



EUREKA AIRPORT BOOTH BAILEY FIELD AIRPORT LAYOUT PLAN UPDATE

*Planning Advisory Committee Meeting #1
September 21, 2023*

AGENDA

- Introductions
- Public Involvement and Schedule
- Known Issues & Opportunities
- Existing Conditions Overview
- Critical Aircraft
- Facility Goals and Requirements
- Questions?



PROJECT TEAM



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PROJECT TEAM



Planning



Cultural Resources



Engineering



Environmental

PLANNING ADVISORY COMMITTEE (PAC)

- Jeb Rowley
 - Airport Manager
- Craig Benson
 - Diamond Valley Rancher, Airport User
- Kurt Haukohl
 - NDOT State Aviation Manager
- Marty Plasket
 - Diamond Valley Rancher, County Commissioner
- Kenny Sanders
 - Eureka County EMS
- Ken Hall
 - FAA Community Planner

PAC Responsibilities Include:

1. Attending PAC meetings
2. Reviewing and commenting on draft work products
3. Providing input during the planning process
4. Providing local expertise to reflect community interests or concerns

WHAT THIS PROJECT IS

Lumos and Century West Engineering are completing an update to the 2015 Airport Layout Plan (ALP) which was developed as part of the 2015 Airport Master Plan (AMP).

- *Updates include:*
 - *Existing Conditions*
 - *Facility Goals and Requirements Assessment*
 - *Development Alternatives Analysis*
 - *Update the Airport Layout Plan (ALP) drawing set*
 - *Refresh Airport's 20-year Capital Improvement Program (CIP)*

PROJECT SCHEDULE

■ Develop Understanding -----

April 2023 – June 2023

Existing Conditions Analysis

- Chapter 1 – Introduction
- Chapter 2 – Existing Conditions

September 2023

PAC Meeting #1

■ Explore Solutions-----

June 2023 – November 2023

- Chapter 3 - Facility Goals and Requirements
- Chapter 4 - Airport Development Alternatives

November 2023

PAC Meeting #2

■ Implementation-----

November 2023 – February 2024

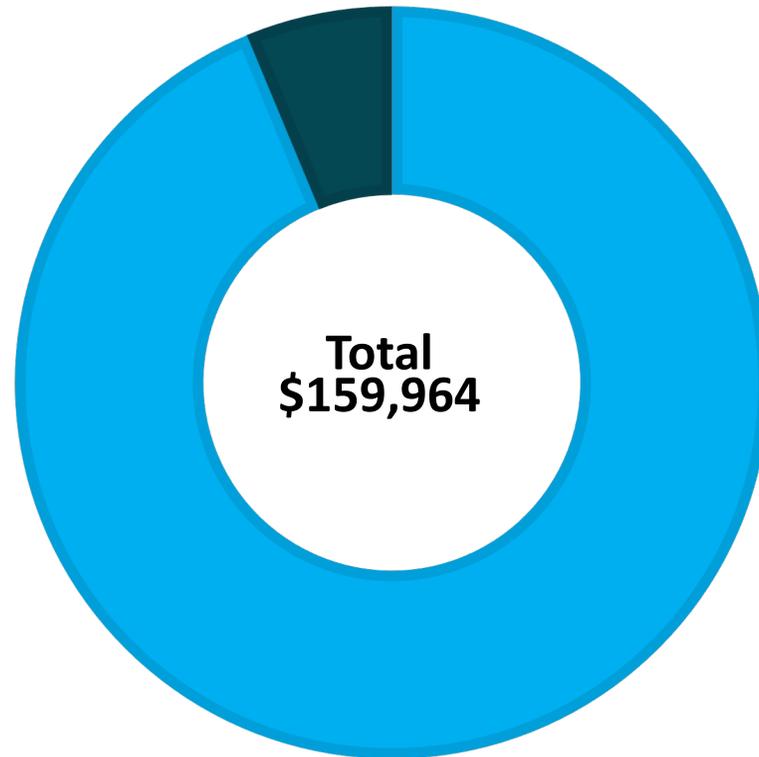
- Chapter 5 - Airport Layout Plan
- Chapter 6 - Capital Improvement Plan

March 2024

FAA Review

Note: This is a living project schedule, and dates often evolve over the course of the project.

PROJECT FUNDING



- FAA Funds: \$149,966 (93.5%)
- Local Match: \$9,998 (6.5%)

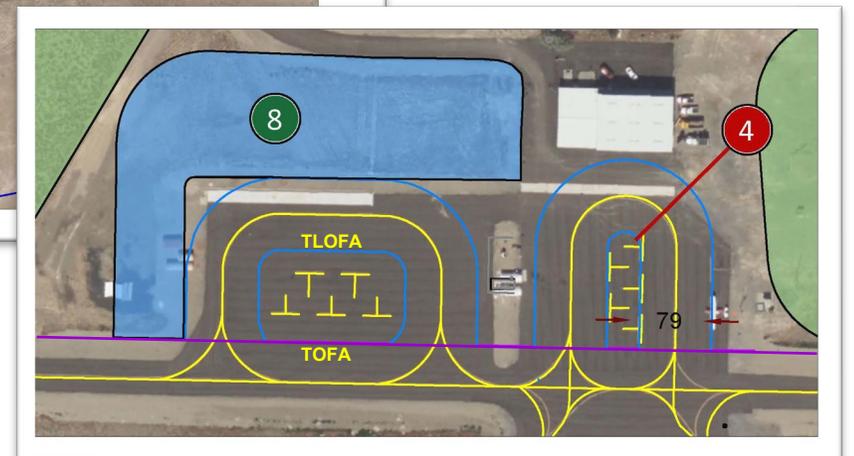
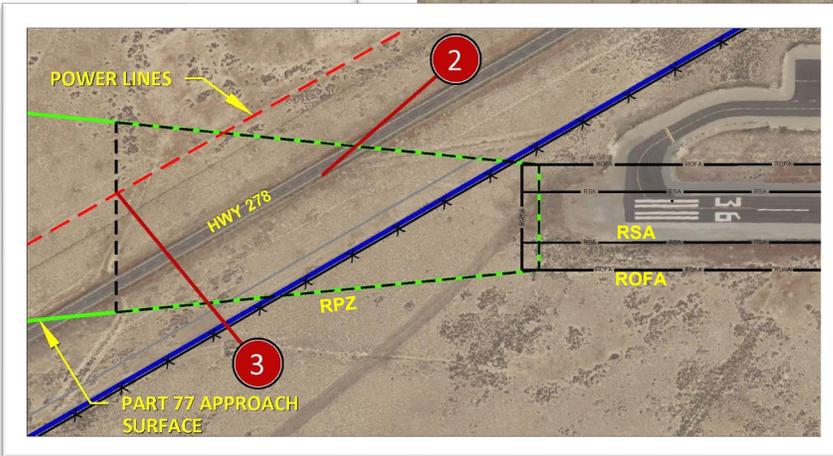
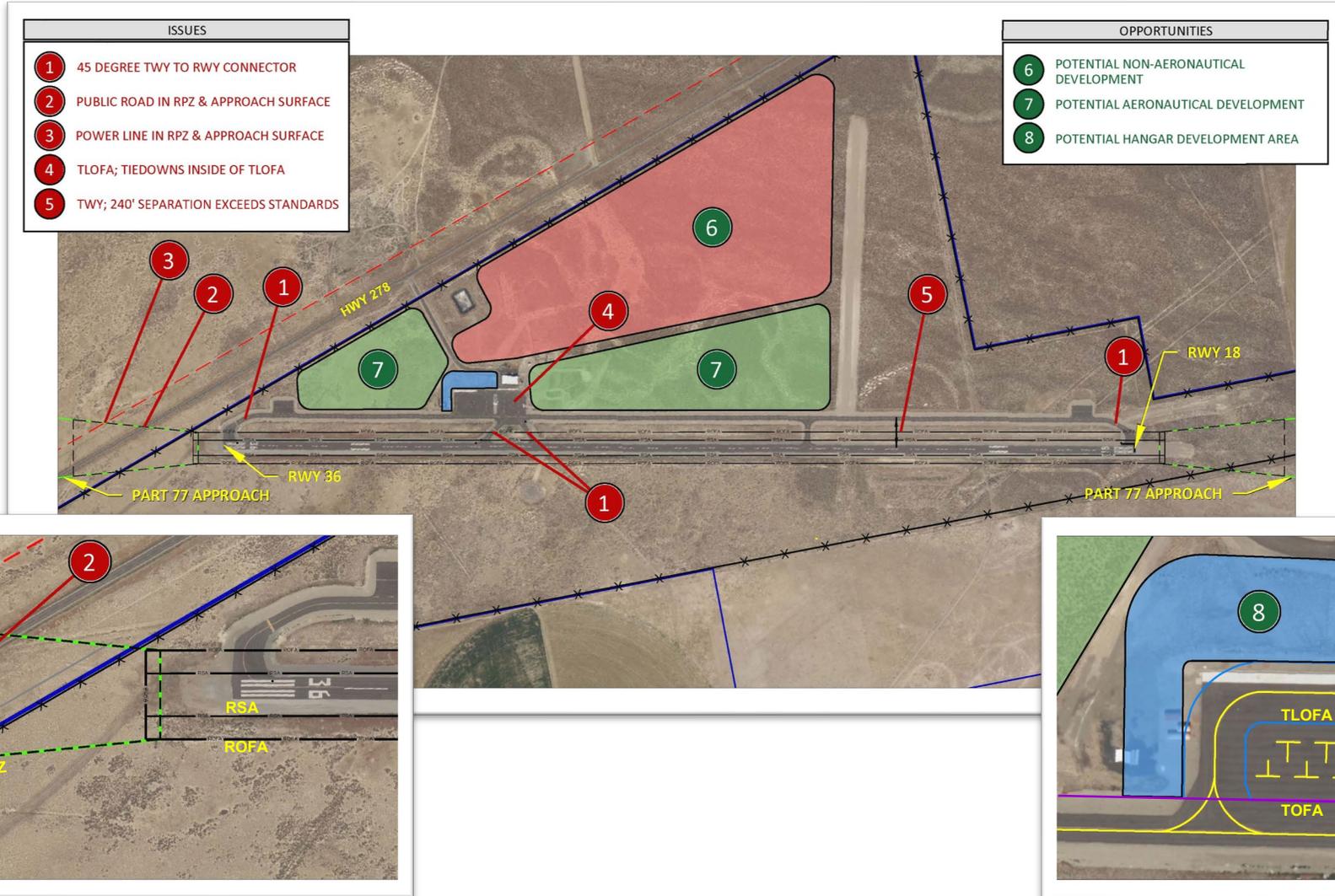
WHY ARE WE UPDATING THE 2015 AIRPORT LAYOUT PLAN?

Airport plans are typically updated every 10 years, or sooner if conditions require:

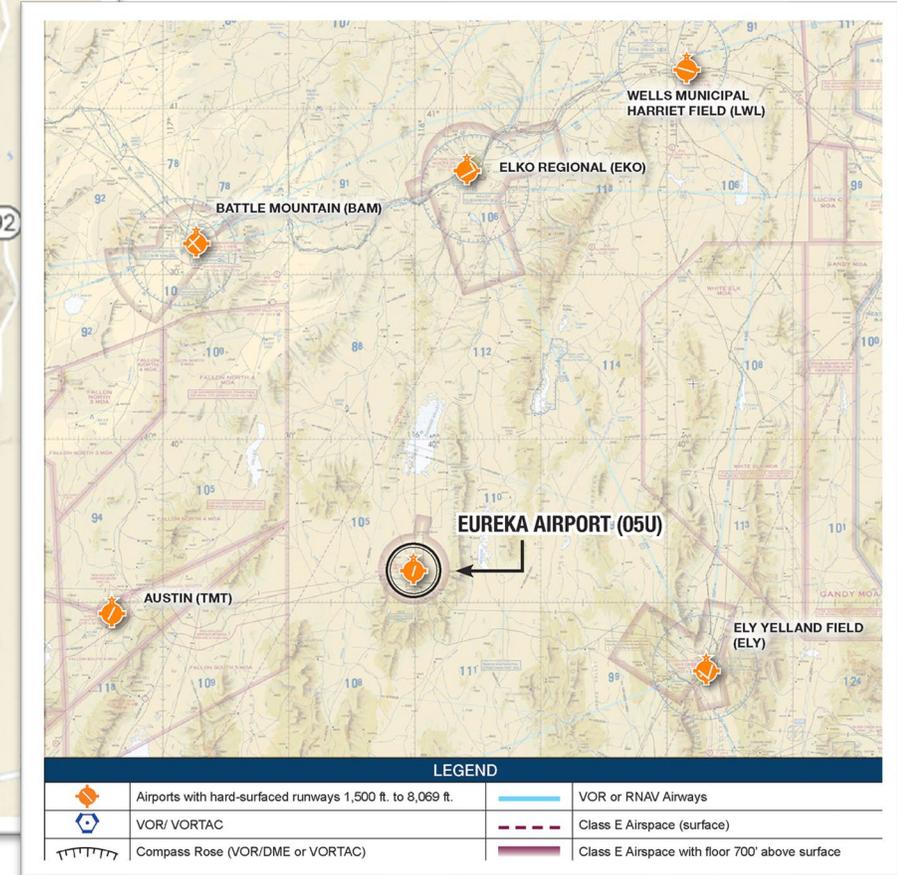
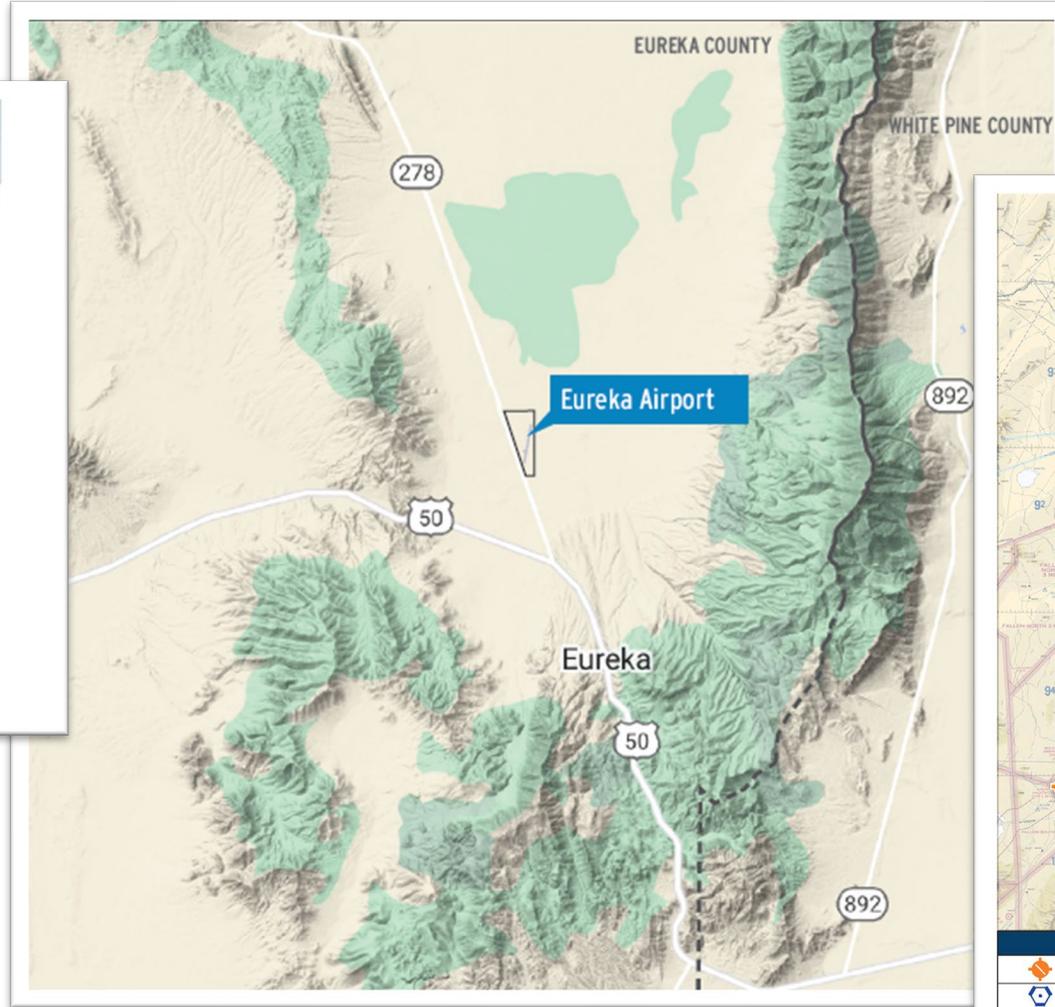
- *Changes in FAA airport design standards or areas of FAA emphasis*
- *Changes in Airport activity*
- *When previous planning recommendations have been implemented*
- *Provide updated cultural and environmental analysis necessary for future development*

FAA Airport Grant Assurances require airport sponsors to “*keep up to date at all times an airport layout plan of the airport...*”

KNOWN ISSUES & OPPORTUNITIES



AIRPORT LOCALE



PRIOR PLANNING

- The previous Airport Master Plan (AMP) and FAA-approved ALP drawing set were completed in 2015
 - 2023 is nearing the midpoint in the last AMP 20-year planning period
- Nevada Airport and Heliport System Plan was completed in 2022
 - Eureka’s role in the state system was assessed and its facilities/capabilities were evaluated against that role



2015 ALP

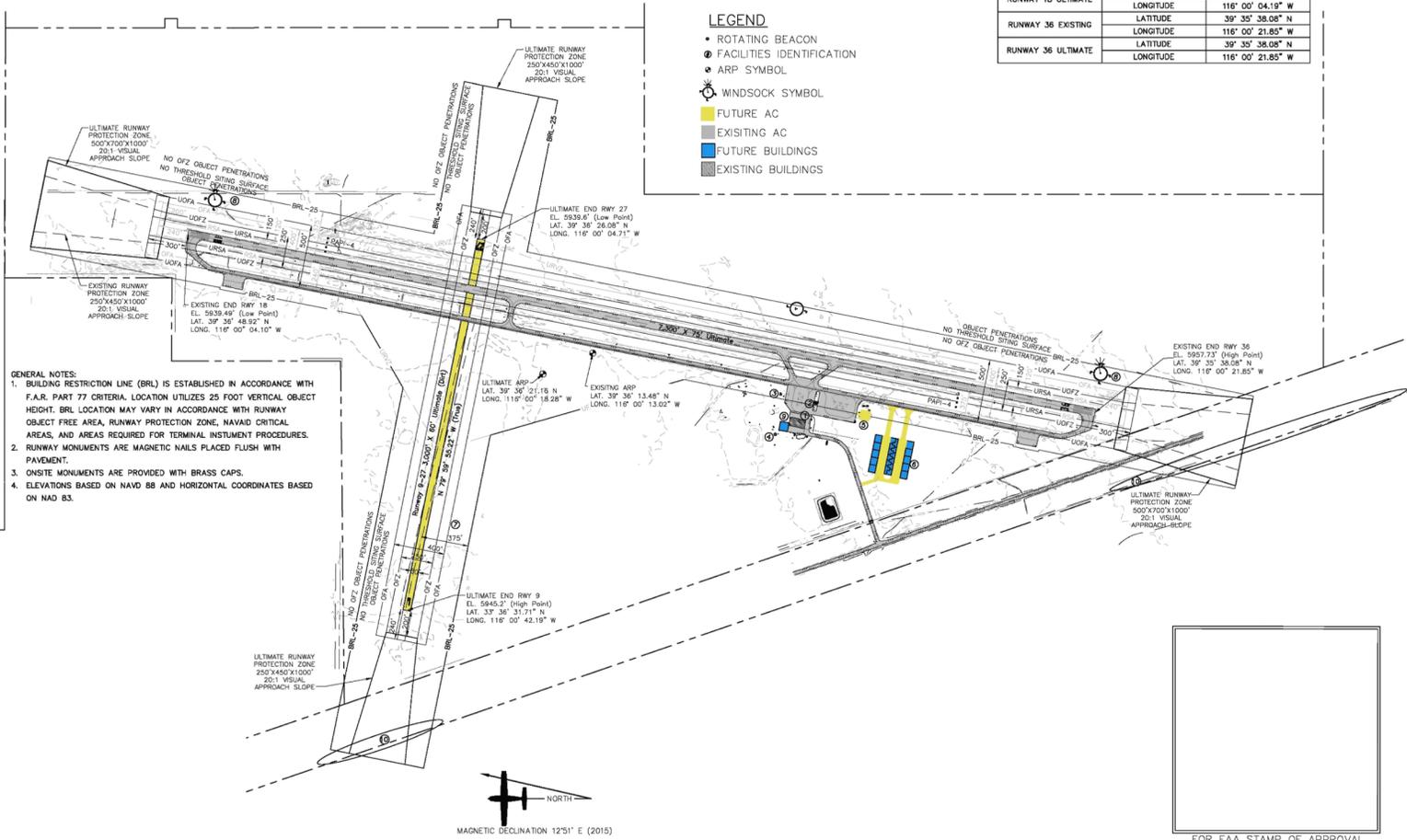
EXISTING BUILDINGS/FACILITIES		
NO.	DESCRIPTION	ELEV.
1	FBO HANGER	5947.0
2	FUEL TANK	5949.0
3	HANGER	5946.0
4	ROTATING BEACON	5947.0

ULTIMATE BUILDING/FACILITIES		
NO.	DESCRIPTION	ELEV.
5	HELIPAD	5951.0
6	FUTURE HANGER	5950.0
7	CROSSWIND RUNWAY	5942.4
8	ADDITIONAL WIND SOCKS	5946.0
9	SNOWFLOW BUILDING	5947.0
10	POWER LINES TO UNDERGROUND	5950±

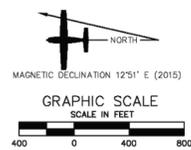
RUNWAY END COORDINATES		
RUNWAY	LATITUDE	EXISTING AND ULTIMATE
RUNWAY 9 ULTIMATE	LONGITUDE	39° 36' 31.72" N 116° 00' 42.19" W
RUNWAY 27 ULTIMATE	LATITUDE	39° 36' 26.03" N
	LONGITUDE	116° 00' 04.61" W
RUNWAY 18 EXISTING	LATITUDE	39° 36' 48.92" N
	LONGITUDE	116° 00' 04.19" W
RUNWAY 18 ULTIMATE	LATITUDE	39° 36' 48.92" N
	LONGITUDE	116° 00' 04.19" W
RUNWAY 36 EXISTING	LATITUDE	39° 35' 38.08" N
	LONGITUDE	116° 00' 21.85" W
RUNWAY 36 ULTIMATE	LATITUDE	39° 35' 38.08" N
	LONGITUDE	116° 00' 21.85" W

LEGEND

- ROTATING BEACON
- ⊙ FACILITIES IDENTIFICATION
- ⊙ ARP SYMBOL
- ⊙ WINDSOCK SYMBOL
- FUTURE AC
- EXISTING AC
- FUTURE BUILDINGS
- EXISTING BUILDINGS



- GENERAL NOTES:**
- BUILDING RESTRICTION LINE (BRL) IS ESTABLISHED IN ACCORDANCE WITH F.A.R. PART 77 CRITERIA. LOCATION UTILIZES 25 FOOT VERTICAL OBJECT HEIGHT. BRL LOCATION MAY VARY IN ACCORDANCE WITH RUNWAY OBJECT FREE AREA, RUNWAY PROTECTION ZONE, NAVD CRITICAL AREAS, AND AREAS REQUIRED FOR TERMINAL INSTRUMENT PROCEDURES.
 - RUNWAY MONUMENTS ARE MAGNETIC NAILS PLACED FLUSH WITH PAVEMENT.
 - ONSITE MONUMENTS ARE PROVIDED WITH BRASS CAPS.
 - ELEVATIONS BASED ON NAVD 88 AND HORIZONTAL COORDINATES BASED ON NAD 83.



FOR FAA STAMP OF APPROVAL

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CIVIL ENGINEERING
 GEOTECHNICAL ENGINEERING
 PLANNING
 LANDSCAPE ARCHITECTURE
 SURVEYING / GIS
 CONSTRUCTION SERVICES
 MATERIALS TESTING

EUREKA COUNTY PUBLIC WORKS
EUREKA AIRPORT MASTER PLAN UPDATE
AIRPORT LAYOUT PLAN

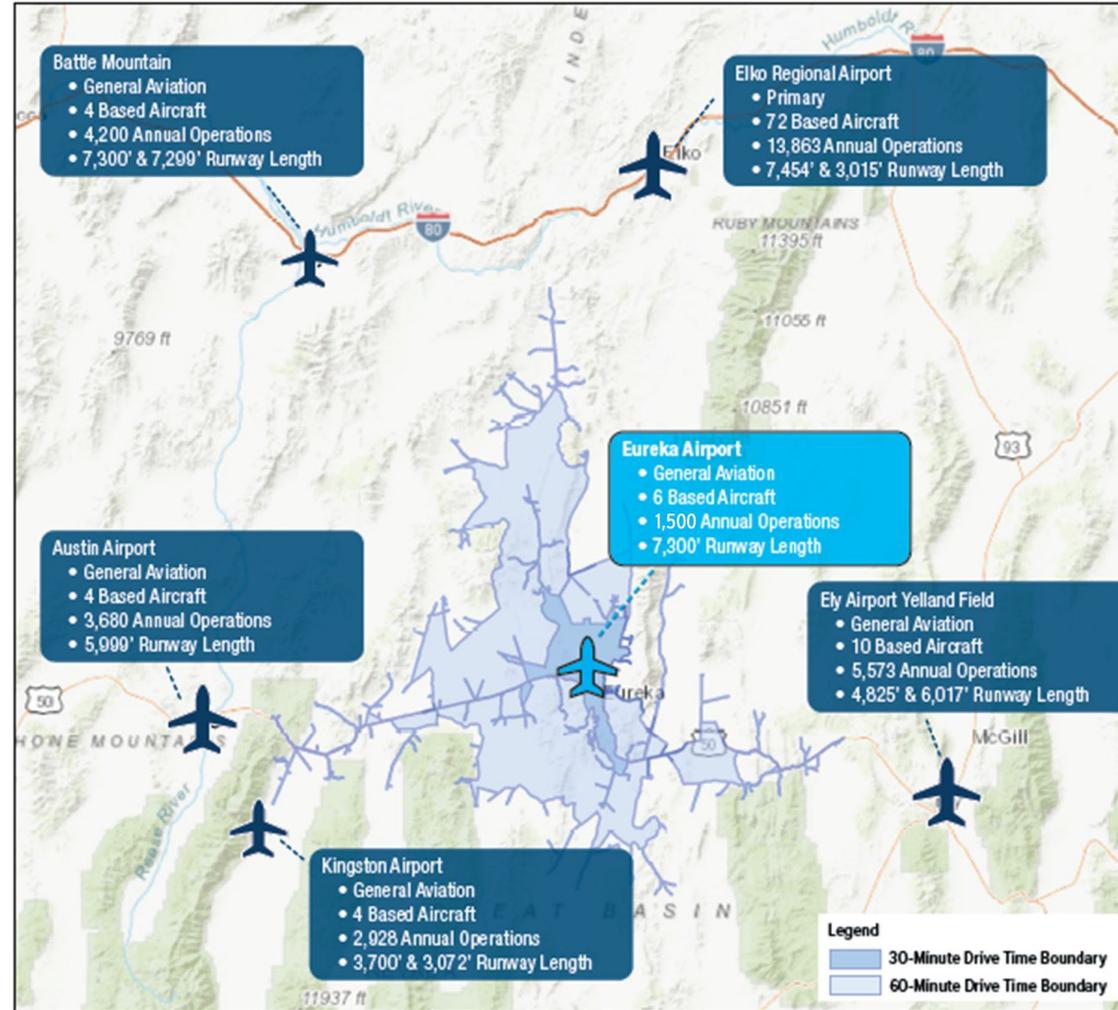
REV.	DATE	DESCRIPTION

A.4.

DATE: SEPT 2015
 DRAWN BY: DJZ
 DESIGNED BY: DJZ
 CHECKED BY: MOB

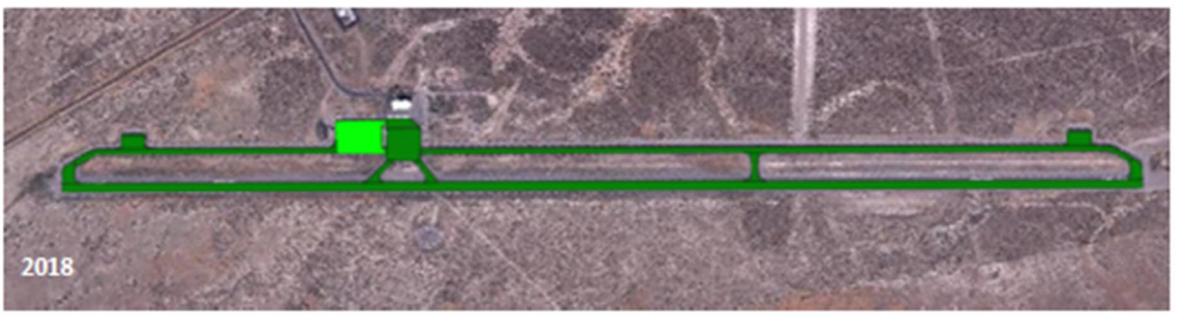
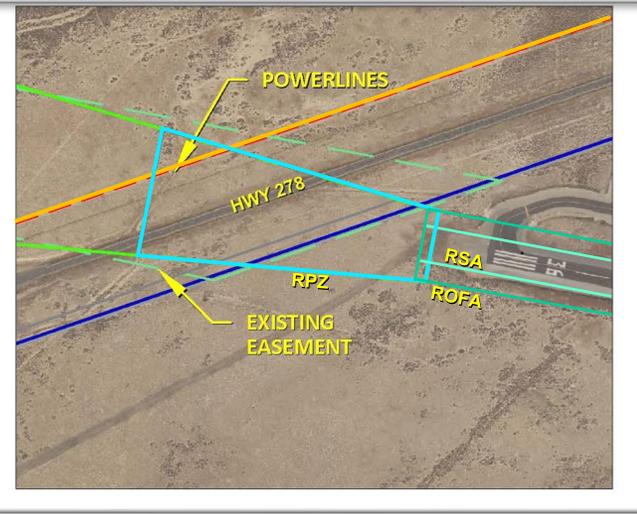
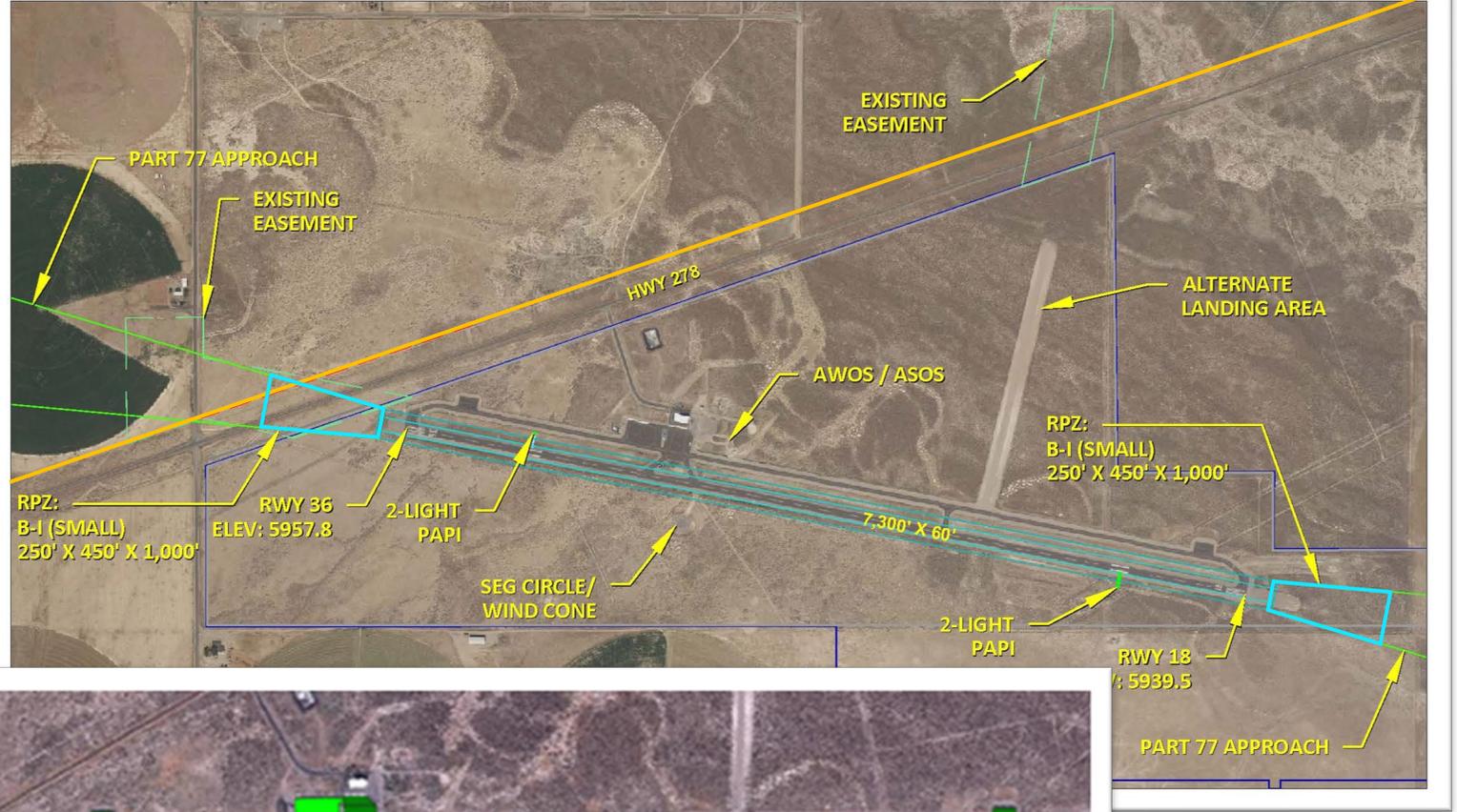
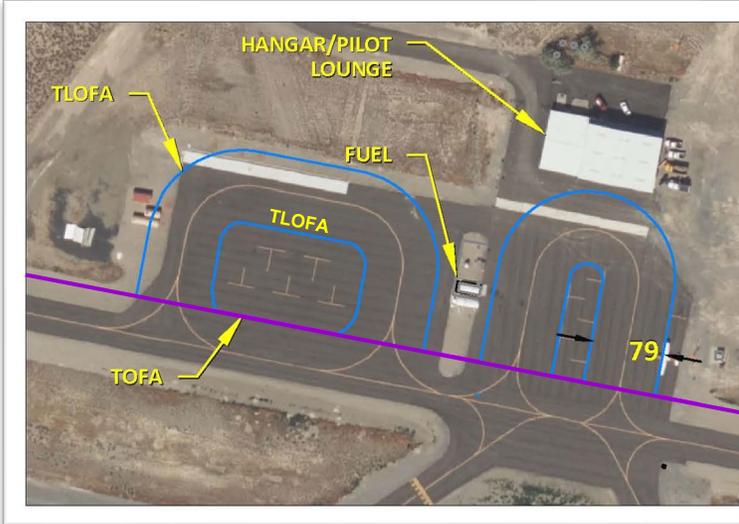


REGIONAL SETTING



Source: AirportIQ 5010, Esri, USGS, NOAA

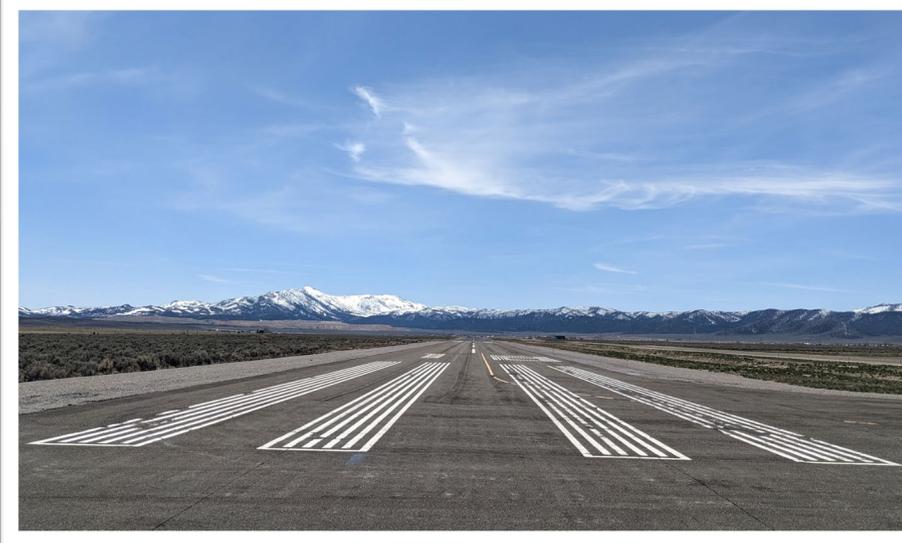
EXISTING CONDITIONS



EXISTING CONDITIONS

Airfield (Airside)

- Runway 18/36 – 7,300’ x 60’ (Asphalt)
 - 30,000# SWG Pavement Design
- Non-Precision Instrument (NPI) Markings
- Runway Edge Lighting (LED)
 - High Intensity Runway Lights – (HIRL) - Edge & Threshold Lighting (pilot-activated)
- 2-Box Precision Approach Path Indicators (PAPI)
- Runway End Identifier Lights (REIL)



EXISTING CONDITIONS

Airfield (Airside)

- Parallel Taxiway - 35' wide
 - Full length parallel taxiway
 - 240' runway separation
 - 90-degree connector (1) to runway
 - 45-degree connectors (4) to runway
 - Blue reflective markers
- Gravel Alternate Landing Area (ALA)
- Rotating Beacon, Wind Cone, Seg Circle



EXISTING CONDITIONS

Airfield (Landside)

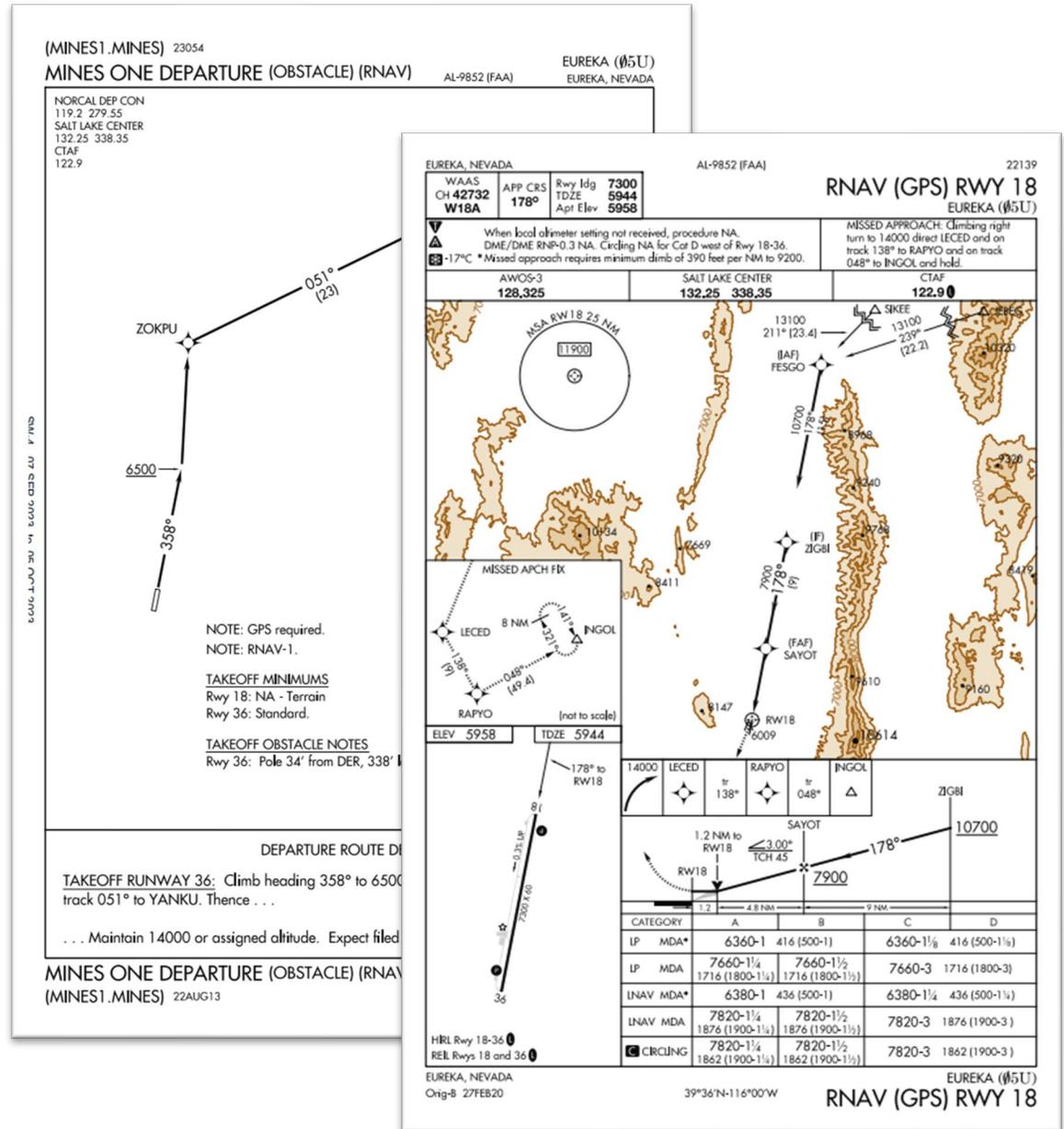
- Terminal Apron
 - 12 small airplane tiedowns
 - Aircraft fueling station - 2 above-ground fuel storage tanks (6,000 gallons each); 100LL and Jet A
- There is a 5,000 sq. ft. hangar
- Airport Fencing
 - 3-strand barbed wire surrounds property
- Real-time Weather
 - AWOS and ASOS onsite



EXISTING CONDITIONS

Instrument Flight Procedures

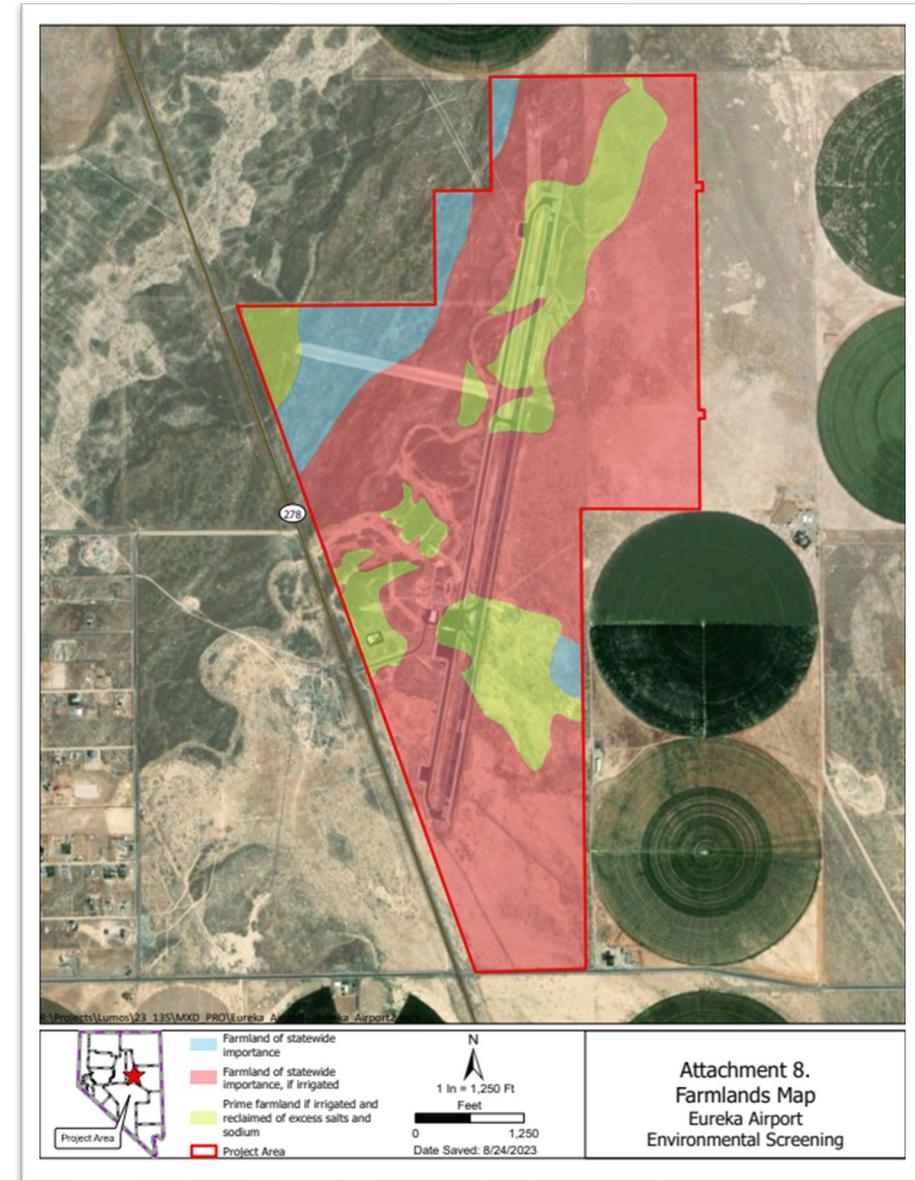
- Non-Precision approach procedures published
 - Straight-in and Circling procedures available
 - Minimums not lower than 1-mile
- Published departure procedure
 - RNAV/GPS departure to the north via ‘Mines One’



EXISTING CONDITIONS

Land Use

- Airport: Approximately 695 Acres (Owned by Eureka County)
- The Airport is in unincorporated Eureka County
- There are not land use controls in place in Eureka County
- The Airport property functions as aeronautical use but is located on agricultural land
- Surrounding properties are a mix of private and public (BLM) agricultural use land

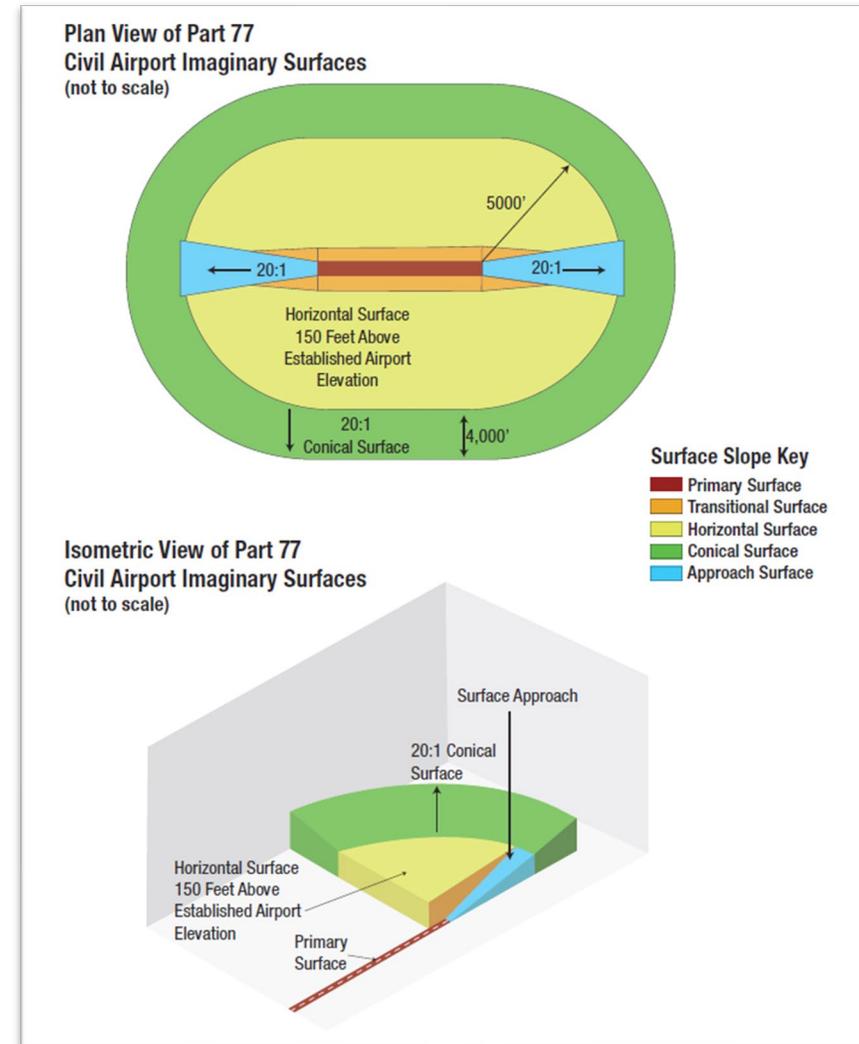


Source: RCI

EXISTING CONDITIONS

Land Use Control

- No zoning ordinances published in County Code, including airport overlay zones
- 14 CFR Part 77
 - The central regulation governing airspace protection that lists requirements for notifying the FAA of proposed construction
 - defines obstruction criteria, and describes aeronautical studies required to assess hazard status



FAA CRITICAL AIRCRAFT DESIGNATION

The critical aircraft guides existing and future airport planning & design standards that will guide future improvements at the Airport

- Critical Aircraft are defined by
 - Aircraft Approach Category (AAC)
 - Based on approach speed
 - Airplane Design Group (ADG)
 - Based on wingspan
 - “Small” Category
 - Indicates MTOW 12,500 lbs or less
 - Combining AAC, ADG, (and “Small” if applies) creates Airport Reference Code (ARC)
 - No longer an official FAA standard, but still used informally

Aircraft Approach Category	Aircraft Approach Speed	Airplane Design Group	Aircraft Wingspan
A	Less than or equal to 91	I – Existing/Future	Less than or equal to 49'
B	92 to 121	II – Previous	50' to 79'
C	122 to 141	III	80' to 118'
D	142 to 166	IV	119' to 171'

A-I (small) 12,500 lbs. or less	 <p>Beech Baron 55 Beech Bonanza Cessna 182 Piper Archer</p>	B-I (small) 12,500 lbs. or less	 <p>Beech Baron 58 Beech King Air C90 Cessna 402 Cessna 421</p>	A-II, B-II 12,500 lbs. or less	 <p>Beech Super King Air 200 Pilatus PC-12 DHC-6 Twin Otter Cessna Caravan</p>
ARC - B-II Greater than 12,500 lbs.	 <p>Super King Air 300, 350 Beech 1900 Cessna Citation Falcon 20, 50</p>	A-III, B-III Greater than 12,500 lbs.	 <p>DHC Dash 7, Dash 8 Q-200, Q-300 DC-3 Convair 580</p>	C-I, D-I	 <p>Lear 25, 35, 55, 60 Israeli Westwind HS 125-700</p>
C-II, D-II	 <p>Gulfstream II, III, IV Canadair 600 Canadair Regional Jet Lockheed JetStar</p>	C-III, D-III	 <p>Boeing Business Jet Gulfstream 650 B 737-300 Series MD-80, DC-9</p>	C-IV, D-IV	 <p>B - 757 B - 767 DC - 8-70 DC - 10</p>

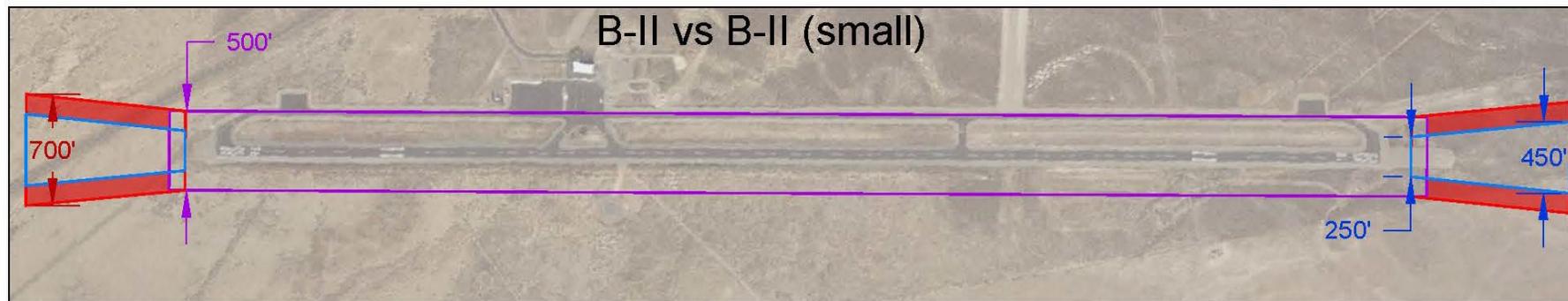
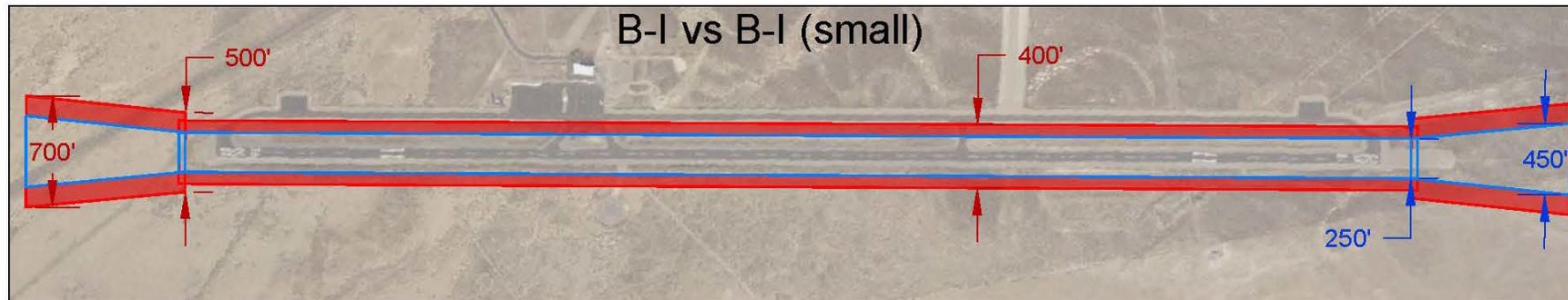
CRITICAL AIRCRAFT

- The 2015 ALP provides the most recent assessment of critical aircraft
 - Beechcraft Baron is listed as existing critical aircraft
 - Listed on ALP as ARC B-I
 - Baron is ARC B-I (small)
 - ≤12,500 lbs
 - Beechcraft King Air 200 is listed as future critical aircraft
 - Listed on ALP as ARC B-II
 - King Air 200 is ARC B-II (small)
 - ≤12,500 lbs

AIRPORT DATA			
EUREKA AIRPORT (05U)			
CITY: EUREKA, NEVADA		COUNTY: EUREKA, NEVADA	
RANGE: 53 EAST	TOWNSHIP: 20 NORTH	CIVIL TOWNSHIP: EUREKA COUNTY	
		EXISTING	ULTIMATE
AIRPORT SERVICE LEVEL		GENERAL AVIATION	GENERAL AVIATION
AIRPORT REFERENCE CODE		B-I	B-II
DESIGN AIRCRAFT		BEECH BARON	KING AIR 200
AIRPORT ELEVATION		5942.0' MSL	5942.0' MSL
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH		85.7' F (JULY)	85.7' F (JULY)
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD)	LATITUDE	39' 36' 13.48" N	39' 36' 21.16" N
	LONGITUDE	116' 00' 13.02" W	116' 00' 18.28" W
AIRPORT AND TERMINAL NAVIGATIONAL AIDS		ROTATING BEACON-AIRPORT PAPI-AIRPORT AWOS-AIRPORT	ROTATING BEACON PAPI AWOS GPS

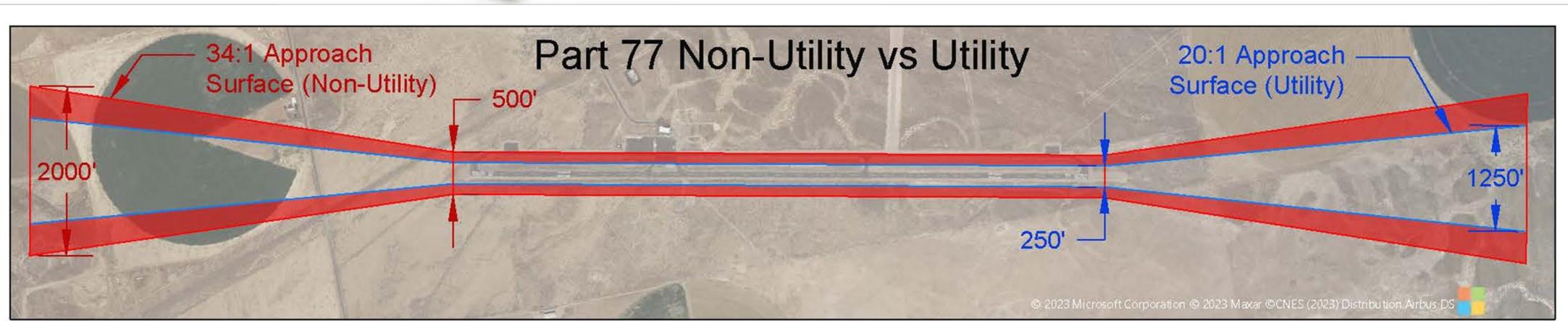
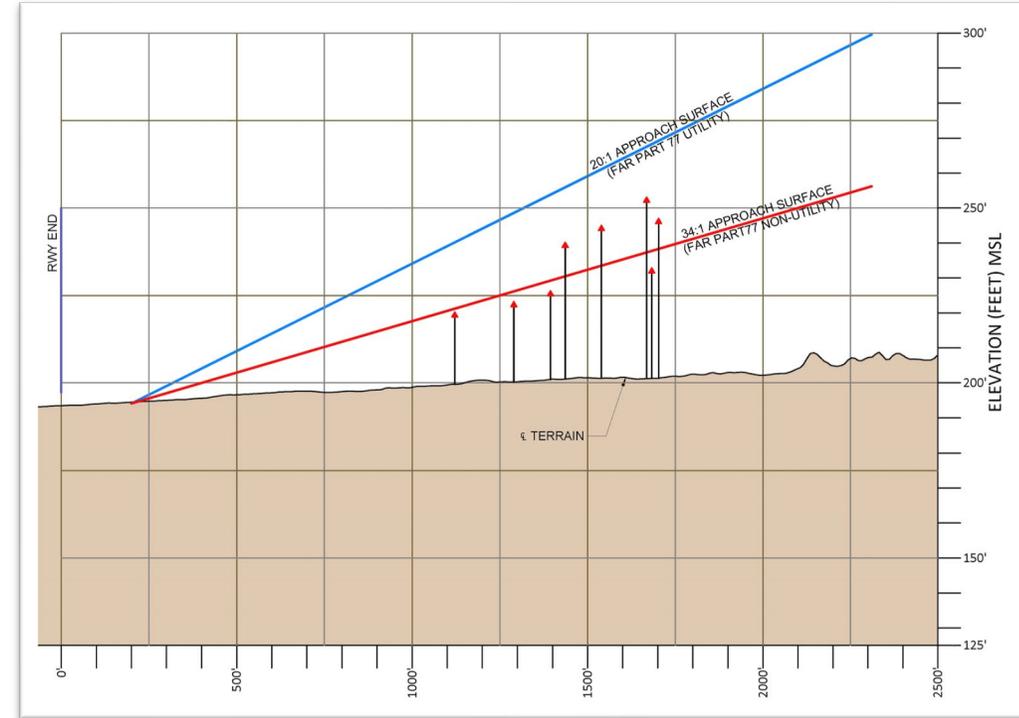
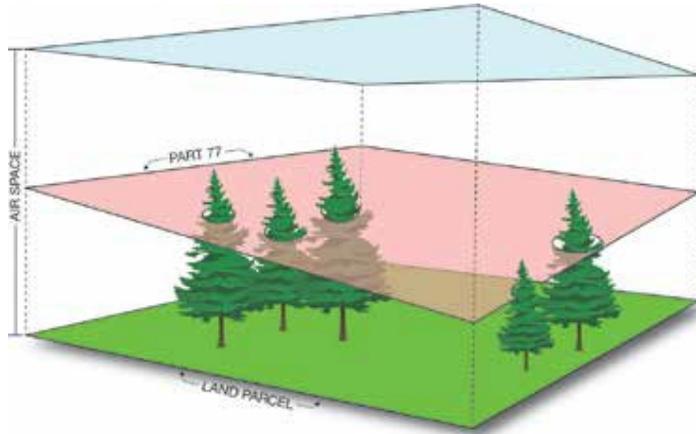
DESIGN AIRCRAFT

- Why does it matter?



DESIGN AIRCRAFT

- Why does it matter?



DESIGN AIRCRAFT

- ARC B-I(small) and B-II(small) are the appropriate classifications for Eureka
 - All based aircraft are SEP
 - It is understood that most transient aircraft visiting the Airport are SEP and small turboprops
 - Medevac (PC-12) and occasional small corporate aircraft are the most demanding
 - A review of TFMSC (flight plans) data reveal only a limited number of large category aircraft with negligible growth over seen over the past 10 years

DESIGN AIRCRAFT

- Existing Design Aircraft
 - Beechcraft Baron 58
 - ARC B-I(small)

- Future Design Aircraft
 - Beechcraft King Air 200
 - ARC B-II(small)



FACILITY GOALS AND REQUIREMENTS

Facility Goals

The goals, policies, and objectives developed in response to issues/opportunities identified in the Existing Conditions Analysis

Facility Requirements

The facility improvements required to satisfy identified capacity/demand requirements and FAA standards

FACILITY GOALS AND REQUIREMENTS

REGIONAL SETTING

Facility Requirement:

- Maintain B-I (small) status and monitor for signs of growth towards B-II (small)



FACILITY GOALS AND REQUIREMENTS

REGIONAL SETTING

Facility Goals

- Investigate basing medevac service at the Airport to better serve the community's emergency medical needs
- Update local and state system plans to reflect the recommendations of this ALP Update
- Work with Local, State and Federal agencies to conduct appropriate environmental evaluations and permitting for future development projects
- Coordinate with State DOT on future transportation improvements on Highway 50 and Highway 278
- Work with Eureka County to codify CFR 14 Part 77 airspace surfaces as airport overlay zoning to protect the airspace of Eureka Airport from incompatible development

FACILITY GOALS AND REQUIREMENTS

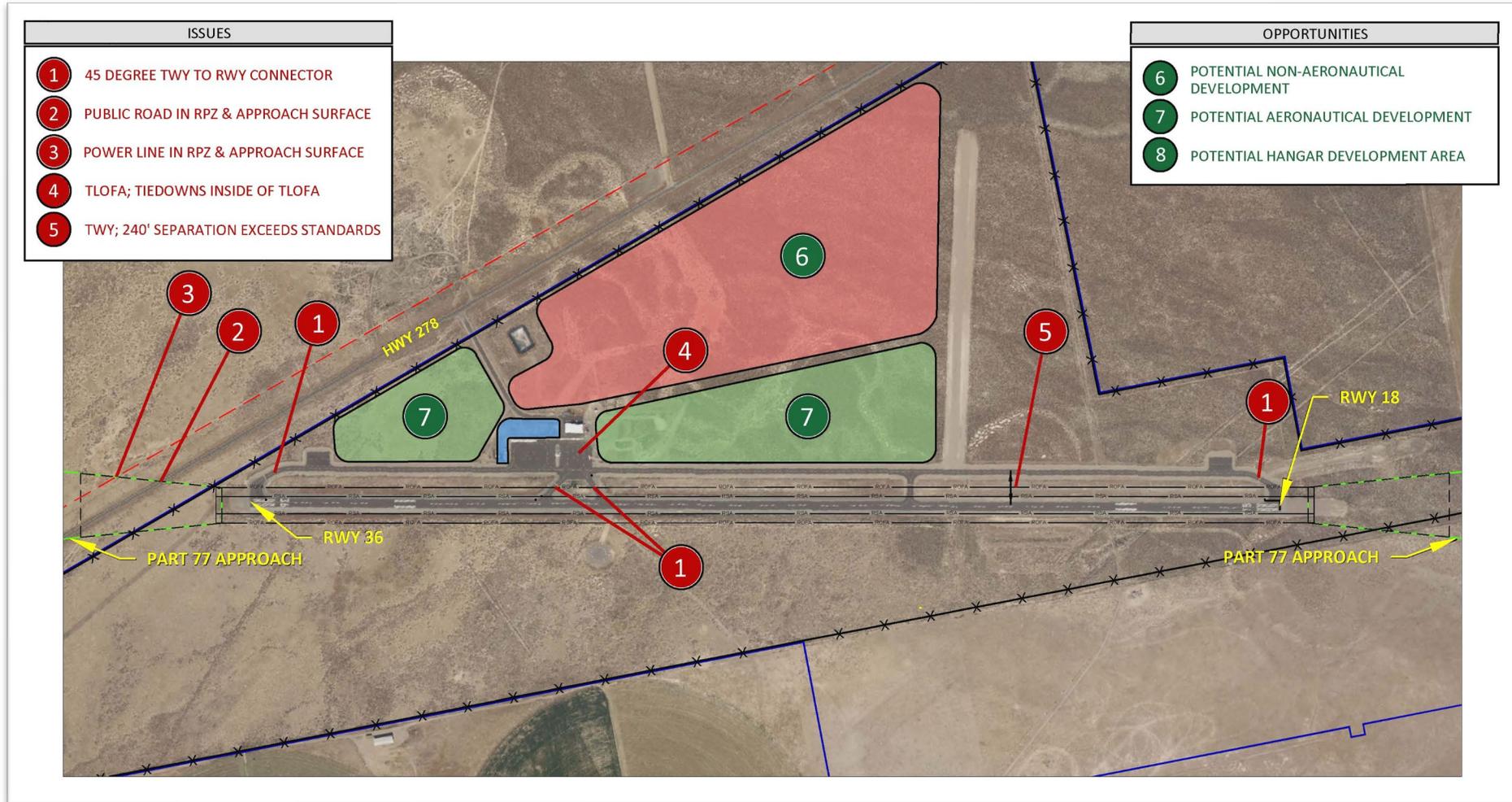
AIRSIDE - RUNWAY

Facility Requirement:

- Evaluate all airspace surfaces and mitigate any obstacles identified
- Maintain the current runway orientation to provide adequate wind coverage
 - Crosswind runway is not justified
- Maintain current runway 7,300' x 60' configuration in near term
 - Widen runway to 75' if B-II(small) status reached
- Maintain current 30,000 lbs (SWG) pavement strength through useful life of runway
 - At reconstruction the pavement should be designed to match the needs of the fleet operating at that time
- Mitigate incompatible land uses present in RPZs
- Protect FAA runway design surfaces with all future development

FACILITY GOALS AND REQUIREMENTS

AIRSIDE - RUNWAY



FACILITY GOALS AND REQUIREMENTS

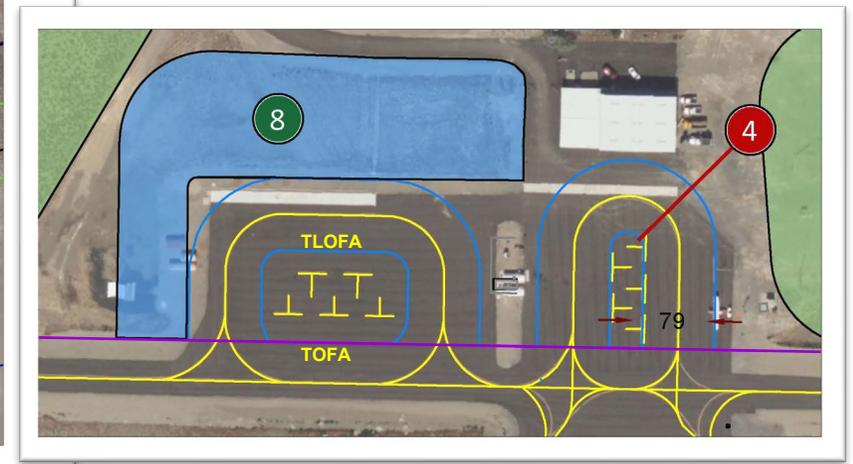
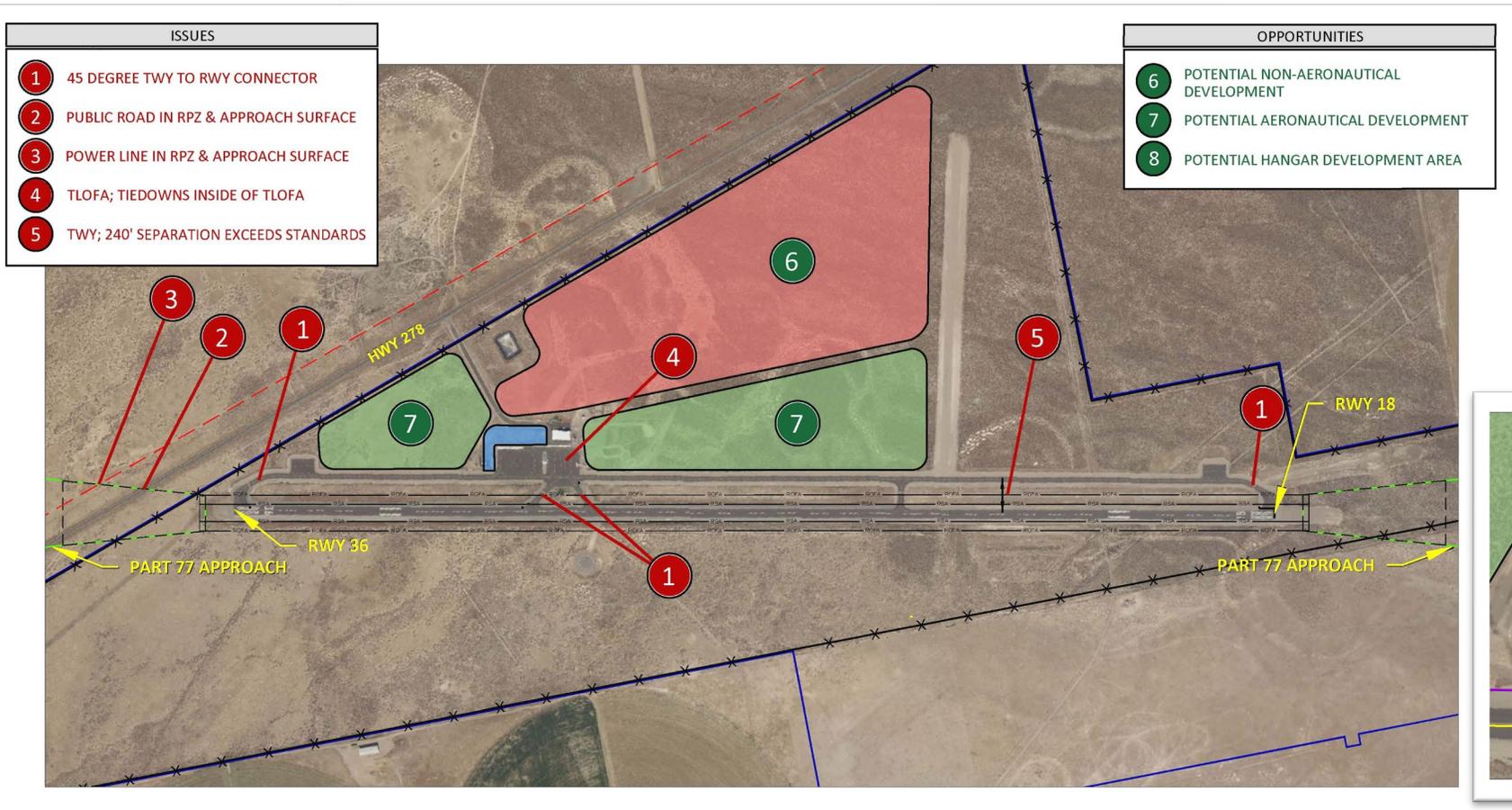
AIRSIDE – TAXIWAYS & TAXILANES

Facility Requirement:

- Maintain 35' taxiway width and 240' runway separation in anticipation of future B-II(small) configuration
 - Work with FAA to determine funding requirements
- Reconfigure 45° connector taxiways to 90°
- Address TLOFA penetrations by aircraft parking on apron

FACILITY GOALS AND REQUIREMENTS

AIRSIDE – TAXIWAYS & TAXILANES



FACILITY GOALS AND REQUIREMENTS

AIRSIDE – APRON AND TIEDOWNS

Facility Requirement:

- Maintain a total of at least 9 tiedown parking locations to meet current demand
 - 4 for based aircraft, 5 for transient aircraft

Facility Goals

- Establish 1 dedicated helicopter parking position separated from the fixed wing parking to accommodate transient helicopters

FACILITY GOALS AND REQUIREMENTS

LANDSIDE

Facility Requirement:

- The existing terminal building should be maintained and updated as needed; adequate space for future business and commercial uses to accommodate changing market demand should be identified

Facility Goals

- Identify hangar development lease areas to provide additional aircraft storage and generate additional income
- Install wildlife fence around airport perimeter
- Maintain existing vehicle access from HWY 278 and update as needed
- Pave existing vehicle parking area and provide additional parking as needed with future development
- Establish municipal water service at the Airport

FACILITY GOALS AND REQUIREMENTS

AIRFIELD SUPPORT FACILITIES

Facility Requirement:

- Monitor and maintain airfield pavements in conjunction with the NDOT Airport Pavement Management System
- Maintain existing lighting, signage, and NAVAID systems and update with changes to airfield configuration

Facility Goals

- Enable upload of AWOS/ASOS data to NOAA
- Maintain current fuel system
 - Investigate establishing FBO presence to manage fuel sales and other services

NEXT STEPS

PAC Meeting #2

- **Development Alternatives**
 - Evaluate Preliminary Alternatives
 - Select Preferred Alternative



QUESTIONS?

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<https://www.eurekacountynv.gov/departments/public-works/eureka-county-airport/>