

Airport Master Plan

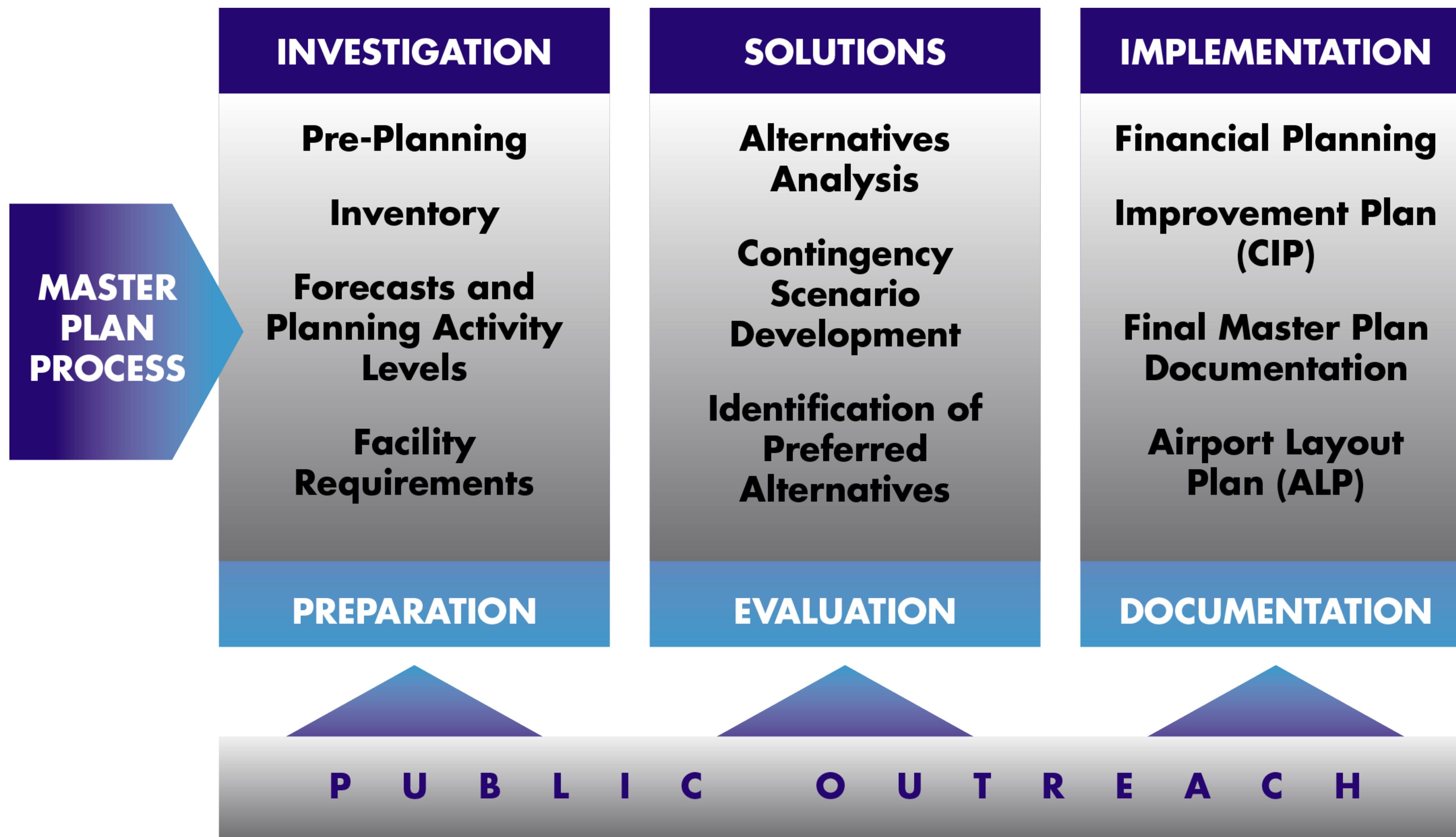
Open House

Buena Vista Community Center

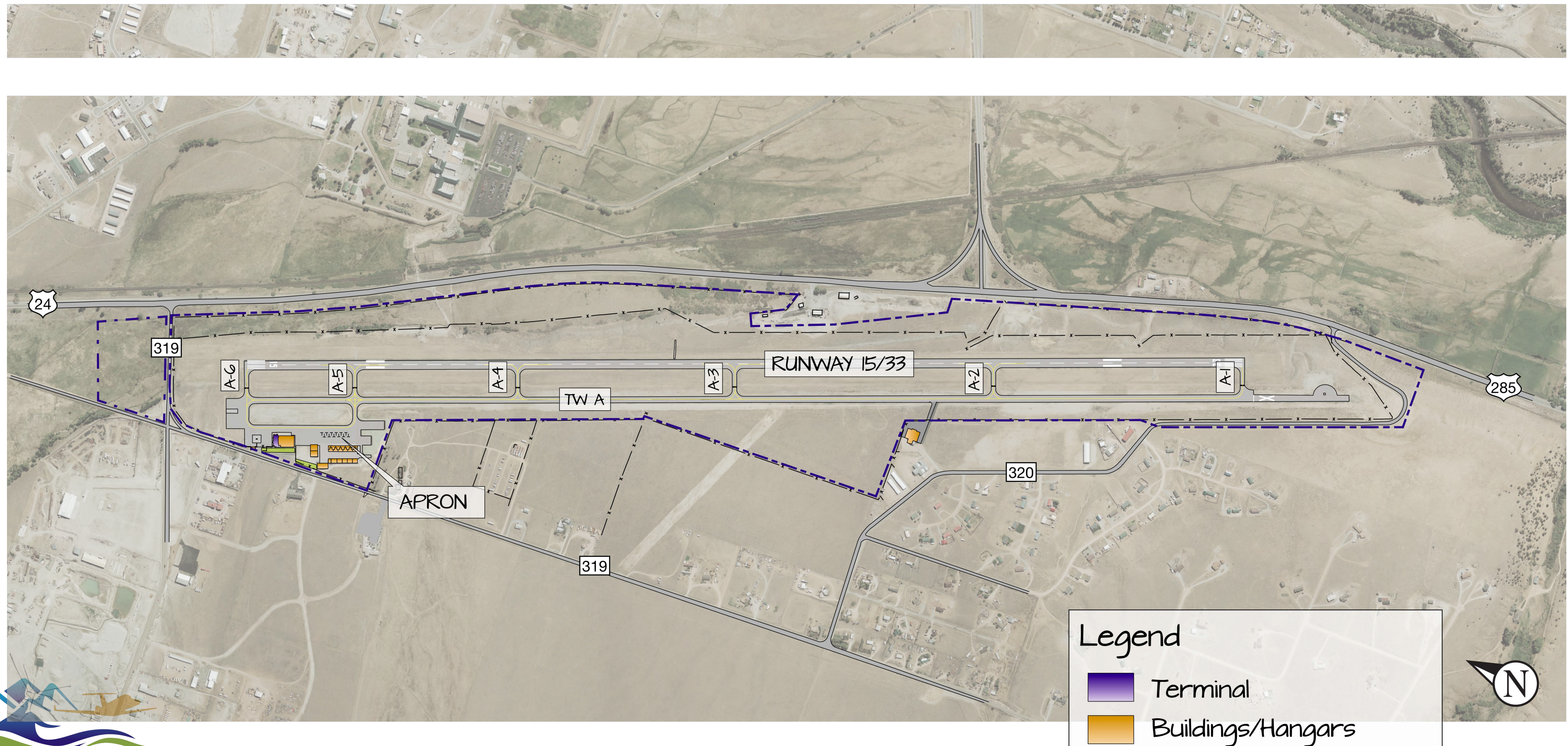
March 9, 2015



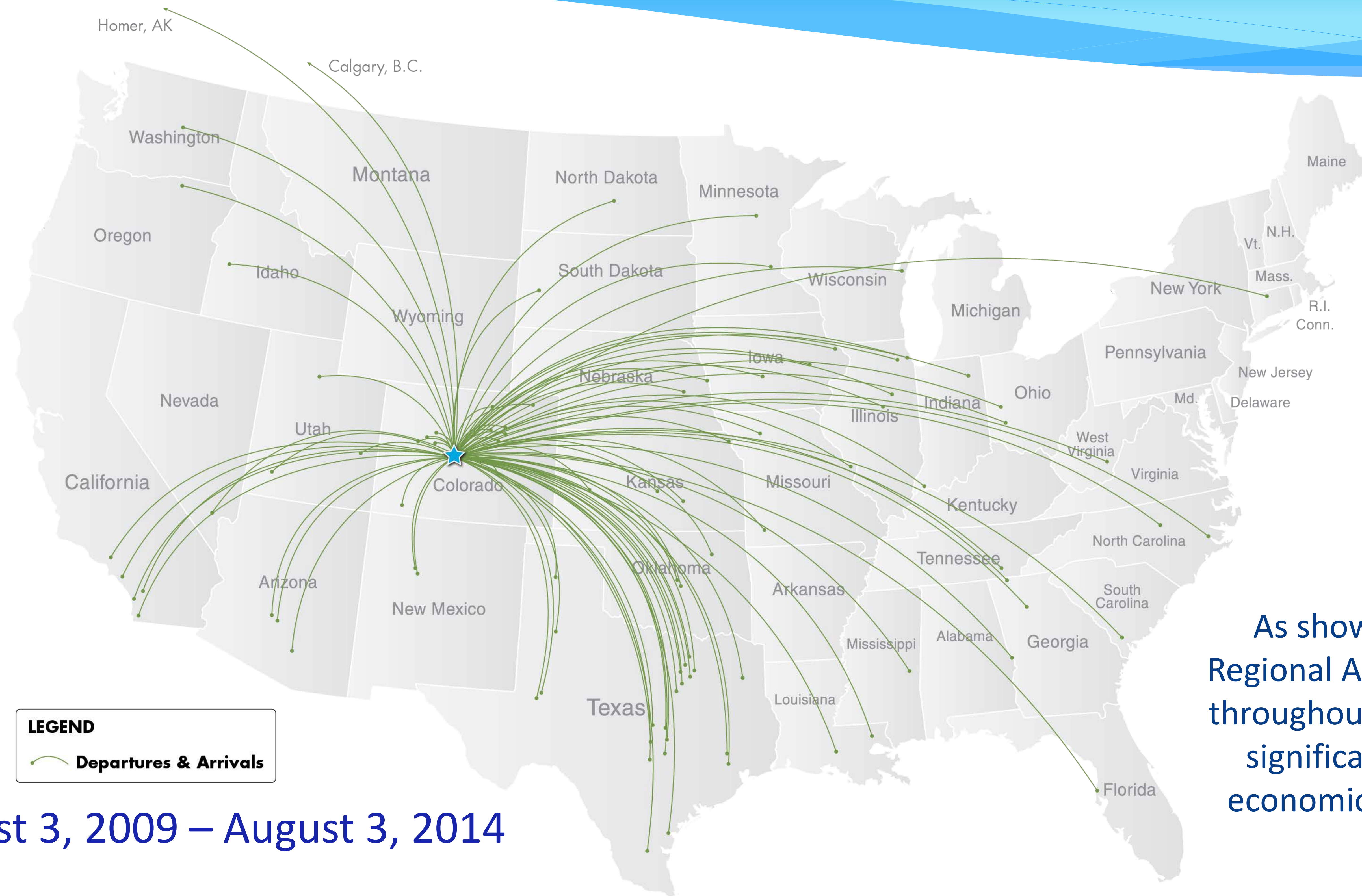
Master Plan Process



Airport Overview



Instrument Flight Rules (IFR) Flight Map – each route shown represents a destination



August 3, 2009 – August 3, 2014

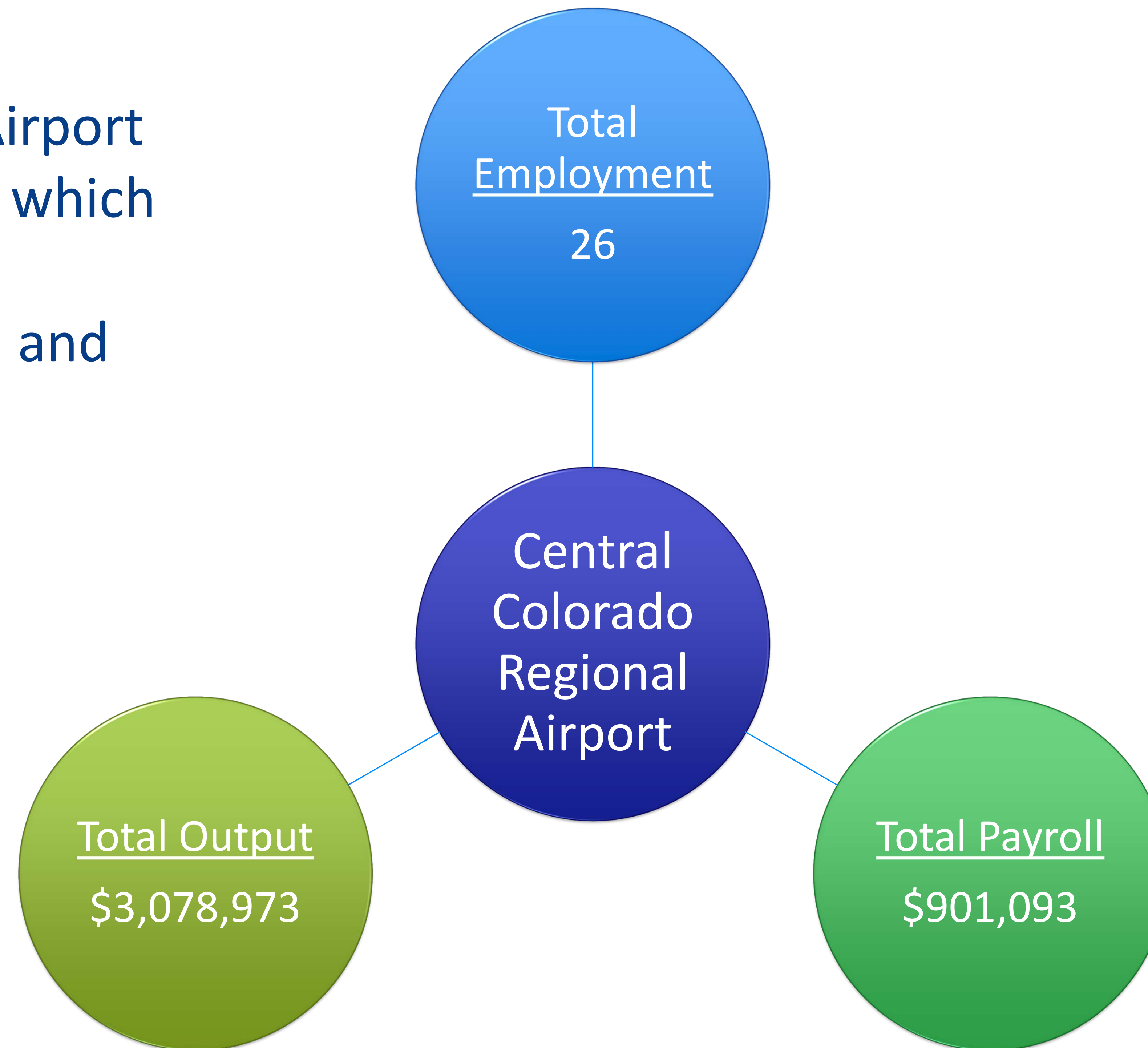
As shown, the Central Colorado Regional Airport has a broad reach throughout the nation, making it a significant asset for viability and economic health of the town and county.



Airport Economic Impact – Total Annual Output with Multiplier Effect

Multiplier Effect:

Initial economic impacts from Airport enter economy and re-circulate which generate successive rounds of spending, employment, payroll, and output.



Source: CDOT, Division of Aeronautics, Economic Impact Study, 2013

High Altitude & Military Testing

- Constant since 2002
- Typically during summer months (June – September)
- Augusta, Bell, Boeing, Sikorsky, Qinetiq, and the U.S. Army, Air Force, & Navy Seals
- Huge economic impact to Buena Vista annually due to the amount spent by companies during testing.



Aviation Forecast



Why Prepare Activity Forecasts?

Forecasts are needed to define key Master Plan elements

- Facility Requirements & Operational Needs
- Identify Design Aircraft
- Aeronautical & Non-Aeronautical Revenue
- Operation & Maintenance and Capital Costs
- Environmental Planning
- Capital Improvement Program (CIP)
- Airport Layout Plan (ALP)

Forecasting sources & methods

- FAA Terminal Area Forecast (TAF) - 2014
- FAA Form 5010-1, Airport Master Record
- FAA Advisory Circular 150/5070-6B, Airport Master Plans
- ACRP – Airport Aviation Activity Forecasting
- ACRP – Counting Aircraft Operations at Non-Towered Airports
- CDOT Aeronautics' State Aviation System Plan - 2011
- Forecasting Aviation Activity by Airport, GRA, Inc.

Factors Influencing Aviation Activity at AEJ

- Aviation fuel prices
- Availability of 100LL avgas and a drop-in replacement
 - Drop in replacement means another fuel can be used in the same storage tanks and aircraft engines with no modifications
- Cost of airplane ownership: acquisition, maintenance, storage, insurance, etc.
- Airport and/or airspace security regulations
- Number of licensed pilots and pilot demographics
- Demographic and Socioeconomic trends
- Regional airport competition

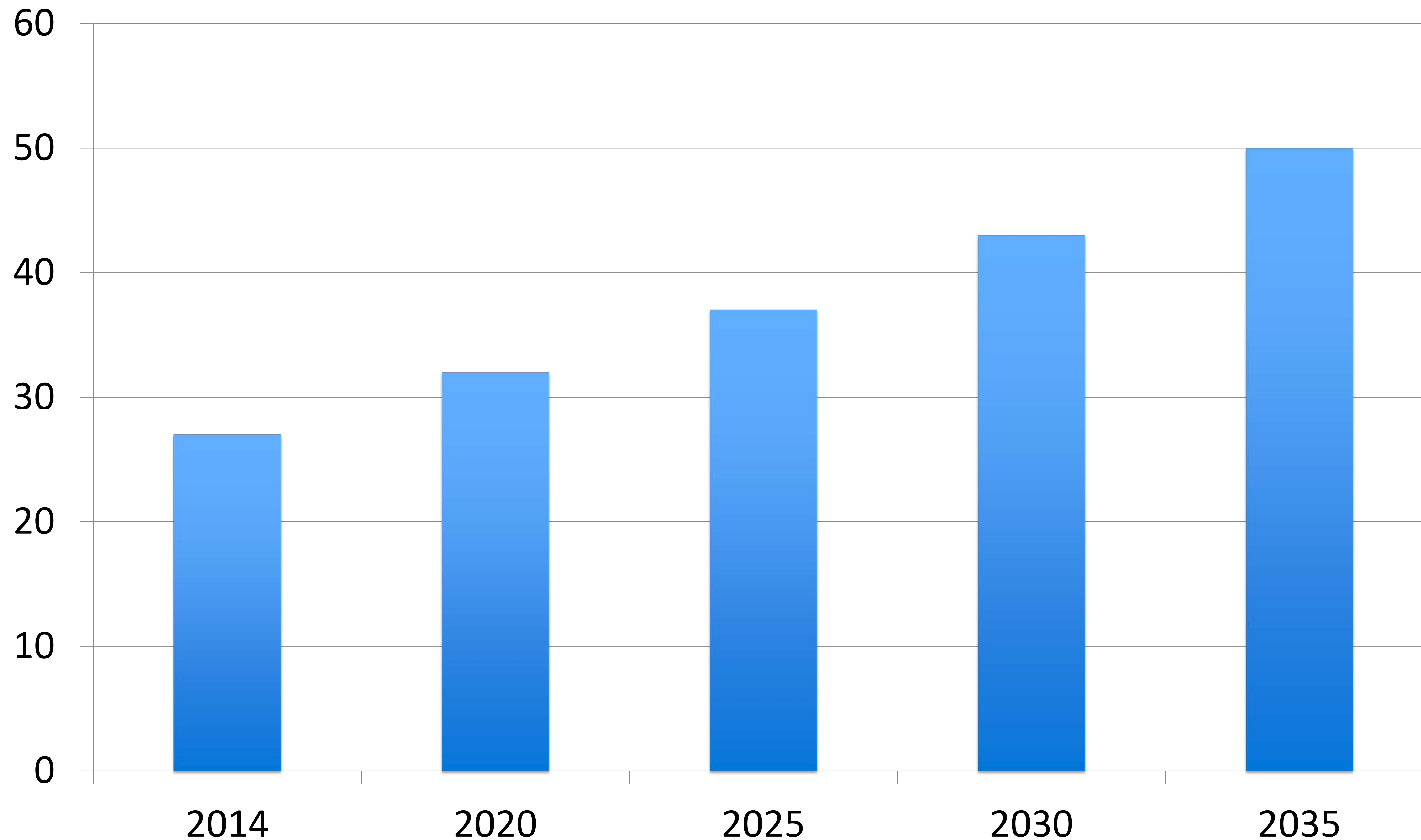


Conclusions

- Likely that a combination of some downward pressures on GA activity will be offset by positive developments.
- Status Quo/Slow Growth best represents the future level of activity at AEJ through 2035.
 - Likely actual activity levels will fluctuate over time, trending upwards over the long-term
 - Based aircraft and operations will continue to increase due to:
 - Continued growth of Chaffee County
 - Strong tourist market
 - Transportation network access

Based Aircraft Forecast

Based Aircraft



- Growing at 2.9 percent annually
- 27 aircraft in 2014 to 50 aircraft in 2035
- Some growth attributed to immigration of aircraft owners.

Note: Forecast pending FAA review and approval.

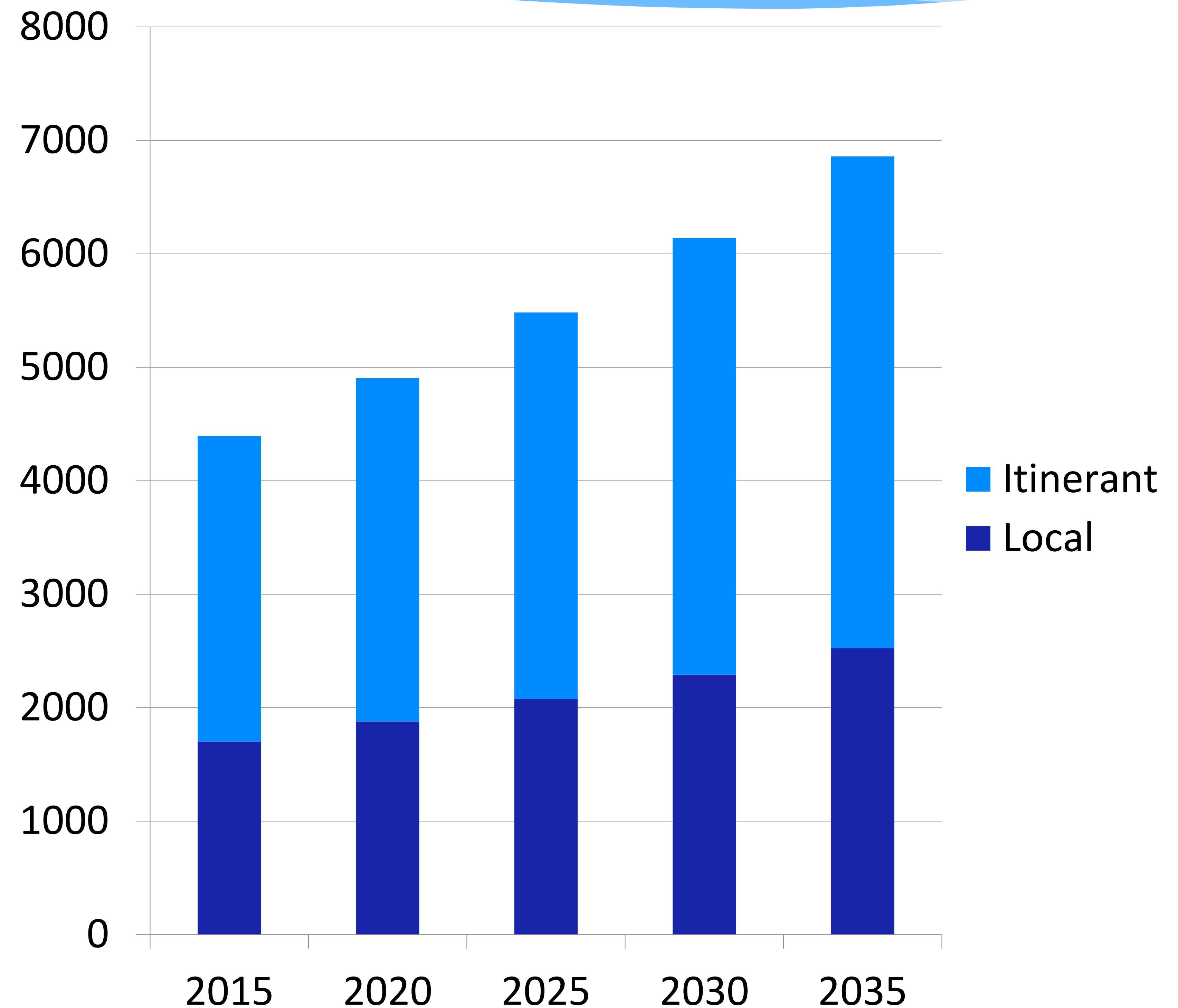
Operations Forecast

→ Growing at 2.3 percent annually

❖ From 4,392 to 6,859 in 2035

→ Local vs. Itinerant Operations

❖ Itinerant activity expected to increase twice as fast as local activity



Note: Forecast pending FAA review and approval.

Critical Aircraft and Runway Design Code (RDC)

→ Most demanding aircraft or family of aircraft that account for at least 500 annual operations.

→ Currently: Cessna Citation CJ2

- Aircraft Approach Category (AAC) – B
- Airplane Design Group (ADG) – II








→ Future: ***Maintain the current RDC of B-II***

Inventory & Facility Requirements



Runway Design Code

Made up of 3 components: Aircraft Approach Category (AAC), Airplane Design Group (ADG), and instrument approach visibility minimums

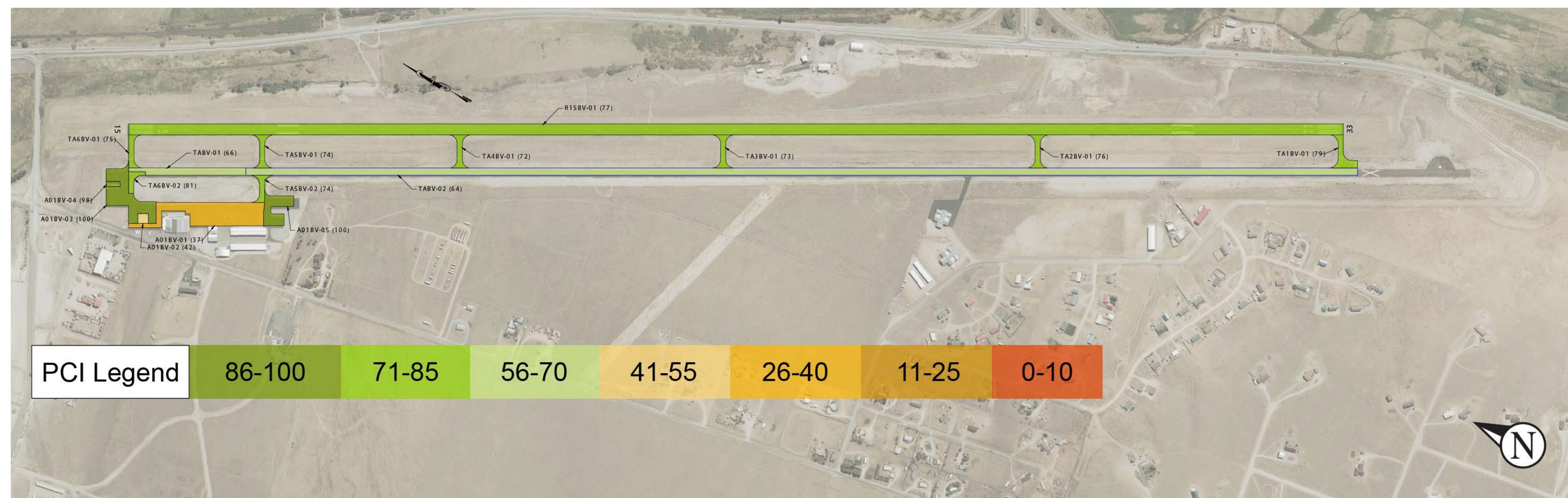
SINGLE ENGINE Aircraft Design Group A1	 Cessna 150	 Cessna Caravan	<ul style="list-style-type: none">→ Small aircraft typically used for flight training and personal use.
MULTI ENGINE Aircraft Design Group A1-C1	 Piper Navajo	 Cessna 402	<ul style="list-style-type: none">→ Aircraft having more than one engine but aren't jets.→ Typically larger and faster than single engine aircraft.→ Used for both personal and commercial operations.
TURBO PROP Aircraft Design Group B1-B11	 Cessna 208B-Grand Caravan	 King Air 100	<ul style="list-style-type: none">→ Can be both single and multi-engine aircraft.→ Rather than being powered by a piston, these aircraft have a propeller driven by a turbine engine.→ These aircraft are typically faster and more demanding than a piston powered airplane.→ Frequently used in commercial operations and as charter and business aircraft.

Airport
Reference
Code (ARC)
A-I to B-II

AEJ Meets
Current FAA
B-II Design
Criteria

Pavements

Item	Description
Runway 15/33	8,303 feet by 75 feet Asphalt Published Strength: 30,000 pounds Single Wheel (SW) and Dual Wheel Gear (DW)*
Taxiways	Parallel Taxiway A Connector Taxiways A1 through A6
Apron	General Aviation (GA) / Fixed Base Operator (FBO): 950 feet by 175 feet



*Airport has requested the FAA change the published strength to 45,000 pounds; currently under review.

Runway, Taxiway, & Apron Pavement Recommendations

→ Runway Recommendations:

- ❖ Blast pads
- ❖ Routine maintenance – crack/joint sealing

→ Taxiway Recommendations:

- ❖ Remove direct access from apron to runway (Taxiways A5 & A6)
- ❖ Routine maintenance – crack/joint sealing

→ Apron Recommendations:

- ❖ General Aviation apron rehabilitation prior to 2020
- ❖ Preventative maintenance and maintenance plan



Wind Coverage - Central Colorado Regional Airport

- According to FAA, desirable wind coverage is 95 percent during all weather conditions
- 10.5 and 13-knots are typically used as crosswind components for most critically affected aircraft (small aircraft)

All Weather	10.5-Knots	13-Knots	16-Knots	20-Knots
Runway 15/33	90.64%	93.95%	96.96%	98.93%

Sources: Mal Sillars, Consulting Meteorologist, and FAA AGIS Wind Rose Form, <https://airports-gis.faa.gov/airportsgis/publicToolbox/windroseForm.jsp>; Observations taken November 11, 2007 through October 20, 2014.

Runway Length & Orientation Recommendations



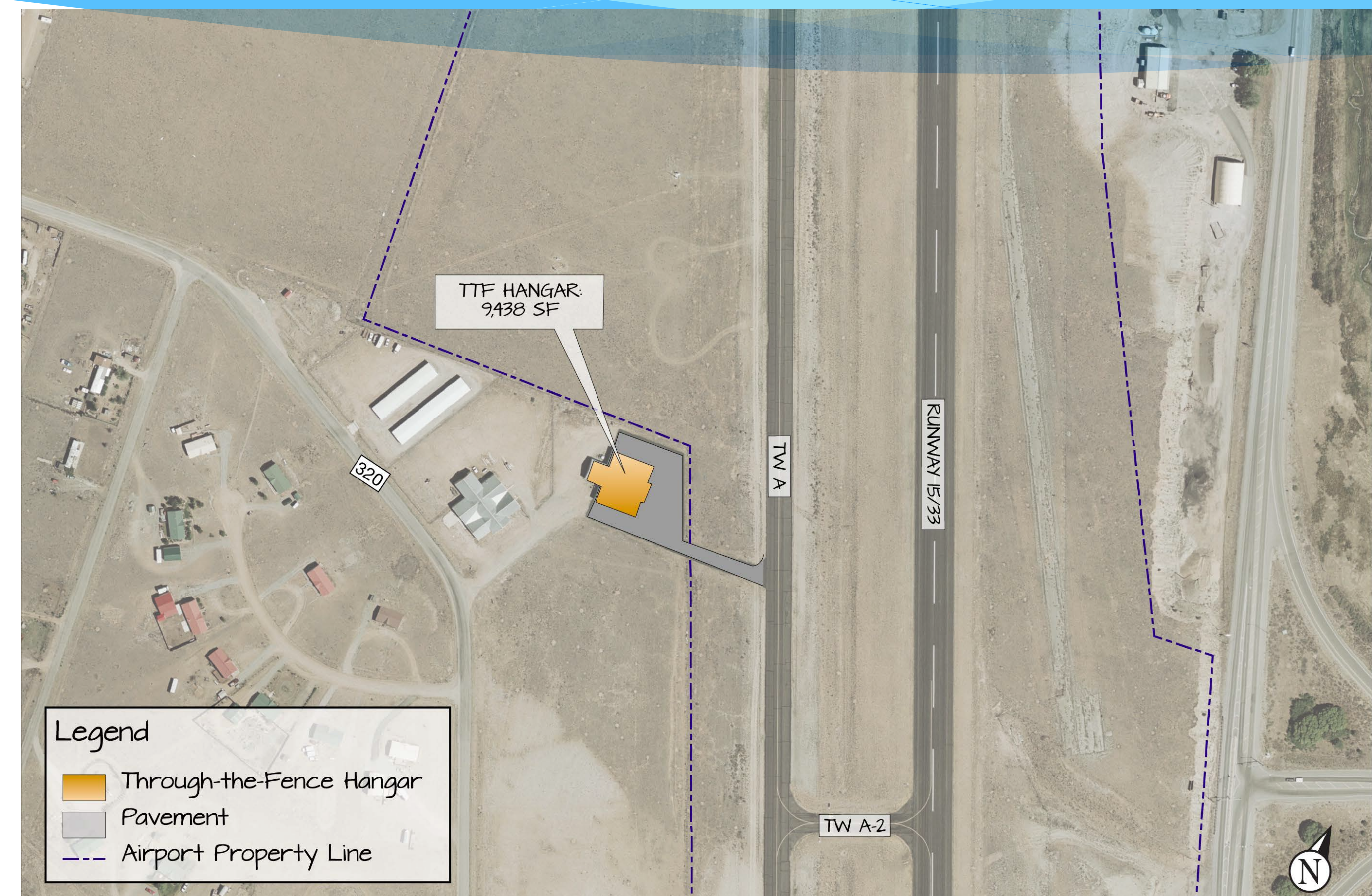
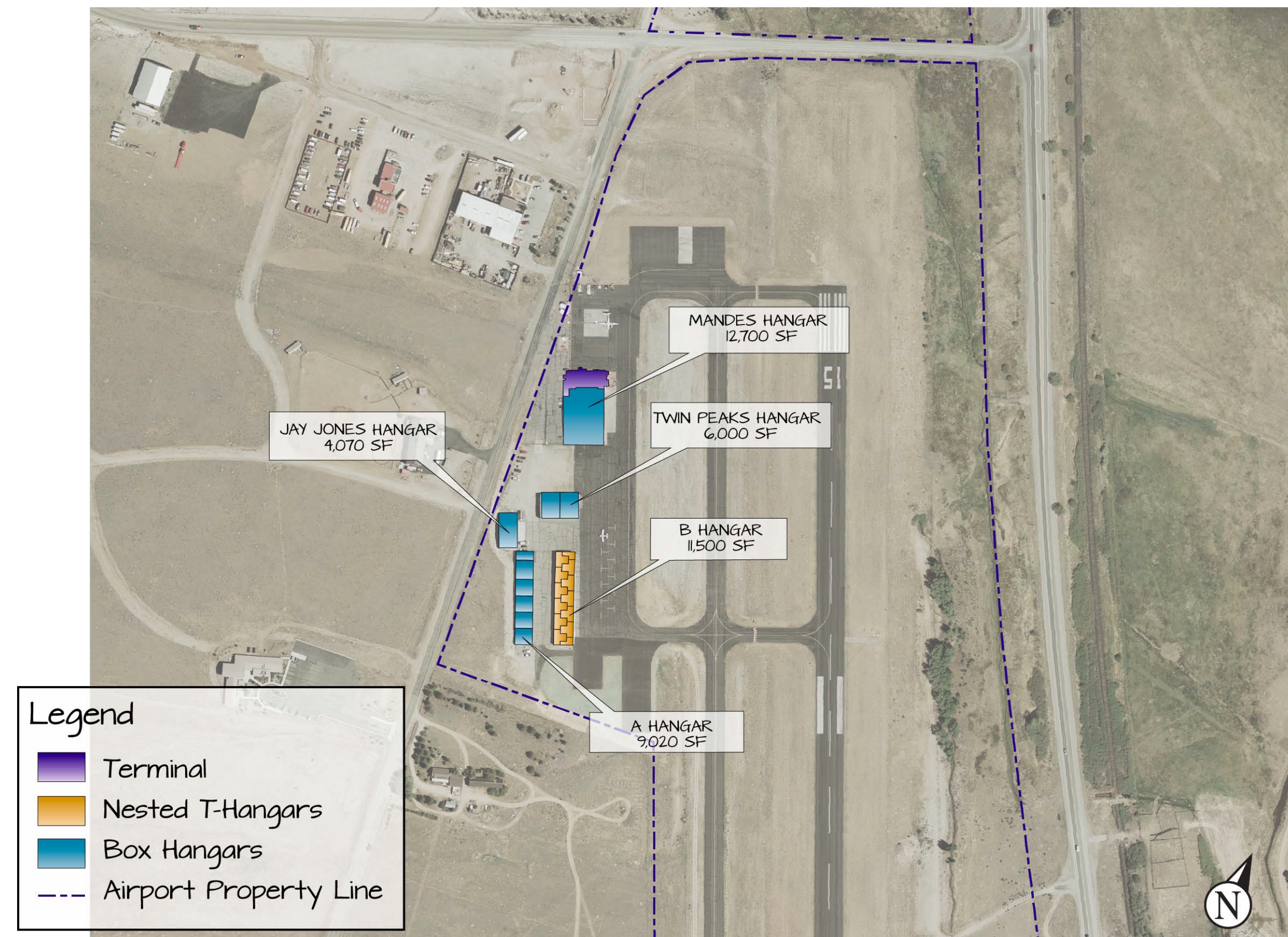
→ Runway Length:

- ❖ Current runway length is 8,303' and width is 75' which meets existing and future demand based upon the critical aircraft, Cessna Citation.

→ Runway Orientation:

- ❖ Current orientation of 15/33 is below the FAA's recommended 95% wind coverage for 10.5 and 13-knots
- ❖ A crosswind runway could be recommended within the planning period.
 - The FAA may not support due to higher funding priorities within the national system and limited funding for crosswind runways
 - A crosswind could be locally funded

Hangars

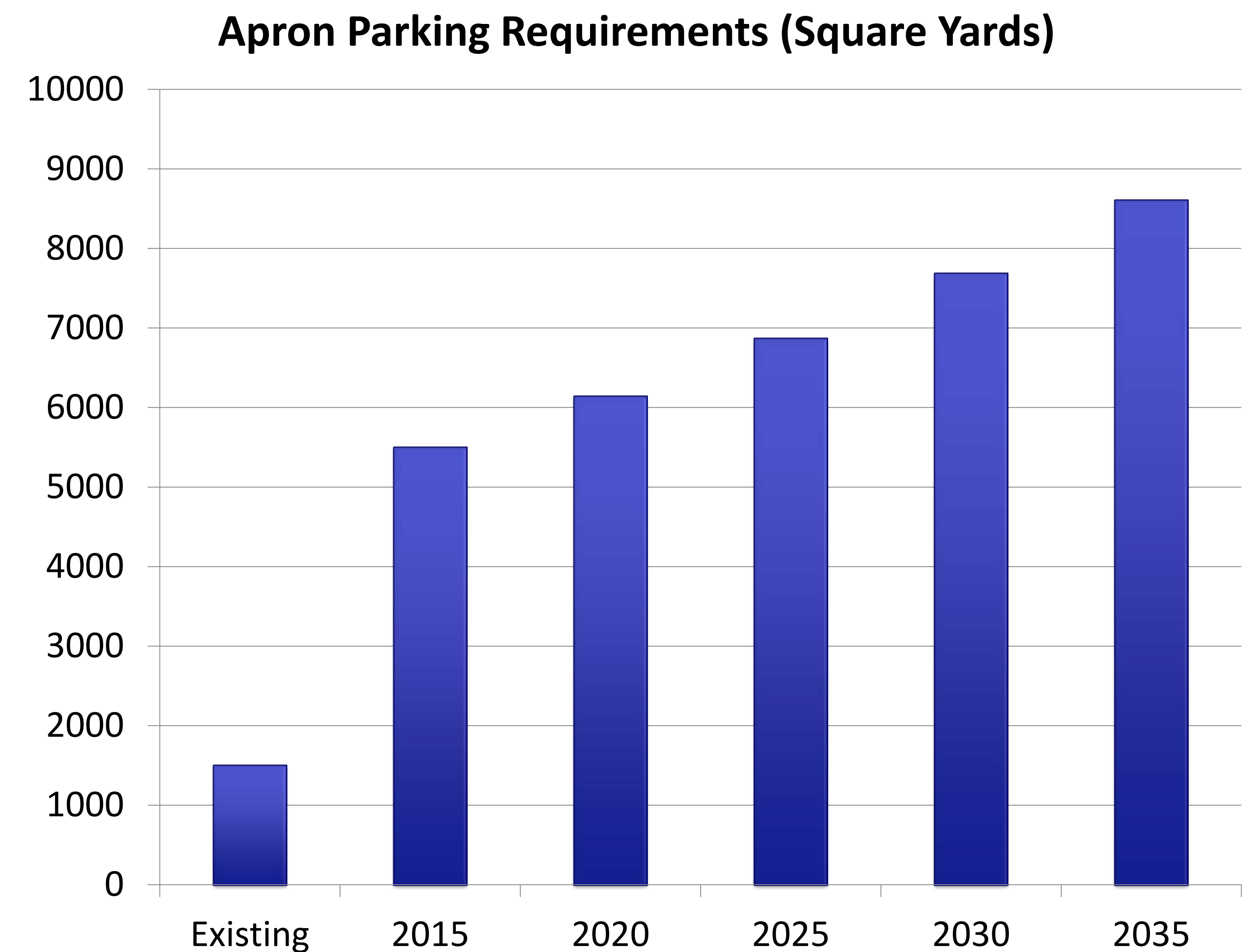
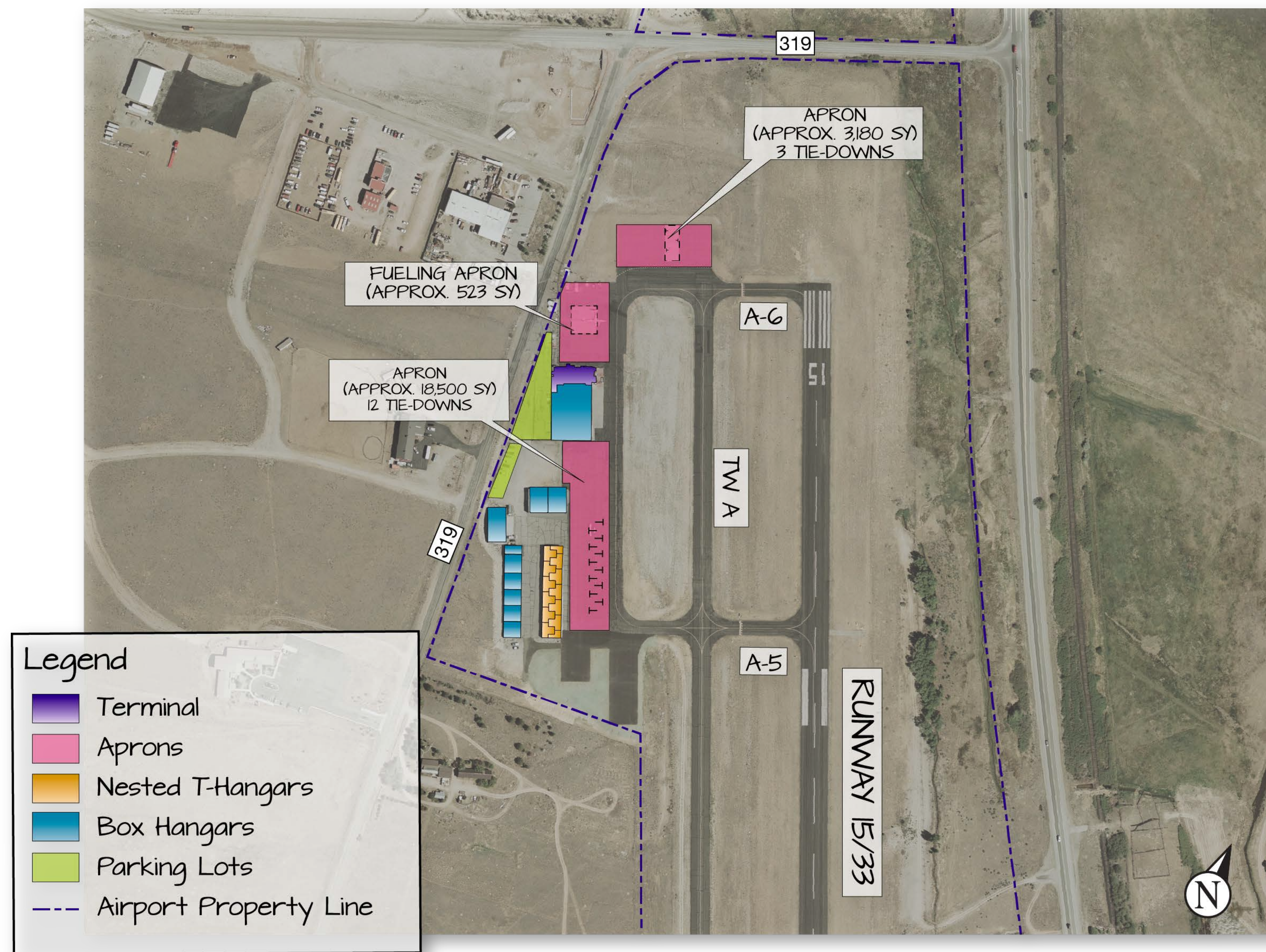


Type	Name	Units	Area (square feet)	Year Constructed	Condition	Utilities
Box	Mandes Hangar	1	12,700	1983	Fair	Electric
Box	Twin Peaks	2	6,000	2007	Good	Electric
Box	Jay Jones	1	4,070	2012	Excellent	Electric
T-hangar	B	11	11,500	2004	Good	Electric
Box	A	5	9,020	1985	Fair/Good	Electric
Box (Through-the-fence)	TTF	6	9,438	1995	Good	Electric

Hangar Needs

Year	Based GA Aircraft	Based GA Aircraft Using Tie-downs	Minimum Hangar Space (square feet)	Current Hangar Space (square feet)	Surplus or (Shortfall) (square feet)
2015	28	0	35,190	35,190	0
2020	32	0	40,217	35,190	(5,027)
2025	37	0	46,501	35,190	(11,311)
2030	43	0	54,042	35,190	(18,852)
2035	50	0	62,829	35,190	(27,649)

Apron Parking Requirements – based upon peak day transient aircraft



Approximately 7,112 additional square yards are needed by 2035.

Parking, Airport Support Equipment, & Facility Requirements

→ Auto Parking

- ❖ 35 existing spaces
- ❖ Additional 10 spaces are recommended by 2025 (45 total) & another 12 by 2035 (57 total)

→ Snow Removal Equipment

- ❖ Replacement of both plow trucks and 1987 dump truck with plow is recommended within the first 10 years.

→ Fuel Storage

- ❖ Replace single walled tanks with double walled tanks to meet current regulations/standards
- ❖ Expand fueling capacity to accommodate projected deficit (~10,000 gallons) by 2035

→ Deicing Facilities

- ❖ Assess feasibility of providing facilities upon an increase in demand

Environmental Overview

The Airport property and surrounding area was reviewed for the presence of numerous environmentally sensitive areas including those shown here. Although none were found based upon the desktop review, a wetland, biotic, and cultural resource survey is recommended prior to developing undisturbed areas on the airfield.

Endangered Species



Wetlands



Historic



Hazardous Materials

Schedule & Next Steps

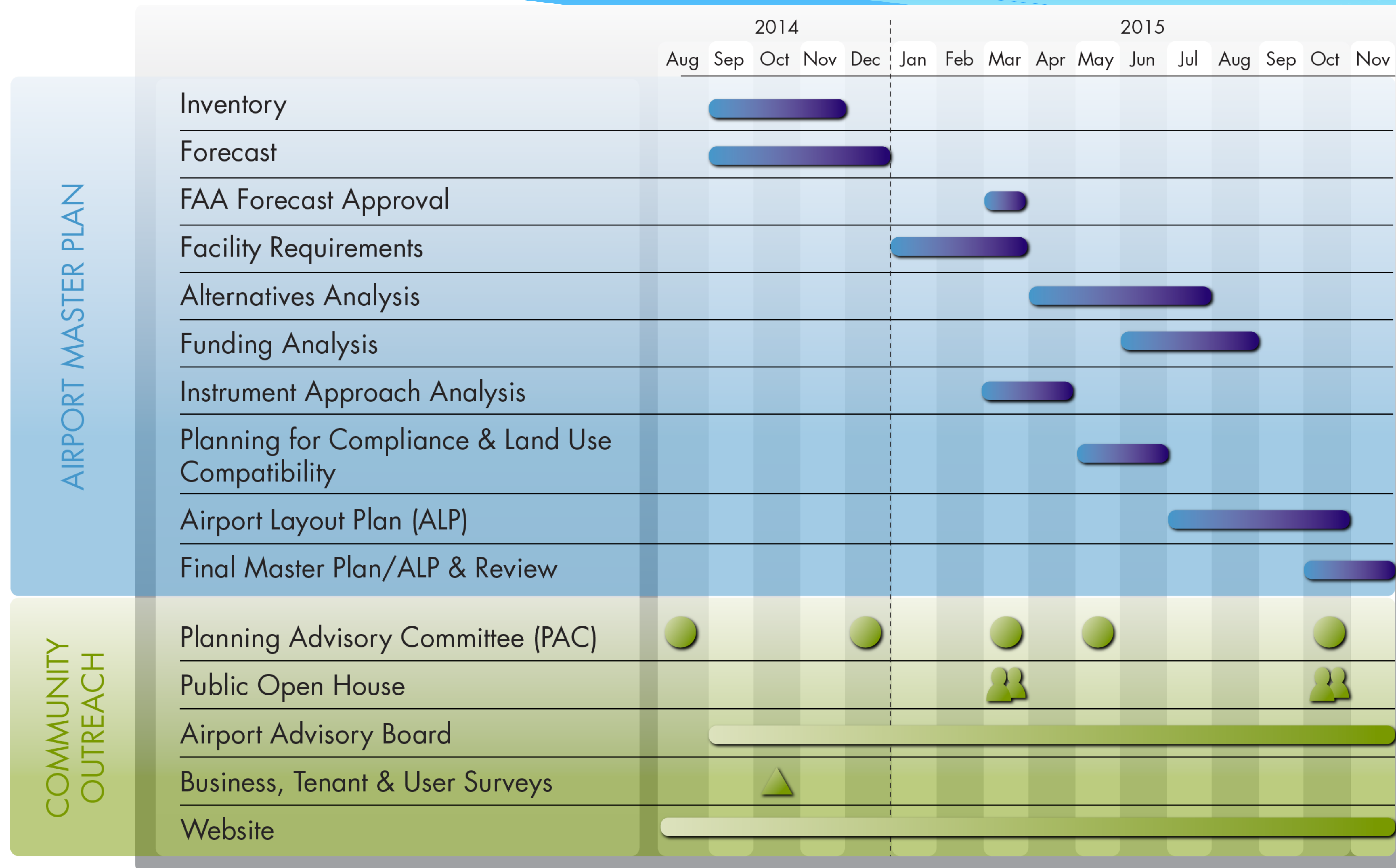


Airport Website:

<http://buenavistaco.gov/2144/Airport>



Master Plan Timeline



The Planning Advisory Committee is comprised of 17 members of the region who serve in the vital role of providing insight and feedback to the airport and consulting team throughout the planning process.

Next Steps

- Finalize Working Paper #2
 - ❖ Facility Requirements
- Instrument Approach Analysis
- Draft Working Paper #3
 - ❖ Alternative Analysis – identifies alternative ways to provide required/recommended facilities
- Planning for Compliance & Land Use Compatibility Analysis

Thank you!

Jill Van Deel, Airport Manager

bvairportinfo@buonavistaco.gov

719.395.3496 or 719.966.9098

Colleen M. Cummins, Project Manager

Colleen.Cummins@jviation.com

720.544.6508



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