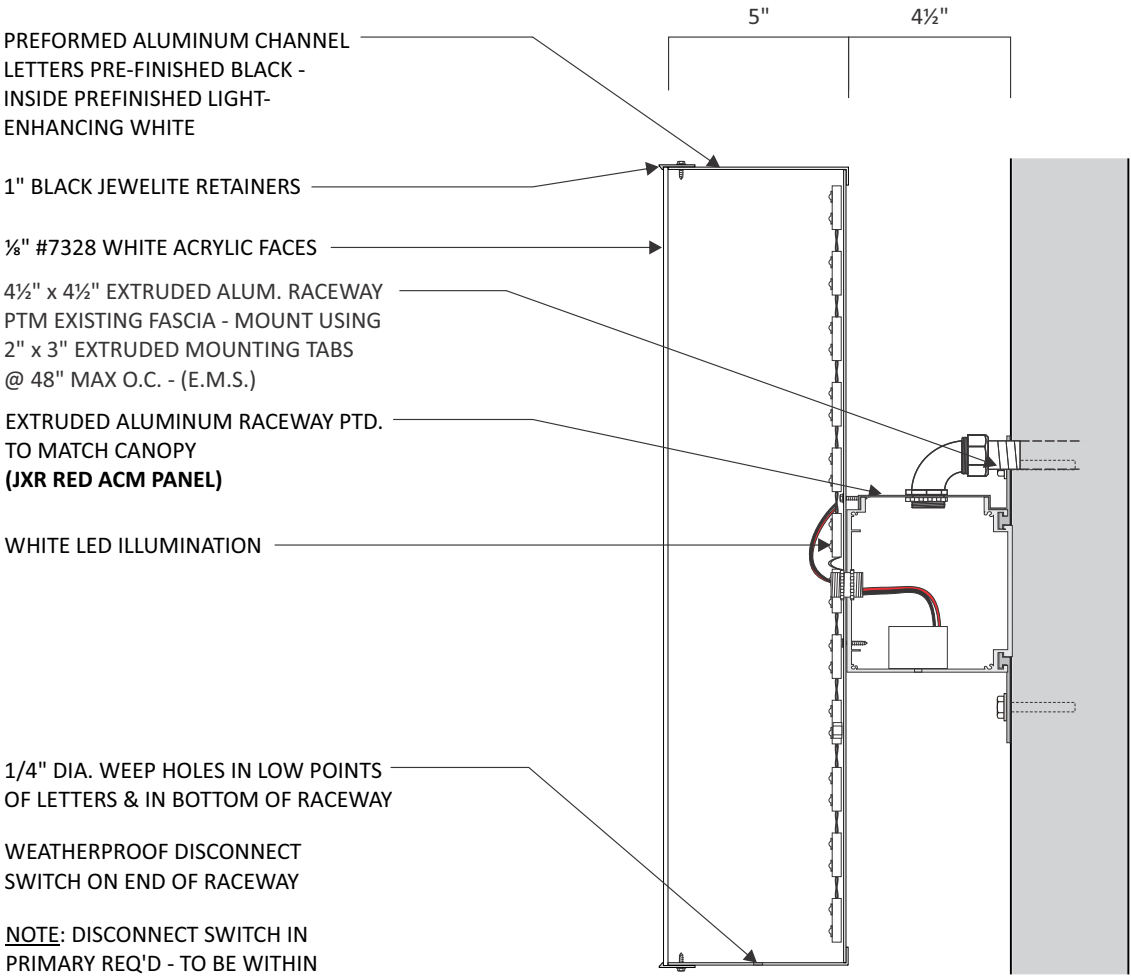


F

FACE-LIT CHANNEL LETTERS ON RACEWAY

ONE [1] SET REQUIRED - MANUFACTURE & INSTALL

SCALE: 3/4" = 1'-0"



LED LETTER SECTION
RACEWAY-MOUNTED

Project ID
042464Ar1

EXCEPTIONAL
COMMUNITY HOSPITAL
340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024

Contact: WF / JR

Designer: SDM

Sign Item

BUILDING LTRS

Scale: 3/4" = 1'-0"

Revision Note

R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site
plan

Information Required
for Production

Customer Approval

Signature

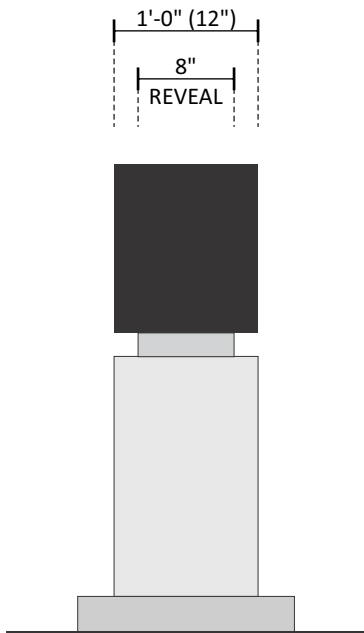
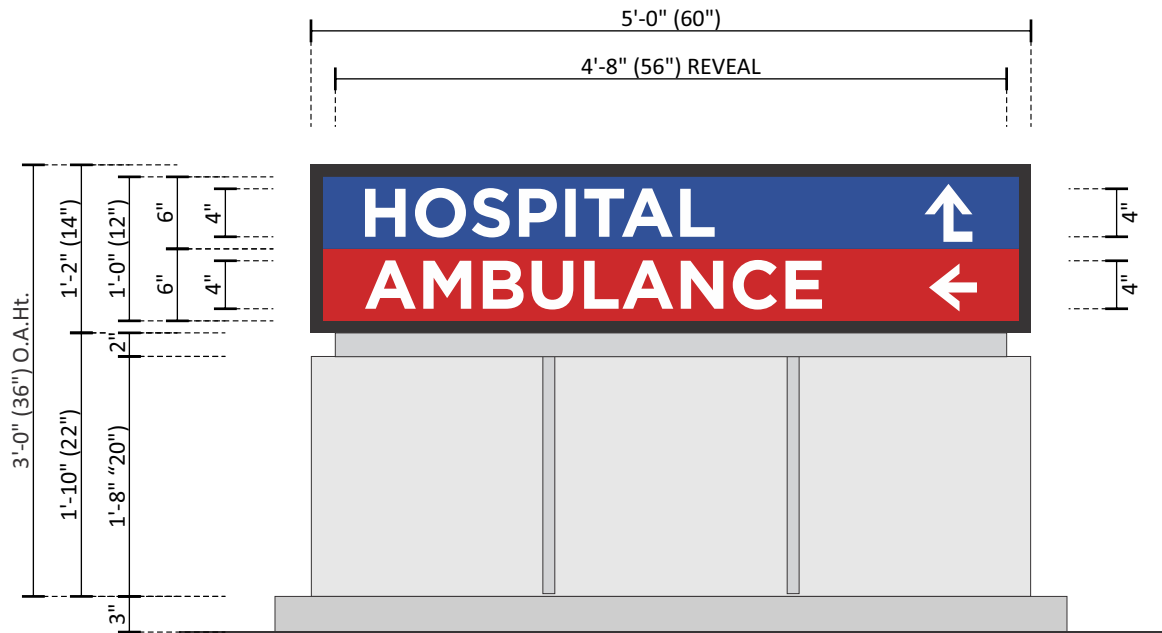
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D/F DIRECTIONAL SIGN

SCALE: 3/4" = 1'-0"

ONE [1] REQUIRED - MANUFACTURE & INSTALL:

D/F ALUMINUM FABRICATED CABINET PAINTED BLACK -
ALUMINUM RETAINERS PAINTED BLACK

#7328 WHITE ACRYLIC FACES w/ 1st SURFACE APPLIED 3M VINYL OVERLAYS
w/ SHOW-THRU WHITE COPY & ARROWS -
3630-33 RED VINYL & 3630-97 BRISTOL BLUE VINYL

ALUMINUM REVEAL & ALUMINUM BASE w/ 1" DEEP CHANNELS -
PAINTED AKZO 91163-33 "SATIN ALUMINUM"

WHITE LED ILLUMINATION

CONCRETE MAINTENANCE PAD w/ #3 REBAR @12" O.C. BOTH DORECTIONS

STEEL PIPE SUPPORT SET IN CONCRETE PIER FOUNDATION AS REQUIRED
PER LOCAL CODES & CONDITIONS

END VIEW

OPPOSITE FACE (FRONT)

NOTE: EXACT LOCATION & COPY TO BE VERIFIED

**ENGINEERING NOTE: REFERENCE WO# 0420100 FOR SAME SIGN
@ PRESCOTT, AZ LOCATION**

Project ID
042464Ar1

**EXCEPTIONAL
COMMUNITY HOSPITAL**
340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024

Contact: WF / JR

Designer: SDM

Sign Item

DIRECTIONAL SIGN

Scale: 3/4" = 1'-0"

Revision Note

R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site
plan

**Information Required
for Production**

Customer Approval

Signature

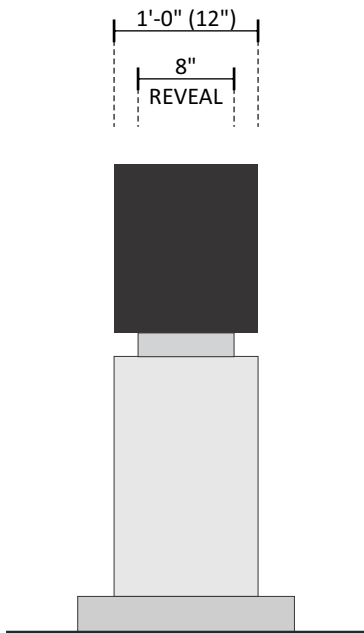
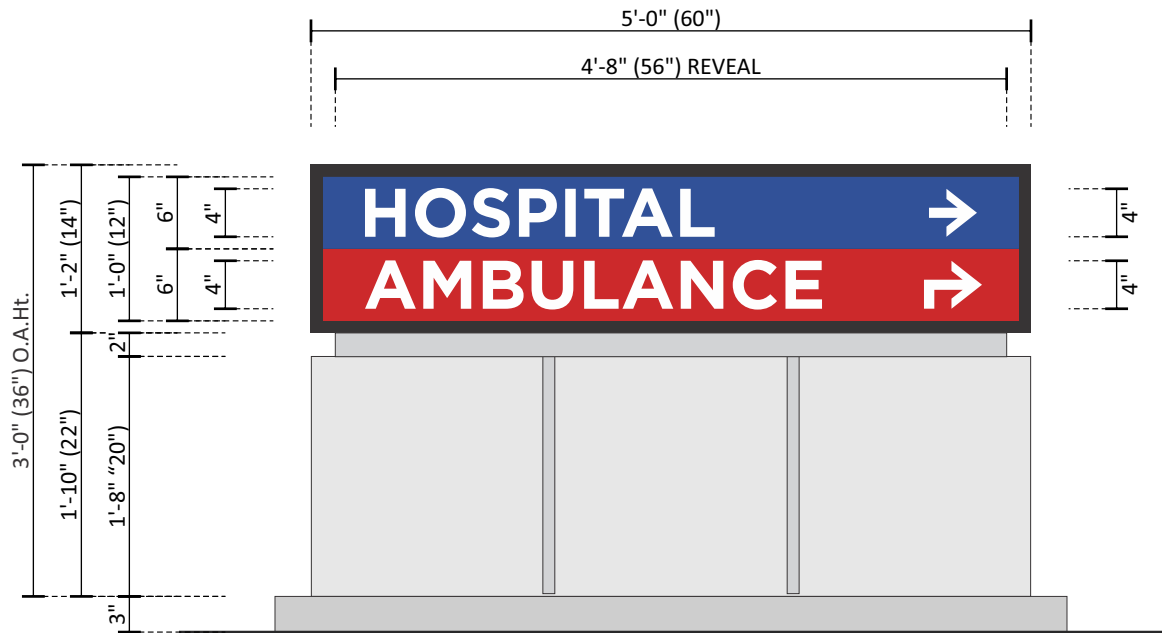
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OPPOSITE FACE

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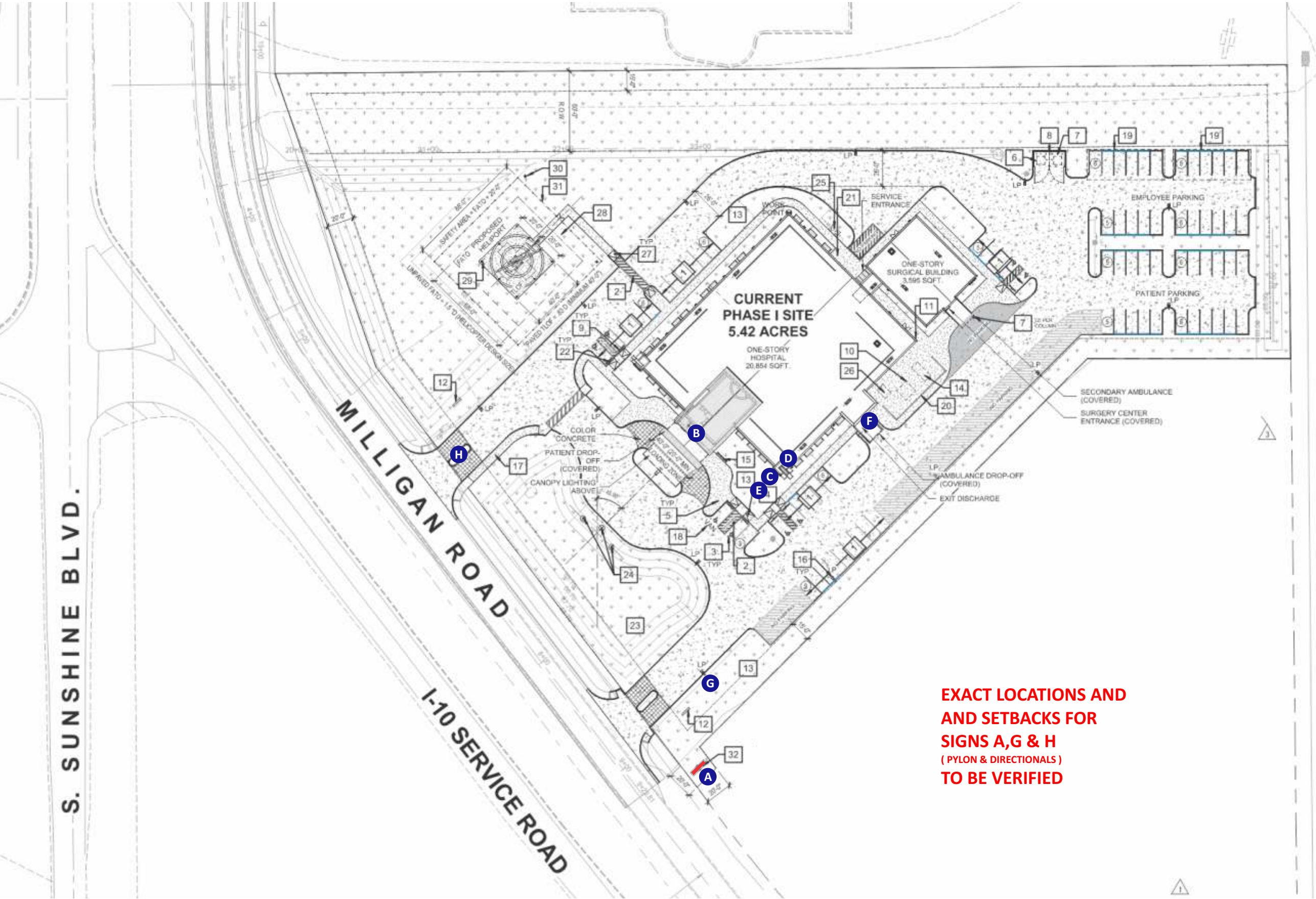
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SITE PLAN

NTS

Project ID
042464Ar1

EXCEPTIONAL
COMMUNITY HOSPITAL
340 E. MILLIGAN RD
ELOY, AZ

Date: 09-26-2024

Contact: WF / JR

Designer: SDM

Sign Item

SITE PLAN

Scale: NO SCALE

Revision Note

R1 TS-10/7/24: A - New Pylon
B - H Adj. notes and updt. site
plan

Information Required
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CITY OF ELOY

REQUEST FOR COMMISSION ACTION

Agenda Item: **V.B.**

Date: **1/15/2025**

Date submitted:
01/03/2025

Action: Formal

Date requested:
1/15/2025

Subject: Case No. RZPAD2024-006:
Sonoran Crossing: Conduct a public hearing and make a recommendation to the Eloy City Council on an application request to rezone approximately 122 acres located at the southwest corner of W. Houser Road and N. Estrella Road from General Industrial (I-2) to General Industrial (I-2) with the Planned Area Development (PAD) Overlay.

TO: Planning and Zoning Commission

FROM: Dan Symer

RECOMMENDATION:

Staff recommends that the Planning and Zoning Commission recommend to the City Council the approval of Case No. RZPAD2024-006: Southwest Crossing in accordance with the attached Conditions of Approval and find that the Planned Area Development Approval Criteria have been met.

DISCUSSION:

Request:

The applicant, Bergin, Frakes, Smalley & Oberholtzer, PLLC, c/o Carolyn Oberholtzer, on behalf of Cotton City Industrial Park, LLC, has applied for an Amendment to Zoning Map to rezone approximately 122 acres of land from General Industrial (I-2) to General Industrial (I-2) with the Planned Area Development Overlay(PAD). The purpose of this request is to allow for Data Processing & Hosting Services use to be allowed on the property and increase the building height from 56 feet to 80 feet. The site is located between N. Estrella Road and the west side of the Union Pacific Railroad, and abutting the south side of W Houser Road.

Context

The site is an irregularly shaped property located between N. Estrella Road and the west side of the Union Pacific Railroad and between the south side of W Houser Road and the Santa Rosa Canal. The property is currently used for agricultural purposes and is primarily surrounded by undeveloped and vacant land to the north, east and south; and

to the west is surrounded by an outdoor storage uses and vacant land. The General Plan land use map designations, zoning, and land uses of the property abutting and adjacent to the site are identified in the table below and in the attachments.

Direction	General Plan Land Use Map Designation	Existing Property Zoning	Existing Use of the Property
North	General Industrial and Medium Density Residential	Light Industrial (I-1), and General Commercial (C-2)	Vacant land
South	General Industrial	Light Industrial (I-1)	Vacant land
East	General Industrial and Medium Density Residential	General Industrial (I-2) and further east Single-family Residential (R1-6)	Vacant land
West	General Industrial	General Industrial (I-2)	Outdoor storage and vacant land

Zoning Ordinance Issues for Consideration:

In determining whether to approve, approve with conditions, or deny the proposed Official zoning Map amendments, the issue for consideration shall include but not be limited to: (Staff's analysis of the consideration is included in blood italic text, and the applicant's analysis is included in their narrative, attached):

A. Consistency (or lack thereof) with the adopted Eloy General Plan and other adopted plans;

- *The proposed Amendment to the Zoning Map aims to rezone the property to add the Planned Area Development Overlay (PAD) while maintaining the existing General Industrial (I-2) base zone, which is the most intensive land use zone under the Zoning Ordinance and aligns with the property's General Plan designation as General Industrial. The addition of a Planned Area Development Overlay (PAD) zone is intended to allow the Data Processing & Hosting Services and associated uses (e.g., substations) and increase the allowable building height from 55 feet to 80 feet. Both modifications are reasonably consistent with the anticipated impacts of the General Industrial designation.*
- *The proposed Amendment to the Zoning Map, which incorporates Data Processing & Hosting Services and their supporting uses, is expected to promote the orderly development of the property within the General Plan's Sun Corridor Growth Area. It will also help facilitate a balance of diverse local uses and the employment base, thereby contributing to a more*

economically sustainable community (General Plan Goals 3.1.1.1, 3.3.1.1, 3.3.1.2, and 3.3.1.3).

- With the development of the property, the property owner/developer will be required to dedicate right-of-way and construct half-street improvements for both W. Houser Road and N. Estrella Road. These improvements align with General Plan Objectives 3.2.5.1, 3.2.5.2, and 3.2.5.7, which focus on improving and enhancing street quality, adhering to the street classification system, and dedicating adequate right-of-way.*
- Promoting connectivity throughout the city, as a requirement of the Conditions of Approval, the property owner is to dedicate a Public Multi-use Path and Trial Easement on the south side of W. Houser Road and the east side of N. Estrella Road. This easement will provide for a route to connect the Santa Road Canal planned trail along W. Houser Road to the east side of the Union Pacific Railroad (General Plan Objective 3.4.5.2.) Without this dedication, the Santa Road Canal planned trail would be cut off at the railroad tracks.*

B. Compatibility with the existing zoning and conforming uses of nearby property and with the character of the neighborhood;

- The existing zoning of the abutting and adjacent properties is Light Industrial (I-1) and General Industrial (I-2). Currently, most of the properties are vacant, although they are anticipated to be developed for industrial and employment uses. The proposed Amendment to the Zoning Map will maintain the existing General Industrial (I-2) base zone and associated uses. Additionally, the inclusion of Data Processing & Hosting Services and associated uses (e.g., substations) is anticipated to be compatible with the allowed uses in the industrial zones.*
- To maintain compatibility with the nearby properties and their associated zoning allow development standards, particularly regarding the increase in building height, the proposed development plan for the property includes an increase in setbacks and landscape buffers: from 15 feet to 30 feet adjacent to W. Houser Road and from 15 feet to 30 feet adjacent to N. Estrella Road.*
- To help maintain compatibility with the nearby residentially zoned properties on the north and east side of W. Frontier Road, particularly concerning the noise anticipated to be generated by the use, the Conditions of Approval incorporate a maximum noise level allowance of 60 decibels (dB), with intermittent impulse noise when equipment turns on reaching up to 70 decibels (dB). These levels are measured along the W. Frontier Street right-of-way line abutting the Union Pacific Railroad right-of-way. Sixty (60) decibels (dB) is generally equivalent to a conversation in an office environment, and 70 decibels (dB) is equivalent to the sound*

generated by a washing machine or dishwasher.

C. Suitability of the subject property for uses permitted by the proposed zoning district;

- ***The property is currently zoned General Industrial (I-2), and the proposed Amendment to the Zoning Map maintains the zone. The inclusion of Data Processing & Hosting Services and associated uses (e.g., substations) as additional uses incorporated with the PAD is compatible with uses allowed in the General Industrial (I-2) zone and is not anticipated to negatively impact the associated other uses of the zone if developed on the property or adjacent property.***

D. Suitability of the subject property for uses permitted by the existing district; and

- **The property is currently zoned General Industrial (I-2), and the proposed amendment to the Zoning Map maintains this zoning. The inclusion of Data Processing & Hosting Services, along with associated uses (e.g., substations), as additional uses within the PAD are not specified in the Zoning Ordinance. The property is anticipated to be suitable for Data Processing & Hosting Services and related uses.**

E. Availability of sewer and water facilities.

- ***The adjacent to the property, within N. Estrella Road alignment, there is an existing 12 inch water main. Furthermore, there is the city well, pump station and reservoir/water tank on the northwest corner of W. Houser Road and N. Estrella Road alignment. The development's Basis of Design report for the property contemplates providing additional on and offsite water improvements to service the development. The nearest wastewater line is adjacent to the southwest corner of the property in the N. Estrella Road alignment. The Conditions of Approval require the property owner/developer to construct the necessary water and wastewater improvements to service the development of the property. In addition, the property owner/developer will be responsible for their proportional share of any improvements to the City's wastewater treatment facility that are necessary to accommodate the development, as further described in condition 10 and sub-conditions therein of the Conditions of Approval.***

Approval Criteria for a PAD:

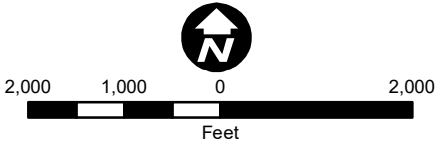
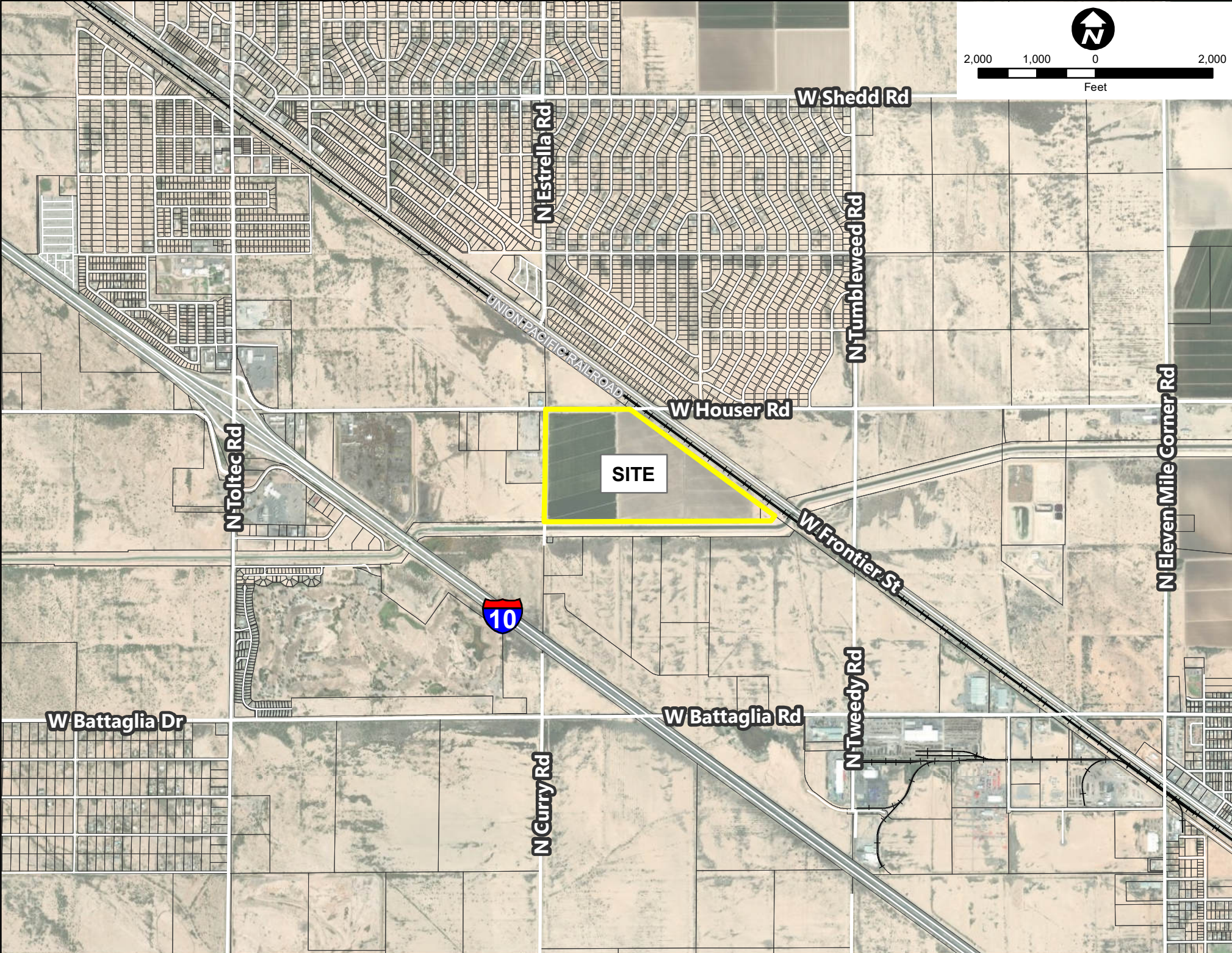
In determining whether to approve, approve with conditions, or deny a proposed Zoning Map Amendment for a PAD, the City Council shall make a determination in accordance with the provisions specified below (Staff analysis of the considerations included in bold italic text and the applicant's analysis is included in their narrative, attached):

A. A PAD District may be approved only when the City Council determines that the proposed PAD would result in a greater benefit to the City as a whole than would development under conventional zoning district regulations and would not adversely affect the existing and/or future permissible uses of adjacent properties. Such greater benefits may include implementing adopted planning policies/design standards, natural resources preservation/conservation resource provision of utilities, urban design, neighborhood/community amenities, or an overall level of increased development quality.

- ***The incorporation of Data Processing & Hosting Services as an allowed use will help provide for a use that is not currently specified in the Zoning Ordinance, as well as allow for an increase in building height necessary to accommodate the use. The proposed Data Processing & Hosting Services will also help facilitate a balance of diverse local uses and employment, thereby contributing to a more economically sustainable community (General Plan Goals 3.1.1.1, 3.3.1.1, 3.3.1.2, and 3.3.1.3).***
- ***The development plan standards for the project include an increase in setbacks and landscape buffers: from 15 feet to 30 feet adjacent to W. Houser Road and from 15 feet to 30 feet adjacent to N. Estrella Road. These areas will also accommodate the Public Multi-use Path and Trail Easement on the south side of W. Houser Road and the east side of N. Estrella Road. This easement will provide a route to connect the Santa Road Canal planned trail along W. Houser Road to the east side of the Union Pacific Railroad (General Plan Objective 3.4.5.2). Without this dedication, the Santa Road Canal planned trail would be cut off at the railroad tracks.***

FISCAL IMPACT:

There is no anticipated fiscal impact from this request.



N Estrella Rd

W Shedd Rd

N Tumbleweed Rd

W Houser Rd

SITE

W Frontier St

N Eleven Mile Corner Rd

N Toiletec Rd

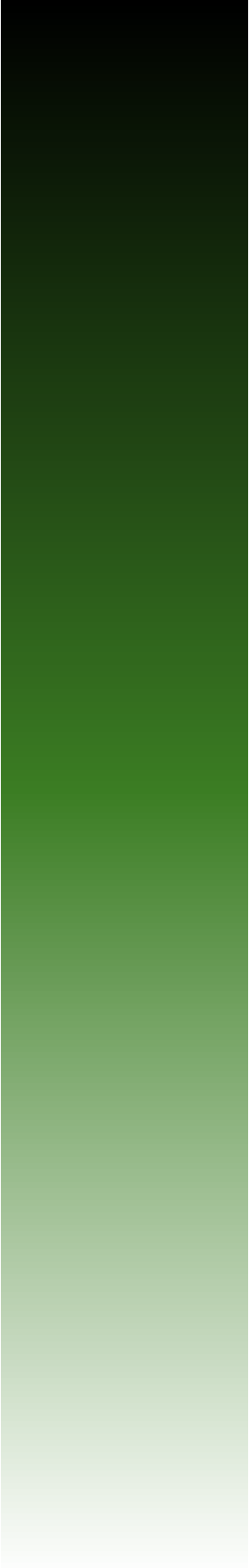
10

W Battaglia Dr

W Battaglia Rd

N Gurry Rd

N Tweedy Rd



Southwest Crossing

PLANNED AREA DEVELOPMENT OVERLAY

Narrative

Southeast Corner of Estrella & Houser Roads

November 2024

Development Team

Owner

Cotton City Industrial Park, LLC
PO BOX 11090
Casa Grande, AZ 85130
Contact: Brian Rhodes
Email: brian@aandbfarm.com

Civil Engineer

Colliers Engineering & Design
2141 E. Highland Ave, Ste 250
Phoenix, Arizona 85016
Phone: 602-490-0535
Contact: Darrell Wilson
Email: Darrell.Wilson@collierseng.com

Developer

Ryan Companies, Inc.
3900 E. Camelback Road, Suite 100
Phoenix, Arizona 85018
Phone: 602-322-6100
Contact: John Paul Mulhern
Email: JohnPaul.Mulhern@ryancompanies.com

Land Use Attorney

Bergin, Frakes, Smalley & Oberholtzer
4343 E. Camelback Road, Suite 210
Phoenix, AZ 85018
Phone: 602-888-7860
Contact: Carolyn Oberholtzer
Email: coberholtzer@bfsolaw.com

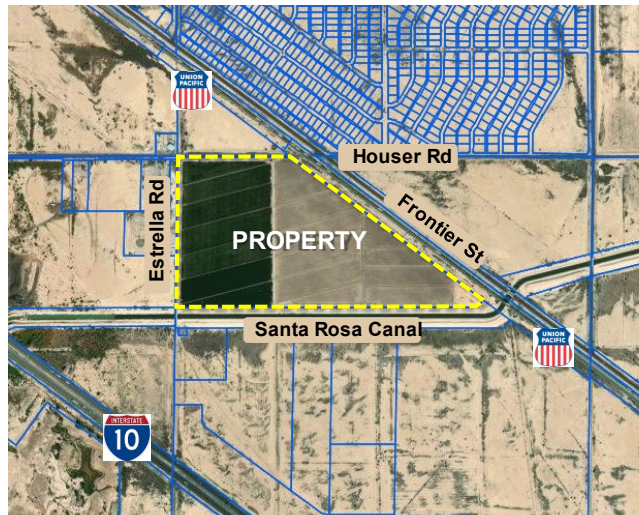


Table of Contents

Introduction.....	3
Purpose of Request.....	3
Site Location and Context.....	4
Project Description.....	6
Site Analysis	7
Infrastructure / Utilities	8
Zoning Map Amendment Criteria	8
PAD Overlay Criteria	10
Appendix	12

1. INTRODUCTION

Bergin, Frakes, Smalley & Oberholtzer, PLLC, of behalf of Cotton City Industrial Park, LLC, is applying for a Planned Area Development overlay (“PAD”) on approximately 122 gross acres located at the southeast corner of Estrella Road & Houser Road (“Property”) within the City of Eloy, Arizona. The Property is currently zoned I-2 General Industrial, the City’s most intense zoning district and is designated General Industrial on the City’s General Plan Land Use Map.



The PAD will establish and define a new *Data Processing & Hosting Facility* use and modify certain development standards. The PAD is the appropriate planning tool for maintaining the structure of the City of Eloy’s I-2 zoning regulations while allowing the flexibility to respond to specific development needs.

2. PURPOSE OF REQUEST

This PAD is limited in scope to add *Data Processing & Hosting Services* as a permitted use on this Property, which is currently zoned I-2 General Industrial, and to increase allowable building height. The Zoning Ordinance is silent on this use and it was determined that a PAD would be a more precise, parcel-specific approach to allowing the use in on the property and to amend the property development standards. Furthermore, the use of the PAD to add the use will provide certainty that it is allowed on the property regardless of future modifications to the Zoning Ordinance.

The PAD maintains the City’s Permitted, Conditional and Accessory uses as provided in Zoning Ordinance Section 21-2-5.3 *Industrial Use Standards*, Table 2.5-1 *Table of Allowed Uses for Business, Industrial and Public Facility Districts*, and adds *Data Processing & Hosting Services* as an additional Permitted use for the Property.

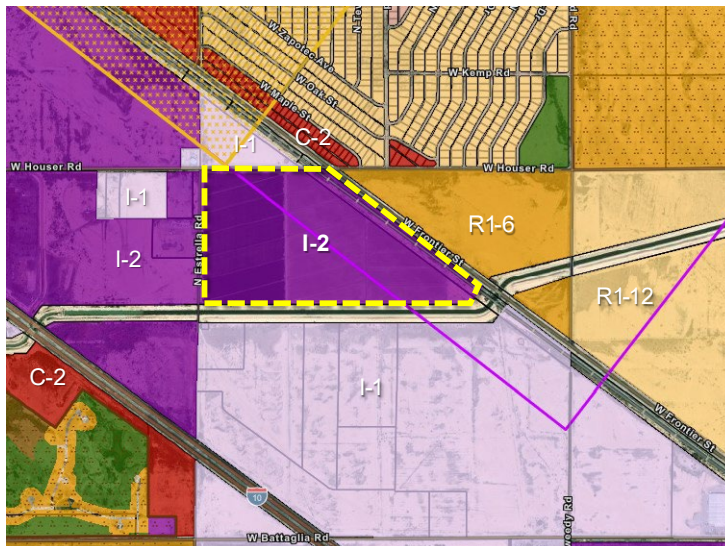
Because the proposed use is not defined in the Zoning Ordinance, the PAD also includes a definition for *Data Processing & Hosting Services*. That definition is as follows:

A use that’s primary purpose is to provide information technology services, including digital data processing and distribution, web hosting and management, internet and cloud services for applications, networking and security, data and telecommunication storage, backup, recovery, and management, eCommerce transactions, and internet gaming platforms. Data Processing & Hosting Services are typically located in a facility that contains the necessary information technology and computing hardware and software to provide the aforementioned services, including supporting equipment such as generators, water tanks and treatment facilities, electrical switch yards and substations, and related mechanical equipment.

The PAD also modifies the General Industrial (I-2) building height of 55-foot maximum to allow a maximum height of 80 feet, inclusive of rooftop appurtenance, equipment and screen walls, to accommodate the required building height for a typical Data Processing & Hosting Services development. To offset the increase in building height, the PAD includes several unique architectural guidelines aimed to minimize the perceived visual impacts of a large building. These architectural guidelines are specified in the proposed PAD Development Standards & Guidelines.

3. SITE LOCATION AND CONTEXT

The Property (APN 404-23-002D and 40423002E) is zoned I-2 General Industrial (Fig. 1). The Zoning Ordinance identifies the purpose of this district as providing areas where heavy and concentrated fabrication, manufacturing, and processing uses are permitted. It is intended that this district provide adequate space for industrial operations and related activities so that the economic base of the City may be strengthened and employment opportunities, directly or indirectly, may be expanded while protecting residential and commercial land uses from objectionable encroachments.



The Property is located in an approximately 11-mile corridor between Frontier Street and I-10 that is shown on the General Plan Land Use Map as primarily General Industrial (Fig. 2). This corridor is also primarily zoned for future industrial uses. The Property is adjacent to vacant industrially zoned properties to the north, west, and south (separated by the Santa Rosa Canal), as well as the Union Pacific Railroad. Properties to the east, across the Union Pacific Railroad and Frontier Street, are zoned R1-6 and R1-12.

Figure 1. Current Zoning Map, I-2 General Industrial

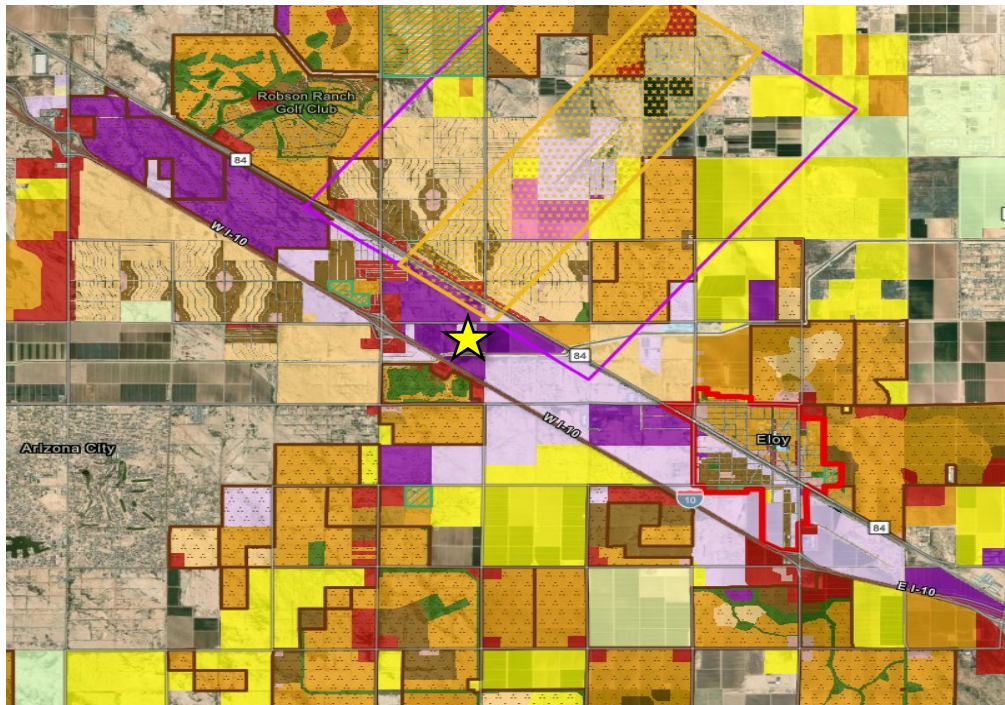
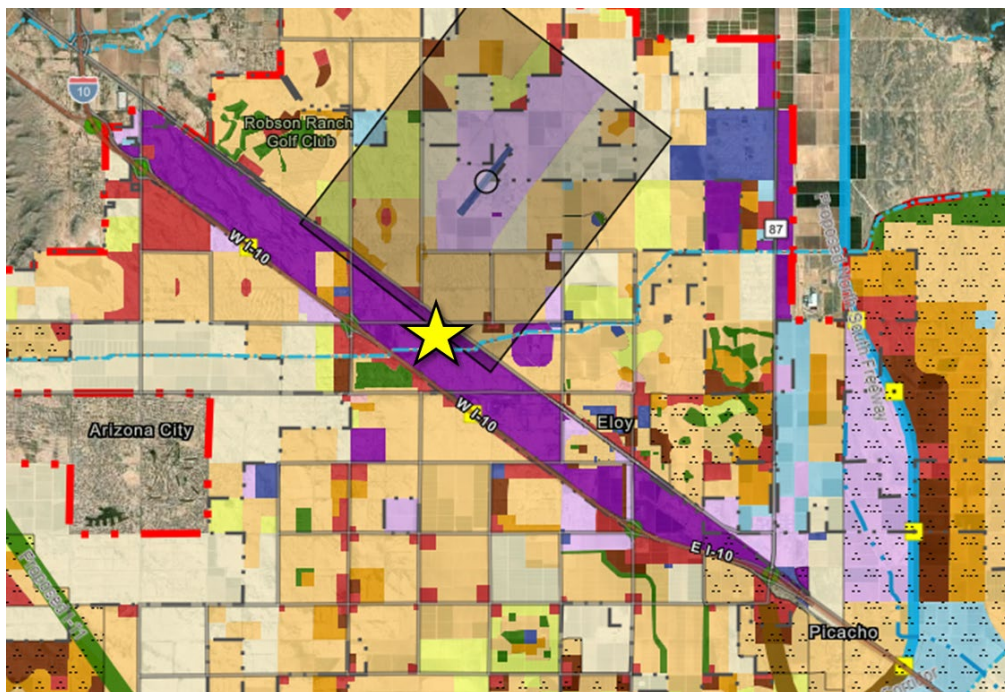


Figure 2. General Plan Land Use Map, General Industrial



4. PROJECT DESCRIPTION

The property will be developed by Ryan Companies, Inc. (“Ryan”), a nationwide industrial developer with extensive experience in the area of uses that fall within the proposed definition of Data Processing & Hosting Services. The current development trend for these types of developments is to provide the use in a two-story building to accommodate the operations, which also provides for heating and cooling efficiencies, although an increase in the building height is necessary to accommodate the development.

Elliott D. Pollack & Company performed a thorough Economic & Fiscal Impact Report that analyzes the costs and benefits the construction and operations of this proposed development. Per the Report, this 400MW (60% load factor) data facility is expected cost over \$470 million to construct and is expected to generate approximately \$2.4 million in construction tax revenues and approximately \$5.6 million in operations tax revenues. This project will generate approximately 100 permanent ‘direct’ jobs and approximately 4,800 construction jobs. Additional revenues include development impact fees, sales tax, real property tax, personal property tax, and state-shared revenues.

This Report is included as Appendix A of this narrative.

The modified building height development standards of the General Industrial (I-2) incorporated into the PAD as modified standards shall only apply to structures developed to contain the Data Processing & Hosting Services (defined above) use, including any use that repurposes/reuses a structure(s) initially developed to be utilized for the Data Processing & Hosting Services. If any part of the property identified in section 3 of this narrative is used for Data Processing & Hosting Services, the landscape buffers specified in PAD and described below shall apply to the entire property. The General Industrial (I-2) use and development standards shall supersede the PAD development standard if no part of the property identified in section 3 is used for a Data Processing & Hosting Services use.

This PAD maintains the City’s development standards as provided in Zoning Ordinance Section 21-2-5.4: *Industrial Development Standards*, Table 2.5-2 *Business and Industrial Districts Development Standards* with the exception of the maximum allowable building height. The Zoning Ordinance limits building height to 55 feet; however, due to the installation and operational parameters of the data storage equipment, specifically associated with spacing – both horizontal and vertical – the proposed two (2) story building will require much larger floor plates than typical commercial buildings. As a result, this PAD will allow up to 80 feet of building height, inclusive of any rooftop appurtenance, equipment and screen walls. Therefore, the recent Zoning Ordinance text amendment (ZTA2024-004) to add new development criteria for Allowed Building Height Appurtenances, Projection, and Structures (new Section 21-4-2.16) (the “Amendment”) above a zone maximum building height will not be needed, and it will be specifically excluded from the PAD development standards. It should be noted that the Zoning Ordinance text amendment (ZTA2024-004) to add new development criteria for Allowed Building Height Appurtenances, Projection, and Structures (new Section 21-4-2.16) would be allowed if no part of the property identified in section 3 is used for a Data Processing & Hosting Services use.

As previously stated, the primary purpose of the proposed PAD is to allow the Data Processing & Hosting Services use and to increase the building height to 80 feet. As a requirement for all PAD developments, Section 21-2-7.3.C of the Zoning Ordinance specifies that a PAD is required to provide a minimum of 15% of the site as an open space conservation area and/or open space recreation area. In lieu of the 15% open space, this PAD shall not be required to provide a minimum of fifteen percent (15%) of the net subject property acreage as Open Space Conservation (OSC) and/or Open Space Recreation (OSR) specified in Section 21-2-7.3 of the Zoning Ordinance and instead large, landscaped setbacks are provided for along Estrella and Houser Roads, and a landscape buffer along the length of the Santa Rosa Canal as discussed

more thoroughly below. Typically, open space areas of these kinds are an understandingly relevant requirement for PAD that is master planned with a mix of land uses and residential developments. Furthermore, these types of open space areas are typically provided in close proximity to residential, commercial, and trail corridors and abutting major and significant street frontage areas while reserving more intense development with limited open space areas in industrial areas. Also, because the property is agricultural land, it is impossible to preserve any area as an open space conservation area.

While respecting the objective of the PAD open space requirements, and that the PAD incorporate a 25-foot increase in the building height, the development of the property will comply with Section 21-4-2.4: Non-Residential Landscaping Requirements of the zoning ordinance, but will increase the required streetscape landscape abutting the Houser Road right-of-way (an arterial street) from a minimum 15-foot wide landscaped area to a minimum 30-foot landscape area, and a minimum 30-foot wide landscaped area will be provided adjacent to Estrella Road. These areas will assist in mitigating the additional height, will provide the appearance of landscaped open space, and will accommodate an easement for the realigned planned community trail described below. The required (Section 21-4-2.4.A.3.) 20-foot wide landscape buffer that would typically be provided along the south property line, along the Santa Rosa Canal, has been decreased to 10 feet to allow for landscaping. To minimize unwanted pedestrian activity behind the property and adjacent to the canal, the the planned community trail is being rerouted from the canal along the east side of Estrella Road to House Road, and on the south side of Houser Road, extending east, within the increased landscape buffer area and easement described above. All other development standards of the City of Eloy Zoning Ordinance, as amended, shall be complied with.

The property owner and developer acknowledge that Data Processing & Hosting Services uses have the ability to generate high temperatures from the array of servers and other equipment located in and around each building. Temperature control technology is continually evolving, and efficiency is improving. It is also important to note that the temperatures and the resulting cooling technology can vary based on the type of data being processed and hosted. Historically, cooling was managed using open system chillers that used water for cooling then disposed of the water as its temperature and mineral solids increase. Modern systems closed-loop chillers, like the one to be proposed for this Project, use water, but recycle it through integrated cooling equipment, thereby virtually eliminating the need for water disposal. Emerging data processing technology, such as those used for artificial intelligence, requires even more advanced cooling systems that are virtually, if not completely, waterless. Because the end-user and the type of data being processed is currently unknown, this Project is committed to the closed-loop low-water cooling technology, and the average daily water usage for any Data Processing & Hosting Services use on the Property is limited to an average daily water demand of 219,600 gallons per day as provided in the Water Basis of Design, dated November 12, 2024 and submitted with this application, except as may otherwise be approved by the City Engineer at the of site plan approval.

The property owner and developer recognize that Arizona is a dry, arid state, and water is a premium commodity that is to be used wisely. Since many other temperature-controlling alternative technologies and mechanical methods are available, the property owner and developer have committed to using methods that limit ground, surface, delivered, reclaimed, captured, or effluent water in the control of the servers, electronics, electrical and mechanical, etc. temperatures.

5. SITE ANALYSIS

A. General

The Property is owned by Cotton City Industrial Park, LLC, and is in agricultural production. It is generally flat and without native vegetation or known wildlife resources. There are no buildings on the Property. There are existing overhead powerlines on the property along the Santa Rosa Canal frontage and along the Estrella and Houser Road frontages. The Union Pacific mainline runs along the east side of the Property.

B. Access and Circulation

The Property is adjacent to Houser Road, an existing paved two-lane road, and Estrella Road, an existing unimproved dirt road. Houser Road is planned to be a major arterial that will eventually be fully improved and will traverse the City east to west. Permanent access to the Property will be provided by both roads in order to meet the Eloy Fire Department's requirement for two access points.

Right-of-way dedications and adjacent road improvements will be determined at the time of Site Plan Review.

6. INFRASTRUCTURE / UTILITIES

The development shall conform with the Eloy City Code, City of Eloy Engineering Standards.

A. Grading / Drainage / Retention

Grading will be designed such that the finished floors of the buildings will remain protected from localized flooding/ponding during the 100-yr storm event. The Facility will adhere to the City of Eloy and Pinal County drainage criteria and provides retention for the 100-yr, 2-hr storm event with proposed surface and underground retention. Proposed retention will be discharged within 36-hours via drywells, or other methods approved by the City Engineer.

B. Water / Wastewater

The Facility proposes a looped water main through the property. All domestic, irrigation, and fire services will be pulled off the looped water line. Sewer will need to be extended to the site across the Santa Rosa Canal. This Property is also located in the Central Arizona Irrigation and Drainage District (the "District"). The owner has conveyed to the District a well located at the southeast corner of the Property.

The property owner and developer have committed to using low-water, closed-loop cooling methods that limit ground, surface, delivered, reclaimed, captured, or effluent water of in the control of the servers, electronics, electrical and mechanical equipment, etc. temperatures. Alternative cooling methods and technologies may be approved by the City Engineer.

C. Electric Power / Communications Service

There is existing electric and communications infrastructure located along Houser Road and the Santa Rosa Canal via overhead wire and may be extended to the Property from either source. Additional substations may be constructed on the property as needed to serve the Facility.

7. ZONING MAP AMENDMENT CRITERIA

Section 21-6-6.4 of the Zoning Ordinance sets forth five criteria to be considered in the evaluation of a rezoning request. Adding *Data Processing & Hosting Services* as a permitted use to the existing I-2 General Industrial Zoning District uses meets the City's criteria for a zoning map amendment as follows:

A. Consistency (or lack thereof) with the adopted Eloy General Plan, and other adopted plans;

Response:

This use will advance the goals and policies of the General Plan consistent with A.R.S. 9-462.01(F) and with the General Plan rezoning criteria as provided in Section 21-6-6.4. The proposed addition of an industrial use through the PAD is consistent with the General Industrial General Plan land use designation on the Property. The proposed use is in alignment with, and complementary to the City's General Plan land use and economic goals as provided below.

Relevant General Plan Goals include:

Land Use Element Goal 3.1.1.1: Provide a range of residential, employment and supportive land uses to encourage and maintain a sustainable community.

Growth Area Goal 3.3.1.3 Promote commercial, employment and industrial development at identified Growth Area nodes.

Economic Prosperity Element Goal 3.10.1.4: Create a community with adequate infrastructure, utilities, community amenities and housing that will attract new businesses and residents.

The Land Use Element goals above are supported by this PAD because it adds an employment use not otherwise provided for in the community, and which use provides for high-quality, high-paying jobs, but also creates economic prosperity for the City through the taxes generated from the use that will fund critical infrastructure and community amenities. Arizona is ideal for the hosting the tech industry due to the consistent weather and minimal climate hazard, and this prime Eloy location is well suited for the project due to its relatively flat topography and access to a reliable grid-which is fundamental for the advancement of the tech-focused uses and employers.

The Property is also located in the Sun Corridor Growth Area, which is generally located Shay and Shedd Roads and Picacho Hwy and Curry Road along I-10. This growth area includes industrial, commercial and residential properties with access to Interstate 10 (I-10) and the Union Pacific Railroad (UPRR). It is a prime location for industrial and employment development with access to major transportation corridors.

B. Compatibility with the existing zoning and conforming uses of nearby property and with the character of the neighborhood;

Response:

The Property is adjacent to the Union Pacific Railroad and the CAP canal, and all of the surrounding properties are industrially designated and zoned property with the exception of the property to the east, which is separated by the Union Pacific Railroad is vacant, unplatted R1-6 zoned property. The use added in this PAD is a low-traffic, high wage, high revenue generating use. It is compatible with the industrial focus of Eloy south of the rail, and the PAD development standards and design guidelines ensure that the emerging industrial character of this prime corridor is developed with sensitivity to aesthetics adjacent to the Houser Road corridor.

C. Suitability of the subject property for uses permitted by the proposed zoning district;

Response:

The Property is already zoned I-2 General Industrial, therefore, this request only builds upon the existing zoning to expand the permitted uses by allowing the new Data Processing & Hosting Services use and to tailor the maximum allowable building height and roof-mounted mechanical equipment criteria to the needs of the project. This PAD effectively leaves the existing zoning in place.

D. Suitability of the subject property for uses permitted by the existing district; and

Response:

The Property is within an approximately 11-mile industrial corridor that is bounded by I-10 on the west and Union Pacific Railroad / Frontier Road on the east. Like the other properties in this corridor, it is designated and zoned for industrial uses. This PAD is limited to expanding the permitted uses by adding the Data Processing & Hosting Services and updating specific height standards for the unique, parcel-specific use.

E. Availability of sewer and water facilities.

Response:

Water and sewer are available for this use, but will have to be extended to the property. The capacities of both water and sewer have been studied and the findings documented in the Basis of Design Water Report and Basis of Design Sewer Report, which have been submitted with the application. This Property is also located in the Central Arizona Irrigation and Drainage District (the "District"), and the owner has conveyed to the District a well site at the southeast corner of the Property.

8. PAD OVERLAY CRITERIA

Under Section 21.2-7.2 of the Zoning Ordinance, a PAD overlay is utilized to allow both the City and an applicant enhanced flexibility in the application of development standards in exchange for a more creative approach to land planning and building design that could not otherwise be achieved through strict adherence to the terms of the Ordinance. In this case, the PAD is used to provide for the addition of a use that was not prevalent in Arizona or contemplated when the Ordinance was drafted, nor were the construction demands, in terms of building height, provided for. The PAD is being used to modernize the uses for this Property, taking advantage of its natural attributes, while establishing development parameters to ensure compatibility with the character of the area. This application achieves the following PAD goals established by the Ordinance:

- A. To encourage the City's development growth while enhancing the public health, safety, and general welfare;

Response: *The demands for information storage have increased exponentially and will continue to do so with the evolution of Artificial Intelligence, which is becoming a growing tool for nearly every business, educational institution, government, entertainment, and so much more. By providing for this use in Eloy, not only will the City support the technology-based industry that is growing rapidly in our state, but the use will support the city's resources while not requiring a demand on its emergency service providers. The use produces relatively low trips per day, with approximately 100 employees, which tend to billions of dollars of infrastructure. The capital investment in a project such as this is highly secured and as such, does not result in any volume of calls for service. It will also serve as a catalyst for future development and employment opportunities in Eloy, specifically along the I-10 corridor. In all of these ways, the proposed PAD will enhance the public health, safety and general welfare.*

- B. To encourage innovations in residential, commercial, and industrial development to assist in expanding opportunities for diverse choices of housing, recreation, shopping and employment to Eloy residents, workers and visitors;

Response: *The proposed PAD keeps intact the City's I-2 General Industrial zoning district and expands the permitted uses by adding the Data Processing & Hosting Services use – a new high-tech, innovative use for the City of Eloy. This will increase the diversity of employment opportunities in Eloy with the addition of approximately 100 high-tech jobs.*

- C. To reflect enhanced community sustainability and economic health in the design and construction of future development;

Response: *Adding Data Processing & Hosting Services as a permitted use for this Property via PAD Overlay, allows the conversion of vacant / agricultural land into a cutting-edge data processing facility. This use will increase the tax base and revenues and provide job opportunities on land that otherwise lacks the opportunities. This project will also improve local roadways and utility infrastructure to enhance other near- and long-term development opportunities in the area. The revenues produced by this project are both significant in terms of one-time construction sales tax events, as well as annually through the property taxes and utility taxes. This will create a sustainable source of new revenue for the City and convert AG-land into an economic engine for Eloy.*

- D. To encourage a more creative and compact approach in the utilization of land and resources in order to accomplish a more efficient, aesthetic, and sustainable development which may be characterized by special features of the geography, topography, size or shape of a particular property; and

Response: *The triangular shape of this Property, which is constrained in access with adjacency to the railroad and CAP, makes the site a development challenge for many industrial uses. The use proposed use in this PAD and increased building heights to maximize the developable area within these challenges, and provide for the efficient development of the land. With no notable changes in topography, this use will not interfere with any scenic views from surrounding properties.*

- E. To provide a compatible and stable developed environment, in harmony with the Sonoran Desert.

Response: *The Property is currently being used for agriculture and has no native vegetation onsite. Any new vegetative landscape materials will be low-water and/or drought tolerant to ensure an appropriate transition from nearby undisturbed land and this Property.*

9. APPENDIX

- A. Southwest Crossing Data Center Economic & Fiscal Impact Report
- B. Legal Description

APPENDIX A

SOUTHWEST CROSSING DATA CENTER ECONOMIC & FISCAL IMPACT REPORT

Southwest Crossing Data Center Economic & Fiscal Impact Report Eloy, Arizona



Prepared for:
Ryan Companies

DRAFT AS OF AUGUST 16, 2024

August 2024

Prepared by:



Elliott D. Pollack & Company
5111 N. Scottsdale Road, Suite 202
Scottsdale, Arizona 85250

Table of Contents

EXECUTIVE SUMMARY	i
1.0 Introduction	1
2.0 Background, Assumptions & Methodology	3
3.0 Economic Impacts	9
4.0 Fiscal Impacts	11



EXECUTIVE SUMMARY

Elliott D. Pollack & Company was retained to perform an economic and fiscal impact analysis of a proposed data center to be located at Southwest Crossing in Eloy, Arizona. The Southwest Crossing site is approximately 121 acres located at Estrella Road and Houser Road. A site of this size is suitable for a 400MW data center requiring a total of 1.25 million square feet. Construction costs are estimated at \$687.5 million. This construction estimate excludes the initial infrastructure required to bring power to the site.

In terms of operating assumptions, the employee count is estimated based on 12,500 square feet per employee. The equipment purchases that would be subject to personal property taxes are estimated to be \$6.0 billion. Utility costs are based on a 400MW load with a 60% load factor.

Project Site Plan Assumptions Southwest Crossing Data Center (2024 Dollars)	
<u>Development Assumptions</u>	
Acres	121
Square feet	1,250,000
Construction cost per SF	\$550
Total construction costs (\$ mil)	\$687.5
Development impact fees	\$1,779,400
<u>Operating Assumptions</u>	
Square feet per employee	12,500
Equipment (\$ billions)	\$6.0
Load (MW)	400
Load factor	60%
NOTE: Data Centers are exempt from prime contracting sales tax and use tax under ARS 41-1519 but will still pay development impact fees during construction and ongoing personal property tax on equipment. Source: Elliott D. Pollack & Company; Ryan Companies, ULI; SIOR	

Economic Impacts

Based on the assumptions of development for the site, the property would generate 5,468 person years of employment during the construction with \$319.0 million in wages and \$812.4 million in total economic output. Person years of employment are the aggregate of each construction job that is recreated year after year throughout the construction period. To derive the annual average, employment, wages, and economic output can be divided by the expected



number of years it may take to complete the development. Annual averages may be higher or lower depending on the timing of final buildout. Additionally, while the impacts generated during the initial construction phase are typically considered short-term impacts, technology changes in the industry often constitute the need for additional future improvements not accounted for in this report.

Once construction is completed and the new data center is operating at stabilization, the site would generate an estimated 243 total direct, indirect and induced jobs with \$18.9 million in annual wages. The total economic impact on the region would be \$178.6 million annually.

Economic Impact Summary Southwest Crossing Data Center City of Eloy (2024 Dollars)	
<u>Construction Impact</u>	
Direct construction jobs	4,808
Total person years of employment	5,468
Wages (\$ mil)	\$319.0
Output (\$ mil)	\$812.4
<u>Operations Impact (Annual at Buildout)</u>	
Direct jobs	100
Total jobs	243
Wages (\$ mil)	\$18.9
Output (\$ mil)	\$178.6
Source: Elliott D. Pollack & Company; IMPLAN	

Fiscal Impacts

The following table provides the forecasted revenue from construction and during operations for the proposed data center development. One-time construction revenues would total an estimated \$2.4 million for the City of Eloy. This includes an estimated \$1.8 million in development impacts as well as an estimated \$624,200 from the secondary impacts generated by the spending of employees. Data centers are exempt from both prime contracting transaction privilege tax (construction sales tax) and use tax levied on equipment.

Total operating tax revenue for the site (at buildout) is estimated at \$5.7 million each year for the City of Eloy. This includes direct real property taxes, personal property taxes and utility taxes as well as secondary revenue impacts generated by employees.

The Eloy Fire, elementary and high school districts would also benefit from the improvements to the site. Real and personal property taxes are estimated to total \$4.8 million each year for these districts.



Fiscal Impact Summary Southwest Crossing Data Center City of Eloy (2024 Dollars)	
<u>Construction Impacts</u>	
Primary direct taxes	\$1,779,400
Secondary impacts from employees	\$624,200
Total construction tax revenues	\$2,403,600
<u>Operations Impacts (Annual)</u>	
Primary direct taxes	\$5,581,600
Secondary impacts from employees	\$82,900
Total operations tax revenues	\$5,664,500
Additional revenues for Eloy Fire	\$1,628,300
Additional revenues for Eloy School Districts	\$3,123,100
Source: Elliott D. Pollack & Co.; IMPLAN; ADOR; ATRA	

Additional taxes would be collected by the State of Arizona and Pinal County outlined in the body of the report.



1.0 Introduction

Elliott D. Pollack & Company was retained to perform an analysis of the economic and fiscal impacts of the construction and operations of the proposed Southwest Crossing Data Center. The Southwest Crossing site is 121 acres located at Estrella Road and Houser Road in Eloy, Arizona. A site of this size is appropriate for a 400MW data center that would total 1.25 million square feet. This report will demonstrate the impacts to the City of Eloy.

Economic impact analysis examines the regional implications of an activity in terms of three basic measures: output, earnings and job creation. Fiscal impact analysis, on the other hand, evaluates the public revenues and costs created by a particular activity. In fiscal impact analysis, the primary revenue sources of a city, county or state government are analyzed to determine how the activity may financially affect them.

This study prepared by Elliott D. Pollack & Company is subject to the following considerations and limiting conditions.

- It is our understanding that this study is for the client's due diligence and other planning purposes. Neither our report, nor its contents, nor any of our work were intended to be included and, therefore, may not be referred to or quoted in whole or in part, in any registration statement, prospectus, public filing, private offering memorandum, or loan agreement without our prior written approval.
- The reported recommendation(s) represent the considered judgment of Elliott D. Pollack & Company based on the facts, analyses and methodologies described in the report.
- Except as specifically stated to the contrary, this study will not give consideration to the following matters to the extent they exist: (i) matters of a legal nature, including issues of legal title and compliance with federal, state and local laws and ordinances; and (ii) environmental and engineering issues, and the costs associated with their correction. The user of this study will be responsible for making his/her own determination about the impact, if any, of these matters.
- This study is intended to be read and used as a whole and not in parts.
- This study has not evaluated the feasibility or marketability of any site for planned uses.
- All estimates regarding future development and improvements were provided by the client as estimates, with the understanding that final users may vary to meet their corporate needs. Data has been reviewed and verified to determine its reasonableness and applicability to the projects.



- The economic and fiscal impact results of this analysis could be higher or lower than estimated due to the uncertainty of the nature of the businesses that would locate to the project. The figures used in this analysis have been taken from a broad average of users and are meant to represent an example of what could happen should the averages be met.
- This economic and fiscal impact study evaluates the potential “gross impacts” of construction and operations activities. The term “gross impacts” as used in this study refers to the total revenue, jobs and economic output that would be generated by the construction and operations. The study does not consider the potential impact on other businesses in the trade area that may occur as a result of the proposed project.
- All dollar amounts are stated in current dollars and, unless indicated, do not take into account the effects of inflation.
- Our analysis is based on currently available information and estimates and assumptions about immediate as well as long-term future development trends. Such estimates and assumptions are subject to uncertainty and variation. Accordingly, we do not represent them as results that will be achieved. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur; therefore, the actual results achieved may vary materially from the forecasted results. The assumptions disclosed in this study are those that are believed to be significant to the projections of future results.

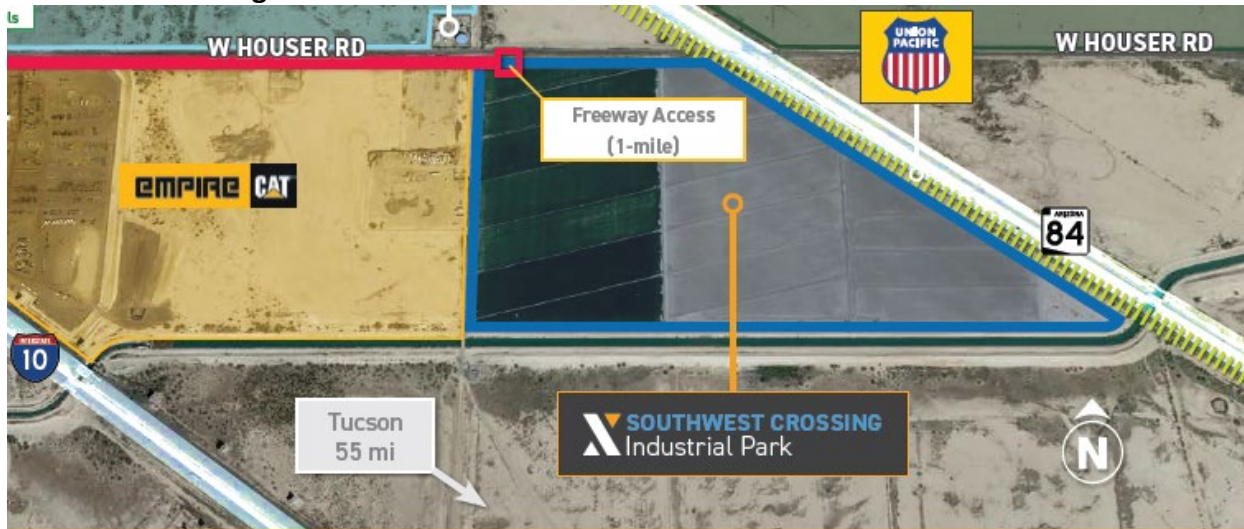


2.0 Background, Assumptions & Methodology

2.1 Background

The Southwest Crossing Industrial Park is a 121-acre site located along Estrella and Houser roads in Eloy, Arizona. The site is 5 minutes from the intersection of two major interstate freeways (I-8 and I-10) and both the Phoenix Sky Harbor Airport and Tucson International Airport are each about 45 minutes in either direction. The site can accommodate various industrial users. This analysis provides the impact of a typical 400MW data center.

Southwest Crossings Site



2.2 Analysis Assumptions

The assumptions used to estimate the economic and fiscal impacts of construction and operations for the data center are outlined below. The primary inputs are based on both assumptions supplied by the client as well as on basic economic fundamentals regarding economic impact analysis. For example, the Consumer Expenditure Survey is used to determine spending patterns of staff based on their respective wages and Census survey results are used for calculating the percentage of employees that live within the county or city in which they work. Certain industry standard assumptions were provided by the City of Eloy, Pinal County, and the Department of Energy. All values are expressed in 2024 dollars. Unless otherwise indicated, an inflation factor has not been included in this analysis.

The following table outlines the proposed project site plans for this analysis. The site plan assumes a total of 1.25 million square feet. Construction costs are projected at \$550 per square foot or a total of \$687.5 million with an estimated \$1.8 million in development impact fees. Data centers in Arizona are exempt from prime contracting transaction privilege tax as well as use tax on equipment under ARS 41-1519.



In terms of operating assumptions, there would be an estimated 12,500 square feet per employee. While there may be fewer employees than other industrial buildings of this size, data centers are rich in equipment that is subject to personal property tax and data centers are among the most energy-intensive buildings, using up to 50 to 100 times more energy than a typical commercial building. A data center of this size is projected to have \$6.0 billion in taxable equipment (subject to personal property tax) and its energy use was based on a 60% load factor of the 400MW load.

Project Site Plan Assumptions Southwest Crossing Data Center (2024 Dollars)	
<u>Development Assumptions</u>	
Acres	121
Square feet	1,250,000
Construction cost per SF	\$550
Total construction costs (\$ mil)	\$687.5
Development impact fees	\$1,779,400
<u>Operating Assumptions</u>	
Square feet per employee	12,500
Equipment (\$ billions)	\$6.0
Load (MW)	400
Load factor	60%
NOTE: Data Centers are exempt from prime contracting sales tax and use tax under ARS 41-1519 but will still pay development impact fees during construction and ongoing personal property tax on equipment. Source: Elliott D. Pollack & Company; Ryan Companies, ULI; SIOR	

2.3 Economic Impact Methodology

Economic impact analysis examines the economic implications of an activity in terms of output, earnings, and employment. For this study, the analysis focused on the construction impacts as well as the ongoing operations including direct expenditures on real and personal property taxes, salaries, sales and operating supplies.

The different types of economic impacts are known as direct, indirect, and induced, according to the manner in which the impacts are generated. For instance, direct employment consists of permanent jobs held by project employees. Indirect employment is those jobs created by



businesses that provide goods and services essential to the operation or construction of the project. These businesses range from manufacturers (who make goods) to wholesalers (who deliver goods) to janitorial firms (who clean the buildings). Finally, the spending of the wages and salaries of direct and indirect employees on items such as food, housing, transportation and medical services creates induced employment in all sectors of the economy, throughout the region. These secondary effects are captured in the analysis conducted in this study.

Multipliers have been developed to estimate the indirect and induced impacts of various direct economic activities. The IMPLAN Group developed the multipliers used in this study and were selected based on the land use type.

The economic impact is categorized into three types of impacts:

- (1) **Employment Impact** – the total wage and salary and self employed jobs in a region. Jobs include both part time and full time workers.
- (2) **Earnings Impact** – the personal income, earnings or wages, of the direct, indirect and induced employees. Earnings include total wage and salary payments as well as benefits of health and life insurance, retirement payments and any other non-cash compensation.
- (3) **Economic Output** – also referred to economic activity, relates to the gross receipts for goods or services generated by the company's operations.

Economic impacts are by their nature regional in character. Such impacts are best illustrated when not assigned to a specific locality, although clearly the primary impact of job creation would be in the City of Eloy. However, other communities in the surrounding area would also benefit from the operations of the proposed development.

2.4 Fiscal Impact Methodology

Fiscal impact analysis studies the public revenues associated with a particular economic activity. The primary revenue sources of local, county, and state governments (i.e., taxes) are analyzed to determine how an activity may affect the various jurisdictions. This section will evaluate the impact of the project on City of Eloy revenues. The fiscal impact figures cited in this report have been generated from information provided by a variety of sources including the U.S. Bureau of the Census; the U.S. Department of Labor; the Internal Revenue Service; the State of Arizona; the Arizona Tax Research Association; and the U.S. Consumer Expenditure Survey. Elliott D. Pollack & Company has relied upon the estimates of operating revenues outlined in this study. Unless otherwise stated, all dollar values are expressed in 2024 dollars.

Fiscal impacts are categorized by type in this study, similar to economic impact analysis. The major sources of revenue generation for governmental entities are calculated based on ongoing operations. Employees will spend part of their salaries on local goods and services and pay taxes



on the homes they occupy. This spending will contribute to revenues collected by the State that are ultimately shared with local governments.

Some revenues are more direct and definitive than others. Revenues have been defined in this analysis as either **primary** or **secondary**, depending on their source and how the dollars flow through the economy into government tax accounts. For instance, some revenues, such as construction sales tax or retail sales taxes are definable, straightforward calculations based on the value of construction or direct sales. These revenues are described in this study as primary revenues. Secondary revenues, on the other hand, flow from the wages of those direct, indirect and induced employees who are supported by the project. Revenue projections are based on typical wages of the employees working in the project, their spending patterns, projections of where they might live, and other assumptions outlined earlier in this report. The following is a description of the applicable revenue sources that will be considered for this analysis.

- **Data Center Exemption on Prime Contracting Transaction Privilege Tax and Use Tax**
In an attempt to encourage data center expansion in Arizona, the State of Arizona offers a prime contracting transaction privilege tax (construction sales tax) exemption as well as a use tax exemptions at the state, county and local levels, on qualifying data center equipment. The exemption was established under A.R.S §41-1519 for up to ten full calendar years following certification. This analysis assumes the data center to be built on this site qualifies for certification. However, the development would still generate other taxes during construction (such as development impact fees and permitting fees described below).
- **Development Impact Fees and Permitting Fees**
The City of Eloy levies fees on the construction of new developments. These fees vary by building type and valuation. For this report, the fees were calculated on an estimated 675,000 square feet of space and construction value of \$371,250,000. The buildings' water meters were projected to be 12" in size.
- **Sales Tax**
The State, counties, and local cities in Arizona charge sales tax on retail goods, and utility usage. Cities and towns also levy tax on commercial leases. The sales tax rate for the State is 5.6%. Portions of this tax are redistributed through revenue sharing to counties and cities throughout Arizona based on population. The City of Eloy's rate is 3.0%. These tax rates are applied direct utility usage (ongoing annually), as well as to the spending of direct, indirect and induced employees. However, this analysis assumes the buildings are owner occupied and not subject to commercial lease tax.
- **Real Property Taxes**
The development will be subject to direct property taxes. As of 2024, commercial properties are levied at a 16.5% assessment ratio, but this assessment ratio is set to decrease to 15.0% by 0.5% increments each year. For this analysis, the assessment ratio at buildout is expected to be 15.0%. In addition, employees supported by operations of



the business will pay property taxes on the homes they occupy. In order to estimate these secondary property taxes, the assessed full cash value along with the projected value of a typical housing unit has been calculated. Residential properties are valued at a 10% assessment ratio. The following table provides the tax rates used in the analysis for each jurisdiction.

- **Personal Property Taxes**

The State of Arizona and the local taxing jurisdictions (see rates in table below) tax personal property on tangible equipment. The value of the property is depreciated at a rate of 2.5% and the assessment ratio used in this report is 15.0%. Data center equipment would be subject to this tax ongoing annually. This report includes a personal property tax estimate for the data center equipment that is estimated at \$3.0 billion.

Once the net assessed values are calculated for both real and personal property, the following tax rates apply:

Property Tax Rates	
	Rate
Pinal County	3.5600
City of Eloy	1.0648
Eloy Fire	2.3005
School Districts	
Toltec Elementary School District	1.8041
Casa Grande Unified High School	2.6083
Special Districts	
Centrail AZ Water District	0.1400
Fire District Assistance Tax	0.0552
Pinal County Library	0.0965
Pinal County Flood	0.1693
Library District	0.0556
Pinal County Junior College	1.9200
Electrical District	0.2646
EVIT	0.0500
TOTAL	14.0889
Source: County Treasurer	

- **State Shared Revenues**

Each city or city in Arizona receives a portion of State revenues from four different sources - State sales tax (see description above), State income tax, vehicle license tax and highway user tax. The formulas for allocating these revenues are primarily based on population. Counties also share in the revenue sources of the State, with the exception of income tax.



State Income Tax

The State of Arizona collects taxes on personal income. The tax rate used in the analysis averages about 1.6% for earnings. These percentages are based on the most recently available income tax data from the State and the projected wage levels of jobs created by the construction and operations impact. This tax is applied to the wages and earnings of direct and indirect employment. Portions of this tax are redistributed through revenue sharing to cities throughout Arizona based on population.

HURF Taxes

The State of Arizona collects specific taxes for the Highway User Revenue Fund (HURF). Both the registration fees and the motor vehicle fuel tax (gas tax) are considered in this analysis. The motor vehicle fuel tax is \$0.18 per gallon and is calculated based on a vehicle traveling 12,000 miles per year at 20 miles per gallon. Registration fees average \$66 per employee in the State of Arizona. These factors are applied to the projected direct and indirect employee count. Portions of these taxes are distributed to cities and counties throughout Arizona based on a formula that includes population and the origin of gasoline sales.

Vehicle License Tax

The vehicle license tax is a personal property tax placed on vehicles at the time of annual registration. This factor is applied to the projected direct, indirect and induced employee count. The average tax used in this analysis is \$325 and portions of the total collections are distributed to the Highway User Revenue Fund. The remaining funds are shared between cities and counties in accordance with population-based formulas.

The above tax categories represent the largest sources of revenues that would be generated to the City of Eloy and its school districts. The revenue impacts do not include certain revenue sources such as personal property taxes or corporate income taxes. All tax collections represented in this analysis are gross collections and do not take into consideration any incentives or development agreements that may occur.



3.0 Economic Impacts

The economic impact includes total economic output, job creation, and wages during construction as well as ongoing impacts from the proposed data center. The results presented are based on the assumptions described in Section 2.0 of this report. Though employment would primarily impact the City of Eloy, the development would likely draw employees from throughout the region. Therefore, the economic impacts are expressed as a regional benefit.

3.1 Economic Impact of Construction

The economic impact from construction is based on the total value of the proposed structures. Since the impacts represent the entire construction phase, employment impacts are expressed as person years of employment. Person years of employment are the aggregate of each construction job that is recreated year after year throughout the construction period. To derive the annual average, employment, wages, and economic output can be divided by the expected number of years it may take to complete the development. Annual averages may be higher or lower depending on the timing of final buildout.

Over the course of construction, an estimated 4,808 direct person years of employment would be generated from the construction of the data center. These are the on-site construction jobs. An additional 660 indirect and induced person years of employment would be created for a total employment impact of 5,468 person years of employment created by the construction and other site work on the properties. In total, \$319.0 million in wages would be paid to these workers and the construction would create \$812.4 million in economic impact throughout the region.

Economic Impact of Construction Southwest Crossing Data Center (2024 Dollars)	
<u>Person Years of Employment</u>	
Direct	4,808
Indirect + Induced	660
Total	5,468
<u>Wages (\$ mil)</u>	
Direct	\$289.1
Indirect + Induced	\$30.0
Total	\$319.0
<u>Economic Output (\$ mil)</u>	
Direct	\$687.5
Indirect + Induced	\$124.9
Total	\$812.4
NOTE: The total may not equal the sum of the impacts due to rounding. All dollar figures are in constant dollars. Inflation has not been included in these figures.	
Source: Elliott D. Pollack & Company; IMPLAN	



3.2 Economic Impact of Operations

Operational impacts are considered permanent once all operations have reached stabilization. The impacts described in this section are expected to recur each year as long as the anticipated data center builds out as projected.

The proposed data center would support 100 direct jobs based on the estimated 13,500 square per employee. Taking into account the ripple effects throughout the economy, a total of 243 jobs would be created from the proposed development with \$18.9 million in wages and \$178.6 million in economic output.

Economic Impact of Operations Southwest Crossing Data Center (2024 Dollars)	
<u>Jobs</u>	
Direct	100
Indirect + Induced	143
Total	243
<u>Wages (\$ mil)</u>	
Direct	\$12.8
Indirect + Induced	\$6.1
Total	\$18.9
<u>Economic Output (\$ mil)</u>	
Direct	\$152.8
Indirect + Induced	\$25.8
Total	\$178.6
NOTE: The total may not equal the sum of the impacts due to rounding. All dollar figures are in constant dollars. Inflation has not been included in these figures. Source: Elliott D. Pollack & Company; IMPLAN	



4.0 Fiscal Impacts

The tables included in this section summarize revenues that would ultimately flow to the City of Eloy during construction and then ongoing annually once construction is complete. Both the primary (direct) and secondary (generated by the spending of employees) are included. Revenue projections are based on assumptions outlined earlier in this report.

4.1 Fiscal Impact of Construction

The fiscal impact of construction includes the tax revenues generated from development impact fees along with the secondary impacts from the spending of employees. Again, data centers are exempt from both construction sales tax and use tax levied on equipment, but would pay development impact fees and permitting fees during construction.

The City of Eloy would collect an estimated \$1.8 million in development impact fees based on 1.25 million square feet of building space. The revenues generated by the spending of employees total an estimated \$624,200. In total, the City of Eloy would collect an estimated \$2.4 million in taxes and fees during the construction phase.

Fiscal Impact of Construction Southwest Crossing Data Center City of Eloy (2024 Dollars)	
<u>Eloy</u>	
Construction sales tax	N/A
Use Tax	N/A
Impact Fees	\$1,779,400
Secondary impacts from employees	
Spending sales tax	\$446,100
Property tax	\$166,800
State shared revenues	\$11,300
Total for City	\$2,403,600
Source: Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; ATRA	

The State of Arizona and Pinal County would also collect taxes during the construction phase in the form of secondary revenues generated by employees. Taxes generated for the State would total an estimated \$10.8 million, while Pinal County would collect \$3.8 million.



Fiscal Impact of Construction Southwest Crossing Data Center State & County (2024 Dollars)	
<u>State of Arizona</u>	
Construction sales	N/A
Use Tax	N/A
Secondary impacts from employees	
Spending sales tax	\$3,507,200
Income tax	\$5,041,100
Unemployment tax	\$1,033,400
Vehicle license tax	\$799,600
Gas tax	\$419,900
Total for the State of Arizona	\$10,801,200
<u>Pinal County</u>	
Construction sales	N/A
Secondary impacts from employees	
Spending sales tax	\$602,200
Property tax	\$3,103,600
State shared revenues	\$139,800
Total for County	\$3,845,600
Source: Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; AZ Tax Research Association	

4.2 Fiscal Impact of Operations

At build-out, the data center property would begin to generate ongoing annual tax revenue for the City of Eloy and its fire and school districts every year. Primary revenues would be collected from real and personal property taxes and utility consumption. Secondary revenue, which is generated by employee spending, includes sales tax, property tax, and State-shared revenues such as income tax, vehicle license tax, and gasoline tax. The figures are exclusive of corporate income tax.

Years prior to build out and stabilized occupancy would experience a relative portion of this total annual impact. Once the project is built out and operating at stabilized levels, the effects of the operations outlined in the following tables will be realized on an annual basis.

The City of Eloy is projected to collect \$5.7 million each year at buildout from primary and secondary sources generated by the proposed data center. The Eloy fire and school districts would collect an additional \$4.8 million each year based on the estimated net assessed value of real and personal property.



Overall, the annual operations of the proposed data center would generate an estimated \$10.4 million each year for the City of Eloy and its fire and school districts if built out as described in this analysis.

Fiscal Impact of Operations Southwest Crossing Data Center City of Eloy (2024 Dollars)	
<u>Eloy</u>	
Real property tax	\$514,100
Personal property tax	\$21,700
Utility Tax	\$5,045,800
Secondary impacts from employees	
Spending sales tax	\$57,600
Property tax	\$24,800
State shared revenues	\$500
Total for City	\$5,664,500
<u>School and Eloy Fire Districts Real Property Taxes</u>	
Eloy fire district	\$1,110,700
School districts	\$2,130,300
<u>School and Eloy Fire Districts Personal Property Tax</u>	
Eloy fire district	\$517,600
School districts	\$992,800
Total for Other Districts	\$4,751,400
Source: Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; AZ Tax Research Association	

Additional taxes will be collected by the State of Arizona (\$7.8 million), Pinal County (\$4.8 million) and special taxing districts such as the Central Arizona Water District, Pinal County Flood, Library, Junior College and electrical district (\$1.9 million). These taxes are in addition to the taxes collected by the City of Eloy and will be collected annually during operations.



Fiscal Impact of Operations Southwest Crossing Data Center State and County (2024 Dollars)	
<u>State of Arizona</u>	
Utility tax	\$7,215,100
Secondary impacts from employees	
Spending sales tax	\$458,300
Income tax	\$19,300
Unemployment tax	\$45,800
Vehicle license tax	\$35,500
Gas tax	\$18,600
Total for the State of Arizona	\$7,792,600
<u>Pinal County</u>	
Property Tax	\$1,718,800
Personal property tax	\$801,000
Utility Tax	\$1,850,100
Secondary impacts from employees	
Spending sales tax	\$77,700
Property tax	\$345,400
State shared revenues	\$5,200
Total for County	\$4,798,200
Special districts real property tax	\$1,328,300
Special districts personal property tax	\$619,000
Total for Special Districts	\$1,947,300
Source: Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; AZ Tax Research Association	



APPENDIX B

LEGAL DESCRIPTION OF PROPERTY AND PARCELS

See Following Pages

APN: 404-23-002E ("Data Site")

A portion of the Northeast quarter of Section 35, Township 7 South, Range 7 East, of the Gila and Salt River Meridian, Pinal County, Arizona, more particularly described as follows:

COMMENCING at a 1/2" Rebar marking the Northwest corner of Section 35, from which a 1/2" Iron pipe marking the West quarter corner of Section 35 bears South 00°46'42" West a distance of 2619.52 feet, and from which a PK nail with tag RLS #31020 marking the North quarter corner of Section 35 bears South 89°55'55" East a distance of 2646.03 feet;

Thence from said Northwest corner of Section 35 South 89°55'55" East along the North boundary of the Northwest quarter of Section 35 a distance of 1468.07 feet to a point on the Southwesterly Right of Way of the Southern Pacific Railroad;

Thence South 53°45'04" East along said Right of Way, a distance of 2741.84 feet to a point being the Northwest corner of the well site and THE POINT OF BEGINNING;

THENCE continuing South 53°45'04" East along said Right of Way, a distance of 303.64 feet to a point being the Northeast corner of the well site;

THENCE South 35°47'24" West along the Northwesterly boundary of the C.A.P. Right of Way, a distance of 129.01 feet to a 1/2" Rebar with plastic cap RLS #42017 marking the Southeast corner of the well site;

THENCE South 89°47'24" West along the Northerly boundary of the C.A.P. Right of Way, a distance of 168.38 feet to point being the Southwest corner of the well site;

THENCE North 00°12'36" West a distance of 284.81 feet to THE POINT OF BEGINNING.



EXHIBIT "A"

C.A.I.D.D. COTTON CITY WELL SITE

A portion of the Northeast quarter of Section 35, Township 7 South, Range 7 East, of the Gila and Salt River Meridian, Pinal County, Arizona, more particularly described as follows:

COMMENCING at a 1/2" Rebar marking the Northwest corner of Section 35, from which a 1/2" Iron pipe marking the West quarter corner of Section 35 bears South 00°46'42" West a distance of 2619.52 feet, and from which a PK nail with tag RLS #31020 marking the North quarter corner of Section 35 bears South 89°55'55" East a distance of 2646.03 feet. Thence from said Northwest corner of Section 35 South 89°55'55" East along the North boundary of the Northwest quarter of Section 35 a distance of 1468.07 feet to a point on the Southwesterly Right of Way of the Southern Pacific Railroad. Thence South 53°45'04" East along said Right of Way, a distance of 2741.84 feet to a point being the Northwest corner of the well site and THE POINT OF BEGINNING.

THENCE continuing South 53°45'04" East along said Right of Way, a distance of 303.64 feet to a point being the Northeast corner of the well site;

THENCE South 35°47'24" West along the Northwesterly boundary of the C.A.P. Right of Way, a distance of 129.01 feet to a 1/2" Rebar with plastic cap RLS #42017 marking the Southeast corner of the well site;

THENCE South 89°47'24" West along the Northerly boundary of the C.A.P. Right of Way, a distance of 168.38 feet to point being the Southwest corner of the well site;

THENCE North 00°12'36" West a distance of 284.81 feet to THE POINT OF BEGINNING.

Comprising of an area of 1.00 Acres, more or less.

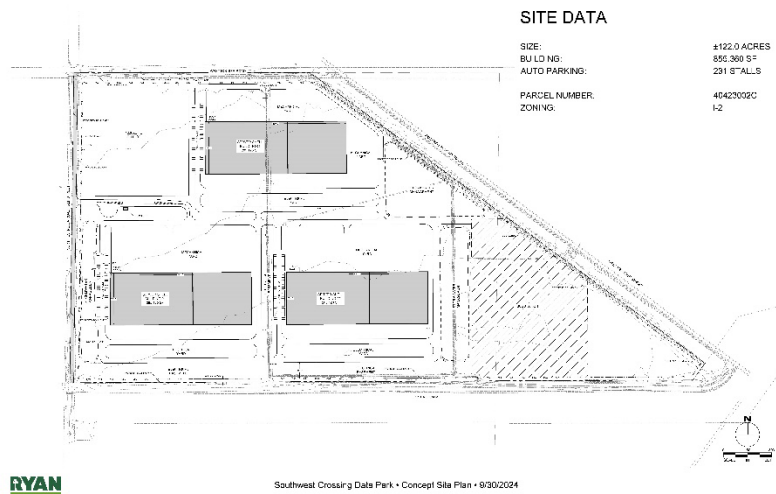


Southwest Crossing

PLANNED AREA DEVELOPMENT OVERLAY

Zoning Uses, Development Standards & Guidelines

Southeast Corner of Estrella & Houser Roads



November 2024

Development Team

Owner

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Land Use Attorney

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Phone: 602-888-7860
Contact: Carolyn Oberholtzer
Email: coberholtzer@bfsolaw.com



B | F | S | O

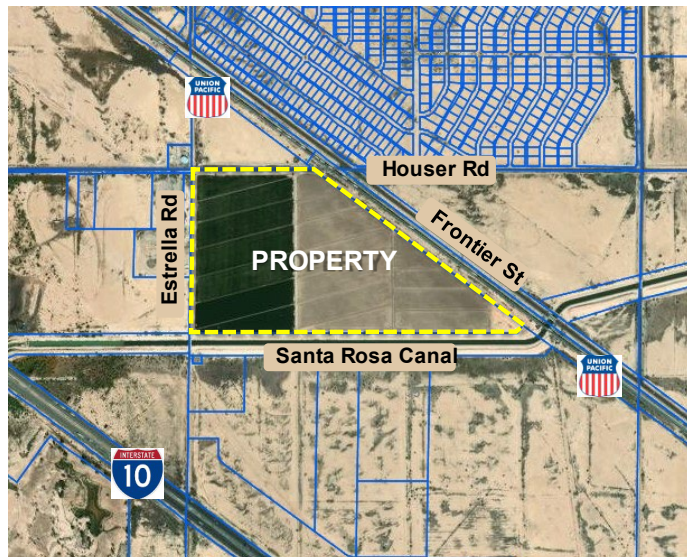
BERGIN, FRAKES, SMALLEY & OBERHOLTZER

Table of Contents

Introduction	3
Governing Provisions of the PAD	3
Permitted, Conditional and Accessory Uses	3
Development Standards.....	4
Design Guidelines	5

1. INTRODUCTION

This is a request to establish Planned Area Development (“PAD”) overlay on approximately 122 gross acres located at the southeast corner of Estrella Road & Houser Road (“Property”) within the City of Eloy, Arizona in the I-2 General Industrial Zoning District. The PAD will add a new Data Processing & Hosting Facility (“the “Facility”) use and modify the permitted height for the Facility while maintaining uses allowed under the existing I-2 zoning district. The Planned Area Development is an appropriate planning tool capable of maintaining the structure of the City of Eloy’s regulations while allowing the flexibility to respond to evolving market conditions where uses had not been contemplated in the Zoning Ordinance and where new construction and efficiency trends favor increased building heights.



2. GOVERNING PROVISIONS OF THE PAD

The purpose of the Planned Area Development (PAD) Overlay Zoning District is to allow both the City and an applicant enhanced flexibility in the application of development standards in exchange for a more creative approach to land planning and building design.

- Where this PAD is silent on a topic, the Zoning Ordinance shall govern. Where there is a conflict between this PAD and the Zoning Ordinance, the PAD shall govern.
- This PAD shall only apply to the property developed for the *Data Processing & Hosting Services (defined below)*, including any use that repurposes/reuses a structure(s) initially developed and used for the Data Processing & Hosting Services regardless of building height. All other development scenarios shall comply with the City of Eloy’s I-2 General Industrial permitted uses, development standards, and requirements.

3. PERMITTED, CONDITIONAL AND ACCESSORY USES

This PAD maintains the City’s Permitted, Conditional and Accessory uses as provided in Zoning Ordinance Section 21-2-5.3 *Industrial Use Standards*, Table 2.5-1 *Table of Allowed Uses for Business, Industrial and Public Facility Districts* for the I-2 zoning district, including the applicable Zoning Ordinance Article III. *Supplemental Use Standards*, and adds the *Data Processing & Hosting Services* as an additional permitted use.

For the purposes of the PAD, *Data Processing & Hosting Services* shall be defined as a use that’s primary purpose is to provide information technology services including digital data processing and distribution, web hosting and management, internet and cloud services for applications, networking and security, data

and telecommunication storage, backup, recovery, and management, eCommerce transactions, and internet gaming platforms. Data Processing & Hosting Services are typically located in a facility that contains the necessary information technology and computing hardware and software to provide the aforementioned services, including supporting equipment such as generators, water tanks and treatment facilities, electrical switch yards and substations, and related mechanical equipment.

4. DEVELOPMENT STANDARDS

- A. This PAD shall not be required to provide a minimum of fifteen percent (15%) of the net subject property acreage as Open Space Conservation (OSC) and/or Open Space Recreation (OSR) specified in Section 21-2-7.3 of the Zoning Ordinance.
- B. This PAD maintains the City's development standards as provided in Zoning Ordinance Section 21-2-5.4: *Industrial Development Standards*, Table 2.5-2 *Business and Industrial Districts Development Standards* and the Zoning Ordinances Article IV. General Development Regulations, except as modified below.

The following standards in bold double underlined note a deviation from the Ordinance in this PAD. Standards struck through are standards that are removed. All other development standards shall be in conformance with the City of Eloy Zoning Ordinance.

TABLE 2.5-2

BUSINESS AND INDUSTRIAL DISTRICTS DEVELOPMENT STANDARDS

Zoning District		I-2	RZPAD2024-006 PAD Standards
Lot dimensions, minimum:			
	Lot width	100'	100'
Setbacks, minimum:			
	Front	30' ¹	30' ¹
	Side	20' ²	20' ²
	Side, adjacent to residential	75' ¹	75' ¹
	Street side	15'	15'
	Rear	20'	20'
	Rear, adjacent to residential	75'	75'
Lot coverage, maximum		60%	60%
Building height, maximum		55'	<u>80³</u>

Notes:

1. **Parking shall not be located in the required streetscape landscaping specified in the development standards of this PAD.**
 2. Zero setbacks are permitted for structures if adjacent structures also have zero setbacks and regulations of the Building Code in force at the time of the review are met.
 3. **The building height includes rooftop appurtenances, parapets, mechanical and electrical, fire suppression and water tanks, communication devices and equipment, antennas, screen walls/fences, and other ancillary equipment supporting the facility. Section 21-4-2.16 of the Eloy Zoning Ordinance, adopted in Ordinance No. 24-981, Resolution No. 24-1601 (Case No. ZTA2024-004) shall not apply.**
- C. Section 21-4-2.4.A.3. of the Zoning Ordinance applies to all C-2 zoned commercial and I-1 and I-2 zoned industrial developments that abut a residentially zoned property or the planned community trail system. This provision, as modified below, shall also apply to this PAD. Except driveway entrances and exits, development on the Property shall provide and maintain a minimum 30-foot-wide landscaped buffer, along Estrella and Houser Roads to accommodate a 10-foot-wide community trail easement. A 10-foot-wide landscape buffer will be provided along the Santa Rosa Canal.
- Landscape buffers shall contain a minimum of one (1) tree and two (2) shrubs every forty (40) lineal feet or portion thereof. Clustering of all vegetative landscaping materials shall be permitted to maintain site security and visibility into the property and to maintain space for sufficient separation from the fencing to secure the site. Solid walls, buildings, or structures shall not be placed in or obstruct the landscape buffer area except that security fencing may undulate into the landscape buffer area to accommodate clustered landscape materials. Further, passive security features, such as bollards, boulders, electronics, lighting, etc. may be placed within the landscape buffer provided they are integrated into the landscape and architectural design of the Project. Security features may not impede pedestrian access ways or reduce the amount of required landscape. The security fence along the Santa Rosa Canal may be located on the property line with the 10-foot landscape buffer inside the fence line.
- D. Section 21-4-1.5 of the Zoning Ordinance provides the required number of parking spaces by use. The proposed Data Processing and Hosting Use is new to the Zoning Ordinance and, therefore, is not included in this Section. Due to the unique nature of the proposed use and the anticipated low parking demand, the required number of parking spaces will be determined by a parking study to be provided at the time of Site Plan Review.

5. DESIGN GUIDELINES

In addition to the industrial requirements and guidelines of the zoning ordinance, all data processing & hosting services facilities and any building over 55' shall adhere to the following additional design guidelines:

Due to the size of this project, a thematic character will be woven into the fabric of the Project that unifies the architecture, signage, and landscape. The specific uses combined with careful aesthetic considerations for large building masses will inform the design process for the architecture. The building may take on the characteristics of specific tenants or design in a manner that appeals to a broader range of potential tenants.

1. Building massing and scale is an important consideration when looking at the overall design. The design of all buildings shall incorporate the following:
 - a. The design of a building should reduce its perceived height by dividing the building mass into smaller-scale components. This can be achieved by breaking down the building elevation to provide a well-defined base, middle, top or other vertical composition as approved by the Zoning Administrator.
 - Elements such as base architectural veneer banding (wainscot) and treatments defined by a different material, texture, or color may be implemented to achieve a solid building base.
 - Distinct parapet designs and cornice treatments may be used to achieve a well-defined building top. Variations in roof or parapet form and parapet heights should reflect at approximately two feet of undulation for every approximately 200 feet of horizontal distance, or as approved by the Zoning Administrator.
 - The design of a building should reduce its apparent bulk by dividing it into smaller masses. The apparent mass of a building is to be further reduced using techniques that include, but not limited to:
 - Incorporating clearly pronounced recesses and projections,
 - Introduction of wall plane off-sets (dimension established by building module), the use of other reveals and projections and subtle changes in texture and color of wall surfaces, windows with mullions inset a minimum of 50% of the wall depth, etc.
 - An alternative equivalent standard may be approved by the Zoning Administrator.
 - b. Long, repetitive facades that repeat the same design element along the elevation are discouraged. The use of horizontal or vertical massing to break up long facades and highlight features such as entries and corners, including the use of windows and/or faux windows, are to be incorporated.
 - Offsets in the in horizontal building planes of at least two feet for each maximum horizontal length of approximately every 200 feet are to be provided, either through the use of shifts in the structure walls, projects, columns, architectural elements or features, or other architectural components approved by the Zoning Administrator.
 - The level of architectural fenestration and detail will increase adjacent to building entries, to emphasize human scale.
 - c. Primary building entrances are to be distinct and proportionally scaled in with the overall façade on which it occurs and shall be accentuated with well-established architectural and landscape elements, which may include varied building materials and trees and shrubs.
2. Colors, materials, and patterns will be used to de-emphasize building mass and develop visual interest that creates an overall pleasing aesthetic on all sides of the building. The color palette shall utilize desert hues. Unique features may include limited color accents to provide additional visual interest. The primary building material may be painted textured concrete, tilt-up wall panels, and feature accent materials that provide additional texture or colors where areas of enhancement are appropriate. Storefront glazing will be incorporated at anticipated primary office entrance areas to provide daylight to workspaces. Canopies entries over the primary building

entries will be provided to respond to the climate by providing shade, shadow, and accents to the building, or other building architecture shading devices approved by the Zoning Administrator.

a. The design of all buildings should incorporate the following:

- Concrete pre-cast/tilt-up buildings should be designed to include surface treatments such as stucco, plaster, glass, stone, brick, or decorative masonry. Textured and formed concrete that emulates stucco, plaster, wood, stone, brick, or decorative masonry finishes is acceptable.
 - Concrete pre-cast walls/tilt-up shall incorporate reveals, recessed panels, recessed windows, and/or molding to articulate the building exterior.
 - The use of corporate identifying colors shall be limited to 25% of any one of the façades.
 - Structures shall utilize color and material that are desert tones and have a light reflective value (LRV) no greater than 60%, although a maximum of 25% of any one of the façades may have color and material with a light reflective value (LRV) no greater than 70%.
 - An alternative equivalent standard may be approved by the Zoning Administrator.
3. Rooftop equipment shall be screened by a parapet or screen wall, unless the equipment is designed with integrated architectural shrouds.
 4. Internalized roof drains are preferred. If external roof drains are used, they must be architecturally integrated with the building. Architecturally integrated scuppers are permitted.
 5. Loading doors and bays shall not face Houser Road, unless approved by the Zoning Administrator.
 6. All ground-mounted equipment shall be placed behind an 8-foot screen wall, fence, landscaping, or similar opaque screening alternative as approved by the Zoning Administrator. Ground-mounted equipment shall not be placed between the façade of the building and Houser Road. Screening for tank equipment, if visible from the public right-of-way, will be painted consistent with the primary architecture.
 7. Service and outdoor storage areas shall be placed behind a screen wall and oriented away from public view. Refuse containers shall be placed in an enclosure or behind an approved screen wall, fence, or similar opaque screening alternative as approved by the Zoning Administrator. The architectural materials and colors of the screen wall shall match the building.

Citizen Participation Report

Southwest Crossing

Southeast Corner of Estrella and Houser Roads

Case Numbers

RZPAD2024-006 Southwest Crossing PAD

November 6, 2024

PREPARED BY:

Bergin, Frakes, Smalley & Oberholtzer PLLC

Contact: Adam Pruett

apruett@bfsolaw.com

(602) 899-0318

Introduction

Section 21-6-2.3 of the Zoning Ordinance outlines the requirements for the Citizen Review Process component for all rezoning applications. Included in these requirements is the provision of a detailed Citizen Participation Plan, which identifies the steps to be taken to ensure adequate notification is provided to the surrounding property owners. Property owners within 300 feet of the application area were notified of the meeting by first class mail and the property was posted in accordance with City requirements in three (3) locations – Houser Road, Estrella Road, and Frontier Street.

A copy of the Citizen Participation Plan is included in this report.

Neighborhood Meeting Summary

The meeting began promptly at 6:00 and 3 representatives from Hendrix Salvage attended, which owns the property at the southwest corner of Houser and Estrella. In attendance from the applicant team were Carolyn Oberholtzer, Garry Hays, Trey Davis, and Adam Pruett. The meeting was held in an open house format where property owners would speak directly with members of the team and have specific questions answered.

Representatives (3) for two parcels located west of the Property across Estrella Road. After a brief introduction to the project and explanation of the need for the requested PAD, no further questions were asked and the discussion turned to their family history, business, and development in general. No other attendees were present.

There was no stated or indicated opposition to the project during the meeting or via phone or email communication; therefore, no changes are being made in response to public feedback.

The following documents are attached as exhibits

- Citizen Participation Plan
- Notification Radius Map and Property Owners within 300 feet
- Site Posting Affidavit
- Neighborhood Meeting Notices
- Sign-in Sheet
- Neighborhood Meeting Presentations Boards (reduced)

Southwest Crossing PAD Citizen Participation Plan



Submittal: October XX, 2024

Case No. XXXXXXXX

Location: Sections 8, 9, 16, and 17 of Township 8 South, Range 7 East of Pinal County

Zoning District: I-2

PREPARED BY:

Bergin, Frakes, Smalley & Oberholtzer, PLLC

4343 East Camelback Road, Suite 210

Phoenix, AZ 85018

602-888-7860

Contact: Carlyn Oberholtzer

Email: coberholtzer@bfsolaw.com

This Citizen Participation Plan (“Plan”) is being implemented in conjunction with a request to establish a Planned Area Development (“PAD”) overlay to support the operations of a new data processing and hosting services facility on approximately 122-acres located at the southwest corner of Estrella Road and Houser Road (the “Property”) within the City of Eloy in the I-2 General Industrial Zoning District. The PAD will add a new Data Processing & Hosting Facility (the “Facility”) use and modify the maximum allowable building height for this use. The PAD is an appropriate planning tool capable of maintaining the structure of the City of Eloy’s regulations while allowing flexibility to respond to evolving markets conditions where uses had not been contemplated in the Zoning Ordinance and where new construction and efficiency trends favor increased building heights. The additional building height allowance is reserved for the Facility only.

This Plan is meant to open the lines of communication between the property owners in the area surrounding the Property and to facilitate the meaningful inclusion of all interested parties in the development of the proposed Request.

I. Description of Community Involvement Area

The Community Involvement Area will be defined by a 300-foot area around the boundaries of the Property (see **Exhibit A**, attached). The development team will notify the property owners, interested parties, and registered homeowner associations within this area and additional stakeholders as set forth below.

II. Parties Affected by the Application

Attached to this Plan is a list of those property owners, interested parties identified by the City, and HOA representatives within the 300-foot boundary. The complete list within the boundary is attached as **Exhibit B**.

III. Notification and Information Procedures

The required notification letters, site posting, and personal contact with neighborhood leaders and interested residents are the most appropriate notification techniques for this type of request. The development team is committed to ensuring that all interested citizens are advised of the proposed Request and understand all issues relevant thereto. Information will be made available in the following ways:

1. Letters will be sent to (a) all property owners and interested parties within 300 feet of the Property boundary, (b) any person who has submitted a request to the City to be notified, and (c) additional identified stakeholders not less than ten (10) calendar days of the scheduled neighborhood meeting. Included in the letter will be the date, time, and location of the meeting as well as a brief description of the Request and the applicant’s contact information. Recipients will be encouraged in the letter to call, email, or otherwise contact the applicant’s representatives or the City with any questions or concerns. A copy of the draft example letter is included as **Exhibit C**.

2. If the notification letter generates interest from the citizens, the development team will respond via email, phone, or meetings with those citizens to discuss their comments, feedback, issues, and questions.

3. For all contact made with citizens to discuss this Request a record of that contact will be sent to the City. This record will include names of those involved, time, date, place, and method of contact as well as the issues discussed.

4. A minimum of one Public Hearing Sign will be erected on the property in accordance with City placement, size, and content requirements. These signs will be posted in locations specified by the Community Development at least fifteen (15) days prior to the neighborhood meeting, stating the type of application requested; a general description of the proposed Request; the dates, times, and locations of public hearings; and the applicant's and City's contact information. The signs will be posted along the frontage of the parcel, so they are visible from the nearest public rights-of-way. The signs shall be a minimum of four feet by four feet in size and will be maintained throughout the required posting period. A signed Affidavit of Posting along with photographic evidence shall be submitted to staff demonstrating proof of posting within two (2) business days following site posting. The posting shall be updated at least fifteen (15) days prior to the Planning and Zoning Commission hearing and City Council hearing, and the applicant shall provide staff with a completed Affidavit of Posting and photographic evidence each time. Within fourteen (14) days of the final hearing, the Applicant shall remove the sign.

IV. Response Procedures

Through the notification techniques described above, the public will be able to gain a full understanding of the proposed Request and will be able to contact the development team to voice their issues and concerns. The ways in which the public will be able to contact the development team include, but are not limited to, telephone, U.S. mail, personal contact, and/or email. The issues and concerns brought to the attention of the development team will be taken into consideration and further communication will be initiated by the development team to fully consider those comments and, wherever possible, integrate them into the application and proposal throughout the application process.

V. Schedule for Completion

1. In [October 2024](#), this Plan will be submitted to Community Development Department staff with the official application. The development team will make appropriate changes according to staff's comments, if necessary.

2. The site will be posted 15 days prior to the neighborhood meeting and will be updated with information regarding the Planning and Zoning Commission hearing and City Council hearing dates. The Property will be posted according to the sign specifications of the City of Eloy Community Development Department. Notifications will be sent to identified stakeholders not less than 10 days prior to the neighborhood meeting.

3. As interested parties reply to the letters and signage, communication will be opened between those citizens and the development team to address all questions, concerns, and comments. At least one neighborhood meeting shall be held in a publicly accessible location near the Project Area. The meeting will be held at least 15 days prior to the first public hearing. A meeting summary will be submitted to staff seven (7) days prior to the first public hearing. Additional meetings may be held with those who would like to further discuss the project. The results of those discussions

and the feedback gained will be taken into consideration with the application. This will be an ongoing aspect of the Plan from first notification through public hearing.

4. Prior to notice of public hearing, a written report will be submitted detailing the results of the Plan. This report will include 1) the dates, times, and locations of all meetings initiated with stakeholders, 2) a description of the approximate number of people that participated in the public participation process, and where they are located in relation to the subject property, 3) a discussion of the results of the public participation process, including major issues and concerns identified by stakeholders and how the development team has and will address them, and 4) an appendix of information, including mailings, flyers, newsletters, handouts, and/or other pertinent materials that were used to help describe the public participation program.

VI. Status Procedure

As a part of the application process, the development team will be in close communication with the Community Development Department and will provide updates to this Plan to ensure that they are fully apprised of the progress and inclusiveness of the public participation process. These updates will include the information (comments, questions, concerns, times, dates, and names) of all contact between the development team and the public. A final report summarizing the public involvement process will be submitted to the Community Development Department prior to the City providing official notice of public hearing according to the guidelines in the City of Eloy Zoning Ordinance.

Exhibit A

Community Involvement Area

Property Owners within 300' Buffer

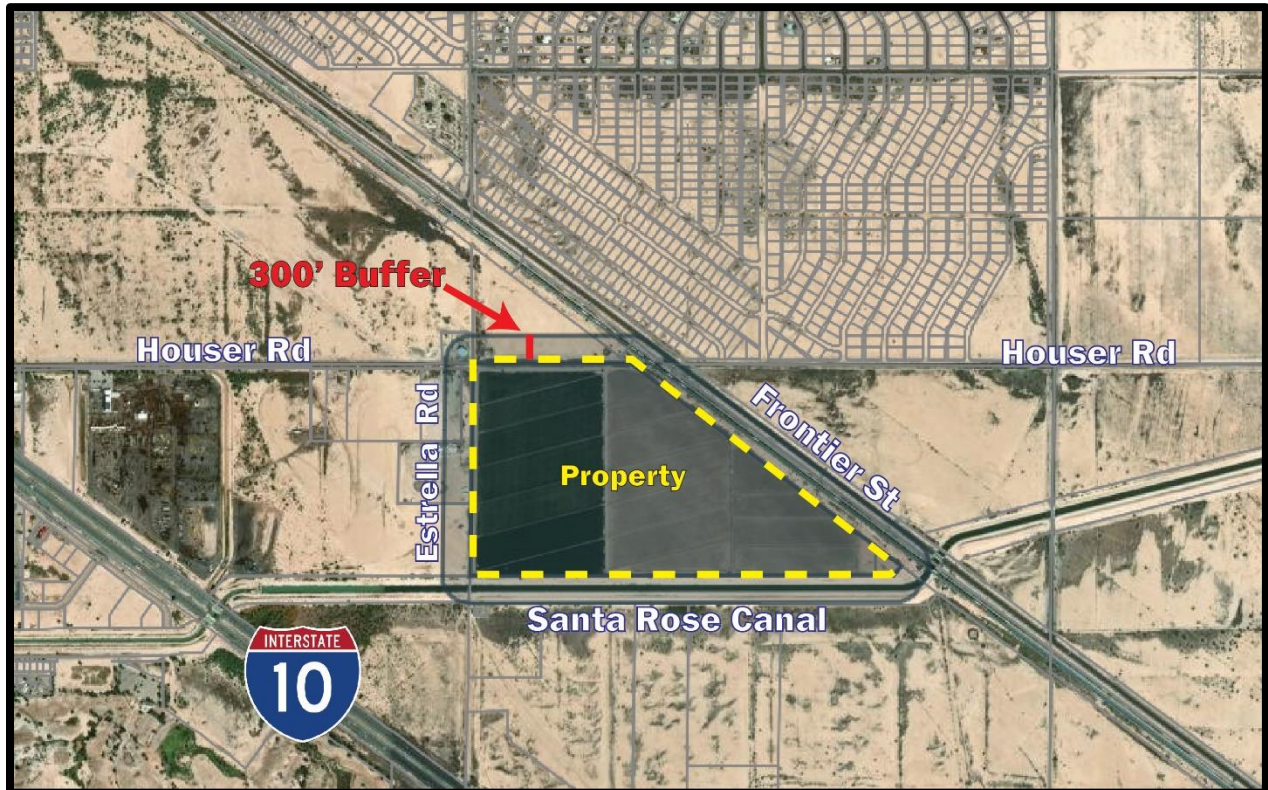


Exhibit B

Property Owners and Interested Parties Labels

USA CAP
PO BOX 43020
PHOENIX,AZ,85080

UNION PACIFIC RAILROAD
1400 DOUGLAS ST STOP 1640
OMAHA,NE,68179

UNION PACIFIC RAILROAD
1400 DOUGLAS ST STOP 1640
OMAHA,NE,68179

FRAZIER EQUIPMENT LLC
PO BOX 5865
SCOTTSDALE,AZ,85261

HENDRIX LYLE
PO BOX 156
LAVEEN,AZ,85339

CITY OF ELOY
595 N C ST STE 104
ELOY,AZ,85131

USA
.
,,0

EMPIRE SOUTHWEST LLC
1725 S COUNTRY CLUB DR
MESA,AZ,85210

EMPIRE SOUTHWEST LLC
1725 S COUNTRY CLUB DR
MESA,AZ,85210

Exhibit C

Example Notification Letter

Month XX, 2024

SENT VIA U.S. MAIL

Dear Neighbor,

This letter is to inform you that our office has filed a Planned Area Development (PAD) application for a data processing and hosting services facility with modified building heights on an approximately 122-acre site located on the southeast corner of Estrella Rd and Houser Rd. **An in-person neighborhood meeting will be held on MONTH/DAY/2024 at TIME and will be held at LOCATION.** We invite you to attend our meeting to discuss this request.

Request: Planned Area Development (PAD) overlay to allow Data Processing and Hosting Services uses on vacant land.

Purpose: The Request will add Data Processing & Hosting Services to Section 21-2-5.3 *Industrial Use Standards*, Table 2.5-1 *Table of Allowed Uses for Business, Industrial and Public Facility Districts* as an additional permitted use and modify the allowable building height.

Location: Southeast corner of Estrella Road and Houser Road

Size: Approximately 122 acres

Applicant: Carolyn Oberholtzer
4343 East Camelback Road, Suite 210
Phoenix, AZ 85018

Phone: 602-888-7855; Fax: 602-888-7860

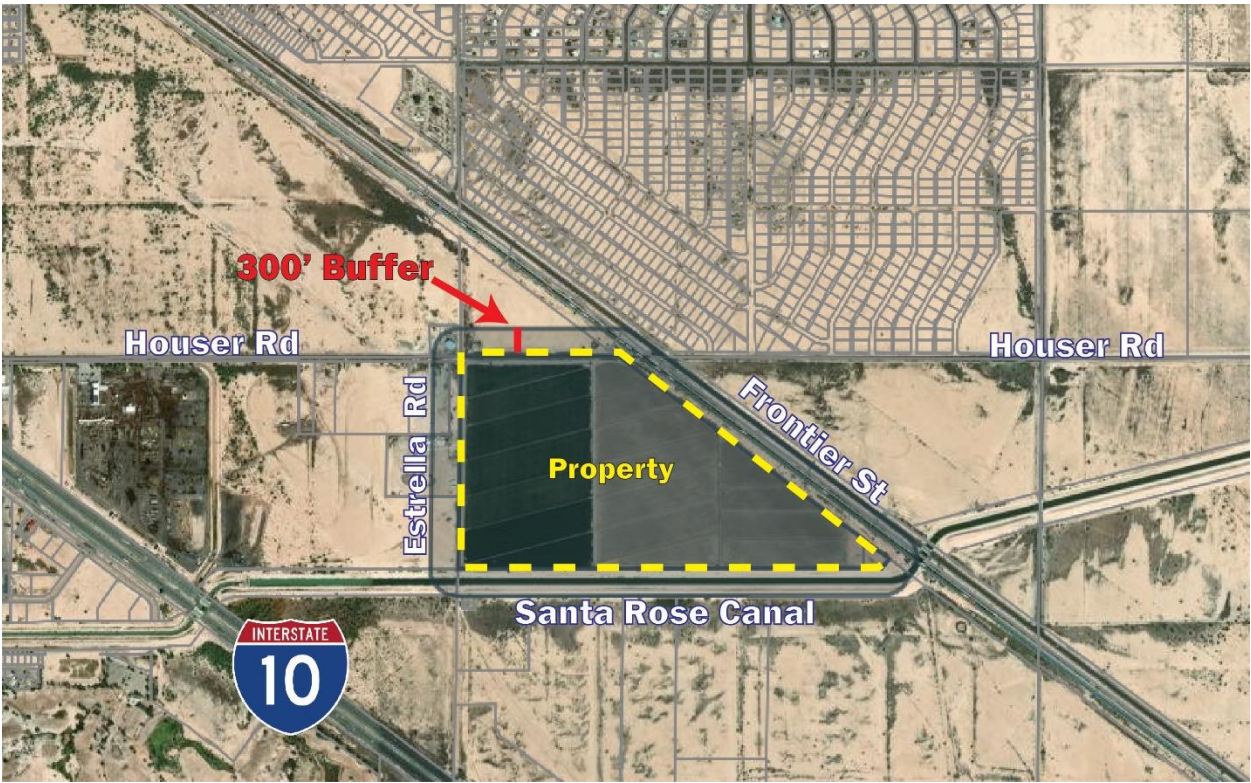
Email: coberholtzer@bfsolaw.com

Map of Area:



An application has been filed with the City of Eloy Community Development Department regarding the request above. This notice is being sent to you because you were listed as a party of interest within 300 feet of the site noted above. This notice is being sent to you to inform you of this application and to provide you with an opportunity to relay any questions, issues, or concerns regarding this application to the contract person listed in the top box of this page.

300-Foot Notification Radius



Property Owners Within 300 Feet

Parcel Identification Number	First Owner Name	Postal Address	Postal City	Postal State	Postal Zip
40423005B	USA CAP	PO BOX 43020	PHOENIX	AZ	85080
404010150	UNION PACIFIC RAILROAD	1400 DOUGLAS ST STOP 1640	OMAHA	NE	68179
404203470	UNION PACIFIC RAILROAD	1400 DOUGLAS ST STOP 1640	OMAHA	NE	68179
404220100	FRAZIER EQUIPMENT LLC	PO BOX 5865	SCOTTSDALE	AZ	85261
404220010	HENDRIX LYLE	PO BOX 156	LAVEEN	AZ	85339
40409010B	CITY OF ELOY	595 N C ST STE 104	ELOY	AZ	85131
40422011B	EMPIRE SOUTHWEST LLC	1725 S COUNTRY CLUB DR	MESA	AZ	85210
40422011A	EMPIRE SOUTHWEST LLC	1725 S COUNTRY CLUB DR	MESA	AZ	85210

AFFIDAVIT OF SIGN POSTING

The undersigned Applicant has complied with the City of Eloy's posting requirements for Case # RZPAD2024-006 on 10/22/24.

See attached photo exhibit.

For applicant:

BFSO

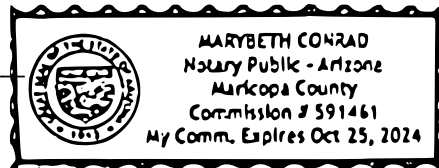
Dynamite Signs, Inc.
Sign Company Name

Meghan Liggett
Sign Company Representative

Subscribed and sworn to be on 10/22/24 by Meghan Liggett.

IN WITNESS WHEREOF, I Hereto set my hand and official seal.

Marybeth Conrad
Notary Public



My Commission expires: 10-25-24

CITY OF ELOY PUBLIC HEARING NOTICE

Case Number: RZPAD2024-06

Request: A rezoning request for a Planned Area Development (PAD) overlay for a data processing and hosting services facility with modified building height on vacant land

Site Location: Southeast corner of Estrella Road and Houser Road

Site Size: Approximately 122 acres

Proposed Use: Data processing and hosting services facility

Applicant Name: Carolyn Oberholtzer –
Bergin, Frakes, Smalley & Oberholtzer

Phone Number: (602) 888-7855

Email: coberholtzer@bfsolaw.com

Neighborhood Meeting

Date: November 4, 2024

Time: 6:00 PM

Location: Community Room,
City of Eloy City Hall,
595 N. C St., Eloy, AZ



Planning and Zoning Commission

Date: TBD

Time: 6:00 PM

Location: City Council Chambers, 595 N. C Street, Eloy

City Council

Date: TBD

Time: 6:00 PM

Location: City Council Chambers, 595 N. C Street, Eloy

Information available at: City of Eloy, Community Development
595 N. C Street, Eloy, Arizona (520) 466-2578

October 22, 2024 at 8:06 AM

+32.775524, -111.594332

W Frontier St

Eloy AZ 85131

United States



CITY OF ELOY PUBLIC HEARING NOTICE

Case Number: RZPAD2024-06

Request: A rezoning request for a Planned Area Development (PAD) overlay for a data processing and hosting services facility with modified building height on vacant land

Site Location: Southeast corner of Estrella Road and Houser Road

Site Size: Approximately 122 acres

Proposed Use: Data processing and hosting services facility

Applicant Name: Carolyn Oberholtzer –
Bergin, Frakes, Smalley & Oberholtzer
Phone Number: (602) 888-7855
Email: coberholtzer@bfsolaw.com

Neighborhood Meeting

Date: November 4, 2024
Time: 6:00 PM
Location: Community Room,
City of Eloy City Hall,
595 N. C St., Eloy, AZ



Planning and Zoning Commission

Date: TBD
Time: 6:00 PM
Location: City Council Chambers, 595 N. C Street, Eloy

City Council

Date: TBD
Time: 6:00 PM
Location: City Council Chambers, 595 N. C Street, Eloy

Information available at: City of Eloy, Community Development
595 N. C Street, Eloy, Arizona (520) 466-2578

October 22, 2024 at 7:44 AM
+32 777459,-111 599562
W Houser Rd
Eloy AZ 85131
United States

CITY OF ELOY PUBLIC HEARING NOTICE

Case Number: RZPAD2024-06

Request: A rezoning request for a Planned Area Development (PAD) overlay for a data processing and hosting services facility with modified building height on vacant land

Site Location: Southeast corner of Estrella Road and Houser Road

Site Size: Approximately 122 acres

Proposed Use: Data processing and hosting services facility

Applicant Name: Carolyn Oberholtzer –
Bergin, Frakes, Smalley & Oberholtzer
Phone Number: (602) 888-7855
Email: coberholtzer@bfsolaw.com

Neighborhood Meeting

Date: November 4, 2024
Time: 6:00 PM
Location: Community Room,
City of Eloy City Hall,
595 N. C St., Eloy, AZ



Planning and Zoning Commission

Date: TBD
Time: 6:00 PM
Location: City Council Chambers, 595 N. C Street, Eloy

City Council

Date: TBD
Time: 6:00 PM
Location: City Council Chambers, 595 N. C Street, Eloy

Information available at: City of Eloy, Community Development
595 N. C Street, Eloy, Arizona (520) 466-2578

October 22, 2024 at 7:25 AM
+32.774871, -111.602083
2401-2695 N Estrella Rd
Eloy AZ 85131
United States

Neighborhood Meeting Notification Letter

October 21, 2024

SENT VIA U.S. MAIL

Dear Neighbor,

This letter is to inform you that our office has filed a Planned Area Development (PAD) application (Case No. RZPAD2024-006) for a data processing and hosting services facility with modified building heights on an approximately 122-acre site located on the southeast corner of Estrella Rd and Houser Rd. **An in-person neighborhood meeting will be held on November 4, 2024 at 6:00 p.m. and will be held in the Community Room at the Eloy City Hall (595 C Street, Eloy, AZ). We invite you to attend our meeting to discuss this request.**

Request: Planned Area Development (PAD) overlay to allow Data Processing and Hosting Services uses on vacant land.

Purpose: Define Data Processing & Hosting Services and establish it as a permitted use in addition to the existing I-2 General Industrial uses provided in Zoning Ordinance Section 21-2-5.3 *Industrial Use Standards*, Table 2.5-1 *Table of Allowed Uses for Business, Industrial and Public Facility Districts*, and to modify the allowable building height to allow for the development of a data processing and hosting services facility.

Location: Southeast corner of Estrella Road and Houser Road

Size: Approximately 122 acres

Applicant: Carolyn Oberholtzer
4343 East Camelback Road, Suite 210
Phoenix, AZ 85018

Phone: 602-888-7855; Fax: 602-888-7860

Email: coberholtzer@bfsolaw.com

Map of Area:

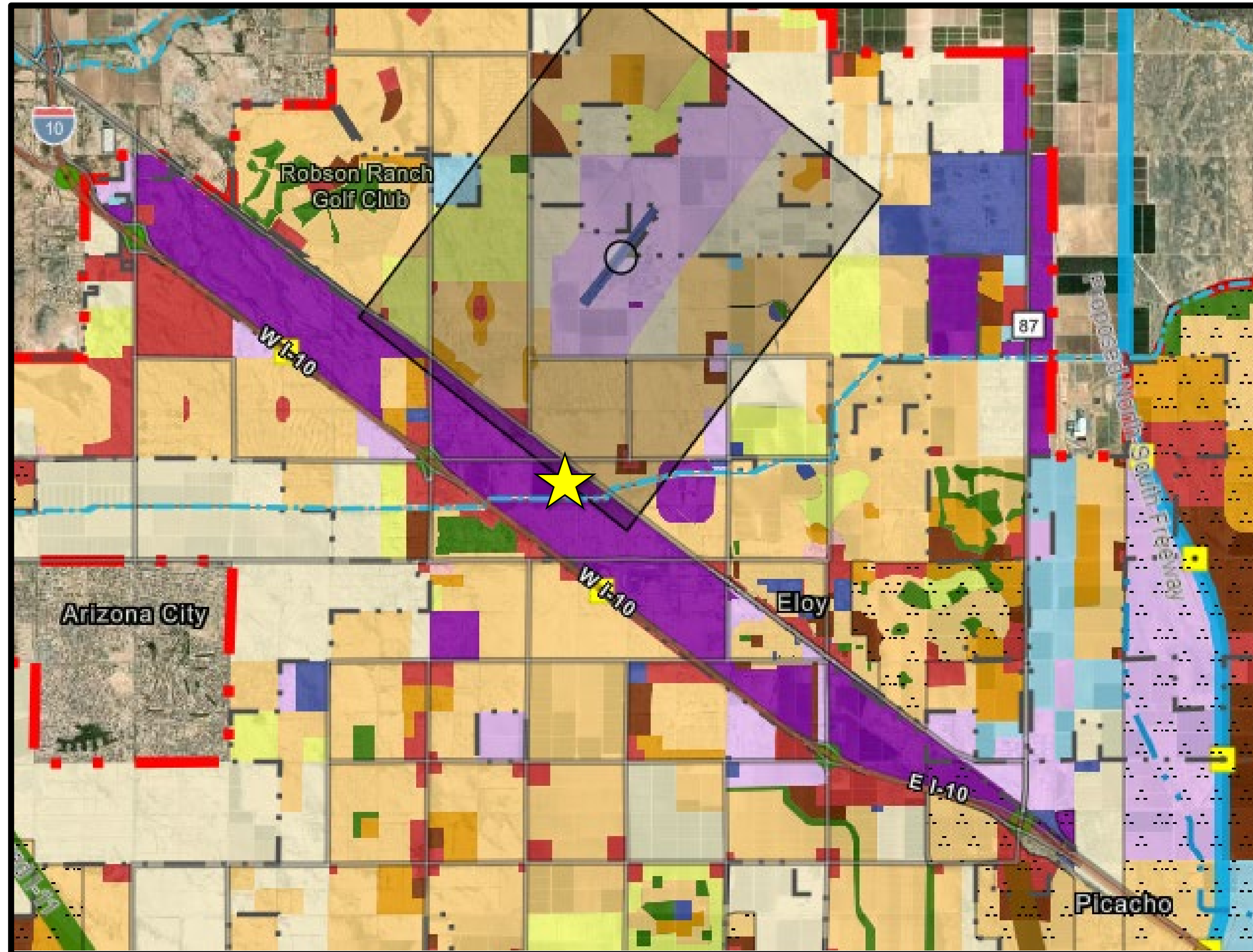


An application has been filed with the City of Eloy Community Development Department regarding the request above. This notice is being sent to you because you were listed as a party of interest within 300 feet of the site noted above. This notice is being sent to you to inform you of this application and to provide you with an opportunity to relay any questions, issues, or concerns regarding this application to the contract person listed in the top box of this page.

[illegible]

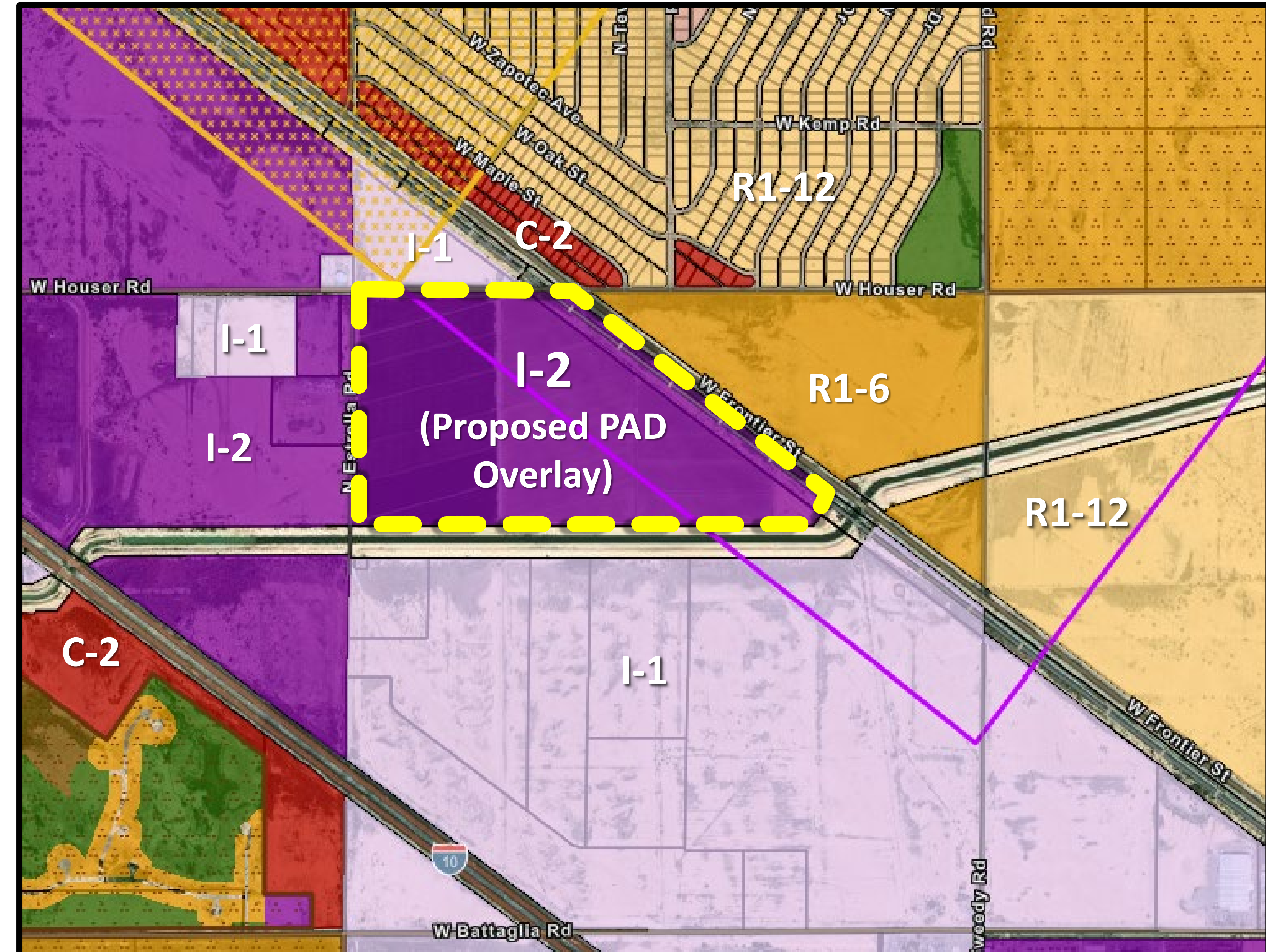


General Plan Land Use Designation



General Industrial

Zoning



I-2 General Industrial

- PAD Overlay

- Adds new *Data Processing & Hosting Services* use

- Increases maximum building height to 80'

Data Processing & Hosting Services

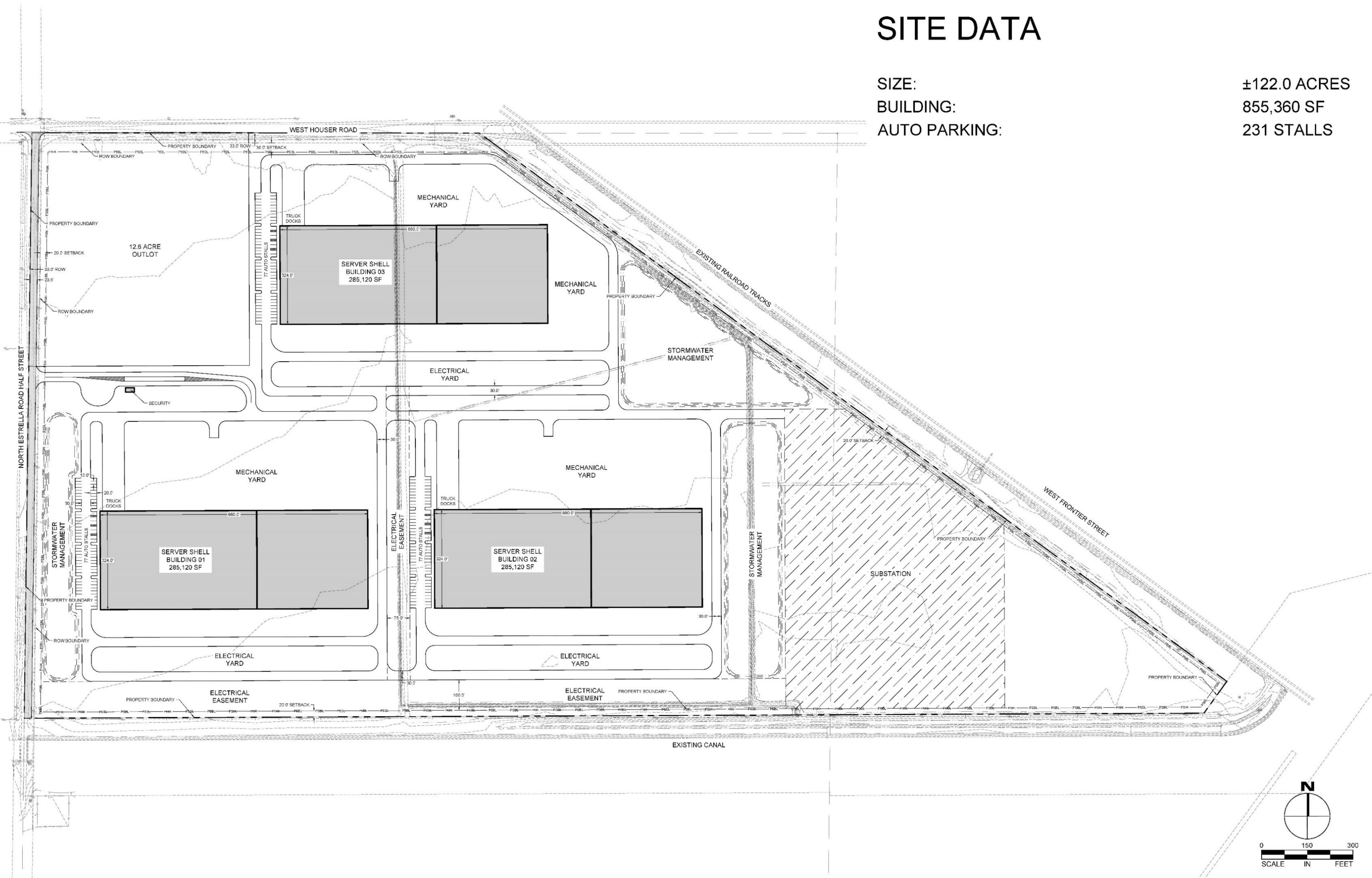
A use that’s primary purpose is to provide information technology services including digital data processing and distribution, web hosting and management, internet and cloud services for applications, networking and security, data and telecommunication storage, backup, recovery, and management, eCommerce transactions, and internet gaming platforms. Data Processing & Hosting Services are typically located in a facility that contains the necessary information technology and computing hardware and software to provide the aforementioned services, including supporting equipment such as generators, water tanks and treatment facilities, electrical switch yards and substations, and related mechanical equipment.

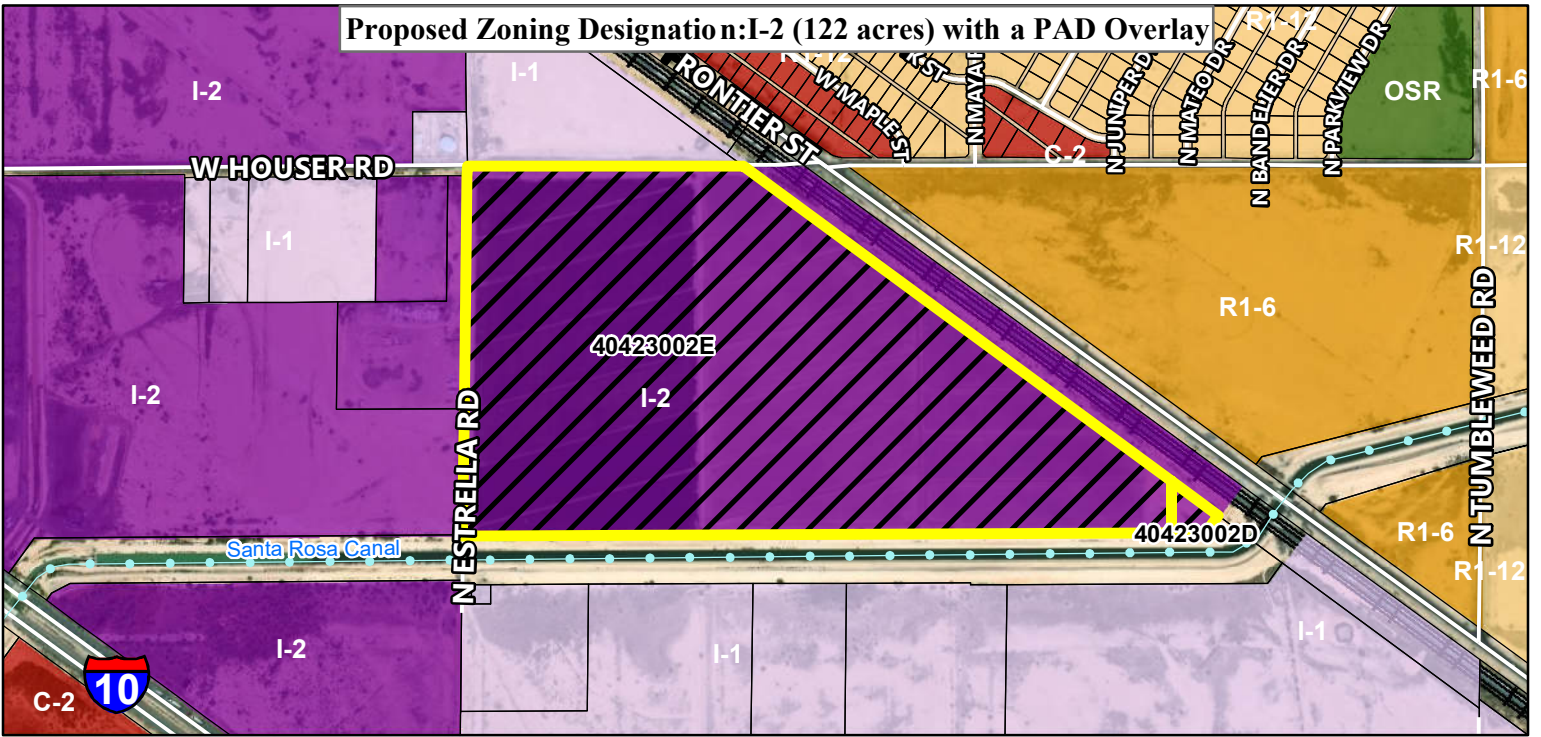
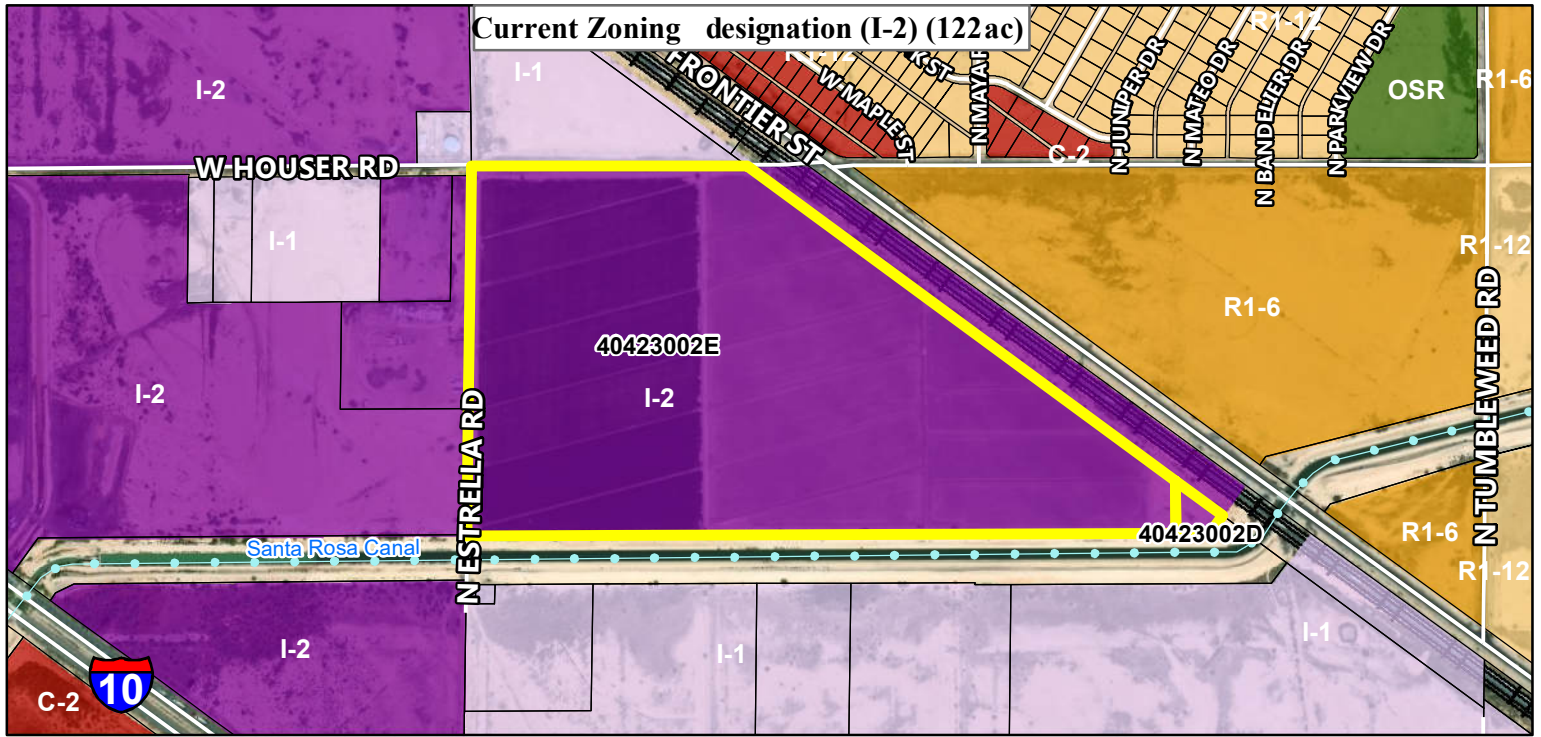
Zoning District	I-2	RZPAD2024-006 PAD Standards
Lot dimensions, minimum:		
Lot width	100'	100'
Setbacks, minimum:		
Front	30' ¹	30' ¹
Side	20' ²	20' ²
Side, adjacent to residential	75' ¹	75' ¹
Street side	15'	15'
Rear	20'	20'
Rear, adjacent to residential	75'	75'
Lot coverage, maximum	60%	60%
Building height, maximum	55'	80 ³

- Notes:**
1. Parking shall not be located in the required streetscape landscaping specified in the development standards of this PAD.
 2. Zero setbacks are permitted for structures if adjacent structures also have zero setbacks and regulations of the Building Code in force at the time of the review are met.
 3. The building height includes rooftop appurtenances, parapets, mechanical and electrical, fire suppression and water tanks, communication devices and equipment, antennas, screen walls/fences, and other ancillary equipment supporting the facility. Section 21-4-2.16 of the Eloy Zoning Ordinance, adopted in Ordinance No. 24-981, Resolution No. 24-1601 (Case No. ZTA2024-004) shall not apply.

SITE DATA

SIZE:	±122.0 ACRES
BUILDING:	855,360 SF
AUTO PARKING:	231 STALLS





Southwest Crossing Rezoning Exhibit - Case No: RZPAD2024-006

Zoning Designations

Single Family

- RR-20 Rural Residential (20 acres/du)
- RR-5 Rural Residential (5 acres/du)
- RR-2.5 Rural Residential (2.5 acres/du)
- R1-54 Estate Residential (1.25 acres/du)
- R1-43 Estate Residential (43,560 sq. ft.)
- R1-12 Single Family Residential (12,000 sq. ft.)
- R1-6 Single Family Residential (6,000 sq. ft.)

Multi-Family

- R-2 Small Lot Residential (6-10 du/acre)
- R-3 Multiple Family Residential (10-24 du/acre)

Commercial

- C-1 Neighborhood Commercial
- C-2 General Commercial
- MU Mixed Use

Industrial

- BP Business Park
- I-1 Light Industrial
- I-2 General Industrial

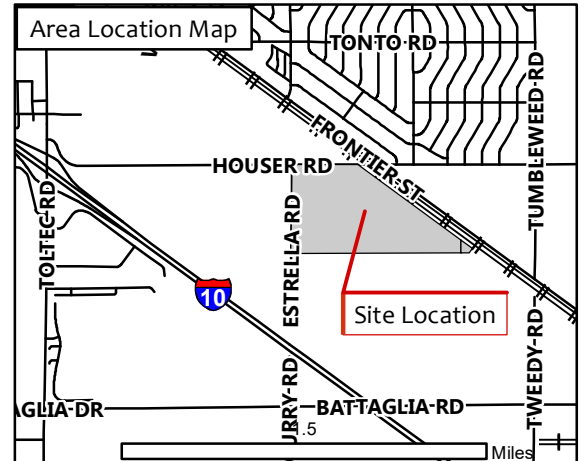
Public Facility

- PF Public Facility

Open Space

- OSC Open Space Conservation
- OSR Open Space Recreational

Proposed PAD



Disclaimer: This map is for reference purposes only and is not suitable for legal, financial, engineering, or surveying purposes or commitments. The City of Eloy assumes no responsibility for errors, omissions, or inaccuracies presented, and shall have neither liability nor responsibility for any direct or indirect loss or damage in connection with, or arising from, the information on this map. Any conclusions derived from this map are the responsibility of the user.

Conditions of Approval for Zoning Map Amendment:

Case No. RZPAD2024-006

Southwest Crossing

These stipulations are in order to protect the public health, safety, and welfare of the City of Eloy.

DEVELOPMENT PLAN, STANDARDS, AND AGREEMENT

1. CONFORMANCE TO DEVELOPMENT PLAN. The development shall conform to the application narrative and Development Plan, entitled “RZPAD2024-006 Southwest Crossing Development Plan and Use Allowances and Standards,” which is on file with the City Clerk and made a public record by Resolution No. *(To Be Determined at the City Council Hearing)* and incorporated into these stipulations and ordinance by reference as if fully set forth herein. Any proposed significant change to the Development Plan, as determined by the Zoning Administrator, shall be subject to additional action and public hearings before the Planning and Zoning Commission and City Council. Where there is a conflict between the Development Plan and these stipulations, these stipulations shall prevail.
2. CONFORMANCE TO AMENDED DEVELOPMENT STANDARDS. The development shall conform to the amended development standards included in the Development Plan, except as modified herein. Any change to the development standards shall be subject to additional public hearings before the Planning and Zoning Commission and City Council.

SITE DEVELOPMENT

3. LANDSCAPE BUFFER.
 - 3.a. HOUSER ROAD AND ESTRELLA ROAD. A minimum of a thirty (30) foot-wide unobstructed (except for driveway access to Houser Road and Estrella Road approved by the City Engineer) landscaped buffer, measured from the right-of-way to be dedicated as specified hereafter, shall be provided abutting the entire Houser Road and Estrella Road right-of-ways if any part of Parcel 1 identified on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)* contains a building exceeding a height of fifty-five (55) feet, or is used for a Data Processing & Hosting Services use. The aforementioned landscape buffer shall be a minimum of twenty (20) feet wide if any part of Parcel 1 contains a building equal to, or less than, a height of fifty-five (55) feet and is used for a use other than Data Processing & Hosting Services use.
 - 3.b. LANDSCAPING. Prior to the issuance of any permit (except a preliminary grading permit), the developer shall obtain approval of the landscape plan to plant the landscape buffers with trees, shrubs, and groundcover plants to the satisfaction of the Zoning Administrator. All plants shall be on the Pinal Active Management Area Low Water Use/Drought Tolerant Plant List.
4. NOISE. If any part of the development of Parcel 1 identified on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)* is used for a Data Processing & Hosting Services

use, noise generated by the development, including any associated equipment for the development, shall not exceed the following noise levels when measured along the southwest West Frontier Street right-of-way line abutting the Union Pacific Railroad right-of-way:

- 4.a. 60 decibels (dB),
- 4.b. Maximum (20 seconds) intermittent impulse noise when equipment turns on: 70 decibels (dB), and
- 4.c. Noise levels may exceed the decibels allowed above during intermittent power outages or other instances that are considered emergency in nature by a reasonable person, as determined by the Zoning Administrator.

5. SOUND MITIGATIONS.

- 5.a. Prior to the issuance of any permit (except a preliminary grading permit) for the development of Parcel 1 identified on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)*), the property owner(s)/developer shall provide an environmental sound assessment by a third-party acoustical engineer registered in Arizona demonstrating that the sound levels emanating from the Data Processing & Hosting Services use and associated equipment during operation does not exceed the level specified in these Conditions of Approval. An updated environmental sound assessment shall be submitted with each phase of development on Parcel 1, identified on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)*) that address any existing development on the parcel and the new phase of development.
- 5.b. If a separate noise study is conducted by the property owner(s)/developer or City after the start of operation of the development on Parcel 1 identified on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)*), regardless of the phase of development, finding that the noise created by the development exceeds the decibel levels specified in the Conditions of Approval aforementioned, the property owner without delay and by any means necessary upon notification by the Zoning Administrator, shall incorporate/construct noise mitigation methods recommended by an acoustical engineer to maintain noise equal to, or less than, the allowed decibel levels specified above.

6. BACKUP GENERATORS. The routine maintenance operation and testing of the backup generator(s) for a Data Processing & Hosting Services use shall be limited to the hours between 8:00 am and 6:00 pm, Monday through Friday, excluding legal holidays recognized by the State of Arizona in accordance with the Arizona Revised Statutes, §1-301 Holidays enumerated, as amended, and the timeframes that are necessary to provide the use with electricity in the event of intermittent loses power from the utility company supplying electricity or other issues impacting the power supply of the facility.

When additional backup generator(s) total run time is required by the manufacturer warranties and certifications beyond the timeframe specified above, the additional time shall be allowed only for the required timeframe outside of the above referenced time frames (e.g.

If the manufacturer warranties and certifications require a runtime of 14 hours, then the generator may run between 8 a.m. and 10 p.m., but it shall not run between 10 a.m. and 12:00 a.m.) Alternative timeframe(s) may approved in writing by the Zoning Administrator upon finding that the alternative timeframe(s) are less impactful to the city and city residents. Written requests for alternative timeframes shall submitted a minimum of four (4) City of Eloy business days in advance – unless the alternative timeframes is considered an emergency in nature by a reasonable person, as determined by the Zoning Administrator. This stipulation does not apply to emergency or non-routine maintenance/repair and related testing of the backup generator(s) necessary for compliance with industry standards and protocols, warranties, and certifications.

6.a. The operator of the facility shall provide copies of the warranty and certification operation requirements to the Zoning Administrator prior to the issuance of the first Certificate of Occupancy for each phase, and upon replacement of the generator equipment replacement.

MASTER PLANS AND STUDIES

7. TRAFFIC IMPACT ANALYSIS. With each site plan or preliminary plat submittal, the property owner(s)/developer shall submit a Traffic Impact Analysis by a registered Traffic Engineer licensed to practice in Arizona for review and acceptance by the City Engineer. At a minimum, the Traffic Impact Analysis shall address on-site and off-site traffic flows, project impacts, and mitigation measures, anticipated trip generations, and levels of service. The Traffic Impact Analysis shall be accepted/approved by the City Engineer Prior to the issuance of any permit (except a preliminary grading permit).
8. BASIS OF DESIGN REPORT (Water and Wastewater). Prior to the issuance of any permit (except a preliminary grading permit), the property owner(s)/developer shall submit an updated Basis of Design report for the entire development (inclusive of all phases of development) and obtain approval of the report from the City Engineer or designee. The report shall specify all infrastructure improvements, including improvements to city facilities that are necessary to accommodate the development.

WATER

9. MAXIMUM WATER USAGE. The water demand for the development shall not exceed a/an:
 - 9.a. Annual calendar year average of 250,000 gallons per day (gpd);
 - 9.b. Maximum day demand of 500,000 gpd; and
 - 9.c. Maximum peak demand of 875,000 gpd;

WASTEWATER

10. MAXIMUM WASTEWATER.
 - 10.a. The maximum outflow of wastewater for all uses of the development on Parcel 1 identified on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)*

shall not exceed 300,000 gpd, or cause the City of Eloy wastewater treatment plant to exceed 80% of the plant's capacity, as determined by the City Engineer, unless:

- 10.a.1. The property owner provides alternate private improvements or methods to dispose of the wastewater in excess of 300,000 gpd, approved by the City Engineer (e.g. recharge pond. If a recharge pond is used, the City Engineer may require the improvements to be dedicated to the City.) All alternate private improvements or methods to dispose of the wastewater shall comply with the requirements of the City Engineer, and governmental jurisdictional agency requirements; or
- 10.a.2. The property owner enters into a Development Agreement approved by the City that requires the property owner to provide financial assurances to contribute to the cost of improvements to improve the City of Eloy Waste Water treatment facilities to accommodate the additional wastewater discharge. The property owner shall only be responsible for their prorated share of the costs for the City of Eloy wastewater treatment plant system improvements to accommodate more than 300,000 gpd and to maintain the facility equal to or less than 80% capacity.
- 10.b. The property owner shall provide an updated Basis of Design report for each phase of development.
 - 10.b.1. If a Basis of Design Report for the phase of development indicates that the total wastewater outflow for the total development on Parcel 1 identified on Exhibit B of Ordinance No. (*To be Determined at the City Council Hearing*)), is to exceed 300,000 gpd, the property owner shall receive approval to construct the improvements necessary to comply with Condition 10.a.1., or enter into the Development Agreement specified in Condition 10.a.2., prior to the issuance of any permit for the corresponding phase of development.
 - 10.b.2. If the total wastewater outflow, as determined by the City Engineer through verifiable means, for the total development on Parcel 1 identified on Exhibit B of Ordinance No. (*To be Determined at the City Council Hearing*)) exceeds 300,000 gpd, or an amount greater than 300,000 gpd specified in development's basis of Design Report(s) accepted by the City Engineer or designee, after the issuance of the Certificate of Occupancy for any phase of development, the property owner without delay and by any means necessary cause the wastewater outflow not to exceed 300,000 gpd, or the greater amount specified in development's accepted basis of Design Report(s), or receive approval of a Development Agreement in accordance 10.a.2, in the timeframe specified by the City Engineer.

INFRASTRUCTURE

11. UTILITIES. The property owner(s)/developer shall be responsible for providing all utilities to accommodate the development.

12. WATER AND WASTEWATER IMPROVEMENTS. The property owner(s) shall provide all water and wastewater infrastructure improvements, including any new service lines, connections, reservoirs, fire hydrants, fire flow lines, pumps, pretreatment facilities, manholes and city facility modifications necessary to serve the development.
13. PRETREATMENT. The property owner shall construct pretreatment improvements, without delay and by any means necessary upon notification by the City Engineer, that City Engineer has determined by verifiable means that the wastewater outflow from the development of Parcel 1 identified on Exhibit B of Ordinance No. (*To be Determined at the City Council Hearing*)) does not meet the City's wastewater standards in effect at the time of the discharge. The City shall have the right to inspect the wastewater and pretreatment facilities and may require sampling, testing, and laboratory analyses at the property owner's expense to ensure that the quality of the wastewater and effluent does not adversely impact the City Wastewater Treatment Facilities. At no time shall the quality of the effluent discharged from the pretreatment facilities be less than a Class C effluent as defined by the Arizona Department of Environmental Quality, or the Arizona Administrative Code.
14. SEPTIC SYSTEM. The installation and use of a septic system for the development shall not be allowed.
15. CIRCULATION IMPROVEMENTS. Prior to the issuance of any permit (except a preliminary grading permit) for the development of Parcel 1 identified on Exhibit B of Ordinance No. (*To be Determined at the City Council Hearing*)), the property owner(s) shall submit and obtain approval of construction documents to construct the following improvements:
 - 15.a. HOUSER ROAD. Complete south half-street improvements in accordance with the City of Eloy Standard Detail for a Major Arterial Street.
 - 15.b. ESTRELLA ROAD. Complete east half-street improvements in accordance with the City of Eloy Standard Detail for a Commercial Collector Street.
 - 15.c. ESTRELLA ROAD CUL-DE-SAC. Complete cul-de-sac with a diameter of ninety (90) feet abutting the Santa Rosa Canal. Where this insufficient right-of-way to maintain a cul-de-sac within the right-of-way, the additional area needed to construct the improvements shall be provided within a Temporary Public Motorized Access Easement on Parcel 1 identified on Exhibit B of Ordinance No. (*To be Determined at the City Council Hearing*)).
16. STANDARDS OF IMPROVEMENT.
 - 16.a. With the development of the property, the property owner(s)/developer shall construct improvements as required by the Zoning Ordinance and the City Engineer. All required infrastructure improvements shall be constructed in accordance with the Eloy City Code, and the applicable Maricopa Association of Governments (MAG) Uniform Standard Specifications and Details for Public Works Construction, Maricopa Association of Governments (MAG) Uniform Standard Specifications and Details for Public Works Construction.

- 16.b. With the development of any other use, the improvements (curb, gutter, sidewalk, curb ramps, driveways, pavement, concrete, water, wastewater, etc.) shall be constructed in accordance with the applicable City of Eloy City Code, accepted/approved Master Infrastructure Plans, and Maricopa Association of Governments (MAG) Uniform Standard Specifications and Details for Public Works Construction, Maricopa Association of Governments (MAG) Uniform Standard Specifications and Details for Public Works Construction, or other standard specifications and details for public works construction accepted by the City Engineer.
17. CONSTRUCTION COMPLETED. Prior to issuance of any Certificate of Occupancy, or Final Inspection, whichever is first, for the development project, the property owner(s) shall complete all the infrastructure and improvements required by the Eloy Code and these stipulations.

DEDICATIONS AND FINAL PLAT

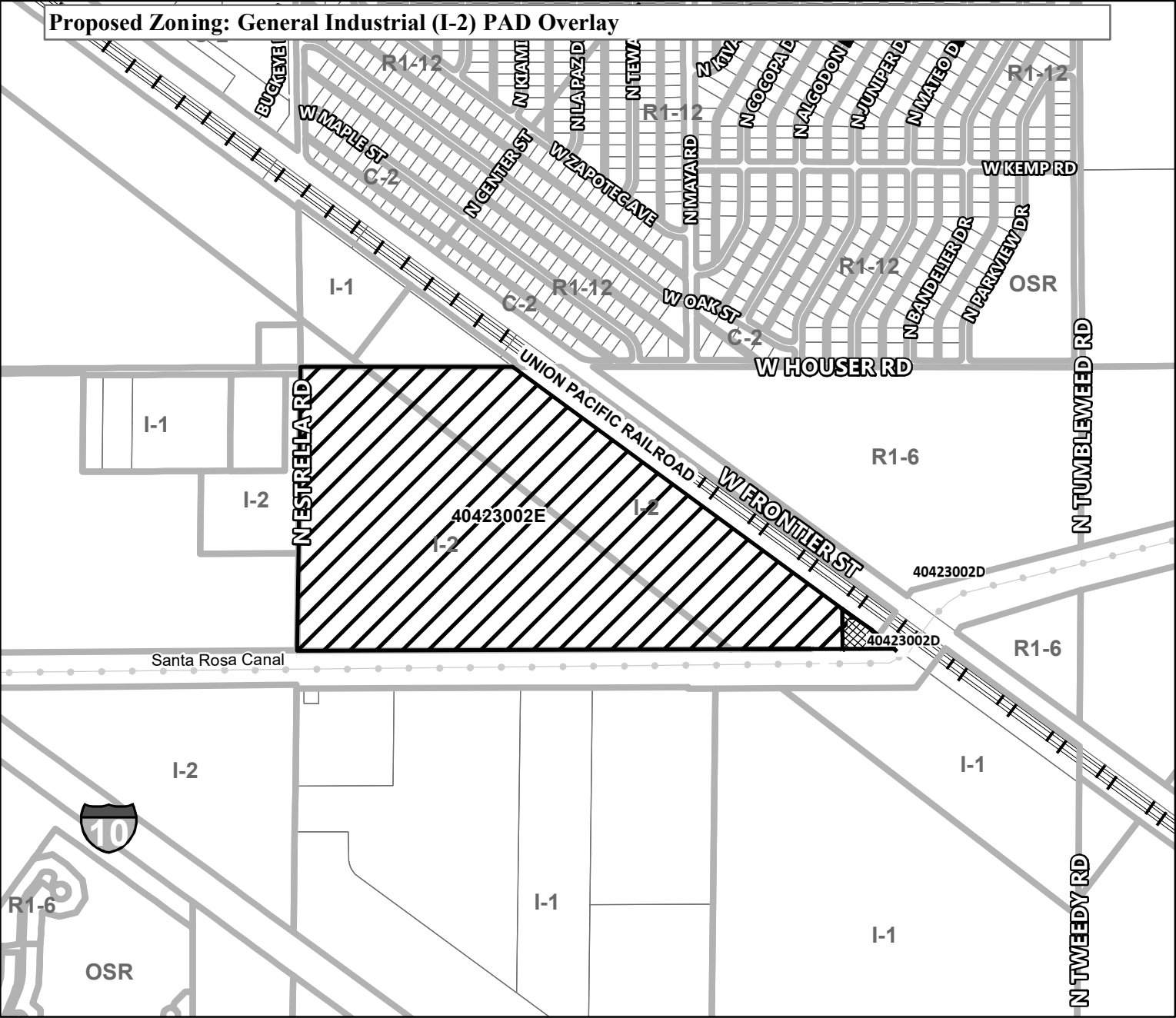
18. RIGHT-OF-WAY. Prior to the issuance of any permit (Except a preliminary grading permit) for the property identified as Parcel 1 on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)*, the property owner(s)/developer shall dedicate to the city the following:
 - 18.a. HOUSER ROAD. A south sixty-five (65) foot right-of-way width.
 - 18.b. ESTRELLA ROAD. An east forty (40) foot right-of-way width, and where Estrella Road abuts the Santa Rosa Canal, the east right-of-way half of a cul-de-sac that has a diameter of ninety (90) feet.
19. EASEMENTS. The property owner(s)/developer shall dedicate to the city all easements necessary to serve the development as determined by the City Engineer or the Community Development Director.
20. NON-MOTORIZED ACCESS EASEMENT. Prior to the issuance of any permit (Except a preliminary grading permit) for the property identified as Parcel 1 on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)*, the property owner(s)/developer shall dedicate to the city a continuous one-foot Non-Motorized Access Easement abutting Houser Road and abutting Estrella Road, except at driveway locations and emergency access approved by the City Engineer or designee.
21. PUBLIC MULTI-USE PATH AND TRAIL EASEMENT. Prior to the issuance of any permit for the property identified as Parcel 1 on Exhibit B of Ordinance No. *(To be Determined at the City Council Hearing)*, the property owner(s)/developer shall dedicate a minimum of a fifteen (15) foot wide Public Multi-use Path and Trail Easement abutting the Houser Road and Estrella Road right-of-way that is required to be dedicated herein.
 - 21.a. RELEASE OF THE MULTI-USE PUBLIC PATH AND TRAIL EASEMENT. The property owner(s) may request a release of this easement if it is determined by the Zoning Administrator that the easement is no longer required due to a modification to the overall alignment of the trail to a different location.

22. TEMPORARY PUBLIC MOTORIZED ACCESS EASEMENT. Prior to the issuance of any permit (except a preliminary grading permit) for Parcel 1 identified on Exhibit B of Ordinance No. (To be Determined at the City Council Hearing), the property owner(s)/developer shall dedicate a Temporary Public Motorized Access Easement over the Estrella Road temporary cul-de-sac that is to be provided on the property.

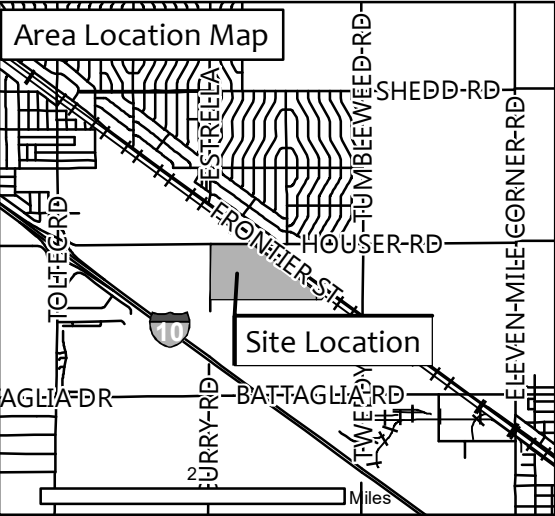
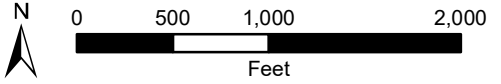
23. FINAL PLAT.

23.a. Prior to the issuance of any permit (except a preliminary grading permit) for the property identified as Parcel 1 on Exhibit B of Ordinance No. (*To be Determined at the City Council Hearing*), and upon receiving approval of a final plat from the Eloy City Council, the property owner(s) shall cause an approved and city-signed final plat to be recorded in the Office of the Pinal County Recorder, to legally establish the two properties identified as Parcel 1 and Parcel 2 on Exhibit B of Ordinance No. (*To be Determined at the City Council Hearing*)), and any additional lot the owner(s) desires, in accordance with the Eloy Code.

23.b. With the final plat described herein, the property owner(s) of Parcel 1 shall dedicate to the property owner(s) and their successors of Parcel 2 a minimum twenty-four (24) foot-wide emergency service and maintenance vehicle access easement from the Estrella Road or Houser Road right-of-way to the Parcel 2 in a location approved by the City Engineer.



Rezoning Exhibit - Case No: RZPAD2024-006
Southwest Crossing
Existing Zoning: +/- 122 acres I-2
Proposed Zoning: +/- 122 acres I-2 with a PAD Overlay



Legend		Subject Parcels
	PARCEL 1 (A.P.N. 40423002E)	
	PARCEL 2 (A.P.N. 40423002D)	

Single Family		Commercial	
RR-20	Rural Residential (20 acres/du)	C-1	Neighborhood Commercial
RR-5	Rural Residential (5 acres/du)	C-2	Community Commercial
RR-2.5	Rural Residential (2.5 acres/du)	MU	Mixed Use
R1-54	Estate Residential (1.25 acres/du)	Industrial	
R1-43	Estate Residential (43,560 sq. ft.)	BP	Business Park
R1-12	Single Family Residential (12,000 sq. ft.)	I-1	Light Industrial
R1-6	Single Family Residential (6,000 sq. ft.)	I-2	General Industrial
Multi-Family		Open Space	
R-2	Small Lot Residential (6-10 du/acre)	OSC	Open Space Conservation
R-3	Multiple Family Residential (10-24 du/acre)	OSR	Open Space Recreational
Public Facility			
PF	Public Facility		

CITY OF ELOY

REQUEST FOR COUNCIL ACTION

Agenda Item: **VI.A.**

Date: **1/15/2025**

Date submitted:
01/06/2025

Action: Other

Subject: Update to the Airport Master Plan

Date requested:
1/15/2025

TO: Planning and Zoning Commission

FROM: David Malewitz

RECOMMENDATION:

Staff recommends that the Planning and Zoning Commission review, discuss, provide input and take public comments on the update to the Airport Master Plan.

DISCUSSION:

The Eloy Municipal Airport Master Plan is an existing, proactive document that identifies, as well as plans for, future facility needs to ensure that airport management can coordinate project approvals, design, financing, and construction to avoid experiencing detrimental effects due to inadequate aviation related facilities. The continuing and ultimate goal of this document is to provide systematic guidelines for the airport's overall maintenance, development, and operation to keep pace with existing and future airport demands within the community and region.

The Federal Aviation Administration (FAA) recommends that municipal airports update their long-term planning documents every seven to 10 years, or as necessary, to address both internal and external changes at the airport and its surrounding area. The last master plan update for the Eloy Municipal Airport (E60) was completed in 2013. The City of Eloy, the sponsor of the airport, has received grants from the FAA and Arizona Department of Transportation – Aeronautics Group (ADOT) to update its airport master plan now. The City selected Coffman Associates to lead the technical and public involvement efforts leading to the preparation and approval of this updated document.

The planning process to update the City's Airport Master Plan has been accomplished by the Coffman Team and City Staff with the completion of ten key tasks, as identified below:

Element 1 – Initiation included the development of the scope of services and schedule, as well as the establishment of the Planning Advisory Committee (PAC). Study materials were assembled in a workbook format. General background information was established

which included outlining the goals and objectives to be accomplished during the master plan process.

Element 2 – Inventory focused on collecting and assembling relevant data pertaining to the airport and the area it serves. Information was collected on existing facilities and operations. Local economic and demographic data were collected to define the local growth trends, and environmental information was gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies which have direct and indirect relevance to the master plan were also collected.

Element 3 – Forecasts examined the potential aviation demand at the airport. The analysis utilized local socioeconomic information and national air transportation trends to quantify the levels of aviation activity which can reasonably be expected to occur at E60 over a 20-year planning period. An existing and ultimate critical design aircraft, based upon FAA AC 150/5000-17, Critical Aircraft and Regular Use Determination, was also established to determine future planning design standards. The results of this effort were also used to determine the types and sizes of facilities that will be required to meet the projected aviation demand at the airport through the 20-year period.

Element 4 – Facility Requirements determined the available capacities of various facilities at the airport; whether they conform with FAA standards; and what facility updates or new facilities will be needed to comply with FAA requirements and/or projected 20-year demand needs.

Element 5 – Airport Alternatives considered a variety of solutions to accommodate projected airside and landside facility needs through the identified planning period. An analysis was completed to identify the strengths and weaknesses of each proposed development alternative, with the intention of determining a single direction for development.

Element 6 – Recommended Master Plan Concept and Capital Financial Plan provided both a graphic and narrative description of the recommended plan for the use, development, and operation of the airport. An Airport Capital Improvement Program (ACIP) was established to define the schedules, costs, and funding sources for the recommended development projects, which will be updated annually based on reconfirmed, new or updated information, implementation and funding priorities.

Element 7 – Airport Plans consist of the official Airport Layout Plan (ALP) drawings based on the recommended development concept. The ALP set is used by the FAA in determining grant eligibility.

Element 8 – Environmental Evaluation involved providing environmental information which assisted in the evaluation of airport alternatives and the recommended development concept, and which is expected to expedite subsequent environmental review under the National Environmental Policy Act (NEPA). A recycling plan was also developed to assess the airport's existing waste management program and provided

recommendations for improving on-airport recycling. This element also included an update to the Public Airport Disclosure Map to reflect operational forecasts, noise contours, airfield facilities, and the airport traffic pattern airspace.

Element 9 – Public Coordination, Communication, and Project Management included tasks related to PAC meetings (4) as the master plan developed, as well as conducting public information workshops (3) to engage the community at key milestones during the planning process. A study website (<https://eloymasterplan.airportstudy.net>) was also developed and frequently updated for the purpose of distributing study materials and notices of public meetings. The city also provided these notices on its website, email blast list and city website calendar as well as coordinating with the Casa Grande Dispatch to publish several articles on the upcoming workshops and status of the airport planning process.

Element 10 – Final Reports and Approvals provided documents which depict the findings of the master plan update effort and presented the master plan and its recommendations to appropriate local organizations. The final document has incorporated the revisions to previous working papers prepared under earlier elements into a final, usable master plan document.

The approximate 19-month process (July 2023 to February 2025) has been completed in three key phases, as identified in the graphic below:

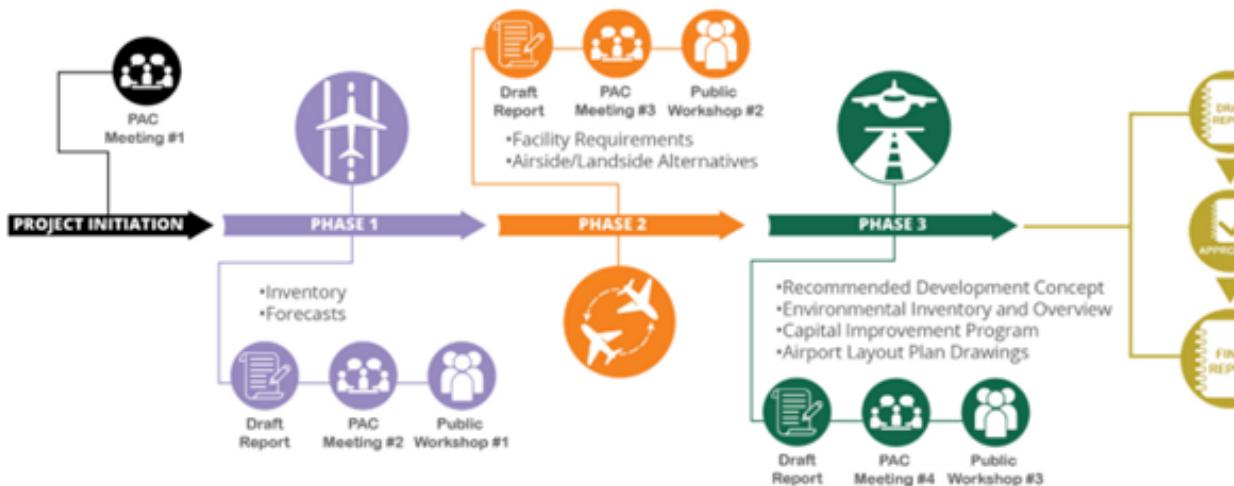


Figure iA – Project Workflow

If this document is reviewed and recommended for approval by the Eloy Planning and Zoning Commission, it is tentatively scheduled to be heard and approved (by resolution) by the Eloy City Council at their regularly scheduled meeting on February 10, 2025.

FISCAL IMPACT:

No fiscal impact. For presentation and discussion only.



Eloy Municipal Airport





Airport Master Plan Overview

Presented by: Coffman Associates
January 15th, 2025

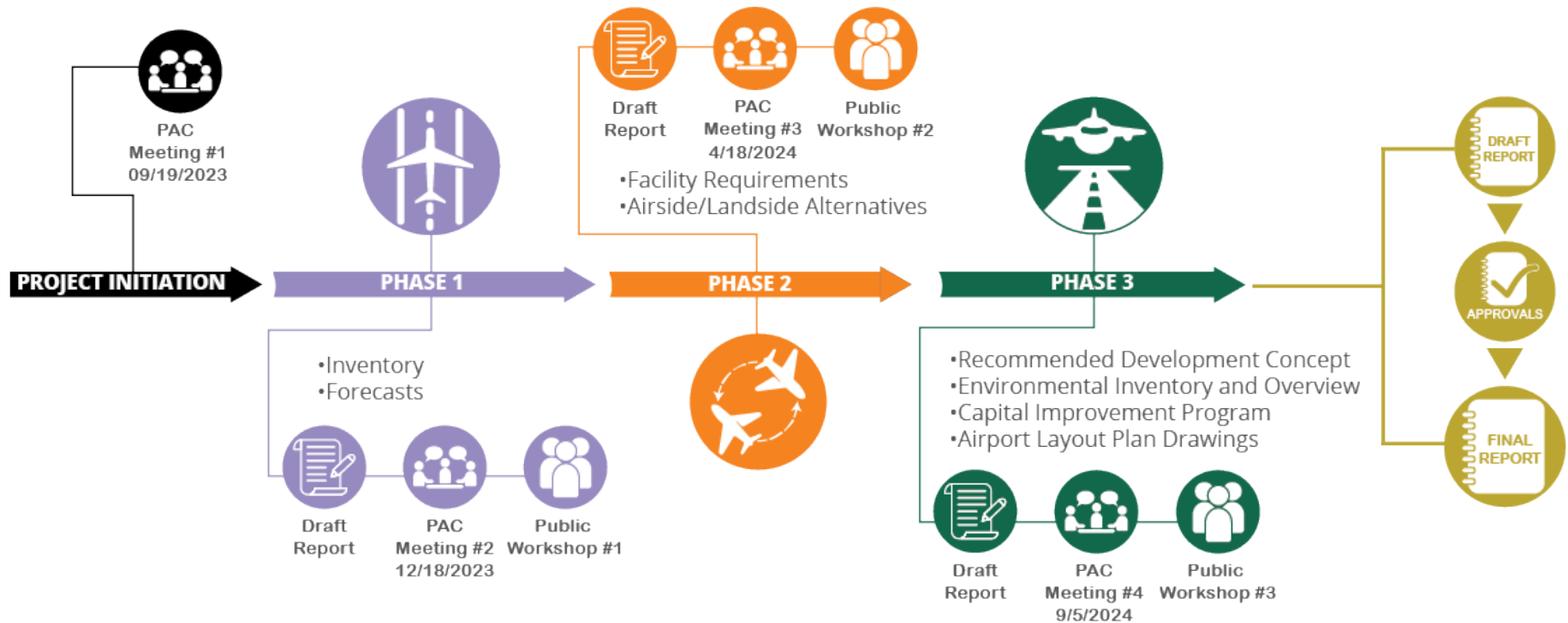




Purpose of an Airport Master Plan

- Provides a visioning document to guide the City of Eloy and other decision makers regarding the future development of the airport over the next 20 years
- Evaluates the airport aviation demand potential
- Addresses local, regional, and national changes in the aviation industry that could impact the development of the airport
- Identifies and plans for potential capital projects well in advance so proper coordination, approvals, financing, design, and construction can take place in a timely manner
- Obtains approval of new aviation demand forecasts and an updated Airport Layout Plan (ALP)
- Increases stakeholder/public awareness of the airport's goal and objectives

Master Plan Process





Public Outreach

- Study Website: eloymasterplan.airportstudy.net
- Four (4) PAC meetings
- Three (3) Public Information Workshops
- Planning Commission Presentation
- City Council Presentation





Key Outcomes

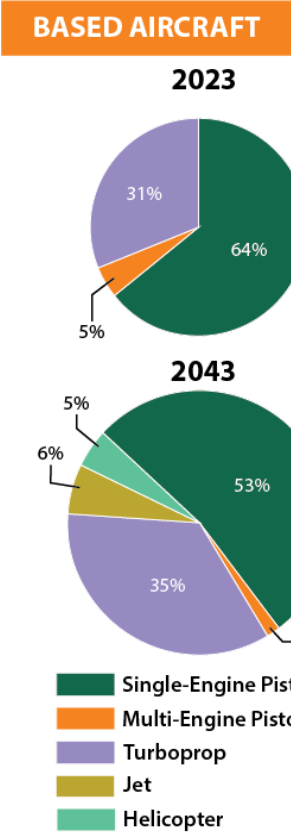
- Aviation Demand Forecasts
- Critical Aircraft
- Recommended Development Concept
- Airport Layout Plan
- Capital Program





Aviation Demand Forecasts

	Base	Forecast		
	2023	2028	2033	2043
BASED AIRCRAFT				
Single-Engine Piston	27	28	30	35
Multi-Engine Piston	2	2	1	1
Turboprop	13	15	18	23
Jet	0	1	2	4
Helicopter	0	1	2	3
TOTAL BASED AIRCRAFT	42	47	53	66
OPERATIONS				
Itinerant				
Air Carrier	-	-	-	-
Air Taxi	-	100	200	500
General Aviation	4,500	5,900	7,100	9,600
Military	100	100	100	100
Subtotal	4,600	6,100	7,400	10,200
Local				
General Aviation	25,400	28,200	29,800	33,200
Military	-	-	-	-
Subtotal	25,400	28,200	29,800	33,200
TOTAL OPERATIONS	30,000	34,300	37,200	43,400
PEAKING				
Peak Month	3,000	3,430	3,720	4,340
Busy Day	121	137	148	169
Design Day	97	111	120	140
Design Hour	15	17	18	21



FAA Approval: August 8, 2024



Critical Aircraft Determination

Existing ARC: B-II-1A: Short Skyvan SC-7

Future ARC: B-II-2A: Cessna Citation Encore

RUNWAY DESIGN CODE

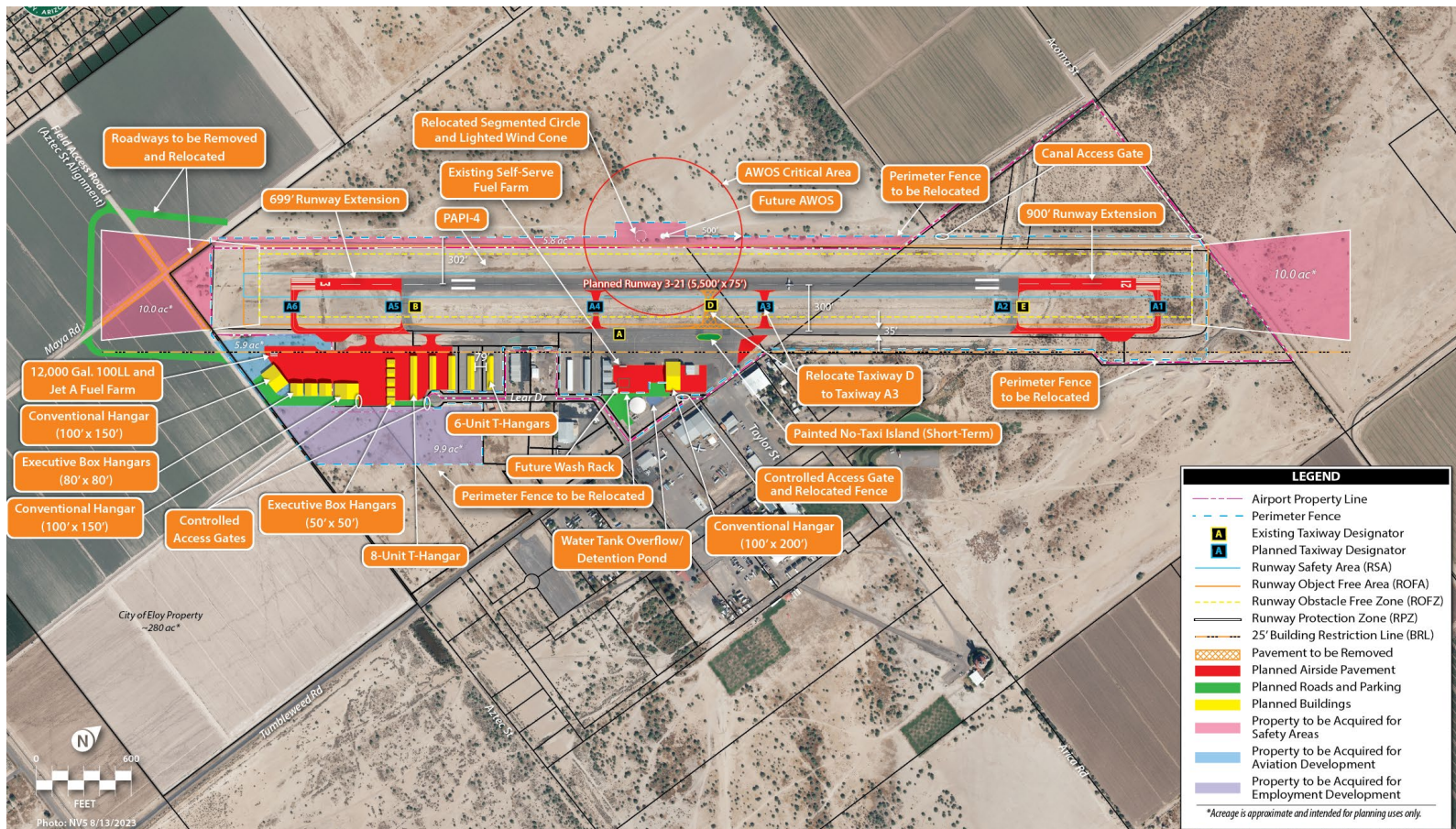
Existing RDC: B-II-VIS

Future RDC: B-II-5000



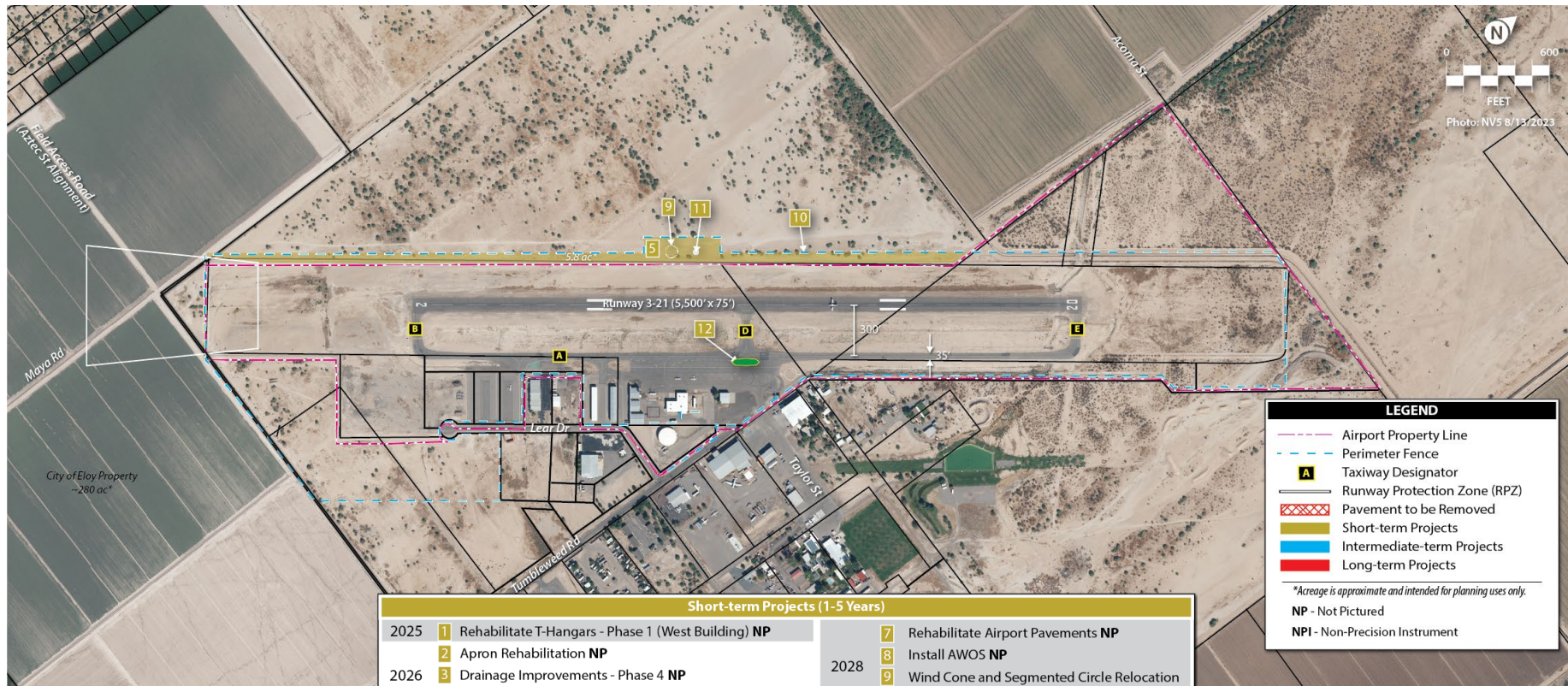


Recommended Development Concept





Capital Program – Short Term



Short-term Projects (1-5 Years)			
2025	1	Rehabilitate T-Hangars - Phase 1 (West Building) NP	
	2	Apron Rehabilitation NP	
2026	3	Drainage Improvements - Phase 4 NP	
	4	Rehabilitate T-Hangars - Phase 2 (East Building) NP	
	5	Land Acquisition for Fence, AWOS, Wind Cone, and Segmented Circle Relocation	
2027	6	Apron Rehabilitation NP	
	7	Rehabilitate Airport Pavements NP	
	8	Install AWOS NP	
2028	9	Wind Cone and Segmented Circle Relocation	
	10	Fence Relocation	
2029	11	Install AWOS	
	12	Install Painted No-Taxi Island	

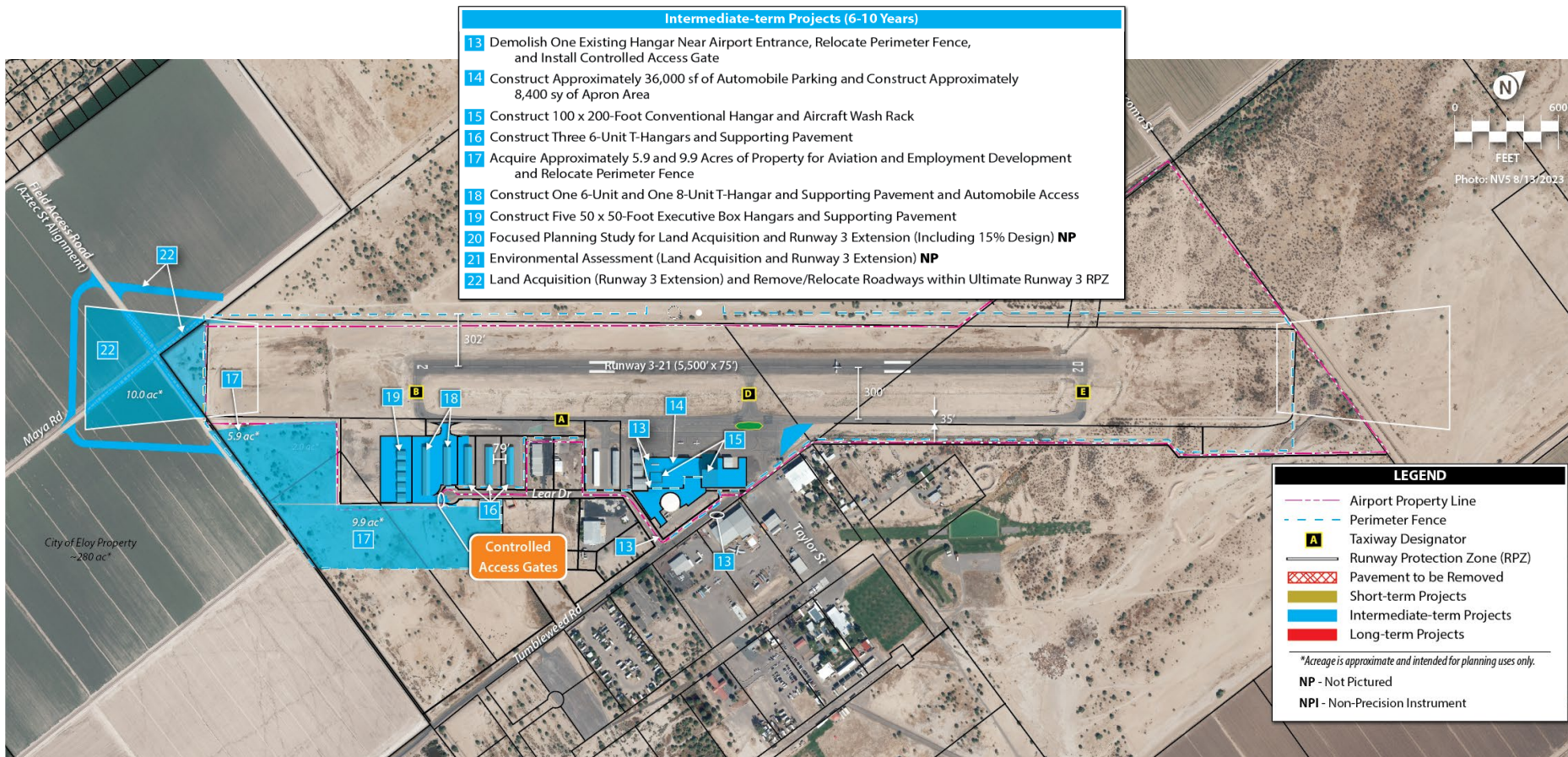


Capital Program – Short Term

			Funding Sources			
Fiscal Year	Project No.	Project	Estimated Cost	Federal	State	Airport Sponsor/Local
SHORT TERM (1-5 Years)						
2025	1	Rehabilitate T-Hangars - Electrical, Doors, Pavement Flooring, Painting (Design & Construct) - Phase 1 (West Building) NP	\$606,300.00	\$575,985.00	\$15,157.50	\$15,157.50
2026	2	Apron Rehabilitation (Design) NP	\$250,000.00	\$237,500.00	\$6,250.00	\$6,250.00
2026	3	Drainage Improvements - Phase 4 (900' x 42') (Design & Construct) NP	\$518,000.00	\$-	\$466,200.00	\$51,800.00
2026	4	Rehabilitate T-Hangars - Electrical, Doors, Pavement Flooring, Painting (Design & Construct) - Phase 2 (East Building) NP	\$152,000.00	\$144,400.00	\$3,800.00	\$3,800.00
2027	5	Land Acquisition for Fence (Part 77 Obstruction), AWOS, Wind Cone, and Segmented Circle Relocation (75' x 3,500' of land)	\$200,000.00	\$-	\$180,000.00	\$20,000.00
2027	6	Apron Rehabilitation (Construct) NP	\$2,750,000.00	\$2,504,150.00	\$122,925.00	\$122,925.00
2028	7	Rehabilitate Airport Pavements - Crack Seal, Seal Coat, and Update Runway Designations to 3-21 (Design & Construct) NP	\$800,000.00	\$728,480.00	\$35,760.00	\$35,760.00
2028	8	Install AWOS (Design) NP	\$100,000.00	\$91,060.00	\$4,470.00	\$4,470.00
2028	9	Wind Cone and Segmented Circle Relocation (Design & Construct)	\$200,000.00	\$182,120.00	\$8,940.00	\$8,940.00
2028	10	Fence Relocation - 3,650 LF (Design & Construct)	\$450,000.00	\$-	\$405,000.00	\$45,000.00
2029	11	Install AWOS (Construct)	\$400,000.00	\$364,240.00	\$17,880.00	\$17,880.00
2029	12	Remove and Relocate Taxiway D	\$450,000.00	\$409,770.00	\$20,115.00	\$20,115.00
Short-term CIP Subtotal			\$6,876,300.00	\$5,237,705.00	\$1,286,497.50	\$352,097.50



Capital Program – Intermediate Term



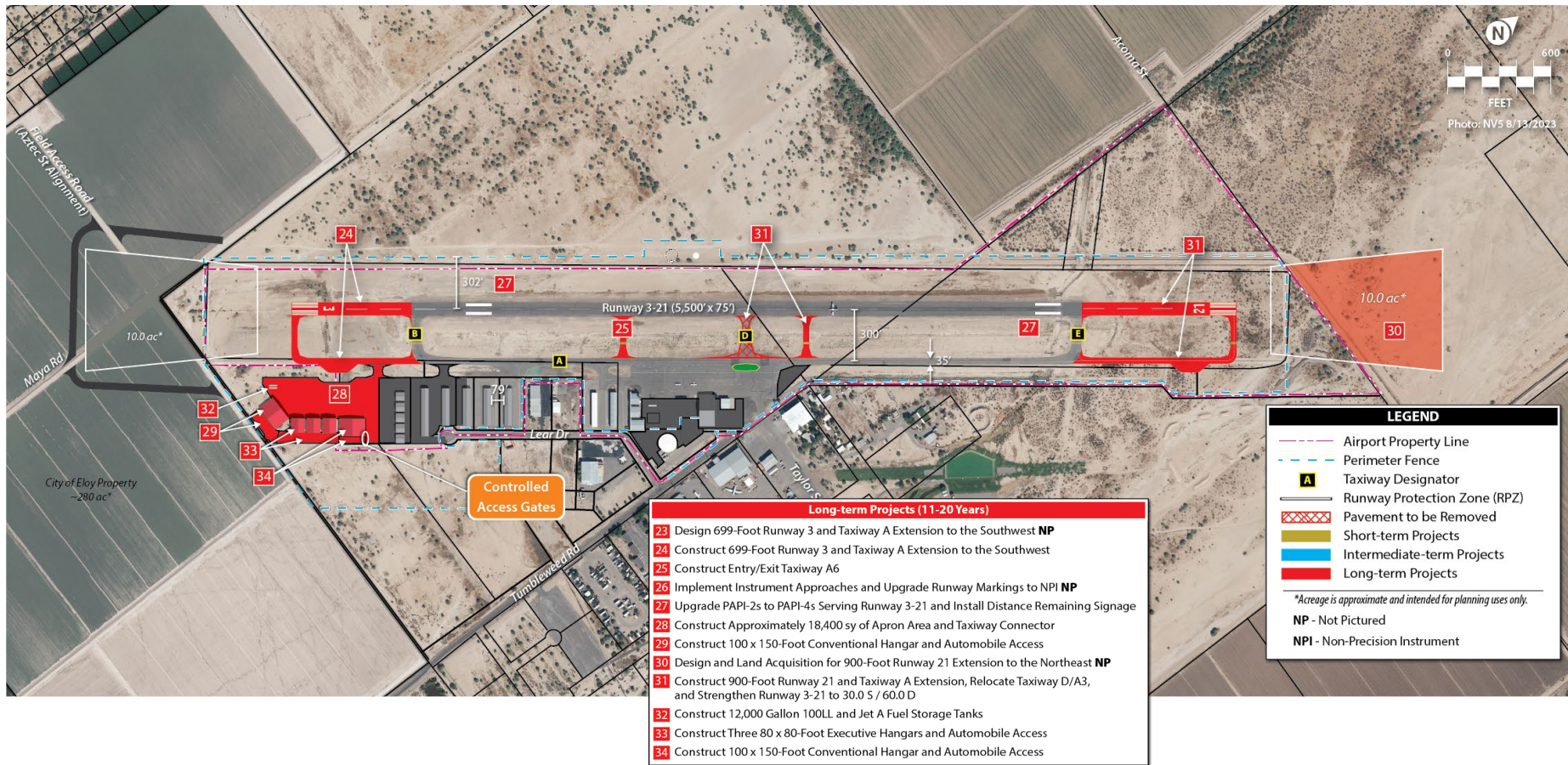


Capital Program – Intermediate Term

			Funding Sources			
Fiscal Year	Project No.	Project	Estimated Cost	Federal	State	Airport Sponsor/Local
INTERMEDIATE TERM (6-10 Years)						
2030-2034	13	Demolish Two Existing Hangars Near Airport Entrance, Relocate Perimeter Fence, and Install Controlled Access Gate	\$237,000.00	\$102,000.00	\$5,000.00	\$130,000.00
	14	Construct Approximately 55,500 sf of Automobile Parking, Relocate Existing Fuel Farm, and Construct Approximately 6,500 sy of Apron Area	\$2,229,000.00	\$2,029,727.00	\$99,636.00	\$99,636.00
	15	Construct 100 x 200-Foot Conventional Hangar and Aircraft Wash Rack	\$1,670,000.00	\$427,982.00	\$21,009.00	\$1,221,009.00
	16	Construct Three 6-Unit T-Hangars and Supporting Pavement	\$2,363,200.00	\$-	\$-	\$2,363,200.00
	17	Acquire Approximately 5.9 and 6.2 Acres of Property for Aviation and Employment Development and Relocate Perimeter Fence	\$372,000.00	\$338,743.00	\$16,628.00	\$16,628.00
	18	Construct One 6-Unit and One 8-Unit T-Hangar and Supporting Pavement and Automobile Access	\$2,225,900.00	\$-	\$-	\$2,225,900.00
	19	Construct Five 50 x 50-Foot Executive Box Hangars and Supporting Pavement	\$1,542,700.00	\$-	\$-	\$1,542,700.00
	20	Focused Planning Study for Land Acquisition and Runway 3 Extension (Including 15% Design) NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
	21	Environmental Assessment (Land Acquisition and Runway 3 Extension) NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
	22	Land Acquisition (Runway 3 Extension) and Remove/Relocate Roadways within Ultimate Runway 3 RPZ	\$1,745,000.00	\$1,588,997.00	\$78,002.00	\$78,002.00
Intermediate -term CIP Subtotal			\$12,884,800.00	\$4,942,749.00	\$242,625.00	\$7,699,425.00



Capital Program – Long Term

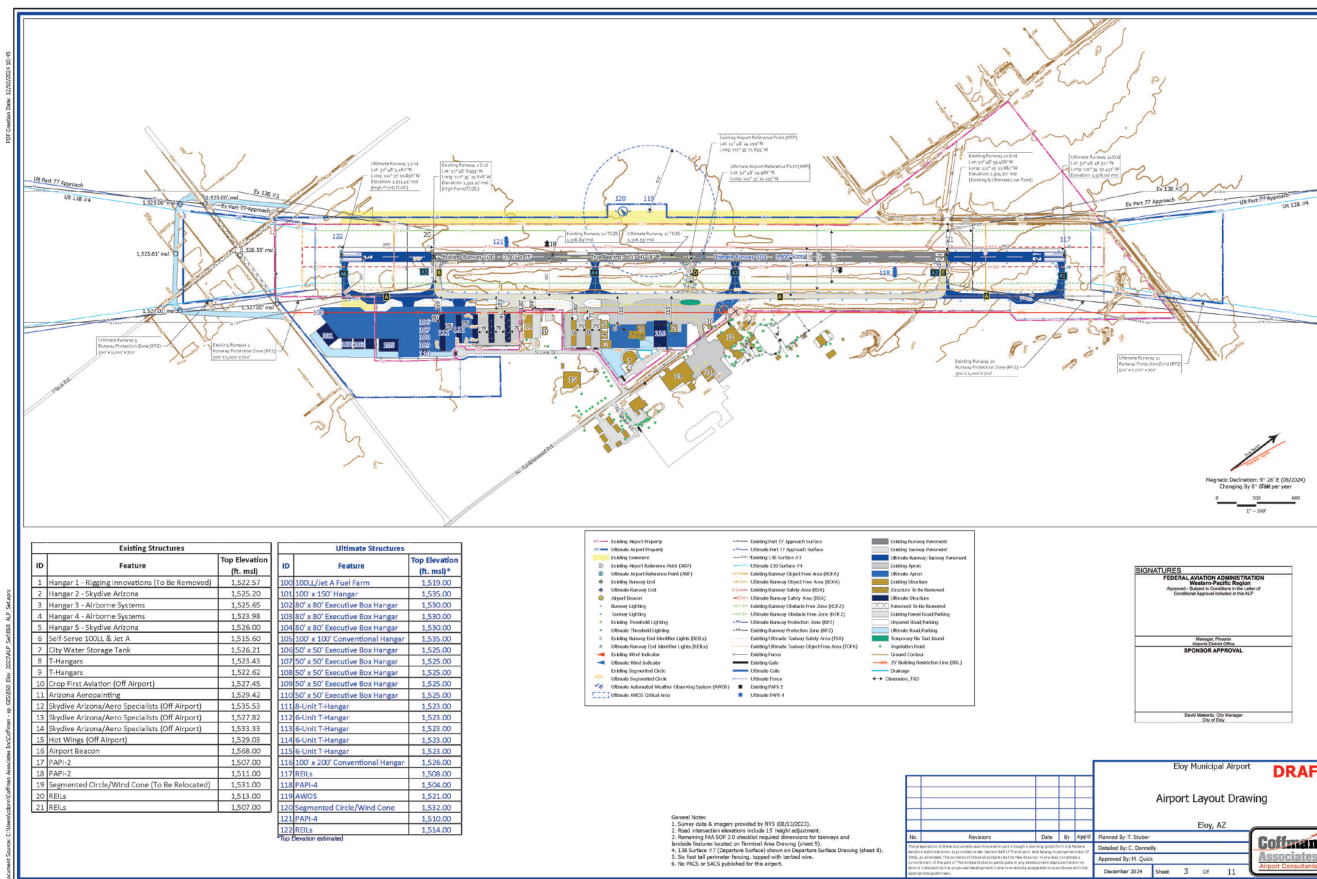




Capital Program – Long Term

			Funding Sources			
Fiscal Year	Project No.	Project	Estimated Cost	Federal	State	Airport Sponsor/Local
LONG TERM (11-20 Years)						
2035-2044	23	Design 699-Foot Runway 3 and Taxiway A Extension to the Southwest NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
	24	Construct 699-Foot Runway 3 and Taxiway A Extension to the Southwest	\$2,012,200.00	\$1,832,309.00	\$89,945.00	\$89,945.00
	25	Construct Entry/Exit Taxiway C	\$362,900.00	\$330,457.00	\$16,222.00	\$16,222.00
	26	Implement Instrument Approaches and Upgrade Runway Markings to NPI NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
	27	Upgrade PAPI-2s to PAPI-4s Serving Runway 3-21 and Install Distance Remaining Signage	\$328,800.00	\$299,405.00	\$14,697.00	\$14,697.00
	28	Construct Approximately 18,400 sy of Apron Area and Taxiway Connector	\$1,780,000.00	\$1,620,868.00	\$79,566.00	\$79,566.00
	29	Construct 100 x 150-Foot Conventional Hangar and Automobile Access	\$1,533,500.00	\$-	\$-	\$1,533,500.00
	30	Design and Land Acquisition for 900-Foot Runway 21 Extension to the Northeast NP	\$445,000.00	\$405,217.00	\$19,892.00	\$19,892.00
	31	Construct 900-Foot Runway 21 and Taxiway A Extension to the Northeast and Strengthen Runway 3-21 to 30,000 lbs S /60,000 lbs D	\$2,853,000.00	\$2,597,942.00	\$127,529.00	\$127,529.00
	32	Construct 12,000 Gallon 100LL and Jet A Self-Service Fuel Tanks	\$600,000.00	\$546,360.00	\$26,820.00	\$26,820.00
	33	Construct Three 80 x 80-Foot Executive Hangars and Automobile Access	\$1,867,800.00	\$-	\$-	\$1,867,800.00
	34	Construct 100 x 150-Foot Conventional Hangar and Automobile Access	\$1,533,500.00	\$-	\$-	\$1,533,500.00
Long-term CIP Subtotal			\$13,816,700.00	\$8,087,858.00	\$397,021.00	\$5,331,821.00
CAPITAL IMPROVEMENT PROGRAM TOTAL			\$33,577,800.00	\$18,268,312.00	\$1,926,143.50	\$13,383,343.50

Airport Layout Drawing





Next Steps

- Adoption of the Master Plan by City Council via Resolution
- Submit Airport Layout Plan to FAA for review and approval (est. approval: Spring 2025)
- Deliver Final Master Plan and Executive Summary Brochure
- Execute Master Plan through City's annual budget and grant funding opportunities





Questions?



ELOY MUNICIPAL AIRPORT



Airport Master Plan





Draft Final AIRPORT MASTER PLAN

FOR

**Eloy Municipal Airport
Eloy, Arizona**

PREPARED FOR

City of Eloy

BY



December 2024



TABLE OF CONTENTS

INTRODUCTION

WHAT IS A MASTER PLAN?	i-1
WHO IS PREPARING THE MASTER PLAN?	i-2
GOALS AND OBJECTIVES	i-3
Baseline Assumptions.....	i-4
MASTER PLAN ELEMENTS AND PROCESS	i-4
COORDINATION AND OUTREACH	i-6
SWOT ANALYSIS	i-7
SWOT Definitions	i-7

CHAPTER ONE – INVENTORY

AIRPORT SETTING	1-2
Location	1-2
Climate.....	1-2
Airport History.....	1-5
AIRPORT ADMINISTRATION	1-5
AIRPORT SYSTEM PLANNING ROLE.....	1-5
Local Airport Planning	1-6
State Airport Planning	1-6
Federal Airport Planning	1-6
ECONOMIC IMPACT	1-8
AERONAUTICAL ACTIVITY	1-9
Annual Operations.....	1-9
Capital Improvement History	1-11
AIRPORT FACILITIES AND SERVICES	1-12
AIRSIDE FACILITIES	1-13
Runways	1-13
Taxiways	1-13
Airfield Lighting, Signage, and Marking.....	1-13
Navigational Aids and Instrument Approach Procedures.....	1-17
Weather and Communication Aids	1-18
AREA AIRSPACE AND AIR TRAFFIC CONTROL.....	1-18
Airspace Structure	1-18
Advanced Air Mobility (AAM).....	1-22
Special Use Airspace.....	1-22
Airspace Control	1-23
Local Operating Procedures	1-24

**CHAPTER ONE – INVENTORY (continued)**

REGIONAL AIRPORTS.....	1-24
LANDSIDE FACILITIES.....	1-25
Terminal Building.....	1-25
Airport Businesses	1-25
Through-the-Fence Access	1-25
Aircraft Hangar Facilities	1-25
Aircraft Parking Aprons	1-26
Vehicle Parking	1-26
SUPPORT FACILITIES.....	1-29
Airport Maintenance and Firefighting Facilities.....	1-29
Fuel Storage.....	1-29
Perimeter Fencing	1-30
Utilities and Drainage	1-30
SOCIOECONOMIC CHARACTERISTICS	1-31
Population	1-32
Employment	1-32
Per Capita Personal Income	1-33
AIRPORT COMPATIBILITY	1-33
Land Use Regulatory and Policy Guidance.....	1-34
Land Ownership.....	1-38
ENVIRONMENTAL INVENTORY	1-38
Air Quality.....	1-42
Biological Resources	1-43
Climate.....	1-45
Coastal Resources.....	1-46
<i>Department of Transportation Act, Section 4(f)</i>	1-46
Farmlands	1-47
Hazardous Materials, Solid Waste, and Pollution Prevention	1-48
Historical, Architectural, Archaeological, and Cultural Resources.....	1-48
Land Use	1-49
Natural Resources and Energy Supply.....	1-50
Noise and Noise-Compatible Land Use	1-55
Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks	1-55
Visual Effects	1-57
Water Resources	1-68



CHAPTER TWO – FORECASTS

NATIONAL AVIATION TRENDS.....	2-3
Economic Environment	2-4
FAA General Aviation Forecasts	2-4
U.S. Pilot Population.....	2-9
Unmanned Aircraft Systems (UAS).....	2-9
Risks to the Forecast.....	2-11
AIRPORT SERVICE AREA	2-11
FORECASTING APPROACH	2-15
EXISTING FORECASTS	2-17
FAA Terminal Area Forecast	2-17
Previous Forecasts.....	2-18
GENERAL AVIATION FORECASTS.....	2-19
Based Aircraft Forecast	2-19
Based Aircraft Fleet Mix Forecast	2-28
Operations Forecasts.....	2-30
Peak Period Forecasts	2-35
FORECAST SUMMARY	2-36
FORECAST COMPARISON TO THE TAF	2-36
AIRCRAFT/AIRPORT/RUNWAY CLASSIFICATION	2-38
Aircraft Classification.....	2-38
Airport and Runway Classifications.....	2-40
Critical Aircraft.....	2-42
Airport Critical Aircraft	2-43
Runway Design Code	2-44
Approach and Departure Reference Codes	2-44
Airport and Runway Classification Summary	2-47
SUMMARY.....	2-47

CHAPTER THREE – FACILITY REQUIREMENTS

DEMAND-BASED PLANNING HORIZONS.....	3-2
AIRFIELD CAPACITY	3-3
Factors Affecting Annual Service Volume	3-3
Capacity Analysis Conclusion.....	3-6
AIRSIDE FACILITY REQUIREMENTS.....	3-6
Runways	3-6
Safety Area Design Standards	3-15
Runway Separation Standards	3-21
Taxiways	3-22



CHAPTER THREE – FACILITY REQUIREMENTS (continued)

Navigational and Approach Aids	3-26
Airfield Lighting, Marking, and Signage.....	3-27
LANDSIDE FACILITY REQUIREMENTS	3-28
General Aviation Activities	3-28
Support Facilities	3-33
SUMMARY	3-35

CHAPTER FOUR – AIRPORT ALTERNATIVES

NO ACTION/NON-DEVELOPMENT ALTERNATIVES	4-2
No-Build/Do-Nothing Alternative.....	4-2
Transfer of Service/Relocate Airport Alternative.....	4-3
Non-Development Alternatives Summary	4-3
PLANNING OBJECTIVES	4-3
REVIEW OF PREVIOUS AIRPORT PLANS	4-4
AIRSIDE ALTERNATIVES	4-7
AIRSIDE CONSIDERATIONS.....	4-7
Airport Design Criteria.....	4-7
Objects Affecting Navigable Airspace – Title 14 CFR Part 77	4-11
Building Restriction Line (BRL)	4-11
Runway Length	4-12
Taxiway Configuration.....	4-13
Ancillary Improvements	4-13
AIRSIDE ALTERNATIVES	4-14
Airside Alternative 1	4-14
Airside Alternative 2	4-17
Airside Alternative 3	4-18
Airside Alternative 4	4-22
Airside Summary	4-23
LANDSIDE PLANNING CONSIDERATIONS.....	4-23
Revenue Support Land Uses.....	4-24
Aviation Activity Levels.....	4-26
Hangar Development	4-27
LANDSIDE ALTERNATIVES	4-28
Landside Development Alternative 1	4-28
Landside Development Alternative 2	4-31
Landside Development Alternative 3	4-32
Landside Summary	4-32
SUMMARY	4-33



CHAPTER FIVE – RECOMMENDED MASTER PLAN CONCEPT

MASTER PLAN DEVELOPMENT CONCEPT	5-1
AIRSIDE DEVELOPMENT CONCEPT.....	5-2
Magnetic Declination and Runway Marking	5-5
Runway Dimensional Standards.....	5-5
Runway 2-20/3-21 (Existing/Ultimate).....	5-6
Building Restriction Line	5-8
Instrument Approaches.....	5-8
Visual Approach Aids.....	5-9
Weather Reporting Aids and Communication	5-9
Taxiway Design, Marking, And Signage	5-9
LANDSIDE DEVELOPMENT CONCEPT	5-10
Aircraft Storage Hangars and Future Aviation Development	5-11
Support Facilities	5-14
ENVIRONMENTAL OVERVIEW	5-15
AIRPORT RECYCLING, REUSE, AND WASTE REDUCTION.....	5-28
Regulatory Guidelines	5-28
Solid Waste	5-29
Existing Services	5-30
Goals and Recommendations.....	5-33
SUMMARY	5-35

CHAPTER SIX – CAPITAL IMPROVEMENT PROGRAM

SHORT-TERM PROGRAM (1-5 YEARS).....	6-4
FY 2025 Projects	6-4
FY 2026 Projects	6-4
FY 2027 Projects	6-7
FY 2028 Projects	6-8
FY 2029 Projects	6-9
Short-term Program Summary	6-9
INTERMEDIATE-TERM PROGRAM (6-10 YEARS)	6-9
Intermediate-term Program Summary	6-12
LONG-TERM PROGRAM (11-20 YEARS AND BEYOND)	6-13
Long-term Program Summary	6-15
CAPITAL IMPROVEMENT PROGRAM SUMMARY	6-14
CAPITAL IMPROVEMENT FUNDING SOURCES	6-15
Federal Grants	6-15
State Aid to Airports	6-18
Local Funding.....	6-19
MASTER PLAN IMPLEMENTATION	6-21



APPENDICES

Appendix A – Glossary of Terms

Appendix B – Forecast Approval

Appendix C – Draft Airport Layout Drawing

EXHIBITS

Chapter One – Inventory

1A	Location Vicinity	1-3
1B	Minimum Services and Facilities Standards for GA Rural Airports	1-7
1C	Existing Airfield Facilities	1-15
1D	2022 Airfield Pavement Condition	1-16
1E	Airspace Classification	1-19
1F	Vicinity Airspace	1-20
1G	Existing Landside Facilities	1-27
1H	Circulation Map	1-35
1J	Economic Prosperity Map	1-39
1K	Environmental Sensitivities	1-41
1L	Zoning Map.....	1-51
1M	Existing Land Use Map.....	1-52
1N	Future Land Use.....	1-53

Chapter Two – Forecasts

2A	National General Aviation Forecasts.....	2-7
2B	Airport Service Area	2-14
2C	Based Aircraft Forecast	2-29
2D	General Aviation Operations Forecasts.....	2-34
2E	Forecast Summary.....	2-37
2F	Aircraft Classification Parameters	2-39
2G	Aircraft Reference Codes.....	2-41
2H	Historic Turboprop and Jet Operations.....	2-45

Chapter Three – Facility Requirements

3A	Airfield Capacity Factors.....	3-4
3B	Windrose	3-8 / 3-9
3C	Safety Areas.....	3-17
3D	Airside Facility Requirements Analysis.....	3-29
3E	Landside Facility Requirements Analysis.....	3-36



EXHIBITS (continued)

Chapter Four – Airport Alternatives

4A	Previous ALP	4-5
4B	Alternative Considerations.....	4-8
4C	Airside Alternative Considerations.....	4-9
4D	Airside Alternatives 1 & 2	4-15
4E	Airside Alternatives 3 & 4.....	4-19
4F	Landside Alternatives 1 & 2.....	4-29
4G	Landside Alternative 3.....	4-30

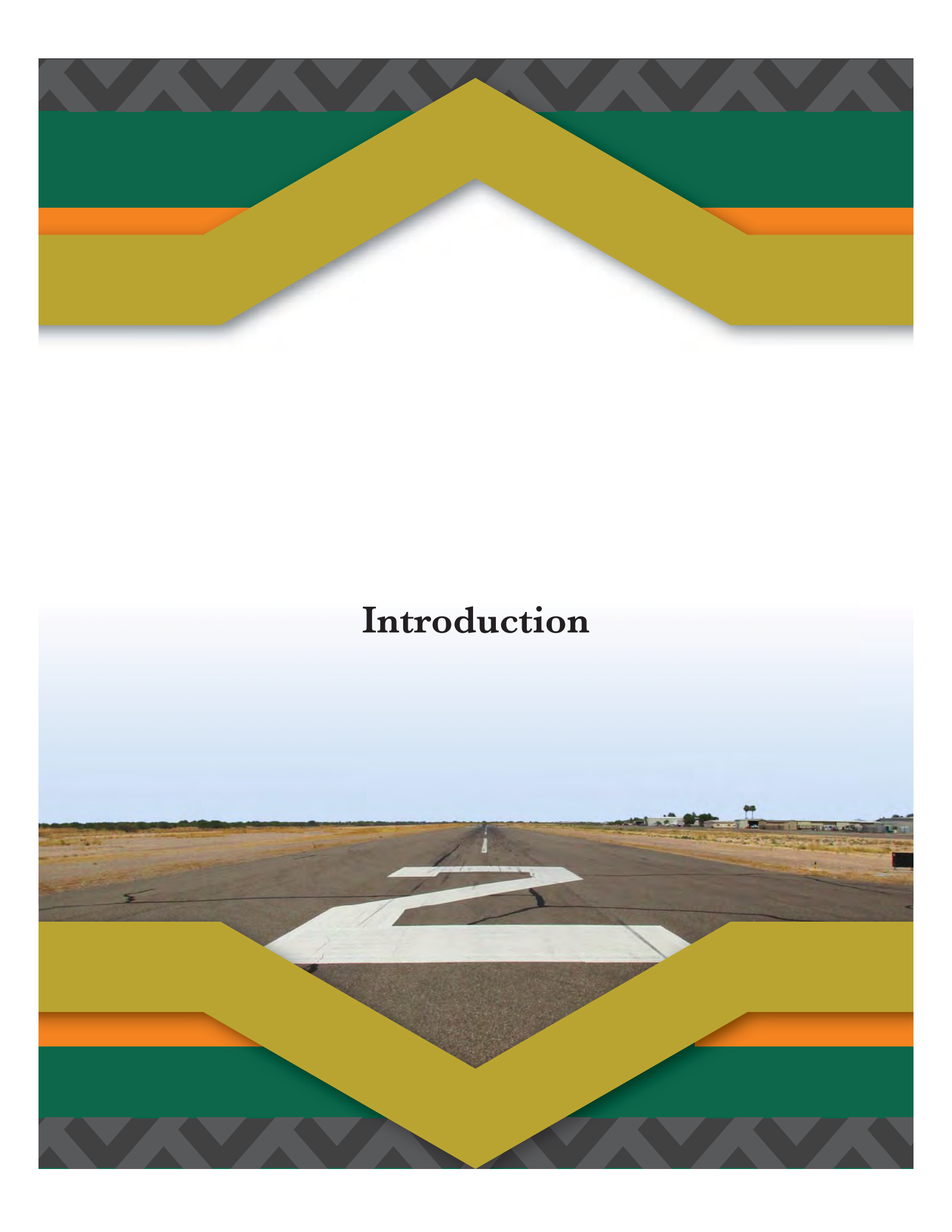
Chapter Five – Recommended Master Plan Concept

5A	Development Concept.....	5-3
5B	Existing Noise Contours.....	5-22
5C	Future Noise Contours	5-23
5D	Airport Waste Streams	5-31
5E	Waste Management Systems.....	5-32

Chapter Six – Capital Improvement Program

6A	Capital Improvement Plan.....	6-5
6B	Development Staging	6-6





Introduction



Introduction

WHAT IS A MASTER PLAN?

The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years, or as necessary to address local changes at the airport. The last master plan update for Eloy Municipal Airport (E60) was completed in 2013. The City of Eloy, the sponsor of the airport, has received grants from the FAA and Arizona Department of Transportation – Aeronautics Group (ADOT) to update the airport master plan.

The city is responsible for funding capital improvements at E60, as well as obtaining FAA and ADOT development grants. In addition, the city oversees facility enhancements and infrastructure development conducted by private entities at the airport. The master plan is intended to provide a true vision for how E60 is developed, guidance for future development, and justification for projects. The airport may receive project funding through an updated capital improvement program (CIP) to demonstrate the future investments required by the City of Eloy, the FAA, and ADOT.

The airport master plan follows a systematic approach outlined by the FAA to identify airport needs in advance of the actual need for improvements. This is done to ensure the city can coordinate environmental reviews, project approvals, design, financing, and construction to minimize the negative effects of maintaining and operating inadequate or insufficient facilities. An important outcome of the master plan process is a recommended development plan, which reserves sufficient areas for future facility needs. Such planning will protect development areas and ensure their availability when required to meet future needs. The intended outcome of this study is a detailed on-airport land use concept that outlines specific uses for all areas of airport property, including strategies for revenue enhancement.

The master plan is intended to provide a true vision for how E60 is developed, guidance for future development, and justification for projects.

The preparation of this master plan is evidence that the city recognizes the importance of the airport and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment that yields impressive benefits for the local community. With a sound and realistic master plan, the airport can maintain its role as an important link to the regional, state, national, and global air transportation systems. Moreover, the plan will aid in supporting decisions for directing limited and valuable city resources for future airport development. Ultimately, continued investment in the airport will allow the City of Eloy to reap the economic benefits.



Some common questions regarding what a master plan is / is not are answered in the graphic below.

What an Airport Master Plan is:

- ✓ A comprehensive, long-range study of the airport and all air and landside components that describes plans to meet FAA safety standards and future aviation demand.
- ✓ Recommended by the FAA to be conducted every 7-10 years to ensure plans are up-to-date and reflect current conditions and FAA regulations. The last Master Plan for E60 was completed in 2013
- ✓ Funded by the FAA through the Airport Improvement Program (AIP), which provides 91.06% of the total project costs. The remaining 8.94% is equally funded by ADOT and the City of Eloy.
- ✓ A City of Eloy document that will ultimately be presented for approval to the City Council. FAA approves only two elements of the Master Plan, the Aviation Demand Forecasts and the Airport Layout Plan (ALP drawing set).
- ✓ An opportunity for airport stakeholders and the general public to engage with airport staff on issues related to the airport and its current and future operations, and environmental and socioeconomic impacts. Up to three (3) public information workshops will be conducted throughout the Master Plan process to facilitate this public outreach effort.

What an Airport Master Plan is not:

- ✗ A guarantee that the airport will proceed with any planned projects. Master Plans are guides that help airport staff plan for future airport development; however, the need/demand for certain projects might never materialize.
- ✗ A guarantee that the City of Eloy, the FAA, or ADOT will fund any planned projects. Project funding is considered on a project-by-project basis and requires appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis.
- ✗ Environmental clearance for specific projects. The Master Plan includes an environmental overview that identifies potential environmental sensitivities per the *National Environmental Policy Act (NEPA)* guidelines. Most planned projects will require a separate NEPA study (environmental assessment/categorical exclusion) prior to construction.

WHO IS PREPARING THE MASTER PLAN?

The City of Eloy has contracted with Coffman Associates, Inc. to undertake the *Eloy Municipal Airport Master Plan*. Coffman Associates is an airport planning and consulting firm that specializes in master planning and environmental studies. Coffman Associates will lead the planning team with support from the following firms:

- **NV5 Geospatial** – aerial photography, ground survey, and geographic information systems (GIS) products to meet FAA 5300-18B requirements for Airports GIS data submittal
- **Dibble** – engineering support, primarily to develop cost estimates for CIP projects
- **SWCA Environmental Consultants** – field survey execution in support of the environmental elements of the plan

The airport master plan update will be prepared in accordance with FAA requirements, including FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*, and AC 150/5070-6B, *Airport Master Plans* (as amended). The plan will be closely coordinated with other planning studies relevant to the area and with aviation plans developed by the FAA and ADOT. The plan will also be coordinated with the City of Eloy and other local and regional agencies, as appropriate.



GOALS AND OBJECTIVES

The primary goal of this master plan is to provide the framework needed to guide future airport development that will satisfy aviation demand while remaining cost-effective and considering potential environmental and socioeconomic impacts. Accomplishing this goal requires an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility.

Specific objectives of the study include the following:

- Document the issues the proposed development will address.
- Present a plan that adequately addresses the issues and satisfies local, state, and federal regulations.
- Justify the proposed development through the technical, economic, and environmental investigation of concepts and alternatives.
- Provide an effective graphic presentation of the development of the airport and anticipated land uses in the vicinity of the airport.
- Establish a realistic schedule for the implementation of the development proposed in the plan, particularly the short-term capital improvement program.
- Provide sufficient project definition and detail for subsequent environmental evaluations that may be required before the project is approved.
- Analyze the through-the-fence (TTF) access and associated operations, as well as their impact on future growth and development of the airport, especially as they relate to skydiving activities.
- Review future use and zoning of airport property and approaches to each runway end for future protection. This will involve the development of new noise exposure contours.
- Analyze the potential implementation of straight-in instrument approach procedures to the runway system and impacts to appropriate approach and departure surfaces, as recognized by the FAA. This includes an evaluation of runway protection zones in association with an instrument approach procedure and an analysis of appropriate Part 77 and obstacle clearance surfaces that could impact the viability of an instrument approach.
- Establish the framework for a continuing planning process. The process should monitor key conditions and permit changes in plan recommendations, as required.
- Research and evaluate socioeconomic factors likely to affect air transportation demand in and around the City of Eloy over the next 20 years, including the development of forecasts for general aviation operations and based aircraft.



- Determine projected facility needs of the airport's users for the next 20 years, taking into consideration recent revisions to FAA design standards and the airport's conformance requirements, as well as the impact of general aviation fleet transitions on design standards.
- Recommend improvements that will enhance the airport's safety capabilities and capacity to the maximum extent possible.
- Prepare landside development options to maximize revenue streams, including both aviation- and non-aviation-related activities.
- Produce current and accurate airport base maps, airport layout plan (ALP) drawings, and an Exhibit 'A' Airport Property Map consistent with FAA Standard Operating Procedures (SOPs) 2.00 and 3.00 and FAA AC 150/5300-13B, *Airport Design*.
- Establish a schedule of development priorities and a program for the improvements proposed in the master plan consistent with the FAA's CIP planning.
- Conduct productive public involvement throughout the planning process, including public information workshops and the formulation of a planning advisory committee (PAC).

BASELINE ASSUMPTIONS

A long-range planning study requires several baseline assumptions, which were used throughout this analysis. The baseline assumptions for this study are as follows:

- E60 will continue to accommodate general aviation tenants, as well as itinerant and local aircraft operations by air taxi, general aviation, and military operators, through the 20-year planning period;
- The aviation industry will develop through the planning period as projected by the FAA (projected changes in national aviation industries are described in Chapter Two);
- The socioeconomic characteristics of the region will generally change as forecasted (see Chapter Two); and
- A federal/state airport improvement program will be in place through the planning period to assist in funding future capital development needs.

MASTER PLAN ELEMENTS AND PROCESS

The master plan has 10 elements intended to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Figure iA** provides a graphical depiction of the process involved in the study.

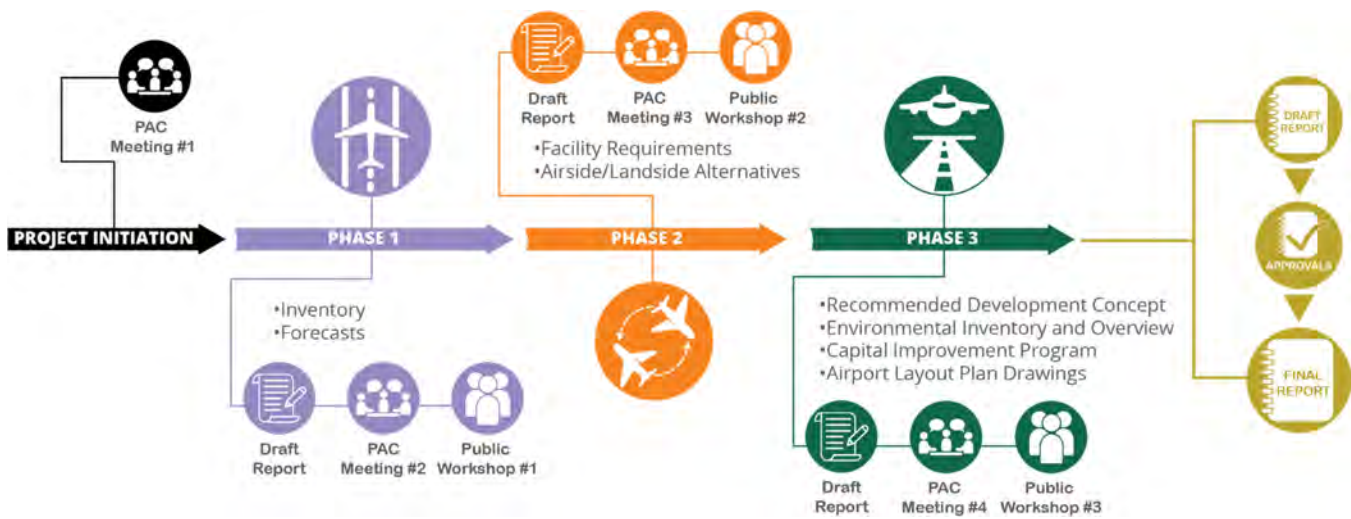


Figure iA – Project Workflow

Element 1 – Initiation includes the development of the scope of services and schedule, as well as the establishment of the PAC. Study materials will be assembled in a workbook format. General background information will be established, including an outline of the goals and objectives to be accomplished during the master plan.

Element 2 – Inventory focuses on collecting and assembling relevant data pertaining to the airport and the area it serves. Information is collected on existing facilities and operations. Local economic and demographic data are collected to define the local growth trends, and environmental information is gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies that may have relevance to the master plan are also collected and referenced.

Element 3 – Forecasts examines the potential aviation demand at the airport. The analysis utilizes local socioeconomic information and national air transportation trends to quantify the levels of aviation activity that can reasonably be expected to occur at E60 over a 20-year period. An existing and ultimate critical design aircraft, based on FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, is established to determine future planning design standards. The results of this effort are used to determine the types and sizes of facilities that will be required to meet the projected aviation demand at the airport through the planning period. (This element is one of two elements that are submitted to the FAA for approval.)

Element 4 – Facility Requirements determines the available capacities of various facilities at the airport, whether they conform with FAA standards, and what facility updates or new facilities will be needed to comply with FAA requirements and/or projected 20-year demand.

Element 5 – Airport Alternatives considers a variety of solutions to accommodate projected airside and landside facility needs through the long-term planning period. An analysis is completed to identify the strengths and weaknesses of each proposed development alternative, with the intention of determining a preferred concept for development.



Element 6 – Recommended Master Plan Concept and Capital Financial Plan provides a graphic and narrative description of the recommended plan for the use, development, and operation of the airport. A CIP is established to define the schedules, costs, and funding sources for the recommended development projects.

Element 7 – Airport Plans is the preparation of the official ALP drawings based on the recommended development concept. The ALP set is used by the FAA in determining grant eligibility. (This element is the second element of the study that is submitted to the FAA for approval.)

Element 8 – Environmental Evaluation includes research and documentation for key environmental considerations, which will assist in the evaluation of airport alternatives and the recommended development concept. The inclusion of such information also expedites its subsequent environmental review under the *National Environmental Policy Act* (NEPA). A recycling plan is developed to assess the airport's existing waste management program and provide recommendations for improving on-airport recycling. This element also includes an update to the Public Airport Disclosure Map to reflect operational forecasts, noise contours, airfield facilities, and the airport traffic pattern airspace.

Element 9 – Public Coordination, Communication, and Project Management includes tasks related to PAC meetings as the master plan develops, as well as conducting public information workshops with the aim of engaging the community in the study process. A study website was developed for the purposes of hosting and distributing study materials and notices of public meetings.

Element 10 – Final Reports and Approvals provides documents that detail the findings of the master plan update process for the City of Eloy and appropriate local organizations for future use and reference. The final document incorporates the revisions to previous working papers prepared under earlier elements into an organized master plan document.

COORDINATION AND OUTREACH

This master plan update process is of interest to many within the local community and region, including local citizens, local businesses, community organizations, city officials, airport users/tenants, and aviation organizations. As a component of the regional, state, and national aviation systems, E60 is of importance to both state and federal agencies responsible for overseeing the air transportation system.

To assist in the update of the master plan, a PAC was established to act in an advisory role. PAC members met four times at key milestones during the update process to review study materials and provide comments to help ensure the development of a realistic, viable plan.

Draft working paper materials were prepared at key milestones in the planning process, which allowed for timely input and review during each step within the master plan study so all issues could be fully addressed during the development of the recommended program.



Three open-house public information workshops were held as part of the study coordination and outreach efforts. These workshops were designed to allow all interested persons to become informed and provide input into the master plan process. Notices of meeting times and locations were advertised through local media outlets. All draft working papers, reports, meeting notices, and materials were made available to the public on the study-specific website at eloymasterplan.airportstudy.net.

SWOT ANALYSIS

A SWOT analysis is a strategic business planning technique used to identify **Strengths**, **Weaknesses**, **Opportunities**, and **Threats** associated with an action or plan. The SWOT analysis involves identifying an action, objective, or element and then categorizing the internal and external forces that positively and negatively impact that action, objective, or element in a given environment.

SWOT DEFINITIONS

This SWOT analysis organizes information into two categories:

- **Internal** – attributes of the airport and market area that may be considered strengths or weaknesses for the action, objective, or element
- **External** – attributes of the aviation industry that may pose opportunities or threats to the action, objective, or element

The SWOT further categorizes information into one of the following:

- **Strengths** – internal attributes of the airport that are helpful to achieving the action, objective, or element
- **Weaknesses** – internal attributes of the airport that are harmful to achieving the action, objective, or element
- **Opportunities** – external attributes of the industry that are helpful to achieving the action, objective, or element
- **Threats** – external attributes of the industry that are harmful to achieving the action, objective, or element



S STRENGTHS	• Outside Phoenix's busy Class B airspace • Airport is not landlocked (vacant land adjacent to the airport) • Airport is in the NPIAS • Community support • Good weather with clear visibility most days	• Solar panels around the airport will restrict encroachment • Close proximity to Coolidge Municipal Airport – receives additional activity • Well-known for skydiving activities
W WEAKNESSES	• Limited aircraft storage • Limited accessibility for general aviation activity • Length of runway can be restrictive in summer • Aging infrastructure • Upgrade/modernize FBO • No signage for restaurant	• Limited apron space for larger aircraft • Lack of design standards for buildings/hangars • Land leases/through-the-fence access • No instrument approaches
O OPPORTUNITIES	• Through-the-fence access for adjacent tenants • Covered aircraft parking • New hangar construction • Focus on based aircraft growth • Increased funding opportunities with 2022 infrastructure bill • Upgrade facilities	• Commercial/industrial growth – economic development • Airpark development • Military partners • Proximity to major interstate • Noise compatibility study • Sustainability plan
T THREATS	• Unresolved situation with skydiving operation regarding drop zone has impacted federal funding opportunities • Competing airports • Noise complaints • Encroachment of non-compatible uses	



Chapter 1

Inventory



Chapter 1

Inventory

The inventory of existing conditions is the initial step in the update of the *Eloy Municipal Airport Master Plan*. This inventory will serve as an overview of the airport’s physical and operational features, including facilities, users, and activity levels, as well as specific information related to the airspace, air traffic activity, and role of the airport. Finally, a summary of socioeconomic characteristics and a review of existing environmental conditions on, adjacent to, and in proximity to the airport are thoroughly detailed, which will provide a solid foundation for additional input for and recommendations from the planning process.

Information provided in this chapter serves as the baseline for the remainder of the updated master plan, which has been compiled using a wide variety of existing applicable planning documents and socioeconomic reports. These documents are specifically identified in **Table 1A** and summarized later in this chapter.

TABLE 1A | Applicable Planning Documents

Document	Prepared By	Date Prepared
Pinal County Joint Land Use Study (in partnership with the Arizona Army National Guard)	Pinal County: Community Development Department	March 2020
Socioeconomic Projections: Population and Employment	Maricopa Association of Governments	June 2023
Eloy General Plan	City of Eloy: Community Development Department	May 2020
Pinal County Comprehensive Plan	Pinal County: Community Development Department	November 2019
City of Eloy Economic Development Strategic Plan	ESI Corporation	July 2019
Eloy Municipal Airport Master Plan	Coffman Associates	May 2013
National Plan of Integrated Airport Systems	Federal Aviation Administration	September 2022
Arizona State Aviation System Plan	Kimley-Horn	October 2018
Regional Transportation Plan 2040 Update	Sun Corridor Metropolitan Planning Organization	February 2020
Eloy Transit Feasibility Study	Sun Corridor Metropolitan Planning Organization	January 2019

In addition, some of the information presented in this chapter includes data compiled from on-site visits; interviews with airport staff, tenants, and users; aerial and ground photography; federal, state, and local publications; and project record drawings.



AIRPORT SETTING

LOCATION

The City of Eloy is located in the south-central region of Arizona, just east of the intersection of Interstates 10 and 8 (proposed CanaMex Corridor) and at the center of the Sun Corridor. Eloy is strategically located equidistant from Tucson and Phoenix (approximately 55 miles each way). The city was initially established as a railroad town in the late 1800s and incorporated in 1949. Eloy has served as a regional trade center for a vibrant agricultural economy, primarily due to its location in the Santa Cruz River Basin, one of Arizona's most fertile agricultural areas.

Over the last 30 years, the city has transitioned to a more diverse economy; more than three quarters of its business and nearly half of its employment are now in transportation services, manufacturing, and logistics. The presence of the Union Pacific Railroad, which parallels and extends north of Interstate 10, provides easy transportation access and visibility benefits to major distribution firms and manufacturers serving the southern and western United States. The Interstate 10 corridor continues to serve as a prime location for major truck stops (six existing and two proposed) and is the site of four prison facilities operated by CoreCivic. The city is located just south of the Phoenix-Mesa-Chandler metropolitan statistical area (MSA), which reported a population of 5,015,678 in 2022. To better serve its residents and businesses, Eloy owns and operates its own water and sewer services, municipal airport, and cemetery.

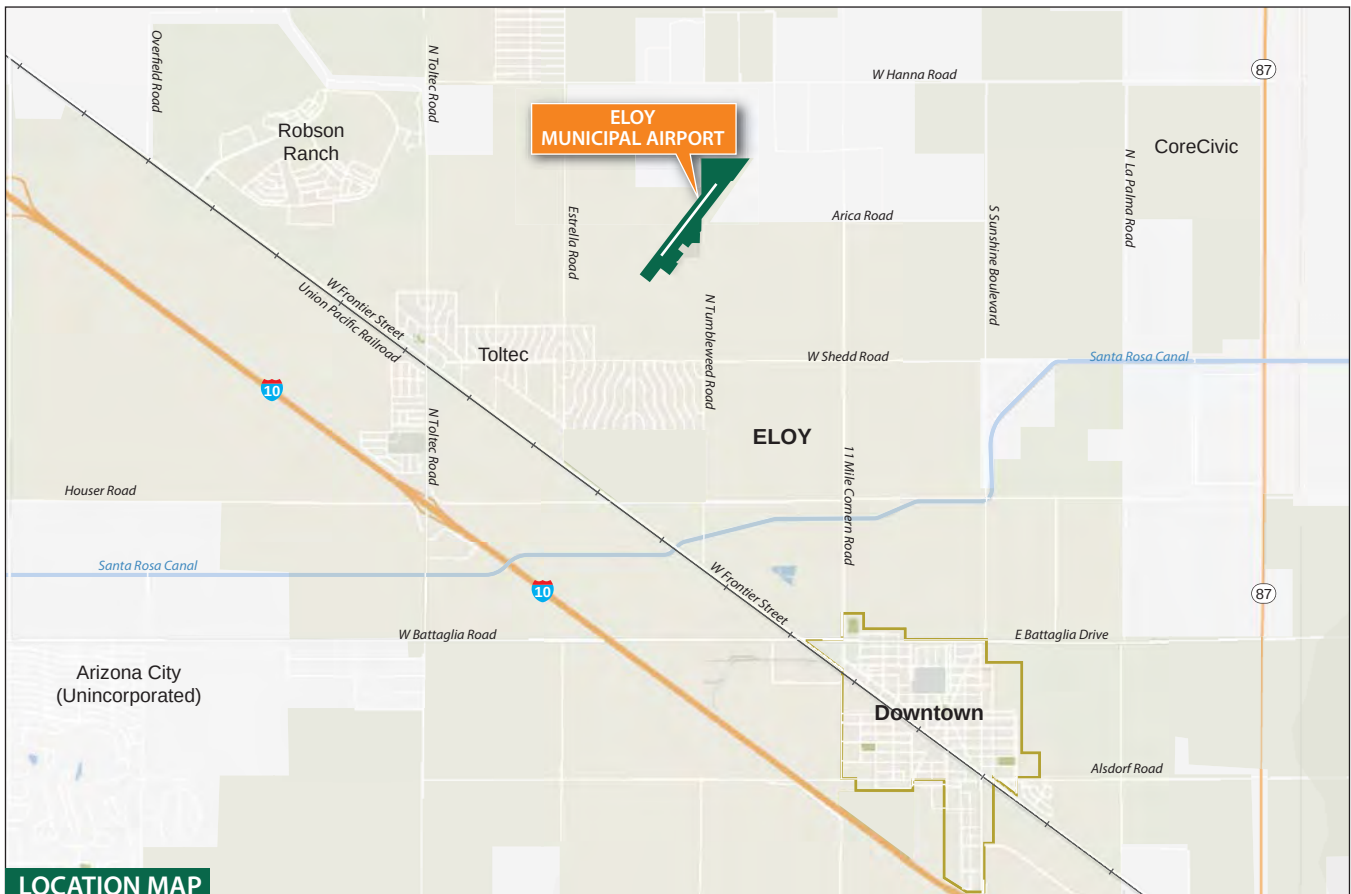
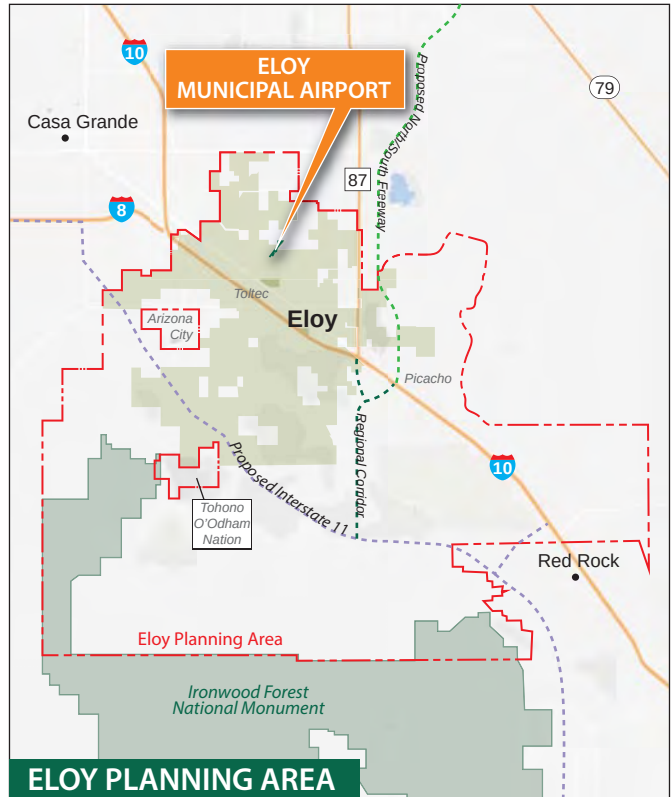
Eloy Municipal Airport (E60) is located approximately three miles northwest of downtown Eloy and encompasses approximately 137 acres at an elevation of 1,511 feet above mean sea level (MSL). The airport is accessible via Tumbleweed Road, which extends south from the airport and intersects with Frontier Street. Frontier Street (Jimmie Kerr Boulevard) is accessible via an existing traffic interchange with Interstate Highway 10, which is parallel to Frontier Street, to the west. Eloy Municipal Airport is home to SkyDive Arizona, a world-class facility that attracts skydivers from around the world. The city also owns approximately 280 acres adjacent to the airport's southern boundary. This land is envisioned as a prime location for a future business/industrial park. **Exhibit 1A** depicts the airport's regional setting.



Airport Entry Signage

CLIMATE

Climate and local weather conditions are important considerations in the airport master planning process, as they can significantly impact the operations of both fixed-wing and rotary-wing aircraft. The presence of seasonally high temperatures and elevated humidity can require increased runway length for some aircraft; predominant wind direction and wind speed dictate primary runway orientation; and extensive cloud cover percentages and frequency of inclement weather determine the need for the proper navigational aids and lighting to conduct operations in such conditions. Knowledge of these weather conditions during the planning process allows the airport to prepare for any improvements that may be needed on the airfield to maintain a safe and functional facility.





Eloy experiences dry and sweltering summers and cool winters with mostly clear skies year-round, which is typical of a hot desert climate. **Figure 1A** displays weather patterns in Eloy. July has the highest average maximum temperature, 107.2 degrees Fahrenheit (°F), while December is the coolest month, with an average minimum temperature of 34.8°F. Annual rainfall is less than 10 inches and is most plentiful during the monsoon season, which brings high winds and heavy rains. August is the rainiest month, averaging 1.57 inches.

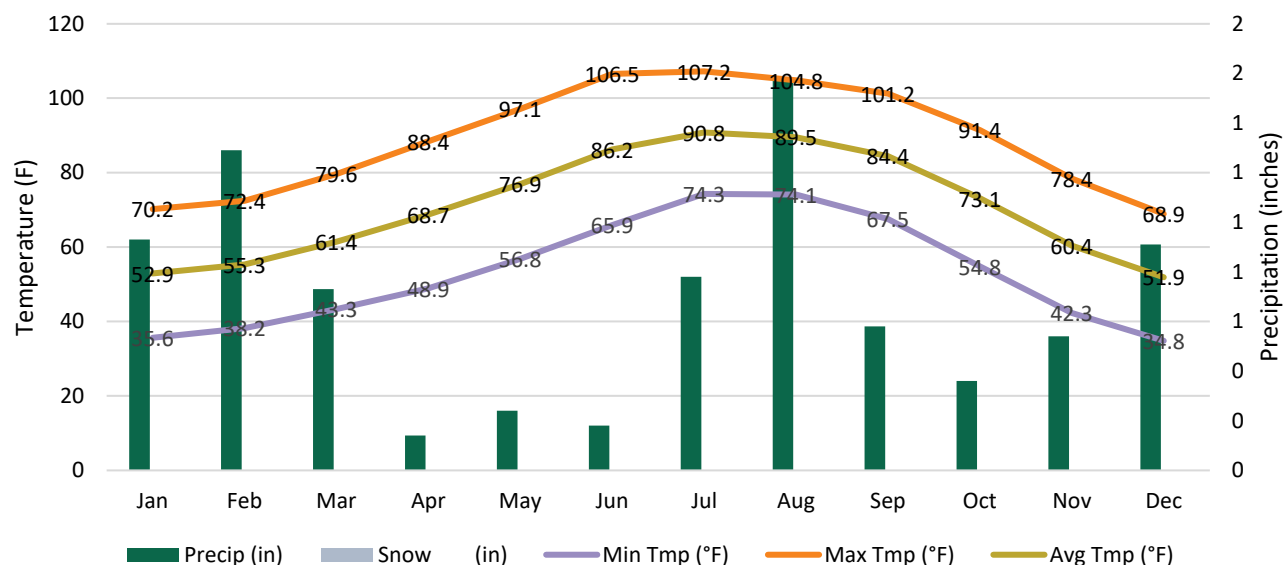


Figure 1A – Eloy Weather Patterns

Table 1B indicates that visual meteorological conditions (VMC) occur 99.27 percent of the time. When under VMC, pilots can operate using visual flight rules (VFR) and are responsible for maintaining proper separation from objects and other aircraft. Instrument meteorological conditions (IMC) account for all weather conditions less than VMC that still allow aircraft to safely operate under instrument flight rules (IFR). Under IFR, pilots rely on instruments in aircraft to accomplish navigation. IMC occur 0.46 percent of the time at Eloy Municipal Airport. Less than IMC, or poor visibility conditions (PVC), are lower than instrument approach minimums and make the airport inaccessible to most air traffic. PVC are present 0.27 percent of the time at Eloy Municipal Airport.

TABLE 1B | Weather Conditions

Condition	Cloud Ceiling	Visibility	Percent of Total
VMC	≥ 1,000' AGL	≥ 3 statute miles	99.27%
IMC	≥ 500' AGL and < 1,000' AGL	≥ 1 to < 3 statute miles	0.46%
PVC	< 500' AGL	< 1 statute mile	0.27%

AGL = above ground level

IMC = instrument meteorological conditions

PVC = poor visibility conditions

VMC = visual meteorological conditions

Source: Eloy Municipal Airport, AZ Station ID72274803914, observations from January 1, 2013, through December 31, 2022



AIRPORT HISTORY

Eloy Municipal Airport was constructed in 1969 with assistance from the Federal Aid to Airports Program. Initial construction included a lighted 3,000-foot-long by 60-foot-wide asphalt runway and a 300-foot by 150-foot aircraft parking apron. The airport served as a primary training base for Air Force T-41 aircraft for several years after initial construction. Crop dusting operations were the dominant use at the airport through the late 1970s and 1980s. SkyDive Arizona based its business at Eloy Municipal Airport in the early 1990s, and skydiving operations and related activities continue to be the most common use of the airport today.



Air Force T-41

AIRPORT ADMINISTRATION

The airport is owned by the City of Eloy and governed by the Eloy City Council. The Municipal Airport Advisory Board was organized to serve the Eloy City Council in an advisory capacity on matters related to airport policies and fees, improvements, equipment, maintenance, and general operations. The board is appointed by the Eloy City Council and consists of six members, each of whom serves no more than three consecutive three-year terms. The board includes a chair, vice chair, three members, and an ex officio (Eloy City Council) member. An on-site airport manager provides day-to-day oversight of the airport and its maintenance and serves as a staff liaison to the Municipal Airport Advisory Board. The airport is staffed from 7:00 a.m. to 4:00 p.m. seven days per week.

AIRPORT SYSTEM PLANNING ROLE

Airport planning takes place at the local, state, and national levels, each of which has a different emphasis and purpose.

- **Local** | Eloy Municipal Airport has operated with an airport master plan dating back to the late 1970s. The *Eloy Municipal Airport Master Plan* was last updated in 2013. Two pen-and-ink revisions to the airport layout plan (ALP) have occurred since then, in 2020 and 2021.
- **State** | Eloy Municipal Airport is included in the 2018 update to the *Arizona State Aviation System Plan* (SASP) as a general aviation (GA) rural airport.
- **National** | Eloy Municipal Airport is included in the *National Plan of Integrated Airport Systems* (NPIAS), which categorizes overall airport roles and responsibilities based on input from local and state planning efforts (i.e., master plans and state system plans). E60's inclusion in the NPIAS makes it eligible to receive federal funding assistance for qualified capital improvement projects.



LOCAL AIRPORT PLANNING

2013 Airport Master Plan

The 2013 *Eloy Municipal Airport Master Plan* updated the 20-year airport development vision from the original master plan, which was prepared in April 2001, based on the need to reconfirm aviation demand forecasts for future activity levels. The 2013 master plan update used 2009 data as the baseline for its aviation forecasts. The primary recommendations from the 2013 study included extending Runway 2-20 to 5,200 feet and widening it to 75 feet; increasing the runway-to-taxiway centerline separation distance to 240 feet; expanding the taxiway system; acquiring property to meet aircraft approach protection requirements; improving instrument approach procedures; and acquiring property on the east side of the airfield for additional landside facilities (aprons/taxilanes/hangars).

2020 and 2021 ALP Updates

Updates to the ALP drawing set were prepared in 2020 and 2021 to reflect as-built conditions at the airport. In 2020, this included the addition of new airport property, future drainage improvements, and new T-hangar taxilanes. The 2021 update included additional drainage improvements, as well as the relocation of Taxiway A and the segmented circle/wind cone, and incorporated changes to the apron and perimeter fencing.

STATE AIRPORT PLANNING

The primary aviation planning document for the State of Arizona is the SASP, which was last updated in October 2018. The SASP focuses on keeping Arizona's airports highly advanced, safe, and responsive to the public's needs from the present through the SASP's 20-year planning horizon. Eloy Municipal Airport is classified as a general aviation (GA) rural airport in the SASP. The SASP defines GA rural airports as "Airports that serve a supplemental role in local economies and provide access to markets in Arizona with limited activity in nearby states, primarily serving small business, recreational, and personal flying." According to the SASP, GA rural airports have moderate to low levels of activity, with few or no jets and multi-engine propeller aircraft, and at least 2,500 annual operations or 10 based aircraft. E60 currently experiences approximately 30,000 annual aircraft operations and has 42 based aircraft, several of which are multi-engine turboprops. The typical facilities and services expected for GA rural airports are listed on **Exhibit 1B**.

FEDERAL AIRPORT PLANNING

Many of the nation's existing airports (such as E60) were either initially constructed by the federal government, or their development and maintenance was partially funded through various federal grant-in-aid programs to local communities. The system of airports that exists today is largely due to federal policy that promotes the development of civil aviation. As part of a continuing effort to develop a national airport system, U.S. Congress has maintained a national plan for the development and maintenance of airports.



Attribute	Standard	Condition at E60	Meets Attribute
Airside Facilities			
Airport Reference Code (ARC) ¹	B-I	A-II	✗
Primary Runway Length	Accomodate 75% of small airplanes (min 4,500 feet)	3,901 feet	✗
Primary Runway Width	60 feet	75 feet	✓
Primary Runway Surface	Asphalt/paved	Paved	✓
Taxiway Type and Width	Full or partial parallel, connectors, or turnarounds width per ARC (25 feet)	Full parallel (40 feet)	✓
Instrument Approach Procedures	Non-precision or circling	Visual	✗
Visual Aids/Approach Lighting	Rotating Beacon Wind Cone Segmented Circle VGIs	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, PAPI-2	✓
Runway and Taxiway Lighting	MIRL/MITL	MIRL/MITL	✓

¹The Airport Reference Code is described in detail in Chapter 2.

Landside Facilities			
Airport Fencing	Perimeter fencing	Perimeter fencing	✓
Aprons and Tie-Downs	Apron (50% of based aircraft fleet and 25% for transient)	39 Tie-downs	✓
Hangars	Hangars (50% of based aircraft fleet and 25% for transient)	36 Hangars	✓
Auto Parking	Yes	Yes	✓

Landside Service			
Automated Weather Reporting	Yes	None	✗
FBO	None	FBO	✓
Aircraft Maintenance	None	Aircraft Maintenance	✓
Aircraft Fuel	AvGas	AvGas; Jet A	✓
Ground Transportation	Yes	None	✗
Phone Access	Yes	None	✗
Restroom	Yes	Yes	✓

KEY

FBO - Fixed Base Operator

MIRL - Medium-Intensity Runway Lighting

MITL - Medium Intensity Taxiway Lighting

PAPI - Precision Approach Path Indicator

REIL - Runway End Identifier Lights

VGI - Visual Glideslope Indicator



The Federal Aviation Administration (FAA) maintains the *National Plan of Integrated Airport Systems*, which is a database of public-use airports that are eligible for Airport Improvement Program (AIP) funding. The NPIAS is published and used by the FAA in administering the AIP, which is the source of federal funds for airport improvement projects across the country. The AIP is funded exclusively by user fees and user taxes, such as those on fuel and airline tickets. An airport must be included in the NPIAS to be eligible for federal funding assistance through the AIP.

The current plan is the NPIAS 2023-2027, which identifies 3,287 existing public-use airports, as well as eight proposed nonprimary airports anticipated to open by 2027, that are deemed important to national air transportation. The plan estimates approximately \$62.4 billion in AIP-eligible airport projects will require financial assistance between 2023 and 2027, which is an increase of almost \$19 billion from the estimate identified in the previous NPIAS report.

The NPIAS categorizes airports by the types of activities they experience, including commercial service, cargo service, reliever operations, and general aviation. E60 is currently classified as a local GA airport in the NPIAS. Local GA airports are a critical component to the national GA system and account for 36 percent of all NPIAS airports. They are typically located near population centers and have moderate levels of activity. Local GA airports often accommodate flight training and emergency services and average approximately 33 based propeller-driven aircraft (no jets).

ECONOMIC IMPACT

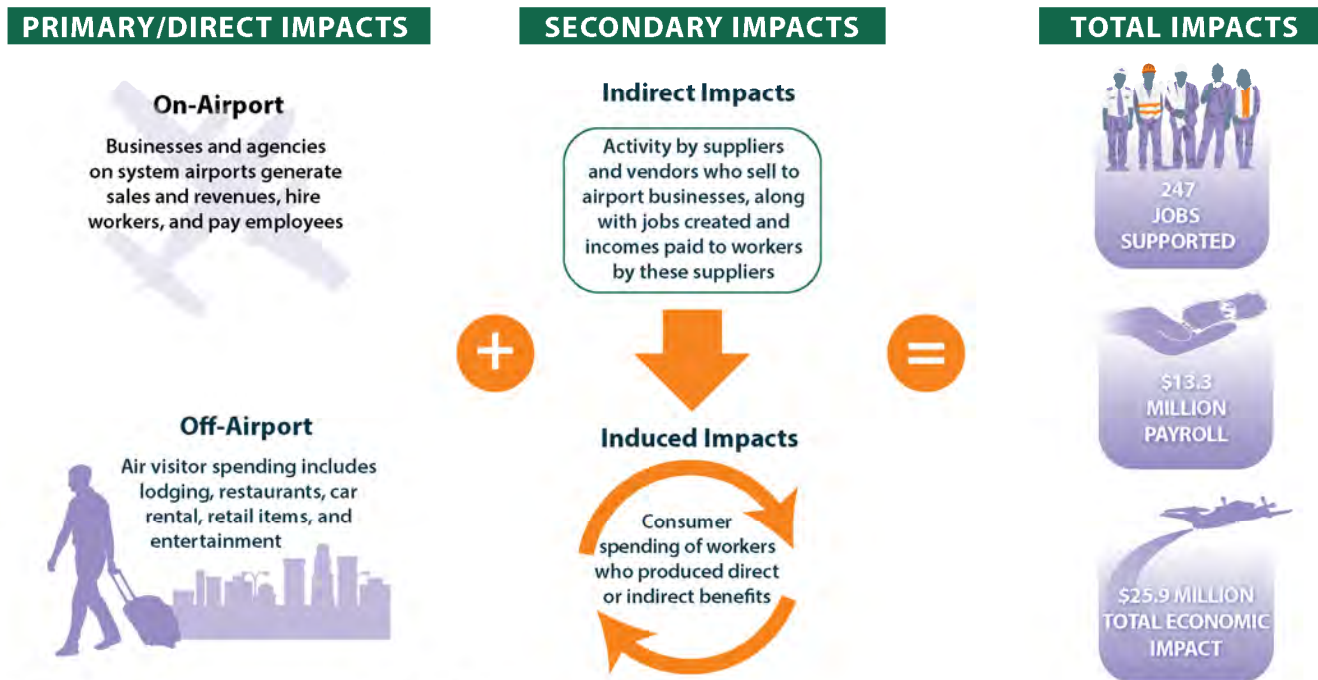
In 2021, the Arizona Department of Transportation – Aeronautics Group (ADOT) undertook a statewide economic impact study to measure how Arizona’s airports stimulated the local, regional, and state economies. Impact types include:

- **Direct impacts**, which include activities by on-airport businesses, as well as visitors who spend at locations like hotels and restaurants;
- **Indirect impacts**, which include any portions of direct impacts that are used to purchase goods or services within the state;
- **Induced impacts**, which are portions of direct and indirect revenues that are paid to on-airport workers and spent on goods and services within the state; and
- **Total economic impacts**, which are the sums of direct, indirect, and induced impacts.

Eloy Municipal Airport is a significant economic engine for the region and is widely known for supporting its through-the-fence operator, SkyDive Arizona, which ranks as one of the world’s leading skydiving centers. Thousands of visitors pass through the airport to participate in skydiving activities; the center is regularly the site of national and global competitive events and is a destination for visitors seeking specialized training, certification, or a unique recreational experience. Eloy Municipal Airport is occasionally used to conduct corporate and business travel to and from the area and is used as a staging area for rotorcraft serving the Banner Casa Grande Medical Center. Top activities at the airport include skydiving, recreational flying, flight training, corporate/business activity, and aerospace manufacturing. **Figure 1B** details E60’s economic impact, as of 2021.



ECONOMIC IMPACT SUMMARY



Source: Arizona Aviation Economic Impact Study, ADOT (2021)

Figure 1B – E60 Economic Impact

Prior to the 2021 economic impact study, an economic benefit analysis was completed in August 2020. The August 2020 study provided a comprehensive analysis of economic benefits created by the operation of E60 during the calendar year 2019. Over the course of the year, the study identified direct benefits of on-airport economic output of \$19.1 million, produced by 191 workers who received total payrolls of \$11.2 million. Secondary benefits (indirect and induced) included additional output of \$6.5 million, providing employment for 53 workers/total payrolls of \$1.9 million. In total, the economic output was \$25.6 million, with 244 jobs and payrolls of \$13.2 million, which is comparable to the results of the 2021 economic impact study completed by ADOT.

AERONAUTICAL ACTIVITY

ANNUAL OPERATIONS

Aircraft operations (takeoffs and landings) are a primary indicator of aeronautical activity at E60. Aircraft operations are classified as local or itinerant. Local operations often include touch-and-go or pilot training activity. Itinerant operations are performed by aircraft that arrive from or depart to other airports outside the local operating area.



Aircraft operations can be separated into four general categories: air carrier, air taxi, general aviation, and military. Due to the absence of an airport traffic control tower (ATCT) at E60, it can be difficult to maintain an accurate count of the airport's operations. An estimated account of annual activity is available via FAA Form 5010, *Airport Master Record*. The current account estimates that E60 experiences approximately 30,000 total operations per year. The *Airport Master Record* apportions the estimated operation totals for the airport by type: 25,400 GA local, 4,500 GA itinerant, and 100 military operations.

Chapter Two of this master plan update provides a more detailed account of the existing and projected aircraft operations for the airport. The categories of aircraft operations listed above are described below.

- **Air carrier operations** are defined as those conducted commercially by aircraft with seating capacities of 60 or more seats and cargo payload capacities of more than 18,000 pounds. No operators fitting the definition of an air carrier operation currently operate at E60.
- **Air taxi operations** are associated with aircraft originally designed to have fewer than 60 passenger seats or cargo payloads of less than 18,000 pounds that carry cargo or mail on a scheduled or charter basis and/or carry passengers on an on-demand or limited scheduled basis. A review of IFR flight plans that were opened or closed on the ground indicates that E60 experiences a limited number of air taxi operations on an annual basis.
- **Military operations** are conducted by airplanes and helicopters with military identification. E60 currently experiences approximately 100 annual operations by military aircraft.
- **General aviation operations** are conducted by civil aviation operators other than scheduled air services and nonscheduled for-hire air transport operations. The majority of operations at E60 can be categorized as general aviation operations.

Based Aircraft

Identifying the current number of based aircraft at an airport is important to the master plan analysis but can be challenging because of the transient nature of aircraft storage. Eloy Municipal Airport maintains a record of aircraft based on the airport. As of November 2023, there were 42 based aircraft at E60, including 27 single-engine piston, two multi-engine piston, and 13 turboprop aircraft. Data from the previous planning studies and the state system plan were also consulted to provide an expanded history. Historical based aircraft levels at E60 are shown in **Table 1C**.

TABLE 1C | Based Aircraft History

Year	Based Aircraft	Source
1979	22	1979 Eloy Master Plan
1988	27	1988 Eloy Master Plan
1996	22	2001 Eloy Master Plan
2009	41	2013 Eloy Master Plan
2016	21	2018 State System Plan
2023	42*	Airport Records

*Includes aircraft that are based off airport property.

Source: Eloy Municipal Airport records (November 2023)



CAPITAL IMPROVEMENT HISTORY

Significant improvements have been made to the airport since its establishment. To assist in funding capital improvements, the FAA and ADOT have provided funding assistance to E60 through the AIP. Airport improvement funds are collected through user fees and user taxes, such as those on fuel and airline tickets. As an airport grows and safety standards change over time, funding is needed to maintain a safe and efficient airport environment. The *Airport and Airway Development and Revenue Act of 1970* established the Aviation Trust Fund, which funds the AIP. Generally, federal AIP grants fund 91.06 percent of FAA-approved airport improvement projects for airports in the State of Arizona, and airport sponsors are responsible for the remaining 8.94 percent; however, through Arizona's State Aviation Fund, an airport sponsor is eligible to receive state-matching grants for 50 percent of the sponsor's share. As a result, a typical project cost is apportioned as 91.06 percent federal funding, 4.47 percent state funding, and 4.47 percent airport sponsor funding.

Table 1D summarizes airport capital improvement projects and maintenance undertaken at E60 since 2001 with funding from federal, state, and local sources. During this period, the airport has been awarded more than \$12 million in state and federal grants.

TABLE 1D | Airport Capital Improvement Project History

Fiscal Year	Grant Number	Project Description	Funds
FEDERAL AIP GRANTS			
2001	3-04-0014-04	Acquire Land (approximately 4.1 acres), Phase I; Install PAPIs and REILs	\$150,000
2003	3-04-0014-05	Rehabilitate Runway 2-20	\$150,000
2004	3-04-0014-06	Install Perimeter Fencing, Rehabilitate Runway 2-20, Widen Runway 2-20	\$1,365,900
2005	3-04-0014-07	Install Perimeter Fencing	\$171,000
2009	3-04-0014-08	Update Airport Master Plan Study	\$198,693
2010	3-04-0014-09	Install Miscellaneous NAVAIDS	\$150,000
2011	3-04-0014-10	Remove Obstructions	\$112,220
2013	3-04-0014-11	Conduct Miscellaneous Study (Conduct Airport Drainage Master Plan Study)	\$135,891
2013	3-04-0014-12	Rehabilitate Taxiway	\$261,462
2015	3-04-0014-13	Conduct Environmental Study	\$225,227
2018	3-04-0014-14	Acquire 15 Acres of Land for Development	\$450,000
2019	3-04-0014-15	Reconstruct Taxiway	\$429,360
2020	3-04-0014-16	Reconstruct Taxiway	\$4,288,468
AIP Grants Subtotal:			\$8,088,221
STATE (ADOT) GRANTS			
2001	EN629	Drainage/Erosion Control; Master Plan; Environmental Assessment (EA); Archeological Study	\$20,262
2003	E3F74	Land Acquisition (approximately 4.1 acres, Phase 1)	\$2,485
2003	E3F27	Install PAPI and REILs	\$4,905
2004	E5S12	Design Only: Runway 2-20 Extension (1,600 linear feet); Design Only: MITLs	\$247,500
2004	E5F55	Reconstruct and Widen Runway 2-20; Rehabilitate Runway 2-20, Including Lighting; Install Perimeter Fencing	\$35,946
2004	E5F54	Rehabilitate Runway 2-20 – Phase 1, Including Design	\$7,363
2004	E4S66B	Crack Seal and Thin PFC Overlay and Markings to Taxiway A and Apron	\$360,333
2005	E6S35	Rates & Fees Study; EA for Runway Extension	\$107,550

(Continues)



TABLE 1D | Airport Capital Improvement Project History (continued)

Fiscal Year	Grant Number	Project Description	Funds
2006	E7S31	Prepare New Master Plan	\$0
2007	E8S27	Install New Rotating Beacon and Pole Tower	\$16,785
2007	E7F76	Design and Install Airport Perimeter/Security Fence (5,000 linear feet)	\$4,441
2009	E9F61	Update Airport Master Plan Study	\$5,088
2010	E1F21	Remove Existing Beacon; Purchase and Install New Beacon	\$1,638
2011	E2S61	Mill and Replace PFC (A01EM Section 10): Crack Seal and Rubberized Asphalt Emulsion Seal Coat (TWAEM Section 10)	\$206,264
2011	E2F92	Remove Obstructions at Both Ends of Runway 2-20	\$2,790
2013	E4F2N	Conduct Airport Drainage Master Plan	\$6,670
2013	E4F2M	Rehabilitate Taxiway	\$12,835
2014	E5S2U	Design and Construction of Three Taxilanes	\$464,153
2015	E6S1S	Drainage Improvements	\$142,174
2015	E6F1N	EA for Drainage Improvements, Land Acquisition, and Relocation of Taxiway A	\$9,191
2016	E7S1L	Construction Only: Drainage Improvements Eligible to Proceed via Categorical Exclusion	\$0
2019	E9P1U	APMS Runway 2-20 Section 10 One-Inch AC Overlay and Pavement Markings	\$0
2019	E9M2D	Acquire Land for Development	\$20,300
2019	E0S2W	Airport Drainage Plan	\$1,064,449
2019	E0S2V	Install MIRL on Runway 2-20	\$285,018
2019	E0M1F	Reconstruct Taxiway A (Design Only)	\$20,865
2021	E2S2C	Construct Drainage Improvements – Phase 2	\$750,000
2023	E3S3G	Drainage Improvements – Phase 3	\$950,000
ADOT Grants Subtotal:			\$4,749,005
MISCELLANEOUS GRANTS			
2021	3-04-0014-18	Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA Act) Funds	\$13,000
2021	3-04-0014-19	American Rescue Plan Act of 2021 (ARPA)	\$32,000
Misc. Grants Subtotal:			\$45,000
TOTAL:			\$12,882,226

Source: Eloy Municipal Airport Records; FAA AIP Grant History as of 2023 (https://www.faa.gov/airports/aip/grant_histories)

AIRPORT FACILITIES AND SERVICES

Three broad categories of facilities and services are provided at the airport: airside, landside, and support.

- **Airside facilities** are directly associated with aircraft operations and include runways, taxiways, lighting, marking, navigational aids, and weather reporting.
- **Landside facilities** are necessary to provide a safe transition from surface to air transportation and support aircraft parking, servicing, storage, maintenance, and operational safety.
- **Support facilities** serve as a critical link for providing the necessary efficiency to aircraft ground operations, such as fuel storage, airport maintenance, firefighting, and fencing.



AIRSIDE FACILITIES

RUNWAY

As depicted on **Exhibit 1C**, E60 has a single runway, Runway 2-20, which is oriented northeast to southwest. Runway 2-20 measures 3,901 feet long and 75 feet wide and is constructed of asphalt. Pavement conditions, which are shown on **Exhibit 1D**, were determined by a visual inspection conducted as part of the 2022 Arizona Airport Pavement Management System study. Pavement condition index (PCI) ratings range from 0 (failed) to 100 (excellent). As of the 2022 pavement inspection, Runway 2-20 has a PCI of 91 with very low longitudinal and transverse cracking. The runway has a weight-bearing capacity of 12,500 pounds for single wheel (SWL) aircraft. Runway 2-20 is equipped with basic markings, which distinguish the runway centerline and designation. Standard left-hand traffic patterns are used for Runway 2 and right-hand traffic patterns are used for Runway 20. The gradient of the runway is 0.2 percent; the Runway 2 end elevation is 1,511 feet mean sea level (MSL) and the Runway 20 end elevation is 1,505 feet MSL.



Runway 20



Runway 2

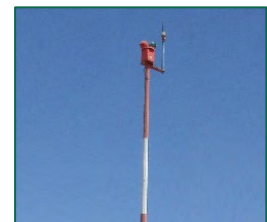
TAXIWAYS

A taxiway is a defined path established for the taxiing of aircraft from one part of an airport to another. The taxiway system at E60 consists of a full-length parallel taxiway and three connectors, as identified on **Exhibit 1C**. Taxiway A serves as the full-length taxiway with a 300-foot centerline separation from Runway 2-20. Taxiway B provides access to Runway 2 and Taxiway E provides access to Runway 20. Taxiway D connects the runway to the main apron. The taxiways are constructed of asphalt and the majority are 40 feet in width, with the exception of the northeast portion of Taxiway A, which is 35 feet wide.

AIRFIELD LIGHTING, SIGNAGE, AND MARKING

Airfield lighting systems extend an airport's usefulness into periods of darkness and/or poor visibility. A variety of lighting systems are installed at the airport for this purpose. These lighting systems are categorized by function and summarized as follows.

Airport Identification Lighting | The location of the airport is universally identified by a rotating beacon at night. The rotating beacon stands 61 feet above the ground and projects two beams of light, one white and one green, 180 degrees apart. The beacon operates from sunset to sunrise, is owned and operated by the City of Eloy, and is located near the northeast corner of the main apron.



Rotating Beacon



Pavement Edge Lighting | Pavement edge lighting defines the lateral limits of the pavement to ensure safe operations during night and/or low visibility times, maintaining safe and efficient access to and from the runway and aircraft parking areas. Runway 2-20 is equipped with medium intensity edge lighting (MIRL) to illuminate the runway edges at night and/or during poor meteorological conditions. Each runway end is equipped with threshold lights, which emit green light outward from the runway and red light toward the runway. Green lights indicate the landing threshold for arriving aircraft and red lights indicate the end of the runway for departing aircraft. The entirety of the taxiway system at E60 is equipped with elevated blue medium intensity taxiway lighting (MITL).

*MIRL Fixture**MITL Fixture*

Visual Approach Aids | Visual glideslope approach aids provide a visual cue to pilots, alerting them as to whether they are on the correct glide path to landing. Each end of the runway is outfitted with a two-light precision approach path indicator (PAPI-2) system with a 3.00-degree standard glide path. Pilots interpret the system of red and white lights, which indicate whether their aircraft are above, below, or on the designated descent path to the runway. The locations of the PAPI equipment are identified on **Exhibit 1C**.

Runway end identification lights (REILs) provide a visual identification of the runway end for landing aircraft. The REILs consist of two synchronized flashing lights, located laterally on each side of the runway end, facing the approaching aircraft. These flashing lights can be seen during the day or night for up to 20 miles, depending on visibility conditions. Runway 2-20 is equipped with REILs on both ends of the runway. This equipment is owned and operated by the City of Eloy.

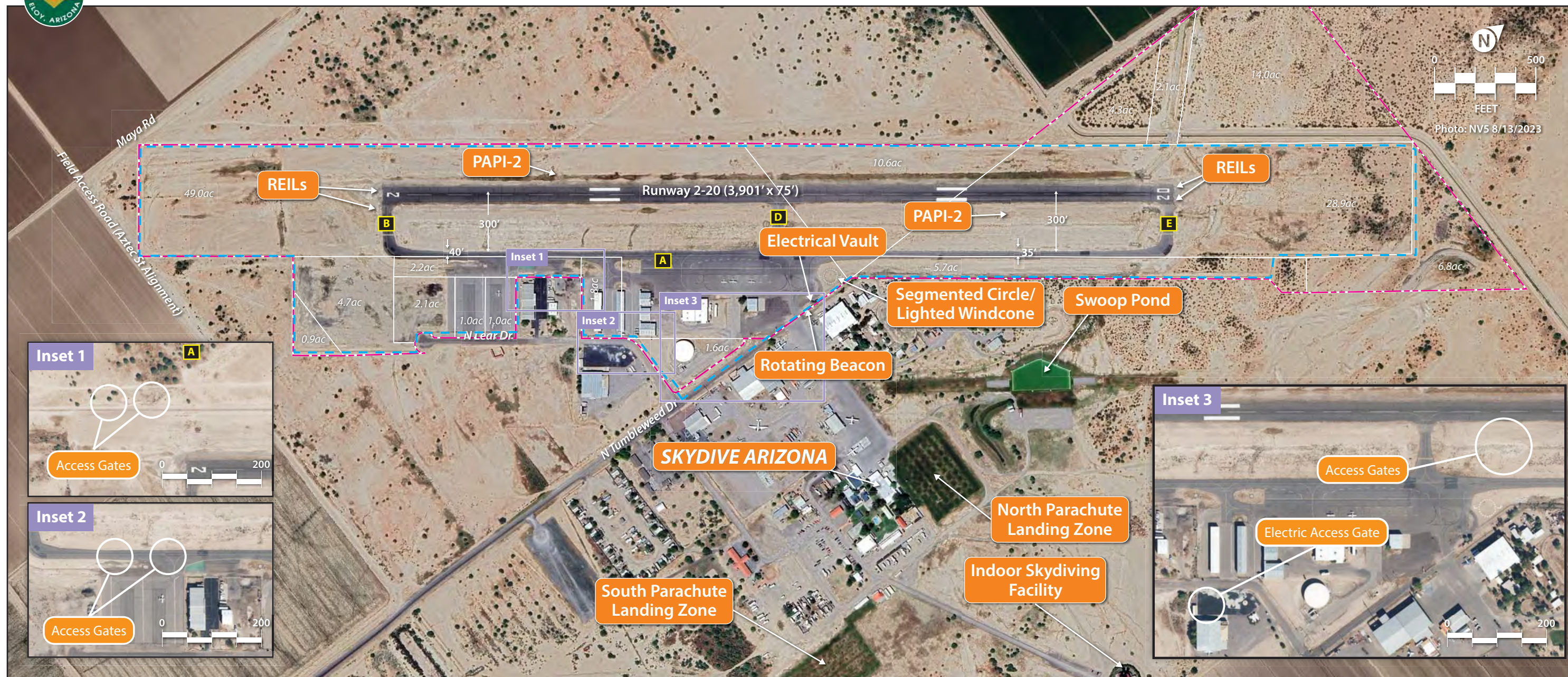
*PAPI-2*

Pilot-Controlled Lighting | During nighttime hours, a pilot can use the pilot-controlled lighting (PCL) system to activate the MIRL and visual approach aids from their aircraft through a series of clicks of their radio transmitter, using the common traffic advisory frequency (CTAF) 122.8 MHz. Some systems allow pilots to adjust the lighting intensity: three clicks for low, five clicks for medium, and seven clicks for high intensity.

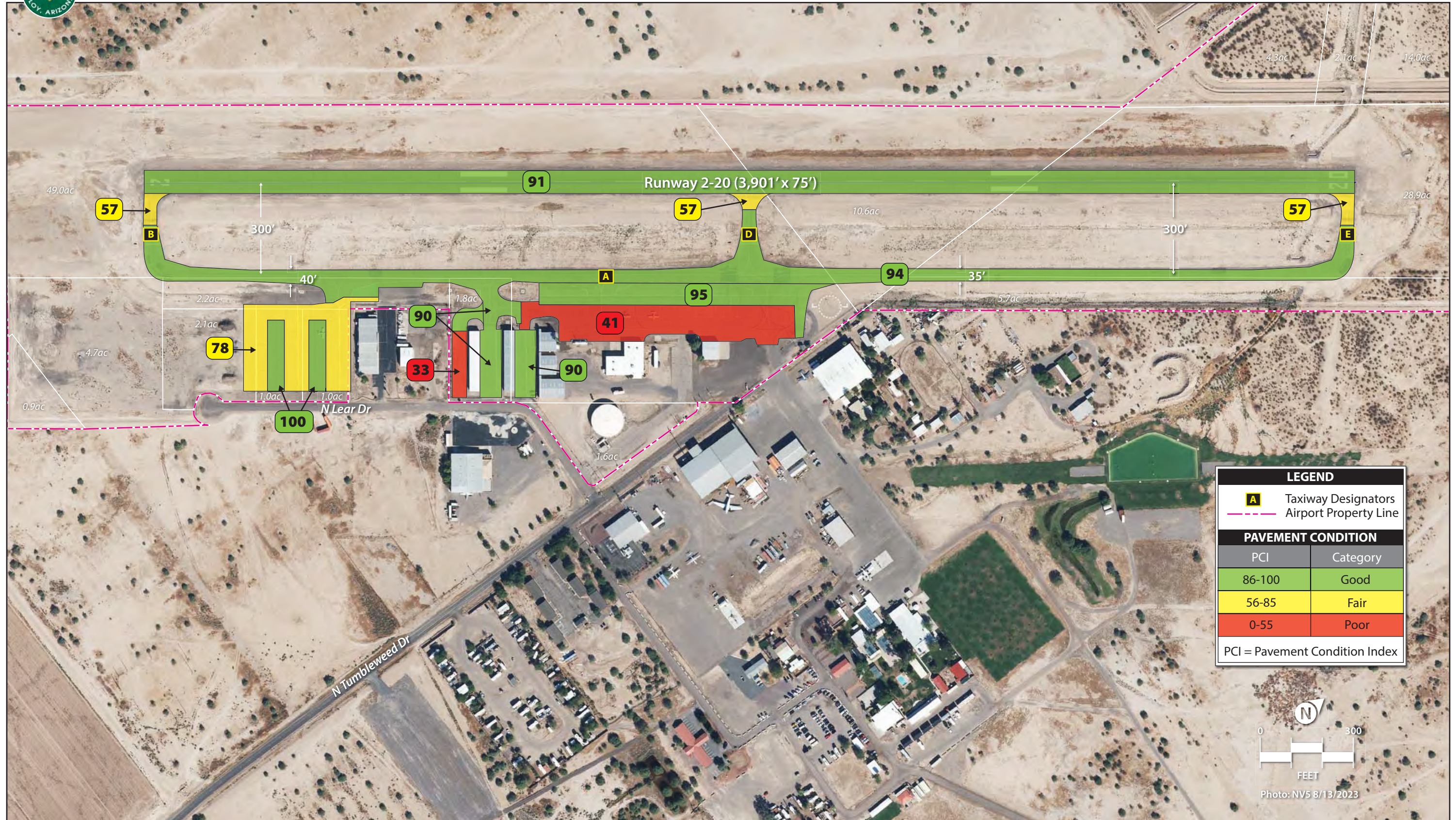
*REIL*

Airfield Signage and Pavement Markings | Airfield identification signs assist pilots in identifying runways, taxiway routes, and critical areas. The airfield at E60 is equipped with lighted location, directional, and mandatory instruction signs. Pavement markings aid in the safe and efficient movement of aircraft along airport surfaces and identify closed or hazardous areas on the airport. E60 provides and maintains marking systems in accordance with Part 139.311(a) and FAA Advisory Circular (AC) 150/5340-1, *Standards for Airport Marking*, and AC 150/5300-13B, *Airport Design*.

*Airfield Signage*



LEGEND	
---	Airport Property Line
---	Perimeter Fence
A	Taxiway Designator



Arizona Airport Pavement Management System, 2022 Pavement Inspection



As detailed previously, Runway 2-20 has basic markings that distinguish the runway centerline and designation. All taxiways at the airport are marked with yellow centerline and holding position markings, as well as leadoff lines on normally used exits. Centerline markings assist pilots in maintaining proper clearance from pavement edges and objects near taxiway edges. Aircraft holding positions are marked at each runway/taxiway intersection. Holding positions are located 200 feet from the centerline of Runway 2-20.

NAVIGATIONAL AIDS AND INSTRUMENT APPROACH PROCEDURES

Navigational aids are electronic devices that transmit radio frequencies, which pilots of properly equipped aircraft can translate into point-to-point guidance and position information. A very high omnidirectional range (VOR) system provides azimuth readings to pilots of properly equipped aircraft by transmitting a radio signal at every degree to provide 360 individual navigational courses. Distance measuring equipment (DME) is frequently combined with a VOR facility (VOR/DME) to provide distance and direction information to pilots. Military tactical air navigation aids (TACANs) and civil VORs are commonly combined to form VORTACs, which provide distance and direction information to both civil and military pilots. The E60 area is served by four VORTACs: Stanfield, 16.9 nautical miles (nm) northwest; Willie, 30 nm north; Phoenix, 42 nm northwest; and Gila Bend, 56 nm northwest.

The global positioning system (GPS) is an additional navigational aid for pilots. GPS was initially developed by the United States Department of Defense for military navigation around the world. GPS differs from VOR in that it does not require pilots to navigate using specific ground-based facilities. GPS uses satellites placed in orbit around the earth to transmit electronic radio signals, which pilots of properly equipped aircraft can use to determine altitude, speed, and other navigational information. With GPS, a pilot can directly navigate to any airport in the country and is not required to use a specific navigation facility.

Instrument approach procedures assist pilots in locating and landing at an airport during low visibility and cloud ceiling conditions. They are categorized as either precision, approach with vertical guidance (APV), or non-precision. Precision instrument approach aids provide an exact course alignment and vertical descent path for an aircraft on final approach to a runway with a height above threshold (HATh) lower than 250 feet and visibility lower than $\frac{3}{4}$ mile. APVs also provide course alignment and vertical guidance but use a HATh of 250 feet or more and visibility minimums of $\frac{3}{4}$ mile or greater. Non-precision instrument approaches provide only course alignment information with no vertical guidance.

Approach minimums are published for different aircraft categories. Each consists of a minimum decision altitude (DA) and required visibility. (Aircraft categories are described in greater detail in Chapter Two.) According to Title 14 Code of Federal Regulations (14 CFR) 91.175, a pilot must be able to make a safe landing and have the runway in sight, and the visibility requirement must be met. For a precision approach or APV, the DA is the point at which a pilot must meet all three criteria for landing; otherwise, they cannot land using the published instrument approach. For a non-precision approach, the minimum descent altitude (MDA) is a specific altitude at which the required visual reference must be made or a missed approach must be initiated. E60 does not have any published precision or non-precision instrument approaches. The potential for future instrument approaches serving E60 will be evaluated in Chapters Three and Four of this master plan.



WEATHER AND COMMUNICATION AIDS

Eloy Municipal Airport is equipped with a lighted wind cone, which provides pilots with wind speed and direction information, and a segmented circle, which provides traffic pattern information. The lighted wind cone and segmented circle are owned and operated by the City of Eloy and are located on the northeast edge of the main apron adjacent to the rotating beacon.



Lighted Wind Cone and Segmented Circle

Many airports are equipped with an automated weather observation station (AWOS), which records and transmits current weather conditions, such as wind speed, wind gusts, wind direction, temperature, dew point, altimeter setting, and density altitude. E60 is not currently equipped with an on-site AWOS; however, pilots can utilize the AWOS systems available at Coolidge Municipal Airport (P08) and Casa Grande Municipal Airport (CGZ), which are located 11 nm northeast and 13 nm northwest of E60, respectively. The P08 AWOS is available to pilots via frequency 119.350 MHz or by calling 520-723-4920, and the CGZ AWOS is available via frequency 132.175 MHz or by calling 520-836-3392.

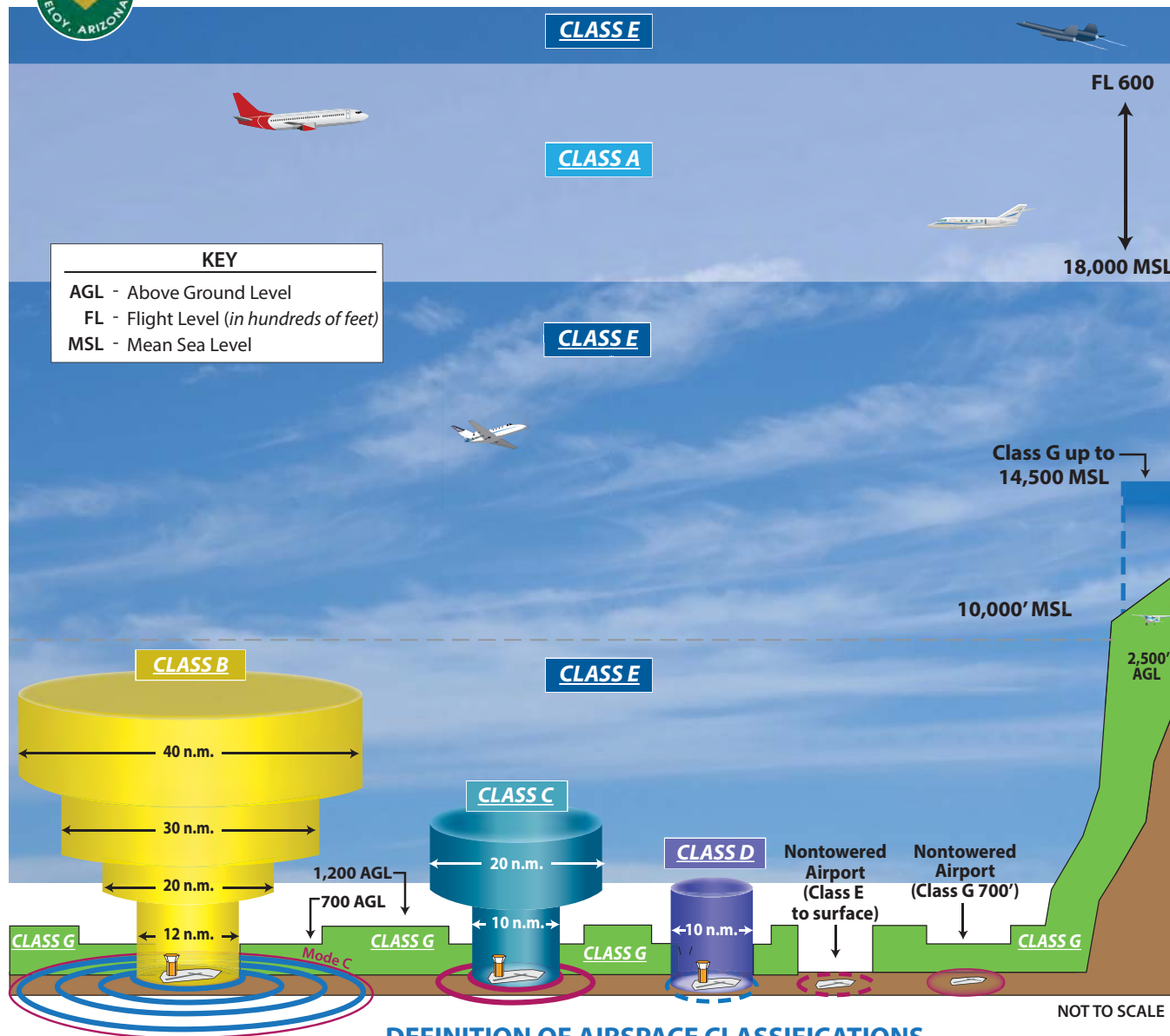
AREA AIRSPACE AND AIR TRAFFIC CONTROL

The *Federal Aviation Act of 1958* established the FAA as the responsible agency for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS covers the common network of U.S. airspace, including air navigation facilities; airports and landing areas; aeronautical charts; associated rules, regulations, and procedures; technical information; and personnel and material. The system also includes components shared jointly with the military.

AIRSPACE STRUCTURE

Airspace in the United States is broadly classified as either controlled or uncontrolled. The difference relates primarily to requirements for pilot qualifications, ground-to-air communications, navigation and air traffic services, and weather conditions. Six classes of airspace have been designated in the United States, as shown on **Exhibit 1E**. Airspace designated as Class A, B, C, D, or E is considered controlled airspace. Class G airspace includes all other airspace and is uncontrolled. Aircraft operating within controlled airspace are subject to varying requirements for positive air traffic control. Airspace near E60 is depicted on **Exhibit 1F**.

Class A | Class A includes all airspace from 18,000 feet mean sea level (MSL) to flight level 600 (approximately 60,000 feet MSL). This airspace is designated in Federal Aviation Regulation (FAR) Part 71.193 for positive control of aircraft. The positive control area (PCA) allows flights to be governed only under IFR operations. To enter Class A airspace, an aircraft must have special radio and navigational equipment, and its pilot must obtain clearance from an air traffic control (ATC) facility. Additionally, the pilot must possess an instrument rating to operate in Class A airspace.



DEFINITION OF AIRSPACE CLASSIFICATIONS

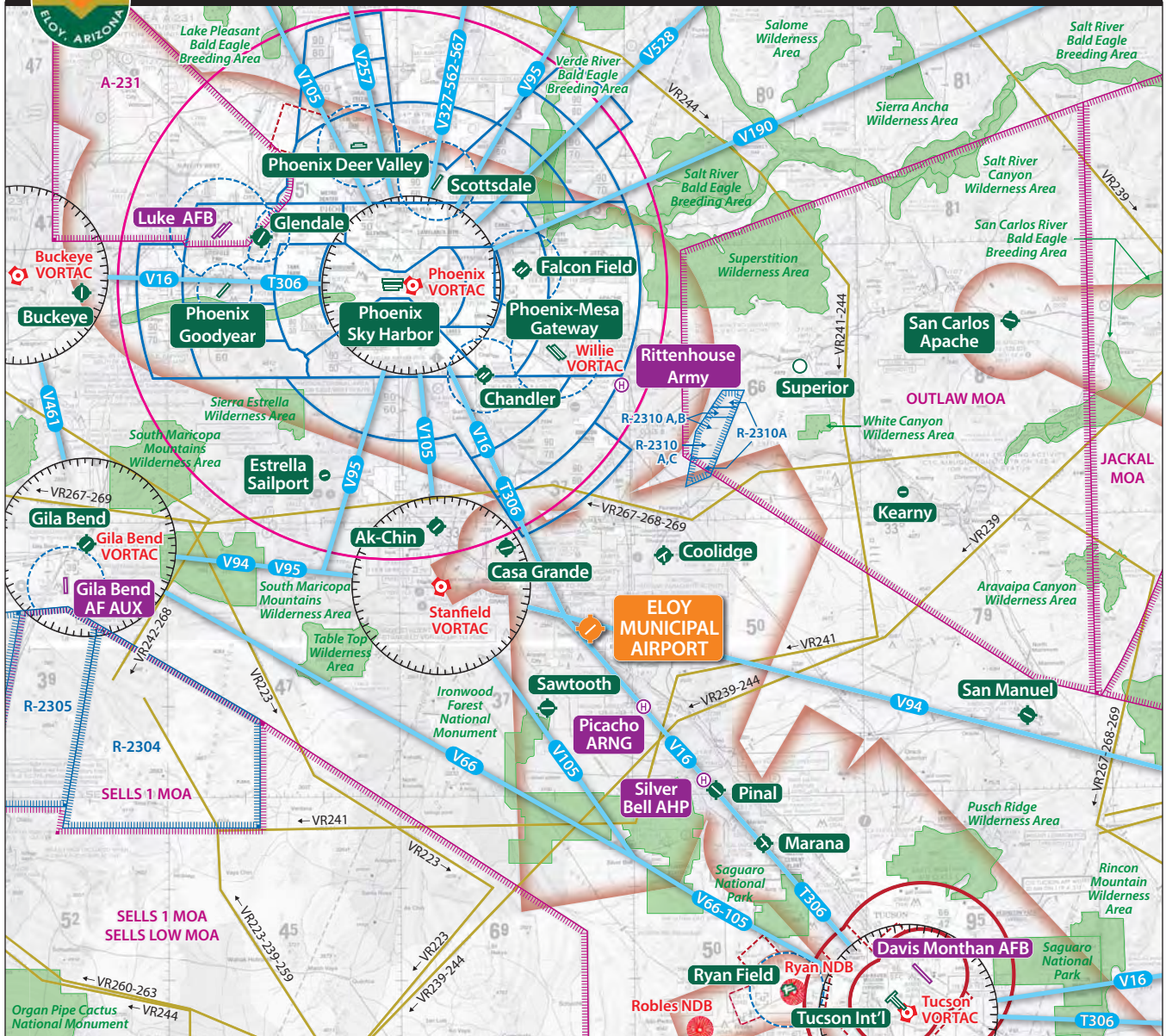
- CLASS A** Think A - Altitude. Airspace above 18,000 feet MSL up to and including FL 600. Instrument Flight Rule (IFR) flights only, ADS-B 1090 ES transponder required, ATC clearance required.
- CLASS B** Think B - Busy. Multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports. ADS-B 1090 ES transponder required, ATC clearance required.
- CLASS C** Think C - Mode C. Mode C transponder required. ATC communication required. Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.
- CLASS D** Think D - Dialogue. Pilot must establish dialogue with tower. Generally airspace from the surface to minimum 2,500 feet AGL surrounding towered airports.
- CLASS E** Think E - Everywhere. Controlled airspace that is not designated as any other Class of airspace.
- CLASS G** Think G - Ground. Uncontrolled airspace. From surface to a 1,200 AGL (in mountainous areas 2,500 AGL) Exceptions: near airports it lowers to 700' AGL; some airports have Class E to the surface. Visual Flight Rules (VFR) minimums apply.

Source: www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/15_phak_ch15.pdf



ELOY, AZ

Airport Master Plan



LEGEND

	Airports with hard-surfaced runways greater than 8,069' or some multiple runways less than 8,069' (Military airfields are shown in Purple, public in Green)		Class B Airspace	 Not to Scale
	Airport with hard-surfaced runways 1,500' to 8,069' in length		Class C Airspace	
	Airport with other than hard-surfaced runway		Class D Airspace	
	Arizona Army National Guard (AZARNG), Stagefield Heliport		Class E Airspace	
	Compass Rose		Class E (sfc) Airspace with floor 700 ft. above surface that laterally abuts 1200 ft. or higher Class E airspace	
	VORTAC		Mode C	
	Non-Directional Radio Beacon (NDB)		Victor Airways	
	Alert Area and Military Operations Area (MOA)		Military Training Routes	
	Restricted Areas		Wilderness/Monument Area	

Source: Phoenix Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration, 6/15/2023.



Class B | Class B airspace has been designated around some of the country's major airports, such as Phoenix Sky Harbor International Airport (PHX), to separate all aircraft within a specified radius of the primary airport. Each Class B airspace is specifically tailored for its primary airport. This airspace is the most restrictive controlled airspace routinely encountered by pilots. To fly within Class B airspace, an aircraft must be equipped with special radio and navigation equipment and must obtain clearance from air traffic control. A pilot is required to have at least a private pilot certificate or be a student pilot who has met the requirements of FAR Part 61.95, which requires special ground and flight training for Class B airspace. An aircraft is required to utilize a Mode C transponder within a 30-nm range of the center of the Class B airspace; a Mode C transponder allows an airport traffic control tower (ATCT) to track the location and altitude of the aircraft. E60 is located approximately 12 nm south of PHX's Class B airspace.

Class C | The FAA has established Class C airspace at approximately 120 airports around the country that have significant levels of IFR traffic. Class C airspace is designated to regulate the flow of uncontrolled traffic above, around, and below the arrival and departure airspace required for high-performance passenger-carrying aircraft at major airports. To operate inside Class C airspace, an aircraft must be equipped with a two-way radio and an encoding transponder, and its pilot must have established communication with the ATC facility. Aircraft may fly below the floor of Class C airspace or above the Class C airspace ceiling without establishing communication with ATC. The nearest Class C airspace surrounds Tucson International Airport (TUS) and Davis Monthan Air Force Base (DMA) to the south of E60.

Class D | Class D is controlled airspace surrounding most airports that have operating ATCTs and are not classified under B or C airspace designations. Class D airspace typically constitutes a cylinder with a horizontal radius of four or five nm from the airport, extending from the surface up to a designated vertical limit, which is typically set at approximately 2,500 feet above the airport elevation. Aircraft operators planning to operate within Class D airspace are required to contact ATC prior to entering or departing the airspace and must maintain contact while within the controlled airspace to land or traverse the area. The nearest Class D airspace to E60 surrounds Chandler Municipal Airport (CHD) and Phoenix-Mesa Gateway Airport (IWA), approximately 25 nm north of E60.

Class E | Class E is controlled airspace surrounding an airport that encompasses all instrument approach procedures and low-altitude federal airways. Only aircraft conducting instrument flights are required to be in contact with the appropriate ATC facility when operating in Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio contact with ATC facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. E60 is in Class E airspace, the surface of which begins at 700 feet above ground level (AGL). The airspace surrounding the airport below 700 feet AGL is Class G airspace.

Class G | Class G is uncontrolled airspace that is typically found in rural areas and does not require communication with an ATC facility. Class G airspace lies between the surface and the overlying Class E airspace (700 to 1,200 feet AGL). While aircraft may technically operate within Class G airspace without any contact with ATC, it is unlikely many aircraft will operate so low to the ground. Furthermore, FAR Part 91.119, *Minimum Safe Altitudes*, generally states that, except when necessary for takeoff or landing, pilots must operate aircraft over any congested area of a city, town, or settlement, or over any open-air assembly of persons, at a minimum altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.



Over less congested areas, pilots must maintain an altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure. Helicopters may be operated at less than the minimums prescribed if such operations are conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter must comply with any routes or altitudes specifically prescribed for helicopters by the FAA.

ADVANCED AIR MOBILITY (AAM)

As a new era of aviation transportation emerges, Advanced Air Mobility (AAM) leverages new aircraft and an array of innovative technologies to provide the opportunity for more efficient, sustainable, and equitable transportation options. In July 2023, the FAA published the *AAM Implementation Plan*, which focuses on set guidelines as AAM is integrated into the NAS. The expectation of this aircraft type is that it will operate from the surface to 4,000 feet AGL in urban and metropolitan areas, and in relatively close proximity to (or directly around) Class B and C airspace.

When operating in Class B airspace, a pilot must receive ATC clearance, and the aircraft is required to be equipped with an operating two-way radio; ADS-B (automatic dependent surveillance-broadcast) Out; suitable navigation capability; and an operable transponder with altitude reporting capability. Similar to existing aircraft operations requirements within Class C airspace, a pilot must initiate two-way radio communication with ATC prior to entry and maintain communication while in Class B airspace.

SPECIAL USE AIRSPACE

Special use airspace is defined as airspace where activities must be confined because of their nature, or where limitations are imposed on aircraft not taking part in those activities. Special use airspace identifies for other users the areas in which such non-standard operations may be occurring by outlining active times and/or altitudes to provide separation information in the area. Most special use airspace is designated on FAA aeronautical charts. The special use airspace in the vicinity of E60 is depicted on **Exhibit 1F**; the closest areas are identified approximately 25 nm to the northeast.

Victor Airways | Victor airways are corridors of airspace eight miles wide that extend upward from 12,000 feet AGL to 18,000 feet MSL and extend between VOR facilities. This system of federal airways has been established for aircraft arriving to or departing from the regional area and navigating by using VOR facilities. There are several Victor airways surrounding the airport, which are identified on **Exhibit 1F** with blue lines marked with a “V” preceding a designation number.

Military Operations Area (MOA) | An MOA is an area of airspace designated for military training use. This type of area is not restricted airspace; however, pilots who use this airspace should be on alert for the possibility of military traffic. A pilot may need to be aware that military aircraft can be operating in high concentrations, conducting aerobatic maneuvers, and possibly flying at high speeds and/or at lower elevations in this airspace. The nearest MOA to E60 is the Outlaw MOA, which is approximately 22 nm northeast of the airport. Two additional MOAs are located southwest of E60: Sells 1 MOA and



Sells Low MOA. Each MOA has its own designated airspace block and hours of operation. The activity status of an MOA is advertised by a Notice to Air Missions (NOTAM) and notated on sectional charts. The Outlaw MOA is controlled by the Albuquerque Air Route Traffic Control Center (ARTCC). Active military aircraft operate in the Outlaw MOA from 8,000 feet MSL or 3,000 AGL (whichever is higher) and its scheduled use can fluctuate from 7:00 a.m. to 6:00 p.m. and 6:00 p.m. to 10:00 p.m. Monday through Friday (notification by NOTAM), with intermittent weekend use (notification by NOTAM). The Sells 1 MOA is used at 10,000 feet MSL up to (but not including) FL 180 from 6:00 a.m. to 7:00 p.m. Monday through Friday. The Sells Low MOA is used at 3,000 feet AGL up to (but not including) 10,000 feet MSL from 6:00 a.m. to 7:00 p.m. Monday through Friday.

Restricted Airspace | Restricted airspace is an area (volume) of airspace, typically used by the military, in which the local controlling authorities have determined that air traffic must be restricted (if not continually prohibited) for safety or security concerns. It is depicted on aeronautical charts with the letter “R” followed by a serial number. Restricted areas denote the existence of unusual, often invisible hazards to aircraft, such as artillery firing, aerial gunnery, or guided missiles. Penetration of restricted areas without authorization from the using or controlling agency may be extremely hazardous to an aircraft and its occupants. Restricted airspace zones may not always be active; in such cases, schedules of local dates and times that specify when the zone is active are typically available to aviators. At other times, the airspace is subject to normal operation for the applicable airspace class. The closest restricted areas to E60 are R-2310A, B, and C, located approximately 20 nm northeast of the airport. These restricted areas are used for live fire munitions training and unmanned aerial vehicle (UAV) training within the Florence Military Reservation (Arizona Army National Guard).

Alert Areas | Alert areas are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain high volumes of pilot training or unusual types of aerial activity, such as military operations. Pilots should be particularly alert when flying in these areas. Military activities or other flight training in these areas typically operate at lower altitudes and may occur at any time of day or night. General aviation flights are not restricted within these areas, but pilots are strongly advised to be on alert for high-speed military training aircraft.

Military Training Routes | Military training routes (MTRs) are designated airspace established for use by high-performance military aircraft to train below 10,000 feet AGL and at speeds exceeding 250 knots. There are visual (VR) and instrument (IR) designated MTRs. MTRs with no segments above 1,500 feet AGL are designated with “VR” or “IR” followed by a four-digit number. MTRs with one or more segments above 1,500 feet AGL are identified by the route designation followed by a three-digit number. The arrows on the route show the direction of travel. MTRs in the vicinity of E60 are depicted on **Exhibit 1F** using a gold-colored line and are associated with their identifying numbers.

AIRSPACE CONTROL

The FAA has established 21 Air Route Traffic Control Centers throughout the continental United States to control aircraft operating under IFR within controlled airspace and while en route. An ARTCC assigns specific routes and altitudes along federal airways to maintain separation and orderly traffic flow. The Albuquerque ARTCC controls IFR air traffic en route to and from E60.



A flight service station (FSS) is an air traffic facility that provides pilot briefings, flight plan processing, in-flight radio communications, search and rescue (SAR) services, and assistance to lost aircraft in emergency situations. FSS facilities also relay ATC clearances, process NOTAMs, broadcast aviation meteorological and aeronautical information, and notify Customs and Border Protection of trans-border flights. The Prescott Flight Service Station is the nearest FSS to E60.

LOCAL OPERATING PROCEDURES

All flights into and out of E60 are conducted under VFR. Under VFR, the pilot is responsible for collision avoidance. Typically, a pilot will make radio calls announcing their intentions and the position of the aircraft relative to the airport. In most situations under VFR and basic radar services, the pilot is responsible for navigation and choosing the arrival and departure paths to and from the airport.

The traffic pattern at an airport is maintained to provide the safest and most effective use of the airspace. At E60, Runway 2 uses a left-hand traffic pattern, which means aircraft conduct left-hand turns within the traffic pattern when operating on the runway. Runway 20 uses a right-hand traffic pattern. Runway 2 is utilized for departure and Runway 20 is utilized for landing when winds are 10 knots or less. It should be noted that pilots should approach the airport from the west and not overfly. In addition, there is extremely heavy parachute jumping activity over the east side of the airport. E60 is situated at 1,511 feet MSL; the standard traffic pattern altitude is 1,000 feet above the elevation of the airport surface (2,511 feet MSL). The traffic pattern for heavy and turbine aircraft is 1,500 feet above the airfield elevation (3,011 feet MSL), while rotorcraft and ultralight aircraft should maintain an altitude of 2,011 feet MSL.

REGIONAL AIRPORTS

A review was conducted of other public-use airports with at least one paved runway within a 30-nm radius of E60 to identify and distinguish the types of air service provided in the region. It is important to consider the capabilities and limitations of these airports when planning for future changes or improvements to E60. **Table 1E** provides basic information regarding the seven public-use airports within the vicinity of E60.

TABLE 1E | Regional Airports Within 30 Nautical Miles of Eloy Municipal Airport

Airport	nm/Direction from E60 ¹	FAA Service Level ²	Towered ¹	Based Aircraft ³	2022 Annual Operations ⁴	Longest Runway ¹	Visibility Minimum ¹
Eloy Municipal Airport	–	GA	No	42 ⁵	30,000	3,901'	None
Coolidge Municipal Airport	11.2 nm NE	GA	No	41	65,050	5,564'	1-mile
Casa Grande Municipal Airport	12.7 nm NW	GA	No	73	122,000	5,200'	½-mile
Ak-Chin Regional Airport	20.0 nm WNW	GA	No	14	39,350	4,751'	None
Pinal Airpark Airport	22.2 nm SE	GA	No	75	58,200	6,849'	None
Chandler Municipal Airport	30.0 nm NNW	Reliever	Yes	423	239,300	4,870'	¾-mile
Marana Regional Airport	30.2 nm SE	Reliever	No	211	90,252	6,901'	1-mile
Phoenix-Mesa Gateway Airport	30.3 nm N	PCS	Yes	72	254,599	10,401'	¾-mile

GA = general aviation

nm = nautical miles

PCS = primary commercial service

Sources: ¹Airnav.com; ²FAA NPIAS; ³Basedaircraft.com; ⁴ADIP; ⁵Airport Records, E60 Based Aircraft



LANDSIDE FACILITIES

Landside facilities support the aircraft and pilot/passenger handling functions and include other non-aviation facilities that typically provide a revenue stream to the airport. These facilities include the passenger terminal complex/fixed base operator (FBO), general aviation facilities, automobile parking, and other non-aviation businesses located at the airport.



SkyDive Arizona

TERMINAL BUILDING

Eloy Municipal Airport does not have a terminal building; however, the SkyDive Arizona hangar located southwest of the self-service fuel facility provides services to visitors, including a pilot lounge and restrooms.

AIRPORT BUSINESSES

SASOs and Other Businesses | Several specialty aviation service operators (SASOs) and other businesses are located on the airport, including air charter operators, flight schools, and aircraft maintenance providers. **Table 1F** includes information about the businesses operating on the airfield at the time of this writing (November 2023).

Several aviation-related businesses are located off airport property but have access to the airfield via through-the-fence agreements with the City of Eloy. These businesses are identified on **Exhibit 1G** and listed in **Table 1F**.

TABLE 1F | Airport Businesses

On Airport Property	Off Airport Property
SkyDive Arizona – Two Hangars	SkyDive Arizona
Airborne Systems – Two Hangars	PHI Medical
Rigging Innovations	Hot Wings
High but Dry Balloons	Aero Specialists
Droplene Hot Air Balloons Eloy AZ	Crop First Aviation

Source: Eloy Municipal Airport Records, as of July 2023

THROUGH-THE-FENCE ACCESS

Through-the-fence activities are permitted by the airport sponsor through an agreement that provides airside infrastructure access to independent entities that own and have improved their property adjacent to airport property. At E60, five gates currently provide airfield access to businesses. Two of these gates are located on the southwest side of the airfield along Taxiway A and two other gates are located east of the two T-hangars. The fifth gate is located east of the main apron, which connects SkyDive Arizona to the main apron area. Additionally, the City of Eloy maintains an electric airfield access gate on the southernmost side of the airfield. **Exhibits 1C** and **1G** note these features.

AIRCRAFT HANGAR FACILITIES

Existing hangar facilities located on airport property at E60 include one conventional hangar, four executive hangars, and two T-hangars, which are shown on **Exhibit 1G**. Conventional hangars typically offer more than 10,000 square feet (sf) of storage space, while executive hangars are smaller and usually



range in size from 2,500 sf to 10,000 sf; most hangars at E60 are executive hangars. T-hangars are used primarily for small piston aircraft. At the time of this writing (December 2024), all hangar spaces are occupied, and there are 53 individuals on a hangar waiting list. Approximate total tenant space allocations of the existing hangar types are as follows:

- Conventional hangars – 10,080 sf
- Executive hangars – 13,465 sf
- T-hangars (12 individual storage units) – 13,520 sf

AIRCRAFT PARKING APRONS

Aircraft aprons are pavement areas that are sufficiently isolated from aircraft taxiways and movement areas. Aprons facilitate the safe and efficient transition of passengers from the airside element (runways and taxiways) to the landside element, provide access to hangars, and provide short- and long-term aircraft parking. E60 has two distinct apron areas: the main apron and the southwest apron.

The main apron, which is immediately northwest of Rigging Innovations and the SkyDive Arizona hangar, encompasses approximately 12,800 square yards (sy). There are 17 marked tiedowns on this apron. The southwest apron is approximately 10,700 sy and includes 18 marked tiedowns. Additionally, the Hot Wings hangar (Building #10), which has a through-the-fence agreement, has an approximately 2,900-sy apron and includes four marked aircraft tiedowns.

Aircraft parking aprons are identified on **Exhibit 1G**. The pavement conditions of the various apron areas were previously detailed on **Exhibit 1D**.

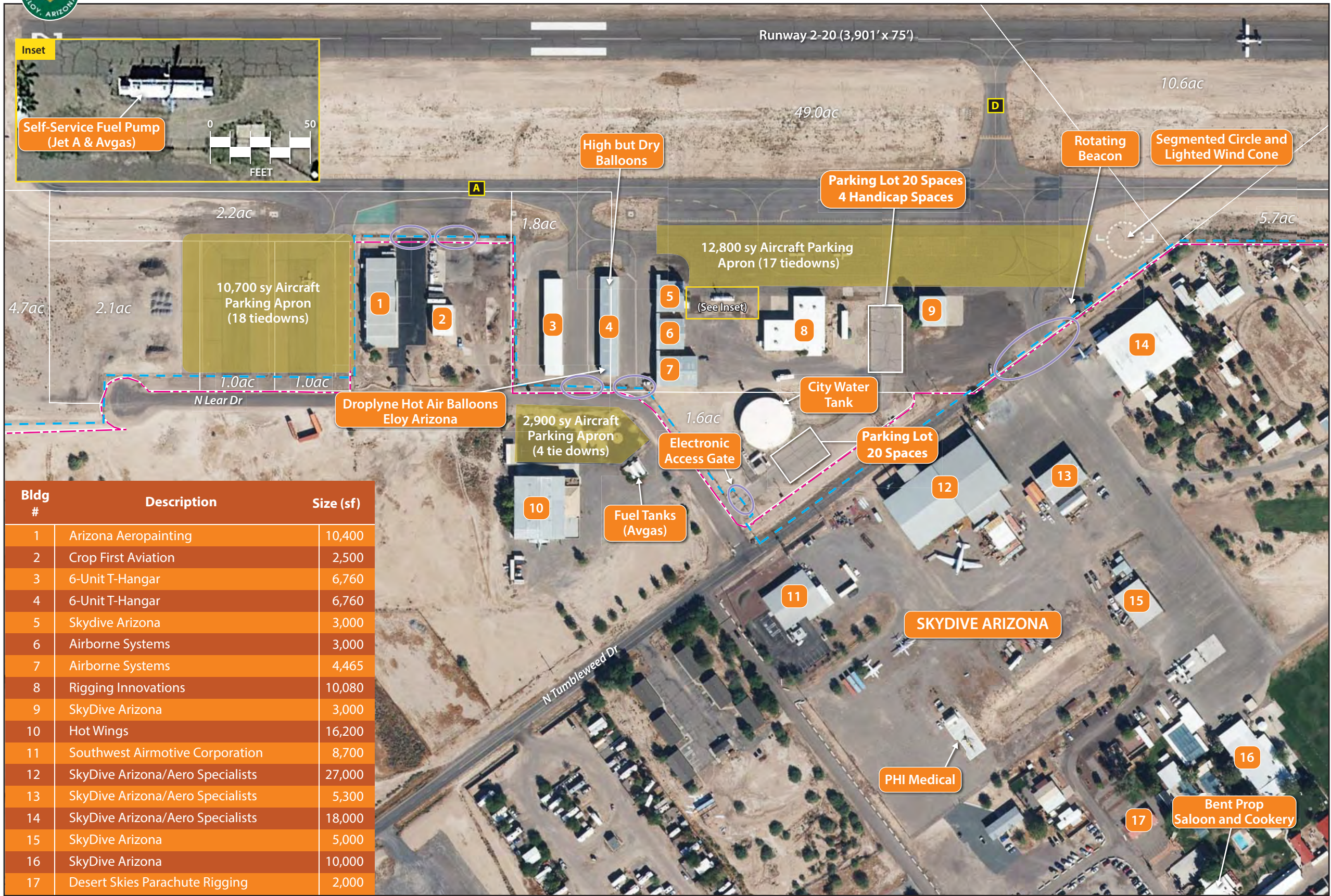
VEHICLE PARKING

Three vehicle parking lots are available and are accessible inside the fence for tenants and visitors. A paved and marked lot located immediately east of the City Water Tank provides 20 automobile parking spots. A second paved and marked parking lot is available between Rigging Innovations (Building #8) and the SkyDive Arizona hangar (Building #9). This lot provides 24 automobile parking spaces, including four accessible/Americans with Disabilities Act (ADA)-compliant spots. An unpaved parking lot is located east of the self-service fuel facility and could accommodate approximately 50 parking spaces if they were marked and planned for maximum efficiency. Vehicle parking spaces outside the airport security fencing are identified on **Exhibit 1G** and in **Table 1G**.

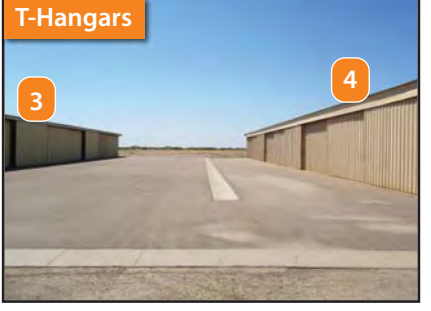
TABLE 1G | Airport Parking

Proximity to Nearest Building/Structure	Parking Spaces	ADA-Compliant Spaces	Approximate Area (sf)
East of City Water Tank	20	0	6,500
Southwest of SkyDive Arizona (Building #9)	24	4	8,300
Southwest of Rigging Innovations (Building #8)	50	0	17,500

Source: Coffman Associates Analysis (November 2023)

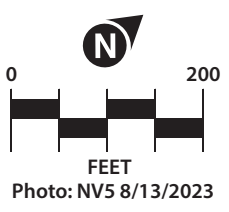


Bldg #	Description	Size (sf)
1	Arizona Aeropainting	10,400
2	Crop First Aviation	2,500
3	6-Unit T-Hangar	6,760
4	6-Unit T-Hangar	6,760
5	Skydive Arizona	3,000
6	Airborne Systems	3,000
7	Airborne Systems	4,465
8	Rigging Innovations	10,080
9	SkyDive Arizona	3,000
10	Hot Wings	16,200
11	Southwest Airmotive Corporation	8,700
12	SkyDive Arizona/Aero Specialists	27,000
13	SkyDive Arizona/Aero Specialists	5,300
14	SkyDive Arizona/Aero Specialists	18,000
15	SkyDive Arizona	5,000
16	SkyDive Arizona	10,000
17	Desert Skies Parachute Rigging	2,000



LEGEND

- Airport Property Line
- Perimeter Fence
- Taxiway Designator
- Access Gate



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SUPPORT FACILITIES

AIRPORT MAINTENANCE AND FIREFIGHTING FACILITIES

E60 does not have a dedicated maintenance facility; however, regular airport maintenance is conducted by City of Eloy personnel and SkyDive Arizona.

As a general aviation airport, E60 is not required to maintain on-site aircraft rescue and firefighting (ARFF) equipment or services. Firefighting services are provided by the Eloy Fire District, which operates two stations within the city. The nearest fire station to the airport is Station 522, located at 4015 N Toltec Road, approximately three miles southwest of the airport.

FUEL STORAGE

SkyDive Arizona owns and operates the airport's fuel facilities, which are located on the main apron between the SkyDive Arizona and Airborne Systems hangars. The existing facilities are aboveground and consist of a 6,000-gallon 100LL Avgas tank and a 6,000-gallon Jet A tank. Fuel is distributed via a self-delivery system co-located with the storage tanks.



Fuel Tanks and Self-Serve Fuel Pump

The current fuel flowage data available for 100LL and Jet A fuel are summarized in **Figure 1E**. The airport dispensed 42,382 gallons of 100LL fuel and Jet A fuel combined in a 12-month period ending in June 2023. The highest amount of fuel sales occurred in August 2022, with a significant drop the following month. Fuel sales slowly began to trend upward in 2023, with another drop in June 2023.

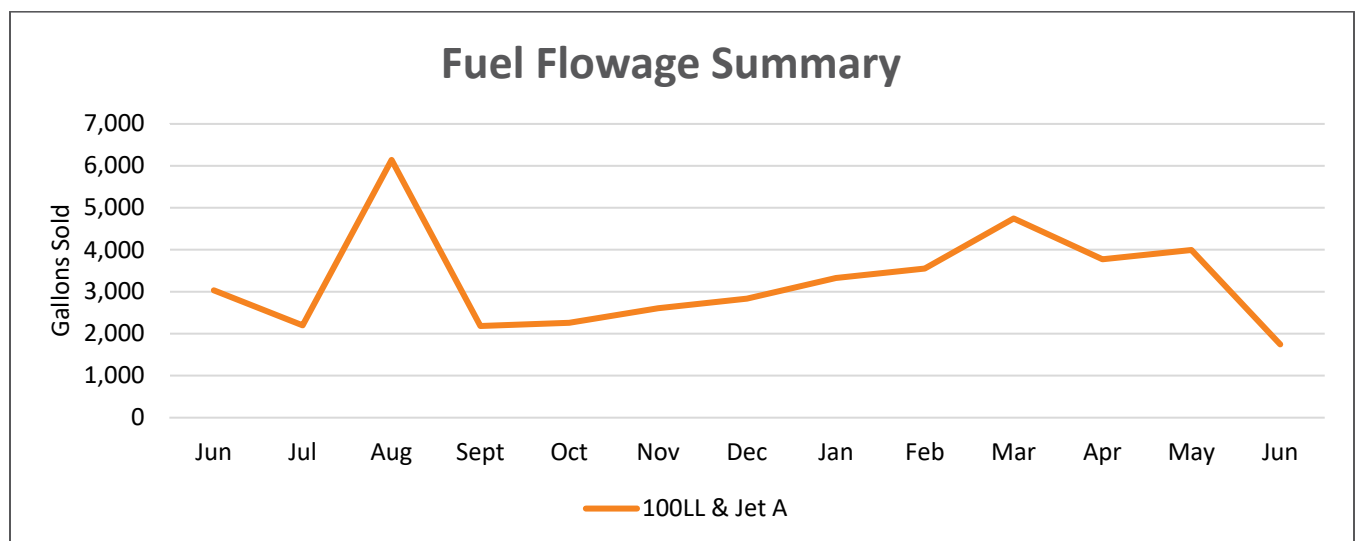


Figure 1E – Historical Fuel Flowage



PERIMETER FENCING

The entire perimeter of the airport is enclosed with chain link fencing for security. The majority of the airport property is surrounded by eight-foot security fencing, which is topped with three strands of barbed wire. A small portion of the airport property is enclosed with four-foot barbed wire fencing. The apron area is protected by a six-foot chain link fence. Signs prohibiting unauthorized entry are displayed on all gates and in other prominent locations to control inadvertent or unauthorized entry to the airfield. An electronic gate is located at the main entrance to the airport. Manual access gates at various locations on the airfield allow access to movement and non-movement areas and are secured with padlocks.



Electronic Access Gate

UTILITIES AND DRAINAGE

The availability and capacity of the utilities serving the airport and related surface water detention/drainage are factors in determining the development potential of the airport property, as well as the land immediately adjacent to the facility. Of primary concern in the inventory investigation is the availability of water, gas, sewer, and power sources. Utility providers are identified below.

- Electric – Arizona Public Service/Electrical Districts #2 and #4
- Natural Gas – Southwest Gas
- Water – City of Eloy
- Sanitary Sewer – septic tanks (the City of Eloy provides sewer collection for annexed areas with proximate service lines)
- Internet – Broadband-Fibaire Communications (Airebeam, TREPIC Networks LLC)
- Stormwater – Pinal County Flood Control District
- Trash – AC Sanitation Services

The following projects are in the vicinity of Eloy Municipal Airport and are included in the *City of Eloy Capital Improvements Plan*:

- Airport Waterline Extension – Construction (Fiscal Years 2024 and 2025): install 2,350 feet of 12-inch water main pipe on Tumbleweed Road (from the Cibola Road alignment to Aztec Street) to replace pipe in poor condition and create a looped system
- New Well at Airport with Connecting Line (Fiscal Years 2026 and 2027): construct a new well adjacent to the existing water reservoir and connect the well to the reservoir



SOCIOECONOMIC CHARACTERISTICS

Socioeconomic information related to the approximate airport service area is an important consideration in the master planning process and provides an understanding of the demographic disposition of the airport's contributing area. The service area for Eloy Municipal Airport encompasses an approximately 30-mile radius around the airport. Chapter Two provides a detailed analysis and identifies the specific airport service area based on general socioeconomic characteristics.

The historical demographic trends in population, employment, and income provide insight into the long-term socioeconomic condition of the region. This information is essential in determining aviation service level requirements and forecasting aviation demand elements for airports. Aviation forecasts are typically related to the population base and economic strength of the region, as well as the region's ability to attract, sustain, and expand a strong economic base now and in the future. The historical population, employment, and income data in this section were gathered from the following sources:

- **Woods & Poole Economics** | Historical population data were obtained from the Population Division of the U.S. Census Bureau. Employment and income figures were obtained from Woods & Poole Economics' *Complete Economic and Demographic Data Source* (2023). Woods & Poole Economics utilizes information from the U.S. Census Bureau, as well as other national and state organizations, for historical data and future projections. Woods & Poole Economics is an FAA-approved source for socioeconomic data.
- **Maricopa Association of Governments (MAG)** | The MAG is the designated metropolitan planning organization (MPO) for transportation planning in the greater Phoenix region, including the Phoenix urbanized area and the contiguous urbanized area in Pinal County. An updated publication of the *Socioeconomic Projections* report was completed for Maricopa and Pinal Counties in June 2023 and included projections for population and employment from 2020 through 2060.
- **Sun Corridor Metropolitan Planning Organization (SCMPO)** | The SCMPO was formed in 2013 after the City of Casa Grande reached a population over 50,000, at which point federal law requires the formation of an MPO to provide transportation planning within designated boundaries. The SCMPO provides transportation planning services to the region that includes the cities of Casa Grande, Coolidge, and Eloy, as well as adjacent rural portions of Pinal County. In February 2020, the SCMPO completed its current *Regional Transportation Plan*, which includes population and employment data and projections from 2018 through 2040. It should be noted that the SCMPO is in the process of updating its *Regional Transportation Plan* through 2050; however, data from the updated plan are currently unavailable.
- **City of Eloy Economic Development Strategic Plan** | The City of Eloy completed its *Economic Development Strategic Plan* in July 2019. This strategic plan offers a framework to improve the social and economic prosperity of Eloy residents, workers, and visitors, and includes an analysis of historical and existing population (years 2000, 2010, and 2017) and employment (years 2011, 2015, and 2018) information.



POPULATION

Population is a key socioeconomic factor to consider when planning for future airport needs. Historical and forecasted population trends provide an indication of the region's potential to sustain growth in aviation activity. Population data for the City of Eloy, the Sun Corridor metropolitan planning area, Pinal County, the State of Arizona, and the United States are discussed to provide past and present population metrics of the region the airport serves.

The City of Eloy's population experienced substantial growth between the years 2007 and 2022 with the addition of 10,062 people, which represents a compound annual growth rate (CAGR) of 3.59 percent. Population totals for the Sun Corridor metropolitan planning area were interpolated from the SCMPO *Regional Transportation Plan* and examined; because the SCMPO was not formed until 2013, only the years 2017 and 2022 have been included in this analysis. Based on the SCMPO *Regional Transportation Plan* population estimates and projected growth rates in the SCMPO region, an interpolated population is estimated at 125,934 in 2017 and 147,946 in 2022, representing a 3.27 percent CAGR. Pinal County, which incorporates the City of Eloy, experienced population growth from 2007 to 2022 at a 3.36 percent CAGR. Since 2007, the State of Arizona population has grown at a CAGR of 1.18 percent, which is a significantly lower rate than that of Pinal County (3.36 percent) over the same period. The United States has increased in overall population at a rate of 0.68 percent CAGR. **Table 1H** presents historical population statistics since 2007.

TABLE 1H | Population Statistics

	2007	2012	2017	2022	CAGR
City of Eloy ¹	14,436	16,885	17,537	24,498	3.59%
Sun Corridor MPO ²	—	—	125,934*	147,946*	3.27%
Pinal County ³	277,998	328,245	387,573	456,647	3.36%
Arizona ⁴	6,167,681	6,508,052	6,879,069	7,359,197	1.18%
United States ⁴	301,231,162	314,283,058	326,541,427	333,287,557	0.68%

*Value interpolated from SCMPO *Regional Transportation Plan 2040*

CAGR = compound annual growth rate

Sources: ¹City of Eloy *Economic Development Strategic Plan*, July 2019; ²SCMPO *Regional Transportation Plan 2040*, February 2020;

³MAG *Socioeconomic Projections*, June 2023; ⁴Woods & Poole, 2023

EMPLOYMENT

Analysis of an area's employment base can provide valuable insight into the overall economic character and sustainability of the region. Some indicators of economic health include availability of jobs, variety of employment types and opportunities, and wage rates provided by local employers. Employment data are based on the number of employees in the region.

Table 1J presents historical employment data for the City of Eloy, the SCMPO, Pinal County, the State of Arizona, and the United States since 2007. Total employment in the City of Eloy has grown at a CAGR of 3.20 percent since 2007. Interpolated employment data presented in the SCMPO *Regional Transportation Plan* indicate employment levels growing from 33,887 in 2017 to 39,124 in 2022 at a CAGR of 2.92 percent. Pinal County experienced growth at a CAGR of 2.12 percent since 2007. The State of Arizona's employment has experienced a lower growth rate, with a CAGR of 1.25 percent, while United States employment has experienced growth at a CAGR of 0.99 percent since 2007.

**TABLE 1J | Employment Statistics**

	2007	2012	2017	2022	CAGR
City of Eloy ¹	2,659	3,005	3,497	4,266	3.20%
Sun Corridor MPO ²	—	—	33,887*	39,124*	2.92%
Pinal County ³	81,473	84,876	96,447	111,531	2.12%
Arizona ³	3,465,075	3,295,538	3,740,756	4,172,914	1.25%
United States ³	179,543,667	178,979,687	196,394,098	208,286,623	0.99%

*Value interpolated from SCMPO Regional Transportation Plan 2040

CAGR = compound annual growth rate

Sources: ¹City of Eloy Economic Development Strategic Plan, July 2019; ²SCMPO Regional Transportation Plan 2040, February 2020;

³Woods & Poole, 2023

PER CAPITA PERSONAL INCOME

Table 1K presents per capita personal income (PCPI) for Pinal County, the State of Arizona, and the United States. PCPI is determined by dividing total economic output by total population. For the PCPI to grow, income must significantly outpace population growth. Pinal County's PCPI has experienced the highest growth rate when compared to the State of Arizona and the United States, with a CAGR of 1.83 percent from 2007 to 2022. Over the same time period, PCPI in the State of Arizona has experienced a CAGR of 1.19 percent, while the United States has experienced a more significant increase in PCPI, with a CAGR of 1.51 percent over this period.

TABLE 1K | Per Capita Personal Income

	2007	2012	2017	2022	CAGR
Pinal County	27,609	26,341	31,535	36,217	1.83%
Arizona	39,155	36,541	41,018	46,777	1.19%
United States	43,534	44,556	48,619	54,507	1.51%

CAGR = compound annual growth rate

Source: Woods & Poole, 2023

AIRPORT COMPATIBILITY

As a municipal general aviation airport, Eloy Municipal Airport conducts its operations on airport property, but the effects of its operations extend well beyond its boundaries. While the airport has been relatively isolated in the past, future on-airport improvements and community growth have the potential to create unintended incompatibilities in the future. For nearby landowners, on-airport operations could create negative off-airport impacts (e.g., noise, glare, accidents, etc.). For the airport and the City of Eloy, a range of off-airport factors could negatively impact the use and safety of ongoing operations and future expansion plans at E60, as identified in this updated master plan. The City of Eloy's intent is to ensure E60 keeps pace with community development and leverages the investment in its improvements to help the airport serve as an important existing and future economic engine for the City of Eloy.

The important compatibility factors identified below are described in greater detail in the following subsections:

- Land use regulatory and policy guidance
- Land ownership



Additional compatibility factors that relate to environmental factors are described in more detail in the next section, *Environmental Inventory*.

LAND USE REGULATORY AND POLICY GUIDANCE

The framework of regulatory and policy guidance for Eloy Municipal Airport is included in several documents. The *Eloy General Plan* serves as the principal document. Because the area surrounding the airport is not entirely annexed by the City of Eloy, the *Pinal County Comprehensive Plan* is summarized, as follows. A recent land use compatibility effort that was undertaken by Pinal County and the Arizona Army National Guard (AZARNG) is also identified and summarized.

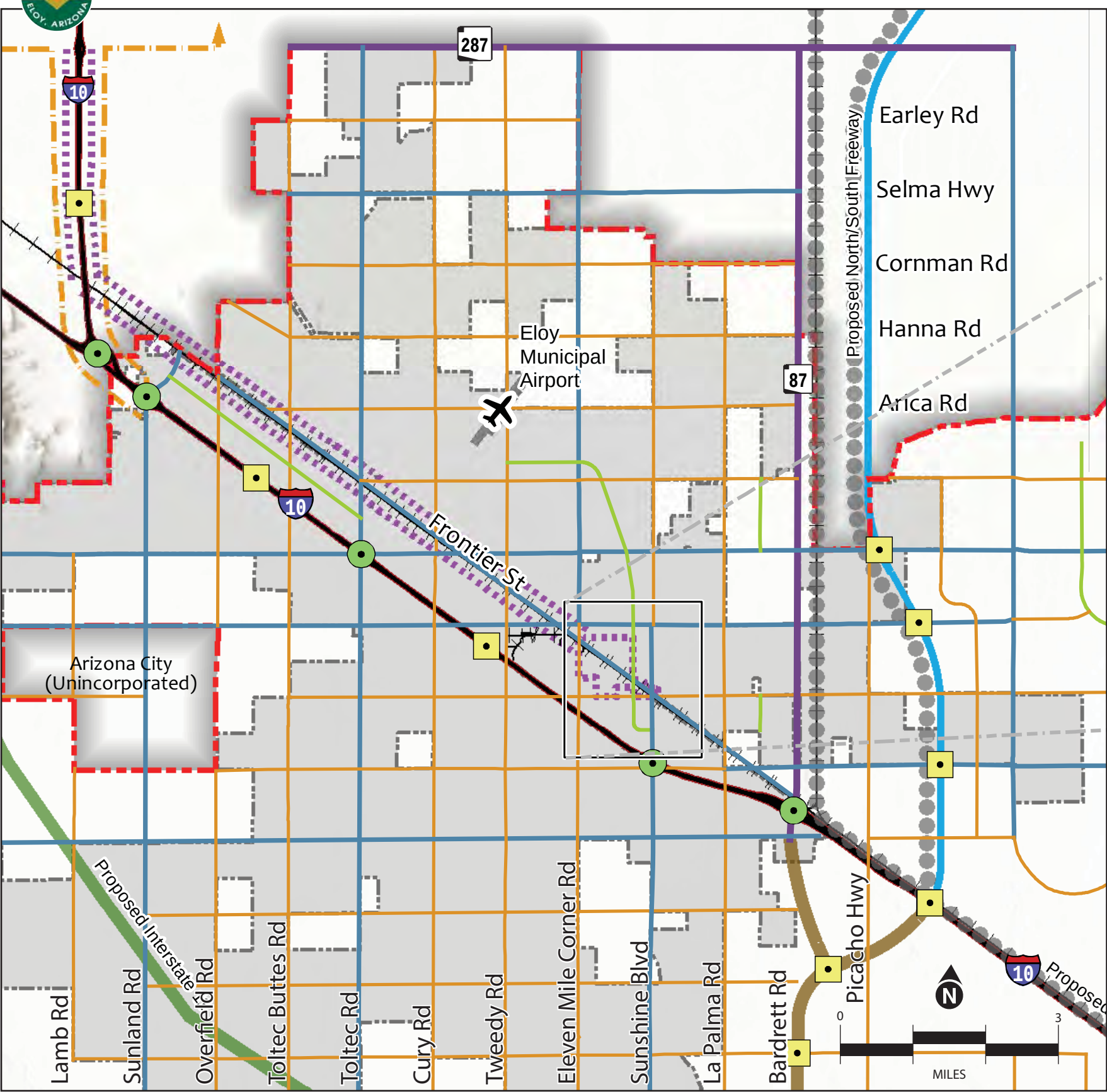
Eloy General Plan

The *Eloy General Plan*, which was readopted by the Eloy City Council on May 11, 2020, provides a long-term vision for Eloy's development and will guide the City of Eloy as it grows and changes in the next 10 years. The *Eloy General Plan* consists of 11 elements; the land use, circulation, growth, public facilities, and economic prosperity elements directly impact Eloy Municipal Airport.

- *Land Use Element* | The land use element of the *Eloy General Plan* provides a foundation on which other subsequent elements are based. This element identifies the intent and direction of future development for the City of Eloy and is a focal point for goals, objectives, and policies that are used by the Eloy City Council, Planning and Zoning Commission, and planning staff to guide and direct development. Land use is also discussed within the *Environmental Inventory* section of this master plan update.
- *Circulation Element* | **Exhibit 1H** depicts the functional street classifications and maps for the future roadway network. The local roadway network is based on the one-mile grid system originally established in Pinal County. Five basic street classifications are used by the city: interstate freeways, state highways, major arterials, minor arterials, and two-lane collectors.

As shown on the exhibit, collector streets provide mobility and access between local streets and arterials, and local streets provide access to other local streets. As the plan foresees population growth and increased job growth, the main airport access road (Tumbleweed Road) will be constructed to a four-lane road (110-foot right-of-way) instead of the current two-lane road. In addition, a two-lane collector road (80-foot right-of-way) is planned to connect downtown Eloy with Eloy Municipal Airport.

Two key transportation corridors are considered in the future within the Eloy Planning Boundary, as shown on **Exhibit 1H**. The North-South Freeway would connect U.S. Route 60 in northern Pinal County to Interstate 10 within the City of Eloy and is intended to extend south to connect with the Intermountain West Corridor (I-11). The I-11 is intended as a proposed multimodal transportation corridor to diversify, support, and connect the economies of Arizona and Nevada, ultimately linking Mexico and Canada.



Functional Classification

- Interstate
- State Highway
- Major Arterial (130' ROW)
- Minor Arterial (110' ROW)
- Two Lane Collector (80' ROW)
- Union Pacific Railroad

Reference

- Eloy City Limits
- Eloy Planning Boundary

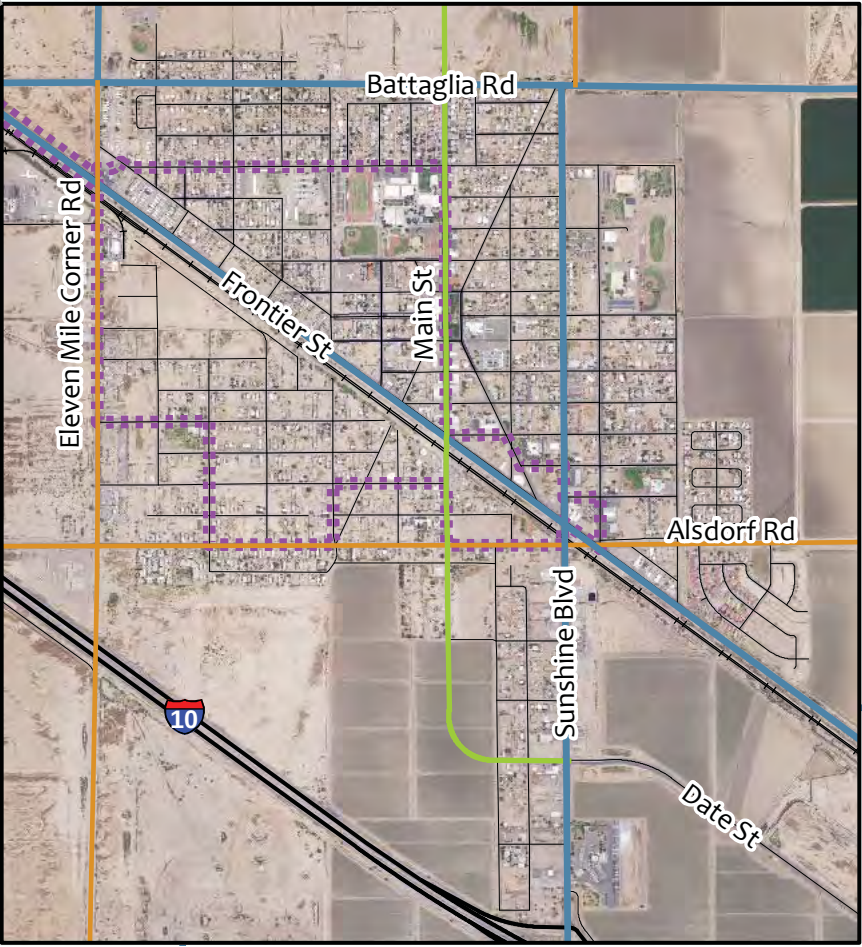
Interchanges

- Existing Interchange
- Potential Interchange

Proposed Transportation Corridors

- Proposed North-South Corridor
- Proposed Interstate 11 Corridor
- Proposed Regional Corridor
- Future Transit System Route
- Proposed Passenger Rail Corridor
- Existing Transit System Route

Downtown Detail



Source: Eloy General Plan, January 2023

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- *Growth Areas Element* | This element is intended to provide the City of Eloy with objectives to guide new development and channel efforts to revitalize, rehabilitate, and redevelop the city to better serve residents and businesses. The City of Eloy must also provide a foundational strategy for services to respond to increased demands from new development while maintaining existing service levels.
- *Public Facilities Element* | This element of the *Eloy General Plan* examines the existing and future conditions within the city for the provision of public buildings and services, including Eloy Municipal Airport. Goals and objectives are included in this element as a framework to provide adequate services and facilities at present and into the future.
- *Economic Prosperity Element* | **Exhibit 1J** depicts future opportunities for Eloy, including employment that supports job growth and capital improvements that foster economic development. Eloy is ideally positioned on Interstate 10 and the Union Pacific rail line, with proximity to the Arizona/Mexico border, to attract manufacturing, distribution, and warehousing operations. Eloy also lies equidistant to Phoenix and Tucson, which both have high-growth areas that are beginning to experience rapid decreases in land and building affordability in virtually every economic sector. In addition, Eloy's proximity to Casa Grande and Coolidge is an advantage, as new industries (such as Gold Bond, Lucid Motors, and Nikola) have built manufacturing facilities in those areas; as the area begins to attract new users and investment, all three communities stand to benefit. Additionally, Eloy has a substantial amount of land available and entitled for development.

Two foreign-trade zones (FTZs) located in the growth corridor are shown on the exhibit. An FTZ is a designated location where companies can use special procedures that encourage U.S./international trade by allowing delayed or reduced duty payments on foreign merchandise, as well as other savings.

Pinal County Comprehensive Plan: Land Use

The land use element within the *Pinal County Comprehensive Plan* examines the land use framework for future development within the unincorporated areas of Pinal County. The intention of the section is to provide a balance between residential, commercial, and employment uses that support an array of opportunities. The primary feature of this element is the *Land Use Plan*, which depicts the location of each major land use throughout the county. Descriptions and recommended locations of identified land uses provide guidance to property owners for future development.

Pinal County Joint Land Use Study

The *Pinal County Joint Land Use Study* supports a proactive approach to collaboration and communication regarding decisions about land use regulation and airspace operations, AZARNG activities in Pinal County, conservation, and natural resource management issues that affect both communities and the military. This study aims to avoid land use and airspace conflicts by engaging the military and local decision-makers in a proactive, collaborative, and multi-agency planning process.



Sun Corridor Regional Transportation Plan Update

The SCMPO provides transportation planning services to the region, which includes the cities of Casa Grande, Coolidge, and Eloy, as well as adjacent rural portions of Pinal County. The SCMPO *Regional Transportation Plan* defines a strategy for creating a regional transportation system that accommodates the current mobility needs of residents while considering future needs. The *Regional Transportation Plan* addresses all modes of transportation, including automobile, bicycle, pedestrian, transit, truck, air, and rail transportation. The plan is updated every four years, allowing planning efforts to evolve as the region continues to grow and develop.

Eloy Transit Feasibility Study

The *Eloy Transit Feasibility Study* analyzes characteristics that contribute to the implementation of a transit system, including demographics, land use, employment, transportation demand, and funding options. Existing and planned land uses, coupled with demographic conditions, provide an indication of potential transit attractors and generators within the community. Within the study, E60 is identified as a growth area that would lend itself to multimodal transportation options to provide community circulation and mobility and reduce automobile dependency.

LAND OWNERSHIP

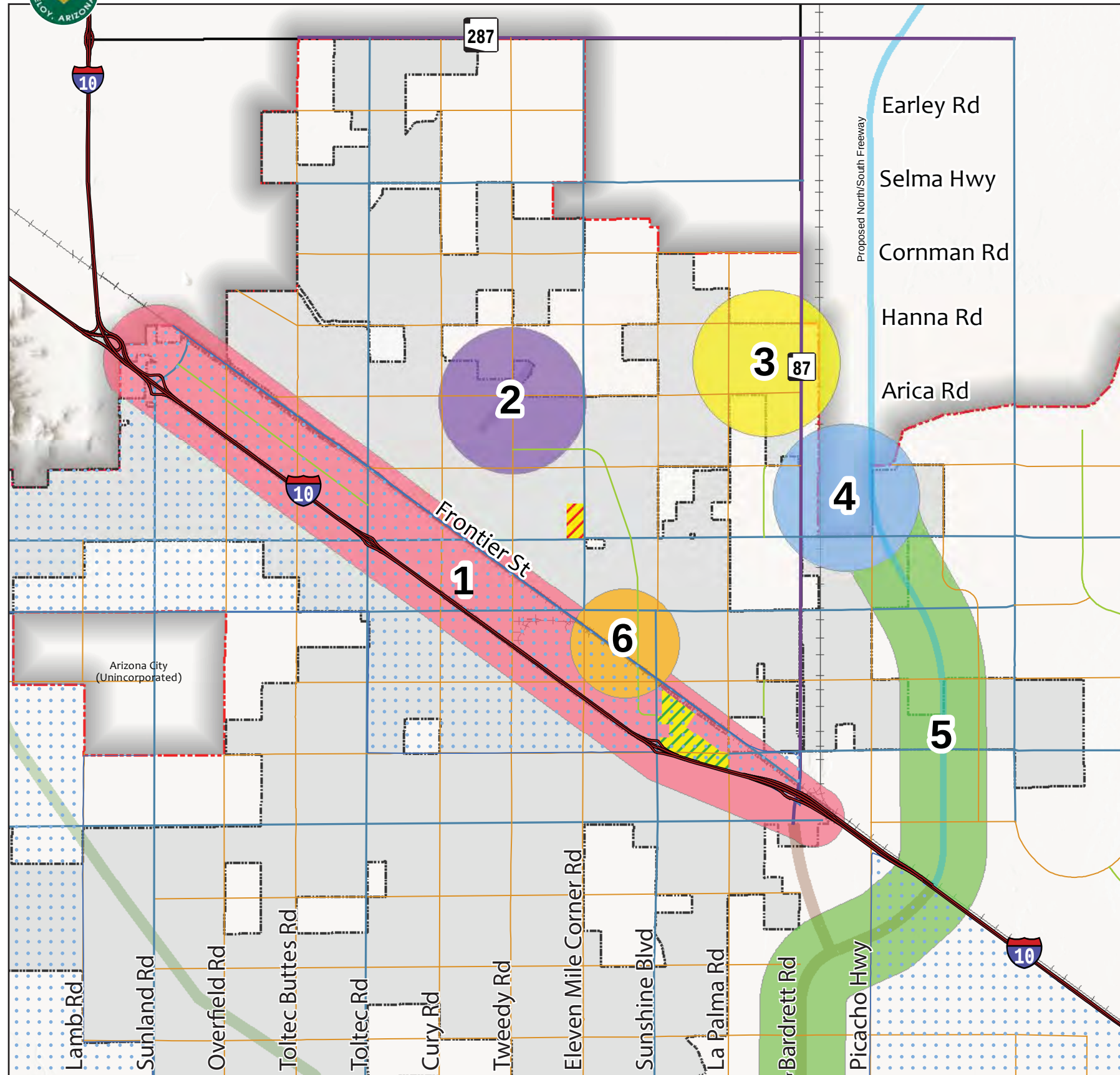
Land ownership within the one-mile airport buffer primarily consists of private land ownership, except the following, which are identified on **Exhibit 1K**:

- Airport property – approximately 137 acres
- City property – approximately 280 acres, located to the west and south of airport property (Pinal County Assessor's parcel 404-05-009B)

ENVIRONMENTAL INVENTORY

In addition to land use compatibility factors, there are a range of environmental considerations to analyze and confirm. An environmental inventory was prepared in December 2023 to identify and ensure awareness of potential environmental sensitivities that must be considered if the City of Eloy submits any request for funding (or other federal action, such as an ALP revision) to the FAA for future improvements at the airport. Research was performed for each of the 14 environmental impact categories described within FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*:

- Air Quality
- Biological Resources (including fish, wildlife, and plants)
- Climate
- Coastal Resources



Economic Focus Areas

- 1 Interstate 10 Corridor
- 2 Eloy Municipal Airport
- 3 Prison Complex
- 4 Nikola Contributing Area
- 5 North-South Freeway Corridor
- 6 Downtown Eloy

Foreign Trade Zone

- City of Eloy - 80 Acres
- Sunshine Industrial Park

Opportunity Zone



Roadways

- Interstate
- State Highway
- Major Arterial (130' ROW)
- Minor Arterial (110' ROW)
- Two Lane Collector (80' ROW)
- Union Pacific Railroad
- Proposed Interstate 11
- Proposed North-South Freeway
- Proposed Regional Corridor

Reference

- Eloy City Limits
- Eloy Planning Boundary

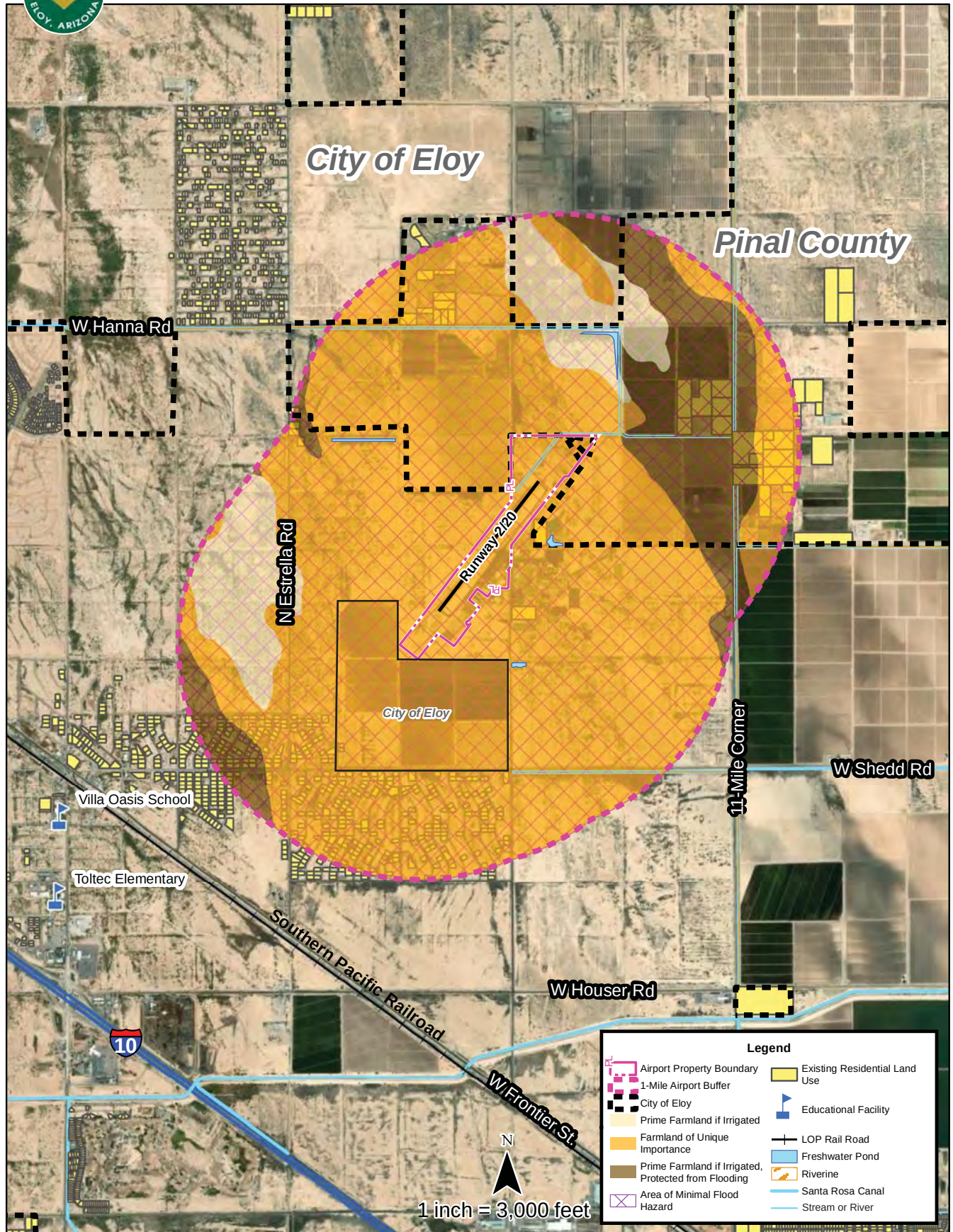


Disclaimer: This map is furnished for reference purposes only and is not suitable for legal, financial, engineering, or surveying purposes or commitments. The City of Eloy assumes no responsibility for errors, omissions, or inaccuracies presented, and shall have neither liability nor responsibility for any direct or indirect loss or damage in connection with, or arising from, the information on this map. Any conclusions derived from this map are the responsibility of the user.

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

Source: Eloy General Plan; January 2023

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- *Department of Transportation Act, Section 4(f)*
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archaeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects (including light emissions)
- Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

AIR QUALITY

The concentration of various pollutants in the atmosphere defines the local air quality. The significance of a pollutant's concentration is determined by comparing it to the state and federal air quality standards. In 1971, the U.S. Environmental Protection Agency (EPA) established standards that specify the maximum permissible short- and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for criteria pollutants:

- ozone (O₃)
- carbon monoxide (CO)
- sulfur dioxide (SO₂)
- nitrogen dioxide (NO₂)
- coarse particulate matter (PM₁₀)
- fine particulate matter (PM_{2.5})
- lead (Pb)

Based on federal air quality standards, a specific geographic area can be classified as an attainment, maintenance, or nonattainment area for each pollutant. The threshold for nonattainment designation varies by pollutant.

Eloy Municipal Airport is located within the incorporated area of the City of Eloy, approximately 3.5 miles northwest of downtown Eloy. The Pinal County Air Quality Department acts as a regulatory agency and sets air quality standards and issues permits relating to burn, dust, and industrial emissions.

The portion of Pinal County that contains the airport is in nonattainment for PM₁₀ (serious).¹

¹ U.S. EPA, Green Book, Arizona Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants (https://www3.epa.gov/airquality/greenbook/anayo_az.html), April 30, 2023



BIOLOGICAL RESOURCES

Biological resources include the various types of plants and animals that are present in an area. The term also applies to rivers, lakes, wetlands, forests, and other habitat types that support plants and animals.

The U.S. Fish and Wildlife Service (USFWS) is charged with overseeing the requirements of the federal *Endangered Species Act* (ESA), specifically Section 7, which sets forth requirements for a consultation to determine if a proposed project may affect a federally endangered or threatened species. If an agency determines that an action may affect a federally protected species, Section 7(a)(2) requires the agency to consult with the USFWS on any action that is likely to jeopardize the continued existence of the proposed species or result in the destruction or adverse modification of proposed critical habitat. Significant impacts occur when a proposed action could jeopardize the continued existence of a protected species or would result in the destruction or adverse modification of federally designated critical habitat in the area. The USFWS Information for Planning and Consultation (IPaC) resource list describes species and habitats protected under the ESA within the vicinity of the airport (**Table 1L**).

Section 3 of the ESA is used to protect critical habitat areas. Designated critical habitat areas are geographically defined and have been determined to be essential to the recovery of a specific species. There is no federally designated critical habitat at or within one mile of the airport.

Additional federal laws that may be applicable to the airport are the *Bald and Golden Eagle Protection Act* (BGEPA) and the *Migratory Bird Treaty Act* (MBTA), which prohibit activities that would harm eagles and other migratory birds, their eggs, or their nests. Birds protected under the BGEPA or MBTA may nest, winter, or migrate throughout the area. Under the requirements of the BGEPA and MBTA, all project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project.

Based on information obtained from the Arizona Heritage Geographic Information System (AZHGIS), there have been documented occurrences of the western burrowing owl (*Athene cunicularia*) within two miles of the airport. Habitat for the western burrowing owl is present at the airport and active burrows were observed within the northeastern portion of the airport. The western burrowing owl is protected under the MBTA and is identified as a species of greatest conservation need by the Arizona Game and Fish Department.

No suitable nesting habitat for bald and golden eagles is present at the airport or in the area adjacent to the airport; however, potential foraging habitat that includes small mammals is present at the airport, and bald and golden eagles may fly over the airport while foraging. This area of impact would be localized and represents an extremely small portion of an individual eagle's foraging range.

**TABLE 1L | Species Protected Under ESA Section 7 with Potential to Occur at the Airport**

Common Name (Scientific Name)	Federal Status*	Habitat and Range	Potential for Occurrence
BIRDS			
cactus ferruginous pygmy-owl (<i>Glaucidium brasilianum cactorum</i>)	Threatened	Typically nest along heavily wooded xeroriparian washes that contain Saguaro cacti or trees with suitable nesting cavities within Sonoran Desert scrub and semi-desert grassland communities.	Unlikely to occur. The airport does not contain suitable habitat for this species.
yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Threatened	Typically found in riparian woodland vegetation (cottonwood, willow, or salt cedar) at elevations below 6,600 feet above mean sea level (AMSL). Dense understory foliage is an important factor in nest site selection. The highest concentrations in Arizona are along the Agua Fria, San Pedro, upper Santa Cruz, and Verde River drainages and Cienega and Sonoita Creeks.	Unlikely to occur. The airport does not contain suitable habitat for this species.
FISHES			
Gila topminnow (incl. Yaqui) (<i>Poeciliopsis occidentalis</i>)	Endangered	Found in small streams, springs, and cienegas at elevations below 4,500 feet AMSL, primarily in shallow waters with aquatic vegetation and debris for cover. In Arizona, this species is typically found in the Santa Cruz River system.	Unlikely to occur. No permanent water sources are present at the airport.
INSECTS			
monarch butterfly (<i>Danaus plexippus</i>)	Candidate	A migratory species found in a variety of habitats that requires milkweed (<i>Asclepias</i> spp.) for breeding. During fall migration in Arizona, monarch butterflies favor nectar from native plants, including sunflowers (<i>Helianthus</i> spp.), rabbitbrush (<i>Ericameria</i> spp.), desertbroom (<i>Baccharis sarothroides</i>), sweetbrush (<i>Baccharis salicifolia</i>), milkweeds, and a variety of other native and garden plants. Populations in Arizona can migrate to California or Mexico for winter or may overwinter in the low deserts in California or Arizona. In the southwestern United States, migrating monarch butterflies often occur near water sources (e.g., rivers, creeks, riparian corridors, roadside ditches, and irrigated gardens). In the low deserts of Arizona, monarch butterflies breed in late August to early September.	Potential to occur. The airport contains flowering plants that could entice this species for migratory stopovers. Twinevine (<i>Funastrum</i> spp.), a known food source for the monarch butterfly, and monarch butterfly larvae have been observed at E60.

***USFWS Status Definitions:**

Candidate = a species for which the USFWS has sufficient information on biological vulnerability and threats to support proposals to list as endangered or threatened under the ESA; however, these proposed rules have not yet been issued because such actions are precluded at present by other listing activity

Threatened = an animal or plant species likely to become endangered throughout all or a significant portion of its habitat range

Endangered = an animal or plant species in danger of extinction throughout all or a significant portion of its habitat range

Sources: USFWS IPaC (<https://ipac.ecosphere.fws.gov/>); Pima County, Multi-Species Conservation Plan Covered Species, Cactus Ferruginous Pygmy-Owl (<https://www.pima.gov/731/Cactus-Ferruginous-Pygmy-Owl>)

The airport is located at an elevation between 1,502 to 1,515 feet above mean sea level within the Lower Colorado River Valley subdivision of the Sonoran Desertscrub biotic community.² Most land within the airport property is developed and the present coverage of undisturbed native vegetation is limited.

² Lyndsey Bradshaw, SWCA Environmental Consultants, Biological Resources Evaluation in Support of the Master Plan for the Eloy Municipal Airport in Eloy, Pinal County, Arizona, September 19, 2023



There are no aquatic habitats (including wetlands), stock ponds, broadleaf deciduous riparian vegetation communities, or potential bat roost sites at the airport; however, an artificial shallow pond (swoop pond) is present near the airport and is utilized by Skydive Arizona for skydivers.

Native plant species observed in the area include blue palo verde (*Parkinsonia florida*), burroweed (*Isocoma tenuisecta*), cattle saltbush (*Atriplex polycarpa*), Hartweg's twinevine (*Funastrum cynanchoides hartwegii*), creosote bush (*Larrea tridentata*), desertbroom (*Baccharis sarothroides*), desert globemallow (*Sphaeralcea ambigua*), desert marigold (*Baileya multiradiata*), Coues' cassia (*Senna covesii*), matted sandmat (*Euphorbia serpens*), Jerusalem thorn (*Parkinsonia aculeata*), purple threeawn (*Aristida purpurea*), scarlet spiderling (*Boerhavia coccinea*), velvet mesquite (*Prosopis velutina*), and whitethorn acacia (*Vachellia constricta*).

Three non-native plant species were observed at the airport: Lehmann lovegrass (*Eragrostis lehmanniana*), Bermudagrass (*Cynodon dactylon*), and stinknet (*Oncosiphon piluliferum*). Dominant plant species observed in the area are creosote bush and stinknet.

Reptile species were also identified at the airport, including tiger whiptail (*Aspidoscelis tigris*) and rattlesnake (*Crotalus* spp.)

CLIMATE

Increasing concentrations of greenhouse gases (GHGs) can affect local and regional climate by trapping heat in the earth's atmosphere. Scientific measurements have shown that the earth's climate is warming with concurrent impacts, including warmer air temperatures, rising sea levels, increased storm activity, and greater intensity in precipitation events. Climate change is a global phenomenon that can also have local impacts. GHGs – such as water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and O₃ – are both naturally occurring and anthropogenic (human-made). Research has established a direct correlation between fuel combustion and GHG emissions. GHGs from anthropogenic sources include CO₂, CH₄, N₂O, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). CO₂ is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.

The U.S. EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2021* shows total U.S. emissions have decreased by two percent from 1990 to 2021, down from a high of 15.8 percent above 1990 levels in 2007. During 2020 to 2021, the U.S. experienced an increase in economic activity driven by businesses and persons rebounding after the COVID-19 pandemic. This resulted in an increase in total U.S. GHG emissions, of which CO₂ emissions accounted for the majority.

In 2021, the transportation sector and power generation accounted for 79.5 percent of total CO₂ emissions; however, the overall aviation industry has experienced a 12 percent decrease in CO₂ emissions between 1990 and 2021.³ Commercial aircraft emissions decreased by 17 percent between 1990 and

³ U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks*, Chapter 3, Energy (<https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021>)



2021 and are anticipated to remain the same between 2020 and 2021. Overall, net emissions in the U.S. increased 6.8 percent from 2020 to 2021 but decreased 16.3 percent from 2005 levels.

Information regarding the climate for the airport and surrounding environments (including wind, temperature, and precipitation) can be found earlier in this chapter.

The State of Arizona currently has a climate action document that is recognized by the U.S. Center for Climate and Energy Solutions. In 2006, Arizona released its *Climate Change Action Plan*, which recommends reducing state GHG emissions to 50 percent below 2000 levels by 2040. Key aspects of the plan include reducing energy demand, increasing energy efficiency, expanding carbon sinks, and imposing a cap-and-trade program.⁴

At a citywide level, the City of Eloy is currently working on the design of the Airport Phase 2 Drainage Project. Project construction would result in a short-term increase in greenhouse gas emissions due to construction vehicle and equipment exhaust, and elsewhere associated with production and delivery of construction materials.

COASTAL RESOURCES

Federal activities that involve or affect coastal resources are governed by the *Coastal Barriers Resource Act*, the *Coastal Zone Management Act*, and Executive Order (E.O.) 13089, *Coral Reef Protection*.

The airport is not located within a coastal zone. The closest National Marine Sanctuary is the Channel Islands National Marine Sanctuary, which is located 450 miles away.⁵

DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

Section 4(f) of the *Department of Transportation Act*, which was recodified and renumbered as Section 303(c) of Title 49 United States Code, provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly or privately owned historic sites, public parks or recreation areas, or waterfowl and wildlife refuges of national, state, regional, or local importance, unless there is no feasible and prudent alternative to the use of such land and the project includes all possible planning to minimize harm resulting from the use.⁶

There are no public parks, recreation areas, or National Register of Historic Places (NRHP)-listed resources within one mile of the airport.

⁴ Center for Climate and Energy Solutions, U.S. State Climate Action Plans (<https://www.c2es.org/document/climate-action-plans/>)

⁵ Google Earth Aerial Imagery, May 2023; National Oceanic and Atmospheric Administration (NOAA), National Marine Sanctuary System (<https://sanctuaries.noaa.gov/>)

⁶ 49 U.S. Code § 303, Policy on Lands, Wildlife and Waterfowl Refuges, and Historic sites



There are no waterfowl and wildlife refuges within one mile of the airport. Other types of potential Section 4(f) resources and their distances from Eloy Municipal Airport are listed below.

- Nearest wilderness area: Table Top Wilderness (27 miles west of the airport)
- Nearest national monument: Ironwood Forest National Monument (24 miles south of the airport)⁷
- Nearest national recreation area: Lake Mead National Recreation Area (233 miles northwest of the airport)

There is one known potential Section 4(f) resource located at the airport: a historic in-use natural gas pipeline that has been determined to be eligible for listing on the NRHP.⁸

FARMLANDS

Under the *Farmland Protection Policy Act* (FPPA), federal agencies are directed to identify and consider the adverse effects of federal programs on the preservation of farmland; consider appropriate alternative actions that could reduce adverse effects; and ensure such federal programs are compatible with state or local government programs and policies to protect farmland, to the extent practicable. The FPPA guidelines, which were developed by the U.S. Department of Agriculture (USDA), apply to farmland classified as prime, unique, or of state or local importance, as determined by the appropriate government agency with concurrence by the Secretary of Agriculture.

The USDA Natural Resources Conservation Service (NRCS) Web Soil Survey shows the types of soils and their farmland classification on and adjacent to the airport. The airport is not within urbanized area boundaries, as classified by the U.S. Census Bureau;⁹ however, the entire airport is classified as farmland of unique importance (**Exhibit 1K**). **Table 1M** identifies the applicable farmland classification type, based on the soil located within the airport's boundaries and within one mile of the airport.

TABLE 1M | Farmland Classification – Pinal County, Arizona, Western Part

Web Soil Survey Symbol	Soil Type	Farmland Rating
43	Toltec fine sandy loam	Farmland of unique importance

Source: USDA-NRCS Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>)

Because the airport is not located within federally designated urbanized area boundaries and the soil is classified as farmland of unique importance, coordination with the USDA will be needed to comply with the FPPA.

⁷ The Ironwood Forest National Monument is owned and operated by the Bureau of Land Management (BLM). To determine whether this monument qualifies as a Section 4(f) resource, the BLM would need to be contacted for further evaluation.

⁸ There is also one archaeological site on airport property that is eligible for NRHP listing, based on what can be learned from data recovery (NRHP, Criterion D). Section 4(f) approval is not required when there is an adverse effect to significant archaeological sites that are determined to be significant only because of what knowledge can be gleaned from data recovery and have minimal value for preservation in place.

⁹ U.S. EPA, EJSscreen (<https://ejscreen.epa.gov/mapper/>), May 2023



HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

Federal, state, and local laws regulate hazardous materials use, storage, transportation, and disposal. These laws may apply to past and future landowners of properties that contain these materials. In addition, disrupting sites that contain hazardous materials or contaminants may cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources. According to the U.S. EPA's *EJScreen* online tool, there are no Superfund or brownfield sites within one mile of the airport.

National Pollutant Discharge Elimination System (NPDES) permits outline the regulatory requirements of municipal stormwater management programs and establish requirements to help protect the beneficial uses of the receiving waters. Permittees are required to develop and implement best management practices (BMPs) to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable (MEP). The NPDES program manages wastewater, construction, stormwater, and pretreatment.

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Determination of a project's environmental impact to historic and cultural resources is made under guidance in the *National Historic Preservation Act of 1966* (NHPA), as amended; the *Archaeological and Historic Preservation Act of 1974* (AHPA); the *Archaeological Resources Protection Act of 1979* (ARPA); and the *Native American Graves Protection and Repatriation Act of 1990* (NAGPRA). The *Antiquities Act of 1906*, the *Historic Sites Act of 1935*, and the *American Indian Religious Freedom Act of 1978* also protect historic, architectural, archaeological, and cultural resources. Impacts may occur when a proposed project causes an adverse effect on a resource that has been identified (or is identified after being unearthed during construction) as having historic, architectural, archaeological, or cultural significance.

A cultural resources survey conducted for the Eloy Municipal Airport Master Plan in fall 2023 surveyed airport property and identified a previously recorded archaeological site, two isolated occurrences (IOs), and one in-use historic structure. The in-use historic structure was initially constructed in the early 1930s to extend natural gas service in Douglas outward to the growing cities of Tucson and Phoenix. This site was evaluated by the State Historic Preservation Office (SHPO) in 2004 and determined to be eligible for the NRHP; however, in-use natural gas pipelines are currently exempt from NHPA Section 106 review.

The previously recorded archaeological site is eligible for both NRHP and Arizona Register of Historic Places (ARHP) listing; the location of the site is confidential and may not be disclosed to the public but is generally located within the purview of the airport. The two IOs are ineligible for listing on the NRHP and the ARHP.

Based on an as-built environment evaluation of the airport, only one building (Eloy Municipal Airport integrated office hangar) and the runway system itself were identified as known resources of historic ages (i.e., at least 50 years or older since their original construction dates). Other resources (Eloy Municipal Airport T-hangar, Eloy Municipal Airport conventional hangar, Crop First Aviation hangar, Hot Wings



hangar, and terminal building) appear in aerial photographs of the airport as early as the early 1980s and will become historic in age within the next decade; however, none of these resources qualify for listing on the NRHP/ARHP.

The nearest Tribal lands to Eloy Municipal Airport are the Tohono O’odham Nation Reservation, which is located more than nine miles southwest of the airport.¹⁰

LAND USE

Land use regulations near airports are achieved through county and/or municipal codes, policies, and plans that address aviation uses and their respective influence areas. Adopted policies, regulations, and plans are used to minimize land use compatibility conflict around airports.

Based on the *Official Zoning Map for the City of Eloy, Arizona*, the entirety of Eloy Municipal Airport property and the land immediately surrounding it are classified as I-1 (Light Industrial), which allows the construction and assembly of non-intensive manufacturing and office park uses. (See also the *Airport Compatibility* section earlier in the inventory.)

The City of Eloy utilizes an adopted zoning ordinance (2018) that establishes a non-residential buffer zone within a 3,000-foot line extending parallel along each side of the runway. This Aviation Overlay (AO) District¹¹ and Airport Influence Zone (AIZ) are depicted on **Exhibit 1L**. According to the *Eloy, AZ Code of Ordinance*, Section 21-2-7.16-16, the AO District is comprised of four overlay sectors:

- AO-1 – the area outside the 3,000-foot buffer running parallel to the runway but still considered to be influenced by aircraft operations
- AO-2 – the area between the 3,000-foot buffer line running parallel to both the runway and the 65-decibel day-night average sound level (DNL) contour line, which is marginally impacted by airport noise
- AO-3 – the area at or between the 65 DNL contour line
- AO-4 – the area at both runway protection zones (RPZs)

Table 1N shows the land uses permitted within each AO sector. The following airport-related uses are also permitted within the AO District:

- Airport structures and facilities that are necessary for Eloy Municipal Airport to operate, and for the control of air traffic
- Heliports, glider operations, skydiving operations, and ground school training

¹⁰ Arizona Game and Fish Department (<https://ert.azgfd.gov/content/map>)

¹¹ The Aviation Overlay District is meant to maintain and enhance the operational capabilities of the airport and promote a compatible land use pattern within the airport environs.

**TABLE 1N | Permitted Land Uses Within Each AO Sector**

Land Use	AO-1	AO-2	AO-3	AO-4
Uses permitted by right in the Industrial District	Yes	Yes	Yes	No
Uses permitted by right in the Open Space Conservation (OSC) District	Yes	Yes	Yes	Yes
Residential development permitted by right in all residential zoning districts	Yes	No	No	No
Plant nurseries and greenhouses for the propagation, cultivation, and distribution of plants produced on the premises	Yes	Yes	Yes	Yes
Farming activities (excluding dairies, CAFOs, swine, ratites, and poultry farms)	Yes	Yes	Yes	No
Ranching activities (including commercial ranches)	Yes	Yes	No	No
Public or private parks without playing field light standards	Yes	Yes	No	No
Public and private open space preserves	Yes	Yes	Yes	Yes
Short-term campgrounds for special events in conjunction with the airport	Yes	Yes	Yes	No

Source: Eloy, AZ Code of Ordinance, 21-2.7.15-16, Aviation Overlay Sectors and Permitted Uses

Exhibit 1M depicts the existing pattern of land use for the City of Eloy. The land the airport occupies is classified as Governmental. Most of the land that encompasses the airport is vacant land. On the eastern side of the airport property, where all existing development is located, numerous parcels exist as Industrial and Manufactured Home/RV uses. On the southern side of the airport property, the existing use of the land is vacant or under agricultural production.

The City of Eloy, Arizona, has adopted the *City of Eloy General Plan Update*, as of May 11, 2020. In Chapter 3 of the 2020 *Eloy General Plan*, the airport is identified as a growth area¹² for the City of Eloy. Additionally, the 2020 *Eloy General Plan* states that future industrial development should occur in and around the airport, as well as along state highway corridors and interstates.

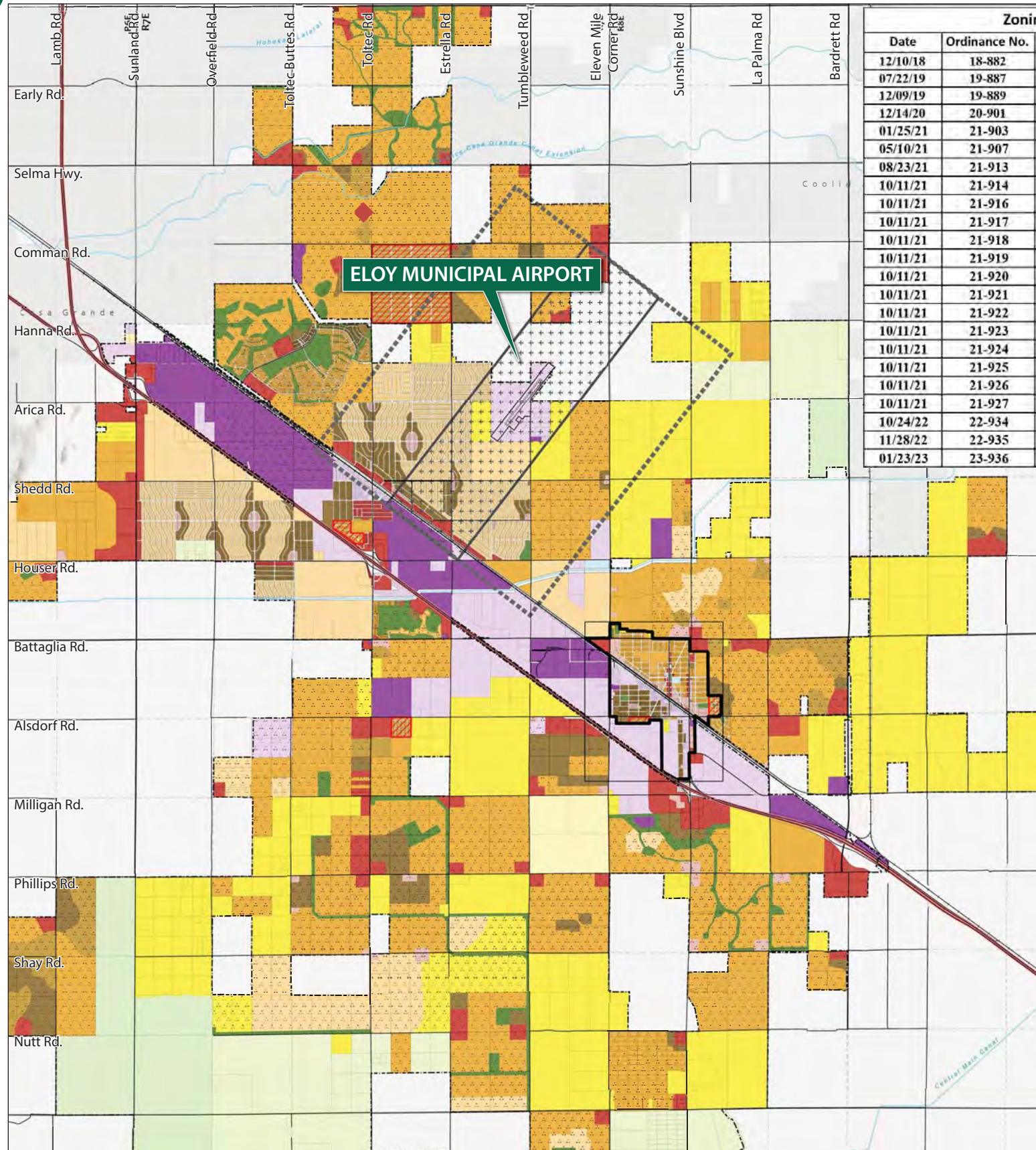
Based on the future land use map for the City of Eloy, Eloy Municipal Airport is designated as Public/Institutional. Land immediately surrounding the airport is classified as Light Industrial, with a mixture of Residential land use designations to the west, east, and south of the airport (**Exhibit 1N**).

See the *Airport Compatibility* section earlier in the inventory for further discussion on the *Eloy General Plan* and other land use guidance documents and policies.

NATURAL RESOURCES AND ENERGY SUPPLY

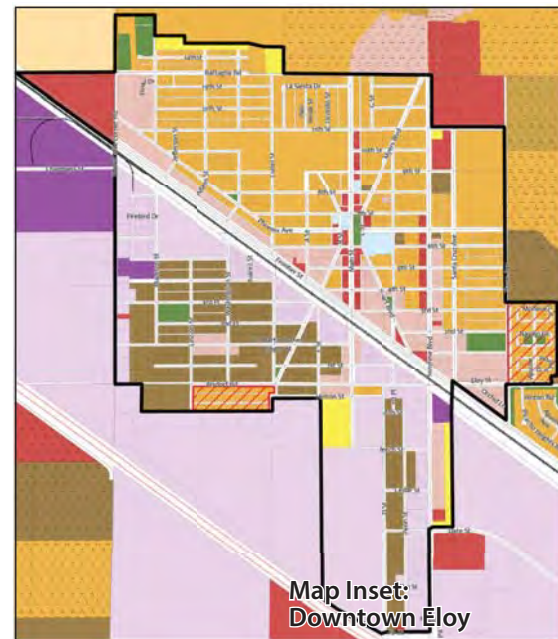
The analysis of natural resources and energy supply factors provides an evaluation of a project's consumption of natural resources. FAA Order 1053.1C, *Energy and Water Management Program for FAA Buildings and Facilities*, encourages the development of facilities that exemplify the highest standards of design, including principles of sustainability.

¹² Growth areas are outlined to provide the City of Eloy with objectives to guide new development. These areas have been identified as places where new jobs and housing could be established without negatively impacting existing neighborhood quality of life through increased traffic or commercial encroachment into residential areas.



Zoning Amendments				
Date	Ordinance No.	Acres	Zoning From	Zoning To
12/10/18	18-882	4.16	R1-6	PF
07/22/19	19-887	0.47	C-1	C-2
12/09/19	19-889	618	I-1 & R1-6	I-2
12/14/20	20-901	75	CB-2 & GR (PC)	C-2 & R1-54
01/25/21	21-903	10.7	GR (PC)	I-1
05/10/21	21-907	0.19	R1-12	I-1
08/23/21	21-913	20.32	RR-20	RR-5
10/11/21	21-914	3.6	R1-6	OSR
10/11/21	21-916	0.6	R1-6	OSR
10/11/21	21-917	0.6	R1-6	OSR
10/11/21	21-918	4.48	C-1	OSR
10/11/21	21-919	1.7	I-1	OSR
10/11/21	21-920	0.9	C-1	OSR
10/11/21	21-921	0.5	R-3	OSR
10/11/21	21-922	0.8	R1-6	OSR
10/11/21	21-923	14.8	R1-12	OSR
10/11/21	21-924	0.9	C-2	PF
10/11/21	21-925	1.7	I-1	PF
10/11/21	21-926	0.5	C-2	PF
10/11/21	21-927	21.6	R1-12	PF
10/24/22	22-934	575	I-1	I-2
11/28/22	22-935	645.7	GR (PC)	R1-54
01/23/23	23-936	47.31	R1-54, C-2	I-1

- Overlay Districts**
- DCO - Downtown Core Overlay
 - MHO - Manufactured Home Overlay
 - PAD - Planned Area Development
 - AO - Aviation Overlay
 - AIZ - Airport Influence Zone (1.5 nautical miles)



Residential Districts

- RR-20 Rural Residential (20 acres/du)
- RR-5 Rural Residential (5 acres/du)
- RR-2.5 Rural Residential (2.5 acres/du)
- R1-54 Estate Residential (54,450 sq. ft./du)
- R1-43 Estate Residential (43,560 sq. ft./du)
- R1-12 Single-Family Residential (12,000 sq. ft./du.)
- R1-6 Single-Family Residential (6,000 sq.ft./du.)
- R-2 Small Lot Residential (6-10 du/acre)
- R-3 Multiple-Family Residential (10-24 du/acre)

Commercial Districts

- C-1 Neighborhood Commercial
- C-2 Community Commercial
- MU Mixed Use

Industrial Districts

- BP Business Park
- I-1 Light Industrial
- I-2 General Industrial

Public Facility Districts

- PF Public Facility

Open Space Districts

- OSC Open Space Conservation
- OSR Open Space Recreation

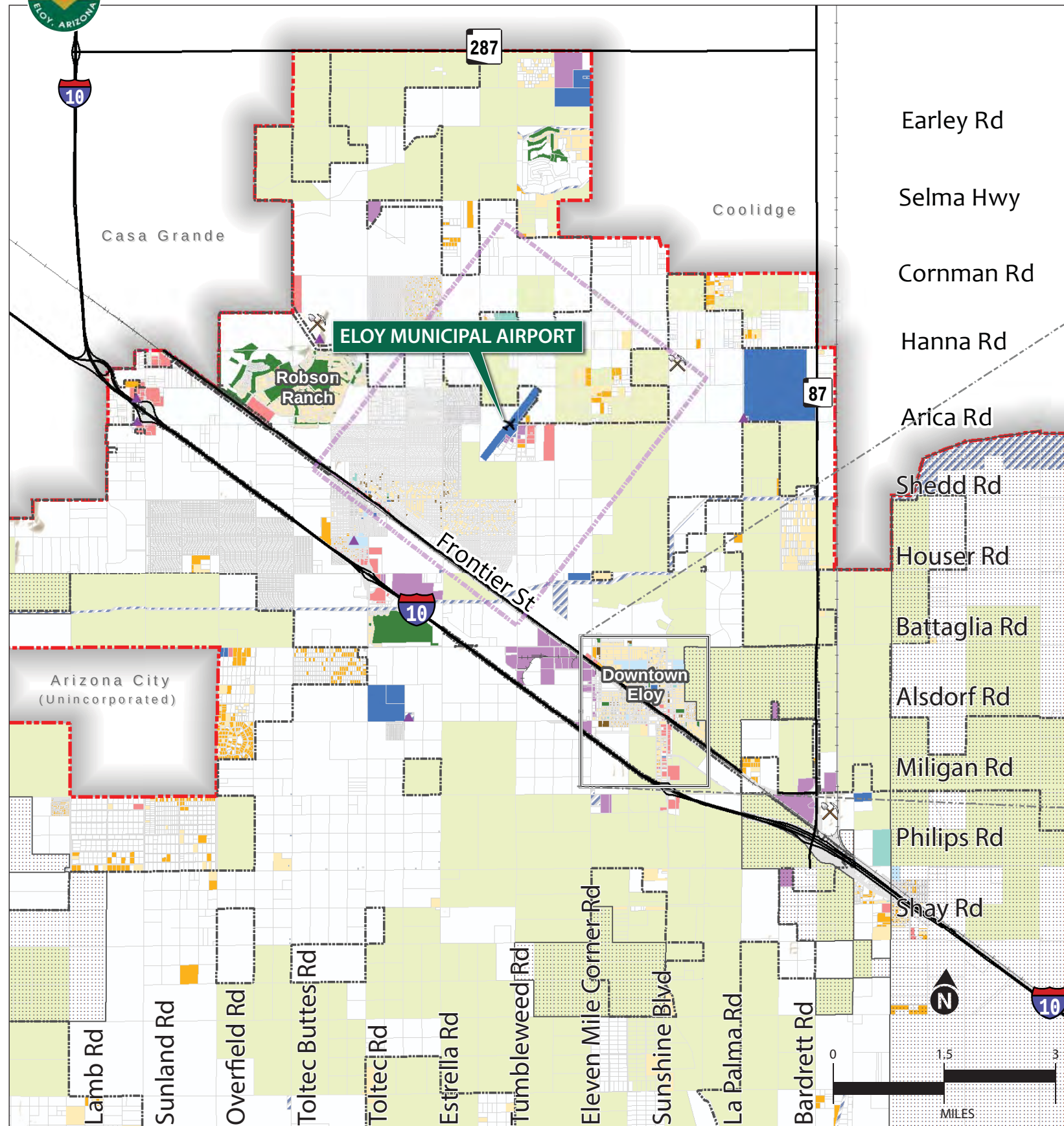
Official Signature Block

Mayor - Joel G. Belloc Date 7/23/18

City Clerk - Mary Myers Date 7/23/18

Disclaimer: This map was compiled and prepared to illustrate the zoning within the City of Eloy from the most current and accurate sources generally available at the time of publication. The provisions of Eloy City Code Chapter 21: Zoning; Section 2: Zoning Districts shall apply. Information portrayed on this map is approximate, and does not replace site survey or other official documentation. Every reasonable attempt has been made to ensure content accuracy, but the City of Eloy makes no guarantees.

Source: City of Eloy Official Zoning Map, July 2023.



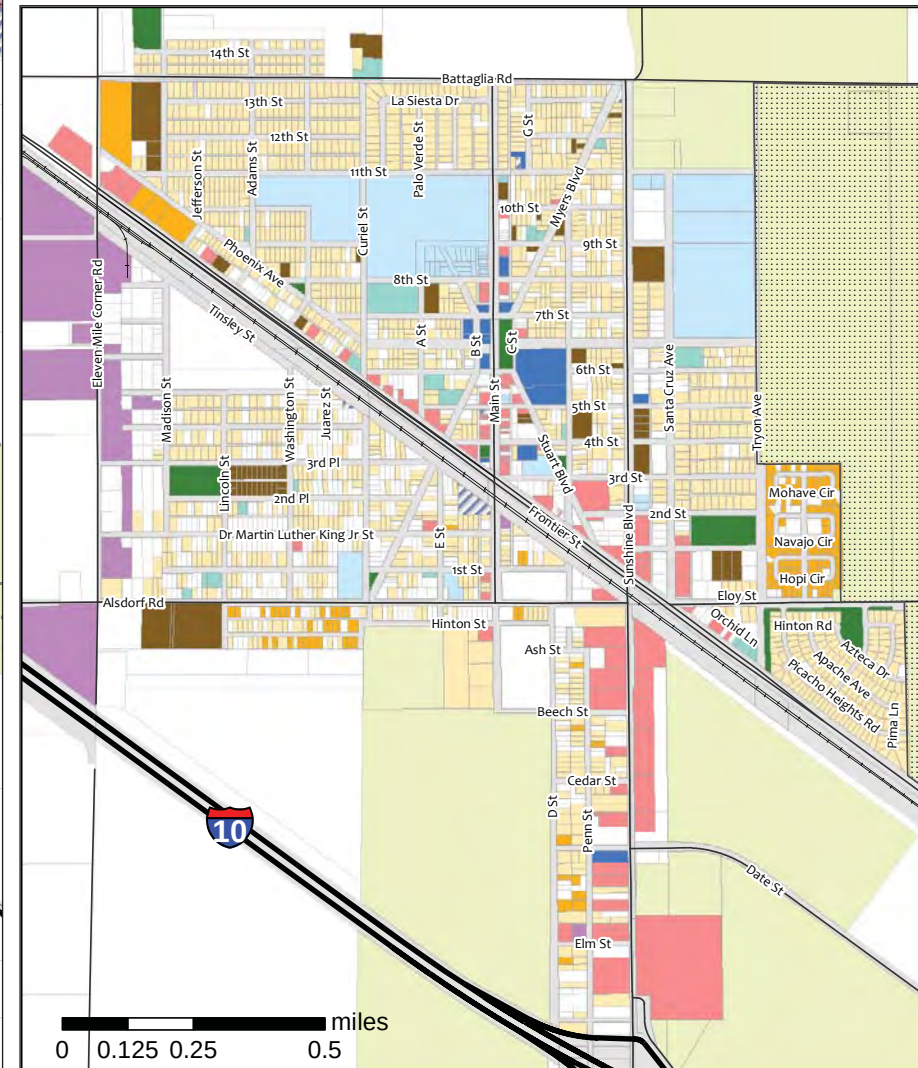
Existing Land Use Designations

- | | |
|---------------------------|----------------------------|
| Residential Single Family | Parks/Open Space |
| Manufactured Home/RV | National Forest/State Park |
| Residential Multi Family | Military |
| Commercial | Utility |
| Industrial | Transportation |
| Religious | Vacant Land |
| Agricultural | Aggregate Mine |
| Education | Planned Community Area |
| Governmental | Airport Influence Area |

Reference

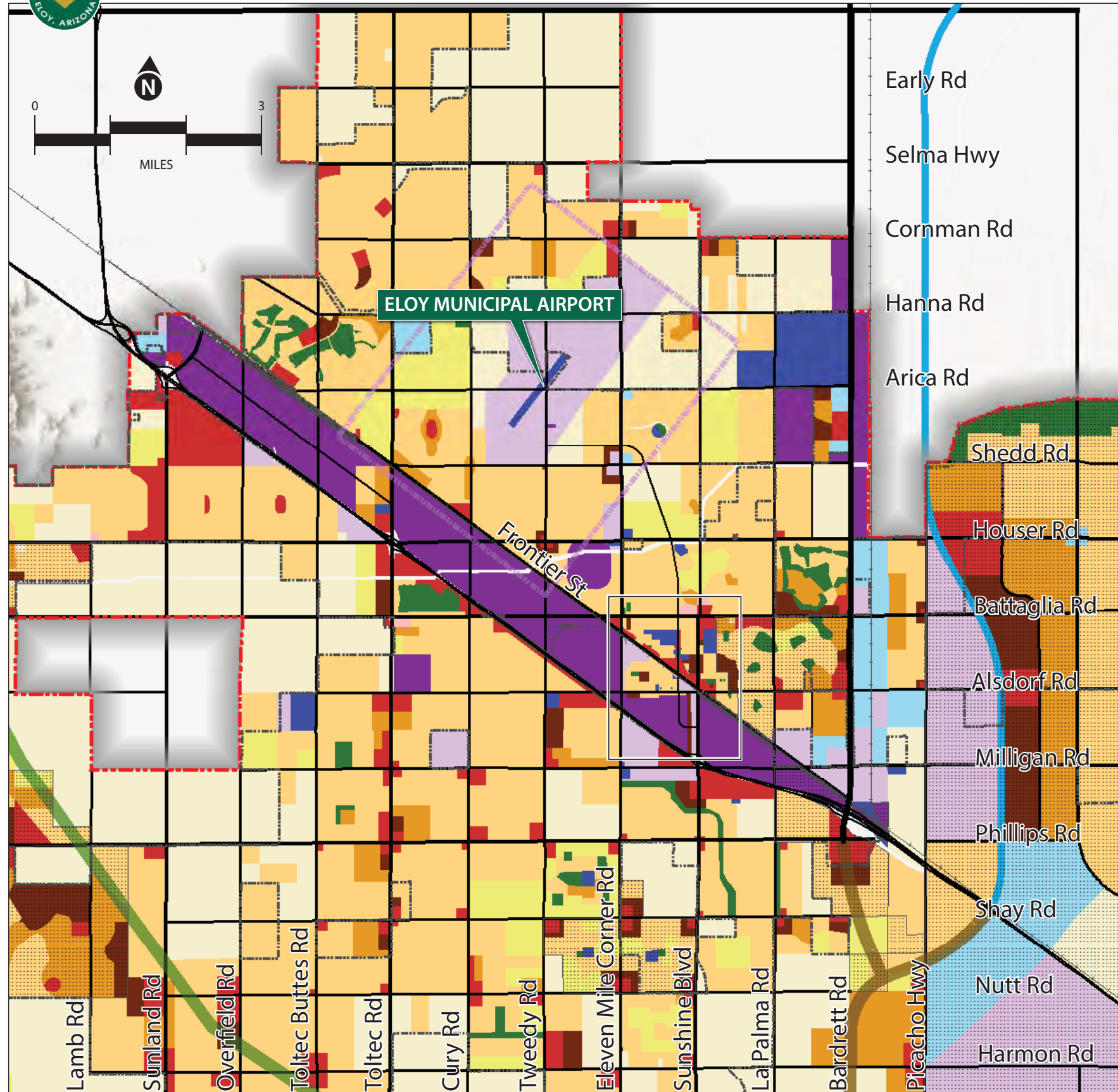
- Cell Tower
- Eloy City Limits
- Eloy Planning Area
- Interstate
- State Highway
- Railroad

Downtown Detail



Disclaimer: This map is furnished for reference purposes only and is not suitable for legal, financial, engineering, or surveying purposes or commitments. The City of Eloy assumes no responsibility for errors, omissions, or inaccuracies presented, and shall have neither liability nor responsibility for any direct or indirect loss or damage in connection with, or arising from, the information on this map. Any conclusions derived from this map are the responsibility of the user.

Source: Eloy General Plan, January 2023.
Service Layer Credits: Sources: Esri, USGS, NOAA



Residential Districts

- Estate Density Residential (0.2 - 1.0 du/ac)
- Low Density Residential (1.0 - 3.0 du/ac)
- Medium Density Residential (3.0 - 6.0 du/ac)
- Med/High Density Residential (6.0 - 10 du/ac)
- High Density Residential (10 - 24 du/ac)

Commercial Districts

- Neighborhood Commercial
- Community Commercial

Industrial Districts

- Light Industrial
- General Industrial

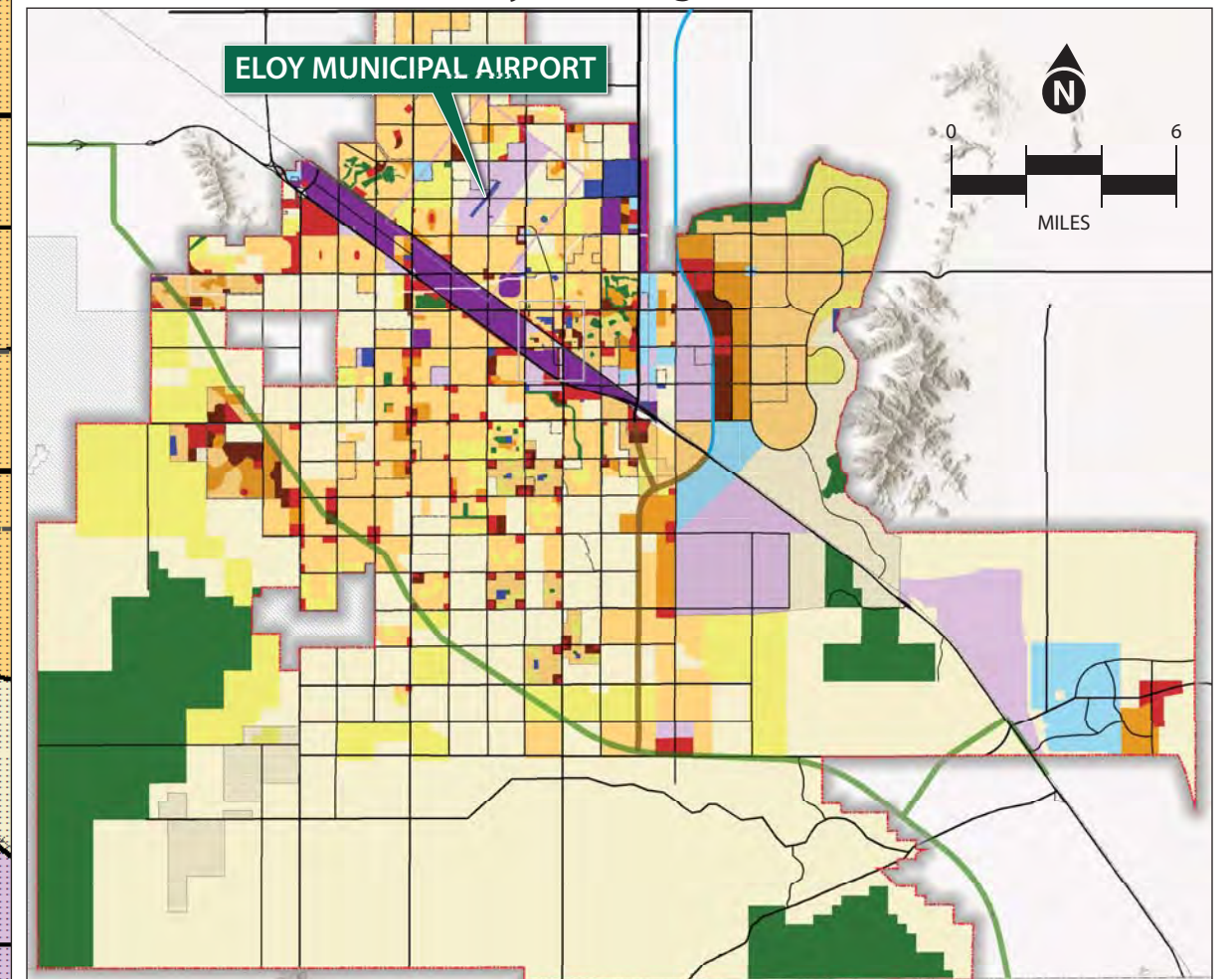
Other

- Parks/Open Space
- Mixed Use
- Public/Institutional
- Planned Community Area
- Airport Influence area

Disclaimer: This map is furnished for reference purposes only and is not suitable for legal, financial, engineering, or surveying purposes or commitments. The City of Eloy assumes no responsibility for errors, omissions, or inaccuracies presented, and shall have neither liability nor responsibility for any direct or indirect loss or damage in connection with, or arising from, the information on this map. Any conclusions derived from this map are the responsibility of the user.

Map Date: January 2023.

Eloy Planning Area



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Under the *Environmental Quality Act of 1986*, the Arizona State Legislature created the Arizona Department of Environmental Quality (ADEQ) in 1987 as the state's cabinet-level environmental agency.¹³ ADEQ's main goal is to protect and enhance public health and environment in Arizona. ADEQ consists of three primary environmental programs: Air Quality, Water Quality, and Waste. Each program operates units responsible for technical, operational, and policy support. ADEQ administers the state's environmental laws and delegated federal programs to prevent air, water, and land pollution and ensure cleanup. Furthermore, ADEQ is responsible for a series of core functions: planning, permitting, compliance management, monitoring, assessment, cleanups, and outreach.

NOISE AND NOISE-COMPATIBLE LAND USE

Federal land use compatibility guidelines are established under Title 14 Code of Federal Regulations (14 CFR) Part 150, *Airport Noise Compatibility Planning*. According to 14 CFR Part 150, residential land and schools are noise-sensitive land uses that are not considered compatible if impacted by a 65-decibel (dB) or higher day-night average sound level (Ldn or DNL).¹⁴ Other noise-sensitive land uses (such as religious facilities, hospitals, or nursing homes), if located within a 65 DNL contour, are generally compatible if a minimum interior noise level reduction of 25 dB is incorporated into the design and construction of such structures. Special consideration should also be given to noise-sensitive areas within Section 4(f) properties where the land use compatibility guidelines in 14 CFR Part 150 do not account for the value, significance, and enjoyment of the area in question.¹⁵

Two existing developed residential parcels (designated as Manufactured Home/RV) are located 0.08 miles east of the airport. Existing fee simple single-family detached housing is located approximately 0.5 miles south and southwest of the end of Runway 20. There are no schools, hospitals, or places of worship located within the 65 DNL contour or within the one-mile buffer of the airport. No identified Section 4(f) properties are located within one mile of the airport.

SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Socioeconomics | *Socioeconomics* is an umbrella term used to describe aspects of a project that are either social or economic in nature. A socioeconomic analysis evaluates how elements of the human environment (such as population, employment, housing, and public services) might be affected by the proposed action and alternative(s).

¹³ ADEQ (<https://azdeq.gov/aboutus>)

¹⁴ DNL accounts for increased sensitivity to noise at night (10:00 p.m. to 7:00 a.m.) and is the metric preferred by the FAA, U.S. EPA, and U.S. Department of Housing and Urban Development as an appropriate measure of cumulative noise exposure.

¹⁵ 49 U.S. Code § 47141, Compatible Land Use Planning and Projects by State and Local Governments



The FAA has identified factors to consider when evaluating the context and intensity of potential environmental impacts, including whether the proposed action would:

- Directly or indirectly induce substantial economic growth in an area;
- Disrupt or divide the physical arrangement of an established community;
- Cause extensive relocation when sufficient replacement housing is unavailable;
- Cause extensive relocation of community business that would cause severe economic hardship for affected communities;
- Disrupt local traffic patterns and substantially reduce the levels of service of roads that serve an airport and its surrounding communities; or
- Produce a substantial change in the community tax base.

Environmental Justice | FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, specifically requires the consideration of a federal action causing disproportionate impacts to an environmental justice population (i.e., a low-income or minority population), as well as an evaluation of environmental health and safety risks to children.

Environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.

Meaningful involvement ensures that:

- People have an opportunity to participate in decisions about activities that may affect their environment and/or health;
- The public's contribution can influence the regulatory agency's decision;
- Their concerns will be considered in the decision-making process; and
- The decision-makers seek out and facilitate the involvement of those potentially affected.¹⁶

The closest residential area to the airport is southeast of the airport across Tumbleweed Road. According to the 2016-2020 American Community Survey (ACS) five-year estimates, the total population within one mile of the airport is 630 persons, of which 54 percent are considered low-income and 74 percent are people of color. As indicated in **Table 1P**, approximately 71 percent of the population has identified as Hispanic or Latino.

¹⁶ U.S. EPA, Environmental Justice (<https://www.epa.gov/environmentaljustice>)

**TABLE 1P | Population Characteristics Within One Mile of the Airport**

Characteristic	
Total Population	630
Population by Race ¹	
White	26%
Black	1%
American Indian	2%
Asian	0%
Pacific Islander	0%
Some Other Race	0%
Population Reporting Two or More Races	2%
Total Hispanic Population (of any race) ²	71%
¹ Percentages do not add up to 100 percent.	
² Hispanic or Latino is treated by the U.S. Census as a question separate from Race.	

Source: U.S. EPA, EJScreen, ACS 5-Year Summary Report (2016-2022) (<https://ejscreen.epa.gov/mapper/>), November 2023

Children's Environmental Health and Safety | Per E.O. 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, federal agencies are directed to prioritize identifying and assessing the environmental health and safety risks that may disproportionately impact children. Such risks include those attributable to products or substances a child is likely to encounter or ingest (i.e., air, food, and water, including drinking water) or to which they may be exposed.

According to the 2016-2020 ACS estimates, 25 percent of the population within one mile of the airport is age 18 or under. There are no schools located within one mile of the airport.

VISUAL EFFECTS

Visual effects include the extent to which a proposed action or alternative(s) would either (1) produce light emissions that create an annoyance or interfere with activities; or (2) contrast with or detract from the visual resources and/or the visual character of the existing environment. Each jurisdiction will typically address outdoor lighting, scenic vistas, and scenic corridors in zoning ordinances and its general plan.

Light Emissions | These impacts typically relate to the extent to which any light or glare results from a source that could create an annoyance for people or would interfere with normal activities. Generally, a local jurisdiction will include ordinances in its local code that address outdoor illumination to reduce the impact of light on surrounding properties. The City of Eloy addresses rules and regulations for outdoor lighting in the *Eloy, AZ Code of Ordinance*, Section 21-4-5, *Outdoor Lighting*.

Airfield lighting at Eloy Municipal Airport includes a rotating beacon, medium intensity runway lighting serving Runway 2-20, medium intensity taxiway lighting, runway end identification lights at each runway end, and two-light precision approach path indicator lights at each runway end. The airfield lights utilize pilot-controlled lighting; thus, the airfield lights are only illuminated when activated by pilots using the airport. (See the *Airfield Lighting, Signage, and Marking* section earlier in this chapter for further discussion on the types of airfield lighting and visual approach aids at the airport.)



Visual Resources and Visual Character | *Visual character* refers to the overall visual conditions of the existing environment where a proposed action or its alternative(s) would be located. For example, areas near densely populated areas generally exhibit a visual character that could be defined as urban, whereas less developed areas could have a visual character defined as suburban or rural, based on the surrounding pattern and density of development and topographical and landscape features (such as open grass fields, forests, mountains, deserts, etc.).

Visual resources include buildings, sites, traditional cultural properties, and other natural or human-made landscape features that are visually important or have unique characteristics. Visual resources may include structures or objects that obscure or block the view of other landscape features. In addition, visual resources can include the cohesive collection of various individual visual resource components that can be viewed at once or together from the area surrounding the site of the proposed action or alternative(s).

Although the Eloy Municipal Airport environment is not located within an urban area, it is visually characterized by low, sparsely vegetated open areas and limited development along the eastern side of the airport. Views of the airport are accessible from surrounding roadways due to the vegetation being spread out, rather than densely grouped. In addition, long-range views are not readily available due to the relatively flat topography of the airport environs. South of the airport lies the 280-acre plot of land that is owned by the City of Eloy and currently used for agricultural production. The existing land use pattern east of the airport is comprised of a manufactured home/recreational vehicle (RV) community and light industrial land uses.

ADOT administers the state-designated scenic roads program, while the Federal Highway Administration (FHWA) administers the byways program. In Arizona, a scenic road is a general term that is often used to identify state-designated and federally designated scenic roads.¹⁷ At present, there are a total of 26 state-designated scenic roads in Arizona, three of which are state-designated historic roads and four of which are state-designated parkways. There are no state-designated scenic roads within one mile of the airport.

There are a total of five federally designated byways in the state. Of the five byways in Arizona, three are National Scenic Byways and two are classified as All-American Roads. There are no byway routes within the City of Eloy; therefore, there are no federal or national scenic byways near the airport.

WATER RESOURCES

Wetlands | The U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the United States, including adjacent wetlands, under Section 404 of the *Clean Water Act* (CWA). Wetlands are defined in E.O. 11990, *Protection of Wetlands*, as “those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated

¹⁷ ADOT, Types of Scenic Roads (<https://azdot.gov/about/historic-and-scenic-roads/types-scenic-roads#:~:text=There%20are%20a%20total%20of%20five%20federally%20designated%20byways%20in,scenic%20and%20federal%20byway%20designations>)



soil conditions for growth and reproduction.” Wetlands can include swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, mudflats, natural ponds, estuarine areas, tidal overflows, and shallow lakes and ponds with emergent vegetation. Wetlands exhibit three characteristics: the soil is inundated or saturated to the surface at some time during the growing season (hydrology); has a population of plants that are able to tolerate various degrees of flooding or frequent saturation (hydrophytes); and has soils that are saturated enough to develop anaerobic (absent of air or oxygen) conditions during the growing season (hydric).

The USFWS manages the National Wetlands Inventory on behalf of all federal agencies. The National Wetlands Inventory identifies surface waters and wetlands in the nation. No wetlands or other special aquatic sites are present within airport boundaries.¹⁸

Floodplains | E.O. 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by the floodplains. U.S. Department of Transportation (DOT) Order 5650.2, *Floodplain Management and Protection*, implements the guidelines contained in E.O. 11988.

E.O. 14030, *Climate-Related Financial Risk*, was established on May 25, 2021. Section 5(e) of E.O. 14030 reinstates E.O. 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input* (originally set forth on January 30, 2015). E.O. 13690 amends E.O. 11988 and mandates the creation of a Federal Flood Risk Management Standard (FFRMS). One of the primary purposes of the FFRMS is to expand the management of floodplains from a base flood evaluation to include a higher vertical elevation (and the corresponding floodplain) to protect against future flood risks for federally funded projects.

Under E.O. 13690 and its guidelines, one of several approaches should be used to identify floodplains and their risks to critical¹⁹ or non-critical federally funded actions:

- Climate-Informed Science Approach (CISA) – the elevation and flood hazard area (i.e., 100-year floodplain) using data that integrate climate science with an emphasis on possible future effects on critical actions
- Freeboard Value Approach – the elevation and flood hazard area and an additional two or three feet above the base flood elevation, depending on whether the proposed federal action is critical or non-critical
- 500-Year Floodplain Approach – all areas subject to the 0.2 percent annual chance flood
- Other methods resulting from updates to the FFRMS

¹⁸ SWCA Environmental Consultants, Biological Resources Evaluation Report in Support of the Master Plan Update for Eloy Municipal Airport, Pinal County, Arizona, September 19, 2023

¹⁹ A critical action is defined in E.O. 13690 and the 2015 Guidelines for Implementing E.O. 11988 as any activity for which even a slight change of flooding is too great.



Of these four approaches, federal departments and agencies should use the CISA approach when data to support such an analysis are available.

A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel number 04021C1590F (effective May 16, 2019) indicates that the airport is in Zone X, an area of minimal flood hazard.²⁰ Eloy Municipal Airport is not located within a 100-year or 500-year floodplain.

Surface Waters | The CWA establishes water quality standards, controls discharges, develops waste treatment management plans and practices, prevents or minimizes the loss of wetlands, and regulates other issues concerning water quality. Water quality concerns related to airport development most often relate to the potential for surface runoff and soil erosion, as well as the storage and handling of fuel, petroleum products, solvents, etc. Additionally, U.S. Congress has mandated the NPDES under the CWA.

Eloy Municipal Airport is located within the Toltec Buttes watershed. There are no impaired waters within this watershed.²¹

Based on the biological resources evaluation conducted at the airport, there is one surface water feature within the airport, as identified by the USFWS National Wetlands Inventory dataset. This surface water feature is in the northeastern section of the airport, is classified as riverine habitat, and is temporarily flooded; however, based on a site visit conducted by a biologist, this stream is a human-made, cement-lined canal for agricultural use.

There are drainage features located on the northeastern side of the runway that are identified as part of the existing storm drainage system. Precipitation from the runway flows into these drainage features, which transport flow into concrete drainages and culverts in the existing storm drainage system.

Groundwater | Groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term *aquifer* is used to describe the geologic layers that store or transmit groundwater, such as wells, springs, and other water sources. Examples of direct impacts to groundwater could include withdrawal of groundwater for operational purposes or reduction of infiltration or recharge area due to new impervious surfaces.²²

According to the Arizona Groundwater Site Inventory, there are no wells located within airport property.²³ The closest mapped well to E60 is located 0.25 miles northwest of the airport.

²⁰ FEMA, Flood Map (<https://msc.fema.gov/portal/search?AddressQuery=eloy%20municipal%20airport#searchresultsanchor>)

²¹ U.S. EPA, How's My Waterway? (<https://mywaterway.epa.gov/community/eloy%20municipal%20airport/overview>)

²² United States Geological Survey, What is Groundwater? (<https://www.usgs.gov/faqs/what-groundwater>)

²³ Arizona Groundwater Site Inventory (GWSI) (<https://azwatermaps.azwater.gov/gwsi>)



The U.S. EPA's Sole Source Aquifer (SSA) program was established under Section 1424(e) of the *Safe Drinking Water Act* (SDWA). Since 1977, it has been used by communities to help prevent contamination of groundwater from federally funded projects and has increased public awareness of the vulnerability of groundwater resources. The SSA program is authorized by Section 1424(e) of the SDWA (Public Law 93-523, 42 U.S.C. 300 et. seq), which states:

*"If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register."*²⁴

According to the U.S. EPA's *Sole Source Aquifers for Drinking Water* website, there are no sole source aquifers located within, or within one mile of, airport boundaries. The nearest sole source aquifer is the Upper Santa Cruz & Avra Basin, located 12 miles away from the airport.²⁵

Wild and Scenic Rivers | The *National Wild and Scenic Rivers Act* was established to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

The Nationwide Rivers Inventory (NRI) is a list of over 3,400 rivers or river segments that appear to meet the minimum *Wild and Scenic Rivers Act* eligibility requirements, based on their free-flowing status and resource values. The development of the NRI resulted from Section 5(d)(1) of the *Wild and Scenic Rivers Act*, which directs federal agencies to consider potential wild and scenic rivers in the comprehensive planning process.

The closest designated national wild and scenic river is the Verde River, located 93 miles north of the airport.²⁶ The nearest NRI features are Arnett and Telegraph Creeks, located 39 miles northeast of the airport.²⁷

²⁴ U.S. EPA, Overview of the Drinking Water Sole Source Aquifer Program (<https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#Authority>)

²⁵ U.S. EPA, Sole Source Aquifers (<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>)

²⁶ National Wild and Scenic River System in the U.S. (<https://nps.maps.arcgis.com/apps/MapJournal/index.html?appid=ba6debd907c7431ea765071e9502d5ac#>)

²⁷ Nationwide Rivers Inventory (<https://www.nps.gov/maps/full.html?mapId=8adbe798-0d7e-40fb-bd48-225513d64977>)

Chapter 2

Forecasts



Chapter 2

Forecasts

The ability to quantify the demand that may reasonably be expected to occur during the useful life of an airport's key components (e.g., runways, taxiways, terminal buildings, etc.) is an important factor in facility planning. In airport master planning, this involves projecting potential aviation activity for at least a 20-year timeframe. Aviation demand forecasting for Eloy Municipal Airport (E60) will primarily consider based aircraft, aircraft operations, and peak activity periods.

The Federal Aviation Administration (FAA) has oversight responsibility to review and approve aviation forecasts developed in conjunction with airport planning studies. The FAA reviews individual airport forecasts with the objective of comparing them to its *Terminal Area Forecast* (TAF) and the *National Plan of Integrated Airport Systems* (NPIAS). Even though the TAF is updated annually, there has almost always been a disparity between the TAF and master planning forecasts in the past, primarily because the TAF forecasts are the result of a top-down model that does not consider local conditions or recent trends. While the TAF forecasts are a point of comparison for master plan forecasts, they serve other purposes, such as asset allocation by the FAA.

When reviewing an airport's forecast (typically from a master plan), the FAA must ensure that the forecast is based on reasonable planning assumptions, uses current data, and is developed using appropriate forecast methods. According to the FAA, forecasts should be:

- Realistic;
- Based on the latest available data;
- Reflective of current conditions at the airport (as a baseline);
- Supported by information in the study; and
- Able to provide adequate justification for airport planning and development.

The forecast process for an airport master plan includes a series of basic steps that vary in complexity depending on the issues to be addressed and the level of effort required. The steps include a review of previous forecasts, determination of data needs, identification of data sources, collection of data, selection of forecast methods, preparation of the forecasts, and documentation and evaluation of the results. FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, outlines the following seven standard steps involved in the forecast process.



1. **Identify Aviation Activity Measures:** Identify the level(s) and type(s) of aviation activities likely to impact facility needs. For general aviation airports, such as E60, this typically includes based aircraft and operations.
2. **Review Previous Airport Forecasts:** These may include the FAA TAF, state or regional system plans, and previous master plans.
3. **Gather Data:** Determine what data are required to prepare the forecasts, identify data sources, and collect historical and forecast data.
4. **Select Forecast Methods:** Several appropriate methodologies and techniques are available, including regression analysis, trend analysis, market share or ratio analysis, exponential smoothing, econometric modeling, comparison with other airports, survey techniques, cohort analysis, choice and distribution models, range projections, and professional judgment.
5. **Apply Forecast Methods and Evaluate Results:** Prepare the actual forecasts and evaluate for reasonableness.
6. **Summarize and Document Results:** Provide supporting text and tables, as necessary.
7. **Compare Forecast Results with TAF:** Based aircraft and total annual operations are considered consistent with the FAA TAF if they meet the following criteria:
 - Forecasts differ by less than 10 percent in the five-year forecast period and less than 15 percent in the 10-year forecast period;
 - Forecasts do not affect the timing or scale of an airport project; or
 - Forecasts do not affect the role of the airport, as defined in the current version of FAA Order 5090.5, *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS) and the Airports Capital Improvement Plan (ACIP)*.

Aviation activity can be affected by many influences on the local, regional, and national levels, making it virtually impossible to predict year-to-year fluctuations of activity over 20 years with any certainty; therefore, it is important to remember that forecasts are intended to serve only as guidelines, and planning must remain flexible enough to respond to a range of unforeseen direct and indirect impacts that could influence future airport development.

The following forecast analysis for Eloy Municipal Airport was produced following these basic guidelines. Existing forecasts were examined and compared against current and historical activity. The historical aviation activity was then examined, along with other factors and trends that can affect aviation-related demand. The intent of this analysis is to provide an updated set of aviation demand projections for Eloy Municipal Airport that will allow airport management to make informed planning adjustments, as necessary, to maintain a viable, efficient, and cost-effective facility.

The forecasts for this master plan utilize a base year of 2023 with a long-range forecast ending in 2043. It is expected that an update to the master plan will occur around the year 2033.



NATIONAL AVIATION TRENDS

Each year, the FAA updates and publishes a national aviation forecast. Included in this publication are forecasts for large air carriers, regional/commuter air carriers, general aviation, and FAA workload measures. The forecasts are prepared to meet the budget and planning needs of the FAA and provide information that can be used by state and local authorities, the aviation industry, and the general public. The current edition used in the preparation of this chapter was the *FAA Aerospace Forecast – Fiscal Years (FY) 2023-2043* (published in May 2023). The FAA primarily uses the economic performance of the United States as an indicator of future aviation industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets. The following discussion is summarized from the *FAA Aerospace Forecast*.

The U.S. commercial air carrier industry has been characterized by boom-to-bust cycles since its deregulation in 1978 and the great recession of 2007-2009. The volatility associated with these cycles was thought to be a structural feature of an industry that was capital intensive but cash poor; however, the great recession of 2007-2009 marked a fundamental change in the operations and finances of U.S. airlines. Since the end of the recession in 2009, U.S. airlines have revamped their business models to minimize losses by lowering operating costs, eliminating unprofitable routes, and grounding older, less fuel-efficient aircraft. To increase operating revenues, carriers initiated new services that customers were willing to purchase and started charging separately for services that were historically bundled in the price of a ticket. The industry experienced an unprecedented period of consolidation, with three major mergers occurring within five years. The results of these efforts were impressive: 2019 marked the eleventh consecutive year of profitability for the U.S. airline industry.

The COVID-19 pandemic in 2020 effectively ended those boom years; airline activity and profitability plummeted almost overnight. In response, airlines cut capacity and costs, and most were able to weather the storm. Some small regional carriers ceased operations as a result of the pandemic, but no mainline carriers closed their doors. Some segments of aviation were less impacted: cargo activity surged, boosted by consumer purchases, and general aviation generally maintained pre-pandemic levels of activity. By the middle of 2021, with the introduction of vaccines and the lifting of some local restrictions, leisure travel began to rebound. Two new low-cost carriers were formed and one regional carrier that had ceased operations in 2020 was revived. By the third quarter of 2021, industry profitability neared the breakeven point, and by the end of 2022, U.S. airlines reported that business demand had recovered to 70-80 percent of pre-pandemic levels. Higher fares accompanied the strong rebound in leisure demand, leading to positive financial results. The top nine U.S. passenger carriers posted operating and net profits, proving strong success for the new business models air carriers have utilized to weather the pandemic.

The business changes airlines implemented because of the pandemic will shape the industry long after recovery is complete. Airlines retired older, less fuel-efficient aircraft and encouraged voluntary employee separations. This has led to airlines seeking newer aircraft investments while meeting the current demand for the rebuilding of business and international travel, which has lagged behind leisure



traffic during the recovery. There is confidence that U.S. airlines can generate solid returns on capital and sustained profits; however, aviation demand will be driven by economic activity over the long term as the growing U.S. and world economies provide the basis for aviation to grow.

ECONOMIC ENVIRONMENT

According to the FAA forecast, the annual gross domestic product (GDP) of the U.S. is expected to increase by 1.8 percent over the next 20 years. U.S. carriers posted an unexpected profit in 2022, and the FAA expects carriers to remain profitable over the next few years as demand rises, despite higher fares, which offset the raised labor and fuel costs. As yields stabilize and carriers return to levels of capacity consistent with their fixed costs and shed excess debt, consistent profitability should continue. Over the long term, the FAA anticipates a competitive and profitable aviation industry characterized by increasing demand for air travel, and airfares growing more slowly than overall inflation, reflecting growing U.S. and global economies.

Prior to the COVID-19 pandemic, the U.S. economy was recovering from the most serious economic downturn and slow recovery since the Great Depression. Fundamentally, demand for aviation is driven by economic activity; as economic growth increases, so will growth in aviation activity. Overall, the FAA forecast calls for annual passenger growth over the next 20 years to average 2.7 percent. Oil prices surged to \$93 per barrel in 2022 (largely due to the Russian invasion of Ukraine) after averaging \$55 per barrel over the five-year period from 2016 to 2021. Prices are expected to ease over the next two years before slowly climbing to \$113 per barrel by the end of the forecast period in 2043.

FAA GENERAL AVIATION FORECASTS

The long-term outlook for general aviation is promising, as growth at the high end of the segment offsets continuing aircraft retirements at the traditional low end. The active general aviation fleet is forecast to remain relatively stable between 2023 and 2043, increasing by just 0.2 percent. While steady growth in both GDP and corporate profits have driven continued growth of the turbine and rotorcraft fleets, the largest segment of the fleet, fixed-wing piston aircraft, continues to shrink over the forecast period.

The FAA generates national forecasts of the fleet mix and hours flown for single-engine piston (SEP) aircraft, multi-engine piston (MEP) aircraft, turboprops, business jets, and piston and turbine helicopters, as well as light sport, experimental, and other aircraft (e.g., gliders and balloons). The FAA forecasts active aircraft, not total aircraft. An active aircraft is one that is flown at least one hour during the year. From 2010 through 2013, the FAA undertook an effort to have all aircraft owners re-register their aircraft. This effort resulted in a 10.5 percent decrease in the number of active general aviation aircraft, mostly in the piston category. **Table 2A** shows the primary general aviation demand indicators, as forecasted by the FAA.

**TABLE 2A | FAA General Aviation Forecast – National**

Demand Indicator	2023	2043	CAGR
General Aviation Fleet			
Total Fixed-Wing Piston	136,290	118,975	-0.7%
Total Fixed-Wing Turbine	26,645	39,740	2.0%
Total Helicopters	10,320	13,870	1.5%
Total Other (experimental, light sport, etc.)	35,840	43,810	1.0%
Total General Aviation Fleet	209,095	216,395	0.2%
General Aviation Operations			
Local	14,801,816	16,622,293	0.6%
Itinerant	15,077,947	16,704,132	0.5%
Total General Aviation Operations	29,879,763	33,326,425	0.5%

CAGR = compound annual growth rate (2023-2043)

Source: FAA Aerospace Forecast, FY 2023-2043

General Aviation Fleet Mix

The FAA estimates there are 136,290 piston-powered, fixed-wing aircraft in the national fleet in 2023. That number is forecast to decline by 0.7 percent by 2043, resulting in 118,975 aircraft. This includes a decline of 0.7 percent in SEP aircraft and a decline of 0.2 percent in MEP aircraft.

Total turbine aircraft are forecasted to grow at an annual rate of 2.0 percent through 2043. The FAA estimates there are 26,645 fixed-wing turbine-powered aircraft in the national fleet in 2023, and forecasts indicate there will be 39,740 fixed-wing turbine aircraft by 2043. Of these aircraft, turboprops are forecasted to grow by 0.8 percent annually, while business jets are projected to grow by 2.7 percent annually through 2043.

Total helicopters are projected to grow by 1.5 percent annually in the forecast period. There are an estimated 10,320 total helicopters in the national fleet in 2023, and that number is expected to grow to a total of 13,870 by 2043. This includes annual growth rates of 0.5 percent for piston helicopters and 1.8 percent for turbine helicopters.

The FAA also forecasts experimental aircraft, light sport aircraft (LSA), and others. Combined, there are an estimated 35,840 other aircraft in 2023 that are forecasted to grow to 43,810 by 2043, for an annual growth rate of 1.0 percent.

General Aviation Operations

The FAA also forecasts total operations based on activity at control towers across the United States. Operations are categorized as air carrier, air taxi/commuter, general aviation, and military. While the fleet size remains relatively constant, the number of general aviation operations at towered airports is projected to increase from 29.9 million in 2023 to 33.3 million in 2043, with an average increase of 0.5 percent per year in turbine, rotorcraft, and experimental hours, which are offset by a decline in fixed-wing piston hours. This includes annual growth rates of 0.6 percent for local general aviation operations and 0.5 percent for itinerant general aviation operations. **Exhibit 2A** presents the historical and forecast U.S. active general aviation aircraft and operations.



General Aviation Aircraft Shipments and Revenue

On an annual basis, the General Aviation Manufacturers Association (GAMA) publishes an aviation industry outlook, which documents past and current trends and provides an assessment of the future condition of the global general aviation industry. **Table 2B** presents historical data related to general aviation aircraft shipments.

TABLE 2B | Annual General Aviation Airplane Shipments

Manufactured Worldwide and Factory Net Billings						
Year	Total	SEP	MEP	TP	J	Net Billings (\$ million)
2002	2,677	1,591	130	280	676	11,778
2003	2,686	1,825	71	272	518	9,998
2004	2,962	1,999	52	319	592	12,093
2005	3,590	2,326	139	375	750	15,156
2006	4,054	2,513	242	412	887	18,815
2007	4,277	2,417	258	465	1,137	21,837
2008	3,974	1,943	176	538	1,317	24,846
2009	2,283	893	70	446	874	19,474
2010	2,024	781	108	368	767	19,715
2011	2,120	761	137	526	696	19,042
2012	2,164	817	91	584	672	18,895
2013	2,353	908	122	645	678	23,450
2014	2,454	986	143	603	722	24,499
2015	2,331	946	110	557	718	24,129
2016	2,268	890	129	582	667	21,092
2017	2,324	936	149	563	676	20,197
2018	2,441	952	185	601	703	20,515
2019	2,658	1,111	213	525	809	23,515
2020	2,408	1,164	157	443	644	20,048
2021	2,646	1,261	148	527	710	21,603
2022	2,818	1,366	158	582	712	22,866

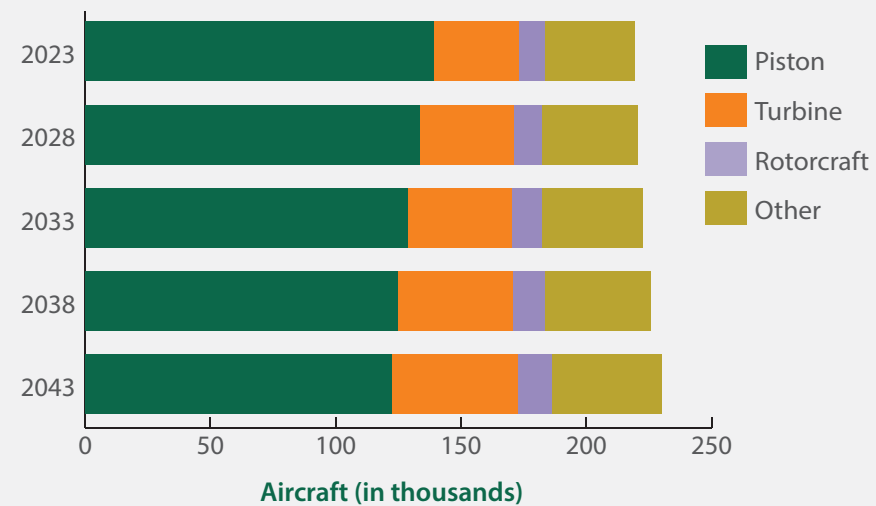
SEP = single-engine piston
 MEP = multi-engine piston
 TP = turboprop
 J = jet

Source: GAMA, 2022 Annual Report

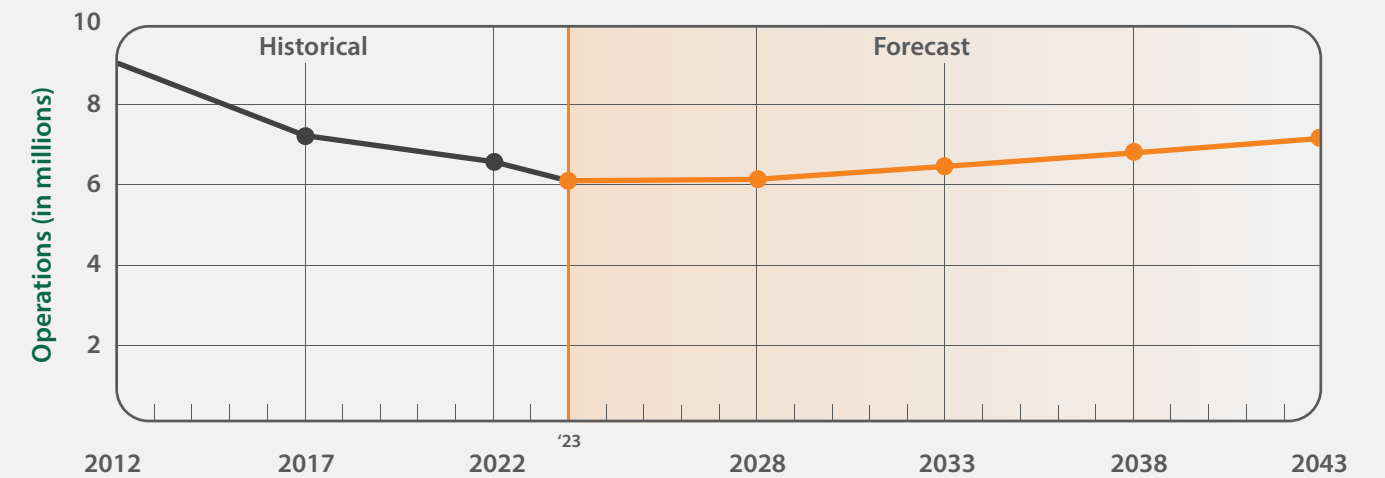
Worldwide shipments of general aviation airplanes increased in 2022, with a total of 2,818 units delivered around the globe, compared to 2,646 units in 2021 – the second year in a row to experience an increase after the drop during 2020, when only 2,408 units were delivered. Worldwide general aviation billings were the highest in 2014. In 2022, an increase in new aircraft shipments generated more than \$22 billion, compared to \$21.6 billion in the previous year. North America continues to be the largest purchasing market for general aviation aircraft and leads in the manufacturing of piston, turboprop, and jet aircraft. The Asia-Pacific region is the second largest market for piston-powered aircraft, while Latin America is the second leading in the turboprop market, and Europe leads in business jet deliveries.



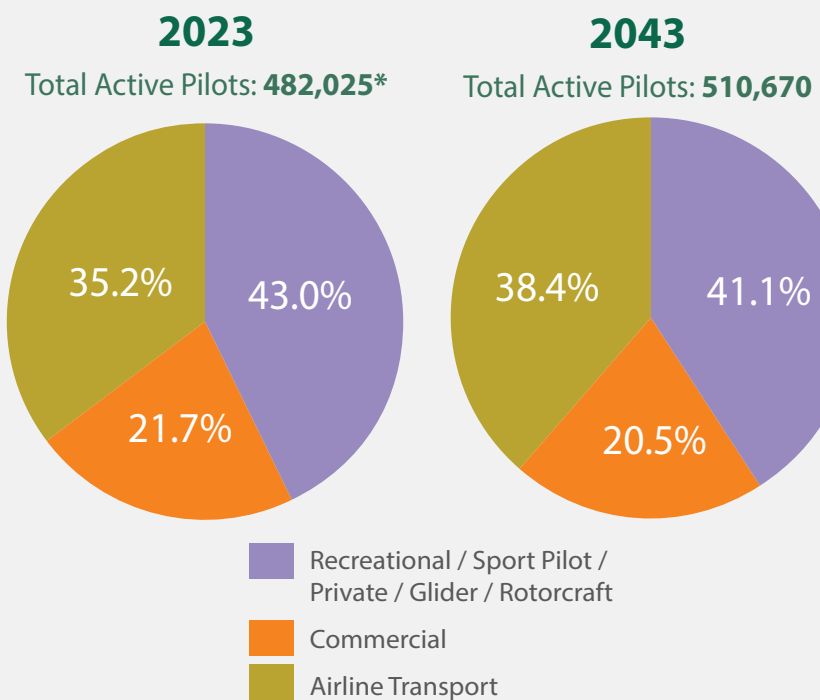
U.S. Active General Aviation Aircraft



U.S. Air Taxi Operations

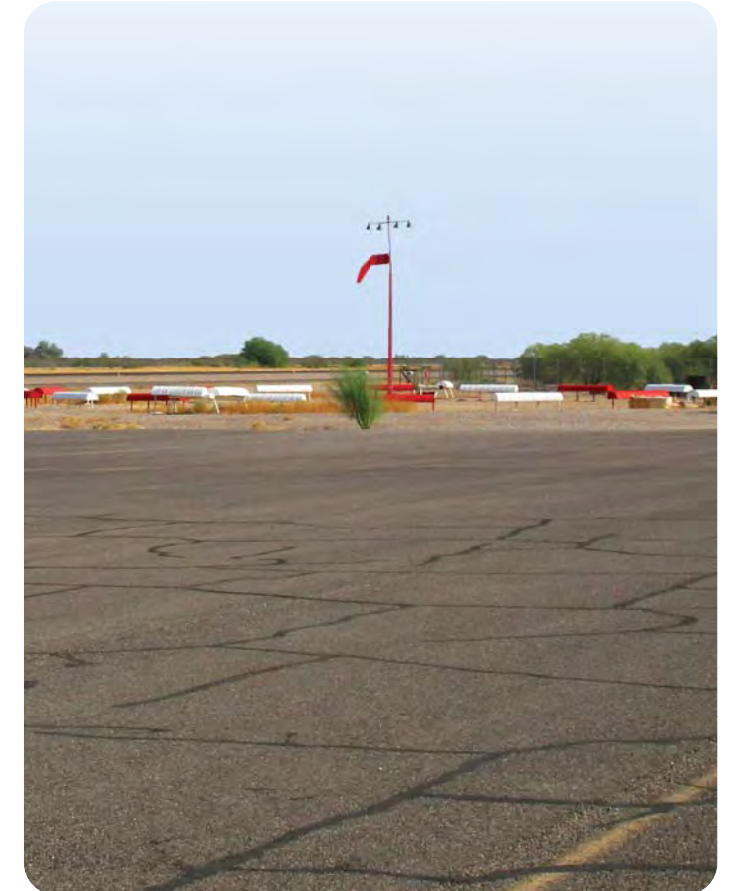
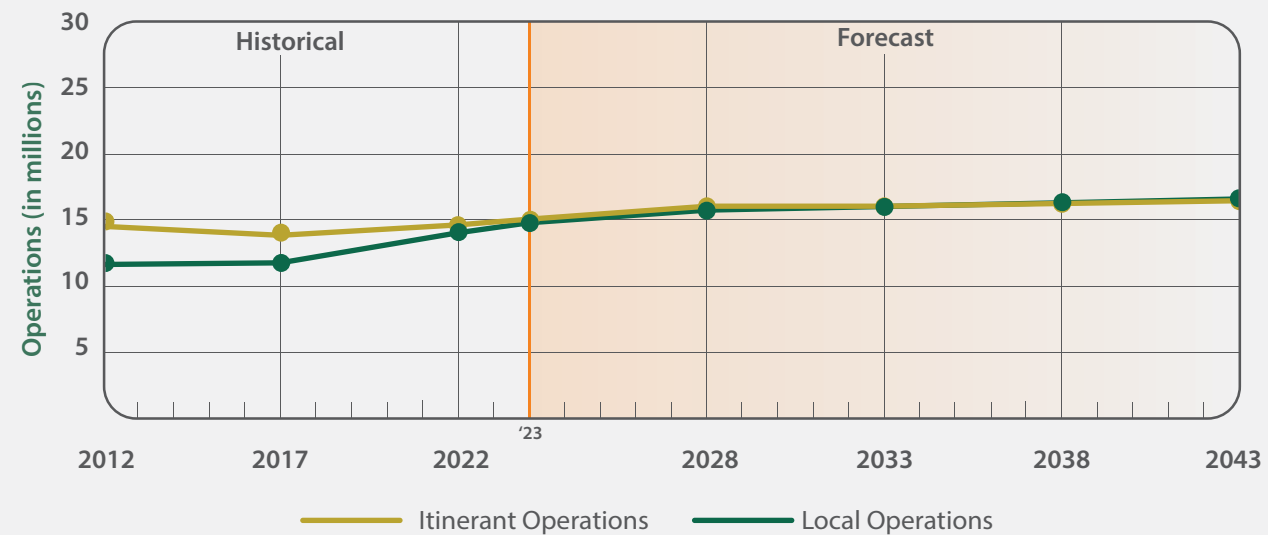


Active Pilots By Certificate



*Excludes Student Pilot Certificates

U.S. General Aviation Operations



Source: FAA Aerospace Forecasts FY2023-2043 (May 2023)

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Business Jets | Business jet deliveries increased from 710 units in 2021 to 712 units in 2022. The North American market accounted for 67.6 percent of business jet deliveries, which is a 1.7 percent increase in market share compared to 2021.

Turboprops | Turboprop shipments increased from 527 in 2021 to 582 in 2022. North America's market share of turboprop aircraft increased by 3.1 percent in the last year. The Europe, Middle East and Africa, and Asia-Pacific market shares decreased, while Latin American markets increased their market share.

Pistons | In 2022, piston airplane shipments increased to 1,524 units, compared to 1,409 units in the prior year. North America's market share of piston aircraft deliveries rose 1.2 percent from the year 2021. The Europe, Latin America, and Middle East and Africa regions experienced a positive rate in market shares during the past year, while the Asia-Pacific market experienced a decline.

U.S. PILOT POPULATION

There were 476,346 active pilots certificated by the FAA at the end of 2022 and 482,025 active pilots projected in 2023. All pilot categories, except private and recreational-only certificates, are expected to continue to increase for the forecast length. Excluding student pilots, the number of active pilots is projected to increase by about 28,645 (up 0.3 percent annually) between 2023 and 2043. The airline transport pilot (ATP) category is forecast to increase by 26,200 (up 0.7 percent annually). Sport pilots are predicted to increase by 2.5 percent and commercial pilots will remain steady over the forecast period, while private pilot certificates are projected to decrease at an average annual rate of 0.2 percent through 2043. The FAA has currently suspended the student pilot forecast.

UNMANNED AIRCRAFT SYSTEMS (UAS)

UAS (commonly referred to as drones) have experienced healthy growth in the U.S. and around the world over the past few years. According to the *FAA Aerospace Forecast – FY 2023-2043*:

“A drone consists of a remotely piloted aircraft and its associated elements – including the control station and the associated communication links – that are required for the safe and efficient operation in the national airspace system (NAS). The introduction of drones in the NAS has opened up numerous possibilities, especially from a commercial perspective. This has also brought challenges including drones' safe and secure integration into the NAS. Despite these challenges, the drone sector holds enormous promise; potential uses range from individuals flying solely for recreational purposes to large companies delivering commercial packages and delivering medical supplies. Public service uses, such as conducting search and rescue support missions following natural disasters, are proving promising as well.”

On December 21, 2015, the FAA launched an online registration system for recreational/model small drones, requiring all drones weighing more than 0.55 pounds (or 250 grams) and fewer than 55 pounds (or 25 kilograms) to be registered. The registration system captures the number of registered



pilots but does not capture individual drone aircraft; nevertheless, the registration information provides a basic understanding of the growth in drone activity, from which the FAA has forecasted drone growth for the next five years.

Trends in Recreational/Model Aircraft | Through an examination of the drone aircraft registrations and renewals, the FAA estimated as many as 1.69 million small drones in the national fleet. The FAA developed three forecasts, which are presented in **Table 2C**. The FAA currently forecasts as many as 1.89 million small drones by 2027.

TABLE 2C | Total Recreational/Model Fleet

Fiscal Year	Low*	Base**	High**
2022	612,200	1,688,500	1,688,500
Forecast			
2023	620,500	1,750,200	1,762,200
2024	639,300	1,785,400	1,815,800
2025	654,800	1,803,500	1,852,000
2026	663,400	1,814,900	1,875,700
2027	668,500	1,823,400	1,891,800
CAGR	1.78%	1.55%	2.30%
*Effective/active fleet counts combined with multiplicity of aircraft ownership			
**New registration counts combined with multiplicity of aircraft ownership			
CAGR = compound annual growth rate			

Source: FAA Aerospace Forecast, FY 2023-2043

Trends in Commercial/Non-Model UAS Aircraft | Online registration for commercial/non-model small drones went into effect on April 1, 2016. These are commercial drones that weigh less than 55 pounds. Unlike recreational/model ownership, each aircraft must be registered individually. Registrations of commercial/non-model UAS aircraft have been increasing yearly, according to the FAA. **Table 2D** shows the FAA forecast for this category of UAS. It is estimated that there were up to 727,000 commercial/non-model UAS in 2022, which is forecasted to increase to 1,015,000 by 2027.

TABLE 2D | Total Commercial/Non-Model Fleet

Fiscal Year	Low*	Base**	High**
2022	328,000	727,000	727,000
Forecast			
2023	349,000	805,000	807,000
2024	364,000	862,000	867,000
2025	373,000	904,000	915,000
2026	378,000	933,000	966,000
2027	382,000	955,000	1,015,000
CAGR	3.10%	5.61%	6.90%
*Effective/active fleet counts combined with multiplicity of aircraft ownership			
**New registration counts combined with multiplicity of aircraft ownership			
CAGR = compound annual growth rate			

Source: FAA Aerospace Forecast, FY 2023-2043



Trends in Large UAS | Drones that weigh 55 pounds or more cannot be operated as recreational remotely piloted aircraft. These large drones are registered with the FAA using the existing aircraft registration system. At present, most large drones are flown by government entities, but commercial operators have steadily increased in 2022; most new large drone operators are active in agricultural spraying operations. The FAA estimates there were 1,206 large drones operating in the NAS in 2022. The FAA forecasts 12,651 commercial large drones will be operating in the NAS by 2027.

Advanced Air Mobility (AAM) | The AAM segment has some crossover with the functions of the drone segment. The FAA defines AAM as “a safe and efficient system for air passenger and cargo transportation, inclusive of small package delivery and other urban drone services, which support a mix of onboard/ground-piloted and increasingly autonomous operations.”

AAM technology presents considerable opportunities for economic growth over the coming decades. The FAA forecasts indicate that package delivery is likely to experience economic growth over the next decade. On the other hand, passenger service promises larger markets for AAM services, but safety challenges, infrastructure, public acceptance, and evolving technology may slow full integration in the short term; nevertheless, flight testing continues, and numerous commercial companies are conducting test flights. An example is the advancements that Joby Aviation has made with its electric vertical takeoff and landing (eVTOL) aircraft, which received its Part 135 air carrier FAA certification in May 2022. Currently, this aircraft can fly over 150 miles on one battery charge and can carry four passengers.

One of the potential challenges of eVTOL entering the marketplace is infrastructure. A system of vertiports for AAM services appears to be the preferred method of operation. Joby Aviation and Archer have partnered with parking garage operator REEF Technology with the goal of using parking garage rooftops as vertiports. Other options may include establishing vertiports at existing airports.

RISKS TO THE FORECAST

While the FAA is confident its forecasts for aviation demand and activity can be reached, meeting the forecast conditions depends on several factors, including the strength of the global economy, security (including the threat of international terrorism), and oil prices. Higher oil prices could lead to shifts in consumer spending away from aviation, dampening a recovery in air transport demand. The COVID-19 pandemic introduced a new risk, and although the industry has rebounded, the threat of future global health emergencies and potential economic fallout remains.

AIRPORT SERVICE AREA

The initial step in determining the aviation demand for an airport is to define its generalized service area for various aviation segments. The service area is determined primarily by evaluating the locations of competing airports and their capabilities, services, and relative attraction and convenience. In determining the aviation demand for an airport, it is necessary to identify the role of the airport, the specific areas of aviation demand, and the forecast of population and employment growth within the surrounding area where the airport is located.



E60 is classified as a local general aviation (GA) airport within the NPIAS, meaning its primary role is to provide the community with access to local and regional markets. General aviation (which includes all segments of the aviation industry except commercial air carriers and the military) is the largest component of the national aviation system and includes activities such as pilot training, recreational flying, and the use of sophisticated turboprop and jet aircraft for business and corporate use. E60 is also home to SkyDive Arizona, a skydiving business based at the airport that conducts a significant number of annual operations and maintains multiple turbine-powered aircraft within its fleet.

The service area for an airport is a geographic region from which an airport can be expected to attract the largest share of its activity. The definition of the service area can be used to identify other factors, such as socioeconomic and demographic growth forecasts and trends that influence aviation demand at an airport. Aviation demand is impacted by the proximity of competing airports; the surface transportation network; the strength of general aviation services provided by an airport and its competing airports; and the future population and employment growth of its surrounding communities.

As in any business enterprise, the more attractive the facility is in terms of service and capabilities, the more competitive it will be in the marketplace. If an airport's attractiveness increases in relation to nearby airports, so will the size of its service area. If its facilities and services are adequate and/or competitive, some level of aviation activity might be attracted to an airport from more distant locales.

As a local GA airport, E60's service area is primarily determined by aircraft owners/operators and where they choose to base their aircraft. The fundamental consideration of aircraft owners/operators when choosing where to base their aircraft is convenience (i.e., easy access and proximity to the airport). As a general rule, an airport's overall service area can extend up to and beyond 30 miles. For E60, the service area can be further divided into immediate (within approximately 15 nautical miles [nm]) and ultimate (beyond 30 nm) service areas.

The proximity and levels of general aviation services are defining factors within the immediate service area and contributing factors within the ultimate service area. A description of NPIAS airports within approximately 30 nm was previously completed in Chapter One. There are two public-use GA airports within 15 nm of E60 and five public-use airports between 15 and approximately 30 nm from E60 that offer varying levels of services and amenities, as presented in **Table 2E**.

TABLE 2E | Regional Airports Within 30 Nautical Miles of Eloy Municipal Airport

Airport	nm/Direction from E60 ¹	FAA Service Level ²	Towered ¹	Based Aircraft ³	2022 Annual Operations ⁴	Longest Runway ¹	Visibility Minimum ¹
Eloy Municipal Airport	–	GA	No	42⁵	30,000	3,901'	None
Coolidge Municipal Airport	11.2 nm NE	GA	No	41	65,050	5,564'	1-mile
Casa Grande Municipal Airport	12.7 nm NW	GA	No	73	122,000	5,200'	½-mile
Ak-Chin Regional Airport	20.0 nm WNW	GA	No	14	39,350	4,751'	None
Pinal Airpark Airport	22.2 nm SE	GA	No	75	58,200	6,849'	None
Chandler Municipal Airport	30.0 nm NNW	Reliever	Yes	423	239,300	4,870'	¾-mile
Marana Regional Airport	30.2 nm SE	Reliever	No	211	90,252	6,901'	1-mile
Phoenix-Mesa Gateway Airport	30.3 nm N	PCS	Yes	72	254,599	10,401'	¾-mile

GA = general aviation

nm = nautical miles

PCS = primary commercial service

Sources: ¹Airnav.com; ²FAA NPIAS; ³Basedaircraft.com; ⁴ADIP; ⁵Airport Records, E60 Based Aircraft



It should be noted that Phoenix-Mesa Gateway Airport (IWA), a commercial service airport, has also been included in this analysis, as it is located just beyond the 30-nm radius around E60. Considering IWA's extensive service level, it can (and does) limit the airport service area for E60.

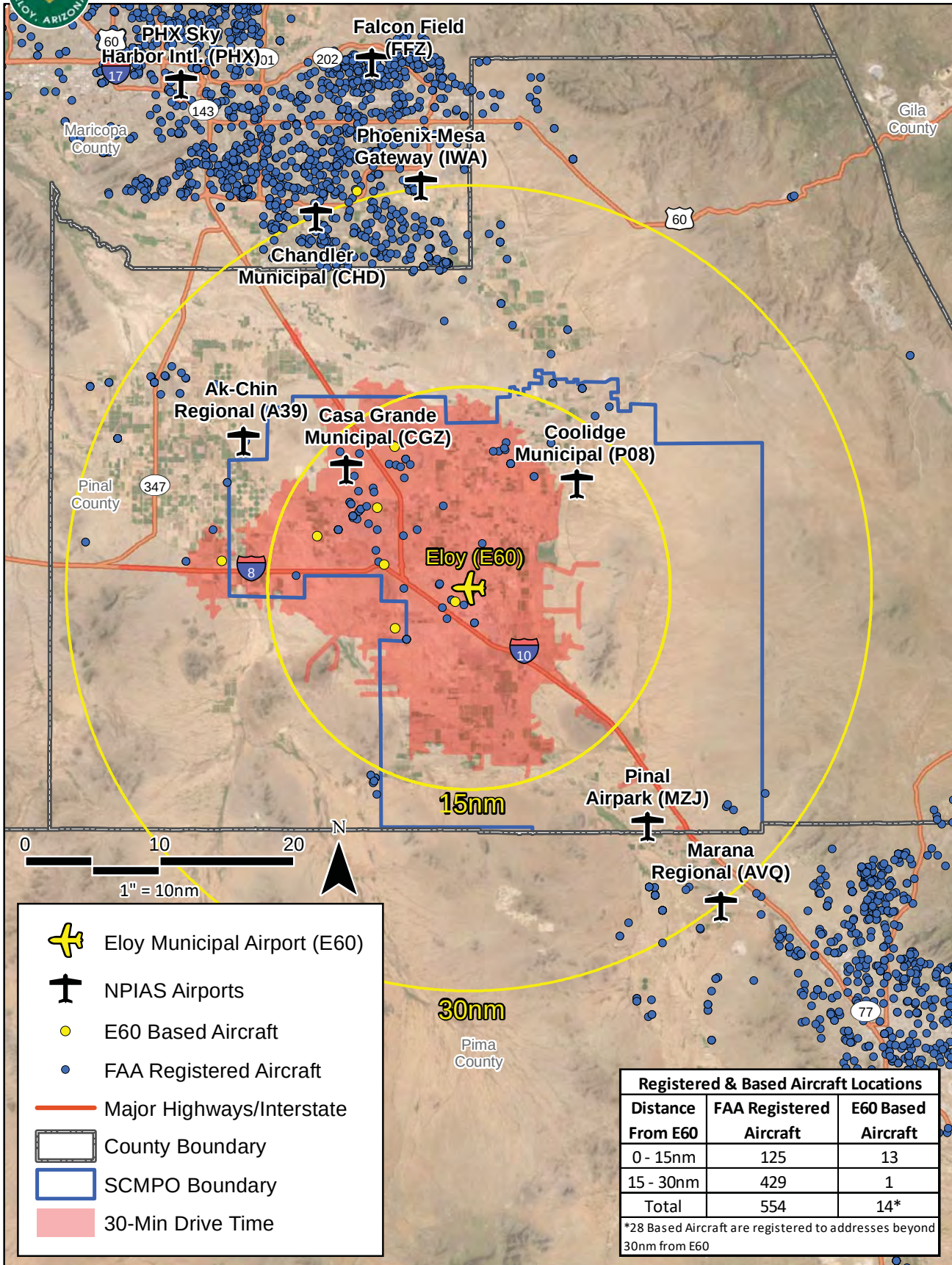
The most effective method of defining the airport's service area is to examine the number of registered aircraft owners in proximity to the airport. When discussing the immediate and ultimate general aviation service areas, two primary demand segments must be addressed. The first segment is the airport's ability to attract based aircraft. As previously mentioned, aircraft owners typically choose to base their aircraft at airports near their homes or businesses. Based on the current registered aircraft data, presented on **Exhibit 2B**, there are 554 registered aircraft within 30 nm of E60; 125 aircraft are registered within 15 nm of E60 and 429 are registered between 15 and 30 nm from E60. Of these, 14 are based at E60 and an additional 28 based aircraft are registered to addresses beyond 30 nm from the airport. This is not an uncommon phenomenon, as some aircraft owners may reside in other parts of the state or country. In addition, registered aircraft owners or businesses may choose to register their aircraft in different states for taxation purposes.

The majority of registered aircraft within 30 nm of E60 are located 20 to 30 nm northwest of the airport within the East Valley and Southeast Valley regions of the Phoenix metropolitan area, near Chandler Municipal Airport (CHD), Phoenix-Mesa Gateway Airport (IWA), and Falcon Field Airport (FFZ). While CHD, IWA, and FFZ are located beyond the 30-nm radius surrounding E60, the service areas of these airports extend outward to encompass the southeastern corner of Maricopa County and beyond. **Exhibit 2B** also depicts a 30-minute drive time analysis, which is centered on E60.

The second demand segment to consider involves itinerant aircraft operations. In most instances, pilots will opt to utilize airports nearer their intended destinations; however, this choice is also dependent on an airport's capabilities in accommodating aircraft operators. Airports that offer enhanced services and facilities are more likely to attract itinerant operators in the region.

Although there are multiple competing airports in the region, Eloy Municipal Airport's immediate airport service area (within 15 nm) is defined by its convenience to its users and its ability to compete for based aircraft. E60 is a hub for recreational aviation, including skydiving, and is well-positioned for potential business opportunities, particularly considering its proximity to the Interstate 10 (I-10) corridor. Additional potential for increased aviation demand for E60 lies in employment and population growth within its immediate and ultimate service areas.

Of the NPIAS airports within the vicinity of E60, five are located north of Eloy, where the majority of aircraft in the area are registered. Of the aircraft registered within the 30-nm radius, most of E60's based aircraft are registered to addresses within 15 nm of the airport. The 30-minute drive time analysis (shown on **Exhibit 2B**) illustrates the ease of vehicular access from Casa Grande, Coolidge, and Arizona City, making E60 a viable option to users throughout a large portion of the county and the Southeast Valley region. In addition, many recreational pilots prefer less congested airport and airspace environments, which enhances E60's attractiveness to the GA segment. In terms of land use compatibility, E60 will also face fewer challenges when it comes to airfield improvement and expansion projects compared to more congested environments to the north.





As such, the general boundary of the Sun Corridor Metropolitan Planning Organization (SCMPO), which is presented on **Exhibit 2B**, can be identified as E60's immediate service area. This area is poised for extensive population and employment growth by the year 2050. The *SCMPO Regional Transportation Plan 2050 Update* identified an increase by jurisdiction to the year 2050, which is seven years beyond the 20-year forecast period (2043) identified in this airport master plan update.

From a population perspective, the immediate airport service area is forecasted to experience a total population increase from approximately 148,600 to 437,500 persons, representing a growth rate of more than four percent, as shown in **Table 2F**. The City of Eloy is expected to capture an increase of 100,400 persons within the 27-year SCMPO planning horizon, which translates to a 6.7 percent annual growth rate. From an employment perspective, the immediate airport service area is forecasted to experience an increase in the number of jobs from approximately 36,600 to 123,200 employees, which represents a growth rate of more than four percent, as shown in **Table 2F**. The City of Eloy is expected to capture an increase of 23,600 employees within the 27-year SCMPO planning horizon, which represents a 4.6 percent compound annual growth rate (CAGR).

TABLE 2F | SCMPO Population and Employment by Jurisdiction 2023-2050

Jurisdiction	Population			Employment		
	2023	2050	CAGR	2023	2050	CAGR
City of Casa Grande	88,033	156,755	2.16%	24,284	54,253	3.02%
City of Coolidge	21,995	128,687	6.76%	6,015	35,949	6.85%
City of Eloy	20,948	121,351	6.72%	4,982	28,596	6.69%
City of Florence	213	341	1.76%	10	32	4.40%
City of Marana	3,156	3,140	-0.02%	436	1,403	4.42%
Unincorporated Maricopa County	0	1,217	41.68%	1	22	12.13%
Unincorporated Pinal County	14,229	26,030	2.26%	854	2,994	4.76%
Total:	148,574	437,521	4.08%	36,582	123,249	4.60%

CAGR = compound annual growth rate

Source: Wilson & Company, *SCMPO Regional Transportation Plan 2050 Update*, January 2024

For planning purposes, the entirety of Pinal County is defined as Eloy Municipal Airport's ultimate service area, which will be utilized to develop a baseline for registered and based aircraft forecasts; however, E60 is in direct competition with Casa Grande Municipal Airport (CGZ) and Coolidge Municipal Airport (P08) to the north and Pinal Airpark (MZJ) and Marana Regional Airport (AVQ) to the south. These airports currently offer longer runway lengths and the availability of instrument approach procedures (except MZJ), and they are located in a manner that could detract from E60's market share of registered aircraft; however, the forecasted population and employment within the immediate airport service area identifies extensive community growth that could also generate demand for E60's operation and expansion.

FORECASTING APPROACH

The development of aviation forecasts includes both analytical and judgmental processes. A series of mathematical relationships is tested to establish statistical logic and rationale for projected growth;



however, the judgment of the forecast analyst (based on professional experience, knowledge of the aviation industry, and assessment of the local situation) is important in the final determination of the preferred forecast. The most reliable approach to estimating aviation demand utilizes more than one analytical technique. Methodologies frequently considered include trendline/time-series projections, correlation/regression analysis, and market share analysis. The forecast analyst may elect not to use certain techniques, depending on the reasonableness of the forecasts produced using other techniques.

- **Trendline/time-series projections** are probably the simplest and most familiar of the forecasting techniques. By fitting growth curves to historical data and extending them into the future, a basic trendline projection is produced. A basic assumption of this technique is that outside factors will continue to affect aviation demand in a manner similar to the past. Although this assumption is broad, the trendline projection serves as a reliable benchmark for comparing other projections.
- **Correlation analysis** provides a measure of the direct relationship between two separate sets of historical data. If there is a reasonable correlation between the data sets, further evaluation using regression analysis may be employed.
- **Regression analysis** measures statistical relationships between dependent and independent variables, yielding a correlation coefficient. The correlation coefficient (Pearson's r) measures the association between the changes in the dependent variable and the independent variable(s). If the r^2 value (coefficient determination) is greater than 0.95, it indicates good predictive reliability. A value less than 0.95 may be used, but with the understanding that the predictive reliability is lower.
- **Market share analysis** involves a historical review of the airport activity as a percentage (or share) of a larger regional, state, or national aviation market. A historical market share trend is determined, providing an expected market share for the future. These shares are then multiplied by the forecasts of the larger geographical area to produce a market share projection. This method has the same limitations as trendline projections but can provide a useful check on the validity of other forecasting techniques.

Forecasts age and become less reliable as they extend out from the base year, particularly due to changing local and national conditions over time; nevertheless, the FAA requires that a 20-year forecast be developed for long-range airport planning. Facility and financial planning usually require at least a 10-year view because it often takes more than five years to complete a major facility development program; however, it is important to use forecasts that do not overestimate revenue-generating capabilities or understate demand for facilities needed to meet public (user) needs.

A wide range of factors is known to influence the aviation industry and can have significant impacts on the extent and nature of aviation activity in both the local and national markets. Historically, the nature and trend of the national economy have had a direct impact on the level of aviation activity. Recessionary periods have been closely followed by declines in aviation activity; nevertheless, trends emerge over time and provide the basis for airport planning.



Future facility requirements (such as hangar, apron, and terminal needs) are derived from projections of various aviation demand indicators. By using a broad spectrum of local, regional, and national socioeconomic and aviation information and analyzing the most current aviation trends, forecasts are presented for the following aviation demand indicators:

- Based aircraft
- Based aircraft fleet mix
- General aviation operations
- Air taxi and military operations
- Operational peaks

EXISTING FORECASTS

Consideration is given to any aviation demand forecasts for the airport that have been completed in the recent past. For E60, the previous forecasts reviewed are those in the FAA TAF, the 2013 *Eloy Municipal Airport Master Plan*, and the 2018 *Arizona State Aviation System Plan (SASP)*.

FAA TERMINAL AREA FORECAST

On an annual basis, the FAA publishes the TAF for each airport included in the NPIAS. The TAF is a generalized forecast of airport activity that is used by the FAA primarily for internal planning purposes. It is available to airports and consultants to use as a baseline projection and is an important point of comparison when developing local forecasts. The current TAF was published in January 2024 and is based on the federal fiscal year (October–September).

As presented in **Table 2G**, the TAF projects general aviation activity at the airport to remain static over the next 20 years. Because there is currently no commercial service activity at E60, the TAF does not reflect any existing and/or forecasted air carrier or air taxi operations over the forecast period. Operations are projected to be dominated by local and itinerant GA operations, which are estimated to account for approximately 85 percent and 15 percent of operations, respectively, over the planning period. Military operations are projected to account for less than one percent of total operations, with 100 operations projected for each of the plan years. Based aircraft are also projected to remain constant over the next 20 years, at 17 based aircraft. As previously discussed, E60 is known to have a significantly higher existing based aircraft count (42) than what is reported in the TAF, and the FAA will compare the new forecasts developed for this master plan to the TAF.

**TABLE 2G | 2023 FAA Terminal Area Forecast for Eloy Municipal Airport**

	2023	2028	2033	2043	CAGR 2023-2043
Annual Operations – Itinerant					
Air Carrier	0	0	0	0	0.00%
Air Taxi	0	0	0	0	0.00%
General Aviation	4,500	4,500	4,500	4,500	0.00%
Military	100	100	100	100	0.00%
Total Itinerant	4,600	4,600	4,600	4,600	0.00%
Annual Operations – Local					
General Aviation	25,400	25,400	25,400	25,400	0.00%
Military	0	0	0	0	0.00%
Total Local	25,400	25,400	25,400	25,400	0.00%
Total Annual Operations:	30,000	30,000	30,000	30,000	0.00%
Based Aircraft					
Total Based Aircraft:	17	17	17	17	0.00%

Source: FAA TAF, January 2024

PREVIOUS FORECASTS

Forecasts of aviation activity at E60 were previously prepared in the 2013 *Eloy Municipal Airport Master Plan* update and the 2018 SASP. **Table 2H** summarizes the forecasts of operations and based aircraft at E60 that were prepared for these studies. Due to the unknown long-term effects of the COVID-19 pandemic, the projections from the 2018 SASP and the previous master plan are no longer relevant; however, because the two aforementioned studies are the most recent local planning efforts for E60, these studies will be analyzed for the purposes of this master plan update.

TABLE 2H | Previous Forecasts – E60

Year	Itinerant Operations	Local Operations	Total Operations	Based Aircraft
2013 Eloy Municipal Airport Master Plan (2009 Base Year)				
2009	10,000	18,550	28,550	41
2014	10,600	20,300	30,900	50
2019	12,300	22,300	34,600	60
2029	16,500	29,000	45,500	100
2018 Arizona State Aviation System Plan Update (2016 Base Year)				
2016	11,430	21,220	32,650	21
2021	11,470	21,310	32,780	23
2026	11,520	21,390	32,910	26
2036	11,610	21,570	33,180	32

Sources: Eloy Municipal Airport Master Plan, 2013; Arizona State Aviation System Plan Update, 2018

The SASP projections were prepared more recently and account for the effects of the recession. The SASP forecasted operations to grow to 32,780 and based aircraft to increase to 23 by 2021. Current operations activity at E60 has not exceeded this figure; an estimated 30,000 annual operations are reported in the airport's FAA Form 5010, *Airport Master Record*, and the FAA's TAF. Current based aircraft have surpassed the SASP projections, as the existing based aircraft count at E60 is 42; however, this number is nearly consistent with the 2013 master plan update, which used a base year of 2009, at which time the airport reported 41 based aircraft. As a result of recent activity trends at E60 and



the time that has passed since the preparation of these previous forecasts, it is necessary to develop new forecasts that utilize the most recent information available and account for both recent and historical trends in local, regional, and national aviation activities.

GENERAL AVIATION FORECASTS

General aviation encompasses all portions of civil aviation, except commercial service and military operations. To determine the types and sizes of facilities that should be planned to accommodate general aviation activity at the airport, certain elements of this activity must be forecasted. These indicators of general aviation demand include based aircraft, aircraft fleet mix, operations, and annual operations.

The number of based aircraft at an airport is the most basic indicator of general aviation demand. By first developing a forecast of based aircraft for the airport, other demand indicators can be projected. The process of developing forecasts of based aircraft begins with an analysis of aircraft ownership in the primary general aviation service area through a review of historical aircraft registrations. An initial forecast of county-wide registered aircraft is developed and will be used as one data point to arrive at a based aircraft forecast for the airport.

BASED AIRCRAFT FORECAST

Forecasts of based aircraft may directly influence the needed facilities and applicable design standards. The needed facilities may include hangars, aprons, taxiways, etc. The applicable design standards may include separation distances and object-clearing surfaces. The sizes and types of based aircraft are also an important consideration. The addition of numerous small aircraft may have no effect on design standards, while the addition of a few larger business jets can have a substantial impact on applicable design standards.

Because of the numerous variables known to influence aviation demand, several separate forecasts of based aircraft are developed. Each forecast is then examined for reasonableness and any outliers are discarded or given less weight. The remaining forecasts collectively create a planning envelope. A single planning forecast is then selected for use in developing facility needs for the airport. The selected forecast of based aircraft can be one of the forecasts developed or a blend of the forecasts, based on the experience and judgement of the forecaster.

Registered Aircraft Forecast

Historical registered aircraft in Pinal County since 2004 are included in **Table 2J**. Aircraft registrations have grown from a low of 323 registrations in 2006 to 370 registrations reported in 2023. The historical peak was reached in 2009, when there were 430 aircraft registered in the county. Aircraft registration generally declined in the years following, likely due (in part) to the FAA's requirement that aircraft owners re-register their aircraft to retain U.S. civil aircraft status. As a result, previously registered aircraft that may have been sold, scrapped/destroyed, or registered to multiple addresses were dropped from the database.



TABLE 2J | Pinal County Registered Aircraft

Year	Single-Engine Piston	Multi-Engine Piston	Turboprop	Jet	Helicopter	UAV	Electric	Other	Total
2004	232	13	23	4	19	0	0	35	326
2005	240	14	22	3	19	0	0	37	335
2006	239	21	8	3	17	0	0	35	323
2007	262	22	12	4	16	0	0	48	364
2008	305	21	21	4	16	0	0	49	416
2009	314	17	24	15	16	0	0	44	430
2010	305	16	22	12	17	0	0	50	422
2011	306	13	24	12	17	0	0	50	422
2012	292	12	26	10	18	0	0	42	400
2013	270	13	24	0	13	0	0	37	357
2014	257	11	22	5	17	0	0	45	357
2015	258	12	22	4	17	2	0	45	360
2016	262	10	22	7	20	4	1	43	369
2017	260	11	20	5	19	7	2	43	367
2018	242	12	17	6	15	9	2	44	347
2019	241	12	18	5	19	12	0	42	349
2020	236	14	17	6	17	12	0	57	359
2021	251	11	16	14	15	12	0	58	377
2022	252	10	17	28	13	14	0	56	390
2023	260	9	11	26	14	0	0	50	370

Source: FAA Registered Aircraft, December 2023

Most registered aircraft in the county are grouped in the single-engine piston category. In 2023, 260 of the 370 county-registered aircraft (70 percent) were single-engine piston aircraft. The “other” category (which includes gliders, balloons, and experimental aircraft) comprised the next largest segment with 50 registrations, followed by 26 jet aircraft. There were also 14 helicopters, 11 turboprops, and nine multi-engine aircraft registered in the county. Like in most areas of the country, the decline in registered aircraft since 2009 is partially attributable to two primary factors: the impact of the 2007-2009 recession and the FAA’s re-registration process, which took place between 2010 and 2013. Now that the number of registered aircraft within the service area has been identified, several projections of future registered aircraft are considered for the 20-year planning horizon.

Different forecasting strategies were used to determine registered aircraft projections, including market share analysis and ratio projection methods. Several regression forecasts were also considered, including single- and multi-variable regressions that examined the correlation of registered aircraft with the service area population, employment, income, and gross regional product, and with U.S. active general aviation aircraft. None of the regressions produced a strong correlation (r^2 value over 0.95); therefore, the regression forecasts were not considered further.



Growth Rate Projections

Utilizing the last 20 years of registered aircraft data, as well as historical forecast efforts completed in the 2018 SASP, a series of growth rate projections were prepared and are presented in **Table 2K**.

TABLE 2K Registered Aircraft Projections – Growth Rates	
Year	Registered Aircraft
2004	326
2018	347
2023	370
20-Year Historical Growth Rate (0.64% CAGR)	
2028	382
2033	394
2043	420
5-Year Historical Growth Rate (1.29% CAGR)	
2028	395
2033	421
2043	478
SASP Statewide Based Aircraft Growth Rate (1.59% CAGR)	
2028	400
2033	433
2043	507

Source: Coffman Associates Analysis, December 2023

Over the past 20 years, registered aircraft in Pinal County have grown from 326 in 2004 to 370 in 2023, representing a compound annual growth rate (CAGR) of 0.64 percent. Applying this growth rate over the 20-year planning horizon results in a forecast of 420 registered aircraft by 2043. Similarly, a five-year growth rate projection was also prepared, which eliminates years (2013–2014) when there were lingering fluctuations due to the FAA changing aircraft registration requirements. The five-year growth rate projection results in 478 registered aircraft by 2043 and a CAGR of 1.29 percent.

Finally, the 2018 SASP statewide based aircraft growth rate has also been considered. By applying the SASP statewide growth rate to the existing registered aircraft in Pinal County over the 20-year planning horizon, a forecast emerges that yields 507 registered aircraft by 2043 and a CAGR of 1.59 percent.

Share of U.S. Active General Aviation Aircraft

The service area's registered aircraft count of 370 in 2023 represents approximately 0.177 percent of the U.S. active general aviation fleet of aircraft. If the service area maintained a constant market share, it would result in 383 registered aircraft by 2043 (0.17 percent CAGR). Given that the service area's market share of registered aircraft has been as high as 0.192 percent (in 2009), an increasing market share projection that considers a return to the higher range of the historical market share was prepared. The increasing projection rises to the 20-year market share high of 0.192 percent, which results in registered aircraft growing to 415 by 2043 (0.58 percent CAGR). The U.S. active general aviation aircraft market share projections are included in **Table 2L**.

**TABLE 2L | Registered Aircraft Projections – Market Share of U.S. Active GA Aircraft**

Year	Registered Aircraft	U.S. Active GA Aircraft	% of U.S. Active GA Aircraft
2004	326	219,319	0.149%
2005	335	224,257	0.149%
2006	323	221,942	0.146%
2007	364	231,606	0.157%
2008	416	228,664	0.182%
2009	430	223,876	0.192%
2010	422	223,370	0.189%
2011	422	220,453	0.191%
2012	400	209,034	0.191%
2013	357	199,927	0.179%
2014	357	204,408	0.175%
2015	360	210,031	0.171%
2016	369	211,794	0.174%
2017	367	211,757	0.173%
2018	347	211,749	0.164%
2019	349	210,981	0.165%
2020	359	204,140	0.176%
2021	377	209,194	0.180%
2022	390	209,140	0.186%
2023	370	209,095	0.177%
Constant Market Share (0.17% CAGR)			
2028	371	209,510	0.177%
2033	373	210,455	0.177%
2043	383	216,395	0.177%
Increasing Market Share (0.58% CAGR)			
2028	379	209,510	0.181%
2033	388	210,455	0.184%
2043	415	216,395	0.192%

Sources: FAA Aerospace Forecast, 2023-2043; Coffman Associates Analysis, December 2023

Ratio of Registered Aircraft to Population

The number of registered aircraft in an area often fluctuates based on population trends. In 2023, the service area (Pinal County) had 0.78 registered aircraft per 1,000 residents. Over the past 20 years, this ratio has decreased due to a growing population and a fluctuation in total registered aircraft. Two projections have been prepared: a constant ratio, which is based on maintaining the current ratio over the forecast period, and an increasing ratio, which returns to the 20-year historical average of 1.04. Maintaining the constant ratio (0.78) through 2043 results in 612 registered aircraft (2.55 percent CAGR). The increasing ratio projection results in 816 registered aircraft by 2043 (4.03 percent CAGR). **Table 2M** shows the projections utilizing the ratio of registered aircraft to Pinal County population.

**TABLE 2M | Registered Aircraft Projections – Ratio to Service Area Population**

Year	Registered Aircraft	Pinal County Population	Aircraft per 1,000 Residents
2004	326	219,472	1.49
2005	335	235,708	1.42
2006	323	271,328	1.19
2007	364	306,174	1.19
2008	416	335,311	1.24
2009	430	349,830	1.23
2010	422	379,106	1.11
2011	422	372,976	1.13
2012	400	372,095	1.07
2013	357	370,159	0.96
2014	357	375,010	0.95
2015	360	380,231	0.95
2016	369	386,483	0.95
2017	367	395,523	0.93
2018	347	405,418	0.86
2019	349	415,396	0.84
2020	359	429,446	0.84
2021	377	448,144	0.84
2022	390	464,154	0.84
2023	370	475,893	0.78
Constant Ratio Projection (2.55% CAGR)			
2028	421	539,193	0.78
2033	477	610,914	0.78
2043	612	784,243	0.78
Increasing Ratio Projection (4.03% CAGR)			
2028	455	539,193	0.84
2033	555	610,914	0.91
2043	816	784,243	1.04

Sources: Woods & Poole, 2023; Coffman Associates Analysis, December 2023

Registered Aircraft Forecast Summary

Table 2N summarizes the seven registered aircraft forecasts for the E60 service area.

TABLE 2N | Registered Aircraft Forecast Summary

Projection	2023	2028	2033	2043	CAGR 2023-2043
20-Year Historical Growth Rate	370	382	394	420	0.64%
5-Year Historical Growth Rate	370	395	421	478	1.29%
2018 SASP Growth Rate	370	400	433	507	1.59%
Constant % of U.S. Active Aircraft	370	371	373	383	0.17%
Increasing % of U.S. Active Aircraft	370	379	388	415	0.58%
Constant Aircraft/1000 Population	370	421	477	612	2.55%
Increasing Aircraft/1000 Population	370	455	555	816	4.03%

Boldface indicates selected forecast
CAGR = compound annual growth rate

Source: Coffman Associates Analysis, December 2023



Three of the seven forecasts resulted in a CAGR of less than one percent, which is not an unreasonable scenario based on recent history; however, over the past five years, registrations have grown since the end of 2018. Registrations are also up from 10-year historical lows, which is when the effects of the FAA's new aircraft registration requirements were most greatly felt. This provides some confidence that aircraft registrations may be stabilizing and have the potential to grow in the future, assuming population growth occurs as forecasted and economic conditions improve and grow.

In this analysis, a range of forecasted scenarios that create a planning envelope have been analyzed. Some scenarios, such as the ratio projections driven by significant projected population, represent the upper end of the planning envelope. Other trendlines examining the market share of U.S. active aircraft represent the lower end of the planning envelope. As such, the outliers are not considered further and the selected forecast will be based on historical registered aircraft growth trends within the service area. Due to the projected growth in population and employment along the I-10 corridor, as well as the projected increase in registered aircraft throughout the state, the five-year historical growth rate of registered aircraft will be carried forward as the selected forecast. This modestly optimistic forecast results in 395 registered aircraft in 2028, 421 in 2033, and 478 in 2043 with a CAGR of 1.29 percent.

Based Aircraft Inventory

Documentation of the historical number of based aircraft at the airport has been somewhat intermittent. Determining the number of based aircraft at an airport can be a challenging task. Aircraft storage can be somewhat transient in nature, meaning aircraft owners can and do move their aircraft. Some aircraft owners may store their aircraft at an airport for only part of the year. The FAA did not require airports to report based aircraft numbers until recently, with the establishment of a based aircraft inventory in which it is possible to cross-reference based aircraft claimed by one airport with other airports. The FAA now utilizes this based aircraft inventory as a baseline for determining how many and what types of aircraft are based at any individual airport. This database evolves daily as aircraft are added or removed. It is the responsibility of the sponsor (owner) of each airport to input based aircraft information into the FAA database (www.basedaircraft.com).

According to the FAA database, E60 has 32 based aircraft, a count that was last validated on April 10, 2017; however, airport and City of Eloy staff recently undertook a comprehensive physical count in November 2023 and identified 42 total based aircraft, which will serve as the base year count for forecasting purposes. Of the existing based aircraft, there are 27 single-engine piston aircraft, two multi-engine piston aircraft, and 13 turboprop aircraft. It should be noted that some of the existing based aircraft are physically located on airport property, and some are located off-airport on business property directly adjacent to the airport that maintains through-the-fence access to the airport. Airport records do not track how many based aircraft are considered on-airport versus off-airport. For planning purposes, there will be no delineation between aircraft located on Eloy Municipal Airport property and aircraft located on adjacent property because all of the aircraft utilize the runway/taxiway system, apron areas, fueling facilities, etc.



For the purposes of this master plan, historical based aircraft counts for E60 have been derived from the FAA TAF. These historical counts are often inconsistent with actual based aircraft counts unless they have been updated as part of a more focused planning effort, such as a master plan; however, the TAF is generally the most complete historical data set available, especially at smaller general aviation airports. Because a complete historical based aircraft record is not available from the airport sponsor, the base year count has been included from current airport records and the remaining historical record has been assembled from the FAA TAF.

Based Aircraft Forecast

Multiple projections (market share, ratio, and growth rate) have been created for based aircraft at Eloy Municipal Airport. The market share projection is based on the airport's percentage of based aircraft compared to registered aircraft in the service area, while the ratio projection is based on the number of based aircraft per 1,000 county residents. Growth rate projections are simply the application of a growth rate derived from historical data or another reliable study that could reasonably be carried forward into the future. The results of these analyses are detailed in **Table 2P**.

TABLE 2P | Based Aircraft Forecasts

Year	E60 Based Aircraft	Service Area Registrations	Market Share	Service Area Population	Aircraft per 1,000 Residents
2004	46	326	14.11%	219,472	0.210
2005	46	335	13.73%	235,708	0.195
2006	19	323	5.88%	271,328	0.070
2007	19	364	5.22%	306,174	0.062
2008	12	416	2.88%	335,311	0.036
2009	41	430	10.70%	349,830	0.131
2010	44	422	10.43%	379,106	0.116
2011	44	422	10.43%	372,976	0.118
2012	27	400	6.75%	372,095	0.073
2013	27	357	7.56%	370,159	0.073
2014	23	357	6.44%	375,010	0.061
2015	21	360	5.83%	380,231	0.055
2016	23	369	6.23%	386,483	0.060
2017	22	367	5.99%	395,523	0.056
2018	22	347	6.34%	405,418	0.054
2019	22	349	6.30%	415,396	0.053
2020	17	359	4.74%	429,446	0.040
2021	17	377	4.51%	448,144	0.038
2022	17	390	4.36%	464,154	0.037
2023	42	370	11.35%	475,893	0.088
Constant Market Share – Low Range (CAGR 1.29%)					
2028	45	395	11.35%	539,193	0.083
2033	48	421	11.35%	610,914	0.078
2043	54	478	11.35%	784,243	0.069

(Continues)

**TABLE 2P | Based Aircraft Forecasts (continued)**

Year	E60 Based Aircraft	Service Area Registrations	Market Share	Service Area Population	Aircraft per 1,000 Residents
Increasing Market Share – Mid Range (CAGR 2.26%)					
2028	47	395	11.95%	539,193	0.088
2033	53	421	12.55%	610,914	0.086
2043	66	478	13.75%	784,243	0.084
Increasing Market Share – High Range (CAGR 3.04%)					
2028	49	395	12.51%	539,193	0.092
2033	58	421	13.68%	610,914	0.094
2043	76	478	16.00%	784,243	0.098
Constant Ratio per 1,000 Residents (CAGR 2.51%)					
2028	47	395	12.01%	539,193	0.088
2033	54	421	12.77%	610,914	0.088
2043	69	478	14.44%	784,243	0.088
Historic Average Ratio per 1,000 Residents (CAGR 2.09%)					
2028	44	395	11.06%	539,193	0.081
2033	49	421	11.75%	610,914	0.081
2043	64	478	13.29%	784,243	0.081
System Plan Statewide Based Aircraft Growth Rate (CAGR 1.59%)					
2028	45	395	11.51%	539,193	0.73
2033	49	421	11.68%	610,914	0.69
2043	58	478	12.05%	784,243	0.61

Sources: Eloy Municipal Airport Records, December 2023; Arizona State Aviation System Plan; FAA TAF, 2024; Woods & Poole, CEDDS, 2023; Coffman Associates Analysis, December 2023

Based Aircraft Market Share of Registered Aircraft Forecast

Utilizing the forecast of registered aircraft in E60's primary service area, a market share forecast of based aircraft at E60 was developed. In 2023, the 42 based aircraft at E60 represented 11.35 percent of the aircraft registered in Pinal County. By maintaining this market share as a constant through the planning years, a forecast emerges that results in 54 based aircraft by 2043 (1.29 percent CAGR). An evaluation of historical based aircraft indicated that E60's market share has fluctuated over time but has captured market share as high as 14.11 percent over the past 20 years; therefore, two increasing market share projections were also prepared. The first is the Increasing Market Share – Mid Range projection, which assumes market share will grow back to a near historical high of 13.75 percent. This increasing market share projection results in 66 based aircraft by 2043 (2.26 percent CAGR). A second increasing market share projection was prepared that represents the high range of the forecast envelope. The Increasing Market Share – High Range projection considers market share increasing up to 16.00 percent, surpassing historical highs. This forecast yields 76 based aircraft by 2043 (3.04 percent CAGR). **Table 2P** presents the three market share projections.

Ratio Projections

Trends comparing the number of based aircraft with the airport's service area population were also analyzed and are presented in **Table 2P**. A constant ratio of based aircraft per 1,000 county residents results in based aircraft growing at the same rate as the service area population. This forecast yields 69



based aircraft by 2043 at a CAGR of 2.51 percent. Additionally, a ratio projection was prepared that considers a return to the 20-year historical average of 0.081 based aircraft per 1,000 county residents. This forecast results in 64 based aircraft by 2043 and a CAGR of 2.09 percent.

Growth Rate Projections

Because registered aircraft within the state are projected to grow over the planning period, a growth rate projection utilizing the SASP's 20-year CAGR of 1.59 percent for based aircraft within the State of Arizona has also been considered. As presented in **Table 2P**, when the 20-year CAGR is applied to E60 based aircraft, a forecast emerges that yields 58 based aircraft by 2043.

Regression Analysis

Several forecasts were prepared utilizing historical based aircraft data and the regression model. Correlations were examined utilizing independent variables, including population, employment, income, gross regional product (GRP), and U.S. active aircraft, as well as a time-series regression. The regression that produced the best correlation was the population regression, which had an r^2 value of 0.701. As described previously, correlation values over 0.95 indicate good predictive reliability; because none of the based aircraft regressions produced a correlation value over 0.95, the regression forecasts have been excluded from consideration.

Selected Based Aircraft Forecast

Selecting a based aircraft forecast is ultimately based on the judgement of the forecast analyst. A selected forecast should be reasonable and based on a sound methodology. The methodology presented in this analysis first examines the history of aircraft ownership in the service area (Pinal County). Utilizing the selected registered aircraft projection, a market share analysis was conducted based on maintaining a constant market share and increasing market share at different intervals over the forecast period. Additional forecasts considered the SASP's projection for based aircraft growth in the state, maintaining E60's current ratio of based aircraft per 1,000 county residents, and increasing to the 20-year historical average of based aircraft per 1,000 county residents. These six projections are summarized in **Table 2Q**.

TABLE 2Q | Based Aircraft Forecast Summary

Projection	2023	2028	2033	2043	CAGR 2023-2043
Constant Market Share – Low Range	42	45	48	54	1.29%
Increasing Market Share – Mid Range	42	47	53	66	2.26%
Increasing Market Share – High Range	42	49	58	76	3.04%
Constant Ratio per 1,000 Residents	42	47	54	69	2.51%
Historical Average Ratio per 1,000 Residents	42	44	49	64	2.09%
SASP Growth Rate Projection	42	45	49	58	1.59%
Boldface indicates selected forecast					
CAGR = compound annual growth rate					

Sources: FAA TAF, 2024; Eloy Municipal Airport Records, December 2023; Coffman Associates Analysis, December 2023



Future aircraft basing at the airport will depend on multiple factors, including the state of the economy, fuel costs, available facilities, competing airports, local airport activity trends, and hangar development potential. Forecasts assume a reasonably stable and growing economy, as well as reasonable development of airport facilities necessary to accommodate aviation demand. Competing airports will play a role in deciding demand; however, E60 should fare well in this competition, as it is served by a runway system that is capable of serving most general aviation aircraft, and it has comparable facilities to other general aviation airports within the service area.

Consideration must also be given to the current and future aviation conditions at the airport. E60 provides an array of aviation services and will continue to be favored by aviation operators due to its location and available facilities. As stated in Chapter One, a significant skydiving operation (SkyDive Arizona) currently bases its operation at E60, which can also introduce new based aircraft.

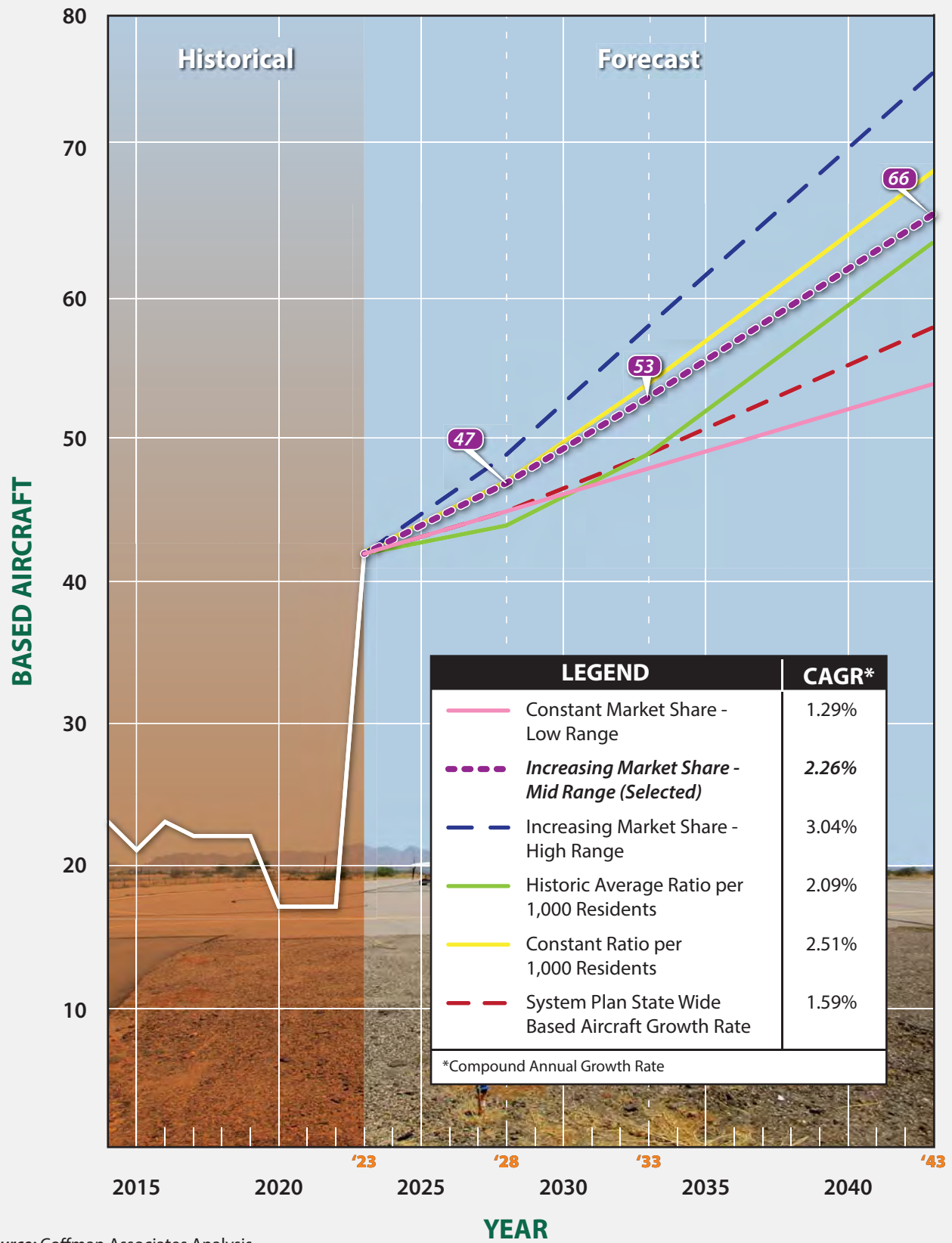
The potential for available hangar space is not the only factor in future based aircraft levels. Economic conditions within the service area are projected to increase at strong rates, which can support aviation and based aircraft growth. The Increasing Market Share – Mid Range projection has been selected as the preferred forecast. The selected forecast is reasonably optimistic and assumes that E60 can continue to gain a market share of registered aircraft in the county with expanded facilities, and that continued economic growth in the local area (particularly in relation to the I-10 corridor) will drive demand for more based aircraft. **Exhibit 2C** presents the six based aircraft forecasts that comprise the planning envelope and highlights the selected forecast for the purposes of this master plan.

BASED AIRCRAFT FLEET MIX FORECAST

It is important to understand the current and projected based aircraft fleet mix at an airport to ensure the planning of proper facilities. For example, the addition of one or several larger turboprop or business jet aircraft to the airfield could have a significant impact on the separation requirements and the various obstacle-clearing surfaces.

The current based aircraft fleet mix consists of 27 single-engine piston aircraft, two multi-engine piston aircraft, and 13 turboprops. As a local general aviation airport with a significant level of skydiving activities and proximity to an increasing commercial and industrial economic base, E60 should continue to have a diverse fleet mix, including small single-engine piston aircraft, turbine-powered aircraft, and helicopters. The forecasted growth trends in the E60 based aircraft fleet mix take FAA projections of the national general aviation fleet mix into consideration. Consistent with national aviation trends, growth is anticipated to occur within the more sophisticated categories, including the turboprop, jet, and helicopter categories.

On a local level, this growth is anticipated to be driven by continued operations by SkyDive Arizona, which primarily flies turboprop aircraft; housing demand and business attraction and expansion fueled by development along the I-10 corridor; the future North-South Corridor; and the widening of I-10 between Casa Grande and Phoenix. **Table 2R** presents the forecast fleet mix for based aircraft at E60.



Source: Coffman Associates Analysis

**TABLE 2R | Based Aircraft Fleet Mix**

Aircraft Type	2023	Percent	2028	Percent	2033	Percent	2043	Percent
SEP	27	64.3%	28	60.0%	30	56.0%	35	53.0%
MEP	2	4.8%	2	4.0%	1	2.0%	1	2.0%
Turboprop	13	31.0%	15	32.0%	18	34.0%	23	35.0%
Jet	0	0.0%	1	2.0%	2	4.0%	4	6.0%
Helicopter	0	0.0%	1	2.0%	2	4.0%	3	4.0%
Total:	42	100.0%	47	100.0%	53	100.0%	66	100.0%
MEP = multi-engine piston								
SEP = single-engine piston								

Sources: FAA Based Aircraft Registry; Coffman Associates Analysis, December 2023; Eloy Municipal Airport Records, December 2023

OPERATIONS FORECASTS

Operations at E60 are classified as either general aviation, air taxi, or military. General aviation operations include a wide range of activity, from recreational use and flight training to business and corporate uses. Air taxi operations are those conducted by aircraft operating under Federal Aviation Regulation (FAR) Part 135, otherwise known as for-hire or on-demand activity. Air taxi operations typically include commuter, air cargo, air ambulance, and many fractional ownership operations. (Fractional ownership operations are typically tied to business activity). Military operations are conducted by the branches of the U.S. military. Air carrier is an additional category of operation that is conducted by large aircraft with 60 or more passenger seats. Air carrier operations do not occur at E60 and are not included as part of the operations forecast.

Aircraft operations are further classified as local and itinerant. A local operation is a takeoff or landing performed by an aircraft operating within sight of an airport or executing simulated approaches or touch-and-go operations at an airport. Local operations are generally characterized by training activity. Itinerant operations are those performed by aircraft with specific origins or destinations away from an airport. Itinerant operations typically increase with business and commercial use because business aircraft are primarily used to transport passengers from one location to another.

The FAA TAF estimates operational levels for E60 at 30,000 total operations, and the forecast is a flatline at 30,000 operations through the planning horizon. The FAA recommends applying an approved forecast model specifically developed for small non-towered general aviation airports; *Model for Estimating General Aviation Operations at Non-Towered Airports Using Towered and Non-Towered Airport Data* (GRA, Inc. 2001) presents the methodology and formula for the model. Independent variables used in the model include airport characteristics, demographics, and geographic features. The model was derived using a combined data set for small towered and non-towered general aviation airports and incorporates a dummy variable to distinguish the two airport types. Specifically, the model utilizes the following variables:

- Based aircraft
- Percent of aircraft based at the airport among general aviation airports within 100 miles
- Number of FAR Part 141 flight training schools at the airport
- Current population within 100 miles
- Ratio of current population within 25 miles and within 100 miles



The model factors each of these variables so that both local and national factors are considered when estimating operations. The results of the model show an annual general aviation operations estimate of 30,342 for E60. Because the model for estimating annual operations at general aviation airports is roughly congruent with the current FAA TAF for E60, 30,000 annual operations will be utilized for the 2023 base year operational count.

Several methods have been employed to develop a reasonable planning envelope of future potential aircraft operations. The following sections present several new operations forecasts.

Market Share Projections

Market share analysis compares known historical and forecast data points to arrive at a trend for the unknown variable (E60 operations). The first forecast considers the current market share of general aviation (itinerant and local) and air taxi operations at the airport compared to the FAA national forecast for operations at towered airports.

In 2023, E60 accounted for 0.0298 percent of U.S. itinerant general aviation operations and 0.1716 percent of U.S. local general aviation operations. By carrying these percentages forward through the planning horizon for itinerant and local GA operations, a constant market share forecast emerges that yields 5,000 itinerant operations (0.53 percent CAGR) and 28,500 local operations (0.58 percent CAGR).

Table 2S shows the results.

The constant market share is considered a low-range projection, as historical data indicate that E60's market share has grown for each operational category over the past 10 years. The FAA TAF indicates that E60 currently experiences no air taxi operations; however, it is believed that limited air taxi activity currently occurs at the airport, but this information is anecdotal. PHI Air Medical presently has a helicopter stationed at E60 and conducts medical operations on a semi-regular basis, which qualifies as an air taxi operation. As such, the low-range air taxi market share projection considers up to 0.0035 percent market share and 200 air taxi operations by 2043.

To reflect historical trends, a mid-range increasing market share projection was prepared. The mid-range projection takes E60's 2043 market share of itinerant general aviation operations to 0.0575 percent, reflecting growth at a CAGR of 3.86 percent and 9,600 operations. E60's 2043 market share of local general aviation operations is taken to 0.2000 percent, which represents a CAGR of 1.35 percent and 33,200 operations by 2043. The 2043 market share of air taxi operations is taken to 0.0075 percent and represents growth at a CAGR of 18.42 percent and 500 air taxi operations. The results of these mid-range projections are also shown in **Table 2S**.

High-range increasing market share projections were also prepared, which consider the potential for operations to exceed the peak periods and growth rates of the past 10 years. The resulting projections take E60's 2043 market shares to 0.0700 percent (itinerant general aviation), 0.2500 percent (local general aviation), and 0.0150 percent (air taxi). The results of the high-range projections are shown in **Table 2S**.

**TABLE 2S | Operations Market Share Projections**

Year	GENERAL AVIATION ITINERANT			GENERAL AVIATION LOCAL			AIR TAXI		
	E60	U.S.	E60 Market %	E60	U.S.	E60 Market %	E60	U.S.	E60 Market %
2014	1,500	13,978,993	0.0107%	21,900	11,675,040	0.1876%	0	8,439,711	0.0000%
2015	1,500	13,887,203	0.0108%	21,900	11,691,338	0.1873%	0	7,895,478	0.0000%
2016	1,500	13,905,204	0.0108%	21,900	11,632,612	0.1883%	0	7,580,119	0.0000%
2017	4,500	13,839,151	0.0325%	25,400	11,732,324	0.2165%	0	7,179,651	0.0000%
2018	4,500	14,130,495	0.0318%	25,400	12,354,014	0.2056%	0	7,125,556	0.0000%
2019	4,500	14,244,787	0.0316%	25,400	13,109,215	0.1938%	0	7,234,239	0.0000%
2020	4,500	12,608,003	0.0357%	25,400	12,332,877	0.2060%	0	5,471,641	0.0000%
2021	4,500	13,774,861	0.0327%	25,400	13,479,087	0.1884%	0	5,884,738	0.0000%
2022	4,500	14,634,811	0.0307%	25,400	14,029,412	0.1810%	0	6,522,238	0.0000%
2023	4,500	15,077,947	0.0298%	25,400	14,801,816	0.1716%	0	6,039,538	0.0000%
Market Share – Low Range									
2028	4,800	16,068,000	0.0298%	27,100	15,768,000	0.1716%	70	6,073,202	0.0011%
2033	4,900	16,274,000	0.0298%	27,500	16,043,000	0.1716%	120	6,401,328	0.0019%
2043	5,000	16,704,000	0.0298%	28,500	16,622,000	0.1716%	200	7,105,068	0.0035%
CAGR	0.53%	–	–	0.58%	–	–	13.12%	–	–
Increasing Market Share – Mid Range									
2028	5,900	16,068,000	0.0368%	28,200	15,768,000	0.1787%	100	6,073,202	0.0021%
2033	7,100	16,274,000	0.0437%	29,800	16,043,000	0.1858%	200	6,401,328	0.0039%
2043	9,600	16,704,000	0.0575%	33,200	16,622,000	0.2000%	500	7,105,068	0.0075%
CAGR	3.86%	–	–	1.35%	–	–	18.42%	–	–
Increasing Market Share – High Range									
2028	6,400	16,068,000	0.0399%	30,100	15,768,000	0.1912%	200	6,073,202	0.0040%
2033	8,100	16,274,000	0.0499%	33,800	16,043,000	0.2108%	500	6,401,328	0.0076%
2043	11,700	16,704,000	0.0700%	41,600	16,622,000	0.2500%	1,100	7,105,068	0.0150%
CAGR	4.89%	–	–	2.50%	–	–	23.18%	–	–

CAGR = compound annual growth rate

Sources: U.S. Operations: FAA Aerospace Forecast, 2023-2043; Historical E60 Operations: FAA TAF, 2024; E60 Projections: Coffman Associates Analysis, December 2023

Statewide TAF and System Plan Growth Rate Forecast

FAA Order 5090.5, *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS) and the Airports Capital Improvement Plan (ACIP)*, provides a method for estimating future operations at airports by applying the statewide TAF growth rate. For all NPIAS airports in Arizona, the FAA projects an annual growth rate of 0.73 percent for itinerant general aviation operations and 0.68 percent for local general aviation operations in the state. Utilizing these growth rates to form projections takes E60's 2043 operations to 5,200 (itinerant general aviation) and 29,100 (local general aviation).

Finally, the 2018 SASP operations growth rate was considered. By applying the SASP growth rate of 0.08 percent for E60 to the current itinerant and local general aviation operations over the 20-year planning horizon, a forecast emerges that yields 4,570 itinerant and 25,800 local GA operations by 2043.

The statewide and SASP growth rates for air taxi operations were also considered; however, due to the lack of current air taxi operations reporting at E60, this methodology did not produce a favorable forecast.



General Aviation and Air Taxi Operations Forecast Summary

Table 2T summarizes each projection prepared for itinerant and local general aviation operations and air taxi operations at E60. The selected forecasts present a realistic approach to growth and anticipate moderate operations growth levels over the planning period.

TABLE 2T | Operations Forecast Summary

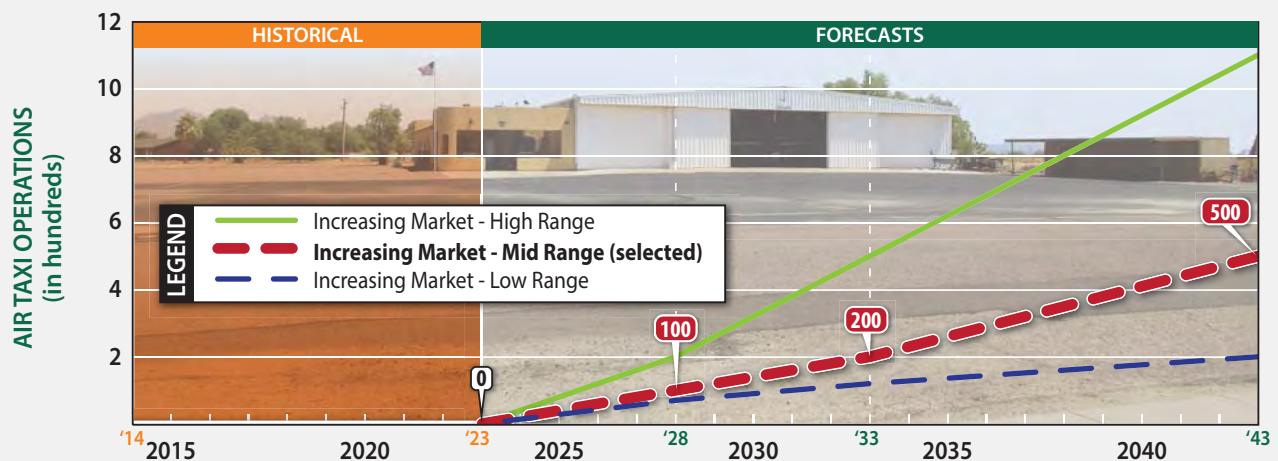
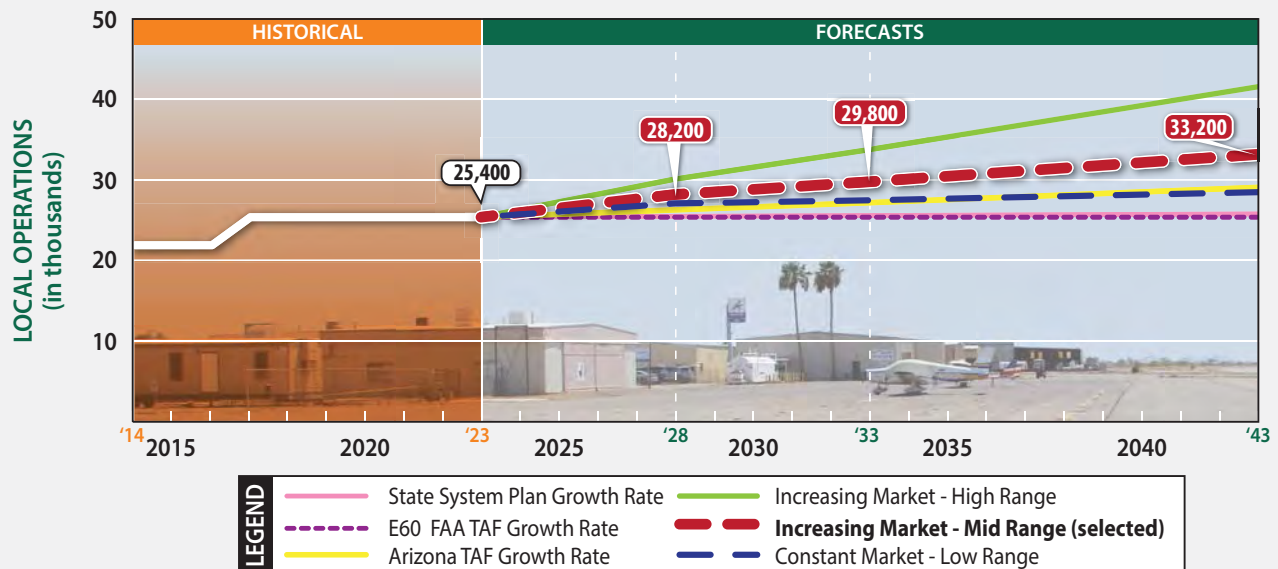
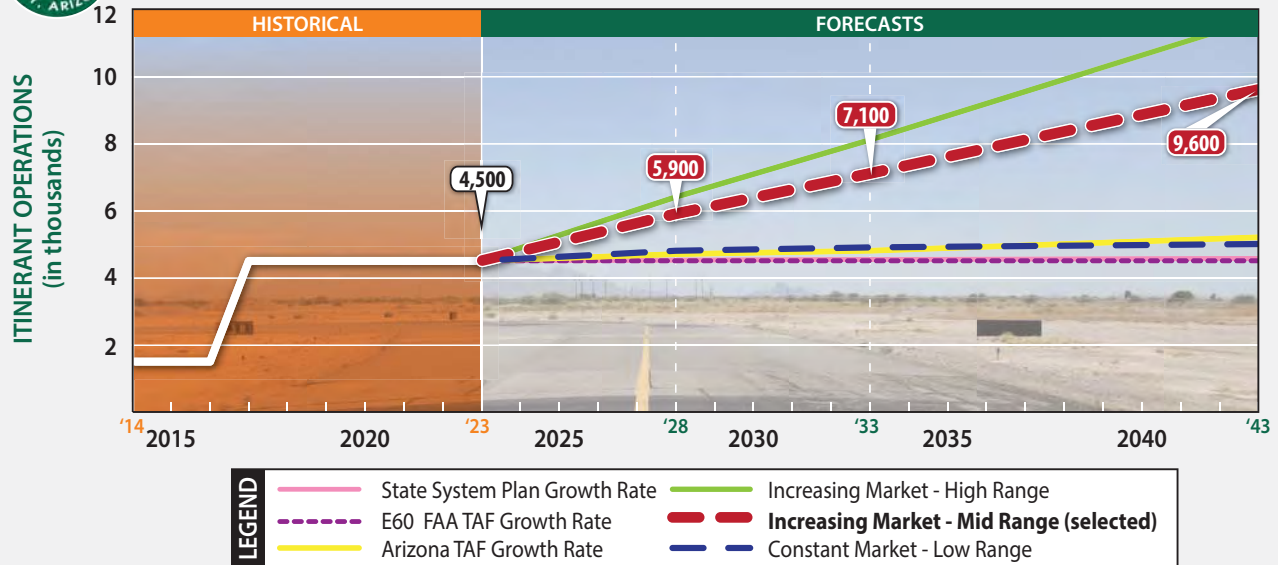
Projection	2023	2028	2033	2043	CAGR 2023-2043
Itinerant General Aviation					
Constant Market Share – Low Range	4,500	4,800	4,900	5,000	0.53%
Increasing Market Share – Mid Range	4,500	5,900	7,100	9,600	3.86%
Increasing Market Share – High Range	4,500	6,400	8,100	11,700	4.89%
Arizona 2023 TAF Growth Rate	4,500	4,700	4,800	5,200	0.73%
2018 SASP Growth Rate	4,500	4,520	4,540	4,570	0.08%
Local General Aviation					
Constant Market Share – Low Range	25,400	27,100	27,500	28,500	0.58%
Increasing Market Share – Mid Range	25,400	28,200	29,800	33,200	1.35%
Increasing Market Share – High Range	25,400	30,100	33,800	41,600	2.50%
Arizona 2023 TAF Growth Rate	25,400	26,300	27,200	29,100	0.68%
2018 SASP Growth Rate	25,400	25,500	25,600	25,800	0.08%
Air Taxi					
Market Share – Low Range	–	70	120	200	13.12%
Increasing Market Share – Mid Range	–	100	200	500	18.42%
Increasing Market Share – High Range	–	200	500	1,100	23.18%
Boldface indicates selected forecast					
CAGR = compound annual growth rate					

Source: Coffman Associates Analysis, December 2023

As previously stated, E60 is home to SkyDive Arizona, which is one of the nation's largest skydiving operations and supports local general aviation operations, along with other training activities. As discussed in the based aircraft section, there is clear demand for new based aircraft at E60, including small aircraft up to larger turboprop and jet aircraft, which would support itinerant general aviation and air taxi operations. In addition, a new hospital with a heliport is currently being constructed in the vicinity of E60. This could ultimately contribute to increased air taxi activity at the airport. For these reasons, the mid-range increasing market share projections of local and itinerant general aviation operations and air taxi operations have been selected. These projections are above the FAA TAF projections for E60 but are still within a reasonable range, considering the development potential of the airport. **Exhibit 2D** graphically represents the operations projections that comprise the planning envelope.

Military Operations Forecast

Military aircraft utilize civilian airports across the country. E60 occasionally experiences activity by military aircraft. Forecasts of military activity are inherently difficult to predict because of the national security nature of military operations and the fact that such missions can change without notice; thus,





it is typical for the FAA to use a flatline forecast for military operations. For E60, the FAA TAF projects itinerant and local military operations to remain static at 100 and zero, respectively, over the forecast period. These TAF estimates are also utilized for the master plan forecast.

Total Operations Forecast Summary

Table 2U presents the summary of the selected operations forecasts. The summary table details the culmination of each selected operations forecast. Over the planning horizon, total operations at E60 are projected to grow from 30,000 in 2023 to 43,400 by 2043 with a CAGR of 1.86 percent. It is anticipated that itinerant operations will comprise an increasing percentage of total operations over time. This can be attributed to trends in the based aircraft fleet mix forecast transitioning to more sophisticated turbine-powered aircraft, as well as business opportunities linked to local and regional economic development pursuits.

TABLE 2U | Total Operations Forecast Summary

Year	ITINERANT				LOCAL			Total Operations
	Air Taxi	General Aviation	Military	Total	General Aviation	Military	Total	
2023	0	4,500	100	4,600	25,400	0	25,400	30,000
2028	100	5,900	100	6,100	28,200	0	28,200	34,300
2033	200	7,100	100	7,400	29,800	0	29,800	37,200
2043	500	9,600	100	10,200	33,200	0	33,200	43,400
CAGR	36.44%	3.86%	0.00%	4.06%	1.35%	0.00%	1.35%	1.86%

Source: Coffman Associates Analysis, December 2023

PEAK PERIOD FORECASTS

Peaking characteristics serve an important role in determining airport capacity and facility requirements. Because E60 does not have a control tower, the generalized peaking characteristics of other non-towered general aviation airports have been used for the purposes of this master plan. The peaking periods used to develop the capacity analysis and facility requirements are described below.

- **Peak month** – the calendar month in which traffic activity is the highest
- **Design day** – the average day in the peak month, derived by dividing the peak month by the number of days in the month
- **Design hour** – the average hour within the design day
- **Busy day** – the busiest day of a typical week in the peak month

For the purposes of this study, the peak month for total operations was estimated at 10 percent of the annual operations. By 2043, the estimated peak month is projected to reach 4,340 operations. The design day is estimated by dividing the peak month by the number of days in the month (31), and the busy day is calculated at 1.25 times the design day. The design hour is then calculated at 15 percent of the design day. These projections are included in **Table 2V**.



TABLE 2V | Peak Period Forecasts

	2023	2028	2033	2043
Annual	30,000	34,300	37,200	43,400
Peak Month	3,000	3,430	3,720	4,340
Design Day	97	111	120	140
Design Hour	15	17	18	21
Busy Day	121	137	148	169

Source: Coffman Associates Analysis, December 2023

FORECAST SUMMARY

This chapter has outlined the anticipated activity levels that might reasonably be achieved over the planning period. **Exhibit 2E** presents a summary of the aviation forecasts prepared in this chapter. The base year for these forecasts is 2023 with a 20-year planning horizon to 2043. The primary aviation demand indicators are based aircraft and operations. Based aircraft are forecast to increase from 42 in 2023 to 66 by 2043 (2.26 percent CAGR). Total operations are forecast to increase from 30,000 in 2023 to 43,400 by 2043 (1.86 percent CAGR).

Projections of aviation demand will be influenced by unforeseen factors and events in the future; therefore, it is not reasonable to assume future demand will follow the exact projection line, but forecasts of aviation demand tend to fall within the planning envelope over time. The forecasts developed for this master planning effort are considered reasonable for planning purposes. The need for additional facilities will be based on these forecasts; however, the implementation of facility construction can be slower if demand does not materialize as projected. Likewise, if demand exceeds these forecasts, facility construction can be accelerated.

FORECAST COMPARISON TO THE TAF

The FAA reviews the forecasts presented in this planning study for comparison to the *Terminal Area Forecast* (TAF). The forecasts are considered consistent with the TAF if they meet one of the following criteria:

- The forecasts differ by less than 10 percent in the five-year forecast period and less than 15 percent in the 10-year forecast period;
- The forecasts do not affect the timing or scale of an airport project; or
- The forecasts do not affect the role of the airport, as defined in the current version of FAA Order 5090.5, *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS) and the Airports Capital Improvement Plan (ACIP)*.

If the forecasts exceed these parameters, they may be sent to the FAA Western-Pacific Region office in El Segundo, California, or FAA Headquarters in Washington, D.C., for further review. **Table 2W** presents the direct comparison of the master planning forecasts with the TAF published in January 2024.



	Base	Forecast		
	2023	2028	2033	2043
BASED AIRCRAFT				
Single-Engine Piston	27	28	30	35
Multi-Engine Piston	2	2	1	1
Turboprop	13	15	18	23
Jet	0	1	2	4
Helicopter	0	1	2	3
TOTAL BASED AIRCRAFT	42	47	53	66
OPERATIONS				
<i>Itinerant</i>				
Air Carrier	-	-	-	-
Air Taxi	-	100	200	500
General Aviation	4,500	5,900	7,100	9,600
Military	100	100	100	100
Subtotal	4,600	6,100	7,400	10,200
<i>Local</i>				
General Aviation	25,400	28,200	29,800	33,200
Military	-	-	-	-
Subtotal	25,400	28,200	29,800	33,200
TOTAL OPERATIONS	30,000	34,300	37,200	43,400
PEAKING				
Peak Month	3,000	3,430	3,720	4,340
Busy Day	121	137	148	169
Design Day	97	111	120	140
Design Hour	15	17	18	21

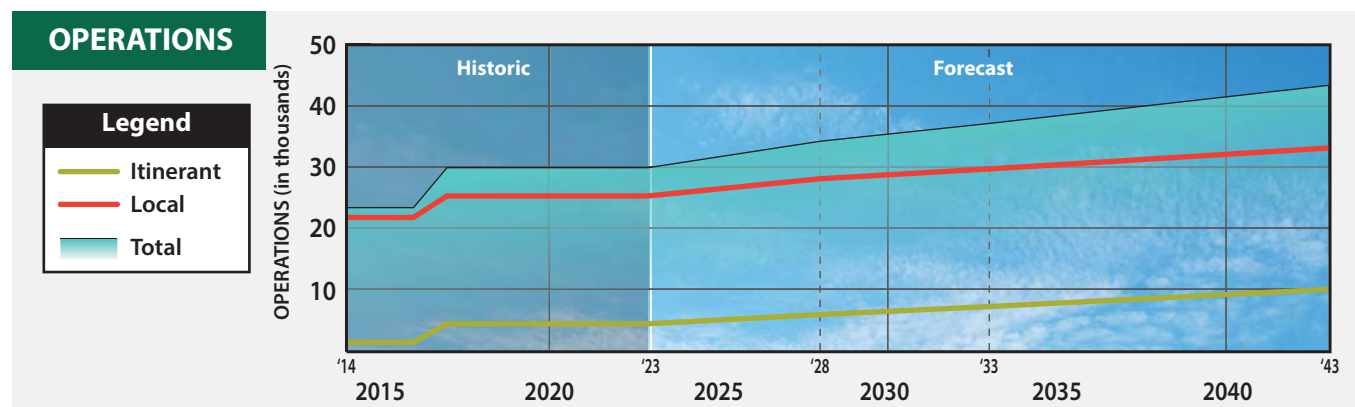
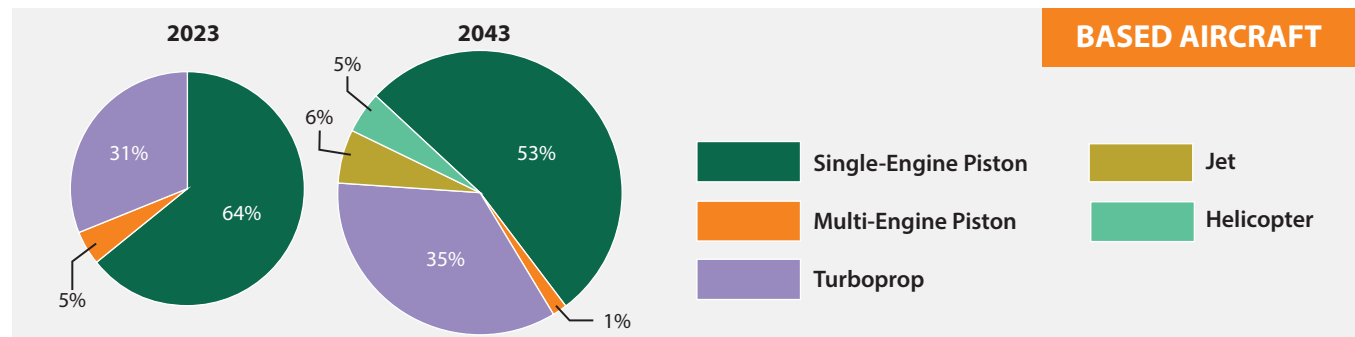


TABLE 2W | Forecast Comparison to the *Terminal Area Forecast*

	BASE YEAR	FORECAST		
	2023	2028	2033	2043
Operations				
Master Plan Forecast	30,000	34,300	37,200	43,400
2023 E60 TAF	30,000	30,000	30,000	30,000
% Difference	0.00%	13.37%	21.43%	36.51%
Based Aircraft				
Master Plan Forecast	42	47	53	66
2023 E60 TAF	17	17	17	17
% Difference	84.75%	93.75%	102.86%	118.07%

Source: FAA TAF, January 2024; Coffman Associates Analysis, December 2023

In examining the master plan and FAA TAF projections of operations, the master plan forecast differs from the TAF by 13.37 percent in the five-year forecast and 21.43 percent in the 10-year forecast. This is due to operations being flatlined in the TAF over the planning period, whereas the master plan predicts a modest level of growth in operations. For based aircraft, the TAF identifies a total of 17 based aircraft in 2023; however, current airport records for E60 indicate 42 based aircraft. As a result, the master plan base year count has an 84.75 percent difference compared to the TAF. Ultimately, the master plan based aircraft forecast differs from the TAF by 93.75 percent in the five-year forecast and 102.86 percent in the 10-year forecast. As noted previously, this is partially due to the TAF projecting no growth in based aircraft at E60 over the next 20 years, but also due to the discrepancy in the 2023 count of based aircraft between the master plan and the TAF; while airport records show 42 based aircraft, the TAF only reports 17, further contributing to the larger percentage outside tolerance.

AIRCRAFT/AIRPORT/RUNWAY CLASSIFICATION

The FAA has established several aircraft classification systems that group aircraft types based on their performance (approach speed in landing configuration) and design characteristics (wingspan and landing gear configuration). These classification systems are used to determine the appropriate airport design standards for specific airport elements, such as runways, taxiways, taxilanes, and aprons.

AIRCRAFT CLASSIFICATION

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily on the characteristics of the aircraft that are currently using or are expected to use an airport. The critical aircraft is used to define the design parameters for an airport. The critical aircraft may be a single aircraft type or a composite aircraft that represents a collection of aircraft with similar characteristics. The critical aircraft is classified by the parameters of three systems: aircraft approach category (AAC), airplane design group (ADG), and taxiway design group (TDG). FAA AC 150/5300-13B, *Airport Design*, describes the following airplane classification systems, the parameters of which are presented on **Exhibit 2F**.



AIRCRAFT APPROACH CATEGORY (AAC)

Category	Approach Speed
A	less than 91 knots
B¹	91 knots or more but less than 121 knots¹
C	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

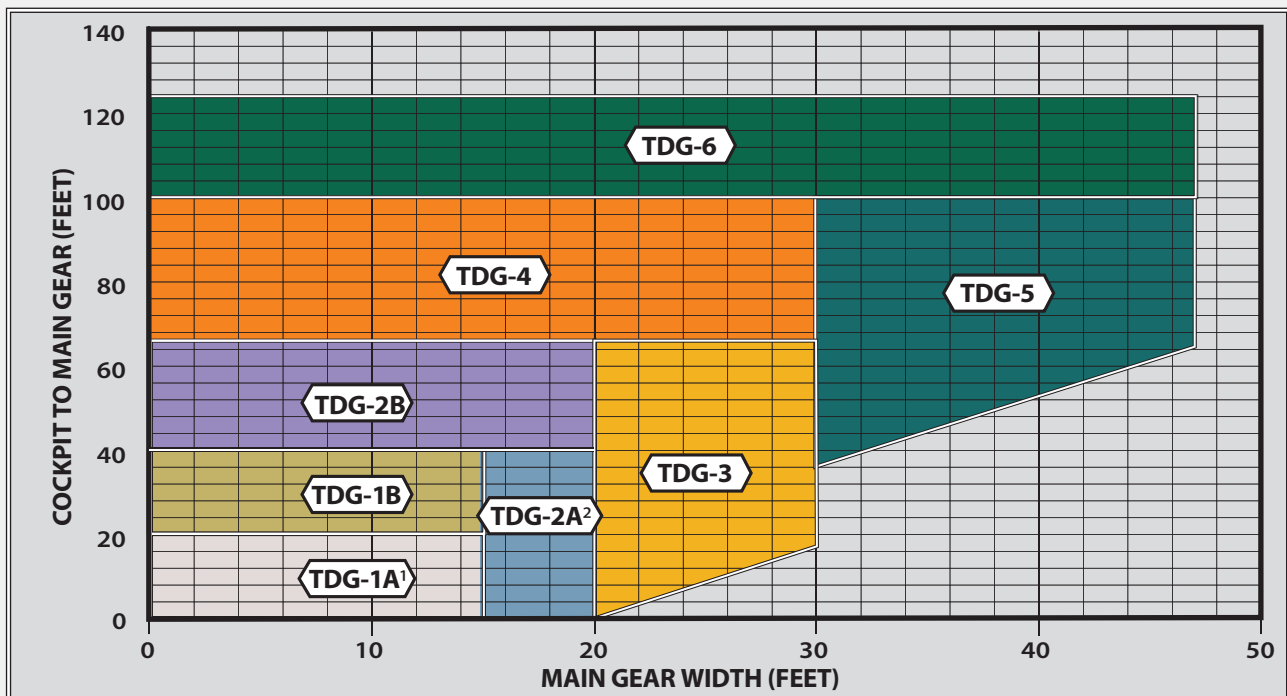
AIRPLANE DESIGN GROUP (ADG)

Group #	Tail Height (ft)	Wingspan (ft)
I	<20	<49
II¹	20≤30¹	49≤79¹
III	30≤45	79≤118
IV	45≤60	118≤171
V	60≤66	171≤214
VI	66≤80	214≤262

VISIBILITY MINIMUMS

RVR* (ft)	Flight Visibility Category (statute miles)
VIS¹	3-mile or greater visibility minimums¹
5,000²	Not lower than 1-mile²
4,000	Lower than 1-mile but not lower than ¾-mile
2,400	Lower than ¾-mile but not lower than ½-mile
1,600	Lower than ½-mile but not lower than ¼-mile
1,200	Lower than ¼-mile

TAXIWAY DESIGN GROUP (TDG)



*RVR: Runway Visual Range

¹ - Existing/Ulimate Condition

² - Ulimate Condition to be Considered



Aircraft Approach Category (AAC) | The AAC is a grouping of aircraft based on a reference landing speed (V_{REF}), if specified, or if V_{REF} is not specified, 1.3 times stall speed (V_{SO}) at the maximum certificated landing weight. V_{REF} , V_{SO} , and the maximum certificated landing weight are values established for the aircraft by the certification authority of the country of registry.

The AAC generally refers to the approach speed of an aircraft in landing configuration; the higher the approach speed, the more restrictive the applicable design standards will be. The AAC is depicted by a letter (A through E) and relates to aircraft approach speed (operational characteristics). The AAC generally applies to runways and runway-related facilities, such as runway width, runway safety area (RSA), runway object free area (ROFA), runway protection zone (RPZ), and separation standards.

Airplane Design Group (ADG) | The ADG, which is depicted by a Roman numeral (I through VI), is a classification of aircraft that relates to aircraft wingspan or tail height (physical characteristics). When the aircraft wingspan and tail height fall in different groups, the higher group is used. The ADG influences design standards for taxiway safety area (TSA), taxiway object free area (TOFA), taxilane object free area, apron wingtip clearance, and various separation distance standards.

Taxiway Design Group (TDG) | The TDG is a classification of airplanes based on outer-to-outer main gear width (MGW) and cockpit to main gear (CMG) distance. The TDG relates to the undercarriage dimensions of the critical aircraft. The TDG is classified by an alphanumeric system (1A, 1B, 2A, 2B, 3, 4, 5, 6, and 7). The taxiway design elements determined by the application of the TDG include taxiway width, taxiway edge safety margin, taxiway shoulder width, taxiway fillet dimensions, and (in some cases) the separation distance between parallel taxiways/taxilanes. Other taxiway elements – such as the taxiway safety area (TSA), taxiway/taxilane object free area (TOFA), taxiway/taxilane separation to parallel taxiway/taxilanes or fixed or movable objects, and taxiway/taxilane wingtip clearances – are determined solely based on the wingspan (ADG) of the critical aircraft utilizing those surfaces. It is appropriate for taxiways to be planned and built to different TDG standards based on expected use.

Exhibit 2G summarizes the classifications of the most common aircraft in operation today. Generally, recreational and business piston and turboprop aircraft will be included in AAC A and B, and ADG I and II. Business jets are typically included in AAC B and C, while the larger commercial aircraft are included in AAC C and D.

AIRPORT AND RUNWAY CLASSIFICATIONS

Along with the previously defined aircraft classifications, airport and runway classifications are used to determine the appropriate FAA design standards to which the airfield facilities should be designed and built.

Runway Design Code (RDC) | The RDC is a code that signifies the design standards to which the runway should be built. The RDC is based on planned development and has no operational component. The AAC, ADG, and runway visual range (RVR) are combined to form the RDC of a runway. The RDC provides the information needed to determine certain applicable design standards. The first component, depicted by a letter, is the AAC and relates to aircraft approach speed (operational characteristics).



A-I	Aircraft	TDG
	• Beech Baron 55	1A
	• Beech Bonanza	1A
	• Cessna 150, 172	1A
	• Eclipse 500	1A
	• Piper Archer, Seneca	1A

B-I	Aircraft	TDG
	• Beech Baron 58	1A
	• Beech King Air 90	1A
	• Cessna 421	1A
	• Cessna Citation CJ1 (525)	1A
	• Cessna Citation 1(500)	2
	• Embraer Phenom 100	1B

A/B-II ¹ 12,500 lbs. or less	Aircraft	TDG
	• Beech Super King Air 200	2
	• Cessna 441 Conquest	1A
	• Cessna Citation CJ2 (525A)	2
	• Pilatus PC-12	1A

B-II ¹ over 12,500 lbs.	Aircraft	TDG
	• Beech Super King Air 350	2
	• Cessna Citation CJ3(525B), Bravo (550), V (560)	2
	• Cessna Citation CJ4 (525C)1B	
	• Cessna Citation Latitude/Longitude	1B
	• Embraer Phenom 300	1B
	• Falcon 10, 20, 50	1B
	• Falcon 900, 2000	2
	• Hawker 800, 800XP, 850XP, 4000	1B
	• Pilatus PC-24	1B

A/B-III	Aircraft	TDG
	• Bombardier Dash 8	3
	• Bombardier Global 5000, 6000, 7000, 8000	2
	• Falcon 6X, 7X, 8X	2

¹ - Existing/Ultimate Condition

C/D-I	Aircraft	TDG
	• Lear 25, 31, 45, 55, 60	1B
	• Learjet 35, 36 (D-I)	1B

C/D-II	Aircraft	TDG
	• Challenger 600/604/800/850	1B
	• Cessna Citation VII, X+	1B
	• Embraer Legacy 450/500	1B
	• Gulfstream IV, 350, 450 (D-II)2	
	• Gulfstream G200/G280	1B
	• Lear 70, 75	1B

C/D-III less than 150,000 lbs.	Aircraft	TDG
	• Gulfstream V	2
	• Gulfstream G500, 550, 600, 650 (D-III)	2

C/D-III over 150,000 lbs.	Aircraft	TDG
	• Airbus A319-100, 200	3
	• Boeing 737 -800, 900, BBJ2 (D-III)	3
	• MD-83, 88 (D-III)	4

C/D-IV	Aircraft	TDG
	• Airbus A300-100, 200, 600	5
	• Boeing 757-200	4
	• Boeing 767-300, 400	5
	• MD-11	6

D-V	Aircraft	TDG
	• Airbus A330-200, 300	5
	• Airbus A340-500, 600	6
	• Boeing 747-100 - 400	5
	• Boeing 777-300	6
	• Boeing 787-8, 9	5



The second component, depicted by a Roman numeral, is the ADG and relates to either the aircraft wingspan or tail height (physical characteristics), whichever is more restrictive. The third component relates to the available instrument approach visibility minimums, expressed by RVR values in feet of 1,200 ($\frac{1}{8}$ mile), 1,600 ($\frac{1}{4}$ mile), 2,400 ($\frac{1}{2}$ mile), 4,000 ($\frac{3}{4}$ mile), and 5,000 (1 mile). The RVR values approximate standard visibility minimums for instrument approaches to runways. The third component is labeled “VIS” for runways that are designed for visual approach use only. The RDC for E60 is currently B-II-VIS.

Approach Reference Code (APRC) | The APRC is a code that signifies the current operational capabilities of a runway and associated parallel taxiway with regard to landing operations. The APRC has the same three components as the RDC: AAC, ADG, and RVR. The APRC describes the current operational capabilities of a runway under particular meteorological conditions where no special operating procedures are necessary, unlike the RDC, which is based on planned development with no operational component. The APRC for a runway is established based on the minimum runway-to-taxiway centerline separation. The APRCs for E60 are currently B/III/4000 and D/II/4000.

Departure Reference Code (DPRC) | The DPRC is a code that signifies the current operational capabilities of a runway and associated parallel taxiway with regard to takeoff operations. The DPRC represents those aircraft that can take off from a runway while any aircraft are present on adjacent taxiways, under particular meteorological conditions with no special operating conditions. The DPRC is similar to the APRC but has two components: AAC and ADG. A runway may have more than one DPRC, depending on the parallel taxiway separation distance. The DPRCs for E60 are currently B/III and D/II.

Airport Reference Code (ARC) | The ARC is an airport designation that signifies the airport’s highest runway design code (RDC) minus the third (visibility) component of the RDC. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely at an airport. The current airport layout plan (ALP) for E60 identifies the ARC as A-II.

CRITICAL AIRCRAFT

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily on the characteristics of the aircraft that currently use or are expected to use an airport. The critical aircraft is used to define the design parameters for an airport. The critical aircraft may be a single aircraft or a composite aircraft that represents a collection of aircraft classified by the three parameters: AAC, ADG, and TDG.

The first consideration is the safe operation of aircraft likely to use an airport. Any operation of an aircraft that exceeds the design criteria of an airport may result in a reduced safety margin; however, it is not the usual practice to base the airport design on an aircraft that uses the airport infrequently.

The critical aircraft is defined as the most demanding aircraft type, or grouping of aircraft with similar characteristics, that makes regular use of the airport. Regular use is 500 annual operations, excluding touch-and-go operations. Planning for future aircraft use is of importance because the design standards are used to plan separation distances between facilities. These future standards must be considered now to ensure that short-term development does not preclude the reasonable long-range potential needs of the airport.



According to FAA AC 150/5300-13B, *Airport Design*, “airport designs based only aircraft currently using the airport can severely limit the airport’s ability to accommodate future operations of more demanding aircraft. Conversely, it is not practical or economical to base airport design on aircraft that will not realistically use the airport.” Selection of the current and future critical aircraft must be realistic in nature and supported by current data and realistic projections.

AIRPORT CRITICAL AIRCRAFT

Three elements are used for classifying the airport critical aircraft: AAC, ADG, and TDG. The AAC and ADG are examined first, followed by the TDG.

The FAA’s Traffic Flow Management System Counts (TFMSC) database captures an operation when a pilot files a flight plan and/or when a flight is detected by the National Airspace System, usually via radar. The TFMSC includes documentation of commercial traffic (air carrier and air taxi), general aviation operations, and military operations. Due to certain factors – such as incomplete flight plans, limited radar coverage, and visual flight rules (VFR) operations – TFMSC data do not account for all aircraft activity at an airport by a specific aircraft type; however, the TFMSC provides an accurate reflection of instrument flight rules (IFR) activity. Operators of high-performance aircraft, such as turboprops and jets, tend to file flight plans at a high rate.

Exhibit 2H presents the TFMSC operational mix at the airport for turbine aircraft (turboprop and jet) operations for the last 10 years. As shown, the airport experiences some turboprop and business jet activity; however, no single aircraft or family of aircraft has been captured that conducts 500 or more operations at the airport. In 2022, the greatest number of operations in any single design family was 12 in ARC B-I, which accounted for approximately 32 percent of logged turbine aircraft activity. Historically, the B-II category has accounted for the majority of operations captured in TFMSC. Over the 10-year period, the B-II design category has averaged approximately 46 percent of the operations reported in the TFMSC. Representative aircraft in this category include the Cessna Citation family, the Beechcraft King Air 200/300/350, and the Short Skyvan SC-7.

Although no single category of aircraft captured within the TFMSC totals 500 annual operations or more at E60, it is anticipated that aircraft classified in the B-II category currently surpass this threshold, as there are currently nine based aircraft that fall within the ARC B-II category or greater. These aircraft include the Short Skyvan SC-7, Beechcraft C-45, Air Tractor AT-802, and Douglas DC-3. Furthermore, all of these aircraft (with the exception of the Air Tractor AT-802) are utilized by SkyDive Arizona to conduct high-frequency skydiving operations. This activity is unlikely to be captured in the TFMSC due to the nature of skydiving operations and the fact that IFR flight plans are generally not filed for this type of activity.

In the future, larger and more sophisticated jets and turboprops could operate more frequently at Eloy Municipal Airport. Nationally, the aircraft fleet is shifting to include more of these types of aircraft and fewer piston-powered aircraft. While single-engine pistons will likely continue to dominate operations at the airport over the short and intermediate terms, it is important to plan for increased operations by larger jet aircraft over the long term. Combined with regional and local economic growth potential



related to the widening of I-10 between Casa Grande and Phoenix, future employment development along the I-10 corridor, and future design and construction of the North-South Corridor, it is not unreasonable to assume these numbers will continue to trend upward in the coming years, and it is prudent to plan facilities to accommodate this type of aircraft now. As such, the existing and ultimate critical aircraft for E60 has been determined to fall within ARC B-II, a category that encompasses a wide array of business and turboprop aircraft.

Airport Critical Aircraft Summary

The current aircraft approach category is B and the current airplane design group is II. Over the last 10 years, the most active B-II airplane at E60 has been the Short Skyvan SC-7, which is a TDG 1A aircraft; therefore, the current airport critical aircraft is classified as B-II-1A. The future airport critical aircraft is planned to transition to B-II-2A, represented by mid-sized turboprop business jet aircraft, such as the Beechcraft King Air 350 and Cessna Citation business jet family.

RUNWAY DESIGN CODE

The RDC relates to specific FAA design standards that should be met in relation to a runway. The RDC takes the AAC, ADG, and the RVR into consideration. In most cases, the critical aircraft will also be the RDC for the primary runway.

Runway 2-20 should be designed to accommodate the overall airport critical aircraft, which has been identified as B-II-1A. The runway is 3,901 feet long and 75 feet wide. At present, Runway 2-20 is not served by any instrument approaches. Based on current activity, the existing RDC is B-II-VIS. Because the airport is anticipated to serve more sophisticated ARC B-II aircraft in the future, the ultimate RDC for Runway 2-20 is planned to transition to B-II-5000, with the potential for an instrument approach procedure serving the runway environment. The possibility for and imposed design impacts of potential instrument approaches serving Runway 2-20 will be further evaluated in Chapters Three and Four of this master plan.

APPROACH AND DEPARTURE REFERENCE CODES

The approach and departure reference codes (APRC and DPRC) describe the current operational capabilities of each runway and the adjacent parallel taxiways, where no special operating procedures are necessary; essentially, the APRC and DPRC describe the current conditions at an airport in runway classification terms when considering the parallel taxiway.

The parallel taxiway for Runway 2-20 is located 300 feet from the runway (centerline to centerline). Based on this separation distance and the existing visual approaches associated with the runway, the APRCs for Runway 2-20 are B/III/4000 and D/II/4000, and its DPRCs are B/III and D/II.



ARC	Aircraft	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A-I	Beech Turbine Duke	0	0	0	0	0	0	0	0	0	2
	Diamond DA 20/40/Twinstar	0	2	0	0	0	0	0	0	0	0
	Epic Dynasty	0	0	0	0	2	0	0	0	0	2
	Lancair Evolution/Legacy	0	0	0	0	4	0	0	2	2	6
	Piper Malibu/Meridian	28	26	32	14	22	16	10	0	4	0
	Socata TBM 7/850/900	0	0	0	2	4	2	0	0	0	0
	Total	28	28	32	16	32	18	10	2	6	10
A-II	Cessna Caravan	0	2	0	2	0	0	0	0	2	2
	De Havilland Twin Otter	6	16	12	4	4	16	2	2	0	0
	Pilatus PC-12	2	2	0	0	0	0	0	0	0	6
	Total	8	20	12	6	4	16	2	2	2	8
B-I	Cessna 425 Corsair	0	0	0	0	0	2	0	0	0	0
	Citation CJ1	0	0	0	0	0	0	0	2	4	0
	Citation Mustang	0	0	0	0	0	2	4	2	0	0
	Honda Jet	0	0	0	0	2	0	0	0	0	0
	King Air 90/100	10	2	28	22	4	10	6	2	10	12
	Phenom 100	0	2	0	0	0	0	0	0	0	0
	Piper Cheyenne	0	0	4	0	0	0	0	2	0	0
	Total	10	4	32	22	6	14	10	8	14	12
B-II	Aero Commander 690	0	2	0	0	0	0	0	0	2	0
	Cessna Conquest	0	0	0	0	0	2	0	2	0	0
	Citation II/SP/Latitude	0	0	0	0	2	0	0	0	0	0
	Dornier 328	0	0	6	0	0	0	0	0	0	0
	King Air 200/300/350	4	8	4	6	10	6	8	2	2	0
	Phenom 300	0	0	0	2	0	0	0	0	0	0
	Shorts 330/360	0	2	0	0	0	4	0	0	0	0
	Shorts Skyvan	64	78	12	32	42	22	22	12	8	8
	Total	68	90	22	40	54	34	30	16	12	8
C-IV	C-130 Hercules	0	0	0	2	0	0	0	0	0	0
	Total	0	0	0	2	0	0	0	0	0	0



AIRPORT REFERENCE CODE (ARC) SUMMARY

ARC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A-I	28	28	32	16	32	18	10	2	6	10
A-II	8	20	12	6	4	16	2	2	2	8
B-I	10	4	32	22	6	14	10	8	14	12
B-II	68	90	22	40	54	34	30	16	12	8
C-IV	0	0	0	2	0	0	0	0	0	0
Total	114	142	98	86	96	82	52	28	34	38

AIRCRAFT APPROACH CATEGORY (AAC)

AAC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A	36	48	44	22	36	34	12	4	8	18
B	78	94	54	62	60	48	40	24	26	20
C	0	0	0	2	0	0	0	0	0	0
Total	114	142	98	86	96	82	52	28	34	38

AIRPLANE DESIGN GROUP (ADG)

ADG	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
I	38	32	64	38	38	32	20	10	20	22
II	76	110	34	46	58	50	32	18	14	16
IV	0	0	0	2	0	0	0	0	0	0
Total	114	142	98	86	96	82	52	28	34	38

Source: TFMSC 1/1/2013 thru 12/31/2022, Data normalized annually



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AIRPORT AND RUNWAY CLASSIFICATION SUMMARY

Table 2X summarizes the current and future airport and runway classification. The critical aircraft is now defined by aircraft in ARC B-II and is expected to remain ARC B-II in the future.

TABLE 2X | Airport and Runway Classifications

	Runway 2-20	
	Existing	Ultimate
Airport Reference Code (ARC)	B-II	B-II
Airport Critical Aircraft	B-II-1A	B-II-2A
Critical Aircraft (Typ.)	Short Skyvan SC-7	Citation Encore
Runway Design Code (RDC)	B-II-VIS	B-II-5000
Approach Reference Code (APRC)	B/III/4000; D/II/4000	B/III/4000; D/II/4000
Departure Reference Code (DPRC)	B/III; D/II	B/III; D/II
Taxiway Design Group (TDG)	1A	2A

Sources: FAA AC 150/5300-13B, *Airport Design*; Coffman Associates Analysis, December 2023

SUMMARY

This chapter has outlined the various activity levels that might reasonably be anticipated to occur over the 20-year planning period, as well as the critical aircraft designated for E60. Based aircraft are forecast to grow from 42 in 2023 to 66 by 2043. Operations are forecast to grow from 30,000 in 2023 to 43,400 by 2043. The projected growth is driven by the FAA's positive outlook for general activity nationwide, as well as a positive outlook for socioeconomic growth (population, employment, and income/GRP) in south central Pinal County and the City of Eloy, as identified in Chapter One.

The critical aircraft for the airport was determined by examining the existing based aircraft, aircraft frequently utilized by SkyDive Arizona, and the FAA TFMSC database of flight plans. The current critical aircraft is described as B-II-1A and is best represented by the Short Skyvan SC-7, a twin-engine turboprop. The future critical aircraft is projected to transition to B-II-2A, with the Citation Encore serving as the representative aircraft.

The next step in the planning process is to assess the capabilities of the existing facilities to determine what upgrades may be necessary to meet the future demands at E60. This range of forecasts will be carried forward as an important foundational component of the next chapter. These forecasts will serve as planning horizon activity levels, which serve as milestones or activity benchmarks in evaluating existing facility requirements and determining future facility requirements at Eloy Municipal Airport. The previous airport master plan, which was completed in 2013, explored the possibility of a runway extension to 5,200 feet to better serve more sophisticated turbine-powered aircraft. Existing and ultimate design considerations for the runway and taxiway system at E60 will be evaluated in detail in the next chapter of this master plan.

3

Chapter

Facility Requirements



Chapter 3

Facility Requirements

Proper airport planning requires the translation of forecasted aviation demand into the specific types and quantities of facilities that can adequately serve the identified demand. This chapter will analyze the existing capacities of the facilities at Eloy Municipal Airport (E60). The existing capacities will then be compared to the forecasted activity levels prepared in Chapter Two to determine the adequacy of the existing facilities and to identify if deficiencies currently exist or may be expected to materialize in the future. This chapter presents the following elements:

- Planning horizon activity levels
- Airfield capacity
- Airport physical planning criteria
- Airside and landside facility requirements

The objective of this effort is to identify (in general terms) the adequacy of existing airport facilities, outline **what** new facilities may be needed, and determine **when** these may be needed to accommodate the forecasted demand. After these facility requirements are established, alternatives for providing these facilities will be evaluated to determine the most practical, cost-effective, and efficient means for implementation.

The facility requirements for E60 were evaluated using guidance contained in several Federal Aviation Administration (FAA) publications, including the following:

- Advisory Circular (AC) 150/5300-13B, *Airport Design*
- AC 150/5060-5, *Airport Capacity and Delay*
- AC 150/5325-4B, *Runway Length Requirements for Airport Design*
- Federal Aviation Regulation (FAR) Part 77, *Objects Affecting Navigable Airspace*
- FAA Order 5090.5, *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS) and the Airports Capital Improvement Plan (ACIP)*



DEMAND-BASED PLANNING HORIZONS

An updated set of aviation demand forecasts for E60 has been established and was detailed in Chapter Two. These activity forecasts include annual aircraft operations, based aircraft, aircraft fleet mix, and aircraft operations peaking characteristics. With this information, specific components of the airfield and landside system can be evaluated to determine their existing capacity and ability to accommodate future demand.

Cost-effective, efficient, and orderly development of an airport should rely more on actual aviation-related demand at an airport than on a time-based forecast. In order to create a demand-based, rather than time-based, update to the E60 master plan, a series of planning horizon milestones has been established that takes into consideration the reasonable range of aviation demand projections. These planning horizons are the short term (years 1-5), the intermediate term (years 6-10), and the long term (years 11-20).

It is important to consider that the actual activity at the airport may be higher or lower than what the annualized forecast portrays. By planning according to activity milestones, the resultant plan can accommodate unexpected shifts or changes in the area's aviation demand by allowing airport management the flexibility to make decisions and develop facilities based on needs generated by actual demand levels. The demand-based schedule provides flexibility in development, as development schedules can be decelerated or accelerated according to demand at any given time over the planning period. The resultant plan provides City of Eloy staff with a financially responsible and needs-based program. **Table 3A** presents the short-, intermediate-, and long-term planning horizon milestones for each aircraft activity level forecasted in Chapter Two.

TABLE 3A | Aviation Demand Planning Horizons

	Base Year (2023)	Short Term (1-5 Years)	Intermediate Term (6-10 Years)	Long Term (11-20 Years)
BASED AIRCRAFT				
Single-Engine	27	28	30	35
Multi-Engine	2	2	1	1
Turboprop	13	15	18	23
Jet	0	1	2	4
Helicopter	0	1	2	3
Total Based Aircraft:	42	47	53	66
ANNUAL OPERATIONS				
Itinerant				
Air Carrier	–	–	–	–
Air Taxi	–	100	200	500
General Aviation	4,500	5,900	7,100	9,600
Military	100	100	100	100
Total Itinerant Operations	4,600	6,100	7,400	10,200
Local				
General Aviation	25,400	28,200	29,800	33,200
Military	–	–	–	–
Total Local Operations	25,400	28,200	29,800	33,200
Total Operations:	30,000	34,300	37,200	43,400

Source: Coffman Associates Analysis, April 2024



AIRFIELD CAPACITY

An airport's airfield capacity is expressed in terms of its annual service volume (ASV). ASV is a reasonable estimate of the maximum level of aircraft operations that can be accommodated in a year without incurring significant takeoff or landing delay factors. As aircraft operations approach or surpass the ASV, delay factors increase exponentially. E60's ASV was examined utilizing FAA AC 150/5060-5, *Airport Capacity and Delay*.

FACTORS AFFECTING ANNUAL SERVICE VOLUME

This analysis takes into account specific airfield components in order to calculate the airport's ASV. These various components (airfield layout, weather conditions, aircraft mix, and operations) are depicted on **Exhibit 3A**. The following describes these components as they relate to E60.

- **Runway Configuration** | The existing airfield configuration consists of a single runway supported by a full-length parallel taxiway. Runway 2-20 is oriented SW/NE and is 3,901 feet long and 75 feet wide.
- **Runway Use** | Runway use to determine capacity conditions is controlled by wind and/or airspace conditions. For E60, the direction of takeoffs and landings is typically determined by the speed and direction of the wind. It is generally safest for aircraft to take off and land into the wind, avoiding a crosswind (wind blowing perpendicular to the travel of the aircraft) or tailwind components during these operations. Wind conditions dictate the use of Runway 2 approximately 30.6 percent of the time, while Runway 20 is used approximately 34.1 percent of the time. Calm wind conditions are present approximately 35.3 percent of the time. When calm wind conditions of 10 knots or less occur, aircraft are instructed to depart to the southwest on Runway 2 and land from the northeast on Runway 20.
- **Exit Taxiways** | Exit taxiways have a significant impact on airfield capacity because the number and locations of exits directly determine the occupancy time of an aircraft on the runway. The airfield capacity analysis gives credit to taxiway exits located within the prescribed range from a runway's threshold. This range is based on the mix index of the aircraft that use the runways. Based on aircraft mix, only exit taxiways between 2,000 feet and 4,000 feet from the landing threshold count in the exit rating at E60. The exits must be at least 750 feet apart to count as separate exit taxiways. Utilizing these criteria, each runway is credited with one exit taxiway. For Runway 2, Taxiway E is located approximately 3,900 feet from the runway end; for Runway 20, Taxiway B is located approximately 3,900 feet from the runway end.
- **Weather Conditions** | Weather conditions can have a significant impact on airfield capacity. Airport capacity is usually highest in clear weather when flight visibility is at its best. Airfield capacity is diminished as weather conditions deteriorate and cloud ceilings and visibility are reduced. As weather conditions deteriorate, the spacing of aircraft must increase to provide allowable margins of safety and air traffic vectoring. The increased distance between aircraft reduces the number of aircraft that can operate at the airport during any given period, thus reducing overall airfield capacity.



AIRFIELD LAYOUT

Runway Configuration



Runway Use



Number of Exits

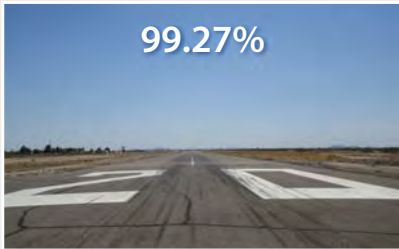


WEATHER CONDITIONS

VMC (VFR)

Visual Meteorological Conditions

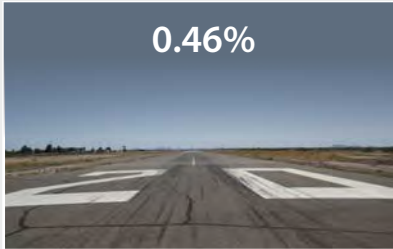
99.27%



IMC (IFR)

Instrument Meteorological Conditions

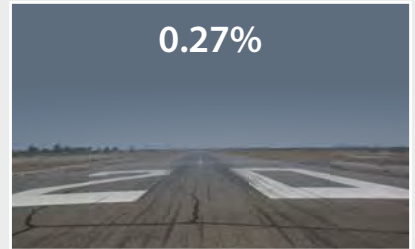
0.46%



PVC

Poor Visibility Conditions

0.27%



AIRCRAFT MIX

Category A & B Aircraft



Category C Aircraft



Category D Aircraft



OPERATIONS

Arrivals



Departures



Total Annual Operations



Touch-and-Go Operations





According to local meteorological data, E60 operates under visual meteorological conditions (VMC) approximately 99.27 percent of the time. VMC exist whenever the cloud ceiling is greater than 1,000 feet above ground level (AGL) and visibility is greater than three statute miles. Instrument meteorological conditions (IMC) are defined when cloud ceilings are between 500 and 1,000 feet AGL or visibility is between one and three miles. Poor visibility conditions (PVC) apply for cloud ceilings below 500 feet and visibility minimums below one mile. **Table 3B** summarizes the weather conditions experienced at the airport over a 10-year period of time.

TABLE 3B | Weather Conditions

Condition	Cloud Ceiling	Visibility	Percent of Total
VMC	≥ 1,000' AGL	≥ 3 statute miles	99.27%
IMC	≥ 500' AGL and < 1,000' AGL	≥ 1 to < 3 statute miles	0.46%
PVC	< 500' AGL	< 1 statute mile	0.27%

AGL = above ground level
IMC = instrument meteorological conditions
PVC = poor visibility conditions
VMC = visual meteorological conditions

Source: Eloy Municipal Airport, AZ Station ID72274803914, observations from January 1, 2013, through December 31, 2022

- **Aircraft Mix** | The aircraft mix for the capacity analysis is defined in terms of four aircraft classifications. Classes A and B consist of small- and medium-sized propeller and some jet aircraft that all weigh 12,500 pounds or less. These aircraft classifications are associated primarily with general aviation activity but include some air taxi activity. Class C consists of aircraft that weigh between 12,500 pounds and 300,000 pounds. These aircraft include most business jets and some turboprop aircraft that utilize the airport on a regular basis. Class D consists of aircraft that weigh more than 300,000 pounds.

The majority of operations at E60 are conducted by aircraft in Classes A and B. It is anticipated that operations at E60 will continue to be conducted primarily by Class A and B aircraft, with some operations by Class C aircraft in the future. No operations by Class D aircraft are expected through the long-term planning horizon of this master plan update.

- **Percent Arrivals** | The percentage of arrivals as they relate to total operations of the airport is important in determining airfield capacity. Under most circumstances, the lower the percentage of arrivals, the higher the hourly capacity will be. The aircraft arrival/departure percentage split is typically 50/50, which is the case at E60.
- **Touch-and-Go Activity** | A touch-and-go operation involves an aircraft making a landing and then an immediate takeoff without coming to a full stop or exiting the runway. As previously discussed in Chapter Two, these operations are normally associated with general aviation training activity and are classified as local operations. A high percentage of touch-and-go traffic normally results in a higher operational capacity because one landing and takeoff occurs within a shorter time period than an individual operation. Touch-and-go operations at E60 accounted for approximately 85 percent of total annual operations in 2023. This percentage is anticipated to decrease slightly through the planning horizon, as itinerant operations tied to local business growth are expected to increase through the long term.



- **Peak Period Operations** | Average daily operations and average peak hour operations during the peak month are utilized for the airfield capacity analysis. Operations activity is important in the calculation of an airport's ASV because peak demand levels occur sporadically. The peak periods used in the capacity analysis are representative of normal operational activity and can be exceeded at various times throughout the year.

CAPACITY ANALYSIS CONCLUSION

Given the factors outlined above, the airfield's ASV will range between 200,000 and 230,000 annual operations. The ASV does not indicate a point of absolute gridlock for the airfield; however, it represents the point at which operational delay for each aircraft operation will increase exponentially.

It is estimated that E60 experienced approximately 30,000 annual operations in 2023. This operational level for the airport represents approximately 13 percent of the airfield's ASV if the ASV is considered at the high end of the typical range of 230,000 annual operations. By the end of the long-term planning period, 43,400 total annual operations are expected to represent nearly 20 percent of the airfield's ASV.

FAA Order 5090.3C, *Field Formulation of the National Plan of Integrated Airport Systems*, indicates that improvements for airfield capacity purposes should be considered when operations reach 60 to 75 percent of the ASV. This is an approximate level to begin the detailed planning of capacity improvements. When 80 percent of the ASV is reached, capacity improvement projects should become higher-priority capital improvements. According to this analysis, operations levels at E60 will reach nearly 20 percent of the ASV by the long-term planning period. That level does not warrant significant capacity improvements; however, options to improve airfield efficiency (such as additional exit taxiways) will still be considered as part of this master plan.

AIRSIDE FACILITY REQUIREMENTS

Airside facilities include those facilities related to the arrival, departure, and ground movement of aircraft. Airside facility requirements are based primarily on the runway design code (RDC) for each runway. Analysis in Chapter Two identified the existing RDC for Runway 2-20 as B-II-VIS and the future RDC as B-II-5000. It should be noted that E60 largely meets the design standards for the future RDC. Any improvements necessary to meet RDC B-II-5000 design standards are detailed below.

RUNWAYS

In this chapter, the adequacy of the existing runway at E60 is analyzed from a number of perspectives related to adherence to safety area standards. Runway conditions (such as orientation, length, width, and pavement strength) were analyzed at E60, and requirements for runway improvements were determined for the airport from this information.



Runway Orientation

Key considerations in the runway configuration of an airport involve the orientation for wind coverage and the operational capacity of the runway system. FAA AC 150/5300-13B, *Airport Design*, recommends that a crosswind runway should be made available when the primary runway orientation provides less than 95 percent wind coverage for any aircraft forecasted to use the airport on a regular basis.

The 95 percent wind coverage is computed on the basis of the crosswind component not exceeding 10.5 knots (12 miles per hour [mph]) for airport reference code (ARC) A-I and B-I; 13 knots (15 mph) for ARC A-II and B-II; 16 knots (18 mph) for ARC A-III, B-III, and C-I through D-II; and 20 knots (23 mph) for ARC C-III through D-IV.

Exhibit 3B presents the all-weather wind rose for the airport. Wind data¹ for the previous 10 years were obtained from the on-airport automated weather observation station (AWOS) located at Casa Grande Municipal Airport (CGZ) and have been analyzed to identify wind coverage provided by the existing runway orientations. At E60, the orientation of the runways provides 96.46 percent coverage for the 10.5-knot component, 98.33 percent coverage for 13 knots, and greater than 99 percent coverage for 16- and 20-knot components.

The instrument flight rules (IFR) wind rose presented on the reverse side of **Exhibit 3B** shows crosswind components for Runway 2-20 during IFR conditions. Although the runway orientation does not meet 95 percent wind coverage during IFR conditions for a crosswind component of 10.5, 13, or 16 knots, IFR conditions are present less than one percent of the time at E60; thus, the current runway orientation at E60 provides adequate wind coverage for all-weather conditions and meets crosswind coverage design standards.

Runway Length

AC 150/5325-4B, *Runway Length Requirements for Airport Design*, provides guidance for determining runway length needs. The determination of runway length requirements for the airport is based on five primary factors:

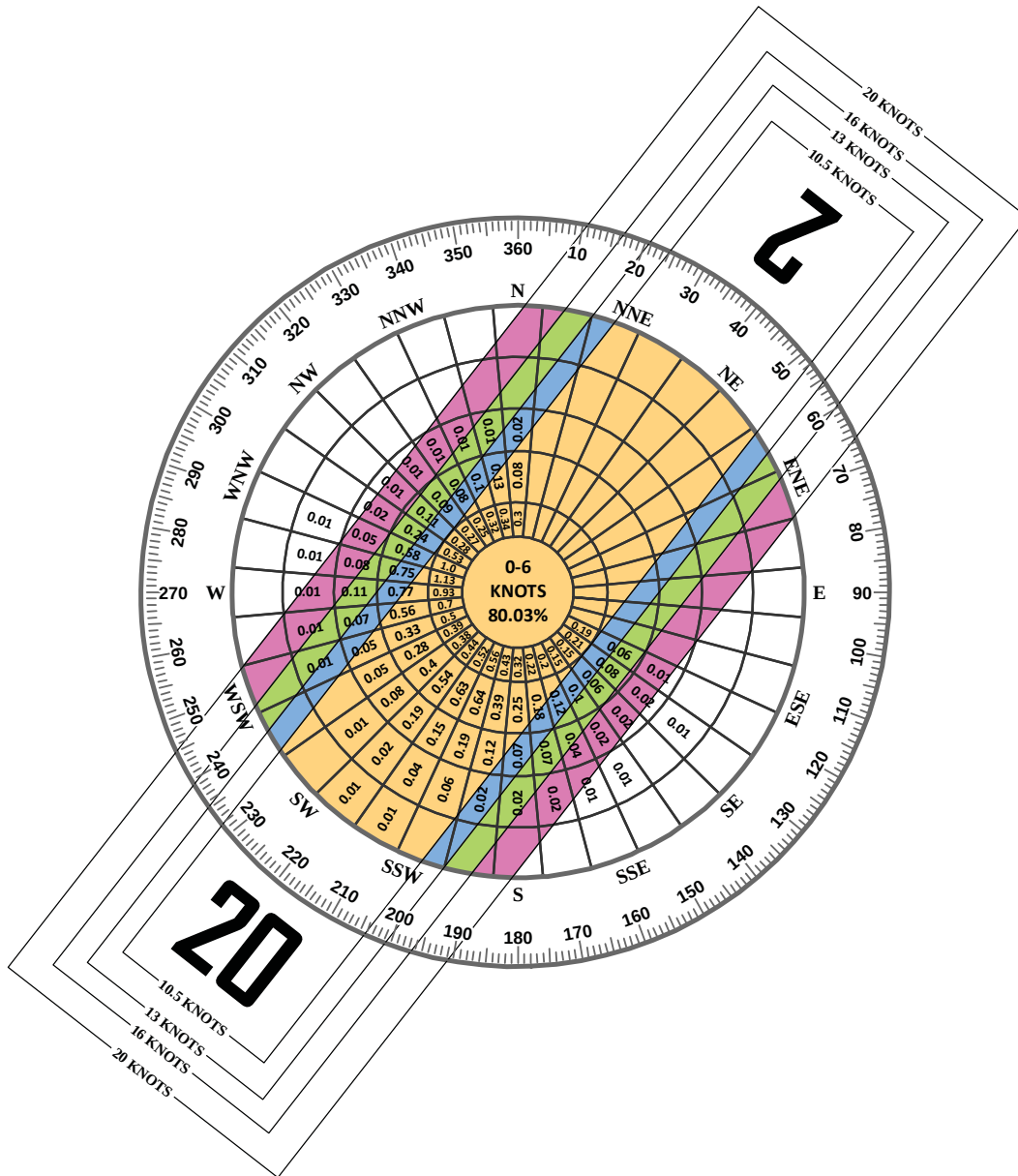
- Mean maximum temperature of the hottest month
- Airport elevation
- Runway gradient
- Critical aircraft type expected to use the runway
- Stage length of the longest nonstop destination (specific to larger aircraft)

The mean maximum daily temperature of the hottest month for E60 is 107.2 degrees Fahrenheit (°F), which occurs in July. The airport elevation is 1,511 feet mean sea level (MSL). Runway 2-20 has a gradient of 0.16 percent, which conforms to FAA design standards for gradient.

¹ 12,493 observations were collected for the period from January 1, 2014, through December 31, 2023.



ALL WEATHER WIND COVERAGE				
Runways	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 2-20	96.46%	98.33%	99.59%	99.91%

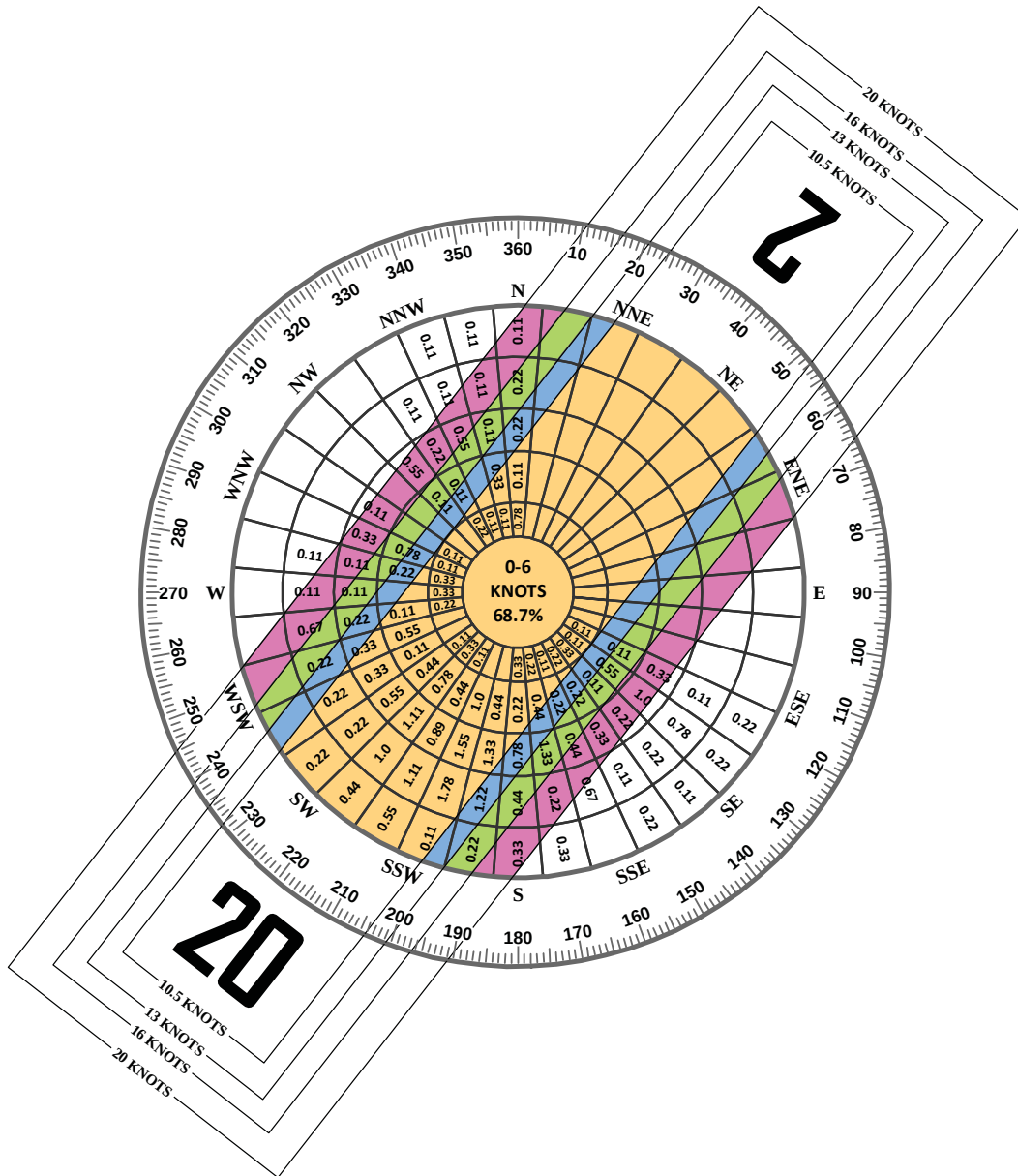


SOURCE:
NOAA National Climatic Center
Asheville, North Carolina
Eloy Municipal Airport
Eloy, Arizona
Casa Grande Municipal Airport Wind Used

OBSERVATIONS:
121,493 All Weather Observations
Jan. 1, 2014 - Dec. 31 2023



IFR WIND COVERAGE				
Runways	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 2-20	84.51%	87.83%	91.91%	96.10%



SOURCE:
 NOAA National Climatic Center
 Asheville, North Carolina
 Eloy Municipal Airport
 Eloy, Arizona
 Casa Grande Municipal Wind Used

OBSERVATIONS:
 1,310 IFR Observations
 Jan. 1, 2014 - Dec. 31 2023



Airplanes operate on a wide variety of available runway lengths. Many factors govern the suitability of runway lengths for aircraft, such as elevation, temperature, wind, aircraft weight, wing flap settings, runway condition (wet or dry), runway gradient, vicinity airspace obstructions, and any special operating procedures. The City of Eloy can pursue policies that maximize the sustainability of the runway length at E60. Policies such as area zoning and height and hazard restrictions can protect an airport's runway length. Airport ownership (fee simple or easement) of land directly adjacent to the runway ends reduces the possibility of natural growth and human-made obstructions. Runway planning should include an evaluation of the aircraft types expected to use the airport now and in the future. Future planning should be realistic, supported by FAA-approved forecasts, and based on the critical design aircraft (or family of aircraft).

General Aviation Aircraft

Most operations at E60 are conducted using smaller general aviation (GA) aircraft that weigh less than 12,500 pounds. Following guidance from AC 150/ 5325-4B, to accommodate 95 percent of these small aircraft with fewer than 10 passenger seats, a runway length of 3,900 feet is recommended. For 100 percent of these small aircraft, a runway length of 4,500 feet is recommended. For small aircraft with 10 or more passenger seats, 4,800 feet of runway length is recommended. These runway lengths are derived from a raw length based on aircraft category that is adjusted (as recommended) for airport elevation, average high monthly temperature, and runway gradient.

The airport is occasionally utilized by aircraft that weigh more than 12,500 pounds, including small- to medium-sized business jet and turboprop aircraft. Runway length requirements for business jets that weigh greater than 12,500 pounds have also been calculated. These calculations take into consideration the runway gradient and landing length requirements for contaminated (wet) runways. Business jets tend to need increased runway length when landing on wet surfaces because of their higher approach speeds. AC 150/5325-4B stipulates that runway length determination for business jets should consider a grouping of airplanes with similar operating characteristics. The AC provides two separate family groupings of airplanes, each of which is based on its representative percentage of aircraft in the national fleet. The first grouping is those business jets that comprise 75 percent of the national fleet, and the second group is those that comprise 100 percent of the national fleet. **Table 3C** presents a partial list of common aircraft in each aircraft grouping. A third group considers business jets that weigh more than 60,000 pounds. Runway length determination for these aircraft must be based on the performance characteristics of the individual aircraft.

TABLE 3C | Business Jet Categories for Runway Length Determination

75 Percent of the National Fleet	MTOW (lbs.)	75-100 Percent of the National Fleet	MTOW (lbs.)	Greater than 60,000 lbs.	MTOW (lbs.)
Lear 35	20,350	Lear 55	21,500	Gulfstream II	65,500
Lear 45	20,500	Lear 60	23,500	Gulfstream IV	73,200
Cessna 550	14,100	Hawker 800XP	28,000	Gulfstream V	90,500
Cessna 560XL	20,000	Hawker 1000	31,000	Global Express	98,000
Cessna 650 (VII)	22,000	Cessna 650 (III/IV)	22,000	Gulfstream 650	99,600
IAI Westwind	23,500	Cessna 750 (X)	36,100		
Beechjet 400	15,800	Challenger 604	47,600		
Falcon 50	18,500	IAI Astra	23,500		

MTOW = maximum takeoff weight

Sources: FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*, July 2005; Coffman Associates Analysis, April 2024



Table 3D presents the results of the runway length analysis for business jets that was developed following the guidance provided in AC 150/5325-4B. To accommodate 75 percent of the business jet fleet at 60 percent useful load, a runway length of 5,500 feet is recommended. This length is derived from a raw length of 5,296 feet that is adjusted (as recommended) for airport elevation, average high monthly temperature, runway gradient, and consideration of landing length needs on a contaminated (wet and slippery) runway. To accommodate 100 percent of the business jet fleet at 60 percent useful load, a runway length of 7,200 feet is recommended.

TABLE 3D | Runway Length Requirements

Airport Elevation		1,511' MSL		
Average High Monthly Temperature		107.2°F (August)		
Primary Runway End Elevation Difference		6.4'		
Fleet Mix Category	TAKEOFF LENGTHS		LANDING LENGTHS	Final Runway Length
	Raw Runway Length from FAA AC	Runway Length with Gradient Adjustment (+65')	Wet Surface Landing Length for Jets (+15%)*	
75% of fleet at 60% useful load	5,296'	5,361'	5,500'	5,500'
100% of fleet at 60% useful load	7,145'	7,210'	5,500'	7,200'
75% of fleet at 90% useful load	8,217'	8,282'	7,000'	8,300'
100% of fleet at 90% useful load	11,000'	11,065'	7,000'	11,100'

*Max 5,500' for 60% useful load and max 7,000' for 90% useful load in wet condition

Sources: FAA AC 150/5325-4B, Runway Length Requirements for Airport Design, July 2005; Coffman Associates Analysis, April 2024

Utilization of the 90 percent category for runway length determination is generally not considered by the FAA unless there is a demonstrated need at an airport, which could take the form of documented activity by a business jet operator that flies out frequently with heavy loads. To accommodate 75 percent of the business jet fleet at 90 percent useful load, a runway length of 8,300 feet is recommended. To accommodate 100 percent of business jets at 90 percent useful load, a runway length of 11,100 feet is recommended.

Another method to determine runway length requirements for aircraft at E60 is to examine aircraft flight planning manuals under conditions specific to the airport. Several aircraft were analyzed for takeoff length requirements at a design temperature of 107.2°F and a field elevation of 1,511 feet MSL. **Table 3E** provides a detailed runway length analysis for several of the most common turbine aircraft in the national fleet, using data obtained from UltrNAV software, which computes operational parameters for specific aircraft based on flight manual data. The analysis includes the maximum takeoff weight (MTOW) allowable and the useful load factor, ranging from 60 to 100 percent.



Hawker 800XP



Falcon 900EX

The analysis shows that the current length of 3,901 feet available on Runway 2-20 is adequate for some business jet and turboprop aircraft for takeoffs up to 60 percent useful load. Few of the aircraft analyzed are able to operate at 70 percent useful load. None of the aircraft analyzed can conduct a takeoff operation at or above 80 percent useful load, with the exception of the Pilatus PC-12, which can conduct takeoff operations without weight restriction. Aircraft included in the analysis primarily fall within aircraft reference code (ARC) A and B-II, as well as limited ARC C-II aircraft, such as the Hawker 800XP and Falcon 900EX.

**TABLE 3E | Business Aircraft Takeoff Length Requirements – Runway 2-20**

Aircraft Name	MTOW (lbs.)	TAKEOFF LENGTH REQUIREMENTS (FEET)				
		Useful Load				
		60%	70%	80%	90%	100%
Pilatus PC-12	9,921	2,276	2,392	2,508	2,626	3,335
King Air 200 GT	12,500	3,944	4,096	4,229	4,347	4,455
Citation V	15,900	3,316	3,616	3,934	4,269	4,625
Citation Sovereign	30,300	3,594	3,865	4,169	4,518	4,938
Citation (525A) CJ2	12,375	3,887	4,206	4,553	4,919	5,027
Citation CJ3	13,870	3,516	3,814	4,171	4,575	5,080
King Air 350	15,000	4,189	4,366	4,542	4,884	5,271
Hawker 800XP	28,000	5,261	5,454	5,454	5,454	5,454
Citation 560 XL	20,000	4,403	4,838	5,350	5,602	5,602
Citation Encore	16,630	3,771	4,153	4,601	5,078	5,634
Citation Encore Plus	16,830	3,789	4,177	4,612	5,118	5,671
Falcon 900EX	49,200	3,650	4,070	4,580	5,160	5,730
Citation III	21,500	5,349	5,756	5,756	5,756	5,756
Citation Bravo	14,800	4,177	4,522	4,919	5,365	5,760
Citation 560 XLS	20,200	4,217	4,579	5,003	5,519	5,775
Citation (525) CJ1	10,600	4,816	5,346	5,794	5,794	5,794
Citation II (550)	13,300	3,930	4,381	4,867	5,387	5,941
Citation VII	23,000	5,486	5,940	5,994	5,994	5,994
Citation X	35,700	5,535	6,063	6,571	6,571	6,571

Green figures are less than or equal to the length of the runway at E60; red figures are greater than the length of the runway at E60
Runway length calculation assumptions: 1,511' MSL field elevation; 107.2°F ambient temperature; 0.16% runway grade
MTOW = maximum takeoff weight

Source: UltrNAV Software, April 2024

Table 3F presents the runway length required for landing under three operational categories: Title 14 Code of Federal Regulations (CFR) Part 25, Part 135, and Part 91k. Part 25 operations are those conducted by individuals or companies that own their aircraft. Part 135 applies to all for-hire charter operations, including most fractional ownership operations. Part 91k includes operations in fractional ownership that utilize their own aircraft under the direction of pilots specifically assigned to said aircraft. Part 91k and Part 135 rules regarding landing operations require operators to land at their destination airports within 60 percent of the effective runway length. An additional rule allows operators to land within 80 percent of the effective runway length if the operator has an approved destination airport analysis in the aircraft's program operating manual. The landing length analysis accounts for both scenarios.

The landing length analysis shows that all of the aircraft examined operating under Part 25 can land on the available runway length at E60 during dry runway conditions, except for the Citation X. The analysis for landing length shows that some of the business jets and turboprops analyzed can be accommodated under the 80 percent rule, and only the King Air 200GT and Pilatus PC-12 can conduct landing operations under the 60 percent rule during dry runway conditions. When factoring in wet conditions, the landing length often increases, and nearly all of the aircraft analyzed exceed the current runway length under Part 25, as well as the 80 and 60 percent rules. Of the aircraft analyzed, only the King Air 350 and Citation Sovereign can conduct landing operations during wet runway conditions while operating under Part 25.

**TABLE 3F | Business Aircraft Landing Length Requirements – Runway 2-20**

Aircraft Name	MLW (lbs.)	LANDING LENGTH REQUIREMENTS (FEET)					
		Dry Runway Condition			Wet Runway Condition		
		Part 25	80% Rule	60% Rule	Part 25	80% Rule	60% Rule
King Air 200 GT	12,500	1,293	1,616	2,155	N/A	N/A	N/A
Pilatus PC-12	9,921	2,161	2,701	3,602	N/A	N/A	N/A
King Air 350	15,000	2,885	3,606	4,808	3,318	4,148	5,530
Citation Sovereign	27,100	2,934	3,668	4,890	3,746	4,683	6,243
Citation VII	20,000	2,924	3,655	4,873	3,905	4,881	6,508
Citation (525) CJ1	9,800	3,042	3,803	5,070	4,112	5,140	6,853
Citation CJ3	12,750	3,112	3,890	5,187	4,233	5,291	7,055
Hawker 800XP	23,350	2,742	3,428	4,570	4,260	5,325	7,100
Falcon 900EX	44,500	3,785	4,731	6,308	4,353	5,441	7,255
Citation III	19,000	3,134	3,918	5,223	4,435	5,544	7,392
Citation Encore	15,200	3,155	3,944	5,258	4,730	5,913	7,883
Citation (525A) CJ2	11,500	3,288	4,110	5,480	4,760	5,950	7,933
Citation V	15,200	3,218	4,023	5,363	4,777	5,971	7,962
Citation Encore Plus	15,200	3,156	3,945	5,260	4,801	6,001	8,002
Citation 560 XL	18,700	3,546	4,433	5,910	5,596	6,995	9,327
Citation 560 XLS	8,700	3,546	4,433	5,910	5,596	6,995	9,327
Citation X	31,800	3,983	4,979	6,638	5,680	7,100	9,467
Citation Bravo	3,500	3,823	4,779	6,372	6,013	7,516	10,022
Citation II (550)	12,700	2,621	3,276	4,368	6,335	7,919	10,558

Green figures are less than or equal to the length of the runway at E60; red figures are greater than the length of the runway at E60
Runway length calculation assumptions: 1,511' MSL field elevation; 107.2°F ambient temperature; 0.16% runway grade
N/A = not applicable; turboprop aircraft landing lengths are not adjusted for wet runway conditions
MLW = maximum landing weight

Source: UltrNav Software, April 2024

As shown in **Tables 3E and 3F**, some small- and mid-sized business jets, including the future critical design aircraft (Cessna Citation Encore), can take off at 60 percent useful load on the current runway; however, many aircraft are unable to take off at 70 percent useful load, and only the Pilatus PC-12 is able to take off at 80 percent useful load and above. For landing operations, the future critical design aircraft can land during dry conditions while operating under Part 25; however, this aircraft needs more than 4,700 feet of landing length under Part 25 on a wet or contaminated runway. The Cessna Citation Encore needs more than 5,600 feet of runway length to take off at MTOW and approximately 7,900 feet of landing length under the 60 percent rule on a contaminated/wet runway.

Runway Length Summary

Many factors are considered when determining appropriate runway length for safe and efficient operations of aircraft at E60. The airport should strive to accommodate business jets and turboprop aircraft to the greatest extent possible, as demand dictates. Runway 2-20 is currently 3,901 feet long and can accommodate some of these aircraft under moderate loading conditions, even during hot temperatures. At 80 percent useful load and above, all aircraft analyzed (except the Pilatus PC-12) have runway length requirements that exceed the available length on Runway 2-20.



Justification for any runway extension to meet the needs of turbine aircraft would require regular use (500 annual itinerant operations), which is the minimum threshold required to obtain FAA grant funding assistance. Many aircraft currently using the runway at E60 can do so without significant weight restrictions; however, as operations by larger business jets increase over time, an extension may become justified. The future critical design aircraft, the Cessna Citation Encore, is classified as an ARC B-II aircraft and is limited by runway length when taking off at more than 60 percent useful load, as well as landing under any condition other than Part 25 operating rules and dry runway conditions. As such, there is merit to examining extension options. Analysis in the next chapter will examine potential impacts of an extension of Runway 2-20 up to a maximum of 5,500 feet while considering appropriate safety design standards, which are detailed later in this chapter. As discussed previously, a runway length of 5,500 feet can accommodate 75 percent of the business jet fleet operating at 60 percent useful load; a runway of this length could accommodate the Cessna Citation Encore at 90 percent useful load under design day runway conditions.

Runway Width

Runway width design standards are primarily based on the critical aircraft but can also be influenced by the visibility minimums of published instrument approach procedures. For Runway 2-20, the existing RDC B-II-VIS design criteria stipulate a runway width of 75 feet. Under future RDC B-II-5000, the design criteria specify a runway width of 75 feet; therefore, the existing width of Runway 2-20 (75 feet) meets these requirements.

Pavement Strength

An important feature of airfield pavement is its ability to withstand repeated use by aircraft. The pavement strength rating listed on the currently approved airport layout plan (ALP) is 12,500 pounds single wheel loading (SWL). There is currently no strength rating listed for dual wheel loading (DWL). These strength ratings refer to the configuration of the aircraft landing gear; for example, SWL indicates an aircraft with a single wheel on each landing gear.

The strength rating of a runway does not preclude aircraft that weigh more than the published strength rating from using the runway. All federally obligated airports must remain open to the public, and it is typically up to the pilot of an aircraft to determine if a runway can support their aircraft safely. An airport sponsor cannot restrict an aircraft from using the runway simply because its weight exceeds the published strength rating; however, the airport sponsor has an obligation to properly maintain the runway and protect the useful life of the runway, typically for 20 years. The strength rating of a runway can change over time. Regular usage by heavier aircraft can decrease the strength rating, while periodic runway resurfacing can increase the strength rating. Runway 2-20 has been rehabilitated as recently as 2019 through the Arizona Pavement Management System (APMS), which is a state-funded pavement management program that will fund up to 90 percent of eligible pavement maintenance projects.



The existing critical aircraft (Short Skyvan SC-7) has a MTOW of 12,500 pounds on single wheel main landing gear (S). The future critical aircraft (Cessna Citation Encore) has a MTOW of 16,300 pounds, also on SWL. The current runway strength rating for Runway 2-20 is adequate to accommodate the majority of aircraft that operate at the airport; however, because the future critical aircraft has an MTOW greater than 12,500 pounds and the number of turboprops and jets utilizing the airport is forecasted to increase, the master plan will consider increasing the pavement strength rating to 30,000 pounds SWL and 60,000 pounds DWL.

Blast Pads

Runway blast pads provide resistance to jet blast erosion beyond runway ends. Under existing B-II-VIS and future B-II-5000 design standards, blast pads are not a design requirement; however, the construction of blast pads could be considered if the airport experiences significant erosion of soil adjacent to the runway ends due to increased jet and turboprop traffic. The recommended blast pad dimensions under existing and future conditions are 95 feet wide by 150 feet long.

SAFETY AREA DESIGN STANDARDS

Table 3G presents the FAA design standards as they apply to the runway at E60.

The FAA has established several imaginary surfaces to protect aircraft operational areas and keep them free from obstructions. These include the runway safety area (RSA), runway object free area (ROFA), runway obstacle free zone (ROFZ), and runway protection zone (RPZ).

The entire RSA, ROFA, and ROFZ must be under the direct ownership of the airport sponsor to ensure these areas remain free of obstacles and can be readily accessed by maintenance and emergency personnel. RPZs should also be under airport ownership. An alternative to outright ownership of the RPZ is the purchase of aviation easements (acquiring control of designated airspace within the RPZ). Another option is having sufficient land use control measures in place to ensure the RPZ remains free of incompatible development. The various airport safety areas are presented on **Exhibit 3C**.

TABLE 3G | Runway Design Standards

	Runway 2-20 (Existing/Future)
Runway Design Code	B-II-VIS / 5000
Visibility Minimums	Visual / 1-mile
RUNWAY DESIGN	
Runway Width	75
Blast Pad Length x Width	150 x 95
RUNWAY PROTECTION	
Runway Safety Area	
Width	150
Length Beyond Departure End	300
Length Prior to Threshold	300
Runway Object Free Area	
Width	500
Length Beyond Departure End	300
Length Prior to Threshold	300
Runway Obstacle Free Zone	
Width	400
Length Beyond Runway End	200
Approach Runway Protection Zone	
Runway End	2/20
Inner Width	500
Outer Width	700
Length	1,000
Acres	13.77
Departure Runway Protection Zone	
Inner Width	500
Outer Width	700
Length	1,000
Acres	13.77
RUNWAY SEPARATION	
Runway Centerline to:	
Hold Line Position	200
Parallel Taxiway	240
Aircraft Parking Apron	250
All dimensions are in feet unless otherwise noted	

Sources: FAA AC 150/5300-13B, *Airport Design*, March 2022; Coffman Associates Analysis, April 2024



Runway Safety Area

The RSA is defined in FAA AC 150/5300-13B, *Airport Design*, as a “surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of undershoot, overshoot, or excursion from the runway.” The RSA is centered on the runway and dimensioned in accordance with the approach speed of the critical design aircraft using the runway. The FAA requires the RSA to be cleared and graded, drained by grading or storm sewers, capable of accommodating the design aircraft and fire and rescue vehicles, and free of obstacles that are not fixed by navigational purpose (such as runway edge lights or approach lights).

The FAA places high significance on maintaining adequate RSA at all airports. The FAA established the *Runway Safety Area Program* under Order 5200.8 (effective October 1, 1999), which states:

“The objective of the Runway Safety Area Program is that all RSAs at federally-obligated airports...shall conform to the standards contained in AC 150/5300-13, Airport Design, to the extent practicable.”

Each Regional Airports Division of the FAA is obligated to perform airport inspections and collect and maintain RSA data for all airport runways. RSA inventory and determination must be completed prior to any project for runway construction, reconstruction, or significant expansion that involves federal funds.

Under existing RDC B-II-VIS and future RDC B-II-5000 design standards for Runway 2-20, the RSA is 150 feet wide and extends 300 feet beyond the runway ends. As depicted on **Exhibit 3C**, an examination of the RSA under existing and future conditions did not identify any non-standard conditions.

Runway Object Free Area

The ROFA is “a two-dimensional ground area, surrounding runways, taxiways, and taxilanes, which is clear of objects except for objects whose location is fixed by function (i.e., airfield lighting).” The ROFA does not have to be graded like the RSA; instead, the primary requirement for the ROFA is that no object in the ROFA penetrates the lateral elevation of the RSA. The ROFA is centered on the runway, extending out in accordance with the critical design aircraft utilizing the runway.

For existing RDC B-II-VIS and future RDC B-II-5000 design standards for Runway 2-20, the ROFA is 500 feet wide, extending 300 feet beyond each runway end. As shown on **Exhibit 3C**, the existing and future ROFA meets FAA design standards and should be maintained through the planning period.

Runway Obstacle Free Zone

The ROFZ is an imaginary surface that precludes object penetrations, including taxiing and parked aircraft. The only allowance for ROFZ obstructions is navigational aids mounted on frangible bases that are fixed in their locations by function, such as airfield signs. The ROFZ is established to ensure the safety of aircraft operations. If the ROFZ is obstructed, the airport’s approaches could be removed or approach minimums could be increased.



Existing RDC: B-II-VIS
Future RDC: B-II-5000



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For all runways serving aircraft over 12,500 pounds, the ROFZ is 400 feet wide, centered on the runway, and extends 200 feet beyond the runway ends. This standard applies to Runway 2-20 at E60 in the existing and future conditions. Under current evaluation with available data, there are no ROFZ obstructions at the airport and this condition should be maintained.

Runway Protection Zone

An RPZ is a trapezoidal area centered on the extended runway centerline beginning 200 feet from the end of the runway. This safety area is established to protect the end of the runway from airspace penetrations and incompatible land uses. The RPZ dimensions are based on the established RDC and the approach visibility minimums serving the runway. While the RPZ is intended to be clear of incompatible objects and land uses, some uses are permitted with conditions and other land uses are prohibited. According to AC 150/5300-13B, the following land uses are permissible within the RPZ:

- Farming that meets the minimum buffer requirements
- Irrigation channels, as long as they do not attract birds
- Airport service roads, as long as they are not public roads and are directly controlled by the airport operator
- Underground facilities, as long as they meet other design criteria (such as RSA requirements), as applicable
- Unstaffed navigational aids (NAVAIDs) and facilities, such as those required for airport facilities that are fixed by function in regard to the RPZ
- Aboveground fuel tanks associated with backup generators for unstaffed NAVAIDS

In September 2022, the FAA published AC 150/5190-4B, *Airport Land Use Compatibility Planning*, which states that airport owner control over RPZs is preferred. Airport owner control over RPZs may be achieved through one of the following methods:

- Ownership of the RPZ property (fee simple)
- Possession of sufficient interest in the RPZ property through easements, deed restrictions, etc.
- Possession of sufficient land use control authority to regulate land use in the jurisdiction that contains the RPZ
- Possessing and exercising the power of eminent domain over the property
- Possessing and exercising permitting authority over proponents of development within the RPZ (e.g., where the sponsor is a state)

AC 150/5190-4B further states that “control is preferably exercised through acquisition of sufficient property interest and includes clearing RPZ areas (and keeping them clear) of objects and activities that would impact the safety of people and property on the ground.” The FAA recognizes that land ownership, environmental, geographical, and other considerations can complicate land use compatibility within RPZs; regardless, airport sponsors must comply with FAA grant assurances, including (but not limited to) Grant Assurance 21, *Compatible Land Use*.



Airport sponsors are expected to take appropriate measures to “protect against, remove, or mitigate land uses that introduce incompatible development within RPZs.” For proposed projects that would shift an RPZ into an area with existing incompatible land uses (such as a runway extension or construction of a new runway), the sponsor is expected to have or secure sufficient control of the RPZ, ideally through fee simple ownership. Where existing incompatible land uses are present, the FAA expects sponsors to “seek all possible opportunities to eliminate, reduce, or mitigate existing incompatible land uses” through acquisition, land exchanges, right-of-first-refusal to purchase, agreements with property owners on land uses, easements, or other such measures. These efforts should be revisited during master plan or ALP updates, and periodically thereafter, and should be documented to demonstrate compliance with FAA grant assurances. If new or proposed incompatible land uses impact an RPZ, the FAA expects the airport to take the above actions to control the property within the RPZ and adopt a strong public stance opposing the incompatible land uses.

For new incompatible land uses that result from a sponsor-proposed action (i.e., an airfield project, such as a runway extension, a change in the critical aircraft that increases the RPZ dimension, or lower minimums that increase the RPZ dimension), the airport sponsor is expected to conduct an alternatives evaluation. The intent of the alternatives evaluation is to “proactively identify a full range of alternatives and prepare a sufficient evaluation to be able to draw a conclusion about what is ‘appropriate and reasonable.’” For incompatible off-airport development, the sponsor should coordinate with the FAA Airports District Office (ADO) as soon as the sponsor is aware of the development and the alternatives evaluation should be conducted within 30 days of the sponsor’s first awareness of the development within the RPZ.

Once the alternatives evaluation has been submitted to the ADO, the FAA will determine whether the sponsor has made an adequate effort to pursue and give full consideration to appropriate and reasonable alternatives. **The FAA will not approve or disapprove the airport sponsor’s preferred alternative. The FAA will only evaluate whether an acceptable level of alternatives analysis has been completed before the sponsor makes the decision to allow or disallow the proposed land use within the RPZ.**

In summary, the RPZ guidance published in September 2022 shifts the responsibility of protecting the RPZ to the airport sponsor. The airport sponsor is expected to take action to control the RPZ or demonstrate that appropriate actions have been taken. The decision to permit or disallow existing or new incompatible land uses within an RPZ is ultimately up to the airport sponsor, with the understanding that the sponsor still has grant assurance obligations, and the FAA retains the authority to review and approve or disapprove portions of the ALP that would adversely impact the safety of people and property within the RPZ.

RPZs have been further designated as approach and departure RPZs. The approach RPZ is a function of the aircraft approach category (AAC) and approach visibility minimums associated with the approach runway end. The departure RPZ is a function of the AAC and departure procedures associated with the runway. For a particular runway end, the more stringent RPZ requirements (usually associated with the approach RPZ) will govern the property interests and clearing requirements the airport sponsor should pursue.

As shown on **Exhibit 3C**, the existing and future RPZs associated with each runway end are largely controlled by the airport through outright ownership; however, small portions of each RPZ serving Runway 2-20 extend beyond airport property. The RPZ serving Runway 2 extends beyond airport property to



the southwest and encompasses approximately 1.0 and 0.4 acres of uncontrolled property, while the Runway 20 RPZ extends beyond airport property to the northeast and encompasses approximately 0.1 acres of uncontrolled property. It should be noted that the uncontrolled property within the Runway 20 RPZ also contains a portion of a drainage canal. In addition, the Runway 2 RPZ is traversed by Maya Road and the field access road along the Aztec Street alignment, which are public roadways. Public roadways are generally considered incompatible uses within an RPZ; however, the FAA often considers existing roads to be grandfathered so that no corrective action is necessary. It should be noted that a change to the runway environment that alters the size or position of the RPZ may negate the grandfathered condition.

If the runway was extended or equipped with lower instrument visibility minimums in the future, the area contained within the applicable RPZs would increase; thus, the level of potentially incompatible land uses within the larger or repositioned RPZ would also increase. To lower the visibility minimums or extend the runway, the airport will have to develop a plan of action to mitigate the newly introduced incompatible land uses and work in consultation with the FAA to determine whether the additional incompatible land is acceptable. The next chapter will discuss options to mitigate potential incompatibilities (i.e., roads and uncontrolled property), especially when considering a potential extension to the runway.

RUNWAY SEPARATION STANDARDS

There are several other standards related to separation distances from runways. Each of these is designed to enhance the safety of the airfield.

Runway/Taxiway Separation | The design standard for the separation between runways and parallel taxiways is a function of the critical design aircraft and the instrument approach visibility minimum. The separation standard for Runway 2-20 is 240 feet from the runway centerline to the parallel taxiway centerline for existing RDC B-II-VIS and future RDC B-II-5000. Parallel Taxiway A currently has a separation distance of 300 feet from Runway 2-20, which should be maintained through the planning horizon.

Hold Line Position Separation | Hold line position markings are placed on taxiways leading to runways. Pilots must stop short of the holding position line. For Runway 2-20, hold line position markings are situated 200 feet from the runway centerline. The existing RDC B-II-VIS and future RDC B-II-5000 design standards call for hold line position markings to be a minimum of 200 feet from the runway centerline. As such, the existing location of the hold line position markings meets the design standard under the existing and future conditions and should be maintained through the planning horizon.

Aircraft Parking Area Separation | Aircraft parking areas should be located in a manner that ensures no aircraft components (wings, tail, and fuselage) conflict with the object free area for adjacent runways or taxiways, including the ROFA, taxiway object free area (TOFA), and taxiway object free area (TLOFA). In addition, aircraft parking areas should not be located within certain aeronautical surfaces and areas, including the ROFZ, runway approach/departure surface, runway visibility zone (RVZ), and navigational aid equipment critical areas.

The aircraft parking areas at E60 are currently clear of all the abovementioned safety and critical areas and meet the existing and future design standards for the airport.



TAXIWAYS

The design standards associated with taxiways are determined by the taxiway design group (TDG) or the ADG of the critical design aircraft. As determined previously, the applicable ADG for Runway 2-20 is ADG II under the existing and future conditions. **Table 3H** presents the various taxiway design standards related to ADG II. The table also shows the taxiway design standards related to the TDG. The TDG standards are based on the main gear width (MGW) and cockpit to main gear (CMG) distance of the critical design aircraft expected to use those taxiways. Different taxiway and taxilane pavements can and should be planned to the most appropriate TDG design standards, based on usage.

TABLE 3H | Taxiway Dimensions and Standards

Standards Based on Wingspan	ADG I	ADG II
TAXIWAY PROTECTION		
Taxiway Safety Area Width	49'	79'
Taxiway Object Free Area Width	89'	124'
Taxilane Object Free Area Width	79'	110'
TAXIWAY SEPARATION		
Taxiway Centerline to:		
Fixed or Movable Object	44.5'	62'
Parallel Taxiway/Taxilane	70'	101.5'
Taxilane Centerline to:		
Fixed or Movable Object	39.5'	55'
Parallel Taxilane	64'	94.5'
Wingtip Clearance		
Taxiway Wingtip Clearance	20'	22.5'
Taxilane Wingtip Clearance	15'	15.5'
Standards Based on TDG	TDG 1A/1B	TDG 2A
Taxiway Width Standard	25'	35'
Taxiway Edge Safety Margin	5'	7.5'
Taxiway Shoulder Width	10'	15'
ADG = airplane design group TDG = taxiway design group		

Sources: FAA AC 150/5300-13B, *Airport Design*, March 2022; Coffman Associates Analysis, April 2024

The current critical design aircraft for E60 is the Short Skyvan SC-7, which is a TDG 1A aircraft. The current design for taxiways serving E60 is TDG 2A, which meets the needs for the future critical aircraft (Cessna Citation Encore) and dictates a taxiway width of 35 feet. Certain portions of the landside area that are utilized exclusively by small aircraft, such as the T-hangar areas, should adhere to TDG 1A/1B standards. All taxiway widths on the airfield should be maintained.

Figure 3A depicts the taxiway object free area (TOFA), which is based on ADG standards. The TOFA on taxiways serving Runway 2-20 is 124 feet wide, centered on the taxiway. Like the ROFA, the TOFA should remain clear of objects and parked aircraft, except objects needed for air navigation or aircraft ground maneuvering purposes. The TOFAs associated with the airfield taxiways at E60 are clear of obstructions.



Taxiway Design Considerations

FAA AC 150/5300-13B, *Airport Design*, provides guidance on recommended taxiway and taxilane layouts to enhance safety by avoiding runway incursions. A runway incursion is defined as “any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft.”

The taxiway system at E60 generally provides for the efficient movement of aircraft; however, AC 150/5300-13B, *Airport Design*, provides recommendations for taxiway design. The following is a list of the taxiway design guidelines and the basic rationale behind each recommendation. Following the discussion of taxiway design guidelines, any existing conditions at E60 that do not meet FAA taxiway design criteria will be identified.

1. **Taxi Method:** Taxiways are designed for cockpit-over-centerline taxiing, with pavement that is sufficiently wide to allow a certain amount of wander. On turns, sufficient pavement should be provided to maintain the edge safety margin from the landing gear. When constructing new taxiways, upgrades to existing intersections should be undertaken to eliminate judgmental oversteering, which is when a pilot must intentionally steer the cockpit outside the marked centerline to ensure the aircraft remains on the taxiway pavement.
2. **Steering Angle:** Taxiways should be designed so the nose gear steering angle is no more than 50 degrees, which is the generally accepted value to prevent excessive tire scrubbing.
3. **Three-Node Concept:** To maintain pilot situational awareness, a taxiway intersection should provide a pilot with a maximum of three choices of travel. Ideally, these are right- and left-angle turns and a continuation straight ahead.
4. **Intersection Angles:** Turns should be designed to 90 degrees wherever possible. For acute-angle intersections, standard angles of 30, 45, 60, 120, 135, and 150 degrees are preferred.



Figure 3A – Taxiway Object Free Area



5. Runway Incursions: Taxiways should be designed to reduce the probability of runway incursions.

- *Increase Pilot Situational Awareness:* Pilots who know where they are on the airport are less likely to enter a runway improperly. Complexity leads to confusion. Keep taxiway systems simple using the three-node concept.
- *Avoid Wide Expanses of Pavement:* Wide pavements require placement of signs far from a pilot's eye. This is especially critical at runway entrance points. Where a wide expanse of pavement is necessary, avoid direct access to a runway.
- *Limit Runway Crossings:* The taxiway layout can reduce the opportunity for human error. The benefits are twofold: through simple reduction in the number of occurrences and a reduction in air traffic controller workload.
- *Avoid High-Energy Intersections:* These are intersections in the middle thirds of runways. By limiting runway crossings to the first and last thirds of the runway, the portion of the runway where a pilot can least maneuver to avoid a collision is kept clear.
- *Increase Visibility:* Right-angle intersections between taxiways and runways provide the best visibility. Acute-angle runway exits provide for greater efficiency in runway usage but should not be used as runway entrance or crossing points. A right-angle turn at the end of a parallel taxiway is a clear indication of approaching a runway.
- *Avoid Dual-Purpose Pavements:* Runways used as taxiways and taxiways used as runways can lead to confusion. A runway should always be clearly identified as a runway and only a runway.
- *Indirect Access:* Do not design taxiways to lead directly from an apron to a runway. Such configurations can lead to confusion when a pilot typically expects to encounter a parallel taxiway.
- *Hot Spots:* Confusing intersections near runways are more likely to contribute to runway incursions. These intersections must be redesigned when the associated runway is subject to reconstruction or rehabilitation. Other hot spots should be corrected as soon as practicable.

6. Runway/Taxiway Intersections:

- *Right Angles:* Right-angle intersections are the standard for all runway/taxiway intersections, except where there is a need for a high-speed exit. Right-angle taxiways provide the best visual perspective to a pilot approaching an intersection with the runway to observe aircraft in both the left and right directions. They also provide optimal orientation of the runway holding position signs for visibility to pilots.
- *Acute Angles:* Acute angles should not be larger than 45 degrees from the runway centerline. A 30-degree taxiway layout should be reserved for high-speed exits. The use of multiple intersecting taxiways with acute angles creates pilot confusion and improper positioning of taxiway signage.



- *Large Expanses of Pavement:* Taxiways must never coincide with the intersection of two runways. Taxiway configurations with multiple taxiway and runway intersections in a single area create large expanses of pavement, making it difficult to provide proper signage, marking, and lighting.
7. **Taxiway/Runway/Apron Incursion Prevention:** Apron locations that allow direct access to a runway should be avoided. Increase pilot situational awareness by designing taxiways in a manner that forces pilots to consciously make turns. Taxiways originating from aprons and forming a straight line across runways at mid-span should be avoided.
- *Wide Throat Taxiways:* Wide throat taxiway entrances should be avoided. Such large expanses of pavement may cause pilot confusion and make lighting and marking more difficult.
 - *Direct Access from Apron to Runway:* Avoid taxiway connectors that cross over a parallel taxiway and directly onto a runway. Consider a staggered taxiway layout that forces pilots to make a conscious decision to turn.
 - *Apron to Parallel Taxiway End:* Avoid direct connection from an apron to a parallel taxiway at the end of a runway.

FAA AC 150/5300-13B, *Airport Design*, states that “existing taxiway geometry should be improved whenever feasible, with emphasis on designated ‘hot spots.’” There are no FAA-designated hot spots at E60; however, Taxiway D provides direct access to Runway 2-20 from an apron area, which is a non-standard taxiway geometry condition, as detailed in **Figure 3B**.

Potential solutions to this non-standard condition will be presented in the alternatives chapter. Analysis in the alternatives chapter will also consider improvements that could be implemented on the airfield to minimize runway incursion potential and conform to FAA standards for taxiway design. Options to correct the abovementioned issues are included in Chapter Four, and any future taxiways that are planned will also consider the taxiway design standards.



Figure 3B – Direct Access: Taxiway D

Taxilane Design Considerations

Taxilanes are distinguished from taxiways in that they do not provide access directly to or from the runway system. Taxilanes typically provide access to hangar areas. As a result, taxilanes can be planned to varying design standards, depending on the type of aircraft utilizing the taxilane. For example, a taxilane leading to a T-hangar area only needs to be designed to accommodate the aircraft that typically access that area.



NAVIGATIONAL AND APPROACH AIDS

Navigational aids are devices that provide pilots with guidance and position information when utilizing the runway system. Electronic and visual guidance for arriving aircraft enhances the safety and capacity of the airfield. Such facilities are vital to the success of an airport and provide additional safety to passengers using the air transportation system. While instrument approach aids are especially helpful during poor weather, they are often used by pilots conducting flight training and operating larger aircraft when visibility is good.

Instrument Approach Aids | Instrument approach procedures are series of predetermined maneuvers established by the FAA using electronic navigational aids that assist pilots in locating and landing at airports during low visibility and/or cloud ceiling conditions. E60 is not currently served by a published instrument approach procedure.

Global positioning system (GPS) technology has radically changed instrument flight over the last 20 years, which continues with the promise of curved approaches and free-flight opportunities in the near future. Moreover, GPS is an inexpensive option for precision approach capabilities, as expensive ground antenna systems, such as an instrument landing system (ILS), are no longer required. For these reasons, it is a good practice to prepare any airport for the possibility of improved approaches in the future. Given the forecasted increase in itinerant and air taxi operations, including those by business jets and turboprops, E60 should consider future approach minimums of not lower than one mile.

Visual Approach Aids | In most instances, the landing phase of any flight must be conducted in visual conditions. To provide pilots with visual guidance information during landings to runways, electronic visual approach aids are commonly provided at airports. Runways 2 and 20 are currently equipped with two-box precision approach path indicator (PAPI-2) systems. Generally, four-box precision approach path indicator (PAPI-4) systems are recommended for runways that are used by jet and turboprop aircraft; therefore, consideration should be given to upgrading the PAPI-2 systems to PAPI-4 systems.

Runway end identification lights (REILs) are flashing lights located at the runway threshold end that facilitate rapid identification of the runway end at night and during poor visibility conditions. REILs provide pilots with the ability to identify the runway thresholds and distinguish the runway end lighting from the other lighting on the airport and in the approach areas. Both ends of Runway 2-20 are currently equipped with REILs, which should be maintained.

Weather Reporting Aids | E60 is equipped with a lighted wind cone, which provides pilots with wind speed and direction information, and a segmented circle, which provides traffic pattern information. The lighted wind cone and segmented circle are located on the northeast edge of the main apron adjacent to the rotating beacon. These facilities should be maintained throughout the planning period of this master plan update. It should be noted that previous planning has considered the purchase of additional property and relocation of the segmented circle and lighted wind cone to the west side of the runway. Alternatives presented in the next chapter will consider options to relocate the segmented circle and lighted wind cone.



Many airports are equipped with automated weather observation stations (AWOS), which record and transmit current weather conditions, such as wind speed, wind gusts, wind direction, temperature, dew point, altimeter setting, and density altitude. E60 is not currently equipped with an on-site AWOS; however, pilots can utilize the AWOS systems available at Coolidge Municipal Airport (P08) and Casa Grande Municipal Airport (CGZ), which are located 11 nautical miles (nm) northeast and 13 nm northwest of E60, respectively. In the future, consideration should be given to installing an AWOS facility on the airport. Potential locations for an AWOS serving E60 will be evaluated in the next chapter.

Communication Facilities | E60 has a common traffic advisory frequency (CTAF), which pilots can use to communicate with one another while operating on and in the vicinity of E60. The E60 CTAF operates on a frequency of 122.8 megahertz (MHz). The CTAF enhances safety at the airport and should be maintained.

AIRFIELD LIGHTING, MARKING, AND SIGNAGE

Several lighting and pavement marking aids serve pilots using the airport. These aids assist pilots in locating an airport and runway at night or in poor visibility conditions. They also serve aircraft navigating the airport environment on the ground when transitioning to/from aircraft parking areas to/from the runway.

Airport Identification Lighting | E60's rotating beacon is located on the northeast corner of the main apron. The beacon is in good working order and should be maintained.

Runway and Taxiway Lighting | Runway 2-20 is equipped with a medium intensity runway lighting (MIRL) system. The taxiway system is equipped with medium intensity taxiway lighting (MITL). These systems are adequate and should be maintained. Planning should consider expansion of the MIRL and MITL systems when/if new pavements are constructed, as well as upgrading to light-emitting diode (LED) systems for new lighting as systems are being repaired or replaced.

Pavement Markings | Runway markings are typically designed to the type of instrument approach available on the runway. FAA AC 150/5340-1K, *Standards for Airport Markings*, provides the guidance necessary to design airport markings. Runway 2-20 has basic markings that meet the current design standards for a B-II-VIS runway. Under future conditions, consideration should be given to upgrading the runway markings to non-precision instrument (NPI) approach markings if/when a non-precision instrument approach is implemented.

Airfield Signs | Airfield identification signs assist pilots in identifying their locations on the airfield and directing them to their desired locations. Lighted signs are installed on the runway and taxiway systems on the airfield. The signage system includes runway and taxiway designation, routing/directional, runway exit, and mandatory instruction signs. All signs on the airfield should be maintained and future consideration should be given to runway distance remaining signage.

It should be noted that many airports are transitioning to LED systems. LEDs have many advantages, including lower energy consumption, longer lifespan, increased durability, reduced size, greater reliability,



and faster switching. While a larger initial investment is required up front, the energy savings and reduced maintenance costs will outweigh any additional costs in the long run. As systems need to be repaired/replaced, consideration should be given to upgrading to LED systems.

A summary of the airside facilities at E60 is presented on **Exhibit 3D**.

LANDSIDE FACILITY REQUIREMENTS

Landside facilities are those necessary for the handling of aircraft and passengers while on the ground. These facilities provide the essential interface between air and ground transportation modes. The capacity of the various components of each landside element was examined in relation to projected demand to identify future landside facility needs. For E60, this includes components for general aviation needs and support facilities.

GENERAL AVIATION ACTIVITIES

General aviation facilities are those necessary for handling general aviation aircraft, passengers, and cargo while on the ground. This subsection is devoted to identifying future general aviation facility needs during the planning period for the following types of facilities normally associated with general aviation terminal areas:

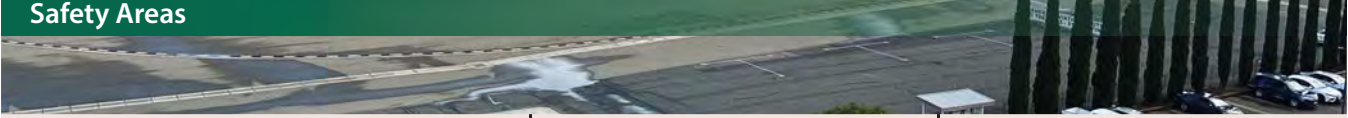
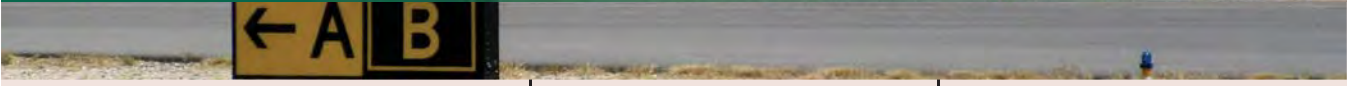
- General aviation terminal services
- Aircraft hangars
- Aircraft parking aprons

General Aviation Terminal Services

The general aviation terminal facilities at an airport are often the first impression of the community that corporate officials and other visitors will encounter. General aviation terminal facilities at an airport provide space for passenger waiting, a pilots' lounge, flight planning, concessions, management, storage, and many other aviation support needs. This space is not necessarily limited to a single, separate terminal building, but can include space offered by fixed base operators (FBOs) and other specialty operators for these functions and services. At E60, no general aviation terminal services are provided by the City of Eloy or a designated FBO; however, the SkyDive Arizona hangar located southwest of the self-service fuel facility provides limited services to visitors, including a pilots' lounge and restrooms. Because this space is not specifically advertised or offered by a dedicated service provider, it is not reflected in the existing terminal space available.

The methodology used in estimating general aviation terminal facility needs is based on the number of airport users expected to utilize general aviation facilities during the design hour. The design hour is calculated at 15 percent of the design day, which is estimated by dividing the peak month operations by the number of days in the month (31). Space requirements for terminal facilities are based on providing



	EXISTING	FUTURE
Runway		
		
Runway Design Code (RDC)	B-II-VIS	B-II-5000
Dimensions	3,901' x 75'	Consider runway extension
Pavement Strength	12,500 lbs S	30,000 lbs S 60,000 lbs D
Safety Areas		
		
RSA	Standard RSA	Maintain
ROFA	Standard ROFA	Maintain
ROFZ	Standard ROFZ	Maintain
RPZ	RPZs extend beyond airport property; public roads in Runway RPZ	Consider mitigation of potential incompatible use
Taxiways		
		
Taxiway Design Group	Conforms to 2A	Maintain
Parallel Taxiway	Taxiway A	Maintain
Parallel Taxiway Separation from Runway	300'	Maintain
Widths	35' (Taxiway A and connectors)	Maintain
Holding Position Separation	200'	Maintain
Notable Conditions	Direct access associated with Taxiway D	Analyze mitigation options
Navigational and Weather Aids		
		
Instrument Approaches	None	Consider GPS approaches
Weather Aids	Wind cones, rotating beacon	Consider AWOS / Maintain
Approach Aids	PAPI-2, REILs on both runway ends	PAPI-4 / Maintain
Lighting, Marking, Signage		
		
Runway Lighting	MIRL	Maintain
Runway Marking	Basic	Non-Precision Instrument
Taxiway Lighting	MITL	Maintain
Airfield Signage	Runway/taxiway designation, routing, runway exits, mandatory instruction signs	Maintain/consider runway distance remaining signage
KEY	AWOS - Automated Weather Observing System D - Dual Wheel Loading GPS - Global Positioning System MIRL - Medium Intensity Runway Lighting MITL - Medium Intensity Taxiway Lighting PAPI - Precision Approach Path Indicator	
	REIL - Runway End Identification Lights ROFA - Runway Object Free Area ROFZ - Runway Obstacle Free Zone RSA - Runway Safety Area S - Single Wheel Loading	



125 square feet (sf) per design hour itinerant passenger. A multiplier of 2.5 in the short term, increasing to 3.5 in the long term, was also applied to terminal facility needs to quantify the number of passengers associated with each itinerant aircraft operation. This increasing multiplier indicates an expected increase in larger aircraft operations through the long term. These operations typically support larger turboprop and jet aircraft, which can accommodate an increasing passenger load factor. This is the case at E60, where an increasing number of turbine operations is anticipated.

Table 3J outlines the space requirements for general aviation terminal services at E60 through the long-term planning period. As previously stated, limited space is currently offered for transient operators at E60. As shown in the table, the long-term planning demand could warrant over 2,000 sf of dedicated general aviation terminal facility space by the end of the planning horizon. Alternatives presented in the next chapter will consider the development of dedicated general aviation terminal facilities.

TABLE 3J | General Aviation Terminal Area Facility Requirements

	Currently Available	Short-Term Need	Intermediate-Term Need	Long-Term Need
General Aviation Terminal Facility Area (sf)	–	900	1,400	2,100
General Aviation Design Hour Passengers	–	7	11	17
Passenger Multiplier	–	2.5	3.0	3.5
Terminal Building Vehicle Parking	–	12	16	22
SASO/Tenant Vehicle Parking	–	24	27	33
Total Vehicle Parking Spaces:	94	36	43	55

Source: Coffman Associates Analysis, April 2024

General aviation vehicle parking demands have also been determined for E60. Space determinations for passengers were based on an evaluation of existing airport use, as well as standards set forth to help calculate projected terminal facility needs. The current designated vehicle parking capacity at E60 can support 94 individual vehicles and is provided at various parking lots, which are located on the airfield and can serve general aviation vehicle parking needs. As identified in **Table 3J**, existing vehicle parking space meets the long-term terminal building parking requirement over the course of the planning period; however, additional parking and reconfiguration options are explored alongside general aviation terminal facilities in the next chapter.

Although some based aircraft owners prefer to park their vehicles in their hangars, safety can be compromised when automobile and aircraft movements are intermixed in and near enclosed buildings. For this reason, separate parking requirements that consider one half of based aircraft at the airport were applied to general aviation automobile parking space requirements. Total parking requirements for general aviation activity at E60 demonstrate a need for approximately 36 spaces in the short term, increasing to approximately 55 vehicle parking spaces by the long-term planning horizon. As such, the current spaces provided are adequate for the projected long-term demand. Ultimately, local demand will dictate the future parking area size, location, and number of parking spaces provided; however, it should be noted that the existing electric access gate located off of N Lear Drive effectively restricts public access to the landside area, as it requires a specific code or key for entry. Alternatives in the next chapter explore options to remedy this condition in order to allow appropriate public access to the landside area.



Aircraft Hangars

Utilization of hangar space varies as a function of weather conditions, local business climate, security, and owner preference. The trend in general aviation aircraft is toward more sophisticated (and consequently, more expensive) aircraft; therefore, many aircraft owners prefer enclosed, climate-controlled hangar space, as opposed to outside tiedowns.

The demand for aircraft storage hangars is dependent on the number and type of aircraft expected to be based at the airport in the future. For planning purposes, it is necessary to estimate hangar requirements based on forecasted operational activity; however, hangar development should be based on actual demand trends in the local economy and financial investment conditions. At present, the City of Eloy maintains a based aircraft waiting list; therefore, it is assumed that all hangars available on airport property are currently at 100 percent capacity.

While most aircraft owners prefer enclosed aircraft storage, several based aircraft will still use outdoor tiedown spaces, usually due to lack of available hangar space, high hangar rental rates, or operational needs. As a result of these factors, enclosed hangar facilities do not necessarily need to be planned for each based aircraft.

Hangar types vary greatly in size and function. T-hangars, box hangars, and shade hangars are popular with aircraft owners in need of storage for individual private aircraft. These hangars often provide individual spaces within a larger structure or in standalone portable buildings. There is 13,500 total sf of T-hangar storage space at the airport. For determining future aircraft storage needs, a planning standard of 1,200 sf per aircraft is utilized for these types of hangars.

Executive box hangars are open-space facilities with no supporting interior structure. These hangars can vary in size between 1,500 and 2,500 sf, with some approaching 10,000 sf. They are typically able to house single-engine, multi-engine, turboprop, and jet aircraft, as well as helicopters. The current inventory of executive box hangar space at E60 is estimated at 13,500 sf. For future planning, standards of 3,000 sf per turboprop, 5,000 sf per jet, and 1,500 sf per helicopter are utilized for executive box hangars.

A conventional hangar is a large, open-space facility with no supporting interior structure. These hangars provide for bulk aircraft storage and are often utilized by airport businesses, such as FBOs or aircraft maintenance operators. Conventional hangars are generally larger than executive box hangars and can range in size from 10,000 sf to more than 20,000 sf. Often, a portion of a conventional hangar is utilized for non-aircraft storage needs, such as maintenance or office space, which is accounted for in the projected hangar space requirements. Conventional hangar space at E60 totals approximately 10,100 sf. The same aircraft sizing standards utilized for executive hangars are also utilized for conventional hangars.

At present, there are a total of 42 aircraft based at E60. These aircraft are stored in hangars that are located both on and off airport property. On-airport hangar area totals approximately 37,000 sf. Multiple off-airport hangars provide approximately 61,000 sf of additional storage space. The majority of the off-airport space is cross-utilized for aircraft storage and maintenance or other aircraft services. Although off-airport service providers can (and do) provide aircraft hangar storage, these operators conduct their



business independent of the airport; as such, future hangar facility needs have been calculated for on-airport hangars only. Ultimately, future hangar development will be dictated by based aircraft and hangar development demands.

Future hangar requirements for the airport are summarized in **Table 3K**.

TABLE 3K | Aircraft Hangar Requirements Analysis

	Currently Available	Short-Term Need	Intermediate-Term Need	Long-Term Need	Difference
Total Based Aircraft to be Hangared	42	47	53	66	+24
Hangar Area Requirements					
T-Hangar/Box Hangar Area (sf)	13,500	18,300	20,600	31,100	+17,600
Executive/Conventional Hangar Area (sf)	23,500	48,500	71,800	98,300	+74,800
Service/Maintenance Area (sf)	-	5,900	6,600	8,300	+8,300
Total Hangar Area (sf):	37,000	72,700	99,000	137,700	+100,700

Source: Coffman Associates Analysis, April 2024

The analysis shows that future net need for hangar space indicates a potential increase of over 100,000 sf through the long-term planning period. This includes a mixture of hangar types, with the largest needs projected in the executive and conventional hangar categories. Due to the projected increase in based aircraft, annual general aviation operations, and hangar storage needs, facility planning will consider the inclusion and siting of additional hangar space at the airport. It is expected that the aircraft storage hangar requirements will continue to be met through a combination of hangar types.

It should be noted that hangar requirements are general in nature and are based on the aviation demand forecasts. The actual need for hangar space will also depend on the usage within the hangars. For example, some hangars may be utilized entirely for non-aircraft storage, such as maintenance, although they have an aircraft storage capacity from a planning standpoint; therefore, the needs of an individual user may differ from the space calculated as necessary. Additionally, off-airport operators may absorb some of the projected hangar demands; however, hangar space requirements are presented from an on-airport perspective for planning purposes.

Aircraft Parking Aprons

The aircraft parking apron is an expanse of paved area intended for aircraft parking and circulation. FAA AC 150/5300-13B, *Airport Design*, suggests a methodology by which transient apron requirements can be determined from knowledge of busy day operations. The busy day is calculated at 1.25 times the design day, which is the peak month divided by the number of days (31). The peak month at E60 is currently estimated at 10 percent of annual operations. The number of itinerant parking spaces required was determined to be approximately 50 percent of the busy day itinerant operations for general aviation operations. A planning standard of 800 square yards (sy) per aircraft was applied to determine future transient apron requirements for single- and multi-engine piston aircraft. For business jets, which are often much larger, a planning standard of 1,600 sy per aircraft position was used. In addition, E60 has aircraft that occasionally use outside aircraft tiedowns for storage. It is assumed that these aircraft require less space than transient aircraft; therefore, a planning standard of 650 sy per aircraft was applied.



For local tiedown needs, five percent of total based aircraft was added for maintenance activities and temporary storage needs. Apron parking requirements are presented in **Table 3L**. Transient apron parking needs are apportioned into business jet needs and smaller single- and multi-engine aircraft needs.

TABLE 3L | Aircraft Parking Apron Requirements Analysis

	Currently Available	Short-Term Need	Intermediate-Term Need	Long-Term Need	Difference
Based GA Parking	–	2	2	3	–
Transient GA Parking	–	12	15	21	–
Corporate Jet Parking	–	1	2	3	–
Helicopter Parking	–	1	1	2	–
Total Parking Positions:	35*	16	21	29	-6
Local Aircraft Apron (sy)	–	2,200	2,400	3,400	–
Transient Apron (sy)	–	11,200	15,200	21,600	–
Total Apron Area (sy):	23,500*	13,400	17,600	25,000	+1,500

*Current parking only accounts for designated on-airport parking areas

Source: Coffman Associates Analysis, April 2024

Existing general aviation aircraft parking aprons at the airport currently total approximately 23,500 sy of space. It should be noted that current apron and marked aircraft parking positions in this analysis only account for those designated on airport property. As shown in the table, the currently available apron area is adequate within the short and intermediate terms of the planning horizon; however, 25,000 sy of apron pavement is estimated to be needed by the long-term period, which equates to an additional 1,500 sy of aircraft parking apron area. The landside alternatives in the next chapter will evaluate siting locations on the airfield where additional aircraft parking could be located.

SUPPORT FACILITIES

Various other landside facilities that serve a supporting role in overall airport operations have also been identified. These support facilities include aviation fuel storage and perimeter fencing and gates.

Aviation Fuel Storage

SkyDive Arizona currently owns and operates the airport's fuel facilities, which are located on the main apron between the SkyDive Arizona and Airborne Systems hangars. The existing storage capacity for 100LL and Jet A fuels totals 6,000 gallons each. Fuel is dispensed via a self-serve system that is co-located with the tanks. In addition to these fuel tanks, multiple privately owned and operated fueling facilities are located off-airport and are not available to the public; as such, private fueling facilities have not been included in this analysis.

According to airport records, fuel flowage on the airport totaled 42,382 gallons of 100LL and Jet A fuel combined over a 12-month period ending in June 2023.



Fuel storage requirements are typically based on maintaining a two-week supply of fuel during an average month; however, more frequent deliveries can reduce the fuel storage capacity requirements. Generally, fuel tanks should be of adequate capacity to accept a full refueling tanker (approximately 8,000 gallons) while maintaining a reasonable level of fuel in the storage tank. Future aircraft demand experienced by the airport will determine the need for additional fuel storage capacity. It is important that airport personnel work with the fuel service provider and other specialty aviation operators to plan for adequate levels of fuel storage capacity through the long-term planning period. Because the current fuel storage capacity cannot accommodate a full refueling tanker, it is recommended that the airport consider increasing fuel storage capacity up to 12,000 gallons in the intermediate term, as shown in **Table 3M**. This would allow the fuel service provider to maintain a reasonable level of fuel for customers while accepting a full refueling tanker load of fuel, ultimately preventing the need to completely drain a fuel tank prior to taking on another load of fuel.

TABLE 3M | Fuel Storage Requirements Analysis

	Capacity	PLANNING HORIZON		
		Short Term	Intermediate Term	Long Term
Fuel Available				
Avgas (100LL)	6,000 gal.	Maintain	Consider 12,000 gal.	Maintain
Jet A	6,000 gal.	Maintain	Consider 12,000 gal.	Maintain

Sources: Fuel capacity provided by airport administration; fuel supply projections prepared by Coffman Associates, April 2024

Perimeter Fencing and Gates

Perimeter fencing is primarily used at airports to secure the aircraft operational area. The physical barrier of perimeter fencing:

- Gives notice of the legal boundary of the outermost limits of the facility or security-sensitive area;
- Assists in controlling and screening authorized entries into a secured area by deterring entry elsewhere along the boundary;
- Supports surveillance, detection, assessment, and other security functions by providing a zone for installing intrusion detection equipment and closed-circuit television (CCTV);
- Deters casual intruders from penetrating the aircraft operations areas on the airport;
- Creates a psychological deterrent;
- Demonstrates a concern for facilities; and
- Limits inadvertent access to the aircraft operations area by wildlife.

At E60, the perimeter of the airport is completely enclosed with chain link security fencing. The majority of airport property is surrounded by security fencing, which is topped with three strands of barbed wire and is eight feet in overall height. The apron area is protected by a six-foot chain link fence. An electronic gate is located at the main entrance to the airport. Manual access gates at various locations on the airfield allow access to movement and non-movement areas and are secured with padlocks.



Additionally, signs prohibiting unauthorized entry are displayed on all gates and in other prominent locations to deter unauthorized entry to the airfield. The existing fencing system is adequate for security and wildlife deterrent purposes; however, the alternatives analysis in the next chapter explores options to reconfigure the main entrance to the airport terminal area.

The existing fence line along the west side of the runway is located approximately 250 feet from the runway centerline and runs parallel to the runway, as detailed on **Exhibit 3C**. Previous analysis has identified this portion of perimeter fencing as an obstruction under 14 CFR Part 77, *Objects Affecting Navigable Airspace*. A detailed survey was conducted as part of this master plan update, which can be utilized to determine potential obstructions to Part 77 surfaces established for E60. Alternatives analysis in the next chapter examines options to mitigate any obstructions identified.

A summary of the overall general aviation landside facilities is presented on **Exhibit 3E**.

SUMMARY

This chapter outlines the safety design standards and facilities required to meet potential aviation demand projected at E60 for the next 20 years. To provide a more flexible master plan, the yearly forecasts from Chapter Two have been converted to planning horizon levels. The short term roughly corresponds to a five-year timeframe, the intermediate term is approximately 10 years, and the long term is 20 years. By utilizing planning horizons, airport management can focus on demand indicators for initiating projects and grant requests, rather than on specific dates in the future.

In Chapter Four, potential improvements to the airside and landside systems will be examined through a series of airport development alternatives. Most of the alternatives discussion will focus on the capital improvements that would be eligible for federal and state grant funds. Other projects of local interest will also be presented. Ultimately, an overall airport development plan will be created that presents a vision to not only achieve the 20-year scope of this master plan update, but the future build-out of E60.



Aircraft Storage Hangar Requirements



Aircraft to be Hangared	42	45	50	63
T-Hangar Area (sf)	13,500	18,300	20,600	31,100
Executive/Conventional Hangar Area (sf)	23,500	48,500	71,800	98,300
Service/Maintenance Area (sf)	-	5,900	6,600	8,300
Total Hangar Storage Area (sf)	37,000	72,700	99,000	137,700

Aircraft Parking Apron



Aircraft Parking Positions	35	16	21	29
Total Public Apron Area (sy)	23,500	13,400	17,600	25,000

General Aviation Terminal Facilities and Parking



Building Space (sf)	-	900	1,400	2,100
Total GA Parking Spaces	94	36	43	55

Fuel Storage Requirements



Jet A 14-Day Supply (gal.)	6,000	Maintain	Consider 12,000 Gal. Capacity	Maintain
100LL 14-Day Supply (gal.)	6,000	Maintain	Consider 12,000 Gal. Capacity	Maintain

*All available existing facilities include those that are on-airport only.



Chapter 4

Airport Alternatives



Chapter 4

Airport Alternatives

In the previous chapter, the aviation facilities required to satisfy airside and landside demand at Eloy Municipal Airport (E60) through the 20-year planning period of the master plan were identified. Several Federal Aviation Administration (FAA) development standards were also discussed that apply to airfield design. The next step in the planning process is to evaluate appropriate staging for these facilities while meeting applicable federal and local design standards. The purpose of this chapter is to formulate and examine a range of realistic development alternatives that address the short-, intermediate-, and long-term planning horizon levels. Because there are multiple possibilities and combinations, it is necessary to focus on the opportunities that have the greatest potential for success. Each alternative provides a different approach to meeting existing and future facility needs. The alternatives considered in this chapter are presented in graphic form for ease of understanding, evaluation, and discussion.

Some airports become constrained due to limited availability of vacant and/or underutilized land, while others may be constrained due to adjacent existing and/or approved land use development or other human-made or geographical features. These conditions must be carefully considered and understood to organize a functionally successful layout of new and improved facilities at Eloy Municipal Airport. A long-term perspective regarding facility planning at this time will provide an effective security for the City of Eloy (airport sponsor) to enhance the long-term viability of the airport for safe and functional aviation operations, as well as compatible and sustainable economic growth.

The primary goal of this planning process is to develop a feasible plan for meeting the needs that result from the projected market demand over the next 20 years. The resulting master plan and capital financial plan should be developed in a manner that is consistent with the future goals and objectives of the City of Eloy and airport stakeholders, including users of the airport and the local community and region, all of which have a vested interest in the successful development and operation of E60.

The goal of this chapter is to develop an underlying rationale that supports the final recommended concept. Through this planning process, an evaluation of the highest and best uses of airport property will be made while considering local development goals, efficiency, physical and environmental factors, capacity, and appropriate safety design standards.



The alternatives presented in this chapter have been formulated as potential solutions to meet the overall program objectives for the airport in a balanced manner. Through coordination with the City of Eloy, the planning advisory committee (PAC), and the public, an alternative (or combination of alternatives) will be refined and modified, as necessary, into a recommended development concept (presented in Chapter 5). The planning considerations and alternatives presented in this chapter are the initial ideas considered in the evolution of a recommended development concept to attain the desired future for the airport.

NO ACTION/NON-DEVELOPMENT ALTERNATIVES

Prior to the presentation of development alternatives for E60, several non-development options should be taken into consideration. Non-development alternatives include a “no-build” (or “do-nothing”) alternative, the development of a replacement airport at a new location, the closure of the existing airport, and the transfer of services to another existing airport. The following discussion presents the primary non-development alternatives.

NO-BUILD/DO-NOTHING ALTERNATIVE

The City of Eloy is charged with managing the airport to provide safe aviation operations for the community, as well as for the economic enhancement of the city and region. For E60, the no-action option would effectively reduce the quality of services being provided to the public, affect the aviation facility’s ability to meet FAA design standards, and affect the region’s ability to support aviation needs.

The ramifications of a no-action alternative extend into impacts on the economic well-being of the region. **An analysis of the economic benefit of the airport (completed in 2021) found that E60 had a total economic impact of \$25.9 million annually and supported more than 240 direct and secondary jobs.** If facilities are not maintained and improved to allow the airport to adequately serve the necessary general aviation operations, or if delays become unacceptable or aircraft storage is not available, aviation activities and business may relocate elsewhere. The no-action alternative is also inconsistent with the long-term goal of the FAA and Arizona Department of Transportation – Aeronautics Group (ADOT) to enhance local and interstate commerce.

Furthermore, E60 has received nearly \$12.9 million in state and federal grants since 2001. These grants represent a direct economic stimulus that generates lasting positive economic impacts. The City of Eloy has a vested interest in maintaining and improving airport facilities for business and general aviation users. Without a commitment to ongoing improvement of the airport, users of the airport will be constrained from taking full advantage of the airport’s air transportation capabilities; therefore, a no-action alternative is not considered further in this master plan.



TRANSFER OF SERVICE/RELOCATE AIRPORT ALTERNATIVE

This study will not consider the relocation of services to another airport or the development of a new airport site. The development of a new facility is a complex and expensive option. A new site would require greater land area, duplication of investment in facilities, installation of supporting infrastructure that is already available at the existing site, and greater potential for negative impacts to natural, biological, and cultural resources.

As mentioned, the City of Eloy has accepted nearly \$12.9 million in federal and state development grant funding. Through grant assurances, the acceptance of these grants obligates the airport sponsor to maintain the airport as an airport. Closing the existing airport and transferring services to another existing airport would be considered a violation of the grant assurances and would require repayment of grants that are not yet fully depreciated. The investments made and the economic benefits received from the airport (both public and private) could not readily be shifted or regenerated to another airport without significant costs/losses; as such, this alternative is not considered practical, reasonable, and/or financially feasible.

NON-DEVELOPMENT ALTERNATIVES SUMMARY

The purpose of this master plan is to examine aviation needs at E60 over the course of the next 20 years; therefore, this master plan will examine the needs of the existing airport and present a program of needed capital improvement projects to cover the scope of the plan. The airport is a lucrative business, transportation utility, and economic asset for both the City of Eloy and the region. It can accommodate existing and future demand and should be developed accordingly to support the interests of residents, visitors, and businesses that rely upon it. Ultimately, the final decision regarding its future development rests with the City of Eloy, the FAA, and ADOT on an individual project basis. E60 is a facility with abundant growth potential remaining; as such, the non-development alternatives will not be considered further in this planning process. The analysis to follow addresses airside and landside development alternatives that consider an array of facility demands, including safety, capacity, access, and efficiency.

PLANNING OBJECTIVES

A set of basic planning objectives has been established to guide the alternatives development process. It is the goal of this master planning update effort to produce a development plan for the airport that addresses forecast aviation demand and meets FAA design standards to the greatest degree possible. As owner and operator, the City of Eloy provides the overall guidance for the operation and development of the airport. It is of primary importance that E60 is marketed, developed, and operated for the benefit of the community and its users. The following basic planning principles and objectives will be utilized as general guidelines during this planning effort:

- Continue to develop a safe, functional, and efficient aviation campus in accordance with applicable federal, state, and local regulations
- Continue to preserve and protect public and private investments in existing and programmed airport facilities



- Continue to strategically improve the airport's existing and programmed facilities as dictated by future demand
- Continue to utilize the airport's master plan and financing program to ensure its long-term viability in a manner that is consistent with the adopted Eloy general plan, zoning ordinance, and subdivision regulations
- Continue to minimize encroachment through the promotion of compatible land uses within and surrounding the airport
- Continue to improve and enhance the airport so it is readily responsive to the changing needs of all aviation users and visitors
- Continue to develop a facility with a focus on self-sufficiency in both operational and developmental cost recovery
- Ensure that future development supports the City of Eloy's intent to make the airport and its surrounding area an economic engine of the city
- Foster a surrounding natural environment that is sustainable and exhibits a cohesive urban design theme

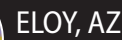
REVIEW OF PREVIOUS AIRPORT PLANS

The previous master plan for E60 was completed and approved in 2013. More recently, the airport layout plan (ALP) was updated with a pen and ink revision in 2021. The 2021 ALP is shown on **Exhibit 4A**. The ALP provides information regarding existing and future conditions at E60, including:

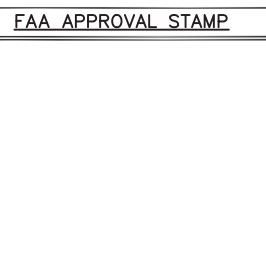
- Airport data related to airport category, airport reference code (ARC), elevation, wind conditions, temperature, and navigational aids located at the airport; and
- Runway data related to the critical design aircraft, safety areas, markings, lighting, and visual and navigational aids associated with the runway and taxiway system.

Additionally, the drawing graphically depicts both airside and landside recommendations based on previous airport planning efforts, including:

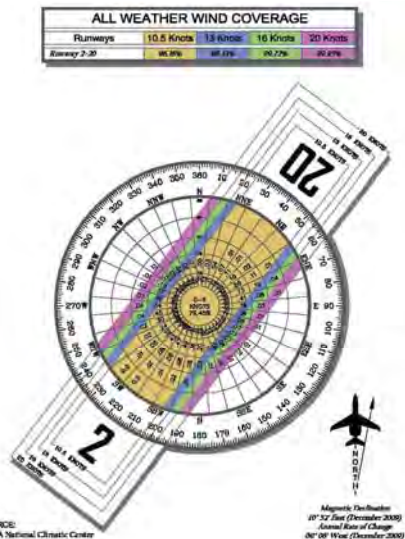
- Extending Runway 2-20 approximately 650 feet on each end to a future length of 5,200 feet;
- Upgrading to a future runway design code (RDC) of B-II-5000;
- Implementing instrument approach visibility minimums down to one mile;
- Programming hangar development within the existing airport property boundary on the southwest side of the airfield; and
- Upgrading visual approach aids, relocating the segmented circle and lighted wind cone, and implementing an automated weather observation station (AWOS).



ELOY MUNICIPAL AIRPORT AIRPORT LAYOUT PLAN ELOY, ARIZONA		
PLANNED BY:	Eric Pfeiffer	
DETAILED BY:	Maggie Beaver	
APPROVED BY:	James M. Harris, P. E.	
September 9, 2013	SHEET	1 OF 7



BUILDINGS/FACILITIES			
EXISTING	ULTIMATE	DESCRIPTION	ELEV.
(1)		T-HANGARS	1523.3'
(2)		T-HANGARS	1523.8'
(3)		HANGAR #5 BRUNETTO FLYING SERVICE	1539.2'
(4)		HANGAR #4 AIRBORNE SYSTEMS	1524.1'
(5)		HANGAR #3 (Rigging Innovations)	1525.0'
(6)		FUEL STORAGE	NA
(7)		HANGAR #1 (Rigging Innovations)	1527.2'
(8)		WATER TANK	1526.8'
(9)		HANGAR #2 SKYDIVE ARIZONA	1526.4'
	(20)	AUTOMATED WEATHER OBSERVATION STATION (AWOS)	>1532.0'
	(21)	AIRCRAFT WASHCRACK	NA
	(22)	CONVENTIONAL HANGAR (FBO)	>1528.0'
	(23)	T-HANGARS (10 units)	>1528.0'
	(24)	TERMINAL BUILDING	>1527.0'
EXISTING OFF AIRPORT PROPERTY			
(10)		ARIZONA AEROPAINTING	1529.5'
(11)		CROP FIRST AVIATION	1527.8'
(12)		AIRCRAFT MAINTENANCE & RESTORATION FACILITY	1543.3'
(13)		SKYDIVE ARIZONA/AERO SPECIALISTS	1533.1'
(14)		SKYDIVE ARIZONA/AERO SPECIALISTS	1527.9'
(15)		SKYDIVE ARIZONA/AERO SPECIALISTS	1548.2'



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The analysis presented in this chapter will revisit the recommendations presented on the ALP and in the previous master plan. Since the completion of the last plan, the FAA has made modifications to design standards, as outlined in the previous chapter. As such, some of the previous plan's elements may be carried over to this master plan, while others may be changed or removed from further consideration.

AIRSIDE ALTERNATIVES

As previously detailed, the development alternatives are categorized into two functional areas: airside and landside. Airside considerations relate to runways, taxiways, navigational aids, lighting and marking aids, etc., and require the commitment of an extensive land area to meet the physical layout of the airport and the required airfield safety standards. The design of the airfield also defines minimum setback distances from the runway and object clearance standards. These criteria are defined first to ensure the fundamental operational needs of the airport are met. Landside considerations include hangars, aircraft parking aprons, terminal services, as well as potential utilization of property to provide revenue support for the airport and benefit the economic development and well-being of the surrounding area.

Exhibit 4B presents the airside and landside alternative considerations that are specifically addressed in this analysis. These initial concepts are the result of the findings of the aviation demand forecasts and facility requirements evaluations, as well as input from the PAC, the City of Eloy, and the public.

The remainder of this chapter describes various development alternatives for airside and landside facilities. Although each airfield component is treated separately in this chapter, the ultimate master plan will integrate all of these individual requirements so that they complement one another.

AIRSIDE CONSIDERATIONS

This section identifies and evaluates various airside development factors at Eloy Municipal Airport to meet the requirements set forth in Chapter Three. Airside facilities are, by nature, the focal point of an airport campus. Because of their primary role and the fact that they physically dominate airport land use, airfield facility needs often serve as the most critical factor in the determination of viable development options. A summary of the primary airside planning issues considered in this alternatives analysis is graphically depicted on **Exhibit 4C** and detailed as follows.

AIRPORT DESIGN CRITERIA

Applicable standards for airport design are outlined in FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*. The design of airfield facilities is primarily based on the physical and operational characteristics of aircraft using the airport. As discussed in Chapter Two, an RDC is applied to each runway at an airport to identify the appropriate design standards for the runway and associated taxiway system. The RDC is comprised of the aircraft approach category (AAC), the airplane design group (ADG), and the approach



AIRSIDE CONSIDERATIONS

- Evaluate improvements necessary to meet the appropriate Federal Aviation Administration (FAA) design standards under existing and future conditions.
- Examine a potential runway extension on Runway 2-20.
- Consider increased runway pavement strength and non-precision instrument markings.
- Evaluate the taxiway system in meeting airfield safety, design, and geometry standards.
- Consider locations for an automated weather observation station (AWOS) and relocate the lighted wind cone and segmented circle.
- Upgrade airport signage to include runway distance remaining signs and upgrade visual approach aids.



LANDSIDE CONSIDERATIONS

- Determine efficient land uses that allow the airport to meet the needs of aviation users and promote non-aviation uses where possible.
- Identify locations for hangar development and additional aircraft apron area to meet projected demand.
- Consider options for designated general aviation terminal facilities.
- Evaluate options to construct support facilities needed for aviation activities, such as perimeter fencing and fuel storage.
- Examine options for vehicle parking access while best segregating aircraft and vehicle traffic on airport movement areas.





Existing RDC: B-II-VIS
Future RDC: B-II-5000



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visibility minimums expressed in runway visual range (RVR) values and relates to the maximum size and top speed of aircraft that regularly operate at the airport. The FAA has historically defined regular use as at least 500 annual operations at the airport. While this standard can sometimes be represented by one specific make and model of aircraft, most of the RDC values for E60 are represented by several different aircraft that, collectively, operate frequently at the airport.

As a local general aviation airport in the FAA's *National Plan of Integrated Airport Systems* (NPIAS), E60 should be capable of safely accommodating the needs of recreational, instructional, and public safety uses, as well as charter and military aviation uses, on a more limited basis. Analysis in Chapter Two indicated that the RDC for Runway 2-20 is currently B-II-VIS. The airfield should continue to be planned for some of the most demanding piston- and turbine-powered aircraft utilizing the airport and the airport should plan for a potential increase in business jet activity to the greatest extent possible, as demand dictates. As such, alternative analyses associated with runway length and improved instrument approach visibility minimums will be considered, and design considerations for Runway 2-20 will be presented under future RDC B-II-5000 standards.

OBJECTS AFFECTING NAVIGABLE AIRSPACE – TITLE 14 CFR PART 77

Title 14 Code of Federal Regulations (CFR) Part 77 establishes standards for determining obstructions in navigable airspace; 14 CFR Part 77 sets forth requirements for construction and alteration of structures (i.e., buildings, towers, etc.). This federal regulation also provides for studies of obstructions to determine their effects on the safe and efficient use of airspace, as well as for public hearings regarding these obstructions and the creation of antenna or wind farm areas. 14 CFR Part 77 also establishes methods of identifying surfaces that must be free from penetration by obstructions (including buildings, cranes, cell towers, etc.) in the vicinity of an airport. This regulation is predominantly focused on airspace-related issues. Implementation and enforcement of the elements contained in this regulation are a cooperative effort between the FAA and individual state aviation agencies or individual airports. The imaginary surfaces defined in 14 CFR Part 77 include the primary surface, transitional surface, approach surface, horizontal surface, and conical surface. As part of the E60 airport master plan update, a detailed obstruction analysis has been conducted for inclusion in the ALP drawing set. The ALP is the culmination of the airport master plan update and depicts the future layout for the airport over the next 20 years or more; however, the survey identified a portion of the existing perimeter fence as an obstruction to the transitional surface. The following alternatives analysis examines options to mitigate the obstructing fence line.

BUILDING RESTRICTION LINE

The building restriction line (BRL) identifies suitable building area locations on the existing and proposed airport property. The BRL encompasses the runway protection zones (RPZs), the runway object free area (ROFA), navigational aid critical areas, areas required for terminal instrument procedures, and other areas necessary for meeting airport line-of-sight criteria.



Two primary factors contribute to the determination of the BRL: the type of runway (utility or other-than-utility) and the capability of the instrument approaches. Under the future condition, Runway 2-20 is an other-than-utility (serving large aircraft over 12,500 pounds) non-precision instrument runway with visibility minimums not lower than one mile.

The BRL is the product of 14 CFR Part 77 transitional surface clearance requirements, which stipulate that no object be located in the primary surface (defined as being 500 feet wide for other-than-utility runways with instrument approach minimums greater than $\frac{3}{4}$ mile). From the primary surface, the transitional surface extends outward at a slope of one vertical foot to every seven horizontal feet. For Runway 2-20, the 25-foot BRL is set at 425 feet from the runway centerline. The BRL is depicted for all landside development alternatives to be considered at E60.

RUNWAY LENGTH

The runway length analysis in the previous chapter concluded that the existing length of Runway 2-20 (3,901 feet) is capable of safely accommodating up to 95 percent of small aircraft (less than 12,500 pounds) with fewer than ten passenger seats; however, to accommodate 100 percent of these small aircraft, a runway length of 4,500 feet is recommended. For small aircraft with 10 or more passenger seats, 4,800 feet of runway length is recommended.

The analysis concluded that the current length of 3,901 feet available on Runway 2-20 is adequate for some business jet and turboprop aircraft for takeoffs at up to 60 percent useful load. Few of the aircraft analyzed are able to operate at 70 percent useful load. None of the aircraft analyzed can conduct takeoff operations at or above 80 percent useful load, with the exception of the Pilatus PC-12, which can conduct takeoff operations without weight restriction. During hot summer periods, most business jet and turboprop aircraft must depart from E60 with restricted payloads (less fuel/freight; fewer passengers), which can limit nonstop destination distances. Furthermore, when considering wet runway conditions, the landing length requirements of several business jets analyzed in Chapter Three often exceed the current runway length. When analyzing runway takeoff and landing length requirements, the future critical design aircraft (Cessna Citation Encore) needs approximately 5,600 feet of runway length to take off at maximum takeoff weight (MTOW) and approximately 7,900 feet of landing length when operating under Part 135 charter aircraft rules on a contaminated or wet runway environment.

The facility requirements analysis concluded that additional length on the primary runway may become necessary in the future, depending on how the business jet aircraft fleet mix changes and grows. For these reasons, the alternatives to follow consider extension options to the runway so the airport is prepared in the future, should demand for an extension materialize. At a minimum, planning for runway extensions allows the City of Eloy to develop land use and zoning policies that limit the potential for encroaching developments that would restrict future airport expansion. As discussed in Chapter Three, a runway length of 5,500 feet can accommodate 75 percent of the business jet fleet operating at 60 percent useful load. A runway of this length could accommodate the Cessna Citation Encore at 90 percent useful load under design day conditions. As such, analysis in this chapter examines potential impacts of an extension to Runway 2-20 up to a maximum of 5,500 feet, while considering appropriate safety design standards.



TAXIWAY CONFIGURATION

The taxiway system at E60 primarily meets the recommended design and geometry standards set forth by the FAA; however, there is an existing non-standard taxiway geometry condition that needs to be addressed:

- Taxiway D provides direct access from the aircraft apron area to Runway 2-20.

This condition can lead to pilots inadvertently taxiing onto the runway, causing runway incursions and other potentially dangerous airfield safety concerns. This condition is addressed in the following airside alternatives.

ANCILLARY IMPROVEMENTS

Runway Strength | An important feature of airfield pavement is its ability to withstand repeated use by aircraft. The strength rating of a runway does not preclude aircraft weighing more than the published strength rating from using the runway. Runway strength is based on design parameters that support a high volume of aircraft at or below the published weight, allowing the pavement to survive its intended useful life. The previously approved ALP reports the current pavement strength for Runway 2-20 as 12,500 pounds single wheel loading (S). Given the number of turboprop and jet aircraft currently operating and forecast to operate at E60, future planning should consider increasing the pavement strength rating to 30,000 pounds S and 60,000 pounds dual wheel loading (D).

Visual Approach Aids | Runways 2 and 20 are currently equipped with two-box precision approach path indicators (PAPI-2s). Generally, four-box precision approach path indicators (PAPI-4s) are recommended for runways that are used by jet and turboprop aircraft; therefore, consideration should be given to upgrading the PAPI-2 systems to PAPI-4 systems.

Weather Reporting Aids | At present, E60 is served by a lighted wind cone and segmented circle. Previous planning has considered relocating these facilities, which are also evaluated in this chapter. Many airports are equipped with AWOS systems, which record and transmit current weather conditions, such as wind speed, wind gusts, wind direction, temperature, dew point, altimeter setting, and density altitude. E60 is not currently equipped with an on-site AWOS; however, potential locations for an AWOS serving E60 will be analyzed in this chapter.

Airfield Signage | Airfield identification signs assist pilots in identifying their locations on the airfield and directing them to their desired locations. Lighted signs are installed on the runway and taxiway system on the airfield. The signage system includes runway and taxiway designation, holding position, routing/directional, and runway exit signs. All existing signs should be maintained throughout the planning period. At present, there are no distance remaining signs serving E60; consideration should be given to the addition of distance remaining signage on Runway 2-20, at a minimum. Airfield signage should be expanded or upgraded as airfield improvements are made.



AIRSIDE ALTERNATIVES

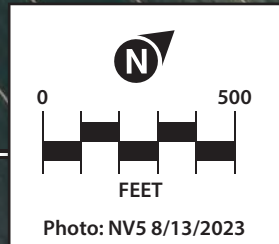
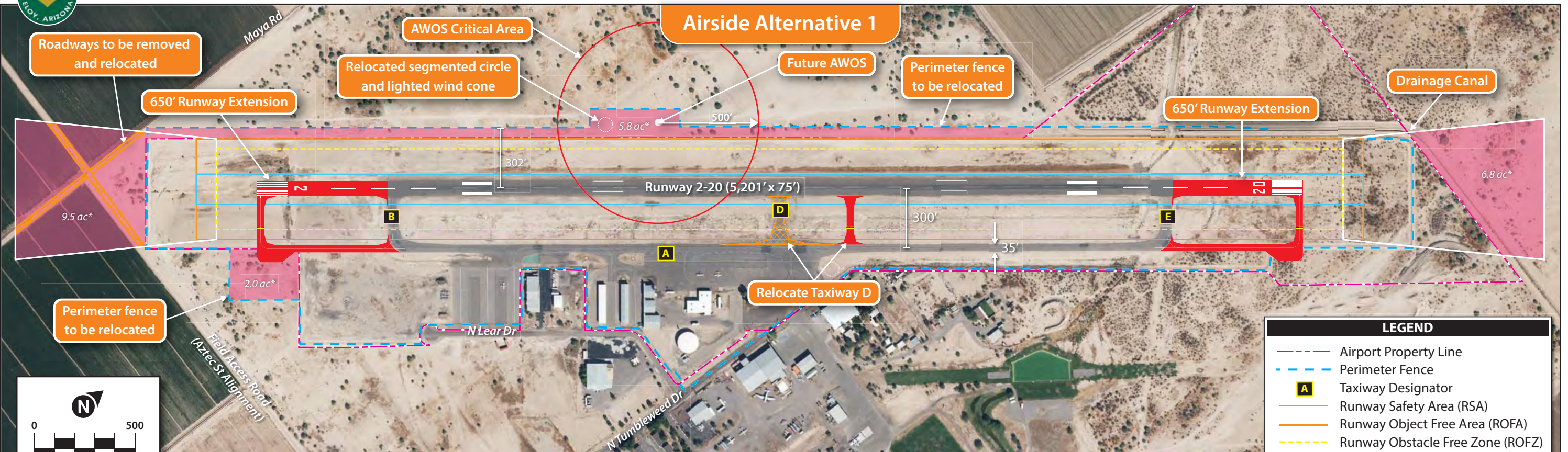
Four airfield alternatives have been prepared to address the airfield components outlined above. The details of each alternative are described as follows, along with each alternative's associated advantages and disadvantages.

AIRSIDE ALTERNATIVE 1

As depicted on **Exhibit 4D**, Airside Alternative 1 considers improvements to the airfield based on the currently approved ALP, including a 650-foot extension to each runway end for a future length of 5,200 feet, while meeting critical safety area design standards for RDC B-II-5000. In addition, this alternative explores options to mitigate the existing direct access point from the aircraft apron area to Runway 2-20.

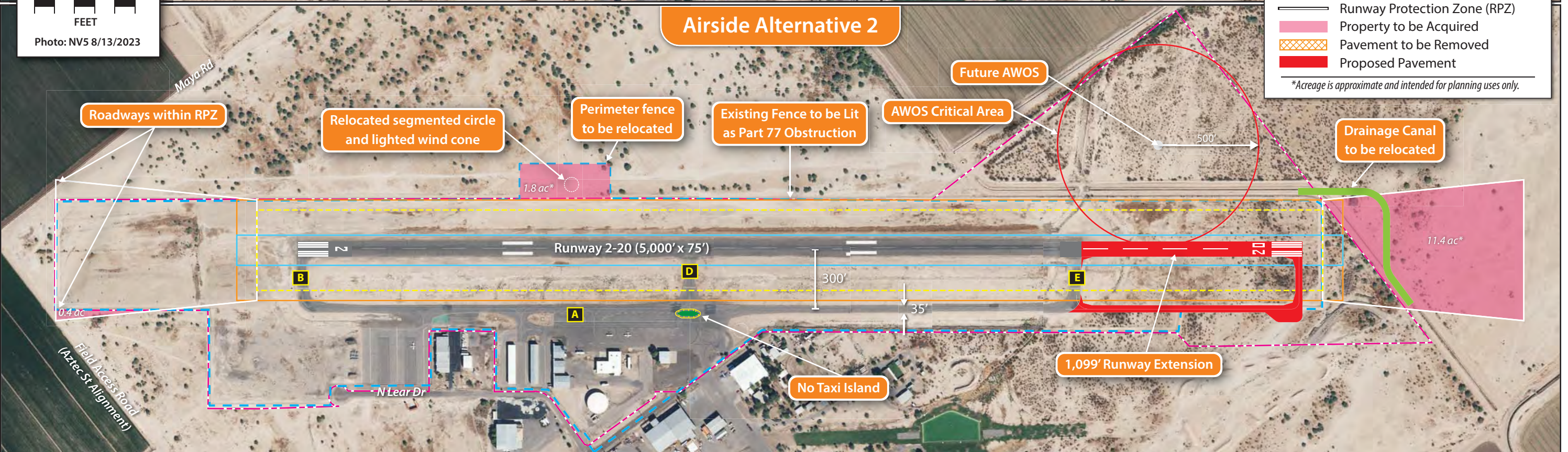
Runway 2-20 | A 650-foot extension on each end of Runway 2-20 results in a length of 5,200 feet. A runway of this length would allow the future critical aircraft (Cessna Citation Encore) to take off at 90 percent MTOW during the hottest periods of the summer and would satisfy runway length requirements to accommodate 100 percent of the small aircraft fleet with 10 or more passenger seats. Additionally, a runway of this length would allow landing operations under 14 CFR Part 25 by the future critical aircraft under wet or contaminated runway conditions. Primary impacts associated with a runway extension of 650 feet on each end of the runway include shifting the RPZs serving Runway 2 and 20 beyond the existing airport property boundary. The RPZ serving Runway 2 includes approximately 9.5 acres of uncontrolled property, as well as portions of Maya Road and the field access road on the Aztec Street alignment, which would ultimately have to be relocated. The RPZ serving Runway 20 extends beyond the existing airport property and encompasses approximately 6.8 acres of uncontrolled property. Furthermore, this alternative considers the acquisition of approximately 5.8 acres and the relocation of the perimeter fence along the northwest side of the runway, which has previously been identified as an existing Part 77 obstruction. This alternative also considers relocating the segmented circle and implementing an AWOS on the northwest side of the runway. The proposed improvements to the runway would involve numerous connected projects, including the following:

- Extension of Taxiway A and acquisition of approximately two acres
- Relocation of the runway end identification lights (REILs) serving Runway 2-20
- Acquisition (fee simple/easement) of approximately 9.5 and 6.8 acres of private, uncontrolled property within the future Runway 2 and Runway 20 RPZs
- Removal and relocation of portions of Maya Road and the field access road on the Aztec Street alignment within the shifted Runway 2 RPZ
- Acquisition of approximately 5.8 acres of private, uncontrolled property on the northwest side of the runway
- Relocation of the perimeter fence on the northwest side of the runway out of the Part 77 surfaces



LEGEND	
	Airport Property Line
	Perimeter Fence
	Taxiway Designator
	Runway Safety Area (RSA)
	Runway Object Free Area (ROFA)
	Runway Obstacle Free Zone (ROFZ)
	Runway Protection Zone (RPZ)
	Property to be Acquired
	Pavement to be Removed
	Proposed Pavement

*Acreage is approximate and intended for planning uses only.



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- Relocation of the segmented circle and lighted wind cone and installation of an AWOS on the northwest side of the runway
- Mitigation of overgrown vegetation and gradient incompatibilities associated with the RSA, ROFA, and ROFZ

Further analysis will be required at the time of construction of a runway extension.

Taxiway Geometry Improvements | This alternative considers the removal and relocation of Taxiway D to the northeast, which would remove the existing (and unsafe) direct access provided from the aircraft apron area, across Taxiway A, and ultimately to Runway 2-20.

AIRSIDE ALTERNATIVE 2

As shown on **Exhibit 4D**, Airside Alternative 2 considers improvements to the airfield to increase the current runway length while meeting critical safety area design standards for RDC B-II-5000. This alternative also explores options to mitigate the existing direct-access point via Taxiway D from the apron area to Runway 2-20.

Runway 2-20 | A 1,099-foot extension to Runway 2-20 results in a length of 5,000 feet, which would satisfy the future critical aircraft requirement for takeoff operations at more than 80 percent useful load and landing operations under 14 CFR Part 25 with a wet or contaminated runway. This length would also increase the runway's overall utility for other business jets and turboprop aircraft. As such, this alternative considers a 1,099-foot runway extension (to the northeast only) and improvements necessary to meet future RDC B-II-5000 design standards. By extending the runway in this manner, the ROFA and RPZ serving Runway 20 would extend beyond the existing airport property boundary and encompass approximately 11.4 acres of private property, which would need to be acquired for the ROFA, while the RPZ could be acquired through avigation easement or fee simple acquisition. Furthermore, the future ROFA and Runway 20 RPZ would be traversed by a drainage canal, which would need to be relocated outside the future ROFA. The drainage canal could be enclosed or tunneled in its existing location. Additional considerations in this alternative, as well as projects supportive of the runway extension, include the following:

- Extension of Taxiway A
- Relocation of the REILs serving Runway 20
- Acquisition (fee simple/easement) of approximately 11.4 acres of private, uncontrolled property within the future Runway 20 RPZ
- Removal and relocation of the drainage canal outside the future ROFA
- Acquisition of approximately 1.8 acres of private, uncontrolled property on the northwest side of the runway
- Installation of obstruction lighting on the perimeter fence on the northwest side of the runway



- Relocation of the segmented circle and lighted wind cone to the northwest side of the runway
- Installation of an AWOS on the northwest side of the airfield, near Runway 20
- Mitigation of overgrown vegetation and gradient incompatibilities associated with the RSA, ROFA, and ROFZ

Further analysis will be required at the time of construction of a runway extension.

Taxiway Geometry Improvements | To mitigate the existing (and unsafe) direct access provided by Taxiway D from the apron area to Runway 2-20, this alternative considers the installation of a no-taxi island on the apron area preceding Taxiway D. Ultimately, this improvement eliminates the existing direct access by forcing pilots to navigate around the no-taxi island prior to entering the runway environment.

AIRSIDE ALTERNATIVE 3

As shown on **Exhibit 4E**, Airside Alternative 3 examines potential options to extend the runway, meet critical safety area design standards for RDC B-II-5000, and mitigate existing direct access provided from the apron to Runway 2-20. It should be noted that the RPZ serving Runway 2 in this alternative remains in its existing location; as such, the RPZ serving Runway 2 encompasses a total of approximately 1.4 acres of private, uncontrolled property and extends over portions of Maya Road and the field access road on the Aztec Street alignment.

Runway 2-20 | A 1,599-foot extension to Runway 2-20 results in a length of 5,500 feet, which would satisfy the future critical aircraft requirement for both takeoff at 90 percent useful load and landing operations under 14 CFR Part 25. A runway of this length also satisfies FAA requirements to accommodate 75 percent of the business jet fleet at 60 percent useful load. In this alternative, a 599-foot extension is considered on the Runway 2 end and a 1,000-foot extension is considered on the Runway 20 end. To meet future RDC B-II-5000 design standards, consideration is given to the implementation of a threshold displacement on Runway 2, as well as declared distances to mitigate safety area deficiencies of the future RPZ beyond the southwest end of the runway, including private, uncontrolled property and portions of Maya Road and the field access road on the Aztec Street alignment.

Declared distances are used to define the effective runway length for landing and takeoff when a standard RSA/ROFA cannot be achieved or an RPZ needs to be relocated. The four declared distances are as follows:

1. **Takeoff Run Available (TORA)** – the runway length declared available and suitable for the ground run of an aircraft taking off (factors in the positioning of the departure RPZ)
2. **Takeoff Distance Available (TODA)** – the TORA plus the length of any remaining runway or clearway beyond the far end of the TORA; the full length of the TODA may need to be reduced because of obstacles in the departure area



DECLARED DISTANCES		
	Runway 2	Runway 20
TODA	5,500'	5,500'
TORA	5,500'	4,901'
ASDA	5,500'	5,500'
LDA	4,901'	5,500'

DEFINITIONS	
TODA	- Takeoff Distance Available
TORA	- Takeoff Run Available
ASDA	- Accelerate/Stop Distance Available
LDA	- Landing Distance Available

Airside Alternative 3

← RUNWAY 20

TODA / ASDA / LDA : 5,500'

TORA : 4,901'

→ RUNWAY 2

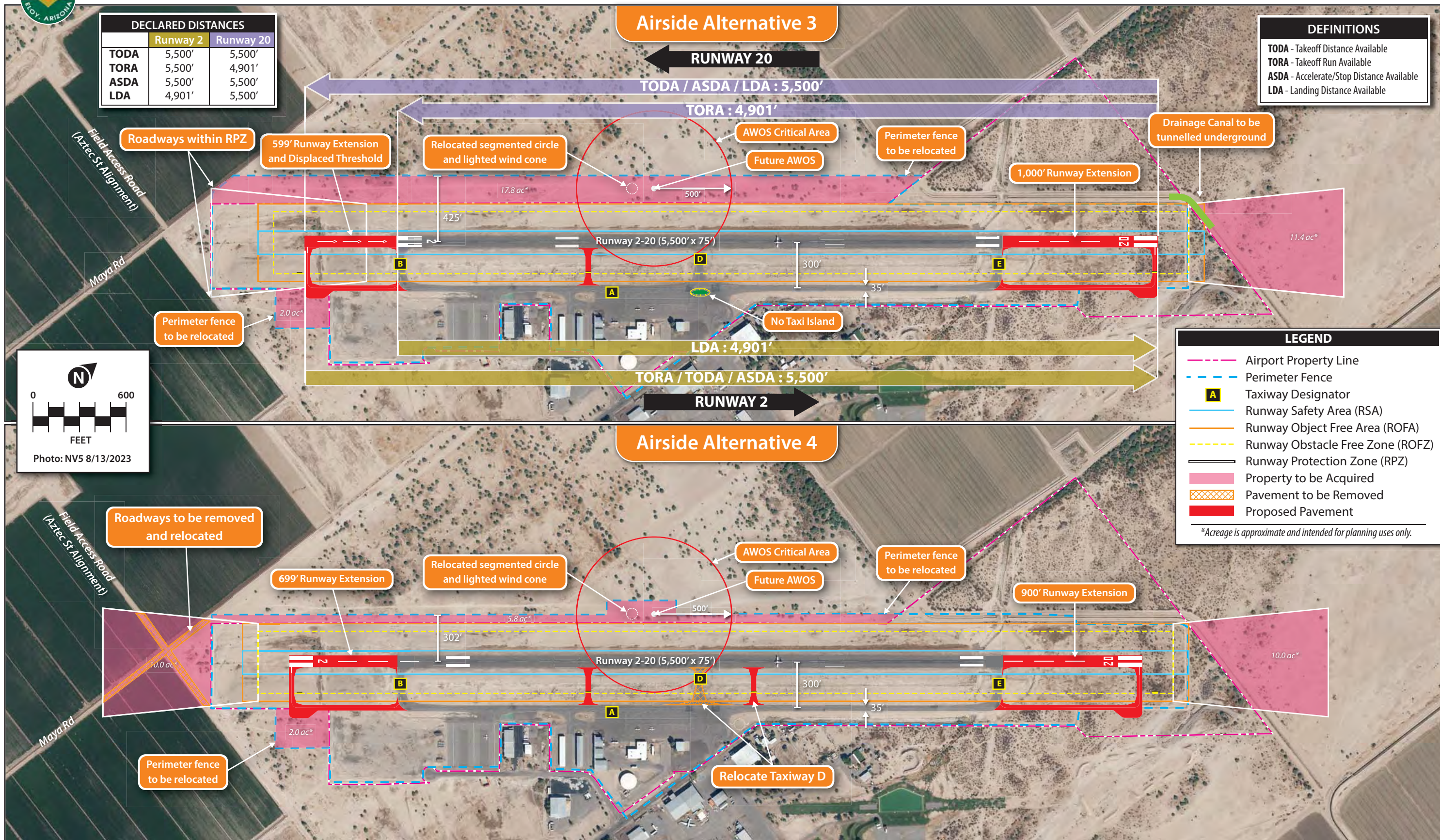
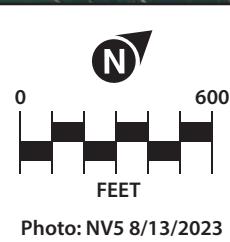
LDA : 4,901'

TORA / TODA / ASDA : 5,500'

Airside Alternative 4

LEGEND	
	Airport Property Line
	Perimeter Fence
	Taxiway Designator
	Runway Safety Area (RSA)
	Runway Object Free Area (ROFA)
	Runway Obstacle Free Zone (ROFZ)
	Runway Protection Zone (RPZ)
	Property to be Acquired
	Pavement to be Removed
	Proposed Pavement

**Acreage is approximate and intended for planning uses only.*



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3. **Accelerate-Stop Distance Available (ASDA)** – the runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff (factors in the RSA/ROFA length beyond the runway end)
4. **Landing Distance Available (LDA)** – the runway length declared available and suitable for landing an aircraft (factors in the RSA/ROFA length beyond the runway end and the positioning of the approach RPZ)

The declared distances pertaining to the RSA and ROFA are the ASDA and LDA, while the TORA and LDA relate to the RPZs. The runway extension and declared distances presented in Alternative 3 reduce the LDA for Runway 2 and the TORA for Runway 20. The application of declared distances keeps the Runway 2 RPZ in its current location, which minimizes impacts to off-airport property. As such, the existing uncontrolled acreage amounts and roadways (Maya Road and the field access road on the Aztec Street alignment) remain the same as in the existing Runway 2 condition under this alternative, amounting to 1.4 total acres of private, uncontrolled property. The resulting declared distances for this alternative are presented in **Table 4A**.

TABLE 4A | Airside Alternative 3 – Declared Distances

Runway 2-20 Declared Distances	2	20
Takeoff Run Available (TORA)	5,500'	4,901'
Takeoff Distance Available (TODA)	5,500'	5,500'
Accelerate-Stop Distance Available (ASDA)	5,500'	5,500'
Landing Distance Available (LDA)	4,901'	5,500'

Source: Coffman Associates Analysis, April 2024

The proposed improvements to the runway would involve several connected projects (listed below). Additionally, this alternative considers several other airfield improvements, including the following:

- Extension of Taxiway A and acquisition of approximately two acres
- Relocation of the REILs serving Runway 2-20
- Acquisition of approximately 11.4 acres of uncontrolled property within the future Runway 20 RPZ
- Tunneling the drainage canal below the grade of the future ROFA
- Acquisition of approximately 17.8 acres up to the 25-foot BRL on the northwest side of the runway
- Relocation of the perimeter fence on the northwest side of the runway outside the 14 CFR Part 77 surfaces
- Relocation of the segmented circle and lighted wind cone and installation of an AWOS on the northwest side of the runway
- Mitigation of overgrown vegetation and gradient incompatibilities associated with the RSA, ROFA, and ROFZ

Further analysis will be required at the time of construction of a runway extension.



Taxiway Geometry Improvements | This alternative considers removing the existing (and unsafe) direct access by implementing a no-taxi island on the aircraft apron area preceding Taxiway D, which forces pilots to make a turn prior to entering the runway environment. An additional taxiway connector is considered on the southwest side of the apron area to alleviate potential points of congestion.

AIRSIDE ALTERNATIVE 4

Airside Alternative 4, shown on **Exhibit 4E**, examines potential options to meet critical safety area design standards for RDC B-II-5000 while maximizing usable runway length. A runway extension to a future length of 5,500 feet is considered, which accommodates the future critical aircraft for both takeoff at 90 percent useful load and landing operations under 14 CFR Part 25. This runway length also satisfies FAA requirements to accommodate 75 percent of the business jet fleet at 60 percent useful load, and options are explored to mitigate the existing (and unsafe) direct access provided from the apron area to Runway 2-20.

Runway 2-20 | This alternative considers an extension of 699 feet on the end of Runway 2 and an extension of 900 feet on the Runway 20 end, resulting in a total runway length of 5,500 feet. Primary impacts associated with runway extensions of 699 feet on the end of Runway 2 and 900 feet on the end of Runway 20 include shifting the RPZs serving Runway 2 and 20 beyond the existing airport property boundary. The RPZ serving Runway 2 includes approximately 10 acres of private, uncontrolled property, as well as portions of Maya Road and the field access road on the Aztec Street alignment, which would ultimately have to be relocated. The RPZ serving Runway 20 also extends beyond the existing airport property and encompasses approximately 10 acres of uncontrolled, private property. By limiting the runway extension to 900 feet on the Runway 20 end, the future RSA, ROFA, and ROFZ remain within the existing airport property, eliminating the need to reroute or tunnel the drainage canal. Furthermore, this alternative considers the acquisition of approximately 5.8 acres of private land and the relocation of the perimeter fence along the northwest side of the runway, which has previously been identified as a 14 CFR Part 77 obstruction. This alternative also considers relocation of the segmented circle and the implementation of an AWOS on the northwest side of the runway. The proposed improvements to the runway would involve several connected projects, including the following:

- Extension of Taxiway A and acquisition of approximately two acres
- Relocation of the REILs serving Runway 2-20
- Acquisition (fee simple/easement) of approximately 10 acres of private, uncontrolled property within each of the future RPZs
- Removal and relocation of portions of Maya Road and the field access road on the Aztec Street alignment within the shifted Runway 2 RPZ
- Acquisition of approximately 5.8 acres of private, uncontrolled property on the northwest side of the runway
- Relocation of the perimeter fence on the northwest side of the runway outside the 14 CFR Part 77 surfaces



- Relocation of the segmented circle and lighted wind cone and installation of an AWOS on the northwest side of the runway
- Mitigation of overgrown vegetation and gradient incompatibilities associated with the RSA, ROFA, and ROFZ

Further analysis will be required at the time of construction of a runway extension.

Taxiway Geometry Improvements | This alternative considers the removal and relocation of Taxiway D to the northeast, thereby eliminating direct, unsafe access from the apron area. Furthermore, this alternative considers the construction of an additional taxiway on the southwest side of the apron area to alleviate potential points of congestion for aircraft.

AIRSIDE SUMMARY

This section has outlined four planning alternatives for the airside facilities at E60. The primary issues to consider on the airfield include addressing non-standard airfield geometry and increasing operational utility at the airport. The PAC, city management, and the public offered feedback so the best combination of these alternatives could be selected. Following discussion and review with these entities, a preferred recommended airside development concept was drafted and is presented in the next chapter.

LANDSIDE PLANNING CONSIDERATIONS

Landside issues are generally related to the facilities necessary or desired for the safe and efficient parking and storage of aircraft; movement of pilots, skydivers, and passengers to and from aircraft; airport support; and overall revenue support functions. Landside planning considerations (summarized previously on **Exhibit 4B**) focus on strategies that follow a philosophy of separating activity levels. To maximize airport efficiency, it is important to locate facilities together that are intended to serve similar functions. The best approach to landside facility planning is to treat the development like that of a community, in which land use planning is the guide. For an airport, land use in the terminal area should generally be dictated by aviation activity levels. Due to the amount of developable land available at E60, some consideration also focuses on non-aviation uses that can provide additional revenue support to the airport and bolster economic development for the City of Eloy.

Landside planning issues include facility-locating strategies that follow a philosophy of separating activity levels; therefore, it is important to plan for an appropriate mix of smaller T-hangars, executive hangars, and larger conventional hangars at E60.

The orderly development of the airport terminal area (parallel to the runway and along the flight line) can be the most critical, and often the most difficult, development to control on an airport. A development approach of “taking the path of least resistance” can have a significant effect on the long-term viability of an airport. Allowing development to occur without regard to a functional plan can result in a haphazard array of buildings and small ramp areas, which will eventually preclude the most efficient use of the limited and highly valuable space adjacent to the flight line.



The alternatives presented are not the only options for development. In some cases, a portion of one alternative could be intermixed with another, and some alternative development concepts could be replaced with others. The final recommended plan only serves as a guide for the airport to aid in the strategic planning of available properties. Airport operators often change their plans to meet the needs of specific users. The goal in analyzing landside development alternatives is to define a schematic approach to accommodate appropriate future development so the airport property can be maximized.

REVENUE SUPPORT LAND USES

Should the amount of land on airport property exceed the space needed for forecast aviation demand, consideration could be given for E60 to utilize portions of its property for indirect or non-aviation purposes, which could include commercial, industrial, or manufacturing development. It should be noted that the airport does not have the approval to use undeveloped property for non-aviation purposes at this time; specific approval from the FAA will be required to utilize undeveloped airfield property for non-aviation uses. This planning document does not confirm any regulatory approval for non-aviation uses, even if these uses are ultimately included in the master plan and on the ALP. A separate request justifying the use of airport property for non-aviation uses will be required for approval by the FAA; however, the information contained in this document can be a source for developing that justification.

An environmental determination will also be required. While FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, states that the release of an airport sponsor from federal obligations is normally categorically excluded and would not typically require an environmental assessment (EA), the issuance of a categorical exclusion is not an automatic action, and the FAA must determine that no extraordinary circumstances exist at the airport. Extraordinary circumstances would include a potentially significant environmental impact to any of the environmental resources governed by federal law. An EA may be required by the FAA if extraordinary circumstances are identified at E60. The following generalized land use conditions outline topical subject areas that could present themselves on the airport.

On-Airport Land Use Obligations | The airport has accepted grants for capital improvements from the FAA in the past; as such, the City of Eloy has agreed to certain grant assurances. Grant assurances related to land use assure that airport property will be reserved for aeronautical purposes. If the airport sponsor wishes to sell (release) airport land or lease airport land for a non-aeronautical purpose (land use change), the airport sponsor must petition the FAA for approval. The ALP and the airport property map must then be updated to reflect the sale or land use change of the identified property.

Release of Airport Property | A release of airport property entails the sale of land that is not needed for aeronautical purposes at present or in the future. The following documentation is required to be submitted to the FAA for consideration of a land release:

1. What is requested?
2. What agreement(s) with the United States are involved?



3. Why is the release, modification, reformation, or amendment being requested?
4. What facts and circumstances justify the request?
5. What requirements of state or local law or ordinance should be provided for in the language of an FAA-issued document if the request is consented to or granted?
6. What property or facilities are involved?
7. How was the property acquired or obtained by the airport owner?
8. What is the present condition and what present use is made of any property or facilities involved?
9. What use or disposition will be made of the property or facilities?
10. What is the appraised fair market value of the property or facilities, and what appraisals or other types of evidence are required to establish fair market value?
11. What proceeds are expected from the use or disposition of the property, and what will be done with any net revenues derived?
12. What is the relative advantage or benefit to the airport from the sale or other disposition compared to retention for rental income?

Each request should have a scaled drawing attached that shows all airport property and facilities that are currently obligated for airport purposes by agreements with the United States. Other exhibits supporting or justifying the request (such as maps, photographs, plans, and appraisal reports) should be attached, as appropriate. No areas of Eloy Municipal Airport property are currently planned for release from obligation and/or sale.

Land Use Change | A land use change permits land to be leased for non-aeronautical purposes; it does not authorize the sale of airport land. Leasing airport land to produce revenue via non-aeronautical uses allows the land to earn revenue for the airport, which serves the interests of civil aviation by making the airport as self-sustaining as possible. Airport sponsors may petition for a land use change for the following purposes:

- Land not needed for aeronautical purposes can be leased to earn revenue from non-aviation uses; this is land that is clearly surplus to the airport's aviation needs
- Land that cannot be used for aeronautical purposes can be leased to earn revenue from non-aviation uses; this is land that cannot be used by aircraft, or where there are barriers or topography that prevent an aviation use
- Land not presently needed for aeronautical purposes can be rented on a temporary basis to earn revenue from non-aviation uses



A land use change will not be approved by the FAA if the land has a present or future airport or aviation purpose, meaning the land has a clear aeronautical use; however, if land is not needed for aeronautical purposes until a long-term condition is met, a land use change may be justified and granted for a short- or mid-term use. Ordinarily, land on or in proximity to the flight line and airport operations area is needed for aeronautical purposes and should not be used or planned for non-aviation purposes. The proceeds derived from the land use change must be used exclusively for the benefit of the airport, may not be used for a non-airport purpose, and cannot be diverted to the airport sponsor's general fund or for general economic development unrelated to the airport.

Generally, a land use change of airport property will be reviewed on a case-by-case basis at the time the change is necessary; however, the airport land use drawing, which is included as part of the ALP set, shows areas that are likely eligible to be released from obligation.

AVIATION ACTIVITY LEVELS

The aviation development areas should be divided into high, medium, and low activity levels at the airport. The high-activity area should be planned and developed to provide aviation services on the airport. Examples of high-activity areas are the airport terminal and administration building and adjoining aircraft parking apron, which provides tiedown locations and circulation for aircraft. In addition, large conventional hangars that are used for fixed base operators, corporate aviation departments, or storing a large number of aircraft would be considered high-activity use areas. The best location for high-activity areas is along the flight line near mid-airfield for ease of access to all areas on the airfield. All major utility infrastructure would need to be provided to these areas.

The medium-activity use category defines the next level of airport use and primarily includes smaller corporate aircraft, the owners of which may desire private executive hangar storage on the airport. The best location for medium-activity use is off the immediate flight line but still readily accessible to aircraft (including corporate jets). Based on an airport's layout and other existing conditions, if this area is to be located along the flight line, it is best to keep it out of the mid-airfield area of the airport to avoid causing congestion with transient aircraft utilizing the airport. Parking and utilities (such as water and sewer) should also be provided in this area.

The low-activity use category defines the area for storage of smaller single- and multi-engine aircraft. Low-activity users are personal or small business aircraft owners with a preference for individual space in linear box hangars or T-hangars. Low-activity areas should be located in less conspicuous areas. This use category requires electricity, but generally does not require high-volume water or sewer utilities.

In addition to the functional compatibility of the aviation development areas, the proposed development concept should provide a first-class appearance for E60. The airport serves as a vital link to the entire region for both business and recreational visitors. Consideration to building and landscape design, construction, and maintenance should be given high priority in all public areas, as the airport can serve as the first impression a visitor may have of the community.



To allow for maximum development of the airport while continuing to meet mandated safety design standards, it is crucial to devise an airport layout plan that allows for the orderly development of airport facilities. Typically, an airport will reserve property adjacent to the runway system exclusively for aviation-related activity, which allows for the location of taxiways, aprons, and hangars.

HANGAR DEVELOPMENT

Analysis in Chapter Three indicated that the airport should plan for the construction of additional aircraft hangars over the next 20 years. Hangar development can occur in a variety of sizes that correspond with several different intended uses.

Commercial general aviation activities are essential to providing the necessary services on an airport. This includes privately owned businesses involved with (but not limited to) aircraft rental and flight training, aircraft charters, aircraft maintenance, line service, skydiving, and aircraft fueling. These types of operations are commonly referred to as fixed base operators (FBOs) or specialized aviation service operators (SASOs). The facilities associated with such businesses include large, conventional type hangars that hold several aircraft. High levels of activity often characterize these operations, along with a need for apron space for the storage and circulation of aircraft. These facilities are best placed along ample apron frontage with unobstructed visibility from the runway system for transient aircraft. Utility services and vehicle parking areas are necessary support uses for these types of facilities.

Aircraft hangars used for the storage of smaller aircraft primarily include T-hangars, shade hangars, or linear box hangars. Because storage hangars often experience lower levels of activity, these types of facilities can be located away from the primary apron areas in more remote locations on the airport. Limited utility services are needed for these areas.

Other types of hangar development can include executive hangars for accommodating either individual larger aircraft or multiple smaller aircraft. These types of hangars are typically used by corporations with company-owned aircraft, or by an individual or group of individuals with multiple aircraft. These hangar areas normally require all utilities and segregated roadway access.

Table 4B summarizes the aircraft hangar types and the corresponding sizes and aviation uses that are typically associated with each facility. Approximately 37,000 square feet of hangar space (including maintenance area) is currently provided on airport property, comprised of a combination of the previously discussed hangar types.

TABLE 4B | Aircraft Hangar Types

Hangar Type	Typical Size	Aviation Uses
Conventional	Clear span hangars greater than 10,000 square feet	FBOs, SASOs, and other commercial aviation activities resulting in high-activity uses
Executive	Clear span hangars less than 10,000 square feet	SASOs, corporate flight departments, and private aircraft storage resulting in medium- to high-activity uses
T-Hangar/Linear Box	Individual storage spaces offering 1,200–1,500 square feet	Private aircraft storage resulting in low-activity uses
FBO = fixed base operator SASO = specialized aviation service operator		



Currently, two primary areas are ideal for future potential general aviation-related development, including the main terminal area along the primary aircraft apron (which could be redeveloped) and on the southwest side of the existing landside development area, near the threshold of Runway 2. It should be noted that the proposed southwestern development area could require the acquisition of additional property. Given the development potential for these portions of existing and future potential airport property, the following alternatives detail development options for the identified areas.

LANDSIDE ALTERNATIVES

This section describes a series of landside alternatives as they relate to the considerations detailed earlier. The alternatives focus on current hangar developments and generalized land use, which is beneficial because a generalized land use concept provides flexibility for the development of a site to meet the needs of clients with no predetermined layout constraints. Variations of future hangar developments are also presented to assist in visualizing the inclusion/integration of such future facility developments on the airport campus or complex.

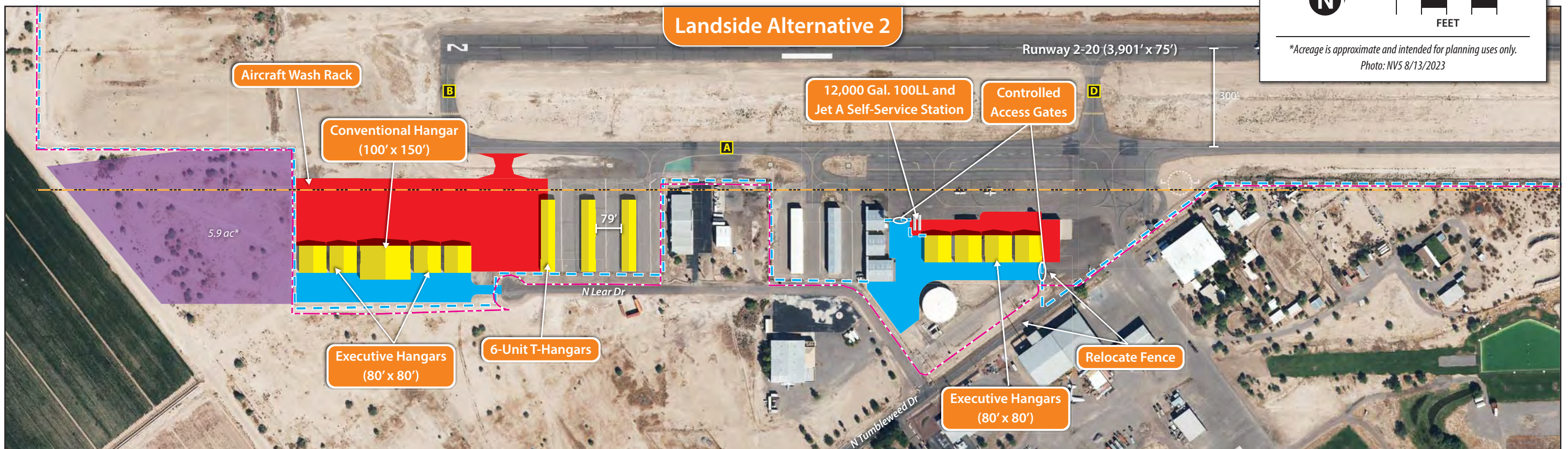
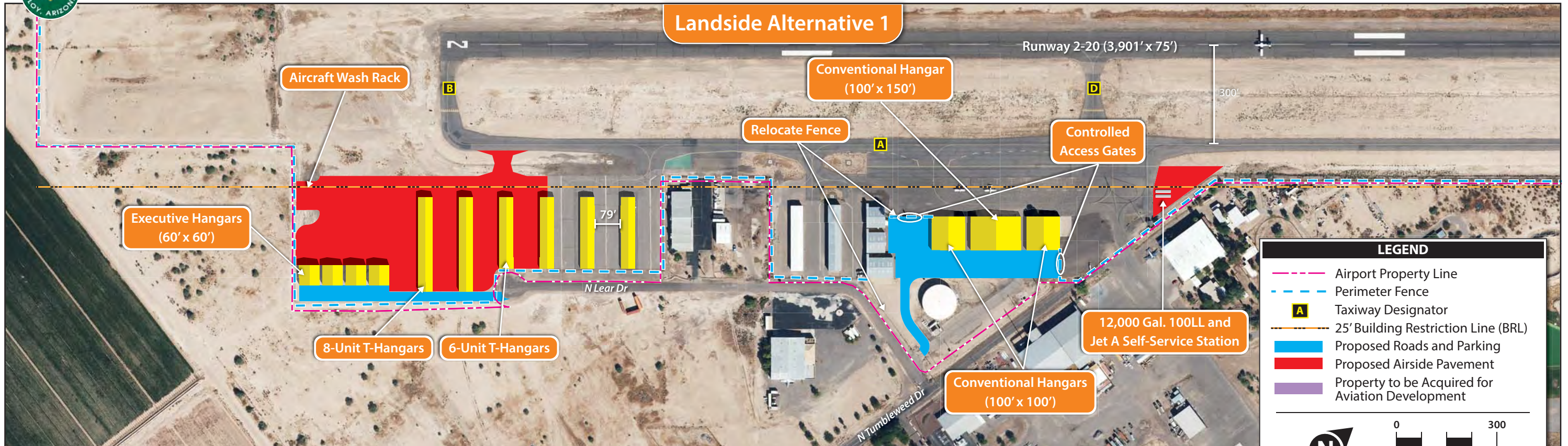
Three alternatives have been prepared for the landside development area. The existing airport property located near the primary apron area is largely developed. Due to the limitations of space caused by existing landside and vehicle access facilities, the focus of the landside alternatives for new development is to the southwest, as well as the potential redevelopment of existing facilities near the primary apron area. The alternatives provide potential development plans aimed at meeting the needs of general aviation through the long-term planning period and beyond.

The alternatives presented are not the only reasonable options for development. In some cases, a portion of one alternative could be intermixed with another, and some development concepts could be replaced with others. The overall intent of this exercise is to outline basic development concepts in order to spur collaboration for a final recommended plan. The final recommended plan only serves as a guide for the airport to aid the City of Eloy in the strategic planning of airport property. Airport operators often change their plans to meet the needs of specific users. The goal in analyzing landside development alternatives is to focus future development to maximize airport property and protect aviation activity.

The existing airport landside infrastructure is located along the southeast side of the runway. Automobile access is provided via North Lear Drive and existing vehicle parking is provided in various locations near the hangar facilities close to the airport entrance. The existing level of airside and landside access makes this portion of airport property an ideal location for continued airport development and potential redevelopment of existing facilities. The alternatives analysis presented on **Exhibits 4F** and **4G** examines the continued development potential options along the southeast side of the runway.

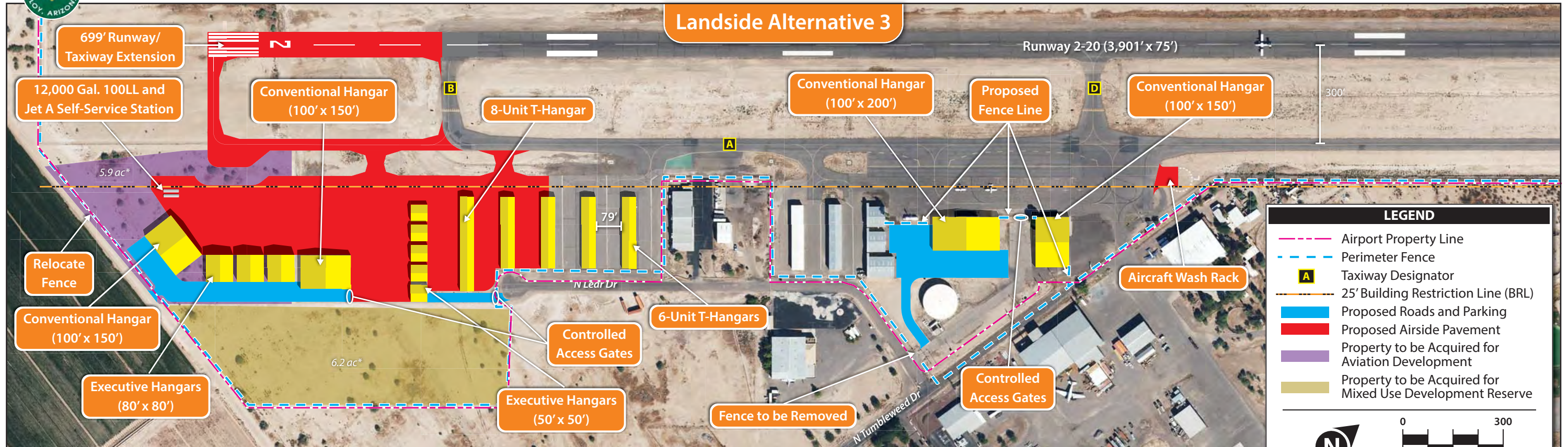
LANDSIDE DEVELOPMENT ALTERNATIVE 1

Alternative 1, presented on **Exhibit 4F**, presents a potential layout that primarily carries forward development proposed on the current ALP; however, some changes from the current ALP are proposed to better suit vehicle access and hangar development needs near the primary apron area. On the northern





Landside Alternative 3



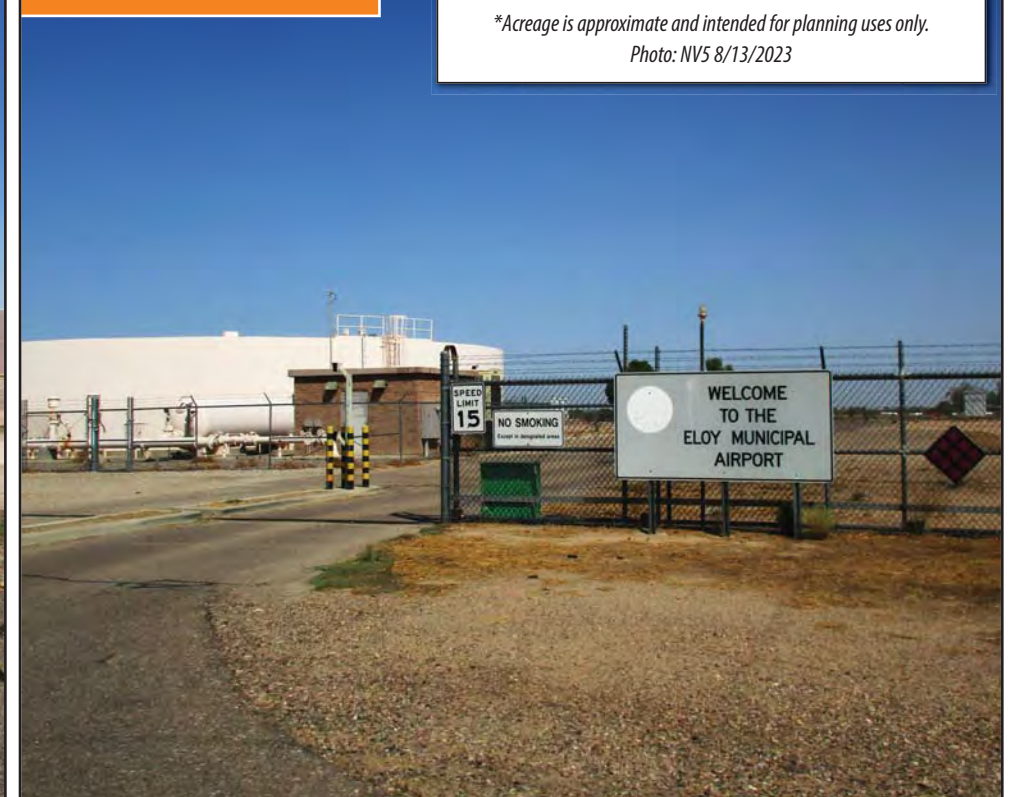
Existing Self-Serve Fuel Station



Hangar to be Redeveloped



Existing Access Gate





end of the development area, three conventional-style hangars (two 100- by 100-foot hangars and one 100- by 150-foot hangar) and supporting vehicle access and parking are proposed. These hangars would redevelop the existing facilities near the primary apron area to maximize hangar and terminal area development potential along the flightline. Any of the proposed hangars in this location could be substituted for an airport terminal facility. Additionally, the existing electric access gate and nearby fence line could be removed and relocated, opening the airport entrance to provide complete public access to the primary landside facilities. Access could then be limited via controlled access gates near the apron area. This alternative also considers the removal and relocation of the Jet A and 100LL self-service fuel station to the northern side of the primary apron. At the time of construction of this project, the capacity of each of the two fuel storage tanks could be increased to 12,000 gallons.

Within existing hangar development, there is minimal opportunity for infill with additional hangar development, so further development is considered to the southwest of existing development. From northeast to southwest, proposed development in this area considers the construction of four six-unit T-hangars (two eight-unit T-hangars and four 80- by 80-foot) executive hangars. Each proposed hangar development is served by an appropriately sized aircraft apron, as well as automobile parking and access. Finally, an aircraft wash rack is proposed on the southwestern corner of the planned aircraft apron area.

LANDSIDE DEVELOPMENT ALTERNATIVE 2

As depicted on **Exhibit 4F**, Landside Development Alternative 2 focuses on providing additional T-hangar development on the existing southern apron area, while larger executive- and conventional-style hangars are proposed along the primary portions of the flight line and the southern side of the existing developable airport property. Also included in this area is private land to be acquired for the future development of aeronautical facilities.

Beginning on the north side of the development area, the proposed hangar development includes four 80- by 80-foot executive hangars located near the existing primary apron/redevelopment of the current facilities. Any of the proposed hangars in this location could be substituted for a dedicated airport terminal facility. Additional automobile parking and access are also considered near the proposed executive hangars. Similar to Alternative 1, the existing electric access gate and nearby fence line could be removed and relocated, opening the airport entrance to provide complete public access to the primary landside facilities. Access could then be limited via controlled access gates near the apron area. Furthermore, the self-service fuel facility is proposed near its existing location but could be reoriented and increased to 12,000-gallon capacities for 100LL and Jet A fuel to better fulfill long-term demands.

On the southwest side of the development area, consideration includes the construction of three six-unit T-hangars, four 80- by 80-foot executive-style hangars, and one 100- by 150-foot large conventional hangar. Each proposed hangar development is served by an appropriately sized aircraft apron, as well as automobile parking and access. The southwestern corner of the proposed apron area is designated as an aircraft wash rack facility. Beyond the proposed conventional and executive hangars on the southwest side of the development area, this alternative considers approximately 5.9 acres of private land to be acquired for future aeronautical reserve; the plans for its use could be further refined as future demand dictates.



LANDSIDE DEVELOPMENT ALTERNATIVE 3

The third and final alternative option, presented on **Exhibit 4G**, considers 100- by 200-foot and 100- by 150-foot conventional hangars located on the northern side of the existing landside development area, as well as supporting automobile parking. Any of the proposed hangars in this location are ideally positioned to be substituted for a dedicated airport terminal facility. The existing electric access gate could be removed and relocated, opening the airport entrance to provide complete public access to the primary landside facilities. Access could then be limited via a controlled access gate near the primary apron area. This alternative considers an aircraft wash rack in place of the existing segmented circle and lighted wind cone, which are planned to be relocated to the west side of the airfield. The existing self-service fueling station is maintained in this alternative to better serve the current primary apron area.

This alternative presents a future potential runway extension on the Runway 2 end, as it would complement landside development on the southwest side of the airfield. On the southwest side of existing landside development, proposed development includes four six-unit T-hangars, one eight-unit T-hangar, five 50- by 50-foot executive hangars, three 80- by 80-foot executive hangars, and two 100- by 150-foot large conventional hangars. Each proposed hangar development is served by supporting apron area and automobile parking and access. An additional self-service fueling station with 12,000-gallon storage capacities for 100LL and Jet A fuels is also considered on the southwest corner of the proposed apron area.

To complete the entirety of this build-out, approximately 5.9 acres of private property must be acquired. It should be noted that automobile access is provided to the three 80- by 80-foot executive hangars and two 100- by 150-foot large conventional hangars via a secondary access point extending from the field access road on the Aztec Street alignment. Access to the proposed apron area from these hangars is provided through a controlled access gate.

Additionally, this alternative considers private land to be acquired and reserved for potential mixed-use development. These portions of future airport property are somewhat removed from the flight line; however, the designated parcel could be set aside for aeronautical or non-aeronautical land use, which could support airport revenues. This alternative proposes the purchase and reservation of approximately 6.2 acres of private land; the plans for its use could be further refined as future demand dictates.

LANDSIDE SUMMARY

The landside alternatives presented in this section are intended to accommodate an array of aviation activities that either currently occur or could be expected to occur at Eloy Municipal Airport in the next 20 years. There is existing demand for new facilities at E60, and with a changing fleet mix of aircraft that includes more sophisticated airframes, this document will help the City of Eloy refine its approach to developing its property in an organized and thoughtful way. Each of the three development options considers a long-term vision that would (in some cases) extend beyond the 20-year scope of this master plan; nevertheless, it is beneficial to provide a long-term vision to ensure the airport will adequately serve the Eloy community for future generations.



SUMMARY

This chapter presents an analysis of various options that may be considered for specific airport elements. The need for alternatives is typically generated by projections of aviation demand growth and/or by the need to resolve non-standard airport conditions. FAA design standards are frequently updated, with the intent of improving the safety and efficiency of aircraft movement on and around airports, which can lead to certain pavement geometries being classified as non-standard when they previously qualified to meet FAA design standards.

Several development alternatives related to both airside and landside facilities have been presented. For the airside, the major considerations involve correcting non-standard taxiway conditions, as well as extending the length and/or upgrading the RDC of Runway 2-20. For the landside, the alternatives presented include the previously planned hangar development, as well as proposed additional aviation development and redevelopment on the northeastern and southwestern areas of the airport. As the airport's fleet mix transitions to include more jets and turboprops, it will be important to clearly delineate development areas for facilities to accommodate those aircraft. Segregating jet and turboprop traffic from small aircraft operators contributes to operational safety and creates a more organized and efficient airport.

The next step in the master plan update process is to arrive at a recommended development concept. Participation of the PAC and the public will be important to the determination of the long-term recommended development concept. Additional consultation with the FAA and ADOT may also be required to ensure improvements are satisfactorily delineated and presented. Once a final development plan is identified, a 20-year airport capital improvement program will be presented, including a list of prioritized projects matched with aviation demand and/or necessity. Finally, a financial analysis will be presented to identify potential funding sources and quantify the City of Eloy's approximate contribution needed to implement each project. In this manner, the City of Eloy can adequately program matching funding in its own six-year capital improvement plan.

5

Chapter

Recommended Master Plan Concept



Chapter 5

Recommended Master Plan Concept

The preparation of the airport master plan update has included technical efforts in the previous chapters that were intended to establish the role of Eloy Municipal Airport (E60), forecast potential aviation demand, establish airside and landside facility needs, and evaluate options for enhancing the airport to meet those facility needs. The planning process has included the development of draft working documents, which have been presented to the planning advisory committee (PAC). The PAC is comprised of stakeholders/constituents with investments or interests in the airport and the surrounding area; this diverse group has provided invaluable input into the master plan. Additionally, a series of public information workshops was conducted as part of this planning process to provide interested members of the community with an opportunity to be involved in and educated about the study.

The alternatives that outlined future growth and development scenarios in Chapter Four have been refined into a recommended development concept, which is presented in this chapter. An overview of environmental conditions that need to be considered when these planned development projects are undertaken is provided later in this chapter.

One of the objectives of the master plan is to allow decision-makers the ability to either accelerate or slow development goals based on actual demand. If demand slows, development of the airport beyond routine safety and maintenance projects could be minimized. If aviation demand accelerates, development could be expedited. A basic plan can account for limited development, but the lack of a plan for accelerated growth can be challenging; therefore, to ensure flexibility in planning and development in response to unforeseen needs, the master plan concept considers balanced development potential for E60.

MASTER PLAN DEVELOPMENT CONCEPT

E60 is classified as a local general aviation (GA) airport within the Federal Aviation Administration's (FAA) *National Plan of Integrated Airport Systems* (NPIAS). Most of the airport's operations can be attributed to general aviation activities, including some business aviation and a substantial number of skydiving operations. NPIAS airports are considered important to the national aviation system and are eligible for development grant funding from the FAA. At the state level, the Arizona Department of Transportation – Aeronautics Group (ADOT) classifies E60 as a GA rural airport. The airport's classifications are not



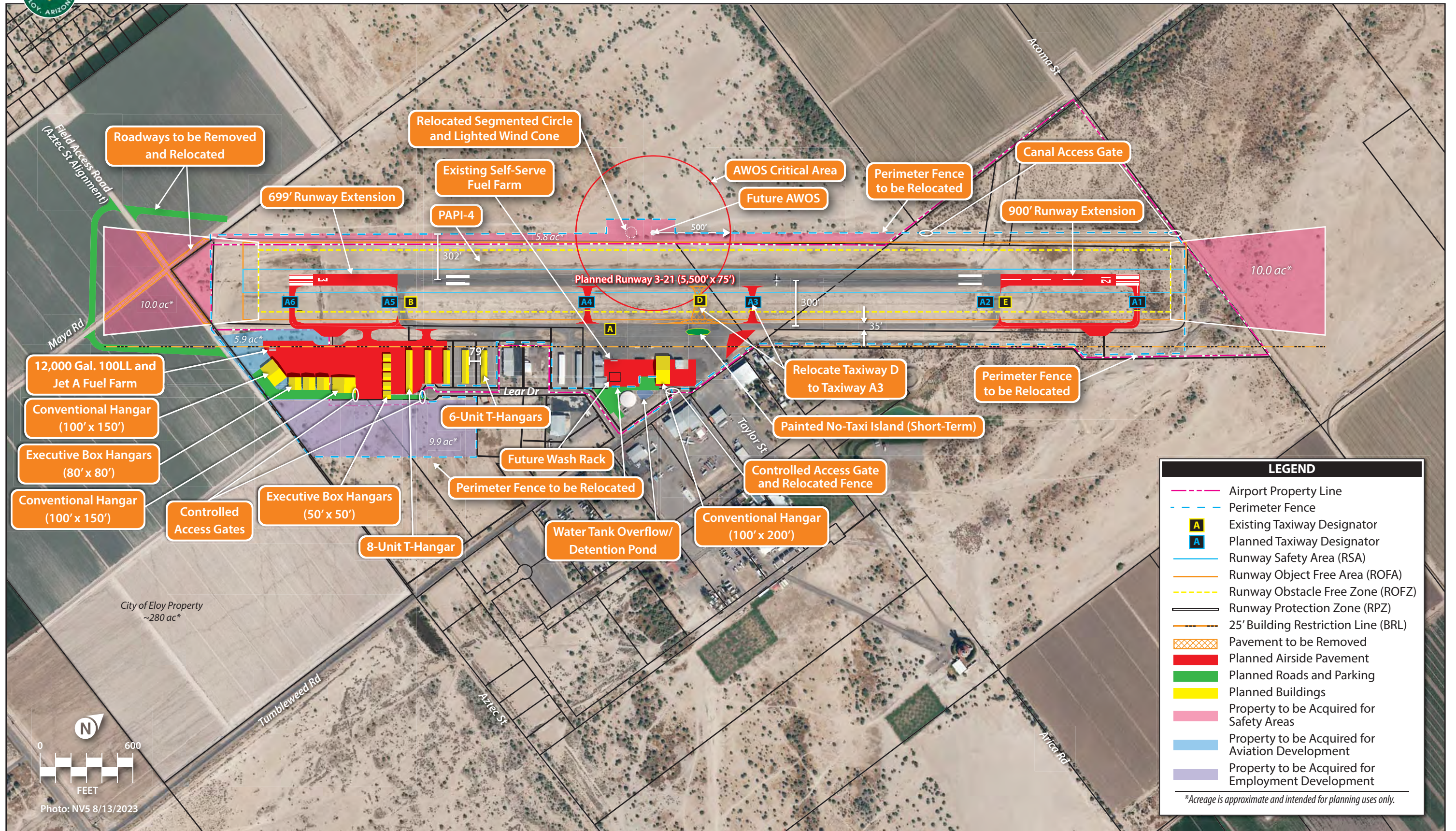
anticipated to change as a result of the recommendations in this master plan, which fully supports the continued and necessary development of the airport to serve the function of local and rural GA roles for the FAA and ADOT, respectively.

The master plan concept, as shown on **Exhibit 5A**, presents the recommended configuration for E60. This configuration preserves and enhances the role of the facility while meeting FAA design and safety standards (to the extent practicable). The concept provides for anticipated facility needs over the next 20 years and establishes a vision and direction for meeting facility needs beyond the 20-year planning period of this study. A phased program to achieve the master plan concept is presented in Chapter Six. When assessing development needs, this chapter separates the airport into airside and landside functional areas. The following sections describe the development concept in detail.

AIRSIDE DEVELOPMENT CONCEPT

An airside development concept generally considers improvements related to the runway and taxiway system and often requires the greatest commitment of land area to meet the physical layout of an airport. Operational activity at E60 is anticipated to grow beyond the 20-year planning horizon of this master plan, and the airport is projected to continue to serve the full range of general and business aviation operations, as well as air taxi, charter, and skydiving activities. The principal airfield recommendations should always focus first on safety and security. Of key importance is to ensure that proposed airfield improvements will be designed to meet all appropriate FAA airport design standards. Recommendations are then designed to improve the operational efficiency, circulation, and capability of the airfield. The major airside recommendations addressed in the development concept include the following:

- Change the designation on Runway 2-20 (existing) to Runway 3-21 (future) due to changes in magnetic declination (to be discussed).
- Plan to implement airport reference code (ARC) B-II-5000 standards on the runway system.
- Consider runway extension options to 5,500 feet to enhance the accommodation of business jet operators, pending further justification and coordination with the FAA and ADOT.
- Address safety area deficiencies on the runway, which primarily include acquiring land, removing any vegetation obstructions, and addressing runway protection zone (RPZ) incompatibilities that are introduced by the runway extension.
- Relocate Taxiway D to eliminate direct access from the apron area to the runway.
- Enhance visual approach aids serving the runway system with the installation of four-box precision approach path indicator (PAPI-4) systems; installation of runway distance remaining signage; relocation of the segmented circle and lighted wind cone; and installation of an automated weather observation station (AWOS) to provide local weather information to pilots.



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MAGNETIC DECLINATION AND RUNWAY MARKING

Magnetic declination, sometimes referred to as magnetic variation, is the angle between magnetic north and true north. Declination is positive when east of true north and negative when west of true north. Magnetic declination changes over time, depending on location. As compasses point with local magnetic fields, declination value is needed to obtain true north. Analysis conducted as part of this master plan update indicates that the magnetic declination at E60 has shifted enough to warrant a change in marking for the runway orientation from the existing marking/designation (2-20) to a future marking/designation of 3-21. This shift happens at nearly every airport approximately every 30 years as magnetic variation occurs. As such, from this point in the master plan update, the existing runway orientation will be referred to as Runway 2-20, while the future runway orientation will be referred to as Runway 3-21.

RUNWAY DIMENSIONAL STANDARDS

The FAA has established design criteria to define the physical dimensions of runways and taxiways, as well as the imaginary surfaces surrounding them, which protect the safe operation of aircraft at airports. These design standards also define the criteria for the placement of landside facilities.

As discussed in previous chapters, the design criteria are primarily based on an airport's critical design aircraft. The critical design aircraft is the most demanding aircraft or family of aircraft that currently conducts (or is projected to conduct) 500 or more operations (takeoffs or landings) per year at an airport. Factors included in airport design are an aircraft's wingspan, approach speed, tail height, and (in some cases) the instrument approach visibility minimums for each runway. The FAA has established the runway design code (RDC) to relate these design aircraft factors to airfield design standards. The most restrictive RDC is also considered the overall ARC for an airport.

Analysis in Chapters Two and Three concluded that the existing RDC for Runway 2-20 is B-II. At its current length of 3,901 feet, existing Runway 2-20 can accommodate most general aviation activity, including limited small and mid-sized business jet activity. Future planning considers numerous upgrades to the runway (to be discussed) and implementing instrument approach capabilities to future Runway 3-21.

Table 5A provides a summary of the RDCs for the runway, based on the master plan concept. In addition to the physical and operational components of an aircraft, the RDC considers the instrument approach capabilities of a runway, expressed in runway visual range (RVR) values. For existing Runway 2-20, the RVR value of "VIS" indicates that the runway is for visual approaches only and there are no instrument approach capabilities. The future RVR value of 5000 indicates approach visibility minimums not less than one mile, which correspond to the proposed instrument approaches serving future Runway 3-21. As such, the ultimate RDC is considered B-II-5000.



TABLE 5A | Runway Design Standards

	Runway 2-20/3-21 (Existing/Future)
Runway Design Code	B-II-VIS / 5000
Visibility Minimums	Visual / 1-mile
RUNWAY DESIGN	
Runway Width	75
Blast Pad Length x Width	150 x 95
RUNWAY PROTECTION	
Runway Safety Area	
Width	150
Length Beyond Departure End	300
Length Prior to Threshold	300
Runway Object Free Area	
Width	500
Length Beyond Departure End	300
Length Prior to Threshold	300
Runway Obstacle Free Zone	
Width	400
Length Beyond Runway End	200
Approach Runway Protection Zone	
Runway End	2-20/3-21
Inner Width	500
Outer Width	700
Length	1,000
Acres	13.77
Departure Runway Protection Zone	
Inner Width	500
Outer Width	700
Length	1,000
Acres	13.77
RUNWAY SEPARATION	
Runway Centerline to:	
Hold Line Position	200
Parallel Taxiway	240
Aircraft Parking Apron	250

All dimensions are in feet unless otherwise noted.

Sources: FAA AC 150/5300-13B, Airport Design, March 2022; Coffman Associates Analysis, September 2024

RUNWAY 2-20/3-21 (EXISTING/FUTURE)

The existing runway is 3,901 feet long, 75 feet wide, and oriented northeast to southwest. The existing runway width should be maintained through the long-term planning horizon. The runway's existing pavement strength is 12,500 pounds single wheel loading (SWL). There is currently no strength rating for dual wheel loading (DWL) aircraft; however, because the future critical aircraft has a maximum takeoff weight (MTOW) greater than 12,500 pounds and the number of turboprops and jets utilizing the airport is forecasted to increase, the master plan will consider increasing the pavement strength rating to 30,000 pounds SWL and 60,000 pounds DWL.



Based on the results of the runway analysis presented in Chapter Three, the length and width of the runway are adequate to accommodate most of the aircraft operating at the airport, and the runway is capable of handling 95 percent of small airplanes with fewer than 10 passenger seats; however, additional runway length could benefit operators of larger and faster business jets and turboprops by allowing aircraft to depart with more fuel, enabling longer stage lengths and increased usable payload. Additional runway length would also improve landing situations for business jets and turboprops operating under Part 91k or Part 135, especially during wet or contaminated runway conditions. As such, the recommended plan includes extending ultimate Runway 3-21 by 699 feet to the southwest and 900 feet to the northeast, to a planned length of 5,500 feet.

Analysis in Chapter Three indicated that the existing B-II-VIS runway safety area (RSA), runway object free area (ROFA), and runway obstacle free zone (ROFZ) serving the existing runway are free of obstructions or incompatibilities. The existing runway protection zones (RPZs) associated with each runway end are largely controlled by the airport through outright ownership; however, small portions of each RPZ serving existing runway extend beyond airport property. The RPZ serving existing Runway 2 encompasses a total of 1.4 acres of property that extends to the southwest beyond the airport property boundary; however, this property is currently owned by the City of Eloy (airport sponsor). The existing Runway 20 RPZ extends beyond airport property to the northeast and encompasses approximately 0.1 acres of uncontrolled property. It should be noted that the uncontrolled property within the existing Runway 20 RPZ also contains a portion of a drainage canal. In addition, the existing Runway 2 RPZ is traversed by Maya Road and an agricultural field access road along the Aztec Street alignment, which are public roadways. Public roadways are generally considered incompatible uses within an RPZ; however, the FAA often considers existing roads to be grandfathered, so no corrective action is necessary in the current condition. Any change to the runway environment that alters the size or position of the RPZ may negate the grandfathered condition.

As shown on **Exhibit 5A**, the ultimate RSA, ROFA, ROFZ, and RPZs associated with future RDC B-II-5000 conditions maintain the same size and position in relation to the runway; however, upon construction of the planned extension to each end of the runway, the corresponding safety areas corresponding to each runway end will also extend. The expanded RSA, ROFA, and ROFZ all remain on airport property and are free of known obstructions. Additional grading and clearing of vegetation may be needed at the time of future extensions to the runway. The planned RPZ serving the extended future Runway 3 will extend beyond airport property to the southwest and will encompass approximately 10 acres, as well as portions of Maya Road and the agricultural field access road along the Aztec Street alignment. In the future, the uncontrolled property within the relocated Runway 3 RPZ should be acquired and the traversing roadways should be removed and relocated. Prior to the 900-foot runway extension to the northeast, approximately 10 acres of uncontrolled property within the planned Runway 21 RPZ should be acquired and kept free of any incompatible land uses.

The City of Eloy should continue to monitor activity within the existing and proposed safety areas and RPZs serving planned Runway 3-21. These areas should be maintained free of incompatible land uses, to the extent practicable. Continued coordination with FAA officials will be important when implementing any projects that could require changes to the existing RPZs at E60.



BUILDING RESTRICTION LINE

Although achieving the lowest instrument approach visibility minimums is advantageous for airport operations, multiple safety area requirements are tied to the visibility minimums associated with a runway's instrument approach procedures; thus, impacts to the airport environment imposed by the planned instrument approach visibility minimums must be addressed. The runway type and capability of the instrument approach visibility minimums contribute to the determination of the building restriction line (BRL), which identifies suitable building locations on the airport and is a product of Title 14 Code of Federal Regulations (CFR) Part 77 primary and transitional surface clearance requirements.

Because the strength rating for the runway is over 12,500 pounds, the runway is classified as an other-than-utility runway under Part 77. The width of the primary surface for other-than-utility visual and non-precision instrument approach runways with minimums greater than $\frac{3}{4}$ statute miles is 500 feet (250 feet to each side of the runway centerline), which is the current and future runway condition at E60.

The transitional surface extends out and up from the edge of the primary surface at a ratio of seven feet laterally for every one-foot increase. The BRL or obstructions to the BRL can be determined based on these criteria and the use of a planned building height. **Exhibit 5A** presents the ultimate BRL separation at 425 feet from the runway centerline, based on a building height of 25 feet.

As shown on the development concept, the existing fence line along the northwest side of the runway currently obstructs the transitional surface. Under fully implemented conditions, approximately 5.8 acres of additional property is proposed for acquisition, and the obstructing fence line can be moved further northwest and out of the transitional surface. Upon the relocation of the fence, access gates should be constructed to allow proper access to the canal located on the north end of the runway. Aside from the obstructing fence to be relocated, there are no structures currently located or planned within the future 25-foot BRL.

INSTRUMENT APPROACHES

As previously discussed, E60 is not currently served by a published instrument approach procedure. As such, the existing runway is capable of visual approaches only.

Global positioning system (GPS) technology has radically changed instrument flight over the last 20 years; that change continues with the promise of curved approaches and free-flight opportunities in the near future. Moreover, GPS is an inexpensive option for precision approach capabilities, as it does not require expensive ground antenna systems, such as an instrument landing system (ILS). For this reason, it is good practice to prepare any airport for the possibility of improved approaches in the future. Given the forecasted increase in itinerant and air taxi operations, including those by business jets and turboprops, E60 is planned for future approach minimums of not less than one mile.



VISUAL APPROACH AIDS

Future planning considers various enhancements to visual approach aids serving the runway system at E60, as depicted on **Exhibit 5A**. Each end of the runway is currently served by two-box precision approach path indicators (PAPI-2s). Ultimately, PAPI-4s are planned to serve each runway end to enhance the use of each runway, as well as overall airfield safety, by providing pilots with improved visual approach guidance information during the landing phases of flight. The existing runway ends are also served by runway end identifier lights (REILs), which are flashing lights located at the runway thresholds that facilitate rapid identification of the runway end at night and during poor visibility conditions. REILs provide pilots with the ability to identify the runway thresholds and differentiate the runway end lighting from other lighting on the airport and in the approach areas. The existing REILs are planned to be maintained through the planning horizon.

WEATHER REPORTING AIDS AND COMMUNICATION

E60 is equipped with a lighted wind cone, which provides pilots with wind speed and direction information, and a segmented circle, which provides traffic pattern information. The lighted wind cone and segmented circle are located on the northeast edge of the main apron, adjacent to the rotating beacon. As shown on **Exhibit 5A**, the future condition considers the acquisition of approximately 5.8 acres of property and relocation of the segmented circle and lighted wind cone to the northwest side of the runway.

Many airports are equipped with an AWOS, which records and transmits current weather conditions, such as wind speed, wind gusts, wind direction, temperature, dew point, altimeter setting, and density altitude. E60 is not currently equipped with an on-site AWOS; pilots must utilize the AWOS systems available at Coolidge Municipal Airport (P08) and Casa Grande Municipal Airport (CGZ), which are located 11 nautical miles (nm) northeast and 13 nm northwest of E60, respectively. The development concept considers the implementation of an AWOS serving E60, which would be located on the northwest side of the runway near the relocated segmented circle and lighted wind cone.

TAXIWAY DESIGN, MARKING, AND SIGNAGE

While no significant airfield capacity improvements should be necessary during the planning period, the development concept considers improving the taxiway system through the implementation of additional taxiway connectors and extended taxiways. The taxiway system is planned to maintain taxiway design group (TDG) 2 standards for all taxiways at a taxiway width of 35 feet. The existing taxiways at E60 are 35 feet wide and should be maintained as such. In addition, it is recommended that taxiway fillets be upgraded to the most current taxiway fillet geometry standards on an as-needed basis or when taxiway rehabilitation projects are scheduled to occur.

At present, the taxiway system serving E60 is adequate for meeting current and future air traffic demand, and the existing airfield taxiway geometry is largely consistent with the current taxiway design standards established in FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*; however, existing Taxiway D



provides direct access from the apron area to the runway, which is a non-standard condition. Under future conditions, existing Taxiway D is planned to be removed and relocated to the northeast, which eliminates the existing direct access. Upon construction of this project, the relocated taxiway will be designated Taxiway A3. Prior to the removal and relocation of Taxiway D (future Taxiway A3), a temporary painted no-taxi island is planned to prevent direct access from the apron area to the runway environment. Additionally, taxiway signage and designations should be updated to standard nomenclature (e.g., A1, A2, A3, etc.), which could be planned with cohesive projects.

As discussed in Chapter Three, runway markings are typically designed according to the type of instrument approach available on the runway. FAA AC 150/5340-1K, *Standards for Airport Markings*, provides the guidance necessary to design airport markings. The existing runway has basic markings that meet the current design standards for a B-II-VIS runway. Under future conditions, runway markings should be upgraded to non-precision instrument (NPI) approach markings upon implementation of a non-precision instrument approach. Runway distance remaining signage should also be installed at this time.

LANDSIDE DEVELOPMENT CONCEPT

The primary goal of landside facility planning is to provide adequate space to meet reasonably anticipated aviation needs, while also optimizing operational efficiency and land use. Achieving this goal yields a development concept that segregates functional uses and maximizes the airport's revenue potential. Chapters Three and Four identified several opportunities to improve the existing landside facilities to better accommodate future aviation demand. This section specifies the recommended improvements pertaining to landside facilities.

Landside facilities can include terminal buildings, hangars, aircraft parking aprons, and aviation support services. Landside facility planning considers the potential utilization of remaining airport property to provide revenue support and benefit the economic well-being of the regional area. It is also important to identify the overall land use classification of airport property to preserve the aviation purpose of the facility well into the future. **Exhibit 5A** presents the planned landside development for E60.

As a local general aviation airport, most of the landside development proposed within the development concept will accommodate the general aviation owners and operators at E60, as well as current and future service providers at the airport. At present, general aviation landside facilities are located on the east side of the airfield and provide approximately 37,000 square feet (sf) of total hangar capacity, as well as aircraft apron space that totals approximately 23,500 square yards (sy).

It should be noted that multiple off-airport hangars provide additional storage space of approximately 61,000 sf. The majority of the off-airport space is cross-utilized for the storage and maintenance of aircraft or other aircraft services.

Multiple layouts of potential landside facilities were presented in Chapter Four, including hangar development, aircraft apron layouts, and the placement of aviation support services. The development concept provides a compilation of proposed landside facilities, which attempts to maximize potential



aviation development space on the airfield. New developments are primarily planned near existing facilities to take advantage of existing infrastructure availability and reduce future development costs; however, long-term landside development also considers new development locations that could help meet forecast demands.

The major landside recommendations addressed in the development concept include the following:

- Designate areas for aviation development near the existing airport entrance and on the southeast side of the airfield, close to the Runway 3 threshold. All proposed development includes aircraft storage hangars and aircraft apron space.
- Provide a site that can be redeveloped for a new airport terminal building.
- Designate areas for additional automobile parking and provide new airport access extending from Lear Drive.
- Provide an additional location for Jet A and 100LL fuel storage capacity.
- Identify new perimeter fencing and access gate locations to promote public access to the terminal area while maintaining a secure airfield.
- Identify potential areas for employment development or non-aeronautics-related land uses for revenue support.

AIRCRAFT STORAGE HANGARS AND FUTURE AVIATION DEVELOPMENT

Analysis in Chapter Three indicated that an additional 100,700 sf of aircraft storage hangar capacity may be needed to meet potential aviation demand through the long-term planning period. Recommended hangar development is proposed in the form of T-hangars, executive box hangars, and large conventional hangars, although future demand will ultimately dictate the size(s) and type(s) of hangar facilities that could be built. Ultimately, the development concept seeks to maximize hangar expansion and redevelopment potential along the flight line and on the main aircraft apron while identifying locations on existing airport property for future aviation-related development.

Terminal Development Area

As presented on **Exhibit 5A** and in **Figure 5A**, the development concept considers significant aviation-related improvements and redevelopment of the existing airport terminal area, which is located on the eastern side of the main aircraft apron. Automobile parking and access are provided on the east side of the terminal area via the airport entrance road.

There is minimal opportunity for infill with additional hangar development within the existing airport terminal area; as such, the existing Rigging Innovations building near the airport entrance is planned to be demolished and redeveloped. These actions will allow the terminal area to be developed in a way that allows complete public access to the primary landside facilities while providing designated automobile



parking facilities and controlled access to the airfield environment. The building to be demolished is planned to be reconstructed as a 100- by 200-foot conventional hangar, which could house a dedicated terminal facility or fixed base operator (FBO). This proposed facility layout maximizes existing apron area and creates the opportunity for an additional 8,400 sy of apron area. Additionally, an aircraft wash rack could be constructed southeast of the existing self-service fuel farm. Finally, public automobile parking and access serving the proposed terminal area would total approximately 36,000 sf.

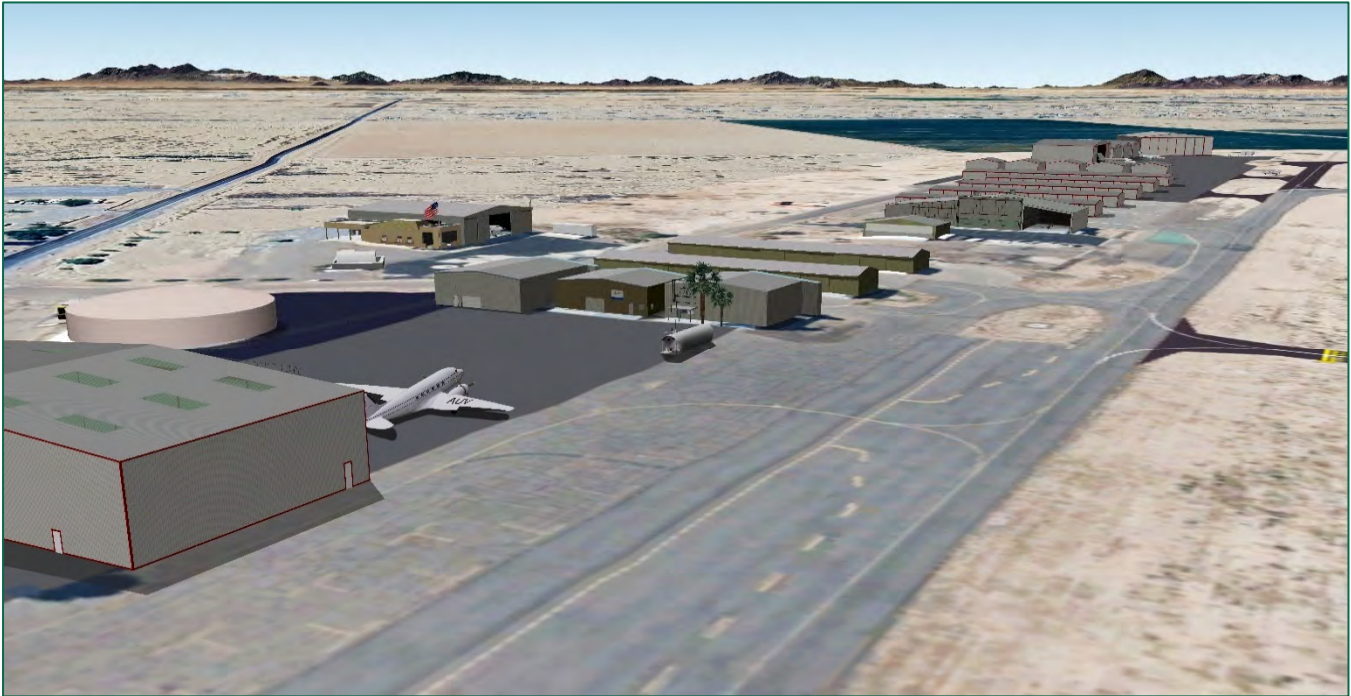


Figure 5A: Terminal Development Area Concept

Southwest Development Area

As previously mentioned, the development concept presents areas that would be suited for future aviation development if demand warrants. Through the alternatives process, multiple development layouts were explored for the southwestern development area, which is positioned along Taxiway A on the southwest side of the existing hangar development. This development area is ideal, as it would provide airside access via Taxiway A, while landside access could be provided by Lear Drive and a secondary access point on the southwest side of the airfield, near the Aztec Street alignment. **Exhibit 5A** and **Figure 5B** present the development concept as it relates to the southwest development area.

On the southwest side of the existing landside development, proposed development includes four six-unit T-hangars, one eight-unit T-hangar, five 50- by 50-foot executive box hangars, three 80- by 80-foot executive box hangars, and two 100- by 150-foot large conventional hangars. The proposed hangar development is served by approximately 18,400 sy of supporting apron area, as well as automobile parking and access. An additional fuel storage station with 12,000-gallon storage capacity for 100LL and 12,000-gallon storage capacity for Jet A fuel is proposed on the southwest corner of the expanded apron area.



To complete this concept, approximately 5.9 acres of private property must be acquired. It should be noted that automobile access is provided to the three 80- by 80-foot executive hangars and two 100- by 150-foot large conventional hangars via a secondary access point extending from the Aztec Street alignment. A controlled access gate provides access to the proposed apron area from these hangars.



Figure 5B: Southwest Development Area Concept

Additionally, the development concept considers the acquisition and reservation of private land for employment development or non-aeronautical revenue support. These additions of future airport property are somewhat removed from the flight line; however, if the designated parcel is not set aside for aeronautical use, it could be set aside for non-aeronautical land use, which could support airport revenues. As such, approximately 9.9 acres of private land is considered for purchase and reservation; the plans for its use could be further refined as future demand dictates.

Non-Aeronautical Land Use

As previously noted, the development concept considers land uses for employment development that could be designated for aeronautical or non-aeronautical purposes on airport property, in an effort to maximize the revenue potential of the airfield. The area proposed for employment development use includes approximately 9.9 acres of property to be acquired immediately southeast of the existing landside development area, between Lear Drive and the Aztec Street alignment. This area is ideal for potential non-aeronautical or mixed use because it is not readily accessible to the airfield system. Depending on the future use of this land, grant funding assistance may be limited or unavailable through FAA or ADOT funding mechanisms. Land acquisition for non-aeronautical purposes is not an eligible project for grant aid; any land to be acquired for non-aeronautical purposes will be the responsibility of the City of Eloy.



It should be noted that the airport does not have the approval to use any undeveloped property for non-aviation purposes at this time. Specific approval from the FAA will be required to utilize undeveloped property for non-aviation uses. This planning document does not provide approval for non-aviation uses, even if these uses are ultimately identified in the development concept and on the airport layout plan (ALP). A separate request justifying the use of airport property for non-aviation uses could be required; however, this study can be a source for developing and presenting that justification.

SUPPORT FACILITIES

As mentioned in Chapter Three, support facilities are integral to the operation of the airport; however, these facilities are not categorized as airside or landside facilities. The facility requirements analysis identified several improvements that will contribute to the airport's ability to accommodate the forecasted aviation activity levels over the planning period.

Aviation Fuel Storage

As indicated in Chapter Three, SkyDive Arizona currently owns and operates the airport's fuel facilities, which are located on the main apron between the SkyDive Arizona and Airborne Systems hangars. The existing storage capacity for 100LL and Jet A fuels totals 12,000 gallons (6,000 gallons each). Fuel is dispensed via a self-serve system co-located with the tanks. In addition to these fuel tanks, multiple privately owned and operated fueling facilities are located off-airport and are not available to the public. Private fueling facilities have not been included for analysis as part of this master plan update.

The current fuel storage capacity cannot accommodate a full refueling tanker (approximately 8,000 gallons), so it is recommended that the airport consider increasing fuel storage capacity up to 12,000 gallons for 100LL and Jet A fuel. This would allow the fuel service provider to maintain a reasonable level of fuel for customers while accepting a full refueling tanker load of fuel, ultimately preventing the need to completely drain a fuel tank prior to taking on another load of fuel. As such, an additional fuel farm with 12,000-gallon storage capacity for 100LL fuel and 12,000-gallon storage capacity for Jet A fuel is proposed on the southwest corner of the ultimate apron area; however, the need for additional fuel storage capacity will be determined by the airport sponsor and fuel service provider.

Airport Utilities

At this time, any significant landside development (particularly in the southwest development area) could be limited by the existing utility infrastructure, or lack thereof. Minimum water flow requirements for sprinkler and firefighting purposes, such as water storage and pumping capabilities, may vary depending on the types of hangars and facilities built. All future development should consider enhancements to utility infrastructure, which could include increased water storage and pumping capacity, sewer systems, and improved electrical, natural gas, and fiber/internet capabilities. In addition to utilities, the airport should evaluate the existing drainage system prior to any significant landside development to ensure it will adequately support that development.



ENVIRONMENTAL OVERVIEW

An analysis of potential environmental impacts associated with proposed airport projects is an essential consideration in the airport master plan process. The primary purpose of this discussion is to review the recommended development concept (**Exhibit 5A**) and associated capital program at the airport to determine whether projects identified in the airport master plan could individually or collectively impact existing environmental resources in a significant way. Information contained in this section was obtained from previous studies, official websites, and analysis by the consultant.

The environmental inventory included in Chapter One of this master plan provides baseline information about the airport environs. This section provides an overview of potential impacts to existing resources that could result from implementation of the planned improvements outlined on the recommended development concept.

If the FAA retains approval authority over a project, the project is typically subject to the *National Environmental Policy Act* (NEPA). For projects not categorically excluded under FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, or under the new categorical exclusions provided in the recent *FAA Reauthorization Act of 2024*, compliance with NEPA is generally satisfied through the preparation of an environmental assessment (EA). For instances in which significant environmental impacts are expected, an environmental impact statement (EIS) may be required.

The *FAA Reauthorization Act of 2024* has also introduced a variety of updated and new environmental guidelines. The primary environmental-related updates are outlined in three sections: Section 743, Section 783, and Section 788.

Section 743 functions as an amendment to Section 163 of the *FAA Reauthorization Act of 2018*. Section 743 details the FAA's authority to regulate uses of airport property. This section first details the FAA's authority over projects on land acquired without federal assistance and outlines limitations imposed on non-aeronautical review. Section 743 also states that a notice of intent for proposed projects outside FAA jurisdiction should be submitted by an airport sponsor to the FAA, effectively replacing Section 163 determinations.

Section 783 outlines that airport capacity enhancement projects, terminal development projects, and general aviation airport improvement projects will be subject to coordinated and expedited environmental review requirements. Section 783 also introduces a new process for determining which safety related projects should be prioritized during the environmental review process.

Section 788 establishes two new NEPA categorical exclusions that would cover environmental impacts for the following types of projects:

(A) Categorical Exclusion for Projects of Limited Federal Assistance

- (1) For projects that receive less than \$6 million of federal funds and do not involve extraordinary circumstances or special purpose laws, or have a total anticipated cost of not more than \$35 million, with federal funds comprising less than 15 percent of the total estimated project cost



(B) Categorical Exclusions in Emergencies

- (1) For the repair or reconstruction of any airport facility, runway, taxiway, or improvement similar in structure that is in operation or under construction when damaged by a state-declared emergency, or for an emergency declared by the U.S. president pursuant to the *Robert. T. Stafford Disaster Relief and Emergency Assistance Act*

The following portion of the airport master plan is not designed to satisfy the NEPA requirements for a specific development project, but it provides a preliminary review of environmental issues that may need to be considered in more detail within the environmental review processes. It is important to note that the FAA is ultimately responsible for determining the level of environmental documentation required for airport actions.

Table 5B summarizes potential environmental issues that are associated with implementation of the recommended development concept for E60. Analysis under NEPA includes the effects or impacts a proposed action or alternative may have on the human environment (see Title 40 CFR §1508.1). *Effects* have been recently defined in the Council of Environmental Quality (CEQ) guidelines as foreseeable environmental effects of the proposed action, reasonably foreseeable adverse environmental effects that cannot be avoided, and a reasonable range of alternatives to the proposed action.¹ These CEQ guidelines were finalized on July 1, 2024.

TABLE 5B | Summary of Potential Environmental Issues

AIR QUALITY	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the United States (U.S.) Environmental Protection Agency (EPA) under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.
Potential Environmental Concerns	Potential Impact. An increase in operations could occur over the 20+ year planning horizon of the master plan that would likely result in additional emissions. Pinal County, where the airport is currently located, is in nonattainment for PM ₁₀ (serious). ^A For construction emissions, project-specific qualitative or quantitative emissions inventories under NEPA may be required, depending on the type of environmental review needed for specific projects defined on the development plan concept. ^A U.S. EPA, Greenbook, Arizona Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants (https://www3.epa.gov/airquality/greenbook/anayo_az.html), as of July 31, 2024
BIOLOGICAL RESOURCES (INCLUDING FISH, WILDLIFE, AND PLANTS)	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat. (Continues)

¹ Federal Register, Vol. 88, No. 145, Proposed Rules, Monday, July 31, 2023



TABLE 5B | Summary of Potential Environmental Issues (continued)

	(Continued) The FAA has not established a significance threshold for non-listed species; however, factors to consider include whether an action would have the potential for: • Long-term or permanent loss of unlisted plant or wildlife species; • Adverse impacts to special status species or their habitats; • Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations; or • Adverse impacts on a species' reproductive rates, non-natural mortality, or ability to sustain the minimum population levels required for population maintenance.
Potential Environmental Concerns	<u>Federally Protected Species</u> Potential Impact. According to the USFWS Information for Planning and Consultation (IPaC) report, there is potential for four endangered, threatened, and candidate species within the vicinity of the airport: cactus ferruginous pygmy-owl (bird, threatened), yellow-billed cuckoo (bird, threatened), Gila topminnow (fish, endangered), and monarch butterfly (insect, candidate).^B Of these four species, only the monarch butterfly has the potential to occur at the airport. Based on a biological resources evaluation conducted for the airport, the airport may be used as a migratory stopover for monarchs, as flowering plants are present.^C Breeding for monarchs may also occur within the airport, as twinevine (<i>Funastrum</i> spp.), a known food source for this species, was observed on airport property. <u>Designated Critical Habitat</u> No Impact. There are no designated critical habitats within airport boundaries. <u>Non-Listed Species</u> Potential Impact. Non-listed species of concern include those protected by the <i>Migratory Bird Treaty Act</i> (MBTA) and the <i>Bald and Golden Eagle Protection Act</i>. No eagles are expected to use the airport environs. Bird species protected by the MBTA could be adversely affected if construction occurs during the nesting and breeding seasons (December 1 to August 31). Pre-construction surveys of vegetated areas at the airport are recommended for projects that involve ground clearing unless such projects occur outside the nesting and breeding seasons. Projects related to future acquisitions of land that contains vegetation may also be areas of concern. ^B U.S. Fish & Wildlife Service – Information for Planning and Consultation, (https://ipac.ecosphere.fws.gov/) ^C SWCA Environmental Consultants, SWCA Project No. 74433, Biological Resources Evaluation in Support of the Master Plan Update for Eloy Municipal Airport in Eloy, Pinal County, Arizona, prepared by Bradshaw, Lyndsey, September 19, 2023
CLIMATE	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Climate. Refer to FAA Order 1050.1F, Desk Reference, and/or the most recent FAA Aviation Emissions and Air Quality Handbook for the most up-to-date methodology for examining impacts associated with climate change.
Potential Environmental Concerns	Unknown. An increase in greenhouse gas (GHG) emissions could occur over the 20+ year planning horizon of the airport master plan. A project-specific analysis may be required based on the parameters of the individual projects; however, the FAA does not have an impact threshold to use to determine significance under NEPA at this time.

(Continues)



TABLE 5B | Summary of Potential Environmental Issues (continued)

COASTAL RESOURCES	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	<i>The FAA has not established a significance threshold for Coastal Resources. Factors to consider include whether an action would have the potential to:</i> • <i>Be inconsistent with the relevant state coastal zone management plan(s);</i> • <i>Impact a coastal barrier resources system unit;</i> • <i>Impact coral reef ecosystems;</i> • <i>Cause an unacceptable risk to human safety or property; or</i> • <i>Cause adverse impacts on the coastal environment that cannot be satisfactorily mitigated.</i>
Potential Environmental Concerns	No Impact. The airport is not located within a coastal zone. The closest National Marine Sanctuary is the Channel Islands National Marine Sanctuary, located roughly 450 miles west of the airport.^D ^D National Oceanic and Atmospheric Administration, National Marine Sanctuaries (https://sanctuaries.noaa.gov/)
DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) (NOW CODIFIED IN 49 UNITED STATES CODE [U.S.C.] § 303)	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	<i>The action involves more than a minimal physical use of a Section 4(f) resource or constitutes a constructive use based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource. Resources protected by Section 4(f) are publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; and publicly or privately owned land from a historic site of national, state, or local significance. Substantial impairment occurs when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished.</i>
Potential Environmental Concerns	Potential Impact. No wilderness areas, public recreational facilities, or National Register of Historic Places (NRHP)-listed resources would be impacted by proposed development at the airport.^E There is one known potential Section 4(f) resource located at the airport: a historic in-use natural gas pipeline that is eligible for listing on the NRHP; however, in-use natural gas pipelines are exempt from <i>National Historic Preservation Act (NHPA)</i> Section 106 review. ^E NRHP (https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466)
FARMLANDS	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	<i>The total combined score on Form AD-1006, Farmland Conversion Impact Rating, ranges between 200 and 260. Form AD-1006 is used by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) to assess impacts under the Farmland Protection Policy Act (FPPA).</i> <i>The FPPA applies when airport activities meet one of the following conditions:</i> • <i>Federal funds are involved</i> • <i>The action involves the potential for the irreversible conversion of important farmlands to non-agricultural uses; important farmlands include pastureland, cropland, and forest considered to be prime, unique, or statewide or locally important land</i> • <i>None of the exemptions to FPPA apply; these exemptions include the following:</i> ○ <i>When land is not considered farmland under the FPPA, such as land that is already developed or already irreversibly converted (these instances include when land is designated as an urban area by the U.S. Census Bureau or the existing footprint includes rights-of-way)</i> ○ <i>When land is already committed to urban development</i> ○ <i>When land is committed to water storage</i> ○ <i>Construction of non-farm structures necessary to support farming operations</i> ○ <i>Construction/land development for national defense purposes</i>

(Continues)

**TABLE 5B | Summary of Potential Environmental Issues (continued)**

Potential Environmental Concerns	Potential Impact. According to the NRCS Web Soil Survey, the airport is comprised of Toltec fine sandy loam soils and is classified as <i>farmland of unique importance</i> (Exhibit 1K).⁶ Proposed changes to the airside and landside areas of the airport (i.e., 699-foot extension of Runway 3, 900-foot extension of Runway 21, future pavement, roads, and buildings) could convert farmlands protected by the FPPA. Impacts should be evaluated on a project-by-project basis in consultation with the State Soil Conservationist and Form AD-1006 should be completed, when appropriate. ⁶ USDA-NRCS, Web Soil Survey (https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx)
HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Hazardous Materials, Solid Waste, and Pollution Prevention; however, factors to consider include whether an action would have the potential to: • Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management; • Involve a contaminated site; • Produce an appreciably different quantity or type of hazardous waste; • Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity; or • Adversely affect human health or the environment.
Potential Environmental Concerns	No Impact. A Phase I Environmental Due Diligence Audit (EDDA) site assessment was conducted for E60 in conjunction with the Taxiway A Relocation EA in 2016 and concluded that there were no recognized environmental conditions (RECs).⁶ This report also noted that there were no active cases for underground or aboveground storage tanks that had leaks, spills, or contamination at the airport. There are no identified brownfields or Superfund sites within a one-mile buffer of the airport.^H Prior to any proposed land purchase, a Phase I site assessment should be conducted to provide a more detailed understanding of what hazardous materials may be located on the land to be purchased. Due to existing regulatory environmental management regarding hazardous materials and waste and stormwater management, no impacts related to ultimate airport development are anticipated. The construction of proposed executive hangars on the south side of the airport would increase solid waste. No long-term impacts related to solid waste disposal are expected. ⁶SWCA Environmental Consultants, Phase I EDDA Site Assessment for the Proposed Taxiway Relocation, Drainage Improvements, and Land Acquisition Project in Pinal County, in Arizona, January 2016 ^HU.S. EPA, EJScreen (https://ejscreen.epa.gov/mapper/)
HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Historical, Architectural, Archaeological, and Cultural Resources. Factors to consider include whether an action would result in a finding of adverse effect through the Section 106 process; however, an adverse effect finding does not automatically trigger the preparation of an EIS (i.e., a significant impact).
Potential Environmental Concerns	Potential Impact. In fall 2023, a cultural resources survey was conducted for the update of the Eloy Airport Master Plan, during which the entirety of the airport was surveyed.¹ As a result of this survey, a previously recorded archaeological site was identified, as well as two isolated occurrences (IOs) and one in-use historic structure. The historic in-use site was identified as eligible for the NRHP; however, it is exempt from <i>National Historic Preservation Act</i> (NHPA) Section 106 review because it is an in-use natural gas pipeline. (Continues)



TABLE 5B | Summary of Potential Environmental Issues (continued)

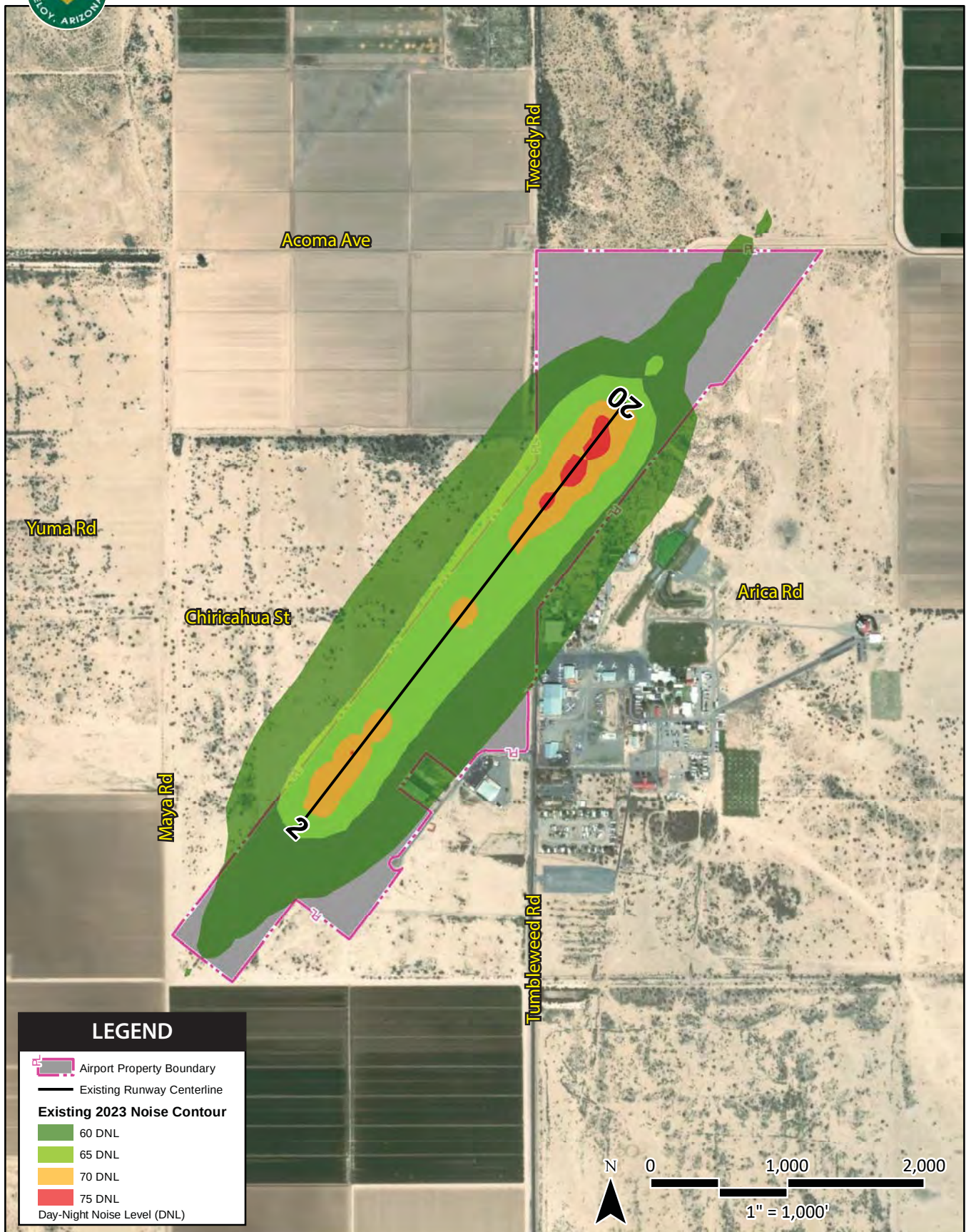
	(Continued) Additionally, a built environment evaluation of the airport was conducted to identify any known resources of historic age (i.e., at least 50 years or older since their original construction date). Based on this evaluation, a hangar/office building and runway system were identified as resources of historic age; however, none of these resources qualify for the NRHP or the Arizona Register of Historic Preservation (ARHP), so development on and near these resources would not require additional historic consultation or permitting. Furthermore, none of the hangars that are identified for demolition and rehabilitation in the capital improvement project portion of the master plan would require additional historic consultation or permitting, as these resources were not identified as eligible for listing on the NRHP or ARHP. The nearest tribal lands to Eloy Municipal Airport are the Tohono O’odham Nation Reservation, which is located more than nine miles southwest of the airport.^J If Section 106 consultation is required for any ultimate airport projects, the following tribes should be consulted: Pueblo of Zuni, Tonto Apache Tribe, Gila River Indian Community, Tohono O’odham Nation, Yavapai-Apache Nation, White Mountain Apache Tribe, Pascua Yaqui Tribe, and Hopi Tribe.^K ^I SWCA Environmental Consultants, Cultural Resources Survey for a Master Plan Update at Eloy Municipal Airport in Pinal County, Arizona, SWCA Project No. 74433, prepared by Knoll, Michelle, M.A., RPA, November 2023 ^J U.S. EPA EIScreen (https://ejscreen.epa.gov/mapper/), accessed August 2024 ^K Government to Government Consultation Toolkit, Consultation Map, accessed August 2024
LAND USE	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	<i>The FAA has not established a significance threshold for Land Use and there are no specific independent factors to consider. The determination that significant impacts exist is normally dependent on the significance of other impacts.</i>
Potential Environmental Concerns	Potential Impact. Land surrounding the airport is designated as Light Industrial on the City of Eloy’s General Plan Future Land Use Map. Proposed airport improvements include new hangars; future runway extensions of Runway 3 and Runway 21; acquisition of land to the north, east, and west of the airport for future runway safety areas and obstruction removal; acquisition of land to the southwest for aviation development; perimeter fence relocation; installation of an AWOS; and the upgrade of existing PAPI-2 lighting systems to PAPI-4 lighting systems along future Runway 3-21. In addition, the portion of the perimeter fence to be relocated on the northwestern end of the airport would impact access to a drainage canal located along the northwestern quadrant of the airport. Swing gates would be installed along this portion of the fence to provide access to the drainage canal. A portion of Maya Road (southwest of the airport) would also be removed and relocated. The relocated portion of Maya Road would allow access to future airport development. The road closure and relocation are not anticipated to have a significant impact on vehicular traffic, as there are currently no businesses or residences near this area. Exhibit 5A depicts property to be acquired within the Runway 3 and Runway 21 RPZs. This property acquisition is recommended to give the airport control over what land uses may be permitted within the airport’s RPZs. These parcels of land are currently unoccupied and would not displace or relocate any businesses or people.

(Continues)

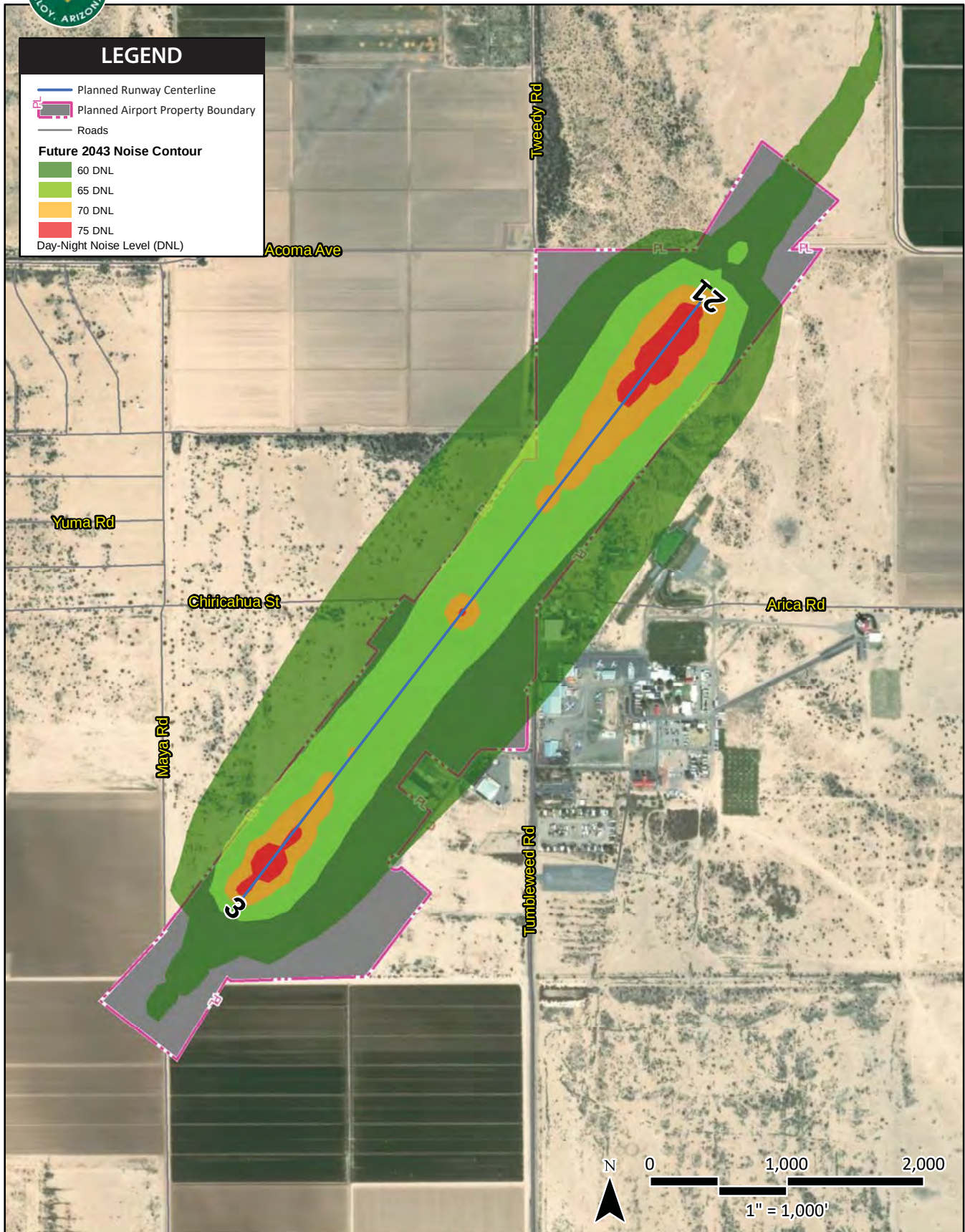
**TABLE 5B | Summary of Potential Environmental Issues (continued)**

NATURAL RESOURCES AND ENERGY SUPPLY	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Natural Resources and Energy Supply; however, factors to consider include whether the action would have the potential to cause demand to exceed available or future supplies of these resources.
Potential Environmental Concerns	No Impact. Planned development projects at the airport could increase demands on energy utilities, water supplies and treatment, and other natural resources during construction; however, significant long-term impacts are not anticipated. If long-term impacts become a concern, coordination with local service providers is recommended.
NOISE AND NOISE-COMPATIBLE LAND USE	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The action would increase noise by day-night average sound level (DNL) of 1.5 decibels (dB) or more for a noise-sensitive area that is exposed to noise at or above the 65 DNL noise exposure level, or that will be exposed at or above the 65 DNL level due to a 1.5-dB or greater increase, when compared to the no-action alternative for the same timeframe. Another factor to consider is that special consideration should be afforded to the evaluation of the significance of noise impacts on noise-sensitive areas within Section 4(f) properties where the land use compatibility guidelines in Title 14 CFR Part 150 are not relevant to the value, significance, and enjoyment of the area in question.
Potential Environmental Concerns	No Impact. Exhibit 5B shows existing noise contours and Exhibit 5C shows anticipated noise contours for the airport. As shown on Exhibit 5B for existing conditions, the 65 DNL noise exposure (light green) is outside airport property along the airport's western property line. In the future (2043) noise contours, the 65 DNL expands slightly further outside airport property boundaries (Exhibit 5C). Although there are a few scattered residents near the airport (east side of Tumbleweed Road), there are no residential units within the 65 DNL noise contour. The future development at the airport is not expected to change the overall noise environment by more than the 1.5-dB threshold; however, this should be confirmed prior to implementing a runway extension of proposed future Runway 3-21. No other noise-sensitive land uses (i.e., places of worship, schools, or overnight medical facilities) are less than a mile from the airport.
SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS	
Socioeconomics	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Socioeconomics; however, factors to consider include whether an action would have the potential to: • Directly or indirectly induce substantial economic growth in an area (e.g., through establishing projects in an undeveloped area); • Disrupt or divide the physical arrangement of an established community; • Cause extensive relocation when sufficient replacement housing is unavailable; • Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities; • Disrupt local traffic patterns and substantially reduce the levels of service of roads serving the airport and its surrounding communities; or • Produce a substantial change in the community tax base.
Potential Environmental Concerns	No Impact. Proposed development would not relocate or disrupt current businesses or residents. No division of existing neighborhoods or housing/business relocations would occur due to the proposed development on the airport. Future airport projects would result in temporary disruption of local traffic patterns along Tumbleweed Road during construction and/or once operational.

(Continues)



Source: FAA Aviation Environmental Design Tool (AEDT), Version 3F



Source: FAA Aviation Environmental Design Tool (AEDT), Version 3F



TABLE 5B | Summary of Potential Environmental Issues (continued)

Environmental Justice	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Environmental Justice; however, factors to consider include whether an action would have the potential to lead to a disproportionately high and adverse impact to an environmental justice population (i.e., a low-income or minority population) due to: • Significant impacts in other environmental impact categories; or • Impacts on the physical or natural environment that affect an environmental justice population in a way the FAA determines is unique to and significant to that population.
Potential Environmental Concerns	No Impact. Low-income and minority populations have been identified in the vicinity of the airport. The closest residence is southeast of the airport across Tumbleweed Road and would be located 0.10 miles from the closest proposed development area;^L however, it is unlikely implementation of the proposed improvements outlined in the development concept plan would affect these populations in a disproportionate or adverse manner. Executive Order (E.O.) 12898, <i>Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations</i>, the accompanying Presidential Memorandum, and Department of Transportation (DOT) Order 5610.2, <i>Environmental Justice</i>, require the FAA to provide meaningful public involvement for minority and low-income populations, as well as analysis that identifies and addresses potential impacts on these populations that may be disproportionately high and adverse. Environmental justice impacts may be avoided or minimized through early and consistent communication with the public and by allowing ample time for public consideration; therefore, it is crucial to disclose future airport development to potentially affected environmental justice populations near the airport as the projects are proposed. If disproportionately high or adverse impacts are noted, mitigation, enhancement measures, and offsetting benefits should be taken into consideration. ^L Google Earth Pro, Aerial Imagery
Children's Health and Safety Risks	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Children's Environmental Health and Safety Risks; however, factors to consider include whether an action would have the potential to lead to a disproportionate health or safety risk to children.
Potential Environmental Concerns	No Impact. No disproportionately high or adverse impacts are anticipated to affect children living, playing, or attending school near the airport because of the proposed ultimate development. The airport is an access-controlled facility and children are not allowed within the fenced portions of the airport without adult supervision. All construction areas should be controlled to prevent unauthorized access.
VISUAL EFFECTS	
Light Emissions	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The FAA has not established a significance threshold for Light Emissions; however, a factor to consider is the degree to which an action would have the potential to: • Create annoyance or interfere with normal activities from light emissions; or • Affect the nature of the visual character of the area due to light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.
Potential Environmental Concerns	Potential Impact. The existing lighting at the airport includes medium intensity runway/taxiway lighting and lighting used for navigation (such as a rotating beacon and two-light PAPI systems at the approach end of Runway 3 and Runway 21). The new proposed lighting would be a four-light PAPI system at the approach end of Runway 3 and Runway 21, which would replace the existing PAPI-2 systems. (Continues)



TABLE 5B | Summary of Potential Environmental Issues (continued)

	<i>(Continued)</i> Extensions are proposed to both Runway 3 and Runway 21. Night lighting during construction phases within the runway environment is typically directed downward to the construction work area to prevent light from spilling outside the airport boundaries. Other future projects are likely to include additional lighting during operation of the airport's new structures and facilities.
Visual Resources/Visual Character	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	<i>The FAA has not established a significance threshold for Visual Resources/Visual Character; however, a factor to consider is the extent to which an action would have the potential to:</i> • <i>Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;</i> • <i>Contrast with the visual resources and/or visual character of the study area; or</i> • <i>Block or obstruct the views of the visual resources (including whether these resources would still be viewable from other locations).</i>
Potential Environmental Concerns	No Impact. The proposed runway extension would extend the approach end of Runway 3 by 699 feet and Runway 21 by 900 feet. These runway extensions are not anticipated to visually alter the line of sight for any land uses, as the parcels of land bordering each runway approach end are either vacant or set aside for agricultural uses.
WATER RESOURCES	
Wetlands	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	<i>The action would:</i> 1. <i>Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers;</i> 2. <i>Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected;</i> 3. <i>Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety, or welfare (the term "welfare" includes cultural, recreational, and scientific resources or property important to the public);</i> 4. <i>Adversely affect the maintenance of natural systems that support wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands;</i> 5. <i>Promote the development of secondary activities or services that would cause the circumstances listed above to occur; or</i> 6. <i>Be inconsistent with applicable state wetland strategies.</i>
Potential Environmental Concerns	No Impact. According to the biological resources evaluation for E60, no wetland vegetation or wetland hydrology is present at the airport and no potential jurisdictional wetlands or aquatic sites are located at E60. ^M ^M SWCA Environmental Consultants, Biological Resources Survey in Support of the Master Plan for Eloy Municipal Airport in Eloy, Pinal County, Arizona, September 2023
Floodplains	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	<i>The action would cause notable adverse impacts on natural and beneficial floodplain values. Natural and beneficial floodplain values are defined in Paragraph 4.k of DOT Order 5650.2, Floodplain Management and Protection.</i>
<i>(Continues)</i>	



TABLE 5B | Summary of Potential Environmental Issues (continued)

Potential Environmental Concerns	No Impact. Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the airport is identified as an area of minimal flood hazard.^N The airport is not located in a 100-year or 500-year floodplain. Prior to the airport's existing floodplain designation, E60 used to be in an area where flood hazards are undetermined, but possible; thus, extensive drainage improvements were implemented to minimize the amount of flooding at the airport. Drainage improvements were installed on the northeastern portion of airport and near the terminus of N Lear Drive to adequately transport and/or detain runoff from the airfield.^O E.O. 14030, <i>Climate-Related Financial Risk</i>, was established on May 25, 2021. Section 5(e) of E.O. 14030 reinstates E.O. 13690,^P amends E.O. 11988,^Q and mandates the creation of a Federal Flood Risk Management Standard (FFRMS). One of the primary purposes of the FFRMS is to expand the management of floodplains from a base flood evaluation to include a higher vertical elevation (and the corresponding floodplain) to protect against future flood risks for federally funded projects. Under E.O. 13690 and its guidelines, one of several approaches should be used to identify floodplains and their risks to critical^R or non-critical federally funded actions: • Climate-Informed Science Approach (CISA) – the elevation and flood hazard area (i.e., 100-year floodplain) using data that integrate climate science with an emphasis on possible future effects on critical actions. • Freeboard Value Approach – the elevation and flood hazard area and an additional two or three feet above the base flood elevation, depending on whether the proposed federal action is critical or non-critical • 500-year Floodplain Approach – all areas subject to the 0.2 percent annual chance flood • Other methods resulting from updates to the FFRMS Because the airport is outside the 500-year floodplain, which is one of the methods for determining federal flood risk, no impacts related to the FFRMS are expected. ^NFEMA, Flood Map Service (https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/) ^OCoffman Associates, Eloy Municipal Airport Proposed Taxiway and Taxiway System Relocation, Drainage Improvements, and Land Acquisition, June 2017 ^PE.O. 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, 2015 ^QE.O. 11988, Floodplain Management, May 1977 ^RCritical action is defined in E.O. 13690 and the 2015 Guidelines for Implementing E.O. 11988 as any activity for which even a slight change of flooding is too great; for example, a facility producing and/or storing highly volatile, toxic, or water-reactive materials; structures (such as schools) in which occupants may not be sufficiently mobile or have available transportation capability given the flood warning lead times available; or essential or irreplaceable resources, utilities, or other functions that could be damaged beyond repair or otherwise made unavailable.
Surface Waters	
FAA Order 1050.1F, Significance Threshold/ Factors to Consider	The action would: 1. Exceed water quality standards established by federal, state, local, and tribal regulatory agencies; or 2. Contaminate public drinking water supply such that public health may be adversely affected.
Potential Environmental Concerns	Potential Impact. The airport is located within the Toltec Buttes watershed. There are no identified natural waterbodies with known water conditions within this watershed.⁵ One artificial shallow pond (swoop pond) is present near the airport and is utilized by SkyDive Arizona for skydivers. Long-term impacts to water quality from the proposed airfield improvements may need to be assessed, depending on how or if stormwater runoff is conveyed to airport stormwater infrastructure. (Continues)



TABLE 5B | Summary of Potential Environmental Issues (continued)

	(Continued) A National Pollutant Discharge Elimination System (NPDES) general construction permit would be required for all projects that involve ground disturbance over one acre. FAA AC 150/5370-10G, <i>Standards for Specifying Construction of Airports</i>, Item P-156, <i>Temporary Air and Water Pollution, Soil Erosion, and Siltation Control</i>, should also be implemented during construction projects at the airport. ^S U.S. EPA, How's My Waterway? (https://mywaterway.epa.gov/community/eloy%20municipal%20airport/overview)
Groundwater	
FAA Order 1050.1F, <i>Significance Threshold/Factors to Consider</i>	The action would: 1. <i>Exceed groundwater quality standards established by federal, state, local, and tribal regulatory agencies; or</i> 2. <i>Contaminate an aquifer used for public water supply such that public health may be adversely affected.</i> Factors to consider include whether a project would have the potential to: • <i>Adversely affect natural and beneficial groundwater values to a degree that substantially diminishes or destroys such values;</i> • <i>Adversely affect groundwater quantities such that the beneficial uses and values of the groundwater are appreciably diminished or can no longer be maintained and impairment cannot be avoided or satisfactorily mitigated; or</i> • <i>Present difficulties based on water quality impacts when obtaining a permit or authorization.</i>
Potential Environmental Concerns	No Impact. There are no groundwater resources at the airport. The airport property is not located over a sole source aquifer. The Upper Santa Cruz & Avra Basin is located 12 miles from the airport.^T E60 is located within the Pinal Active Management Area (AMA). The Arizona Department of Water Resources identifies long-term water management goals for groundwater resources within the Pinal AMA.^U ^T U.S. EPA, Sole Source Aquifers (https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b) ^U Arizona Department of Water Resources, Active Management Area (https://www.azwater.gov/ama/active-management-area-overview)
Wild and Scenic Rivers	
FAA Order 1050.1F, <i>Significance Threshold/Factors to Consider</i>	The FAA has not established a significance threshold for Wild and Scenic Rivers. Factors to consider include whether an action would have an adverse impact on the values for which a river was designated (or is considered for designation) through: • <i>Destroying or altering a river's free-flowing nature;</i> • <i>A direct and adverse effect on the values for which a river was designated (or is under study for designation);</i> • <i>Introducing a visual, audible, or other type of intrusion that is out of character with the river or would alter outstanding features of the river's setting;</i> • <i>Causing the river's water quality to deteriorate;</i> • <i>Allowing the transfer or sale of property interests without restrictions needed to protect the river or the river corridor; or</i> • <i>Any of the above impacts that prevents a river on the Nationwide Rivers Inventory (NRI) (or a Section 5(d) river that is not included in the NRI) from being included in the National Wild and Scenic Rivers System, or causes a downgrade in its classification (e.g., from wild to recreational).</i>

(Continues)

**TABLE 5B | Summary of Potential Environmental Issues (continued)**

Potential Environmental Concerns	No Impact. There are no wild and scenic rivers or rivers listed on the NRI near the airport. The closest designated wild and scenic river identified is the Verde River, located 93 miles from the airport.^v The nearest NRI features are Arnett and Telegraph Creeks, located 39 miles away from the airport.^w Projects delineated on the proposed development concept would not have adverse effects on the outstanding remarkable values of these water resources (i.e., scenery, recreation, geology, fish, wildlife, and history). ^v National Wild and Scenic Rivers System (https://www.rivers.gov/arizona) ^w National Park Service, Nationwide Rivers Inventory (https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm)
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AIRPORT RECYCLING, REUSE, AND WASTE REDUCTION

REGULATORY GUIDELINES

FAA Modernization and Reform Act of 2012 | The *FAA Modernization and Reform Act of 2012 (FMRA)*, which amended Title 49, United States Code (USC), included several changes to the Airport Improvement Program (AIP). Two of these changes are related to recycling, reuse, and waste reduction at airports.

- Section 132(b) of the FMRA expanded the definition of airport planning to include “developing a plan for recycling and minimizing the generation of airport solid waste, consistent with applicable State and local recycling laws, including the cost of a waste audit.”
- Section 133 of the FMRA added a provision requiring airports that have or plan to prepare a master plan, and that receive AIP funding for an eligible project, to ensure the new or updated master plan addresses issues related to solid waste recycling at the airport, including:
 - o The feasibility of solid waste recycling at the airport;
 - o Minimizing the generation of solid waste at the airport;
 - o Operation and maintenance requirements;
 - o A review of waste management contracts; and
 - o The potential for cost savings or the generation of revenue.

State of Arizona Solid Waste Management | The Arizona Department of Environment Quality (ADEQ) enforces the state’s solid waste program.² The purpose of the program is to ensure proper management of solid waste. Solid waste includes the municipal solid waste that is typically collected and disposed of in municipal landfills, as well as other nonhazardous waste. Duties assigned to this program include the following:

² ADEQ (<https://www.azdeq.gov/SolidWaste>)



- Issuance of permits, certifications, and licenses to solid waste facilities
- Conduction of solid waste facility inspections to ensure such facilities are compliant with state and federal regulations
- Conduction of compliance inspections and enforcement actions
- Investigation of complaints
- Provision of information to the general public on recycling, reuse, and proper management of waste-like materials

SOLID WASTE

Airport sponsors typically have complete purview over the waste handling services in the facilities they own and operate, such as airport-owned hangars and maintenance facilities. Tenants of airport-owned buildings/hangars or tenants that own their own facilities are usually responsible for coordinating their own waste-handling services. While airport-operated facilities are the focus of this plan, the airport should work to incorporate facility-wide strategies that create consistency in waste disposal mechanisms, which will ultimately result in the reduction of materials sent to the landfill.

For airports, waste can generally be divided into eight categories:³

- **Municipal Solid Waste (MSW)**, more commonly referred to as trash or garbage, consists of everyday items that are used and then discarded, such as product packaging.
- **Construction and Demolition Waste (C&D)** is considered non-hazardous trash that results from land clearing, excavation, demolition, and renovation/repair of structures, roads, and utilities, including concrete, wood, metals, drywall, carpet, plastic, pipe, cardboard, and salvaged building components. C&D is also generally labelled as MSW.
- **Green Waste** is a form of MSW yard waste that consists of tree, shrub, and glass clippings, as well as leaves, weeds, small branches, seeds, and pods.
- **Food Waste** includes unconsumed food products or waste generated and discarded during food preparation. Food waste is also considered MSW.
- **Deplaned Waste** is waste removed from passenger aircraft. Deplaned waste includes bottles, cans, mixed paper (e.g., newspapers, napkins, paper towels, etc.), plastic cups, service ware, food waste, and food-soiled paper/packaging.

³ FAA, Recycling, Reuse, and Waste Reduction at Airports, April 24, 2013



- **Lavatory Waste** is a special waste that is emptied through a hose and pumped into a lavatory service vehicle. The waste is then transported to a triturator facility⁴ for pretreatment prior to discharge in the sanitary sewerage system. Chemicals in lavatory waste can present environmental and human health risks if mishandled; therefore, caution must be taken to ensure lavatory waste is not released to the public sanitary sewerage system prior to pretreatment.
- **Spill Clean and Remediation Wastes** are also special wastes and are generated during the cleanup of spills and/or the remediation of contamination from several types of sites on an airport.
- **Hazardous Wastes** are governed by the *Resource Conservation and Recovery Act* (RCRA) and the regulations in Title 40 CFR, Subtitle C, Parts 260 to 270. The U.S. Environmental Protection Agency (EPA) expounded less stringent regulations for certain hazardous waste, known as universal waste, in Title 40 CFR Part 237, *The Universal Waste Rule*.

As shown on **Exhibit 5D**, there are multiple areas where the airport potentially contributes to the waste stream, including hangars and airport construction projects. To create a comprehensive waste reduction and recycling plan for the airport, all potential inputs must be considered.

EXISTING SERVICES

E60 currently contracts with Waste Connections of Arizona to remove and transport its solid waste and recycling. Tenants at the airport are responsible for overseeing their own solid waste/recycling pick-up. The airport currently does not recycle hazardous waste (i.e., fluorescent bulbs, aircraft tires, batteries, etc.) or electronic waste.

Airports generally utilize either *centralized* or *decentralized* waste management systems. The differences between these two methods are summarized in **Exhibit 5E** and described as follows. Eloy Municipal Airport currently operates using a decentralized waste system.

Centralized Waste Management System | With a centralized waste management system, the airport provides receptacles for the collection of waste, recyclables, or compostable materials and contracts for their removal by a single local provider.⁵ A centralized waste management system allows for more participation from airport tenants that may be incentivized to recycle on their own and can reduce the overall cost of service for all involved. A centralized strategy can be inefficient for some airports, as it requires more effort and oversight on the part of airport management; however, the centralized system is advantageous in that it involves fewer working components in the overall management of solid waste and recycling efforts. This strategy also allows the city greater control over the type, placement, and maintenance of dumpsters, thereby saving space and eliminating the need for all tenants to have their own containers.

⁴ A triturator facility turns lavatory waste into fine particulates for further processing.

⁵ National Academies of Sciences, Engineering, and Medicine, Airport Cooperative Research Program, Synthesis 92, Airport Waste Management and Recycling Practices, 2018



AIRPORT WASTE STREAMS

AIRPORT AREA

POTENTIAL INPUTS

POTENTIAL OUTPUTS

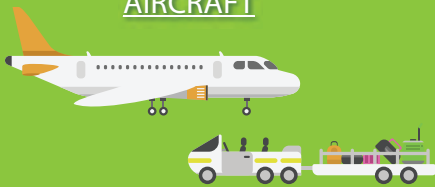
AIRFIELDS



Aircraft
Operations

Runway Rubber,
Green Waste

AIRCRAFT



Aircraft,
Ground Support
Equipment (GSE)

Vehicle Waste,
Plastic,
Wastewater,
Hazmat

AIRPORT CONSTRUCTION



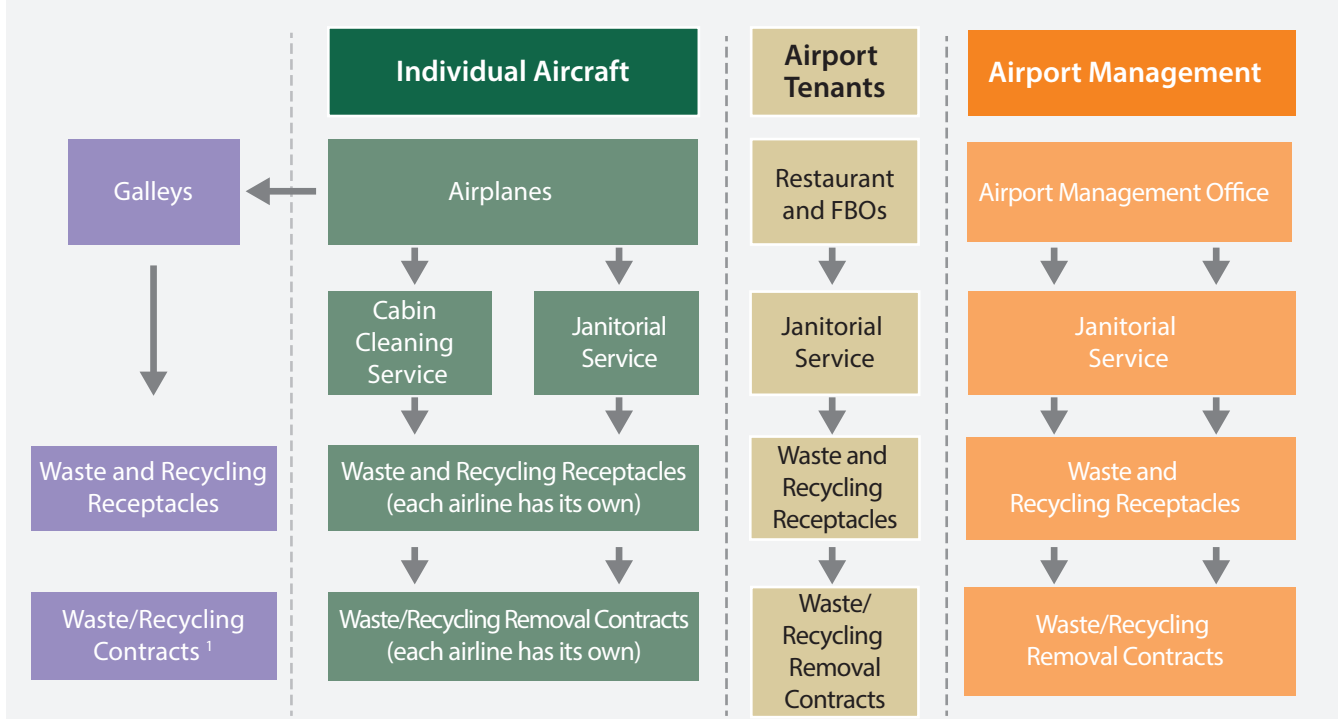
Construction,
Re-Construction,
Demolition

Reused Concrete,
Reused Asphalt,
Vehicle Waste,
Soils, Building Materials,
Wood, General Waste

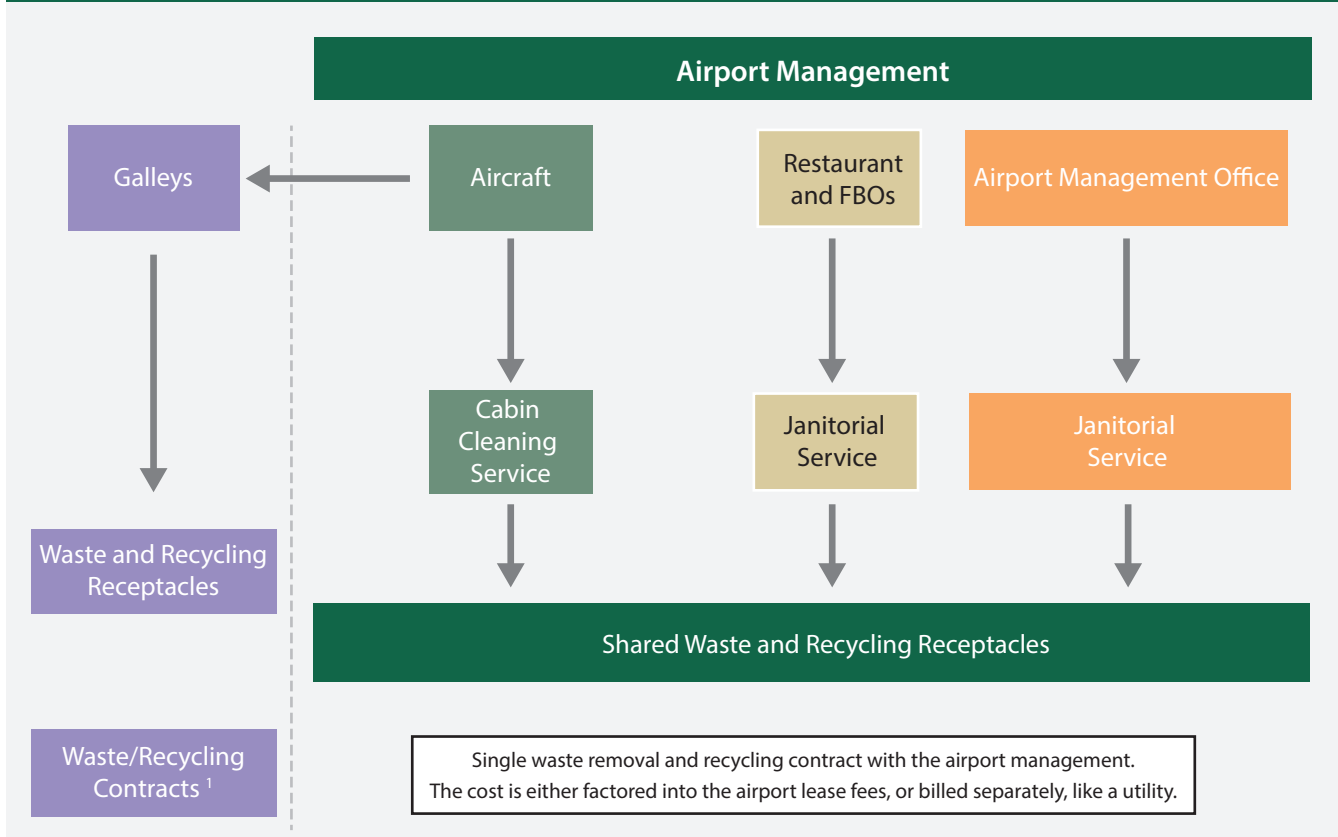




Components of a Decentralized Airport Waste Management System



Components of a Centralized Airport Waste Management System



¹ Galleys usually manage their own waste even if an airport relies on a centralized system

Source: Natural Resources Defense Council, Trash Landings: How Airlines and Airports Can Clean Up Their Recycling Programs, December 2006.



Decentralized Waste Management System | With a decentralized waste management system, the airport provides waste containers and contracts for the hauling of waste materials in airport-operated spaces only; however, airport tenants (such as fixed base operators and others) manage their waste from their leased spaces with separate contracts, billing, and hauling schedules. A decentralized waste management system can increase the number of receptacles on airport property and the number of trips by a waste collection service provider if a tenant's collection schedule differs from that of the airport.

GOALS AND RECOMMENDATIONS

Solid Waste and Recycling Goals

Table 5C outlines objectives that could help reduce waste generation and increase recycling efforts at the airport. To increase the effectiveness of tracking progress at the airport, a baseline state of all suggested metrics should be established to provide a comparison over time.

TABLE 5C | Waste Management and Recycling Goals – Eloy Municipal Airport, Arizona

Goals	Objectives
Create a Recycling Program at E60	• Encourage waste and recycling tracking and data management • Introduce recycling services in all areas of the airport
Reduce Amount of Solid Waste Generated	• Conduct a waste audit to identify the most common types of waste • Reduce waste through controlled purchasing practices and consumption of nonessential products

Source: Coffman Associates, Inc.

Recommendations

To increase recycling efforts at the airport, the following recommendations are made.

Objective 1: Encourage waste and recycling tracking and data management

- Create a centralized waste management system at the airport

E60 currently participates in a decentralized waste management system, as airport tenants are responsible for overseeing their own waste management. Airport staff could consider engaging tenants to create a centralized waste management system at the airport to streamline waste management and recycling efforts at E60.

- Assign the responsibility of waste management to a dedicated individual(s)

Designating one person or a group of people to oversee and manage solid waste and recycling at the airport will create efficient and cost-saving solutions to solid waste management. People dedicated to this operational aspect of the airport will be familiar with the necessary processes and can identify areas of improvement and potential cost-cutting measures.



- Create a tracking and reporting system

Tracking solid waste generated at E60 will help identify areas where a significant amount of waste is generated, which will help the airport estimate annual waste volumes. Understanding the cyclical nature of waste generation will allow the airport to estimate costs and identify areas of improvement.

Objective 2: Introduce recycling services in all areas of the airport

- Create a recycling program at the airport

To guarantee the airport reduces the amount of waste hauled to the landfill, materials that cannot be reused or avoided should be recycled, if possible. Once a recycling program is in place, the city should review internal procedures to ensure there are no unacceptable items contaminating recycling containers or recyclables being thrown in the trash. Clearly marked signage communicating what is and is not accepted should be placed near the solid waste and recycling containers; this is another significant component of a consistent, effective recycling program.

- Recycle waste and electronic waste (e-waste)

To guarantee the airport continues to reduce the amount of waste hauled to the landfill, materials that cannot be reused or avoided should be recycled, if possible. Recyclable materials (such as paper, aluminum, plastic, electronics, etc.) should be sorted from the airport's solid waste.

Objective 3: Conduct a waste audit to identify the most common types of waste

- Audit the current waste management system

The continuation of an effective program requires accurate data of current waste and recycling rates. There are several ways to gain insight into an airport's waste stream, such as requesting weights from the hauler, tracking the volume, or reviewing the bills; however, managing a waste system starts with a waste audit. A waste audit is an analysis of the types of waste produced and is the most comprehensive and intensive way to assess waste stream composition, opportunities for waste reduction, and capture of recyclables. A waste audit should include the following actions:

- Examine records and data
 - Examine waste hauling and disposal records and contracts
 - Inspect supply and equipment invoices
 - Evaluate other waste management costs (commodity rebates, container costs, etc.)
 - Track waste from the point of origin
 - Establish a baseline for metrics



- o Organize a facility walk-through conducted by the airport
 - Attain qualitative waste information to determine major waste components and waste-generating processes
 - Identify the locations at the airport that generate waste
 - Identify what types of waste are generated by the airport to determine what can be reduced, reused, or recycled
 - Understand waste pick-up and hauling practices
- o Sort through waste
 - Provides quantitative data on total airport waste generation
 - Allows problem-solving design/enhances the recycling program for the airport

Objective 4: Reduce waste through controlled purchasing practices and consumption of nonessential products

- Reduce waste by controlling purchasing and decrease the consumption of nonessential products. The airport can control the amount of waste generated by prioritizing the purchase of items or supplies that are reusable, recyclable, compostable, or made from recycled materials.

SUMMARY

This chapter has been prepared to help the City of Eloy make decisions regarding the future growth and development of E60 by narratively and graphically describing the development concept. The plan represents an airfield facility that fulfills aviation needs for the airport while conforming to safety and design standards, to the extent practicable. It also provides a guide for a landside complex that can be developed as demand dictates.

Flexibility will be crucial to future development at the airport, as activity may not occur as predicted. The development concept provides airport stakeholders with a general guide to maintain the long-term viability of Eloy Municipal Airport and allow the airport to continue providing general aviation services for the region. The next chapter of this master plan update considers strategies for funding the recommended improvements and provides a reasonable schedule for undertaking the projects, based on safety and demand, over the next 20 years and beyond.



6 Chapter

Capital Improvement Program



Chapter 6

Capital Improvement Program

The development concept presented in the previous chapter outlined airside and landside improvements for Eloy Municipal Airport (E60) that provide the City of Eloy (airport sponsor) with a plan to preserve and develop the airport to meet future aviation demands. Using the recommended development concept as a guide, this chapter provides a description and overall cost estimates for the projects identified in the capital improvement program (CIP) and development schedule. The program has been evaluated from a variety of perspectives and represents a comparative analysis of basic budget factors, demand, and priority assignments.

The presentation of the capital improvement program is organized into two sections. In the first section, the airport's CIP and associated cost estimates are presented in narrative and graphic form. The CIP has been developed following Federal Aviation Administration (FAA) guidelines for master plans and primarily identifies projects that are likely eligible for FAA and Arizona Department of Transportation – Aeronautics Group (ADOT) grant funding. The second section identifies and discusses capital improvement funding sources at the federal, state, and local levels.

With the recommended development concept and specific needs and improvements for the airport having been established, the next step is to determine a realistic schedule for project implementation and the associated costs for the plan. The capital improvement program considers the interrelationships between the projects to determine an appropriate sequence of development, while remaining within reasonable fiscal constraints.

The CIP is based on planning horizons and has been developed to cover the short-term (1-5 years), intermediate-term (6-10 years), and long-term (11-20 years) planning horizons outlined in this master plan update. By using planning horizons instead of specific years, the City of Eloy will have greater flexibility to adjust capital needs as demand dictates. **Table 6A** summarizes the key aviation demand milestones projected at E60 for each of the three planning horizons.

A key aspect of this planning document is the use of demand-based planning milestones. The short-term planning horizon contains the items of highest need and/or priority, some of which have been previously defined by airport management and existing CIP schedules. As short-term horizon activity levels are reached, the intermediate term can be planned for, based on the next activity milestones. Likewise, when the intermediate-term activity milestones are reached, the long-term activity milestones can be planned for.



TABLE 6A | Aviation Demand Planning Horizons

	Base Year (2023)	Short Term (1-5 Years)	Intermediate Term (6-10 Years)	Long Term (11-20 Years)
BASED AIRCRAFT				
Single-Engine	27	28	30	35
Multi-Engine	2	2	1	1
Turboprop	13	15	18	23
Jet	0	1	2	4
Helicopter	0	1	2	3
Total Based Aircraft:	42	47	53	66
ANNUAL OPERATIONS				
Itinerant				
Air Carrier	–	–	–	–
Air Taxi	–	100	200	500
General Aviation	4,500	5,900	7,100	9,600
Military	100	100	100	100
Total Itinerant	4,600	6,100	7,400	10,200
Local				
General Aviation	25,400	28,200	29,800	33,200
Military	–	–	–	–
Total Local	25,400	28,200	29,800	33,200
Total Operations:	30,000	34,300	37,200	43,400

Source: Coffman Associates Analysis, September 2024

Many development items included in the recommended development concept will need to follow these demand indicators. For example, the plan includes utility infrastructure expansion and site preparation for constructing new landside facilities to support aircraft activity. Demand for new based aircraft will be a primary indicator for these projects. If based aircraft growth occurs as projected, additional hangars should be constructed to meet the demand. If growth slows or does not occur as forecasted, some projects may be delayed. As a result, capital expenditures are planned to be made on an as-needed basis, leading to more responsible use of capital assets. Some development items do not depend on demand, such as airfield improvements to meet FAA design standards. These projects need to be programmed in a timely manner, regardless of changes in demand indicators, and should be monitored regularly by airport management.

At E60, some hangars are owned and managed by the airport sponsor and leased to individual tenants, while others are privately owned and managed on land leased from the airport sponsor. Because of economic realities, many airports rely on private developers to construct new hangars. In some cases, the use of private developers can keep construction costs lower, which lowers the monthly lease rates necessary to amortize a loan.

The CIP for E60 assumes development for many landside facilities will primarily be constructed privately through ground lease agreements with the sponsor. This assumption does not preclude the possibility of the airport sponsor constructing new hangars. Furthermore, the airport sponsor may decide to provide the site preparation projects necessary to facilitate hangar construction, such as grading and utility installation. Based on demand and the specific needs of potential developers, the City of Eloy will ultimately determine whether to self-fund landside facility development or rely on private developers.



Because a master plan is a conceptual document, implementation of the capital projects should only be undertaken after further refinement of their design and costs through architectural and/or engineering analysis. Moreover, some projects may require additional infrastructure improvements (e.g., drainage, extension of utilities, etc.), which may increase the estimated cost or timeline for completion of a project.

Once a list of necessary projects for E60 was curated and refined, project-specific cost estimates were prepared. These estimates include design, construction, administration, and contingency costs that may result from each project. **Capital costs presented here should be viewed only as order-of-magnitude estimates that are subject to further refinement during any engineering and/or architectural design;** nevertheless, they are considered sufficient for planning purposes. Cost estimates for each development project in the CIP are based on present-day construction, design, and administration costs. Adjustments will need to be applied over time to account for inflation and changes in construction and capital equipment costs. Cost estimates for all projects are in current (2024) dollars. It should also be noted that many of the CIP costs were prepared by an engineering firm (Dibble) that was contracted for the purposes of this master plan update, with assistance and input from the City of Eloy.

Exhibit 6A presents the proposed 20-year CIP for E60. The proposed CIP is a point-in-time analysis that will change annually based on actual demand and the changing needs of the airport. An estimate of grant (FAA and/or ADOT) funding eligibility is included, although actual funding is not guaranteed. For projects that would be eligible for federal funding, Airport Improvement Program (AIP) reauthorization typically provides for 91.06 percent of the total project cost for E60. The remaining amount (8.94 percent) would be equally divided (4.47 percent each) between ADOT and the City of Eloy. This eligibility breakdown is based on the airport's classification and the amount of public land within the State of Arizona. Other projects, such as the implementation of certain landside facilities (roadways), are typically either ineligible for AIP grants (outside of non-primary entitlements) or rank low on the priority scale. As a result, these projects should be planned for airport sponsor funding or funding through specific ADOT programs. The *FAA Reauthorization Act of 2024* (enacted May 16, 2024) authorized the FAA's AIP at \$4.0 billion for fiscal years (FY) 2025 through 2028. Section 708 of this act increases the federal share of allowable AIP-funded project costs at nonhub and nonprimary airports to 95 percent for FY 2025 and FY 2026. After FY 2026, the federal share will revert to 91.06 percent for AIP-funded projects. As such, state and local funding responsibility will be 2.5 percent for AIP projects during FY 2025 and FY 2026.

The FAA utilizes a national priority rating system to objectively evaluate potential airport projects. Projects are weighted based on safety, infrastructure preservation, compliance with design standards, and capacity enhancement. The FAA may participate in projects it deems highest priority according to this system before considering lower-priority projects, even if a lower-priority project is considered a more urgent need by the local sponsor; nevertheless, funding support for these projects should continue to be requested in subsequent years.

Some projects identified in the CIP will require environmental documentation. The level of required documentation for each project must be determined in consultation with the FAA and ADOT. There are three major levels of environmental review to be considered under the *National Environmental Policy Act* (NEPA): categorical exclusion (CATEX), environmental assessment (EA), and environmental impact statement (EIS). Each level requires more time to complete and more detailed information. Guidance on



the levels of documentation required for specific projects is outlined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*. The environmental overview presented in Chapter Five addresses NEPA and provides an evaluation of various environmental categories for E60.

The following sections describe the projects identified for the airport over the next 20 years in greater detail. The projects are grouped based on a detailed evaluation of existing and projected demand, safety, rehabilitation needs, and local priority. While the CIP identifies the priority rankings of the projects, the list should be evaluated and revised on a regular basis. It is also important to note that, while certain projects are listed separately for purposes of evaluation in this study, they could be combined with other projects at the time of construction/implementation.

SHORT-TERM PROGRAM (1-5 YEARS)

The short-term projects are those anticipated to be needed during the first five years of the 20-year CIP. The projects listed are subject to change, based on federal and state funding priorities. Projects relating to safety and maintenance generally have the highest priority. The short-term program presents 12 projects for the planning period between 2025 and 2029, as presented on **Exhibit 6A** and depicted on **Exhibit 6B**.

FY 2025 PROJECTS

Project #1 – Rehabilitate T-Hangars: Electrical, Doors, Pavement Flooring, Painting (Design & Construct), Phase 1 (West Building)

Description: This project is for the design and construction of rehabilitation efforts on the west T-hangar building to ensure proper functionality and quality of existing airport facilities.

Cost Estimate: \$606,300

Funding Eligibility: FAA – 95 percent¹ / State Match – 2.5 percent / Airport/Local – 2.5 percent

FY 2026 PROJECTS

Project #2 – Apron Rehabilitation (Design)

Description: This project is the design phase for rehabilitation of the main aircraft apron as part of routine airport maintenance.

Cost Estimate: \$250,000

Funding Eligibility: FAA – 95 percent¹ / State Match – 2.5 percent / Airport/Local – 2.5 percent

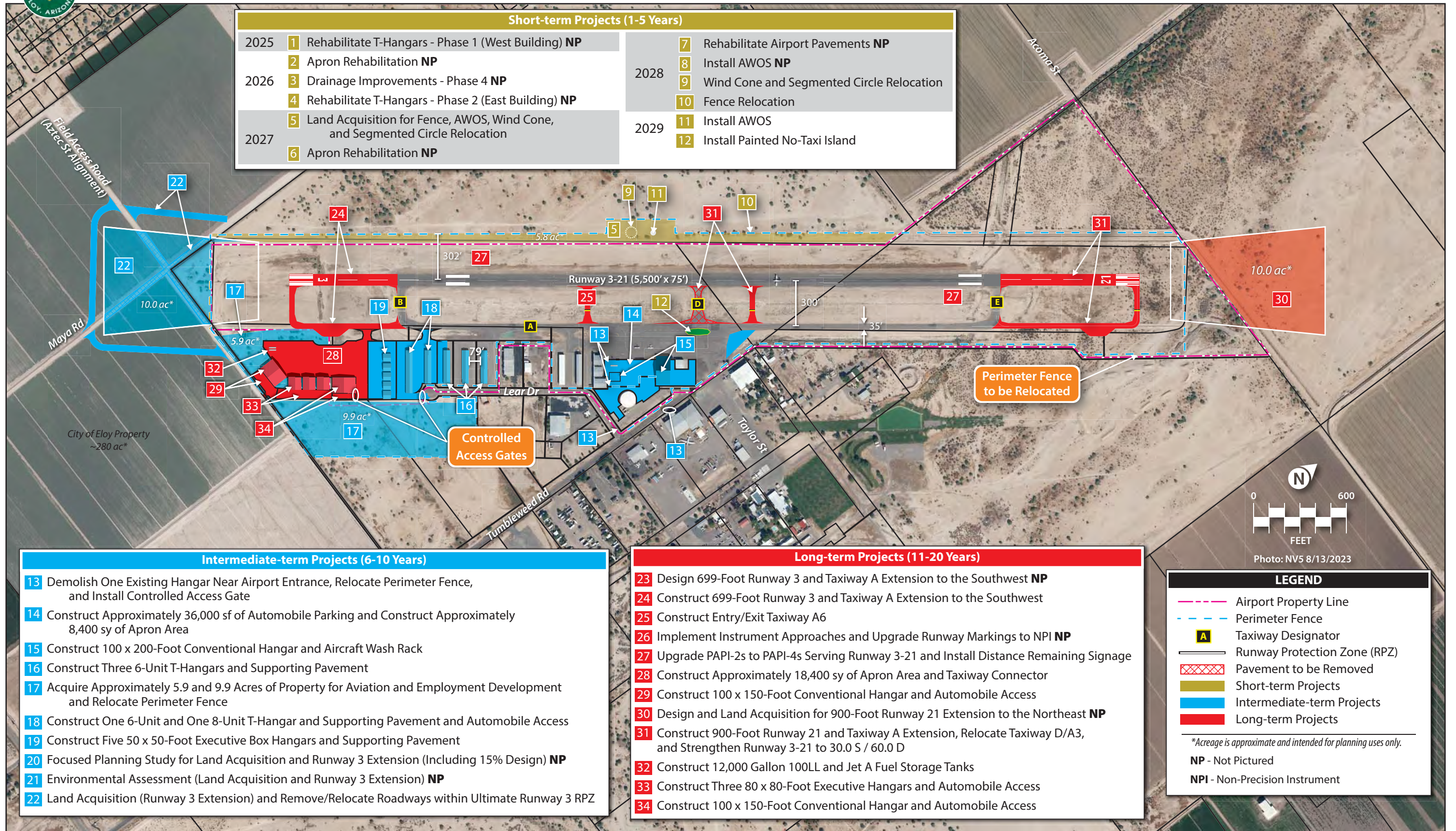
¹ The FAA Reauthorization Act of 2024 sets AIP funding at general aviation airports to 95 percent for FY 2025 and FY 2026.

ELOY, AZ			Airport Master Plan			
			Funding Sources			
Fiscal Year	Project No.	Project	Estimated Cost	Federal	State	Airport Sponsor/Local
SHORT TERM (1-5 Years)						
2025	1	Rehabilitate T-Hangars - Electrical, Doors, Pavement Flooring, Painting (Design & Construct) - Phase 1 (West Building) NP	\$606,300.00	\$575,985.00	\$15,157.50	\$15,157.50
2026	2	Apron Rehabilitation (Design) NP	\$250,000.00	\$237,500.00	\$6,250.00	\$6,250.00
2026	3	Drainage Improvements - Phase 4 (900' x 42') (Design & Construct) NP	\$518,000.00	\$-	\$466,200.00	\$51,800.00
2026	4	Rehabilitate T-Hangars - Electrical, Doors, Pavement Flooring, Painting (Design & Construct) - Phase 2 (East Building) NP	\$152,000.00	\$144,400.00	\$3,800.00	\$3,800.00
2027	5	Land Acquisition for Fence (Part 77 Obstruction), AWOS, Wind Cone, and Segmented Circle Relocation (75' x 3,500' of land)	\$200,000.00	\$-	\$180,000.00	\$20,000.00
2027	6	Apron Rehabilitation (Construct) NP	\$2,750,000.00	\$2,504,150.00	\$122,925.00	\$122,925.00
2028	7	Rehabilitate Airport Pavements - Crack Seal, Seal Coat, and Update Runway Designations to 3-21 (Design & Construct) NP	\$800,000.00	\$728,480.00	\$35,760.00	\$35,760.00
2028	8	Install AWOS (Design) NP	\$100,000.00	\$91,060.00	\$4,470.00	\$4,470.00
2028	9	Wind Cone and Segmented Circle Relocation (Design & Construct)	\$200,000.00	\$182,120.00	\$8,940.00	\$8,940.00
2028	10	Fence Relocation - 3,650 LF (Design & Construct)	\$450,000.00	\$-	\$405,000.00	\$45,000.00
2029	11	Install AWOS (Construct)	\$400,000.00	\$364,240.00	\$17,880.00	\$17,880.00
2029	12	Install Painted No-Taxi Island to Eliminate Direct Access Provided by Taxiway D	\$50,000.00	\$45,530.00	\$2,235.00	\$2,235.00
Short-term CIP Subtotal			\$6,476,300.00	\$4,873,465.00	\$1,268,617.50	\$334,217.50
INTERMEDIATE TERM (6-10 Years)						
2030-2034	13	Demolish One Existing Hangar Near Airport Entrance, Relocate Perimeter Fence, and Install Controlled Access Gate	\$175,000.00	\$102,000.00	\$5,000.00	\$130,000.00
	14	Construct Approximately 36,000 sf of Automobile Parking and Construct Approximately 8,400 sy of Apron Area	\$1,114,800.00	\$1,015,137.00	\$49,832.00	\$49,832.00
	15	Construct 100 x 200-Foot Conventional Hangar and Aircraft Wash Rack	\$1,670,000.00	\$427,982.00	\$21,009.00	\$1,221,009.00
	16	Construct Three 6-Unit T-Hangars and Supporting Pavement	\$2,363,200.00	\$-	\$-	\$2,363,200.00
	17	Acquire Approximately 5.9 and 9.9 Acres of Property for Aviation and Employment Development and Relocate Perimeter Fence	\$475,100.00	\$432,626.00	\$21,237.00	\$21,237.00
	18	Construct One 6-Unit and One 8-Unit T-Hangar and Supporting Pavement and Automobile Access	\$2,225,900.00	\$-	\$-	\$2,225,900.00
	19	Construct Five 50 x 50-Foot Executive Box Hangars and Supporting Pavement	\$1,542,700.00	\$-	\$-	\$1,542,700.00
	20	Focused Planning Study for Land Acquisition and Runway 3 Extension (Including 15% Design) NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
	21	Environmental Assessment (Land Acquisition and Runway 3 Extension) NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
22	Land Acquisition (Runway 3 Extension) and Remove/Relocate Roadways within Ultimate Runway 3 RPZ	\$1,745,000.00	\$1,588,997.00	\$78,002.00	\$78,002.00	
Intermediate -term CIP Subtotal			\$11,811,700.00	\$4,022,042.00	\$197,430.00	\$7,654,230.00 v
LONG TERM (11-20 Years)						
2035-2044	23	Design 699-Foot Runway 3 and Taxiway A Extension to the Southwest NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
	24	Construct 699-Foot Runway 3 and Taxiway A Extension to the Southwest	\$2,012,200.00	\$1,832,309.00	\$89,945.00	\$89,945.00
	25	Construct Entry/Exit Taxiway A6	\$362,900.00	\$330,457.00	\$16,222.00	\$16,222.00
	26	Implement Instrument Approaches and Upgrade Runway Markings to NPI NP	\$250,000.00	\$227,650.00	\$11,175.00	\$11,175.00
	27	Upgrade PAPI-2s to PAPI-4s Serving Runway 3-21 and Install Distance Remaining Signage	\$328,800.00	\$299,405.00	\$14,697.00	\$14,697.00
	28	Construct Approximately 18,400 sy of Apron Area and Taxiway Connector	\$1,780,000.00	\$1,620,868.00	\$79,566.00	\$79,566.00
	29	Construct 100 x 150-Foot Conventional Hangar and Automobile Access	\$1,533,500.00	\$-	\$-	\$1,533,500.00
	30	Design and Land Acquisition for 900-Foot Runway 21 Extension to the Northeast NP	\$445,000.00	\$405,217.00	\$19,892.00	\$19,892.00
	31	Construct 900-Foot Runway 21 and Taxiway A Extension, Relocate Taxiway D/A3, and Strengthen Runway 3-21 to 30.0 S / 60.0 D	\$3,303,000.00	\$3,007,712.00	\$147,644.00	\$147,644.00
	32	Construct 12,000 Gallon 100LL and Jet A Fuel Storage Tanks	\$600,000.00	\$546,360.00	\$26,820.00	\$26,820.00
	33	Construct Three 80 x 80-Foot Executive Hangars and Automobile Access	\$1,867,800.00	\$-	\$-	\$1,867,800.00
	34	Construct 100 x 150-Foot Conventional Hangar and Automobile Access	\$1,533,500.00	\$-	\$-	\$1,533,500.00
Intermediate -term CIP Subtotal			\$14,266,700.00	\$8,497,628.00	\$417,136.00	\$5,351,936.00
Long-term CIP Subtotal			\$32,554,700.00	\$17,393,135.00	\$1,883,183.50	\$13,340,383.50



Short-term Projects (1-5 Years)

2025	1	Rehabilitate T-Hangars - Phase 1 (West Building) NP	2028	7	Rehabilitate Airport Pavements NP
	2	Apron Rehabilitation NP		8	Install AWOS NP
2026	3	Drainage Improvements - Phase 4 NP		9	Wind Cone and Segmented Circle Relocation
	4	Rehabilitate T-Hangars - Phase 2 (East Building) NP		10	Fence Relocation
2027	5	Land Acquisition for Fence, AWOS, Wind Cone, and Segmented Circle Relocation	2029	11	Install AWOS
	6	Apron Rehabilitation NP		12	Install Painted No-Taxi Island



Intermediate-term Projects (6-10 Years)

- 13 Demolish One Existing Hangar Near Airport Entrance, Relocate Perimeter Fence, and Install Controlled Access Gate
- 14 Construct Approximately 36,000 sf of Automobile Parking and Construct Approximately 8,400 sy of Apron Area
- 15 Construct 100 x 200-Foot Conventional Hangar and Aircraft Wash Rack
- 16 Construct Three 6-Unit T-Hangars and Supporting Pavement
- 17 Acquire Approximately 5.9 and 9.9 Acres of Property for Aviation and Employment Development and Relocate Perimeter Fence
- 18 Construct One 6-Unit and One 8-Unit T-Hangar and Supporting Pavement and Automobile Access
- 19 Construct Five 50 x 50-Foot Executive Box Hangars and Supporting Pavement
- 20 Focused Planning Study for Land Acquisition and Runway 3 Extension (Including 15% Design) **NP**
- 21 Environmental Assessment (Land Acquisition and Runway 3 Extension) **NP**
- 22 Land Acquisition (Runway 3 Extension) and Remove/Relocate Roadways within Ultimate Runway 3 RPZ

Long-term Projects (11-20 Years)

- 23 Design 699-Foot Runway 3 and Taxiway A Extension to the Southwest **NP**
- 24 Construct 699-Foot Runway 3 and Taxiway A Extension to the Southwest
- 25 Construct Entry/Exit Taxiway A6
- 26 Implement Instrument Approaches and Upgrade Runway Markings to NPI **NP**
- 27 Upgrade PAPI-2s to PAPI-4s Serving Runway 3-21 and Install Distance Remaining Signage
- 28 Construct Approximately 18,400 sy of Apron Area and Taxiway Connector
- 29 Construct 100 x 150-Foot Conventional Hangar and Automobile Access
- 30 Design and Land Acquisition for 900-Foot Runway 21 Extension to the Northeast **NP**
- 31 Construct 900-Foot Runway 21 and Taxiway A Extension, Relocate Taxiway D/A3, and Strengthen Runway 3-21 to 30.0 S / 60.0 D
- 32 Construct 12,000 Gallon 100LL and Jet A Fuel Storage Tanks
- 33 Construct Three 80 x 80-Foot Executive Hangars and Automobile Access
- 34 Construct 100 x 150-Foot Conventional Hangar and Automobile Access

LEGEND

- Airport Property Line
 - - - Perimeter Fence
 - A Taxiway Designator
 - Runway Protection Zone (RPZ)
 - Pavement to be Removed
 - Short-term Projects
 - Intermediate-term Projects
 - Long-term Projects
- *Acreage is approximate and intended for planning uses only.*
- NP** - Not Pictured
- NPI** - Non-Precision Instrument

**Project #3 – Drainage Improvements, Phase 4 (900' x 42') (Design & Construct)**

Description: This project is for the design and construction phase of drainage improvements on the airfield to ensure proper drainage and stormwater discharge.

Cost Estimate: \$518,000

Funding Eligibility: FAA – 0 percent / State Match / 90 percent / Airport/Local – 10 percent

Project #4 – Rehabilitate T-Hangars: Electrical, Doors, Pavement Flooring, Painting (Design & Construct), Phase 2 (East Building)

Description: This project is for the design and construction of rehabilitation efforts on the east T-hangar building to ensure proper functionality and quality of existing airport facilities.

Cost Estimate: \$152,000

Funding Eligibility: FAA – 95 percent² / State Match – 2.5 percent / Airport/Local – 2.5 percent

FY 2027 PROJECTS**Project #5 – Land Acquisition for Fence (Part 77 Obstruction), AWOS, Wind Cone, and Segmented Circle Relocation (75' x 3,500' of land)**

Description: As presented in Chapter Five, the existing perimeter fence on the northwest side of the runway has previously been identified as a Part 77 obstruction. To remedy this condition, this portion of the fence is planned to be relocated farther northwest. The segmented circle, lighted wind cone, and ultimate AWOS are proposed to be installed on the northwest side of the runway, as well. Approximately 5.8 acres of land must be acquired to make appropriate space for these facilities and relocate the fence outside the Part 77 surfaces.

Cost Estimate: \$200,000

Funding Eligibility: FAA – 0 percent / State Match – 90 percent / Airport/Local – 10 percent

Project #6 – Apron Rehabilitation (Construct)

Description: This project is the construction phase for rehabilitation of the main aircraft apron as part of routine airport maintenance.

Cost Estimate: \$2,750,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

² The FAA Reauthorization Act of 2024 sets AIP funding at general aviation airports to 95 percent for FY 2025 and FY 2026.

**FY 2028 PROJECTS****Project #7 – Rehabilitate Airport Pavements: Crack Seal, Seal Coat, and Update Runway Designations to 3-21 (Design and Construct)**

Description: This project is the design and construction phase for crack sealing and seal coat of airfield pavements as part of routine airport maintenance. Additionally, the runway designations should be updated from 2-20 to 3-21 as part of this project to reflect the current magnetic declination.

Cost Estimate: \$800,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #8 – Install AWOS (Design)

Description: The airport is not currently served by an on-site AWOS. This project is the design phase for installation of an AWOS to serve E60.

Cost Estimate: \$100,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #9 – Wind Cone and Segmented Circle Relocation (Design & Construct)

Description: This project is for the relocation of the segmented circle and lighted wind cone to the northwest side of the runway, within the 5.8 acres to be acquired, in an effort to increase the visibility of these facilities.

Cost Estimate: \$200,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #10 – Fence Relocation: 3,650 Linear Feet (Design & Construct)

Description: As noted in Project #5, the existing fence along the northwest side of the runway is an obstruction to the Part 77 surfaces. This project is for the relocation of the existing fence farther northwest to remedy the Part 77 obstruction.

Cost Estimate: \$450,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent



FY 2029 PROJECTS

Project #11 – Install AWOS (Construct)

Description: This project is for the construction of an AWOS facility on the northwest side of the runway, near the relocated segmented circle and lighted wind cone, to better serve pilots operating at E60.

Cost Estimate: \$400,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #12 – Install Painted No-Taxi Island to Eliminate Direct Access Provided by Taxiway D

Description: This project is for the implementation of a painted no-taxi island to serve as a short-term solution for the direct access provided by existing Taxiway D to conform with current FAA taxiway geometry standards. Ultimately, this will remove the existing direct-access linkage between the aircraft apron area and Runway 3-21. In the long term, Taxiway D will be removed, relocated, and renamed Taxiway A3; however, the relocation project will not take place until Runway 3-21 has been extended.

Cost Estimate: \$50,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

SHORT-TERM PROGRAM SUMMARY

The short-term CIP, detailed on **Exhibit 6A**, includes projects that enhance the overall safety, efficiency, and maintenance of the airfield, while also implementing landside improvements. The total investment necessary for the short-term CIP is approximately \$6.5 million. Of the total short-term program, approximately \$4.9 million is eligible for federal funding assistance, while the state match program is eligible for approximately \$1.3 million and the airport (or local) share is slightly more than \$334,000.

INTERMEDIATE-TERM PROGRAM (6-10 YEARS)

The intermediate-term projects are those anticipated to be necessary between approximately 2030 and 2034. These projects are not tied to specific years of implementation; instead, they have been prioritized so the City of Eloy has the flexibility to determine when they need to be pursued, based on current conditions. It is not unusual for certain projects to be delayed or advanced based on changing conditions, such as funding availability or changes in the aviation industry. The intermediate-term planning horizon includes 10 projects, as listed on **Exhibit 6A** and depicted on **Exhibit 6B**. This section includes a description of each project.

**Project #13 – Demolish One Existing Hangar Near Airport Entrance, Relocate Perimeter Fence, and Install Controlled Access Gate**

Description: There is minimal opportunity for infill with additional hangar development within the existing airport terminal area. As such, one existing building near the airport entrance is planned to be demolished and redeveloped. Ultimately, this will allow the terminal area to be developed in a way that allows complete public access to the primary landside facilities while providing designated automobile parking facilities and controlled access to the airfield environment.

Cost Estimate: \$175,000³

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #14 – Construct Approximately 36,000 Square Feet of Automobile Parking and Construct Approximately 8,400 Square Yards of Apron Area

Description: This project is for the construction of approximately 36,000 square feet (sf) of public automobile parking to better serve automobile parking needs surrounding the terminal area. In combination with Project #13, an additional 8,400 square yards (sy) of apron area could be paved and made available for aircraft parking and movement.

Cost Estimate: \$1,114,800

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #15 – Construct 100- x 200-Foot Conventional Hangar and Aircraft Wash Rack

Description: This project is for the construction of a 100- by 200-foot conventional hangar as part of the terminal area redevelopment. A portion of this hangar could be designated for a traditional terminal facility. This project also includes the construction of an aircraft wash rack facility located southeast of the existing self-serve fuel farm.

Cost Estimate: \$1,670,000⁴

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

³ Funding for hangar demolition is estimated at \$75,000 of the total cost and will be the responsibility of the airport or another local entity. (See Exhibit 6A for estimated funding allocation.)

⁴ Funding for hangar construction is estimated at \$1,200,000 of the total cost and will be the responsibility of the airport or another local entity. (See Exhibit 6A for estimated funding allocation.)

**Project #16 – Construct Three 6-Unit T-Hangars and Supporting Pavement**

Description: This project is for the construction of three six-unit T-hangars and supporting access pavement, should demand warrant. These hangars will be accessible via Taxiway A from the airside, while landside access will be provided via Lear Drive.

Cost Estimate: \$2,636,200

Funding Eligibility: FAA – 0 percent / State Match – 0 percent / Airport/Local – 100 percent

Project #17 – Acquire Approximately 5.9 and 9.9 Acres of Property for Aviation and Employment Development and Relocate Perimeter Fence

Description: If the airport experiences continued demand for additional landside facility development, approximately 5.9 acres of land should be acquired to accommodate future aviation-related development. An additional 9.9 acres of land is considered for acquisition to accommodate aeronautical or non-aeronautical employment development. This project also includes the relocation of the perimeter fence to encompass that property once it is acquired. It should be noted that federal funding assistance will not be available for the purchase of any land to be used for a non-aeronautical purpose.

Cost Estimate: \$475,100

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #18 – Construct One 6-Unit T-Hangar and One 8-Unit T-Hangar with Supporting Pavement and Automobile Access

Description: This project is for the construction of one six-unit T-hangar and one eight-unit T-hangar with supporting access pavement, should the airport experience continued demand. These hangars will be accessible via Taxiway A from the airside, while landside access will be provided via Lear Drive through a controlled access gate.

Cost Estimate: \$2,225,900

Funding Eligibility: FAA – 0 percent / State Match – 0 percent / Airport/Local – 100 percent

Project #19 – Construct Five 50- x 50-Foot Executive Box Hangars and Supporting Pavement

Description: This project is for the continued development of the southwest landside development area, should demand dictate, and includes the construction of five 50- by 50-foot executive box hangars and supporting pavement.

Cost Estimate: \$1,542,700

Funding Eligibility: FAA – 0 percent / State Match – 0 percent / Airport/Local – 100 percent

**Project #20 – Focused Planning Study for Land Acquisition and Runway 3 Extension (Including 15% Design)**

Description: Based on the results of the runway length analysis conducted in Chapter Three, a runway extension to an ultimate runway length of 5,500 feet could better serve small- to medium-sized turbine-powered aircraft that currently use (and are projected to use) the airport. This project is for a focused planning study to examine the 699-foot runway extension planned for Runway 3, as well as approximately 10 acres of property to be acquired within the future runway protection zone (RPZ).

Cost Estimate: \$250,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #21 – Environmental Assessment (Land Acquisition and Runway 3 Extension)

Description: Prior to construction of the 699-foot extension to Runway 3, this project is for the environmental documentation required for the runway extension and ultimate land acquisition to accommodate the future Runway 3 RPZ.

Cost Estimate: \$250,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #22 – Acquire Land (Runway 3 Extension) and Remove/Relocate Roadways Within Future Runway 3 RPZ

Description: This project is for the acquisition of approximately 10 acres of property encompassed by the future Runway 3 RPZ. This project also includes the removal and relocation of Maya Road and the field access road on the Aztec Street alignment out of the ultimate Runway 3 RPZ.

Cost Estimate: \$1,745,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

INTERMEDIATE-TERM PROGRAM SUMMARY

The total costs associated with the intermediate-term program are estimated at \$11.8 million. Of this total, approximately \$4.0 million could be eligible for federal funding, while the state match program could be eligible for nearly \$200,000 and the airport (or local) share is projected to be approximately \$7.6 million.



LONG-TERM PROGRAM (11-20 YEARS AND BEYOND)

The long-term planning horizon considers 12 projects for the final 10-year period (and beyond). These projects are mainly demand-driven. The projects and their associated costs are listed on **Exhibit 6A** and presented on **Exhibit 6B**.

Project #23 – Design 699-Foot Runway 3 and Taxiway A Extension to the Southwest

Description: This project is for the design of the 699-foot extension to Runway 3 and Taxiway A to the southwest prior to its construction.

Cost Estimate: \$250,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #24 – Construct 699-Foot Runway 3 and Taxiway A Extension to the Southwest

Description: This project is for the construction of the 699-foot extension to Runway 3 and Taxiway A to the southwest in an effort to better serve small- to medium-sized turbine-powered aircraft that currently use and are projected to use the airport.

Cost Estimate: \$2,012,200

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #25 – Construct Entry/Exit Taxiway A6

Description: This project is for the construction of an additional entry/exit taxiway to serve the southwest side of the existing apron area, which will be needed due to increased runway length

Cost Estimate: \$362,900

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #26 – Implement Instrument Approaches and Upgrade Runway Markings to NPI

Description: The airport is not currently served by instrument approach procedures. Based on the forecasted increase in itinerant and air taxi operations, including those by business jets and turboprops, this project is for the implementation of approach minimums of not lower than one mile, as well as non-precision instrument (NPI) runway markings.

Cost Estimate: \$250,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

**Project #27 – Upgrade PAPI-2s to PAPI-4s Serving Runway 3-21 and Install Distance Remaining Signage**

Description: This project is for the implementation of four-box precision approach path indicators (PAPI-4s) and runway distance remaining signage to enhance the use of the runway, as well as overall airfield safety.

Cost Estimate: \$328,800

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #28 – Construct Approximately 18,400 Square Yards of Apron Area and Taxiway Connector

Description: This project is for the construction of an additional 18,400 sy of apron area and a taxiway connector serving the southwest development area to better accommodate existing and future aircraft apron demands.

Cost Estimate: \$1,780,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #29 – Construct 100- x 150-Foot Conventional Hangar and Automobile Access

Description: This project is for the continued development of the southwest development area and includes the construction of a 100- by 150-foot conventional hangar, as well as automobile parking and access pavements.

Cost Estimate: \$1,533,500

Funding Eligibility: FAA – 0 percent / State Match – 0 percent / Airport/Local – 100 percent

Project #30 – Design and Land Acquisition for 900-Foot Runway 21 Extension to the Northeast

Description: This project is for the design and acquisition of approximately 10 acres of property to accommodate the 900-foot Runway 21 and Taxiway A extension to the northeast prior to construction.

Cost Estimate: \$445,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #31 – Construct 900-Foot Runway 21 and Taxiway A Extension to the Northeast, Relocate Taxiway D/A3 to the Northeast, and Strengthen Runway 3-21 to 30,000 Pounds Single Wheel (S) and 60,000 Pounds Dual Wheel (D)

Description: This project is for the construction of the 900-foot extension to Runway 21 and Taxiway A to the northeast for an ultimate runway length of 5,500 feet in an effort to better serve small- to medium-sized turbine-powered aircraft that currently use and are projected to use the airport. This project also includes runway strengthening, as well as the relocation of Taxiway D/A3 and the PAPI-4 unit serving future Runway 21.

Cost Estimate: \$3,303,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

**Project #32 – Construct 12,000-Gallon 100LL and Jet A Fuel Storage Tanks**

Description: Because the southwest landside development area is removed from the terminal area, this project considers the implementation of two 12,000-gallon aboveground fuel tanks to provide 100LL and Jet A fuel storage capability. It is anticipated that aircraft fuel trucks could utilize these storage tanks to serve aircraft using the southwest landside development area.

Cost Estimate: \$600,000

Funding Eligibility: FAA – 91.06 percent / State Match – 4.47 percent / Airport/Local – 4.47 percent

Project #33 – Construct Three 80- x 80-Foot Executive Box Hangars and Automobile Access

Description: This project is for the continued development of the southwest development area and includes the construction of three 80- by 80-foot executive box hangars, as well as automobile parking and access pavements.

Cost Estimate: \$1,867,800

Funding Eligibility: FAA – 0 percent / State Match – 0 percent / Airport/Local – 100 percent

Project #34 – Construct 100- x 150-Foot Conventional Hangar and Automobile Access

Description: This project is for the construction of a 100- by 150-foot conventional hangar, as well as automobile parking and access pavements, to complete the hangar development proposed in the southwest landside development area.

Cost Estimate: \$1,533,500

Funding Eligibility: FAA – 0 percent / State Match – 0 percent / Airport/Local – 100 percent

LONG-TERM PROGRAM SUMMARY

The total investment necessary for the long-term CIP is approximately \$14.3 million. Of this amount, roughly \$8.5 million is eligible for federal assistance, the state match program is estimated to be nearly \$400,000, and the airport/local share of the long-term projects is estimated to be more than \$5.4 million. As previously noted, eligibility and actual funding of individual projects will be determined year-to-year and on a case-by-case basis.

CAPITAL IMPROVEMENT PROGRAM SUMMARY

The CIP is intended as a road map of improvements to help guide the City of Eloy, the FAA, and ADOT. As presented, the plan will help accommodate increased demand at E60 over the next 20 years and beyond. The sequence of projects may change due to the availability of funds or changing priorities, based on annual review by the airport sponsor, the FAA, and ADOT; nevertheless, this is a comprehensive list of capital projects the airport should consider in the next 20 years and beyond.



The total CIP proposed represents approximately \$32.6 million in airport development needs. Of this total, approximately \$17.4 million could be eligible for federal funding assistance. The state match program could be eligible for approximately \$1.9 million. The local funding estimate for the proposed CIP is estimated to be a minimum of \$13.3 million, which could increase if individual projects are not offered federal grants.

The airport or local funding estimate is largely driven by the construction costs of hangar development. It should be noted that costs associated with hangar development will likely be offset by the airport pursuing private developers for hangar construction, but any land acquired for non-aeronautical purposes will be the responsibility of the City of Eloy; nevertheless, the CIP can serve as a guide for airport improvements to help the City of Eloy, the FAA, and ADOT prioritize projects and funding efforts.

CAPITAL IMPROVEMENT FUNDING SOURCES

Four different sources of funds are generally used to finance airport development:

- Airport cash flow
- Revenue and general obligation bonds
- Federal/state/local grants
- Passenger facility charges (reserved for commercial service airports)

Access to these sources of financing varies widely among airports; some large airports maintain substantial cash reserves, while smaller commercial service and general aviation airports often require subsidies from local governments to fund operating expenses and finance modest improvements.

Financing capital improvements at E60 will not rely solely on the financial resources of the airport sponsor. Capital improvement funding is available through various grant-in-aid programs on both the federal and state levels. Historically, the airport has received both federal and state grants. While more funds could be available some years, the CIP was developed with project phasing to remain realistic and within the range of anticipated grant assistance. The following discussion outlines key funding sources that are potentially available for capital improvements at the airport.

FEDERAL GRANTS

Through federal legislation over the years, various grant-in-aid programs have been established to develop and maintain the system of public-use airports across the United States. The purposes of this system and its federally based funding are to maintain national defense and promote interstate commerce. As previously noted, the *FAA Reauthorization Act of 2024* (enacted May 16, 2024) authorized the FAA's AIP at \$4.0 billion for fiscal years 2025 through 2028. Section 708 of this law increases the federal share of allowable AIP-funded project costs at nonhub and nonprimary airports to 95 percent for FY 2025 and FY 2026. After FY 2026, the federal share will revert to 91.06 percent for AIP-funded projects.



The source for AIP funds is the Aviation Trust Fund, which was established in 1970 to provide funding for aviation capital investment programs (aviation development, facilities and equipment, and research and development). The Aviation Trust Fund also finances the operation of the FAA. It is funded by user fees, including taxes on airline tickets, aviation fuel, and various aircraft parts.

Several projects identified in the CIP are eligible for FAA funding through the AIP, which provides entitlement funds to airports based (in part) on their annual enplaned passengers and pounds of landed cargo weight. Additional AIP funds that are designated as discretionary may also be used for eligible projects, based on the FAA's national priority system. Although the AIP has been reauthorized several times and the funding formulas have periodically been revised to reflect changing national priorities, the program has remained essentially the same. Public-use airports that serve civil aviation, including E60, may receive AIP funding for eligible projects, as described in the FAA's *Airport Improvement Program Handbook*. The airport must fund the remaining project costs through a combination of other funding sources, which are discussed in the following sections.

Funding for AIP-eligible projects is undertaken through a cost-sharing arrangement in which the FAA typically provides up to 91.06 percent of the cost and the remaining share is split evenly between ADOT and the airport sponsor (4.47 percent, respectively). In exchange for this level of funding, the airport sponsor is required to meet various grant assurances, including maintaining each improvement for its useful life (usually 20 years).

Another source for federal grants is the *Infrastructure Investment and Jobs Act*, which is also known as the *Bipartisan Infrastructure Law* (BIL). The BIL was signed into law in 2022 and plans for \$25 billion to be invested into America's airports over a five-year period. BIL funds are sourced from the U.S. Treasury General Fund and are split into three funding buckets: \$15 billion for Airport Infrastructure Grants (AIG), \$5 billion for the Airport Terminal Program (ATP), and \$5 billion for air traffic control facilities and equipment. **Under the BIL, E60 will receive \$137,000 in allocated AIG funding in FY 2025.**⁵ This money can be used for the repair and maintenance of existing infrastructure or the construction of new facilities (i.e., airfield pavement, navigational aids, lighting, terminal building, etc.). ATP and air traffic control facility grants can be used for multimodal terminal development and the relocation, reconstruction, repair, or improvement of an airport traffic control tower. The federal share for AIG funds is the same as an AIP grant (90 percent with a local 10 percent match), while the federal share for ATP grants is 95 percent for nonprimary airports. The grant assurances that apply to AIP grants also apply to BIL grants.

Apportionment (Entitlement) Funds | The AIP provides funding for eligible projects at airports through an apportionment (or entitlement) program. Nonprimary airports that are included in the *National Plan of Integrated Airport Systems* (NPIAS), such as E60, receive a guaranteed minimum level of \$150,000 each year in nonprimary entitlement (NPE) funds. These funds can be carried over and combined for up to four years, thereby allowing for the completion of a more expensive project.

⁵ <https://www.faa.gov/bil/airport-infrastructure>



The FAA also provides a state apportionment based on a federal formula that considers land area and population. The FAA distributes these funds for projects at various airports throughout the state.

Small Airport Fund | If a large- or medium-hub commercial service airport chooses to institute a passenger facility charge (PFC), which is a fee of up to \$4.50 per airline ticket for the funding of capital improvement projects, the airport's apportionment is reduced. An amount of the reduced apportionment is directed to the small airport fund. The small airport fund is reserved for small-hub primary commercial service airports, nonhub commercial service airports, reliever airports, and general aviation airports. As a general aviation airport, E60 is eligible for funds from this source.

Discretionary Funds | In some cases, airports face major projects that will require funds that exceed the airport's annual entitlements; thus, additional funds from discretionary apportionments under the AIP become desirable. The primary feature of discretionary funds is that they are distributed on a priority basis. Priority is decided by the FAA according to a code system under which projects are ranked by purpose. Projects that ensure airport safety and security are ranked as the highest priority, followed by projects to maintain current infrastructure development, mitigate noise and other environmental impacts, meet design standards, and increase system capacity.

It is important to note that competition for discretionary funding is not limited to airports within the State of Arizona or those within the FAA Western-Pacific Region. Discretionary funds are distributed to all airports in the country and, as such, are more difficult to obtain. High-priority projects will often fare favorably, while lower-priority projects may not receive discretionary grants.

Set-Aside Funds | Portions of AIP funds are set-asides designed to achieve specific funding minimums for noise compatibility planning and implementation, select former military airfields (Military Airports Program), and select reliever airports. E60 does not qualify for set-aside funding.

FAA Facilities and Equipment (F&E) Program | The Airway Facilities Division of the FAA administers the Facilities and Equipment (F&E) Program, which provides funding for the installation and maintenance of various navigational aids and equipment supporting the National Airspace System. Under the F&E Program, funding is provided for FAA airport traffic control towers, en-route navigational aids, on-airport navigational aids, and approach lighting systems.

While the F&E Program still installs and maintains some navigational aids, on-airport facilities at general aviation airports have not historically been a priority; therefore, airports often request funding assistance for navigational aids through the AIP and then maintain the equipment on their own.⁶

⁶ Guidance on the eligibility of a project for federal AIP grant funding can be found in FAA Order 5100.38D, Airport Improvement Program Handbook, Change 1 (effective February 26, 2019).



STATE AID TO AIRPORTS

ADOT recognizes the value of airports to Arizona's transportation economy and administers several programs to aid in the maintenance of airports within the state. The source for state airport improvement funds is the Arizona State Aviation Fund. Taxes levied by the state on aviation fuel, flight property, aircraft registration tax, and registration fees (as well as interest on these funds) are deposited in the Arizona State Aviation Fund. The Arizona State Transportation Board establishes the policies for distribution of these state funds.

AIP Grant Match and Standalone State Grants | Under the State of Arizona's grant program, an airport can receive funding for one half of the local share of projects receiving federal AIP funding (4.47 percent of the total project cost). The AIP grant match program for an individual airport sponsor is limited to no more than 10 percent of the average revenue in the Arizona State Aviation Fund for a three-year period. The current maximum AIP matching grant is estimated to be \$3.0 million. E60 is eligible for matching funds from this source.

The state also provides 90 percent funding for projects that are typically not eligible for federal AIP funding or have not received federal funding. The highest level of funding available for a single project fluctuates but is approximately \$3.0 million. E60 is eligible for this funding source.

Pavement Maintenance Program | The airport system in Arizona is a multimillion-dollar investment of public and private funds that must be protected and preserved. State aviation fund dollars are limited, and the Arizona State Transportation Board recognizes the need to protect and extend the maximum useful life of the airport system's pavement. The Arizona Pavement Management System (APMS) has been established to assist in the preservation of Arizona airports' system infrastructures.

Public Law 103-305 requires that airports requesting federal AIP funding for pavement rehabilitation or reconstruction have an effective pavement maintenance system in place. To this end, ADOT maintains the APMS.

The APMS uses the U.S. Army Corps of Engineers' MicroPAVER program as the basis for generating the five-year Arizona Pavement Preservation Program (APPP). The APPP includes visual inspections of all airport pavements. Evaluations are made of pavement condition, types of irregularities, and severities observed, and these inspections are then entered into a computer program database. PCI values are determined through visual assessment of pavement conditions, in accordance with the most recent FAA AC 150/5380-7, *Pavement Management System*. These values range from 0 (failed) to 100 (excellent). Every three years, a complete database update with new visual observations is conducted, and individual airport reports from the update are shared with all participating system airports. ADOT ensures the APMS database is kept up-to-date and in compliance with FAA requirements. The last pavement evaluation for E60 was completed in 2022.

Every year, ADOT utilizes the APMS to identify airport pavement maintenance projects that will be eligible for funding for the upcoming five years; these projects appear in the state's five-year airport development program. Once a project has been identified and approved for funding by the Arizona State



Transportation Board, the airport sponsor may elect to accept a state grant for the project and not participate in the APPP, or the sponsor may sign an intergovernmental agreement (IGA) with ADOT to participate in the APPP. E60 participates in this program.

LOCAL FUNDING

After consideration has been given to grants, the balance of project costs must be funded through local resources. A goal for any airport is to generate enough revenue to cover all operating and capital expenditures, if possible. Several local financing options are available to consider when funding future development at airports, including airport revenues, issuance of various bond types, leasehold financing, implementation of a customer facility charge (CFC), pursuit of non-aviation development potential, and collection of money from special events. These strategies could be used to fund the local matching share or complete a project if grant funding cannot be arranged. Brief descriptions of the most common local funding options are as follows.

Airport Revenues | An airport's daily operations are conducted through the collection of various rates and charges. These airport revenues are generated specifically by airport operations. There are restrictions on the use of revenues collected by the airport. All receipts (excluding bond proceeds or related grants and interest) are irrevocably pledged to the punctual payment of operating and maintenance expenses, the payment of debt service for as long as bonds remain outstanding, or additions/improvements to airport facilities.

All airports should establish standard base rates for various leases. All lease rates should be set to adjust to a standard index, such as the consumer price index (CPI), to ensure fair and equitable rates continue to be charged in the future. Many factors impact what the standard lease rate should be for a particular facility or ground parcel. For example, ground leases for aviation-related facilities should have different lease rates than non-aviation leases. A separate facility lease rate should be charged for airport-owned hangars. The lease rate for any individual parcel or hangar may vary based on the availability of utilities, condition, location, and other factors; nevertheless, standard lease rates should fall within an acceptable range.

Bonding | Bonding is a common method of financing large capital projects at airports. A bond is an instrument of indebtedness of the bond issuer to the bond holder; a bond is a form of loan or "IOU." While bond terms are negotiable, the bond issuer is typically obligated to pay the bond holder interest at regular intervals and/or repay the principal at a later date.

Leasehold/Third-Party Financing | Leasehold or third-party financing is an option for developers or tenants to finance improvements under a long-term ground lease. The advantage of this arrangement is that it relieves the airport of the responsibility of having to raise capital funds for the improvement. As an example, a hangar developer might consider constructing hangars and charging fair market lease rates while paying the airport sponsor for a ground lease. A fuel farm can be undertaken in the same manner, with the developer of the facility paying the airport a fuel flowage fee.



Many airports use third-party funding when planned improvements will primarily be used by a private business or other organization. Such projects are not typically eligible for federal funding. Projects of this kind may include hangars, fixed base operator facilities, fuel storage, exclusive aircraft parking aprons, industrial aviation-use facilities, non-aviation office/commercial/industrial developments, and other similar projects. Private development proposals are considered on a case-by-case basis. Airport funds for infrastructure, preliminary site work, and site access are often required to facilitate privately developed projects on airport property.

Customer Facility Charge (CFC) | A CFC is the imposition of an additional fee charged to customers for the use of certain facilities. The most common example is when an airport constructs a consolidated rental car facility and imposes a fee for each rental car contract; that fee is then used by the airport to pay down the debt incurred from building the facility. A landing fee is another example, by which operators of aircraft pay the airport a set amount for use of the airfield. This can often be waived with the purchase of aviation fuel, which offers another revenue source for the airport.

Non-Aeronautical Development | In addition to generating revenue from traditional aviation sources, airports with excess land can permit compatible non-aeronautical development. Generally, an airport will extend a long-term lease for land that is not anticipated to be needed for aviation purposes in the future. The developer will then pay the monthly lease rate and construct and use the compatible facility. The recommended development concept for E60 plans for approximately 9.9 acres along the southeast side of the airfield to be designated as employment development reserve, which could be for aeronautical or non-aeronautical land use. This area could be considered for non-aeronautical use because it is located away from the airside facilities such that it does not pose a risk to airport operations.

It should be noted that any future non-aviation development must be reviewed and approved by both the FAA and ADOT. Additionally, the purchase of land to be used for non-aeronautical purposes is not eligible for federal funding assistance and will be the responsibility of the airport sponsor.

Special Events | Another common revenue-generating option is the permitted use of airport property for temporary or standalone events; pancake “fly-ins” and airshows are two popular examples of special events. Airports can also permit portions of their facilities to be used for non-aviation special events, such as car shows or video production of commercials. This type of revenue generation must be approved by the FAA.

MASTER PLAN IMPLEMENTATION

To implement the master plan recommendations, it is important to recognize that planning is a continuous process and does not end with approval of this document. The airport should implement measures that allow it to track various demand indicators, such as based aircraft, hangar demand, and operations. The issues on which this updated master plan is based will remain valid for several years. The primary goal is for E60 to best serve the air transportation needs of the region while achieving economic self-sufficiency. The CIP and phasing program presented will change over time. An effort has been made to identify and prioritize all major capital projects that would require federal or state grant funding; nevertheless, the airport, the FAA, and ADOT should review the five-year CIP on an annual basis.



The primary value of this study is that it keeps the airport's issues and objectives at the forefront of the decision-makers' minds. In addition to adjustments in aviation demand, decisions regarding when to undertake any projects or improvements recommended in this master plan update will impact how long the plan remains valid. The format of this plan reduces the need for formal and costly updates by allowing the City of Eloy to adjust the timing of project implementation. Updates can be completed by the City of Eloy, thereby improving the effectiveness of the master plan. Even so, airports are typically encouraged to update their master plans every seven to 10 years, or sooner if significant changes occur in the interim.

In summary, the planning process requires the airport sponsor to constantly monitor the progress of the airport. The information obtained from continually monitoring its activity will provide the data necessary to determine if the capital improvement schedule should be accelerated or decelerated.



A

Appendix

Glossary of Terms



GLOSSARY OF TERMS

A

Above Ground Level:	The elevation of a point or surface above the ground.
Accelerate-Stop Distance Available (ASDA):	See declared distances.
Advisory Circular:	External publications issued by the FAA consisting of non-regulatory material providing for the recommendations relative to a policy, guidance and information relative to a specific aviation subject.
Air Carrier:	An operator which: (1) performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of the week, and places between which such flights are performed; or (2) transports mail by air pursuant to a current contract with the U.S. Postal Service. Certified in accordance with Federal Aviation Regulation (FAR) Parts 121 and 127.
Air Route Traffic Control Center (ARTCC):	A facility established to provide air traffic control service to aircraft operating on an IFR flight plan within controlled airspace and principally during the enroute phase of flight.
Air Taxi:	An air carrier certificated in accordance with FAR Part 121 and FAR Part 135 and authorized to provide, on demand, public transportation of persons and property by aircraft. Generally operates small aircraft "for hire" for specific trips.
Air Traffic Control:	A service operated by an appropriate organization for the purpose of providing for the safe, orderly, and expeditious flow of air traffic.
Air Traffic Control System Command Center:	A facility operated by the FAA which is responsible for the central flow control, the central altitude reservation system, the airport reservation position system, and the air traffic service contingency command for the air traffic control system.
Air Traffic Hub:	A categorization of commercial service airports or group of commercial service airports in a metropolitan or urban area based upon the proportion of annual national enplanements existing at the airport or airports. The categories are large hub, medium hub, small hub, or non-hub. It forms the basis for the apportionment of entitlement funds.
Air Transport Association Of America:	An organization consisting of the principal U.S. airlines that represents the interests of the airline industry on major aviation issues before federal, state, and local government bodies. It promotes air transportation safety by coordinating industry and governmental safety programs and it serves as a focal point for industry efforts to standardize practices and enhance the efficiency of the air transportation system.
Aircraft:	A transportation vehicle that is used or intended for use for flight.
Aircraft Approach Category:	A grouping of aircraft based on 1.3 times the stall speed in their landing configuration at their maximum certificated landing weight. The categories are as follows: • Category A: Speed less than 91 knots. • Category B: Speed 91 knots or more, but less than 121 knots. • Category C: Speed 121 knots or more, but less than 141 knots.

- **Category D:** Speed 141 knots or more, but less than 166 knots.
- **Category E:** Speed greater than 166 knots

Aircraft Operation: The landing, takeoff, or touch-and-go procedure by an aircraft on a runway at an airport.

Aircraft Operations Area (AOA): A restricted and secure area on the airport property designed to protect all aspects related to aircraft operations.

Aircraft Owners And Pilots Association: A private organization serving the interests and needs of general aviation pilots and aircraft owners.

Aircraft Rescue And Fire Fighting: A facility located at an airport that provides emergency vehicles, extinguishing agents, and personnel responsible for minimizing the impacts of an aircraft accident or incident.

Airfield: The portion of an airport which contains the facilities necessary for the operation of aircraft.

Airline Hub: An airport at which an airline concentrates a significant portion of its activity and which often has a significant amount of connecting traffic.

Airplane Design Group (ADG): A grouping of aircraft based upon wingspan. The groups are as follows:

- **Group I:** Up to but not including 49 feet.
- **Group II:** 49 feet up to but not including 79 feet.
- **Group III:** 79 feet up to but not including 118 feet.
- **Group IV:** 118 feet up to but not including 171 feet.
- **Group V:** 171 feet up to but not including 214 feet.
- **Group VI:** 214 feet or greater.

Airport Authority: A quasi-governmental public organization responsible for setting the policies governing the management and operation of an airport or system of airports under its jurisdiction.

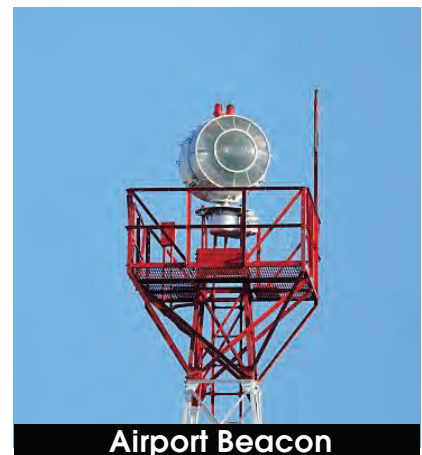
Airport Beacon: A navigational aid located at an airport which displays a rotating light beam to identify whether an airport is lighted.

Airport Capital Improvement Plan: The planning program used by the Federal Aviation Administration to identify, prioritize, and distribute funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.

Airport Elevation: The highest point on the runway system at an airport expressed in feet above mean sea level (MSL).

Airport Improvement Program: A program authorized by the Airport and Airway Improvement Act of 1982 that provides funding for airport planning and development.

Airport Layout Drawing (ALD): The drawing of the airport showing the layout of existing and proposed airport facilities.



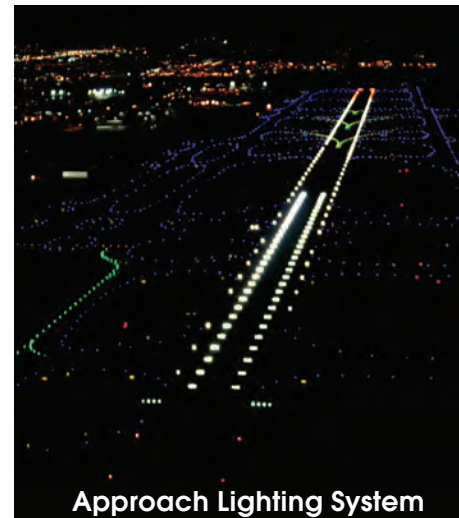
Airport Beacon

Airport Layout Plan (ALP):	A scaled drawing of the existing and planned land and facilities necessary for the operation and development of the airport.
Airport Layout Plan Drawing Set:	A set of technical drawings depicting the current and future airport conditions. The individual sheets comprising the set can vary with the complexities of the airport, but the FAA-required drawings include the Airport Layout Plan (sometimes referred to as the Airport Layout Drawing (ALD)), the Airport Airspace Drawing, and the Inner Portion of the Approach Surface Drawing, On-Airport Land Use Drawing, and Property Map.
Airport Master Plan:	A local planning document that serves as a guide for the long-term development of an airport.
Airport Movement Area Safety System:	A system that provides automated alerts and warnings of potential runway incursions or other hazardous aircraft movement events.
Airport Obstruction Chart:	A scaled drawing depicting the Federal Aviation Regulation (FAR) Part 77 surfaces, a representation of objects that penetrate these surfaces, runway, taxiway, and ramp areas, navigational aids, buildings, roads and other detail in the vicinity of an airport.
Airport Reference Code (ARC):	A coding system used to relate airport design criteria to the operational (Aircraft Approach Category) to the physical characteristics (Airplane Design Group) of the airplanes intended to operate at the airport.
Airport Reference Point (ARP):	The latitude and longitude of the approximate center of the airport.
Airport Sponsor:	The entity that is legally responsible for the management and operation of an airport, including the fulfillment of the requirements of laws and regulations related thereto.
Airport Surface Detection Equipment:	A radar system that provides air traffic controllers with a visual representation of the movement of aircraft and other vehicles on the ground on the airfield at an airport.
Airport Surveillance Radar:	The primary radar located at an airport or in an air traffic control terminal area that receives a signal at an antenna and transmits the signal to air traffic control display equipment defining the location of aircraft in the air. The signal provides only the azimuth and range of aircraft from the location of the antenna.
Airport Traffic Control Tower (ATCT):	A central operations facility in the terminal air traffic control system, consisting of a tower, including an associated instrument flight rule (IFR) room if radar equipped, using air/ground communications and/or radar, visual signaling and other devices to provide safe and expeditious movement of terminal air traffic.
Airside:	The portion of an airport that contains the facilities necessary for the operation of aircraft.
Airspace:	The volume of space above the surface of the ground that is provided for the operation of aircraft.
Alert Area:	See special-use airspace.
Altitude:	The vertical distance measured in feet above mean sea level.
Annual Instrument Approach (AIA):	An approach to an airport with the intent to land by an aircraft in accordance with an IFR flight plan when visibility is less than three miles and/or when the ceiling is at or below the minimum initial approach altitude.

Approach Lighting System (ALS): An airport lighting facility which provides visual guidance to landing aircraft by radiating light beams by which the pilot aligns the aircraft with the extended centerline of the runway on final approach and landing.

Approach Minimums: The altitude below which an aircraft may not descend while on an IFR approach unless the pilot has the runway in sight.

Approach Surface: An imaginary obstruction limiting surface defined in FAR Part 77 which is longitudinally centered on an extended runway centerline and extends outward and upward from the primary surface at each end of a runway at a designated slope and distance based upon the type of available or planned approach by aircraft to a runway.



Apron: A specified portion of the airfield used for passenger, cargo or freight loading and unloading, aircraft parking, and the refueling, maintenance and servicing of aircraft.

Area Navigation: The air navigation procedure that provides the capability to establish and maintain a flight path on an arbitrary course that remains within the coverage area of navigational sources being used.

Automated Terminal Information Service (ATIS): The continuous broadcast of recorded non-control information at towered airports. Information typically includes wind speed, direction, and runway in use.

Automated Surface Observation System (ASOS): A reporting system that provides frequent airport ground surface weather observation data through digitized voice broadcasts and printed reports.

Automatic Weather Observation System (AWOS): Equipment used to automatically record weather conditions (i.e., cloud height, visibility, wind speed and direction, temperature, dew point, etc.)

Automatic Direction Finder (ADF): An aircraft radio navigation system which senses and indicates the direction to a non-directional radio beacon (NDB) ground transmitter.

Avigation Easement: A contractual right or a property interest in land over which a right of unobstructed flight in the airspace is established.

Azimuth: Horizontal direction expressed as the angular distance between true north and the direction of a fixed point (as the observer's heading).

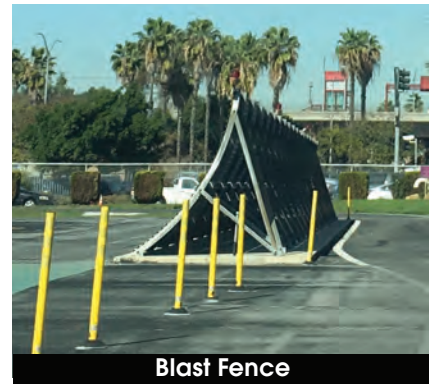
B

Base Leg: A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline. See "traffic pattern."

Based Aircraft: The general aviation aircraft that use a specific airport as a home base.

Bearing: The horizontal direction to or from any point, usually measured clockwise from true north or magnetic north.

Blast Fence:	A barrier used to divert or dissipate jet blast or propeller wash.
Blast Pad:	A prepared surface adjacent to the end of a runway for the purpose of eliminating the erosion of the ground surface by the wind forces produced by airplanes at the initiation of takeoff operations.
Building Restriction Line (BRL):	A line which identifies suitable building area locations on the airport.



Blast Fence

C

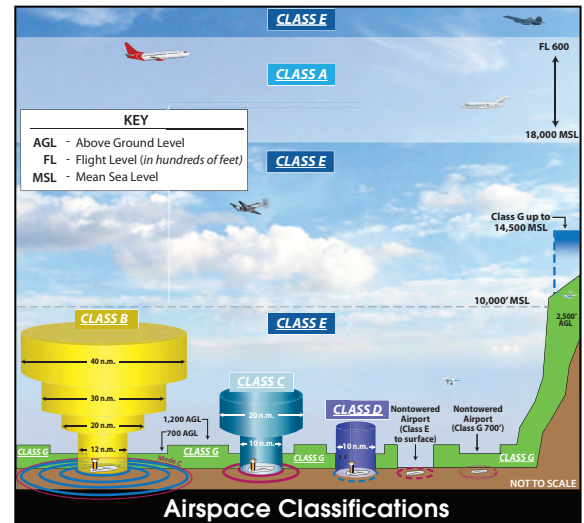
Capital Improvement Plan:	The planning program used by the Federal Aviation Administration to identify, prioritize, and distribute Airport Improvement Program funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.
Cargo Service Airport:	An airport served by aircraft providing air transportation of property only, including mail, with an annual aggregate landed weight of at least 100,000,000 pounds.
Ceiling:	The height above the ground surface to the location of the lowest layer of clouds which is reported as either broken or overcast.
Circling Approach:	A maneuver initiated by the pilot to align the aircraft with the runway for landing when flying a predetermined circling instrument approach under IFR.
Class A Airspace:	See Controlled Airspace.
Class B Airspace:	See Controlled Airspace.
Class C Airspace:	See Controlled Airspace.
Class D Airspace:	See Controlled Airspace.
Class E Airspace:	See Controlled Airspace.
Class G Airspace:	See Controlled Airspace.
Clear Zone:	See Runway Protection Zone.
Commercial Service Airport:	A public airport providing scheduled passenger service that enplanes at least 2,500 annual passengers.
Common Traffic Advisory Frequency (CTAF):	A radio frequency identified in the appropriate aeronautical chart which is designated for the purpose of transmitting airport advisory information and procedures while operating to or from an uncontrolled airport.
Compass Locator (LOM):	A low power, low/medium frequency radio-beacon installed in conjunction with the instrument landing system at one or two of the marker sites.
Conical Surface:	An imaginary obstruction-limiting surface defined in FAR Part 77 that extends from the edge of the horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
Controlled Airport:	An airport that has an operating airport traffic control tower.

Controlled Airspace:

Airspace of defined dimensions within which air traffic control services are provided to instrument flight rules (IFR) and visual flight rules (VFR) flights in accordance with the airspace classification. Controlled airspace in the United States is designated as follows:

CLASS A: Generally, the airspace from 18,000 feet mean sea level (MSL) up to but not including flight level FL600. All persons must operate their aircraft under IFR.

CLASS B: Generally, the airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports. The configuration of Class B airspace is unique to each airport, but typically consists of two or more layers of air space and is designed to contain all published instrument approach procedures to the airport. An air traffic control clearance is required for all aircraft to operate in the area.



CLASS C: Generally, the airspace from the surface to 4,000 feet above the airport elevation (charted as MSL) surrounding those airports that have an operational control tower and radar approach control and are served by a qualifying number of IFR operations or passenger enplanements. Although individually tailored for each airport, Class C airspace typically consists of a surface area with a five nautical mile (nm) radius and an outer area with a 10 nautical mile radius that extends from 1,200 feet to 4,000 feet above the airport elevation. Two-way radio communication is required for all aircraft.

CLASS D: Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted as MSL) surrounding those airports that have an operational control tower. Class D airspace is individually tailored and configured to encompass published instrument approach procedure. Unless otherwise authorized, all persons must establish two-way radio communication.

CLASS E: Generally, controlled airspace that is not classified as Class A, B, C, or D. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Class E airspace encompasses all Victor Airways. Only aircraft following instrument flight rules are required to establish two-way radio communication with air traffic control.

CLASS G: Generally, that airspace not classified as Class A, B, C, D, or E. Class G airspace is uncontrolled for all aircraft. Class G airspace extends from the surface to the overlying Class E airspace.

Controlled Firing Area:

See special-use airspace.

Crosswind:

A wind that is not parallel to a runway centerline or to the intended flight path of an aircraft.

Crosswind Component:

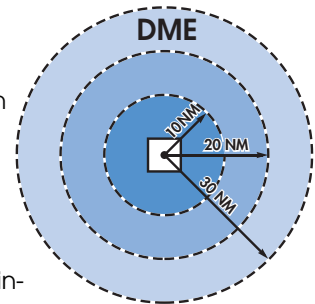
The component of wind that is at a right angle to the runway centerline or the intended flight path of an aircraft.

Crosswind Leg:

A flight path at right angles to the landing runway off its upwind end. See "traffic pattern."

D

- Decibel:** A unit of noise representing a level relative to a reference of a sound pressure 20 micro newtons per square meter.
- Decision Height/Decision Altitude:** The height above the end of the runway surface at which a decision must be made by a pilot during the ILS or Precision Approach Radar approach to either continue the approach or to execute a missed approach.
- Declared Distances:** The distances declared available for the airplane's takeoff runway, takeoff distance, accelerate-stop distance, and landing distance requirements. The distances are:
- **Takeoff Run Available (TORA):** The runway length declared available and suitable for the ground run of an airplane taking off.
 - **Takeoff Distance Available (TODA):** The TORA plus the length of any remaining runway and/or clear way beyond the far end of the TORA.
 - **Accelerate-stop Distance Available (ASDA):** The runway plus stopway length declared available for the acceleration and deceleration of an aircraft aborting a takeoff.
 - **Landing Distance Available (LDA):** The runway length declared available and suitable for landing.
- Department Of Transportation:** The cabinet level federal government organization consisting of modal operating agencies, such as the Federal Aviation Administration, which was established to promote the coordination of federal transportation programs and to act as a focal point for research and development efforts in transportation.
- Discretionary Funds:** Federal grant funds that may be appropriated to an airport based upon designation by the Secretary of Transportation or Congress to meet a specified national priority such as enhancing capacity, safety, and security, or mitigating noise.
- Displaced Threshold:** A threshold that is located at a point on the runway other than the designated beginning of the runway.
- Distance Measuring Equipment (DME):** Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.
- DNL:** The 24-hour average sound level, in decibels, obtained after the addition of ten decibels to sound levels for the periods between 10 p.m. and 7 a.m. as averaged over a span of one year. It is the FAA standard metric for determining the cumulative exposure of individuals to noise.
- Downwind Leg:** A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg. Also see "traffic pattern."



E

- Easement:** The legal right of one party to use a portion of the total rights in real estate owned by another party. This may include the right of passage over, on, or below the property; certain air rights above the property, including view rights; and the rights to any

	specified form of development or activity, as well as any other legal rights in the property that may be specified in the easement document.
Elevation:	The vertical distance measured in feet above mean sea level.
Enplaned Passengers:	The total number of revenue passengers boarding aircraft, including originating, stop-over, and transfer passengers, in scheduled and nonscheduled services.
Enplanement:	The boarding of a passenger, cargo, freight, or mail on an aircraft at an airport.
Entitlement:	Federal funds for which a commercial service airport may be eligible based upon its annual passenger enplanements.
Environmental Assessment (EA):	An environmental analysis performed pursuant to the National Environmental Policy Act to determine whether an action would significantly affect the environment and thus require a more detailed environmental impact statement.
Environmental Audit:	An assessment of the current status of a party's compliance with applicable environmental requirements of a party's environmental compliance policies, practices, and controls.
Environmental Impact Statement (EIS):	A document required of federal agencies by the National Environmental Policy Act for major projects or legislative proposals affecting the environment. It is a tool for decision-making describing the positive and negative effects of a proposed action and citing alternative actions.
Essential Air Service:	A federal program which guarantees air carrier service to selected small cities by providing subsidies as needed to prevent these cities from such service.

F

Federal Aviation Regulations:	The general and permanent rules established by the executive departments and agencies of the Federal Government for aviation, which are published in the Federal Register. These are the aviation subset of the Code of Federal Regulations.
Federal Inspection Services:	The provision of customs and immigration services including passport inspection, inspection of baggage, the collection of duties on certain imported items, and the inspections for agricultural products, illegal drugs, or other restricted items.
Final Approach:	A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. See "traffic pattern."
Final Approach and Takeoff Area (FATO):	A defined area over which the final phase of the helicopter approach to a hover, or a landing is completed and from which the takeoff is initiated.
Final Approach Fix:	The designated point at which the final approach segment for an aircraft landing on a runway begins for a non-precision approach.
Finding Of No Significant Impact (FONSI):	A public document prepared by a Federal agency that presents the rationale why a proposed action will not have a significant effect on the environment and for which an environmental impact statement will not be prepared.
Fixed Base Operator (FBO):	A provider of services to users of an airport. Such services include, but are not limited to, hangaring, fueling, flight training, repair, and maintenance.
Flight Level:	A measure of altitude used by aircraft flying above 18,000 feet. Flight levels are indicated by three digits representing the pressure altitude in hundreds of feet. An airplane flying at flight level 360 is flying at a pressure altitude of 36,000 feet. This is expressed as FL 360.

Flight Service Station (FSS):	An operations facility in the national flight advisory system which utilizes data interchange facilities for the collection and dissemination of Notices to Airmen, weather, and administrative data and which provides preflight and in-flight advisory services to pilots through air and ground based communication facilities.
Frangible Navaid:	A navigational aid which retains its structural integrity and stiffness up to a designated maximum load, but on impact from a greater load, breaks, distorts, or yields in such a manner as to present the minimum hazard to aircraft.

G

General Aviation:	That portion of civil aviation which encompasses all facets of aviation except air carriers holding a certificate of convenience and necessity, and large aircraft commercial operators.
General Aviation Airport:	An airport that provides air service to only general aviation.
Glideslope (GS):	Provides vertical guidance for aircraft during approach and landing. The glideslope consists of the following: • Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS; or • Visual ground aids, such as PAPI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.
Global Positioning System (GPS):	A system of satellites used as reference points to enable navigators equipped with GPS receivers to determine their latitude, longitude, and altitude.
Ground Access:	The transportation system on and around the airport that provides access to and from the airport by ground transportation vehicles for passengers, employees, cargo, freight, and airport services.
Ground Based Augmentation System (GBAS):	A program that augments the existing GPS system by providing corrections to aircraft in the vicinity of an airport in order to improve the accuracy of these aircrafts' GPS navigational position

H

Helipad:	A designated area for the takeoff, landing, and parking of helicopters.
High Intensity Runway Lights (HIRL):	The highest classification in terms of intensity or brightness for lights designated for use in delineating the sides of a runway.
High-speed Exit Taxiway:	An acute-angled exit taxiway forming a 30 degree angle with the runway centerline, designed to allow an aircraft to exit a runway without having to decelerate to typical taxi speed.
Horizontal Surface:	An imaginary obstruction-limiting surface defined in FAR Part 77 that is specified as a portion of a horizontal plane surrounding a runway located 150 feet above the established airport elevation. The specific horizontal dimensions of this surface are a function of the types of approaches existing or planned for the runway.
Hot Spot:	A location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.

Initial Approach Fix: The designated point at which the initial approach segment begins for an instrument approach to a runway.

Instrument Approach Procedure: A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

Instrument Flight Rules (IFR): Procedures for the conduct of flight in weather conditions below Visual Flight Rules weather minimums. The term IFR is often also used to define weather conditions **and the type of flight plan under which an aircraft is operating.**

Instrument Landing System (ILS): A precision instrument approach system which normally consists of the following electronic components and visual aids:

- | | | |
|----------------|------------------|--------------------|
| 1. Localizer | 3. Outer Marker | 5. Approach Lights |
| 2. Glide Slope | 4. Middle Marker | |

Instrument Meteorological Conditions: Meteorological conditions expressed in terms of specific visibility and ceiling conditions that are less than the minimums specified for visual meteorological conditions.

Itinerant Operations: Operations by aircraft that are arriving from outside the traffic pattern or departing the airport traffic pattern.

K

Knots: A unit of speed length used in navigation that is equivalent to the number of nautical miles traveled in one hour.

L

Landside: The portion of an airport that provides the facilities necessary for the processing of passengers, cargo, freight, and ground transportation vehicles.

Landing Distance Available (LDA): See declared distances.

Large Airplane: An airplane that has a maximum certified takeoff weight in excess of 12,500 pounds.

Local Operations: Aircraft operations performed by aircraft that operate in the local traffic pattern or within sight of the airport, that are known to be departing for or arriving from flights in local practice areas within a prescribed distance from the airport, or that execute simulated instrument approaches at the airport. Typically, this includes touch and-go training operations.

Localizer: The component of an ILS which provides course guidance to the runway.

Localizer Type Directional Aid (LDA): A facility of comparable utility and accuracy to a localizer but is not part of a complete ILS and is not aligned with the runway.



Localizer

Low Intensity Runway Lights: The lowest classification in terms of intensity or brightness for lights designated for use in delineating the sides of a runway.

M

Medium Intensity Runway Lights: The middle classification in terms of intensity or brightness for lights designated for use in delineating the sides of a runway.

Military Operations: Aircraft operations that are performed in military aircraft.

Military Operations Area (MOA): See special-use airspace

Military Training Route: An air route depicted on aeronautical charts for the conduct of military flight training at speeds above 250 knots.

Missed Approach Course (MAC): The flight route to be followed if, after an instrument approach, a landing is not affected, and occurring normally:

- When the aircraft has descended to the decision height and has not established visual contact; or
- When directed by air traffic control to pull up or to go around again.

Movement Area: The runways, taxiways, and other areas of an airport which are utilized for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports with a tower, air traffic control clearance is required for entry onto the movement area.

N

National Airspace System (NAS): The network of air traffic control facilities, air traffic control areas, and navigational facilities through the U.S.

National Plan Of Integrated Airport Systems (NPIAS): The national airport system plan developed by the Secretary of Transportation on a biannual basis for the development of public use airports to meet national air transportation needs.

National Transportation Safety Board: A federal government organization established to investigate and determine the probable cause of transportation accidents, to recommend equipment and procedures to enhance transportation safety, and to review on appeal the suspension or revocation of any certificates or licenses issued by the Secretary of Transportation.

Nautical Mile: A unit of length used in navigation which is equivalent to the distance spanned by one minute of arc in latitude, that is, 1,852 meters or 6,076 feet. It is equivalent to approximately 1.15 statute mile.

Navaid: A term used to describe any electrical or visual air navigational aids, lights, signs, and associated supporting equipment (i.e., PAPI, VASI, ILS, etc.)

Navigational Aid: A facility used as, available for use as, or designed for use as an aid to air navigation.

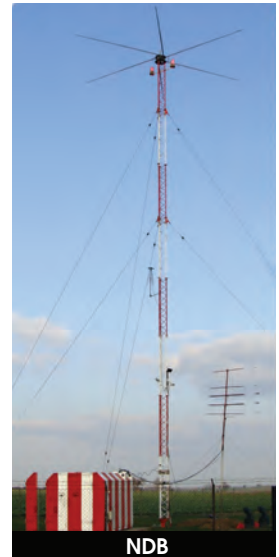
Noise Contour: A continuous line on a map of the airport vicinity connecting all points of the same noise exposure level.

Non-directional Beacon (NDB): A beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine their bearing to and from the radio beacon and home on, or track to, the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.

Non-precision Approach Procedure:

A standard instrument approach procedure in which no electronic glide slope is provided, such as VOR, TACAN, NDB, or LOC.

Notice To Air Missions (NOTAM): A notice containing information concerning the establishment, condition, or change in any component of or hazard in the National Airspace System, the timely knowledge of which is considered essential to personnel concerned with flight operations.



O

Object Free Area (OFA): An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

Obstacle Free Zone (OFZ): The airspace below 150 feet above the established airport elevation and along the runway and extended runway centerline that is required to be kept clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance for aircraft landing or taking off from the runway, and for missed approaches.

Operation: The take-off, landing, or touch-and-go procedure by an aircraft on a runway at an airport.

Outer Marker (OM): An ILS navigation facility in the terminal area navigation system located four to seven miles from the runway edge on the extended centerline, indicating to the pilot that he/she is passing over the facility and can begin final approach.

P

Pilot-controlled Lighting: Runway lighting systems at an airport that are controlled by activating the microphone of a pilot on a specified radio frequency.

Precision Approach: A standard instrument approach procedure which provides runway alignment and glide slope (descent) information. It is categorized as follows:

- **CATEGORY I (CAT I):** A precision approach which provides for approaches with a decision height of not less than 200 feet and visibility not less than 1/2 mile or Runway Visual Range (RVR) 2400 (RVR 1800) with operative touchdown zone and runway centerline lights.
- **CATEGORY II (CAT II):** A precision approach which provides for approaches with a decision height of not less than 100 feet and visibility not less than 1200 feet RVR.
- **CATEGORY III (CAT III):** A precision approach which provides for approaches with minimal less than Category II.

Precision Approach Path Indicator (PAPI):

A lighting system providing visual approach slope guidance to aircraft during a landing approach. A PAPI normally consists of four light units but an abbreviated system of two lights is acceptable for some categories of aircraft.

Precision Approach Radar:

A radar facility in the terminal air traffic control system used to detect and display with a high degree of accuracy the direction, range, and elevation of an aircraft on the final approach to a runway.



Precision Approach Path Indicator

Precision Object Free Zone (POFZ):

An area centered on the extended runway centerline, beginning at the runway threshold and extending behind the runway threshold that is 200 feet long by 800 feet wide. The POFZ is a clearing standard which requires the POFZ to be kept clear of above ground objects protruding above the runway safety area edge elevation (except for frangible NAVAIDS). The POFZ is only in effect when the approach includes vertical guidance, the reported ceiling is below 250 feet, and an aircraft is on final approach within two miles of the runway threshold.

Primary Airport:

A commercial service airport that enplanes at least 10,000 annual passengers.

Primary Surface:

An imaginary obstruction limiting surface defined in FAR Part 77 that is specified as a rectangular surface longitudinally centered about a runway. The specific dimensions of this surface are a function of the types of approaches existing or planned for the runway.

Prohibited Area:

See special-use airspace.

PVC:

Poor visibility and ceiling. Used in determining Annual Service Volume. PVC conditions exist when the cloud ceiling is less than 500 feet and visibility is less than one mile.

R

Radial:

A navigational signal generated by a Very High Frequency Omni-directional Range or VORTAC station that is measured as an azimuth from the station.

Regression Analysis:

A statistical technique that seeks to identify and quantify the relationships between factors associated with a forecast.

Remote Communications Outlet (RCO):

An unstaffed transmitter receiver/facility remotely controlled by air traffic personnel. RCOs serve flight service stations (FSSs). RCOs were established to provide ground-to-ground communications between air traffic control specialists and pilots at satellite airports for delivering enroute clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times.

Remote Transmitter/receiver (RTR):

See remote communications outlet. RTRs serve ARTCCs.

Reliever Airport:

An airport to serve general aviation aircraft which might otherwise use a congested air-carrier served airport.

Restricted Area:

See special-use airspace.

RNAV:

Area navigation - airborne equipment which permits flights over determined tracks within prescribed accuracy tolerances without the need to overfly ground-based navigation facilities. Used enroute and for approaches to an airport.

Runway:	A defined rectangular area on an airport prepared for aircraft landing and takeoff. Runways are normally numbered in relation to their magnetic direction, rounded off to the nearest 10 degrees. For example, a runway with a magnetic heading of 180 would be designated Runway 18. The runway heading on the opposite end of the runway is 180 degrees from that runway end. For example, the opposite runway heading for Runway 18 would be Runway 36 (magnetic heading of 360). Aircraft can takeoff or land from either end of a runway, depending upon wind direction.
Runway Alignment Indicator Light (RAIL):	A series of high intensity sequentially flashing lights installed on the extended centerline of the runway usually in conjunction with an approach lighting system.
Runway Design Code:	A code signifying the FAA design standards to which the runway is to be built.
Runway End Identification Lighting (REIL):	Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.
Runway Gradient:	The average slope, measured in percent, between the two ends of a runway.
Runway Protection Zone (RPZ):	An area off the runway end to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape. Its dimensions are determined by the aircraft approach speed and runway approach type and minimal.
Runway Reference Code:	A code signifying the current operational capabilities of a runway and taxiway.
Runway Safety Area (RSA):	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.
Runway Visibility Zone (RVZ):	An area on the airport to be kept clear of permanent objects so that there is an unobstructed line of sight from any point five feet above the runway centerline to any point five feet above an intersecting runway centerline.
Runway Visual Range (RVR):	An instrumentally derived value, in feet, representing the horizontal distance a pilot can see down the runway from the runway end.



REIL

S

Scope:	The document that identifies and defines the tasks, emphasis, and level of effort associated with a project or study.
Segmented Circle:	A system of visual indicators designed to provide traffic pattern information at airports without operating control towers, often co-located with a wind cone.
Shoulder:	An area adjacent to the edge of paved runways, taxiways, or aprons providing a transition between the pavement and the adjacent surface; support for aircraft running off the pavement; enhanced drainage; and blast protection. The shoulder Does Not Necessarily Need To Be Paved.
Slant-range Distance:	The straight line distance between an aircraft and a point on the ground.

Small Aircraft:	An aircraft that has a maximum certified takeoff weight of up to 12,500 pounds.
Special-use Airspace:	Airspace of defined dimensions identified by a surface area wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities. Special-use airspace classifications include: • ALERT AREA: Airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft. • CONTROLLED FIRING AREA: Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons or property on the ground. • MILITARY OPERATIONS AREA (MOA): Designated airspace with defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from instrument flight rule (IFR) traffic and to identify for visual flight rule (VFR) traffic where these activities are conducted. • PROHIBITED AREA: Designated airspace within which the flight of aircraft is prohibited. • RESTRICTED AREA: Airspace designated under Federal Aviation Regulation (FAR) 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use. When not in use by the using agency, IFR/VFR operations can be authorized by the controlling air traffic control facility. • WARNING AREA: Airspace which may contain hazards to nonparticipating aircraft.
Standard Instrument Departure (SID):	A preplanned coded air traffic control IFR departure routing, preprinted for pilot use in graphic and textual form only.
Standard Instrument Departure Procedures:	A published standard flight procedure to be utilized following takeoff to provide a transition between the airport and the terminal area or enroute airspace.
Standard Terminal Arrival Route (STAR):	A preplanned coded air traffic control IFR arrival routing, preprinted for pilot use in graphic and textual or textual form only.
Stop-and-go:	A procedure wherein an aircraft will land, make a complete stop on the runway, and then commence a takeoff from that point. A stop-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.
Stopway:	An area beyond the end of a takeoff runway that is designed to support an aircraft during an aborted takeoff without causing structural damage to the aircraft. It is not to be used for takeoff, landing, or taxiing by aircraft.
Straight-in Landing/approach:	A landing made on a runway aligned within 30 degrees of the final approach course following completion of an instrument approach.

T

Tactical Air Navigation (TACAN):

An ultrahigh frequency electronic air navigation system which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station.

Takeoff Runway Available (TORA):

See declared distances.

Takeoff Distance Available (TODA):

See declared distances.

Taxilane:

A taxiway designed for low speed and precise taxiing. Taxilanes are usually, but not always, located outside the movement area and provide access to from taxiways to aircraft parking positions and other terminal areas.

Taxiway:

A defined path established for the taxiing of aircraft from one part of an airport to another.

Taxiway Design Group:

A classification of airplanes based on outer to outer Main Gear Width (MGW) and Cockpit to Main Gear (CMG) distance.

Taxiway Safety Area (TSA):

A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

Terminal Instrument Procedures: Published flight procedures for conducting instrument approaches to runways under instrument meteorological conditions.

Terminal Radar Approach Control:

An element of the air traffic control system responsible for monitoring the enroute and terminal segment of air traffic in the airspace surrounding airports with moderate to high levels of air traffic.

Tetrahedron:

A device used as a landing direction indicator. The small end of the tetrahedron points in the direction of landing.

Threshold:

The beginning of that portion of the runway available for landing. In some instances, the threshold may be displaced.

Touch-and-go:

An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway. A touch-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

Touchdown:

The point at which a landing aircraft makes contact with the runway surface.

Touchdown and Lift-off Area (TLOF):

A load bearing, generally paved area, normally centered in the FATO, on which a helicopter lands or takes off.

Touchdown Zone (TDZ):

The first 3,000 feet of the runway beginning at the threshold.

Touchdown Zone Elevation (TDZE):

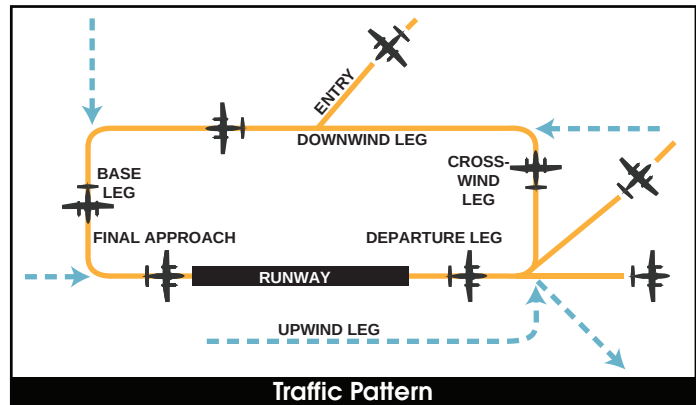
The highest elevation in the touchdown zone.



Tetrahedron

Touchdown Zone Lighting: Two rows of transverse light bars located symmetrically about the runway centerline normally at 100-foot intervals. The basic system extends 3,000 feet along the runway.

Traffic Pattern: The traffic flow that is prescribed for aircraft landing at or taking off from an airport. The components of a typical traffic pattern are the upwind leg, crosswind leg, downwind leg, base leg, and final approach.



U

Uncontrolled Airport: An airport without an airport traffic control tower at which the control of Visual Flight Rules traffic is not exercised.

Uncontrolled Airspace: Airspace within which aircraft are not subject to air traffic control.

Universal Communication (UNICOM): A nongovernment communication facility which may provide airport information at certain airports. Locations and frequencies of UNICOMs are shown on aeronautical charts and publications.

Upwind Leg: A flight path parallel to the landing runway in the direction of landing. See "traffic pattern."

V

Vector: A heading issued to an aircraft to provide navigational guidance by radar.

Very High Frequency/ Omnidirectional Range (VOR): A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the national airspace system. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature.

Very High Frequency Omnidirectional Range/ Tactical Air Navigation (VORTAC): A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance-measuring equipment (DME) at one site.

Victor Airway: A system of established routes that run along specified VOR radials, from one VOR station to another.

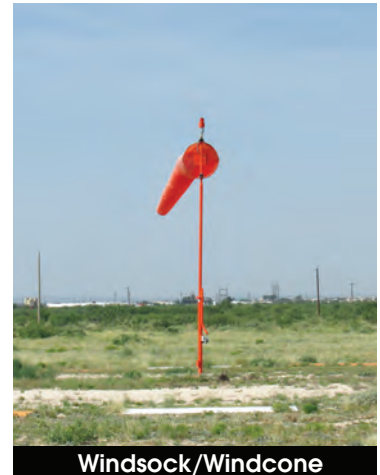
Visual Approach: An approach wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of an air traffic control facility and having an air traffic control authorization, may proceed to the airport of destination in VFR conditions.

Visual Approach Slope Indicator (VASI): An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing. The VASI is now obsolete and is being replaced with the PAPI.

Visual Flight Rules (VFR):	Rules that govern the procedures for conducting flight under visual conditions. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.
Visual Meteorological Conditions:	Meteorological conditions expressed in terms of specific visibility and ceiling conditions which are equal to or greater than the threshold values for instrument meteorological conditions.
Visual Runway:	A runway without an existing or planned instrument approach.
VOR:	See "Very High Frequency Omnidirectional Range Station."
VORTAC:	See "Very High Frequency Omnidirectional Range Station/Tactical Air Navigation."

W

Warning Area:	See special-use airspace.
Wide Area Augmentation System:	An enhancement of the Global Positioning System that includes integrity broadcasts, differential corrections, and additional ranging signals for the purpose of providing the accuracy, integrity, availability, and continuity required to support all phases of flight.
Windsock/Windcone:	A visual aid that indicates the prevailing wind direction and intensity at a particular location.



Windsock/Windcone

Abbreviations

AC:	advisory circular	BRL:	building restriction line
ACIP:	airport capital improvement program	CFR:	Code of Federal Regulation
ADF:	automatic direction finder	CIP:	capital improvement program
ADG:	airplane design group	DME:	distance measuring equipment
AFSS:	automated flight service station	DNL:	day-night noise level
AGL:	above ground level	DPRC:	departure reference code
AIA:	annual instrument approach	DWL:	runway weight bearing capacity of aircraft with dual-wheel type landing gear
AIP:	Airport Improvement Program	DTWL:	runway weight bearing capacity of aircraft with dual-tandem type landing gear
AIR-21:	Wendell H. Ford Aviation Investment and Reform Act for the 21st Century	FAA:	Federal Aviation Administration
ALS:	approach lighting system	FAR:	Federal Aviation Regulation
ALSF-1:	standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT I configuration)	FBO:	fixed base operator
ALSF-2:	standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT II configuration)	FY:	fiscal year
AOA:	Aircraft Operation Area	GA:	general aviation
APRC:	approach reference code	GPS:	global positioning system
APV:	instrument approach procedure with vertical guidance	GS:	glide slope
ARC:	airport reference code	HIRL:	high intensity runway edge lighting
ARFF:	aircraft rescue and fire fighting	IFR:	instrument flight rules (FAR Part 91)
ARP:	airport reference point	ILS:	instrument landing system
ARTCC:	air route traffic control center	IM:	inner marker
ASDA:	accelerate-stop distance available	LDA:	localizer type directional aid
ASR:	airport surveillance radar	LDA:	landing distance available
ASOS:	automated surface observation station	LIRL:	low intensity runway edge lighting
ATC:	airport traffic control	LMM:	compass locator at middle marker
ATCT:	airport traffic control tower	LNAV:	lateral navigation
ATIS:	automated terminal information service	LOC:	localizer
AVGAS:	aviation gasoline - typically 100 low lead (100LL)	LOM:	compass locator at outer marker
AWOS:	automatic weather observation station	LP:	localizer performance
		LPV:	localizer performance with vertical guidance

MALS:	medium intensity approach lighting system	RNAV:	area navigation
MALSR:	MALS with runway alignment indicator lights	RPZ:	runway protection zone
MALSF:	MALS with sequenced flashers	RSA:	runway safety area
MIRL:	medium intensity runway edge lighting	RTR:	remote transmitter/receiver
MITL:	medium intensity taxiway edge lighting	RVR:	runway visibility range
MLS:	microwave landing system	RVZ:	runway visibility zone
MM:	middle marker	SALS:	short approach lighting system
MOA:	military operations area	SASP:	state aviation system plan
MSL:	mean sea level	SEL:	sound exposure level
MTOW:	maximum takeoff weight	SID:	standard instrument departure
NAVAID:	navigational aid	SM:	statute mile (5,280 feet)
NDB:	nondirectional radio beacon	SRE:	snow removal equipment
NEPA:	National Environmental Policy Act	SSALF:	simplified short approach lighting system with runway alignment indicator lights
NM:	nautical mile (6,076.1 feet)	STAR:	standard terminal arrival route
NPDES:	National Pollutant Discharge Elimination System	SWL:	runway weight bearing capacity for aircraft with single-wheel tandem type landing gear
NPIAS:	National Plan of Integrated Airport Systems	TACAN:	tactical air navigational aid
NPRM:	notice of proposed rule making	TAF:	Federal Aviation Administration (FAA) Terminal Area Forecast
ODALS:	omnidirectional approach lighting system	TDG:	taxiway design group
OFA:	object free area	TLOF:	Touchdown and lift-off
OFZ:	obstacle free zone	TDZ:	touchdown zone
OM:	outer marker	TDZE:	touchdown zone elevation
PAPI:	precision approach path indicator	TODA:	takeoff distance available
PFC:	porous friction course	TORA:	takeoff runway available
PFC:	passenger facility charge	TRACON:	terminal radar approach control
PCI:	pavement condition index	VASI:	visual approach slope indicator
PCL:	pilot-controlled lighting	VFR:	visual flight rules (FAR Part 91)
PIW:	public information workshop	VHF:	very high frequency
POFZ:	precision object free zone	VOR:	very high frequency omni-directional range
PVC:	poor visibility and ceiling	VORTAC:	VOR and TACAN collocated
RCO:	remote communications outlet	WAAS:	wide area augmentation system
RDC:	runway design code		
REIL:	runway end identification lighting		

B

Appendix

Forecast Approval





U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports
Phoenix Airports District Office

3800 N. Central Ave
Suite 1025
Phoenix, AZ 85012

August 8, 2024

David Malewitz
City Manager
City of Eloy
595 North C Street
Suite 104
Eloy, Arizona 85131

Dear Mr. Malewitz:

The Federal Aviation Administration (FAA) has reviewed the aviation forecast for the Eloy Municipal Airport (E60), which was provided to our office. The FAA approves this forecast and the use of B-II for the future critical design aircrafts.

The forecast was developed using current data, appropriate methodologies, and is within the acceptable range for TAF tolerance. Therefore it is approved for planning purposes, to include Airport Layout Plan development at E60. It is important to note that the approval of this forecast doesn't guarantee funding for large scale capital improvements as future projects will need to be justified to current activity levels at the time the projects are proposed for implementation.

If you have any questions about this forecast approval, please call me at (602) 792-1074.

Sincerely,

**Kenneth
Paul Hall** Digitally signed by
Kenneth Paul Hall
Date: 2024.08.08
09:54:07 -07'00'

Kenneth Hall
Community Planner

Appendix

Draft Airport Layout Drawing



Appendix C

AIRPORT LAYOUT PLANS

As part of this master plan update, the Federal Aviation Administration (FAA) requires the development of airport layout plan (ALP) drawings that detail specific parts of Eloy Municipal Airport and its environs. The ALP drawings are created on a computer-aided drafting (CAD) system and serve as the official depiction of the current and planned conditions at the airport. The ALP drawings are delivered to the FAA and Arizona Department of Transportation (ADOT) – Aeronautics Group for review. These entities critique the drawings from a technical perspective to ensure all applicable federal regulations are met. Ultimately, it is the responsibility of the FAA to approve the ALP drawing set. The ALP will then be used as the basis for justification for funding decisions.

It should be noted that the FAA requires any changes to the airfield (i.e., runway and taxiway system, navigational aids, etc.) to be presented on the ALP. The landside configuration developed during the master planning process is also depicted on the ALP, but the FAA recognizes that landside development is more fluid and dependent on developer needs; thus, an updated ALP set is typically not necessary for future landside development.

The five primary functions of the ALP that define its purpose are provided in FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, as follows:

1. An approved plan is necessary for the airport to receive financial assistance under the terms of the *Airport and Airway Improvement Act of 1982* (AIP), as amended, and to be able to receive specific Passenger Facility Charge funding. An airport must keep its ALP current and follow that plan because, as required by the grant assurances of the AIP and previous airport development programs, including the Airport Development Aid Program (ADAP) of 1970 and the Federal Aid Airports Program (FAAP) of 1946, as amended. While ALPs are not required for airports other than those developed with assistance under the aforementioned federal programs, the same guidance can be applied to all airports.
2. An ALP creates a blueprint for airport development by depicting proposed facility improvements. The ALP provides a guideline by which the airport sponsor can ensure development maintains airport design standards and safety requirements and is consistent with airport and community land use plans.
3. The ALP is a public document that serves as a record of both present and future aeronautical requirements and as a reference for community deliberations on land use proposals and budget resource planning.
4. The approved ALP enables the airport sponsor and the FAA to plan for facility improvements at the airport and allows the FAA to anticipate budgetary and procedural needs. The approved ALP will also allow the FAA to protect the airspace required for facility or approach procedure improvements.
5. The ALP can be a working tool for the airport sponsor, including its development and maintenance staff.

AIRPORT LAYOUT PLAN SET

The ALP set includes several technical drawings, which depict various aspects of the current and future layout of the airport. The following is a description of the ALP drawings included with this master plan update.

AIRPORT DATA SHEET

The Airport Data Sheet provides existing and future conditions for the airport as they relate to the runways, taxiways, navigational aids, and wind data tabulations.

AIRPORT LAYOUT PLAN DRAWING

An official ALP Drawing has been developed for Eloy Municipal Airport. The ALP Drawing graphically presents the existing and future airport layout. The ALP Drawing includes elements such as the physical airport features, locations of airfield facilities (i.e., runways, taxiways, navigational aids), and existing aviation development. Also presented on the ALP Drawing are the runway safety areas, airport property boundary, and revenue support areas.

The computerized plan provides detailed information regarding existing and future facility layouts on multiple layers that permit the user to focus on any section of the airport at a desired scale. The plan can be used as base information for design and can be easily updated in the future to reflect new development and more detail concerning existing conditions, as made available through design surveys. The ALP Drawing is used by the FAA to determine funding eligibility for future capital projects.

TERMINAL AREA DRAWING

The Terminal Area Drawing is a larger-scale plan view drawing of existing and planned aprons, buildings, hangars, parking lots, and other landside facilities.

AIRSPACE DRAWING

Title 14 Code of Federal Regulations (CFR) Part 77, *Objects Affecting Navigable Airspace*, was established for use by local authorities to control the height of objects near airports. The Part 77 Airspace Drawing is a graphic depiction of this regulatory criterion. The Airspace Drawing is a tool to aid local authorities in determining if proposed development could present a hazard to aircraft using the airport. It can be a critical tool for the airport sponsor's use in reviewing proposed development in the vicinity of the airport and for establishing locally enforceable height and hazard zoning regulations.

The Airspace Drawing assigns three-dimensional imaginary surfaces associated with the airport. These imaginary surfaces emanate from the runway centerline(s) and are dimensioned according to the visibility minimums associated with the approach to the runway end and sizes of aircraft planned to operate on the runway. The Part 77 imaginary surfaces include the primary surface, horizontal surface, approach surface, transitional surface, and conical surface.

Penetrations to the Part 77 surfaces are considered obstructions to the airport airspace. Further analysis by the FAA (through an aeronautical survey) is necessary to determine if any obstructions are hazards to air navigation. It should be noted that the Part 77 drawings are based on future planning recommendations and not necessarily existing conditions.

APPROACH SURFACE PROFILE DRAWINGS

The Approach Surface Profile Drawings present the entirety of the Part 77 approach surface to the end of each runway, as well as the runway centerline profile with elevations. These drawings provide profile details that the Airspace Drawings do not.

The Approach Surface Profile Drawings include identified penetrations to the approach surface. Penetrations to the approach surface are considered obstructions. The FAA will determine if any obstructions are also hazards that require mitigation. The FAA utilizes other design criteria, such as the threshold siting surface (TSS) and various surfaces defined in FAA Order 8260.3B, *Terminal Instrument Procedures* (TERPS), to determine if an obstruction is a hazard.

If an obstruction is a hazard, the FAA can take various steps to protect airspace navigation. Some mitigation options include removal of the hazard by the airport owner, installation of obstruction lighting, or adjustment of the instrument approach minimums by the FAA.

The drawing set includes the following approach surface drawings:

- Approach profile drawings for each runway end
- Inner portion of the approach surface drawings for each runway end

LAND USE DRAWING

The objective of the Land Use Drawing is to coordinate uses of the airport property in a manner that is compatible with the functional design of the airport facility. Airport land use planning is important for orderly development and efficient use of available space. There are two primary considerations for airport land use planning: to secure areas that are essential to the safe and efficient operation of the airport and to determine compatible land uses for the balance of the property that would be most advantageous to the airport and community. In essence, this drawing depicts the suggested highest and best potential uses for airport property.

The Land Use Drawing presents general proposed uses of property for the future. The on-airport land uses on this drawing become the official FAA acceptance of current and future land uses. The map also depicts the existing and future noise exposure limits.

EXHIBIT 'A' AIRPORT PROPERTY INVENTORY MAP

The Airport Property Inventory Map provides information regarding property under airport control and is subject to FAA grant assurances. The various recorded deeds that comprise the airport property are listed in tabular format. The primary purpose of the drawing is to provide information for analyzing the current and future aeronautical use of land acquired with federal funds.

DEPARTURE SURFACE DRAWING

The Departure Surface Drawing provides detailed analysis of the existing and future departure surface for each corresponding runway end. A composite profile of the extended ground line is depicted. Obstructions are shown where appropriate.

APPROVED ALP

The preparation of the ALP set has been supported, in part, through financial assistance from the FAA through the Airport Improvement Program (AIP). The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of the master plan update does not in any way constitute a commitment on the part of the FAA to participate in any development depicted on the ALP drawings, nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws.

Airport Layout Plan

For The

Eloy Municipal Airport

Eloy, Arizona

Prepared for The City of Eloy

Location Map



Vicinity Map



Drawing Index

1. Title Sheet
2. Airport Data Sheet
3. Airport Layout Plan Drawing
4. Airport Airspace Drawing
5. Approach Profile Drawing
6. Inner-Approach Profile Drawing - Runway 2
7. Inner-Approach Profile Drawing - Runway 20
8. Departure Surface Drawing - Runway 2/20
9. Terminal Area Drawing
10. Airport Land Use Drawing
11. Exhibit "A" Airport Property Inventory Map

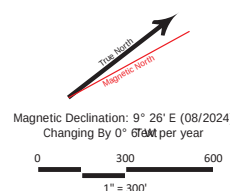
County Map



					Eloy Municipal Airport		DRAFT
					Title Sheet		
					Eloy, Arizona		
No.	Revisions	Date	By	App'd	Planned By: T. Stuber		
					Detailed By: C. Donnelly		
					Approved By: M. Quick		
					December 2024		
					Sheet	1	Of 11

Coffman Associates
Airport Consultants

The preparation of these documents was financed in part through a planning grant from the Federal Aviation Administration as provided under Section 505 of The Airport and Airway Improvement Act of 1982, as amended. The contents of these documents by the FAA does not in any way constitute a commitment of the part of The United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with the appropriate public laws.

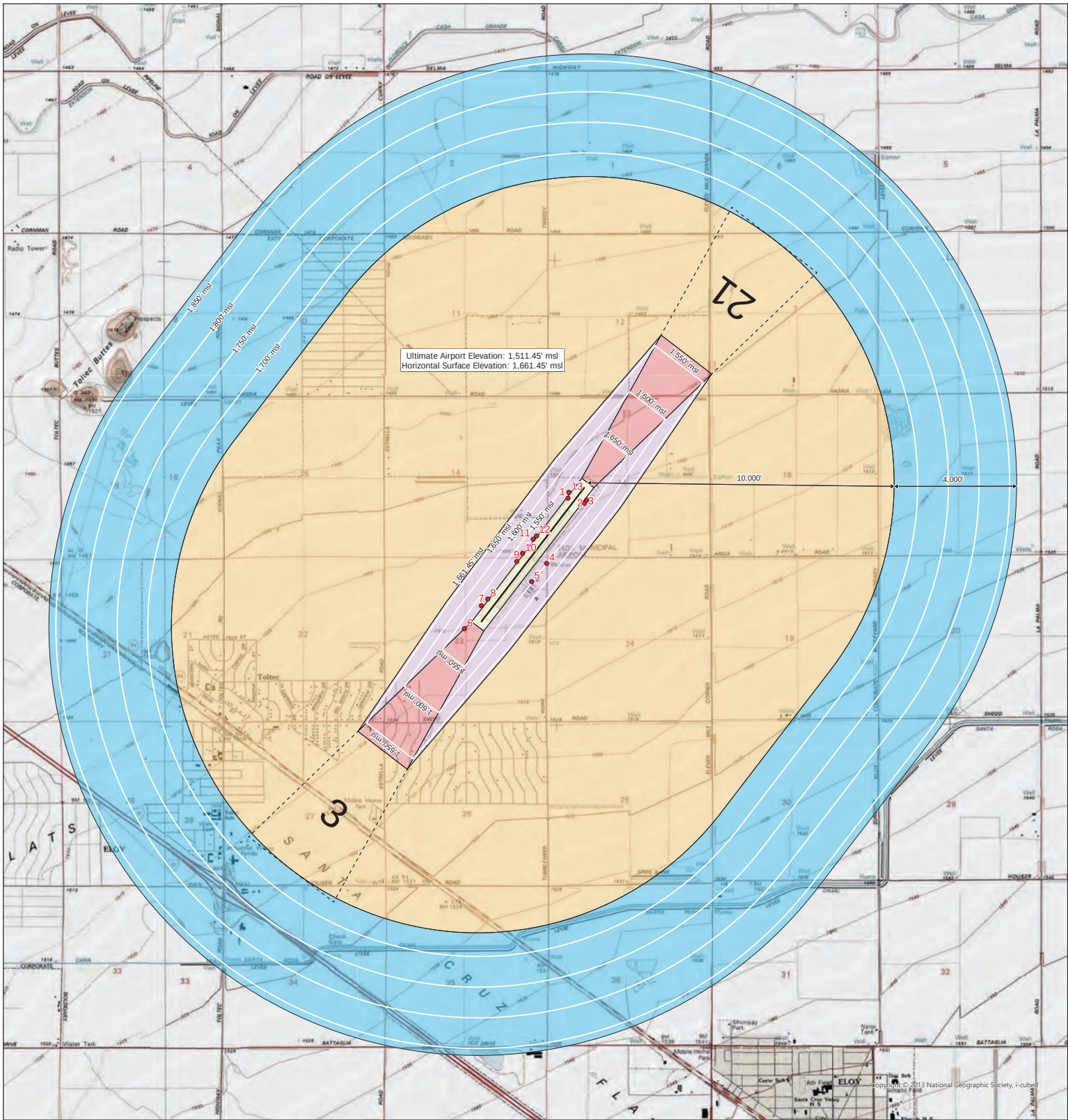


Ultimate Structures		
ID	Feature	Top Elevation (ft. msl)*
100	100LL/Jet A Fuel Farm	1,519.00
101	100' x 150' Hangar	1,535.00
102	80' x 80' Executive Box Hangar	1,530.00
103	80' x 80' Executive Box Hangar	1,530.00
104	80' x 80' Executive Box Hangar	1,530.00
105	100' x 100' Conventional Hangar	1,535.00
106	50' x 50' Executive Box Hangar	1,525.00
107	50' x 50' Executive Box Hangar	1,525.00
108	50' x 50' Executive Box Hangar	1,525.00
109	50' x 50' Executive Box Hangar	1,525.00
110	50' x 50' Executive Box Hangar	1,525.00
111	8-Unit T-Hangar	1,523.00
112	6-Unit T-Hangar	1,523.00
113	6-Unit T-Hangar	1,523.00
114	6-Unit T-Hangar	1,523.00
115	6-Unit T-Hangar	1,523.00
116	100' x 200' Conventional Hangar	1,526.00
117	REILS	1,508.00
118	PAPI-4	1,504.00
119	AWOS	1,521.00
120	Segmented Circle/Wind Cone	1,532.00
121	PAPI-4	1,510.00
122	REILS	1,514.00

- | | |
|---|--|
| <p>SIGNATURES</p> <p>FEDERAL AVIATION ADMINISTRATION
 Western-Pacific Region</p> <p><i>Approved - Subject to Conditions in the Letter of
 Conditional Approval included in the ALP.</i></p> | |
| <p>_____
 Manager, Phoenix
 Airports District Office</p> | |
| <p>SPONSOR APPROVAL</p> | |
| <p>_____
 David Malmwitz, City Manager
 City of Elav</p> | |

No.	Revisions	Date	By	App'd	
The preparation of these documents was financed in part through a planning grant from the Federal Aviation Administration as provided under Section 505 of The Airport And Airway Improvement Act Of 1982, as amended. The contents of these documents by the FAA does not in any way constitute a commitment of the part of The United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with the appropriate public laws.					

Eloy Municipal Airport					
Airport Layout Plan Drawing					
Eloy, AZ					
Planned By: T. Stuber					
Detailed By: C. Donnelly					
Approved By: M. Quick					
December 2024	Sheet	3	Of	11	



Part 77 Surface Obstructions												
ID	Feature	Latitude	Longitude	Point Source	ADIP ID#	FAA Study #	Ground Elevation (ft. msl)	AGL (ft.)	Top Elevation	Surface Obstructed	Penetration Value (ft.)	Remediation
1	Vegetation	32° 48' 43.205" N	111° 34' 57.579" W	NV5 Survey	N/A	N/A	No Data	No Data	1,510.64	Primary Surface	3.58	Remove Vegetation
2	Access Road	32° 48' 42.610" N	111° 34' 50.460" W	adip.faa.gov	04-039477	N/A	1,512.00	10.00	1,522.00	Transitional Surface	7.47	To Remain
3	Access Road	32° 48' 41.530" N	111° 34' 51.390" W	adip.faa.gov	04-050215	N/A	1,511.00	10.00	1,521.00	Transitional Surface	5.78	To Remain
4	Airport Beacon	32° 48' 22.150" N	111° 35' 5.814" W	NV5 Survey	04-023669	N/A	1,506.35	57.95	1,564.31	Transitional Surface	14.98	To Remain
5	Tree	32° 48' 16.285" N	111° 35' 11.588" W	NV5 Survey	04-032574	N/A	No Data	No Data	1,551.59	Transitional Surface	5.45	Remove Tree
6	Maya Road	32° 48' 1.163" N	111° 35' 37.360" W	1/3 Arc Second DEM	N/A	N/A	1,510.00	15.00	1,525.00	Transitional Surface	3.79	To Remain
7	Tree	32° 48' 8.570" N	111° 35' 30.870" W	adip.faa.gov	04-038336	N/A	No Data	No Data	1,522.00	Transitional Surface	1.38	Remove Tree
8	Vegetation	32° 48' 10.730" N	111° 35' 28.380" W	NV5 Survey	04-039419	N/A	No Data	No Data	1,521.00	Transitional Surface	5.61	Remove Vegetation
9	Vegetation	32° 48' 22.790" N	111° 35' 17.264" W	NV5 Survey	04-032572	N/A	No Data	No Data	1,518.73	Transitional Surface	5.53	Remove Vegetation
10	Vegetation	32° 48' 25.384" N	111° 35' 15.040" W	NV5 Survey	04-040741	N/A	No Data	No Data	1,516.23	Transitional Surface	1.87	Remove Vegetation
11	Vegetation	32° 48' 30.000" N	111° 35' 10.950" W	NV5 Survey	04-032290	N/A	No Data	No Data	1,516.00	Transitional Surface	0.88	Remove Vegetation
12	Vegetation	32° 48' 31.034" N	111° 35' 9.696" W	NV5 Survey	SCRUB	N/A	No Data	No Data	1,514.62	Transitional Surface	2.60	Remove Vegetation
13	Access Road	32° 48' 45.090" N	111° 34' 57.260" W	adip.faa.gov	04-040832	N/A	No Data	No Data	1,519.00	Transitional Surface	4.47	To Remain

Obstruction Point

Runway Centerline

Part 77 Sheet Surfaces

Approach

Primary

Transitional

Horizontal

Conical

True North

Magnetic North

Magnetic Declination: 9° 26' E (08/2024)
Changing By 0° 6' W per year

020004000

1" = 2,000'



General Notes:
1. Survey data provided by NV5 (08/13/2023).
2. Eloy North, AZ USGS TopoQuad used as base imagery.
3. Airport Protection height limits are established per the city of Eloy, AZ Code of Ordinances Section 21-2-7.12
Aviation Overlay (AO) Districts. Building heights limitations within the boundaries of the Aviation Overlay District are set forth in the Federal Aviation Regulations (FAR) Part 77
Airspace Plan.
4. Profile view checklist items shown on Sheet 5 of this set.
5. Triggering Event is the ALP Update.

No.	Revisions	Date	By	App'd
The preparation of these documents was financed in part through a planning grant from the Federal Aviation Administration as provided under Section 505 of The Airport And Airway Improvement Act of 1982, as amended. The contents of these documents by the FAA does not in any way constitute a commitment of the part of The United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with the appropriate public laws.				

Eloy Municipal Airport

DRAFT

Airport Airspace Drawing

Eloy, AZ

Planned By: T. Stuber

Detailed By: C. Donnelly

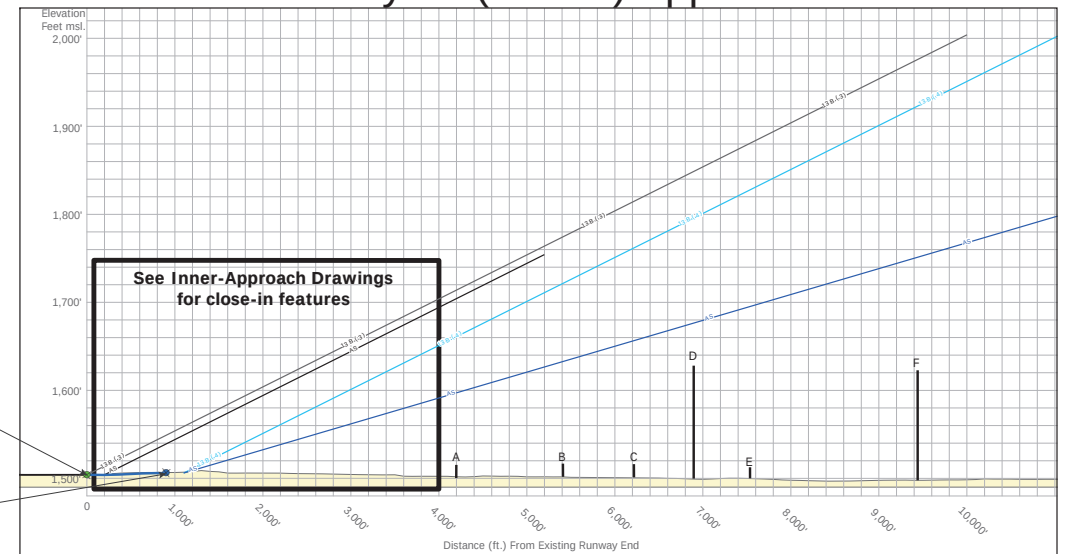
Approved By: M. Quick

December 2024

Sheet 4 Of 11

Coffman Associates Airport Consultants

Runway 20 (Ult. 21) Approach Profile

[illegible]

Runway 20/21 Significant Objects					
ID	Feature	Ground Elevation (ft. msl.)	AGL (ft.)	Top Elevation (ft. msl.)	Ultimate Approach Clearance (ft.)
A	W. Hanna Rd.	1,500.29	15.00	1,515.29	81.81
B	W. Hanna Rd.	1,501.75	15.00	1,516.75	116.01
C	S. 11 Mile Corner Rd.	1,501.16	15.00	1,516.16	140.33
D	Power Pylon	1,496.36	131.80	1,628.16	48.37
E	S. 11 Mile Corner Rd.	1,497.65	15.00	1,512.65	182.62
F	Power Pylon	1,490.81	132.00	1,622.81	128.51

Existing Runway 2 End
Lat: 32° 48' 8.933" N
Long: 111° 35' 25.888" W
Elevation: 1,531.11' msl
(High Point/TDZE)

Ultimate Runway 3 End
Lat: 32° 48' 3.460" N
Long: 111° 35' 30.896" W
Elevation: 1,531.45' msl
(High Point/TDZE)

Existing Runway 30 TDZE
1,508.89' msl

Ultimate Runway 21 TDZE
1,506.59' msl

Runway 5' Line Of Sight

Existing Runway 20 End
Lat: 32° 48' 39.466" N
Long: 111° 35' 57.882" W
Elevation: 1,504.80' msl
(Existing & Ultimate Low Point)

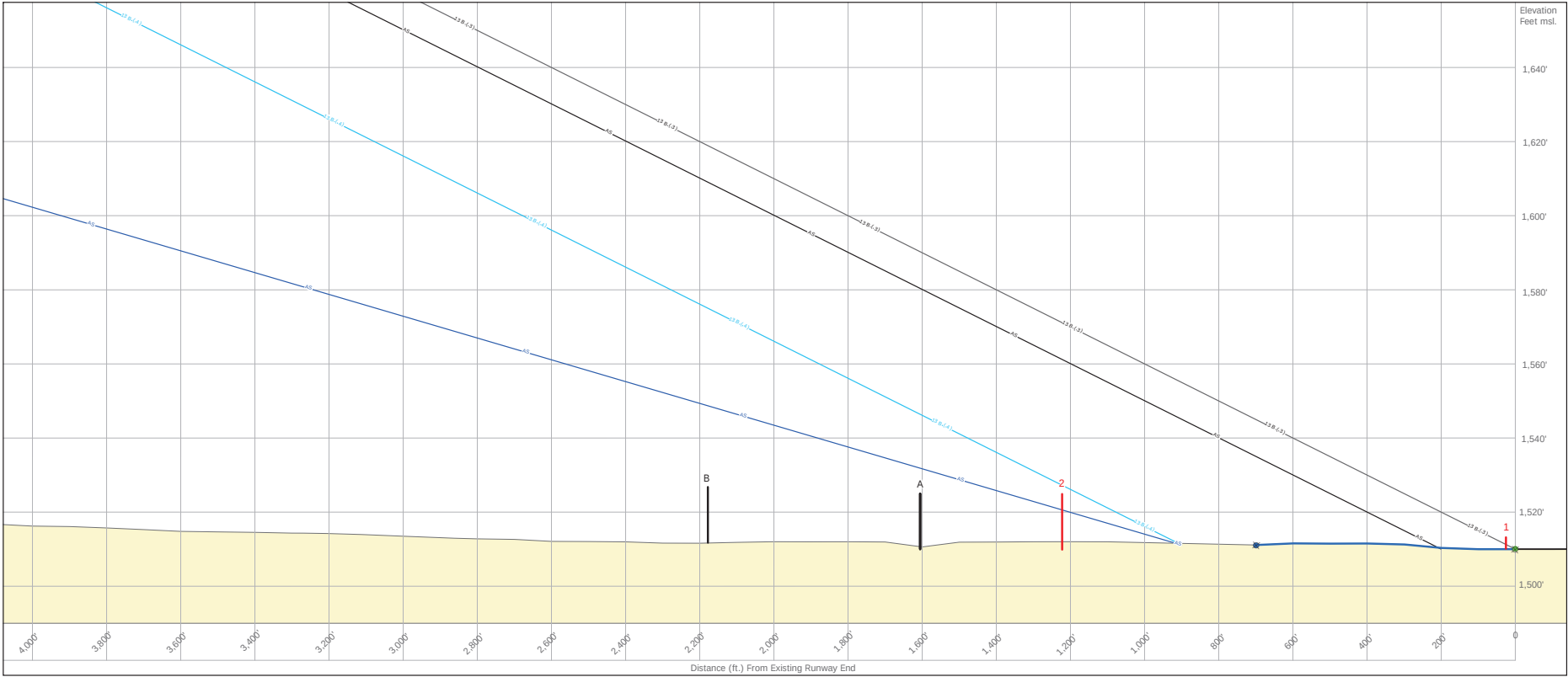
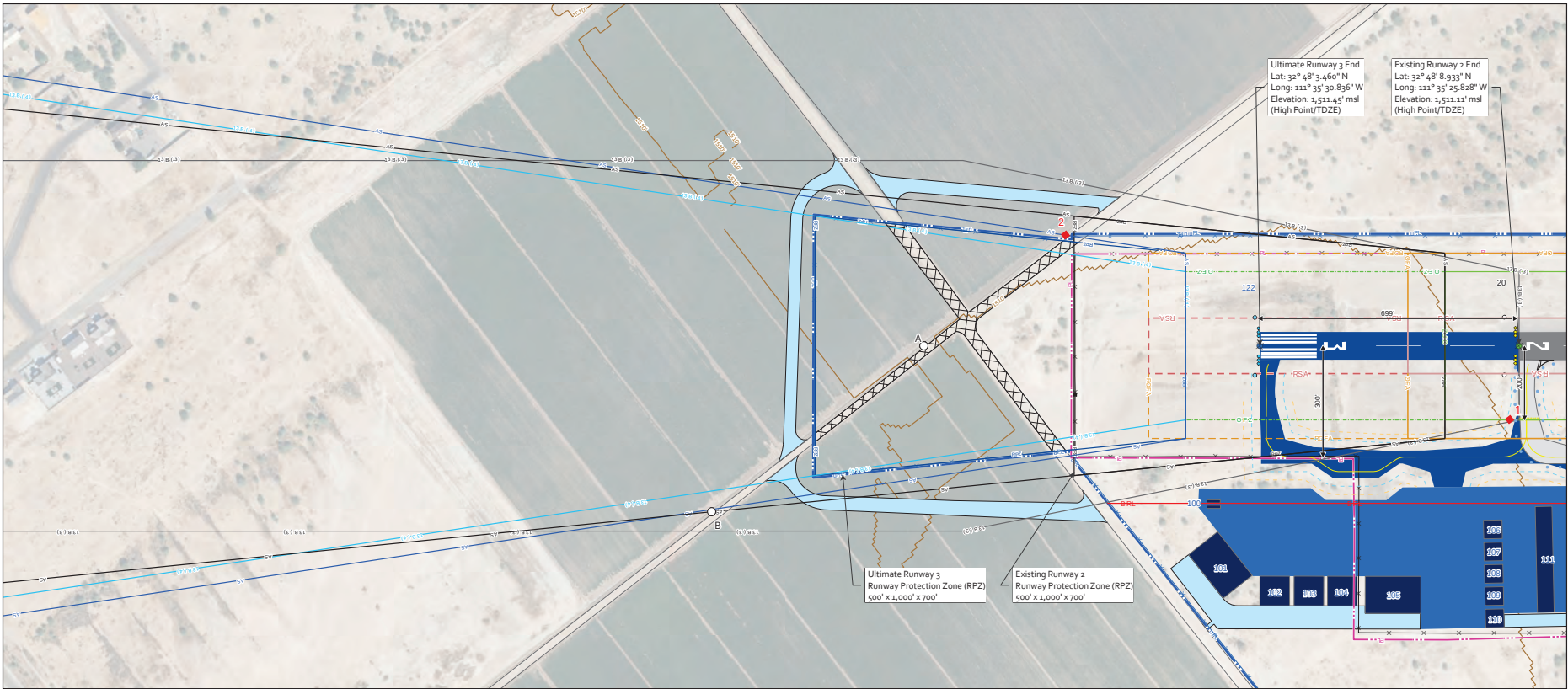
Ultimate Runway 21 End
Lat: 32° 48' 46.511" N
Long: 111° 36' 51.432" W
Elevation: 1,506.00' msl

0 500 1,000
1" = 500'

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December 2024 Sheet 5 Of 11





Runway 2/3 Inner-Approach Obstructions														
ID	Feature	Latitude	Longitude	Point Source	ADIP ID#	FAA Study #	Ground Elevation (ft. msl)	AGL (ft.)	Top Elevation (ft. msl.)	Penetration Value				Remediation
										Existing Part 77 Approach (20:1 Slope)	Existing 13B #3 (20:1 Slope)	Ultimate Part 77 Approach (34:1 Slope)	Ultimate 133B #4 (20:1 Slope)	
1	Airfield Sign	32° 48' 7.528" N	111° 35' 24.161" W	NV5	N/A	N/A	1,510.10	3.10	1,513.20	N/A	0.83	N/A	N/A	To Be Relocated
2	Maya Road	32° 48' 1.163" N	111° 35' 37.360" W	1/3 Arc Second DEM	N/A	N/A	1,510.00	15.00	1,525.00	N/A	N/A	4.39	N/A	To Be Closed

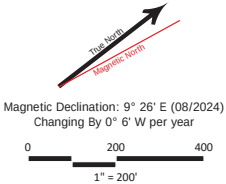
*Each obstruction listed will be considered the controlling object for the respective condition.

General Notes:
1. Survey data & imagery provided by NV5 (08/13/2023).
2. Road intersection elevations include 15' height adjustment.

Runway 2 (Ult. 3) Significant Objects					
ID	Feature	Ground Elevation (ft. msl.)	AGL (ft.)	Top Elevation (ft. msl.)	Ultimate Approach Surface Clearance
A	Maya Road	1,510.00	15.00	1,525.00	7.23
B	Maya Road	1,511.76	15.00	1,526.76	22.04

Legend

- Significant Object Point
- Obstruction Point
- ◆ Ultimate Runway End
- ◆ Existing Runway End
- ◆ Ultimate 13B Surface #4
- ◆ Existing Part 77 Approach
- ◆ Existing 13B Surface #3
- ◆ Ultimate Runway Lighting
- ◆ Ultimate Threshold Lighting
- ◆ Ultimate Automated Weather Observing System (AWOS)
- ◆ 25 Building Restriction Line (BRL)
- ◆ Taxiway Lighting
- ◆ Ultimate Runway End Identifier Lights (REILs)
- ◆ Ultimate Runway End
- ◆ Existing Wind Indicator
- ◆ Existing Threshold Lighting
- ◆ Existing/Ultimate Taxiway Lighting
- ◆ Existing Part 77 Approach Surface
- ◆ Ultimate Part 77 Approach Surface
- ◆ Ultimate 13B Surface #4
- ◆ Existing 13B Surface #3
- ◆ Existing Runway Object Free Area (ROFA)
- ◆ Existing Runway Safety Area (RSA)
- ◆ Existing/Ultimate Taxiway Safety Area (TSA)
- Existing/Ultimate Taxiway Object Free Area (TOFA)
- Ultimate Runway Object Free Zone (ROFZ)
- Ultimate Runway Object Free Area (ROFA)
- Existing Runway Object Free Zone (ROFZ)
- Ultimate Runway Protection Zone (RPZ)
- Existing Runway Protection Zone (RPZ)
- Ultimate Runway Safety Area (RSA)
- Ultimate Fence
- ◆ Runway Lighting
- Existing Runway End Identifier Lights (REILs)
- ◆ Ultimate Airport Property
- ◆ Existing Gate
- ◆ Existing Fence
- ◆ Existing Taxiway Pavement
- ◆ Ultimate Structure
- ◆ Ultimate Runway/Taxiway Pavement
- ◆ VLT Taxiway
- ◆ Ultimate Road/Parking
- ◆ Existing Runway Pavement
- ◆ Existing Paved Road/Parking
- ◆ Ultimate Apron
- ◆ 10' Ground Contour



No.	Revisions	Date	By	App'd

Eloy Municipal Airport

DRAFT

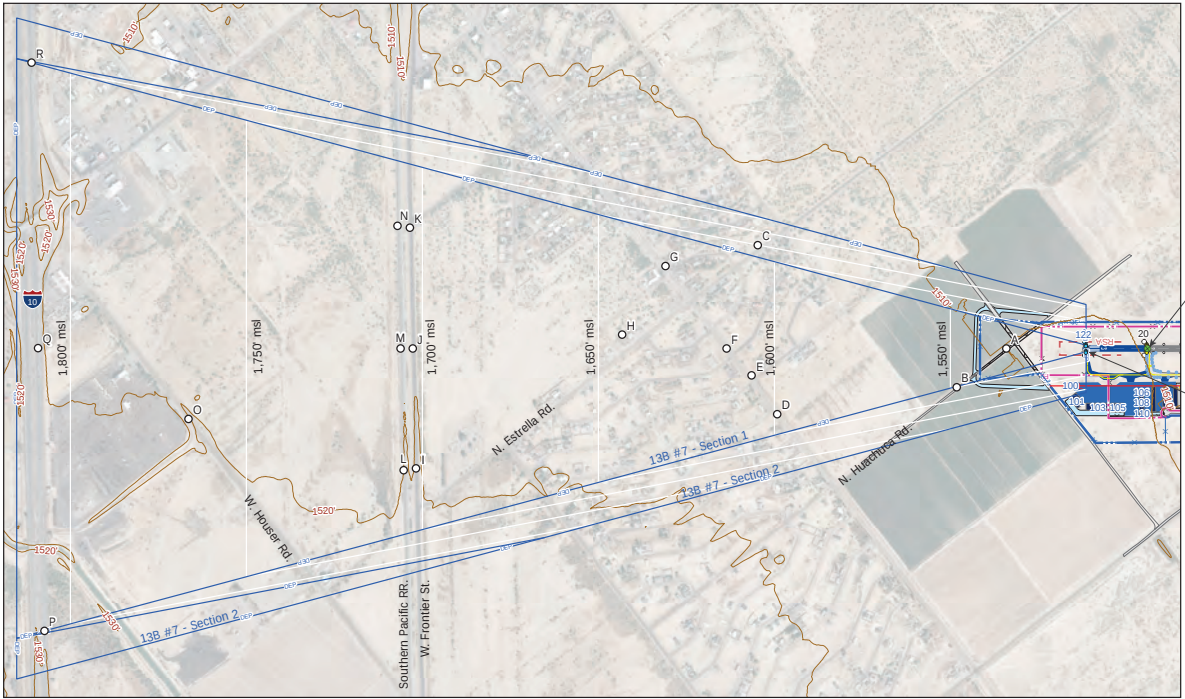
Runway 2 (Ult. 3) Inner-Approach Drawing

Eloy, AZ

Planned By: T. Stuber
Detailed By: C. Donnelly
Approved By: M. Quick

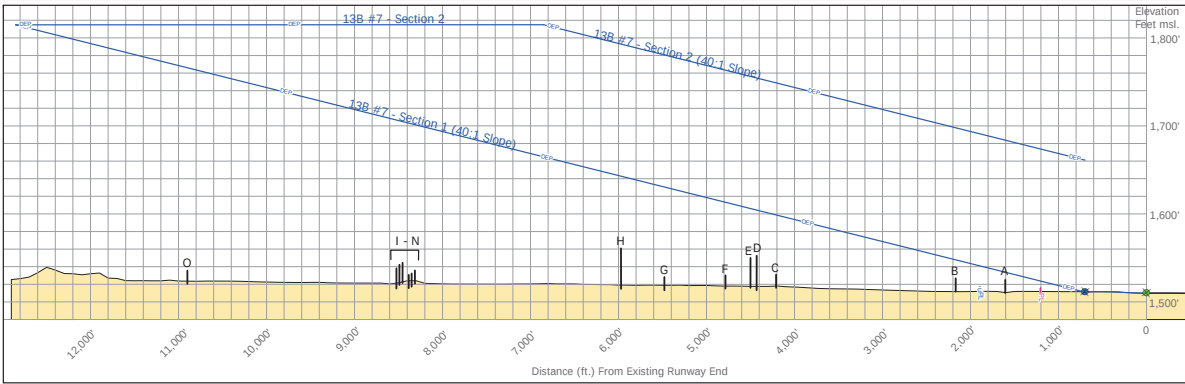
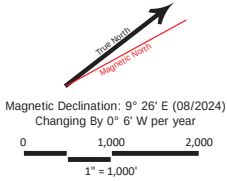
December 2024 Sheet 6 Of 11

Coffman Associates
Airport Consultants



Existing Runway 2 End
Lat: 32° 48' 39.460" N
Long: 111° 35' 25.828" W
Elevation: 1,511.12' msl
(High Point/TDZE)

Ultimate Runway 3 End
Lat: 32° 48' 39.836" W
Long: 111° 35' 20.836" W
Elevation: 1,511.45' msl
(High Point/TDZE)



Runway 21 End Departure Obstructions									
ID	Feature	Latitude	Longitude	Point Source	ADIP ID#	FAA Study #	Ground Elevation (ft. msl)	AGL (ft.)	Top Elevation (ft. msl)
No Obstructions									

Runway 3 End Significant Objects				
ID	Feature	Ground Elevation (ft. msl)	AGL (ft.)	Top Elevation (ft. msl)
A	Maya Road	1,510.00	15.00	1,525.00
B	Maya Road	1,511.76	15.00	1,526.76
C	Pole	1,513.29	39.15	1,552.44
D	W Shedd Rd	1,515.92	15.00	1,530.92
E	Pole	1,516.00	34.00	1,550.00
F	W Shedd Rd	1,515.15	15.00	1,530.15
G	W Shedd Rd	1,513.15	15.00	1,528.15
H	Pole	1,514.76	46.00	1,560.76
I	State Hwy 84	1,520.68	15.00	1,535.68
J	State Hwy 84	1,517.33	15.00	1,532.33
K	State Hwy 84	1,515.70	15.00	1,530.70
L	Southern Pacific Railroad	1,521.44	23.00	1,544.44
M	Southern Pacific Railroad	1,519.22	23.00	1,542.22
N	Southern Pacific Railroad	1,515.15	23.00	1,538.15
O	W Houser Rd	1,520.52	15.00	1,535.52
P	10	1,529.63	17.00	1,546.63
Q	10	1,523.09	17.00	1,540.09
R	10	1,516.69	17.00	1,533.69

Legend

◆ Ultimate Runway End

◆ Existing Runway End

○ Significant Object Point

● Obstruction Point

— Departure Surface

— 10' Ground Contours

— 25' Building Restriction Line (BRL)

— Terrain Profile

— Ultimate Runway Safety Area (RSA)

— Ultimate Fence

— Existing Airport Property

— Ultimate Airport Property

— Existing Gate

— Existing Fence

□ Unpaved Road/Parking

□ Existing Taxiway Pavement

■ Ultimate Structure

■ Ultimate Runway/Taxiway Pavement

■ Ult_Taxiway

■ Ultimate Road/Parking

■ Existing Runway Pavement

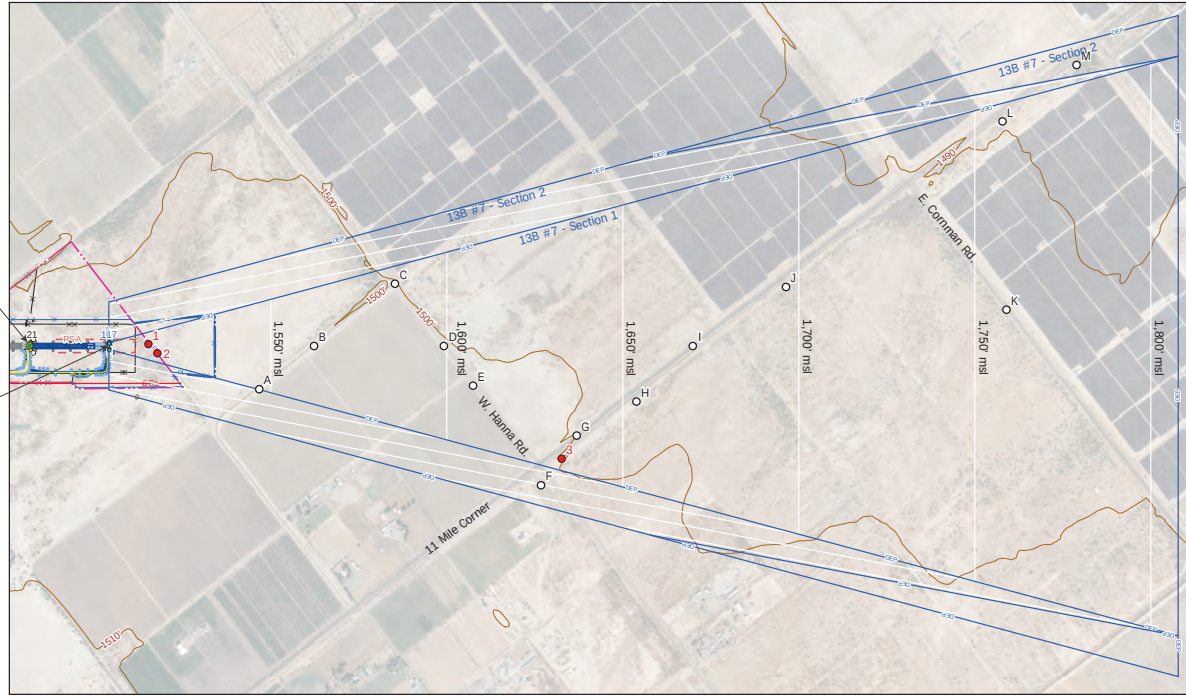
■ Existing Paved Road/Parking

■ Existing Structure

■ Structure To Be Removed

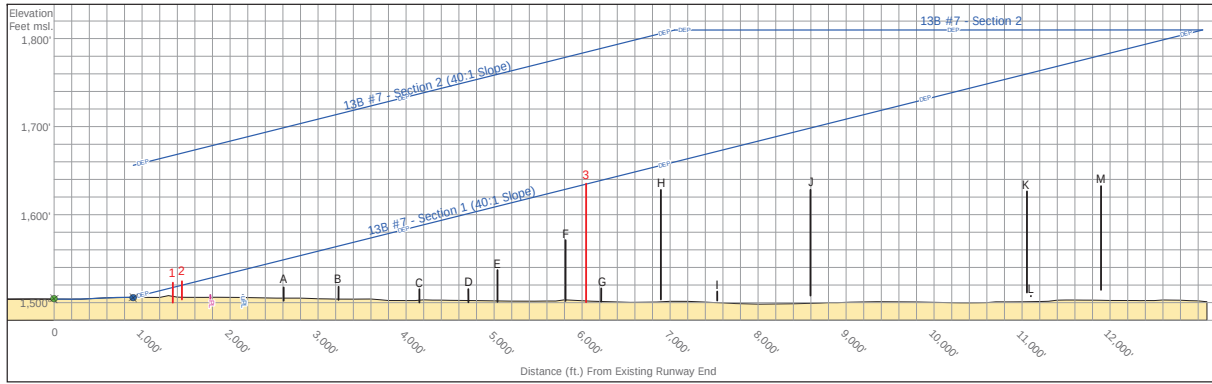
■ Ultimate Apron

■ Existing Apron



Existing Runway 20 End
Lat: 32° 48' 39.460" N
Long: 111° 35' 25.828" W
Elevation: 1,504.80' msl
(Existing & Ultimate Low Point)

Ultimate Runway 21 End
Lat: 32° 48' 46.511" N
Long: 111° 34' 51.431" W
Elevation: 1,506.00' msl



Runway 3 End Departure Obstructions									
ID	Feature	Latitude	Longitude	Point Source	ADIP ID#	FAA Study #	Ground Elevation (ft. msl)	AGL (ft.)	Top Elevation (ft. msl)
1	Scrub	32° 48' 50.161" N	111° 34' 48.408" W	NVS	04-032675	N/A	No Data	No Data	1,522.74
2	Scrub	32° 48' 50.331" N	111° 34' 46.722" W	NVS	N/A	N/A	No Data	No Data	1,520.76
3	Power Pole	32° 48' 19.035" N	111° 34' 2.672" W	NVS	N/A	N/A	1,499.53	135.60	1,635.13
Add Obstruction Lighting									

Runway 21 End Significant Objects				
ID	Feature	Ground Elevation (ft. msl)	AGL (ft.)	Top Elevation (ft. msl)
A	W. Acoma Ave.	1,502.25	15.00	1,517.25
B	W. Acoma Ave.	1,503.09	15.00	1,518.09
C	W. Acoma Ave.	1,500.16	15.00	1,515.16
D	W. Hanna Rd	1,500.41	15.00	1,515.41
E	Pole	1,500.94	36.00	1,536.94
F	Transmission Line	1,502.00	69.00	1,571.00
G	S 11 Mile Corner Rd	1,501.16	15.00	1,516.16
H	Power Pylon	1,496.33	131.60	1,628.13
I	S 11 Mile Corner Rd	1,497.65	15.00	1,512.65
J	Power Pylon	1,492.01	136.20	1,628.21
K	E Comman Rd	1,492.66	15.00	1,507.66
L	Power Pylon	1,488.53	137.80	1,626.33
M	Power Pylon	1,485.33	146.80	1,632.33

No.	Revisions	Date	By	App'd

Eloy Municipal Airport

DRAFT

Departure Surface Drawing - Runway 3/21

Eloy, AZ

Planned By: T. Stuber

Detailed By: C. Donnelly

Approved By: M. Quick

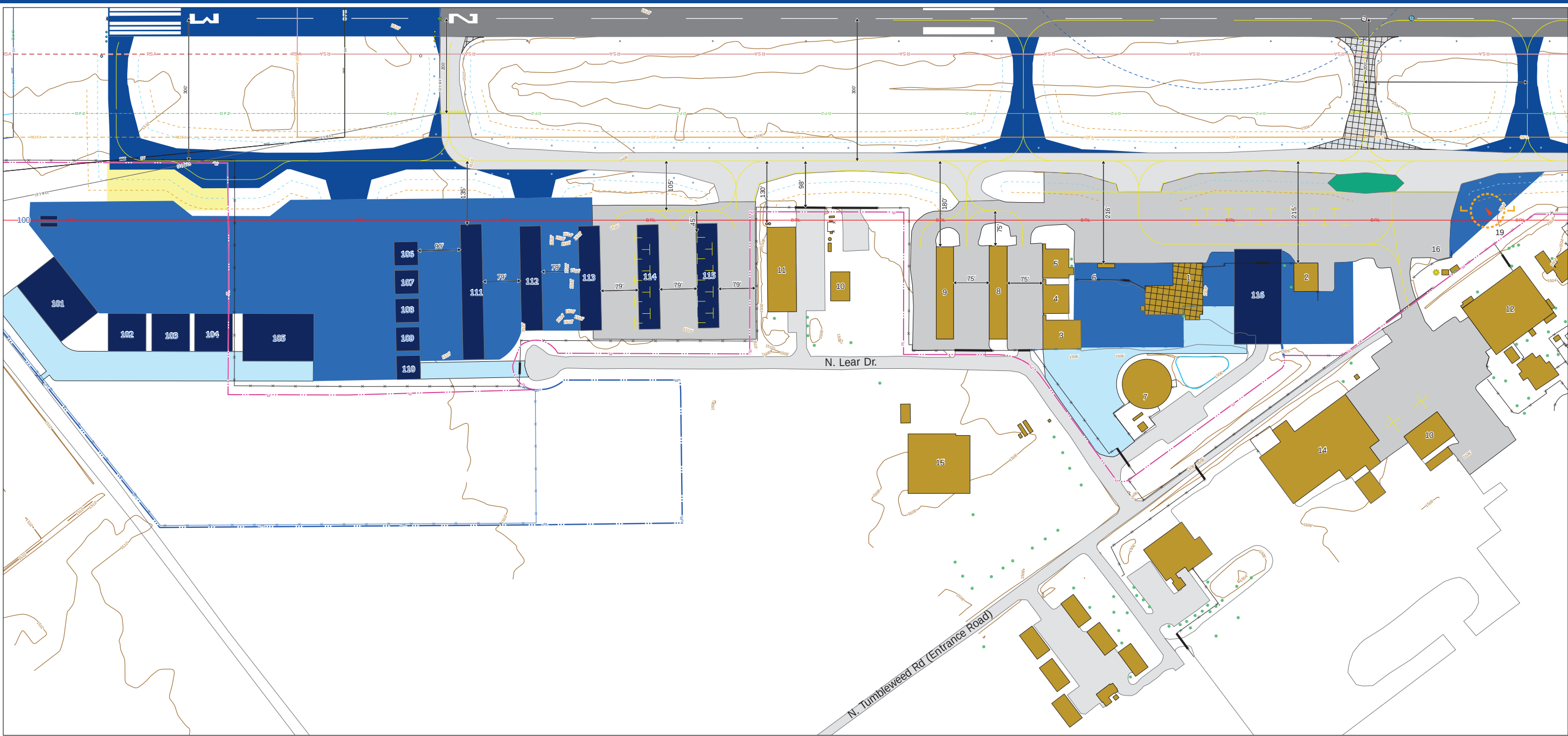
December 2024

Sheet 8 Of 11

Coffman Associates Airport Consultants

General Notes:
1. Survey data & imagery provided by NVS (08/13/2023).
2. Road intersection elevations include 15' height adjustment.

The preparation of these documents was financed in part through a planning grant from the Federal Aviation Administration as provided under Section 505 of The Airport And Airway Improvement Act of 1982, as amended. The contents of these documents by the FAA does not in any way constitute a commitment of the part of The United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with the appropriate public laws.



Existing Structures		
ID	Feature	Top Elevation (ft. msl)
1	Hangar 1 - Rigging Innovations (To Be Removed)	1,522.57
2	Hangar 2 - Skydive Arizona	1,525.20
3	Hangar 3 - Airborne Systems	1,525.65
4	Hangar 4 - Airborne Systems	1,523.98
5	Hangar 5 - Skydive Arizona	1,526.00
6	Self-Serve 100LL & Jet A	1,515.60
7	City Water Storage Tank	1,526.21
8	T-Hangars	1,523.43
9	T-Hangars	1,522.62
10	Crop First Aviation (Off Airport)	1,527.45
11	Arizona Aeropainting	1,529.42
12	Skydive Arizona/Aero Specialists (Off Airport)	1,535.53
13	Skydive Arizona/Aero Specialists (Off Airport)	1,527.82
14	Skydive Arizona/Aero Specialists (Off Airport)	1,533.33
15	Hot Wings (Off Airport)	1,529.03
16	Airport Beacon	1,568.00
19	Segmented Circle/Wind Cone (To Be Relocated)	1,531.00

Ultimate Structures		
ID	Feature	Top Elevation (ft. msl)*
100	100LL/Jet A Fuel Farm	1,519.00
101	100' x 150' Hangar	1,535.00
102	80' x 80' Executive Box Hangar	1,530.00
103	80' x 80' Executive Box Hangar	1,530.00
104	80' x 80' Executive Box Hangar	1,530.00
105	100' x 100' Conventional Hangar	1,535.00
106	50' x 50' Executive Box Hangar	1,525.00
107	50' x 50' Executive Box Hangar	1,525.00
108	50' x 50' Executive Box Hangar	1,525.00
109	50' x 50' Executive Box Hangar	1,525.00
110	50' x 50' Executive Box Hangar	1,525.00
111	8-Unit T-Hangar	1,523.00
112	6-Unit T-Hangar	1,523.00
113	6-Unit T-Hangar	1,523.00
114	6-Unit T-Hangar	1,523.00
115	6-Unit T-Hangar	1,523.00
116	100' x 200' Conventional Hangar	1,526.00

*Top Elevation estimated

- Existing Airport Property - Ultimate Airport Property - Airport Beacon - Runway Lighting - Taxiway Lighting - Existing Wind Indicator - Existing Segmented Circle - Existing Runway Object Free Area (ROFA) - Ultimate Runway Object Free Area (ROFA) - Existing Runway Safety Area (RSA) - Ultimate Runway Safety Area (RSA) - Existing Runway Obstacle Free Zone (ROFZ) - Ultimate Runway Obstacle Free Zone (ROFZ)	- Existing/Ultimate Taxiway Safety Area (TSA) - Existing/Ultimate Taxiway Object Free Area (TOFA) - Existing Fence - Existing Gate - Ultimate Fence - Ultimate Gate - Existing Runway Pavement - Existing Taxiway Pavement - Ultimate Runway/Taxiway Pavement - Existing Apron - Ultimate Apron - Existing Structure - Structure To Be Removed	- Ultimate Structure - Pavement To-Be Removed - Existing Paved Road/Parking - Unpaved Road/Parking - Ultimate Road/Parking - Vegetation Point - Ground Contour 25' Building Restriction Line (BRL) - Temporary No Taxi Island - Drainage - Existing Easement - Dimension_TAD
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General Notes:
1. Survey data & imagery provided by NV5 (08/13/2023).
2. Six foot tall perimeter fencing, topped with barbed wire.
3. No PACS or SACS published for this airport.

No.	Revisions	Date	By	App'd

Eloy Municipal Airport

DRAFT

Terminal Area Drawing

Eloy, AZ

Planned By: T. Stuber

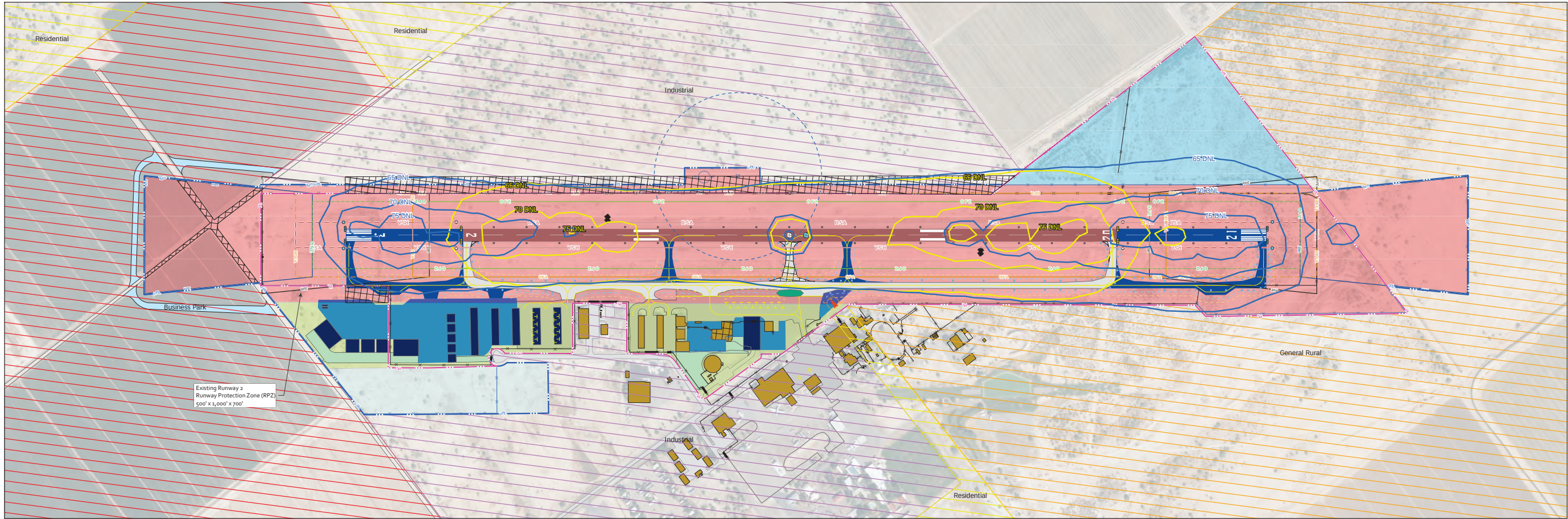
Detailed By: C. Donnelly

Approved By: M. Quick

December 2024

Sheet 9 Of 11

Coffman Associates
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Existing Airport Property

Ultimate Airport Property

Existing Easement

Existing Noise Contours (DNL)

Ultimate Noise Contours (DNL)

Ultimate Segmented Circle

Existing Segmented Circle

On Airport Land Use

Airfield Operations

General Aviation

Open Space

Revenue Support - Aeronautical or Non-Aeronautical

Off Airport Land Use

Business Park

General Rural

Industrial

Residential

True North

Magnetic North

Magnetic Declination: 9° 26' E (08/2024)
Changing By 0° 6' W per year

0300600

1" = 300'

General Notes:
1. Survey data & imagery provided by NV5 (08/13/2023).
2. No PACS or SACS published for this airport.
3. Airport Protection height limits are established per the city of Eloy, AZ Code of Ordinances Section 21-2-7.12 Aviation Overlay (AO) Districts. Building heights limitations within the boundaries of the Aviation Overlay District are set forth in the Federal Aviation Regulations (FAR) Part 77 Airspace Plan.

No.	Revisions	Date	By	App'd

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Eloy Municipal Airport

DRAFT

Airport Land Use Drawing

Eloy, AZ

Planned By: T. Stuber

Detailed By: C. Donnelly

Approved By: M. Quick

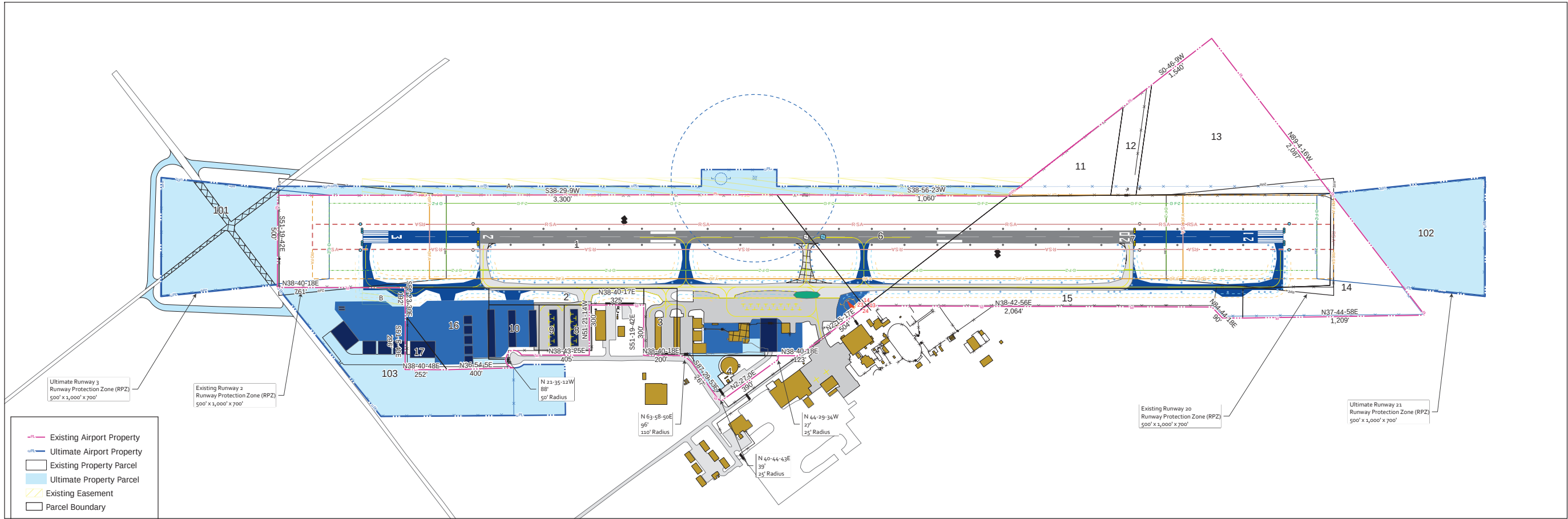
December 2024

Sheet 10 Of 11

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Associates

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