



Tooele Valley Airport Master Plan Executive Summary

May 2024



RS&H



INTRODUCTION

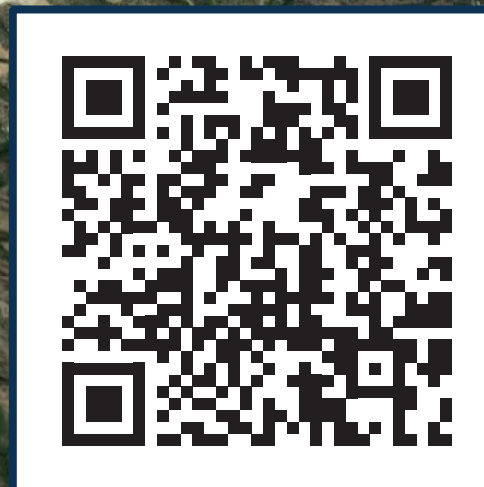
Tooele Valley Airport (TVY) is located west of the Oquirrh Mountains within the city of Erda, Utah, approximately 30 miles southwest of Salt Lake City. TVY is managed and operated by the Salt Lake City Department of Airports (SLCDA) which also manages and operates Salt Lake City International Airport (SLCIA) and South Valley Regional Airport (U42). The Utah Continuous Airport System Plan (UCASP) classifies TVY as a general aviation regional airport and the SLCDA Airports System Plan defines TVY's role as a general aviation reliever for SLCIA, the primary commercial service airport.

Salt Lake International Airport (SLC)
Primary Role - Commercial Service

Tooele Valley Airport (TVY)
Primary Role - General Aviation Reliever

South Valley Regional Airport (U42)
Primary Role - General Aviation Reliever

Scan the QR code with your device for TVY Master plan study documentation, as well as information about other airports within the SLCDA system.



STAKEHOLDER VISIONING

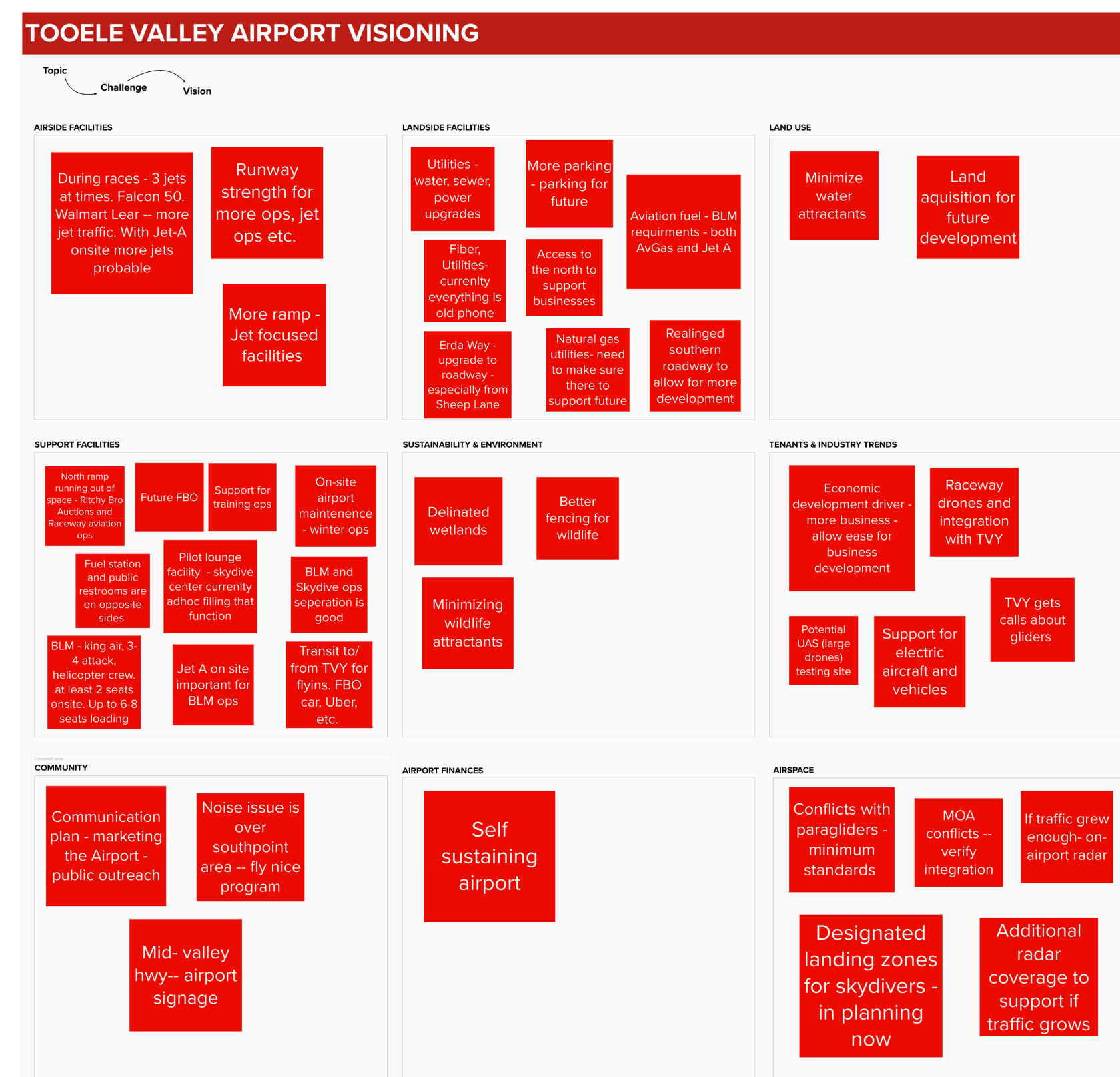


In October 2021, SLCDCA hosted a series of visioning charrettes with stakeholder groups to gather input aimed at helping shape future development at its two general aviation reliever airports: TVY and U42. The first charrette included key SLCDCA leaders from the Airport Master Plans Working Group (AWG) and addressed both airports. Other charrettes included airport-specific stakeholders from the established Technical Advisory Committees (TAC) and Policy Advisory Committees (PAC).

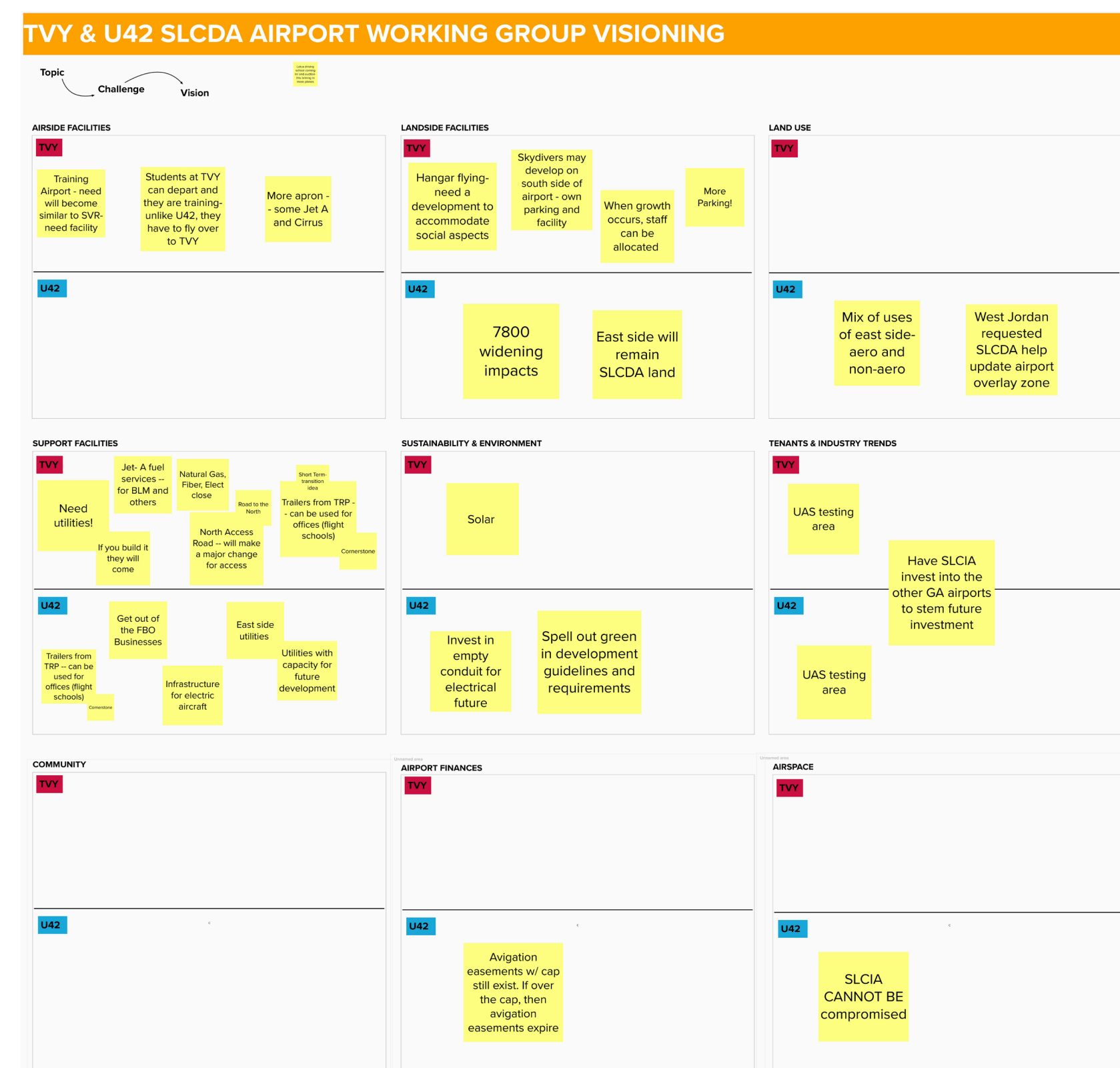
The overarching objective was to collaboratively define the development trajectory of U42 and TVY for the next two decades and beyond. Participants engaged in discussions covering various facets of airport development, including infrastructure upgrades, service enhancements, capacity planning, and community involvement. This dialogue, facilitated through a blend of in-person and virtual formats, fostered a rich exchange of ideas and perspectives, with stakeholders sharing their visions for the airports’ roles within the local community and broader aviation ecosystem.

The visioning charrettes provided a platform for stakeholders to voice their aspirations for these airports, emphasizing the importance of aligning airport development with the evolving needs and expectations of the surrounding communities. Discussions revolved around strategies to accommodate anticipated growth, improve service quality, and ensure the long-term sustainability of airport operations. Stakeholders highlighted the significance of maintaining a balance between infrastructure expansion and environmental stewardship, underscoring the importance of adopting sustainable practices in airport planning and development. These discussions demonstrated a shared commitment to fostering a thriving aviation environment that serves as a catalyst for economic growth and community well-being. Through this collaboration, the visioning process laid the groundwork for the formulation of strategic goals and objectives to guide the master planning process for both TVY and U42.

TVY PAC and TAC Mural Vision Board



TVY & U42 AWG Mural Vision Board



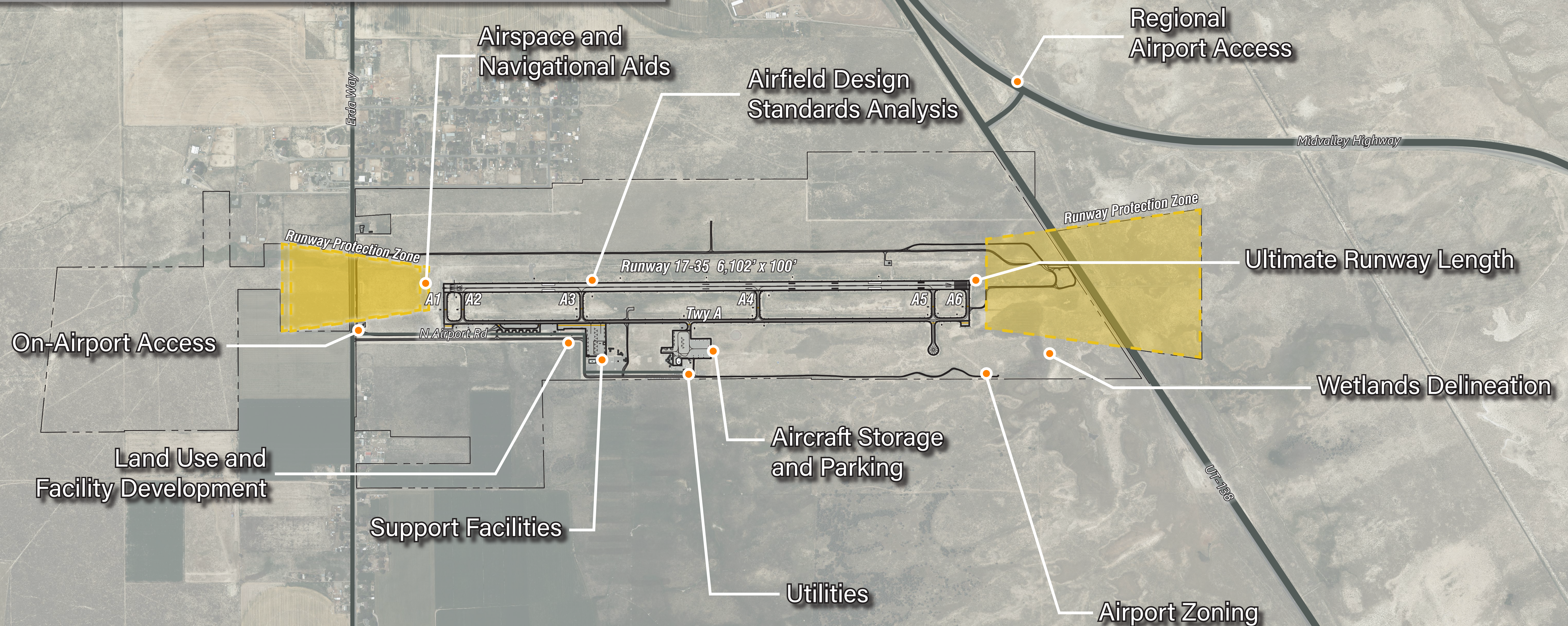
TVY stakeholders identified several focus areas to be explored when planning for the airport’s future development needs. These key planning elements are listed below and depicted in the Study Focus Areas map.

- » **On-Airport Access** – Plan for safe, accessible, and well-designed landside facilities that cater to airport user requirements and seamlessly integrate with the local and regional transportation system.
- » **Airspace and Navigational Aids** – Develop a plan that prioritizes preserving and protecting airspace around TVY, integrates it with SLCIA’s airspace system, addresses conflicting operational uses at the airport, and enhances ATC radar coverage in the Tooele Valley.
- » **Airfield Design Standards Analysis** – Assess airfield geometry and pavement strength deficiencies to align with current FAA design standards and accommodate jet aircraft operations.
- » **Regional Airport Access** – Collaborate with community networks, coordinate with state agencies, and explore the feasibility of an immediate regional access connection from the north to ensure equitable access through regional transportation networks.
- » **Ultimate Runway Length** – Evaluate the necessity of extending Runway 17-35 to meet present and future fleet mix performance requirements.
- » **Wetlands Delineation** – Define wetland areas for environmental assessment purposes.
- » **Airport Zoning** – Work collaboratively with neighboring jurisdictions to establish airport overlay zoning regulations and promote compatibility zoning in the vicinity of the airport.
- » **Aircraft Storage and Parking** – Develop a plan to offer a variety of aircraft storage options based on customer demand and expand vehicle parking at the airport.
- » **Utilities** – Incorporate the extension of utilities to the airport into the Master Plan by preserving utility corridors for development areas, aiming to support future growth and facilitate private investment in aeronautical facilities.
- » **Support Facilities** – Define future facility needs for the performance of airport maintenance, operations, and administration, flight training, and potential Fixed Base Operator (FBO) services.
- » **Land Use and Facility Development** – Optimize airport service and revenue through strategic development of aeronautical and non-aeronautical land.

STUDY FOCUS AREAS

The Tooele Valley Airport Master Plan...

- ✓ Provides guidance for future development
- ✓ Accommodates future aviation demand
- ✓ Establishes financially feasible project implementation
- ✓ Identifies and responds to environmental and socioeconomic conditions



DEMAND FORECAST

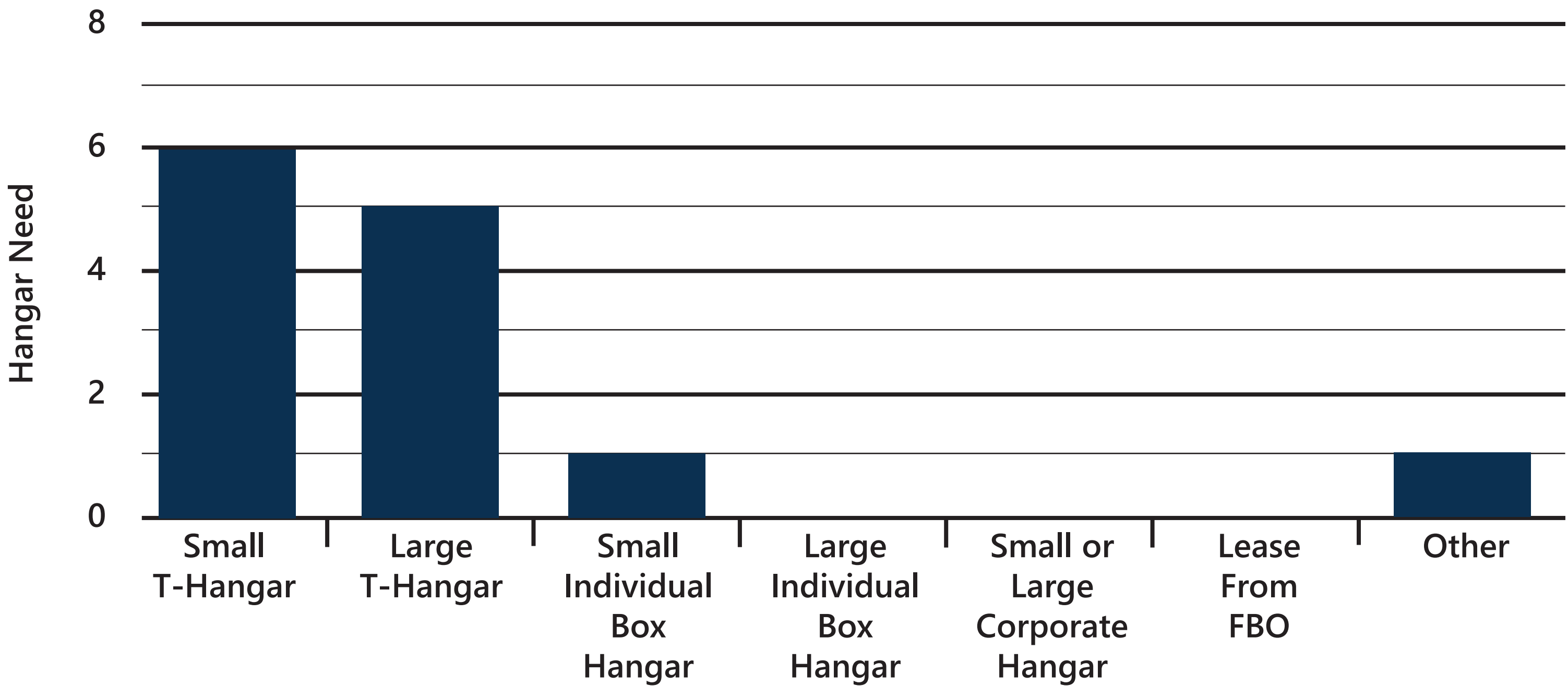
Aviation demand forecasts were developed for aircraft operations and based aircraft at TVY. Forecasting occurred between 2021 and 2022, followed by the onset of the COVID-19 pandemic, which induced widespread economic turmoil and significantly disrupted the aviation industry, particularly commercial passenger travel. Nationally, general aviation (GA) activity was far less disrupted than commercial passenger activity, and in many instances flourished.

Demographic, Socioeconomic, and Other Factors

The demographic and socioeconomic characteristics of the area surrounding an airport are commonly used as indicators for predicting airport demand. Tooele County’s rapid population growth¹ is projected to exceed 100,000 by 2040. With a median household income above the national average, the county’s appeal is further enhanced by infrastructure upgrades like the Midvalley Highway and proposed railway spur which are likely to attract new businesses and stimulate economic development.

The current socioeconomic and demographic conditions in Tooele County suggest a sustained surge in both large-scale business expansion and job opportunities. Discussions with SLCD A personnel and Airport Board members have highlighted the perception commonly held among local business figures that Tooele Valley is poised to undergo significant population and economic expansion, positioning it as the next focal point for growth in Utah. These factors, coupled with nationwide aviation trends, were considered in crafting aviation demand forecasts for TVY.

TVY Hangar Demand By Hangar Type



¹ In 2017, Tooele County ranked as the 7th fastest growing county in the nation. This growth is heavily influenced by its proximity to Salt Lake City (the metropolitan center for the region) and population growth in across the entire region.



Cameras set up to support forecast operations counts capture a skydiving aircraft taxiing for takeoff.

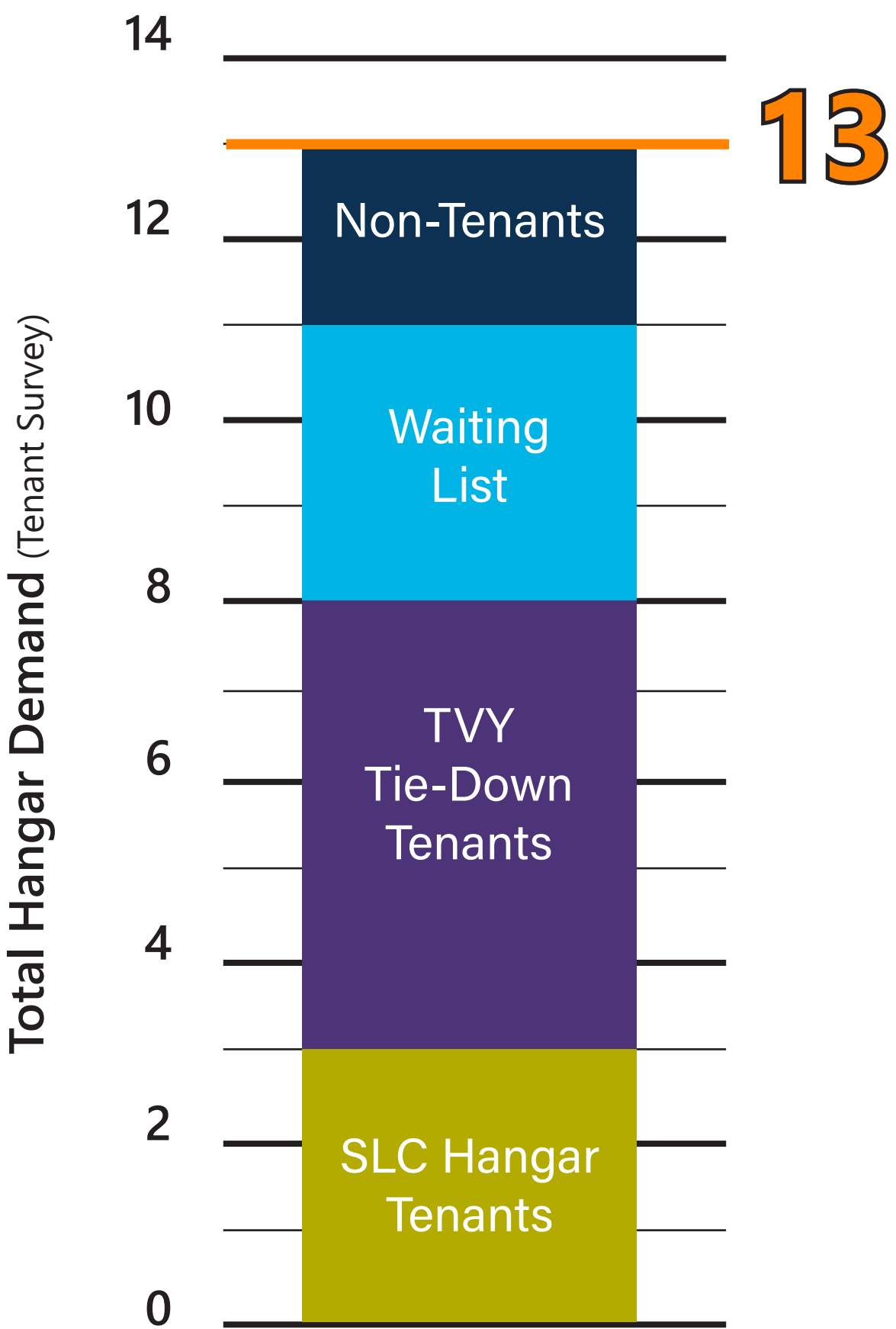
General Aviation Tenant Survey

The TVY Master Plan was conducted simultaneously with the U42 Master Plan. As part of these studies, a tenant survey was issued to SLCD A GA tenants at all three of the SLCD A airports (SLCIA, TVY, and U42). The survey was disseminated to tenants electronically through the monthly SLCD A GA Newsletter.

The GA Newsletter is publicly available for free subscription via the SLC website and, as such, non-tenants also responded to the survey. The survey was designed to gauge market interest in new hangars at U42 and TVY. In addition, tenants at SLC were asked if they would be interested in relocating to U42 or TVY, and if so, how many hangars they would want and at which airport.

In total, the survey garnered 195 responses. Of those responses, 57 were tenants at SLC, 76 were tenants at U42, 9 were tenants at TVY, and 53 were not currently tenants at any SLCD A airport. Overall, the survey indicated potential demand for 13 hangars at TVY.

TVY Hangar Demand By Origin



DEMAND FORECAST



Based Aircraft

The socioeconomic dynamics within Tooele Valley and Salt Lake Valley indicated that, with even limited investment in airport facilities, based aircraft growth at TVY would likely meet FAA and State of Utah forecast growth of 0.8 percent per year. That growth rate was carried forward as the baseline forecast of based aircraft. Two factors supporting this estimate include:

- » Hangar development at TVY appears highly likely to materialize within the 20-year planning period based on the magnitude of development within Tooele Valley and the region.
- » The general aviation tenant survey validated undocumented demand for hangars within the local community of aircraft owners already exists for the SLCD system of airports.

The baseline forecast is conservative, reflecting minimal organic growth over the next two decades. This cautious estimate is justified by the airport’s historical trend of stagnation, despite neighboring airports like Sky Park (BTF) and Spanish Fork (SPK) experiencing rapid expansion. However, insights from the GA tenant survey and economic indicators indicate that TVY is poised for significant growth should facility investments (such as utilities) occur, aligning with the business, population, and job growth observed in Salt Lake County and Tooele County. To accommodate this potential, a high-growth scenario forecast was also formulated.

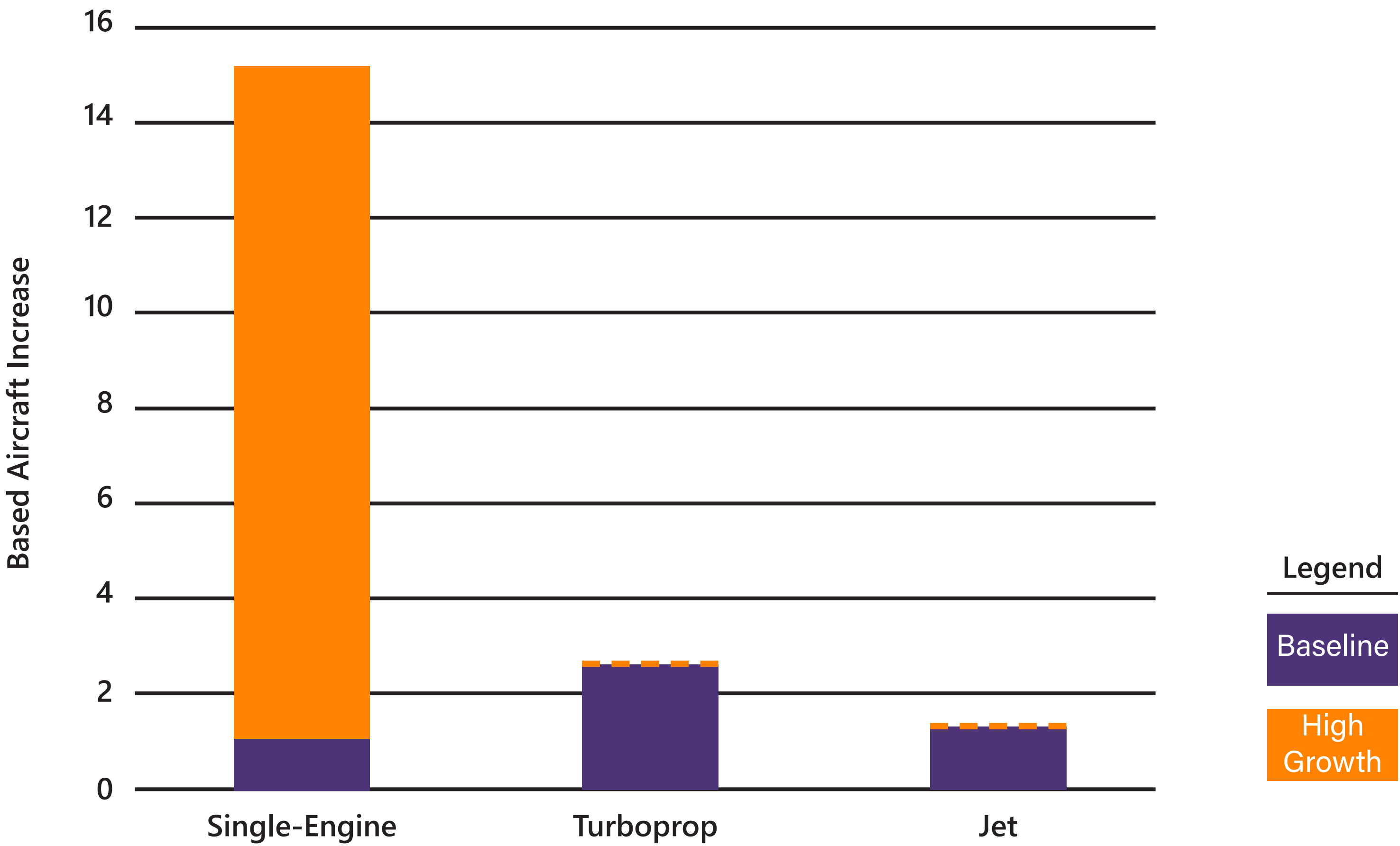
Based Aircraft Forecast

Baseline Forecast						
Year	Single Engine Piston	Multi-Engine Piston	Turboprop	Jet	Helicopter	Total
2020	19	0	1	0	0	20
2025	19	0	2	0	0	21
2030	20	0	2	0	0	22
2040	20	0	3	1	0	24
CAGR (2020-2040)	0.3%	-	5.6%	-	-	0.8%
High Growth						
Year	Single Engine Piston	Multi-Engine Piston	Turboprop	Jet	Helicopter	Total
2020	19	0	1	0	0	20
2025	32	0	1	0	0	33
2030	32	0	2	0	0	34
2040	33	0	3	1	0	37
CAGR (2020-2040)	2.8%	-	5.6%	-	-	3.2%



Aircraft tied down on the TVY apron.

Based Aircraft Forecast Growth



DEMAND FORECAST



Critical Aircraft

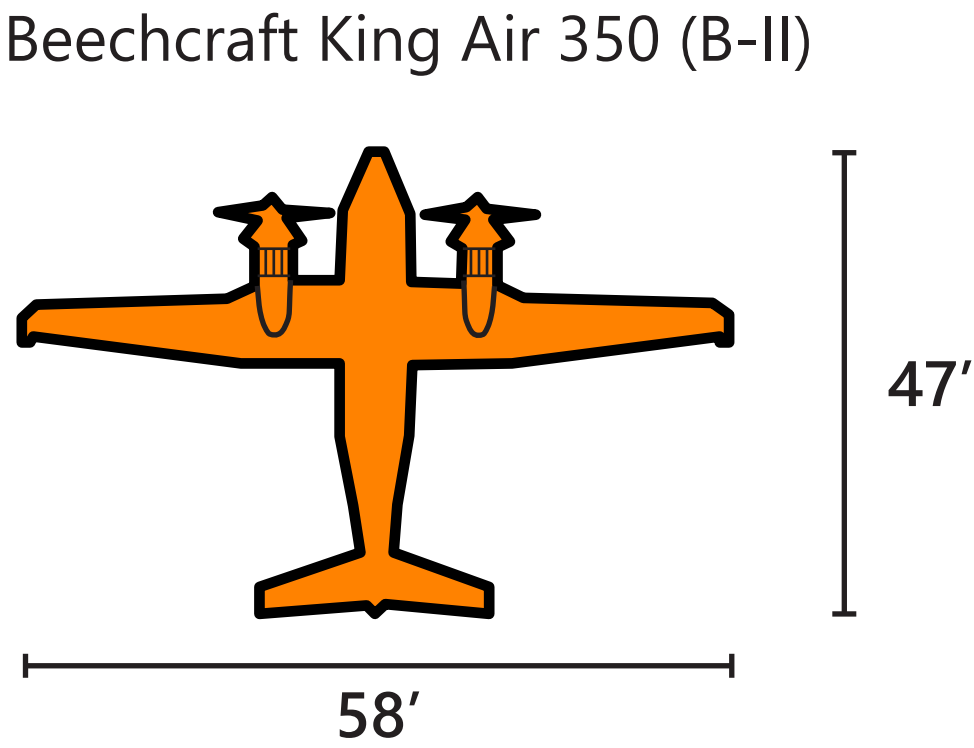
The FAA mandates the identification of a current and future “critical aircraft” for airport planning, considering parameters like Aircraft Approach Category (AAC), Airplane Design Group (ADG), and Taxiway Design Group (TDG). The AAC, depicted by a letter, relates to aircraft landing speeds. The ADG, depicted by a Roman numeral, relates to airplane wingspan and height. The TDG, classified by number, relates to the outer-to-outer main gear width and the distance between the cockpit and main gear. These parameters serve as the basis for standardized design and construction of safe airport infrastructure.

TVY’s previous critical aircraft (per the 2010 Airport Layout Plan (ALP)), was the Beechcraft Super King Air (B-II-2A), with the Cessna Citation X (C-II-1B) designated as the future critical aircraft. Analysis of Envirosuite (EVS) Earth Flight Tracking data validated the existing critical aircraft. Data revealed the presence of numerous B-II aircraft operating at TVY, collectively meeting the FAA’s substantial use threshold. Therefore, the Beechcraft Super King Air (B-II-2A) remains designated as the existing critical aircraft in this study.

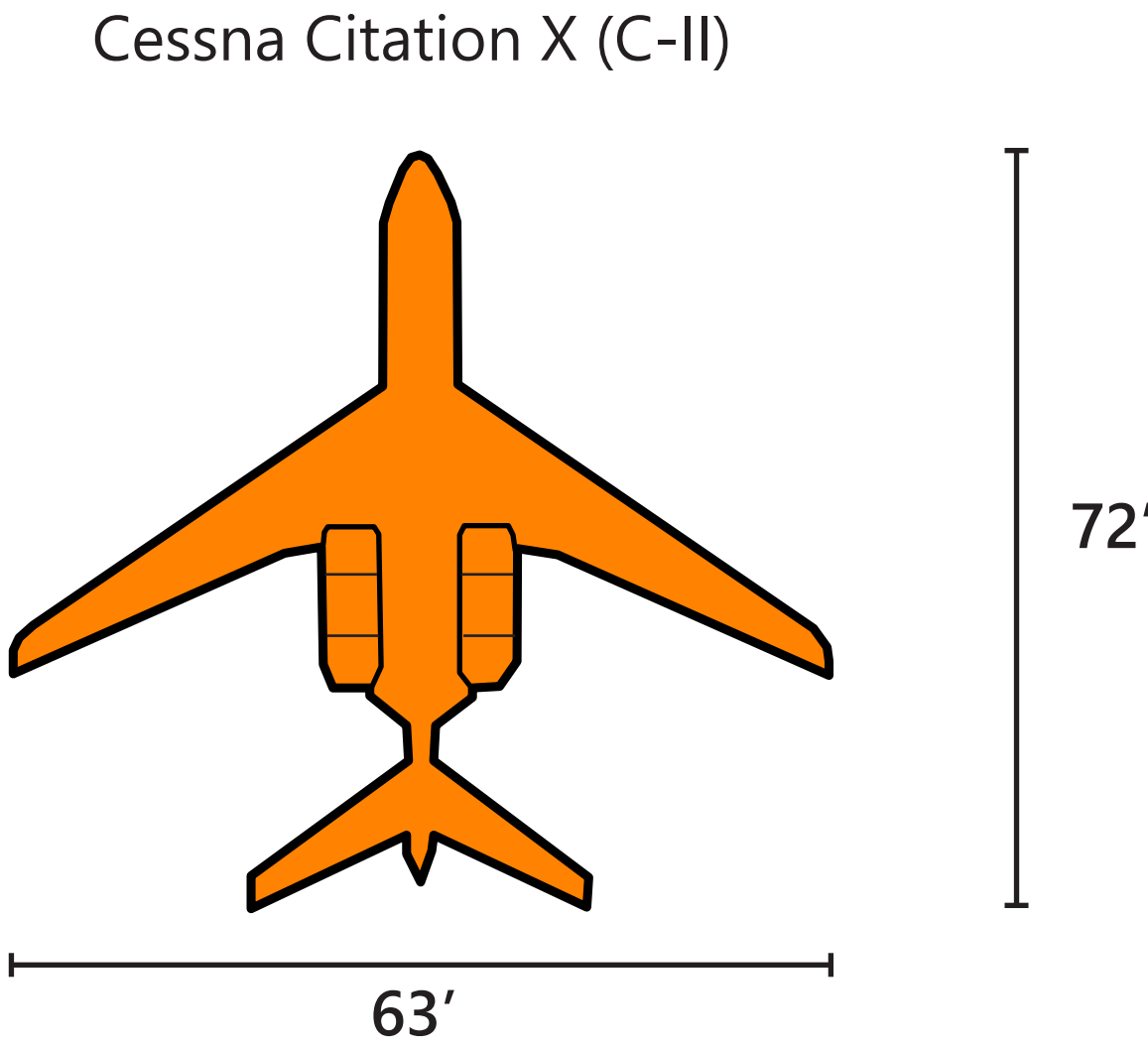
Existing and Future Critical Aircraft

	Aircraft	AAC	ADG	TDG
Existing Critical Aircraft	Beechcraft Super King Air	B	II	2A
Future Critical Aircraft	Beechcraft Super King	B	II	2A
	Cessna Citation X	C	II	1B

Existing Critical Aircraft



Future Critical Aircraft



Given the ongoing and anticipated developments in Tooele Valley, along with the projected increase in the national jet fleet, FAA agreed it is prudent to designate a C-II jet as the future critical aircraft. The Cessna Citation X meets this criterion as a C-II-1B aircraft and is carried forward as the future critical aircraft.

Considering that many ADG II turboprop and jet aircraft feature TDG 2 gear configurations, it was reasonable to propose a composite future critical aircraft for TVY that encompasses both the characteristics of the Beechcraft Super King Air and the Citation X. This approach ensured comprehensive coverage of the aircraft types expected to utilize the airport in the futured.

2020 Annualized Aircraft Operations by AAC and ADG

Annual Mean Operations by AAC				
AAC	EVS Raw Data	EVS Raw Data Disbursed	EVS Extrapolated Data	EVS Extrapolated Disbursed
A	7,947	0	1	0
B	147	0	2	0
C	17	0	2	0
D	1	0	3	1
Unknown	5,295	-	17,002	-

Annual Mean Operations by ADG				
ADG	EVS Raw Data	EVS Raw Data Disbursed	EVS Extrapolated Data	EVS Extrapolated Disbursed
I	7,093	11,723	22,773	37,639
II	1,019	1,685	3,273	5,409
III	0	0	0	0
Unknown	5,295	-	17,002	-

DEMAND FORECAST



Operations

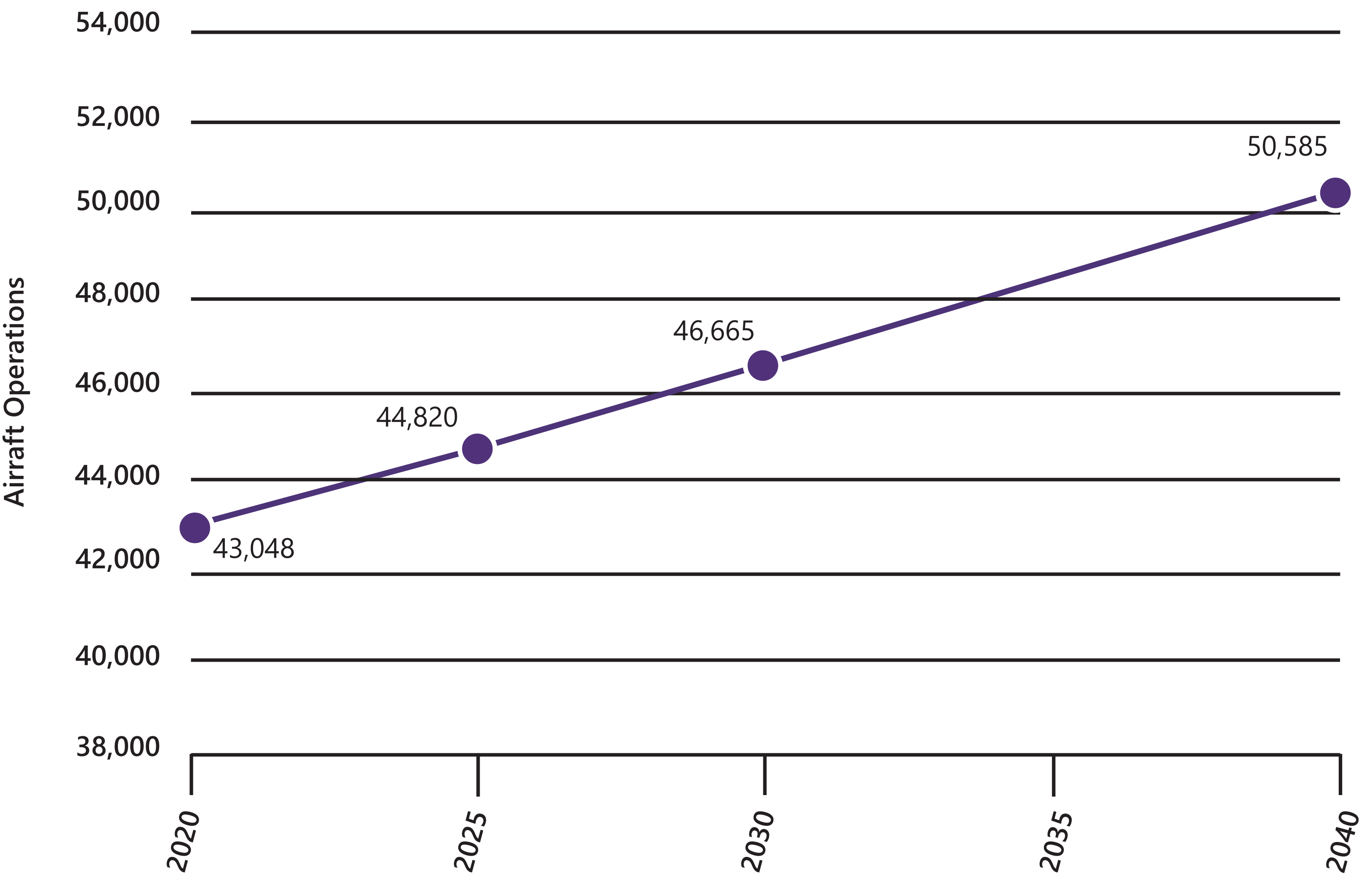
Baseline aircraft operations were primarily tracked using acoustic traffic counters. Additional methods for data collection included utilizing EVS data from April 2020 to September 2021 and deploying three game cameras on the airfield from September 16, 2021 to October 3, 2021.



Image captured from cameras set up to support forecast operations counts.

Operations at GA airports often correlate with the number of based aircraft, with forecasts typically utilizing an operations per based aircraft (OPBA) ratio. At TVY, the OPBA is estimated at 2,150, significantly higher than typical. This is attributed to the airport’s known role in serving a large number of flight training operations despite having very few based aircraft. When assuming a yearly increase of 0.8 percent (the State’s projected growth rate) in the TVY based aircraft fleet, operations are expected to follow suit, remaining constant while accounting for growth in the regional fleet. A high-growth operations forecast was not established since an increase in based aircraft at TVY would not create significant impact on annual operations. This is because the majority of operations at the airport are related to aircraft coming from other airports for flight training purposes.

Aircraft Operations Forecast



Baseline Operations Forecast

Year	Itinerant Air Taxi	Itinerant General Aviation	Itinerant Military	Local General Aviation	Local Military	Total Annual Operations
2020	244	27,738	0	15,066	0	43,048
2025	254	28,880	0	15,686	0	44,820
2030	264	30,069	0	16,332	0	46,665
2040	287	32,595	0	17,704	0	50,585
CAGR (2020-2040)	0.8%	0.8%	-	0.8%	-	0.8%

Note: Military operations not forecast per FAA guidance.

FACILITY REQUIREMENTS



Airport facility requirements at TVY, including the type, size, and quantity, are dependent on future aviation activity levels projected in the aviation demand forecasts. The need for new or expanded facilities is often driven by capacity shortfalls that leave an airport unable to accommodate forecasted growth or desired levels of service using existing facilities. However, the requirements for new or improved facilities can also be driven by other circumstances, such as, updated standards which have been adopted by the FAA (or another regulatory agency), an evolving strategic vision for the airport, the replacement of outdated or inefficient facilities that are prohibitively costly to maintain or modernize, or the desire to introduce new services and facilities.

The TVY facility requirements analysis used the forecast aircraft operation demand levels to define planning activity levels (PALs) which trigger the need for investment to accommodate that user demand in a way which maintains acceptable levels of service.

Planning Activity Level Trigger Points

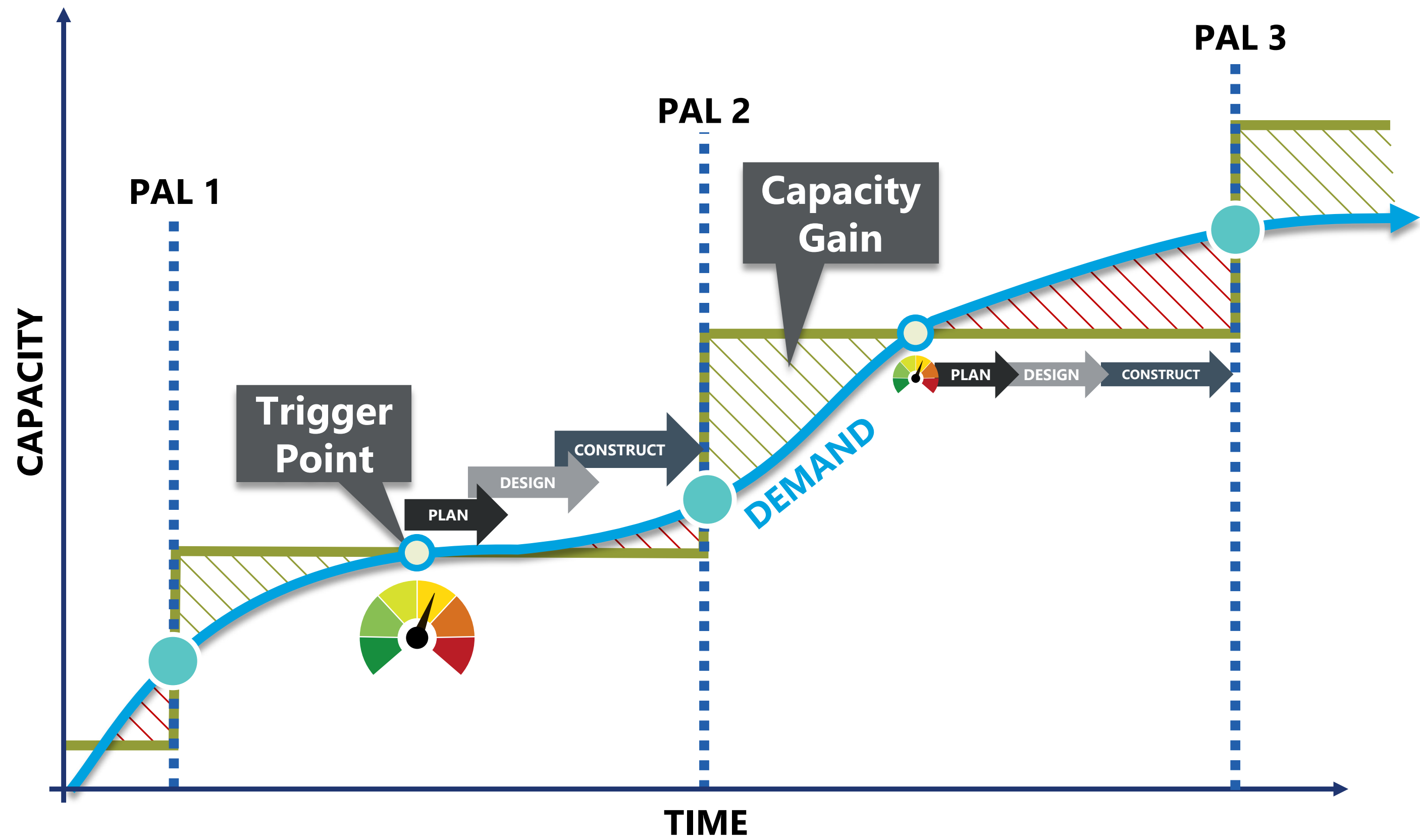


Diagram representing the process for how to effectively plan to meet PAL demand levels by strategically increasing capacity over time as demand materializes.

Summary of Airport Operations Forecast with Associated Planning Activity Levels (PALs)

Type of Operation	Base Year Level (2020)	Base Year +5 years (PAL 1)	Base Year + 10 years (PAL 2)	Base Year + 20 years (PAL 3)
Itinerant				
Air Taxi	244	254	264	287
General Aviation	27,738	28,880	30,069	32,595
Local				
General Aviation	15,066	15,686	16,332	17,704
Total Operations	43,048	44,820	46,665	50,585

Note: Military operations not forecast per FAA guidance.

Airspace, Navigational Aids, and Instrument Procedures

TVY Master Plan study elements included airspace, instrument procedures, and navigational aid requirements. Several NAVAID enhancements were identified to either maintain or improve existing service, ranked in order of importance:

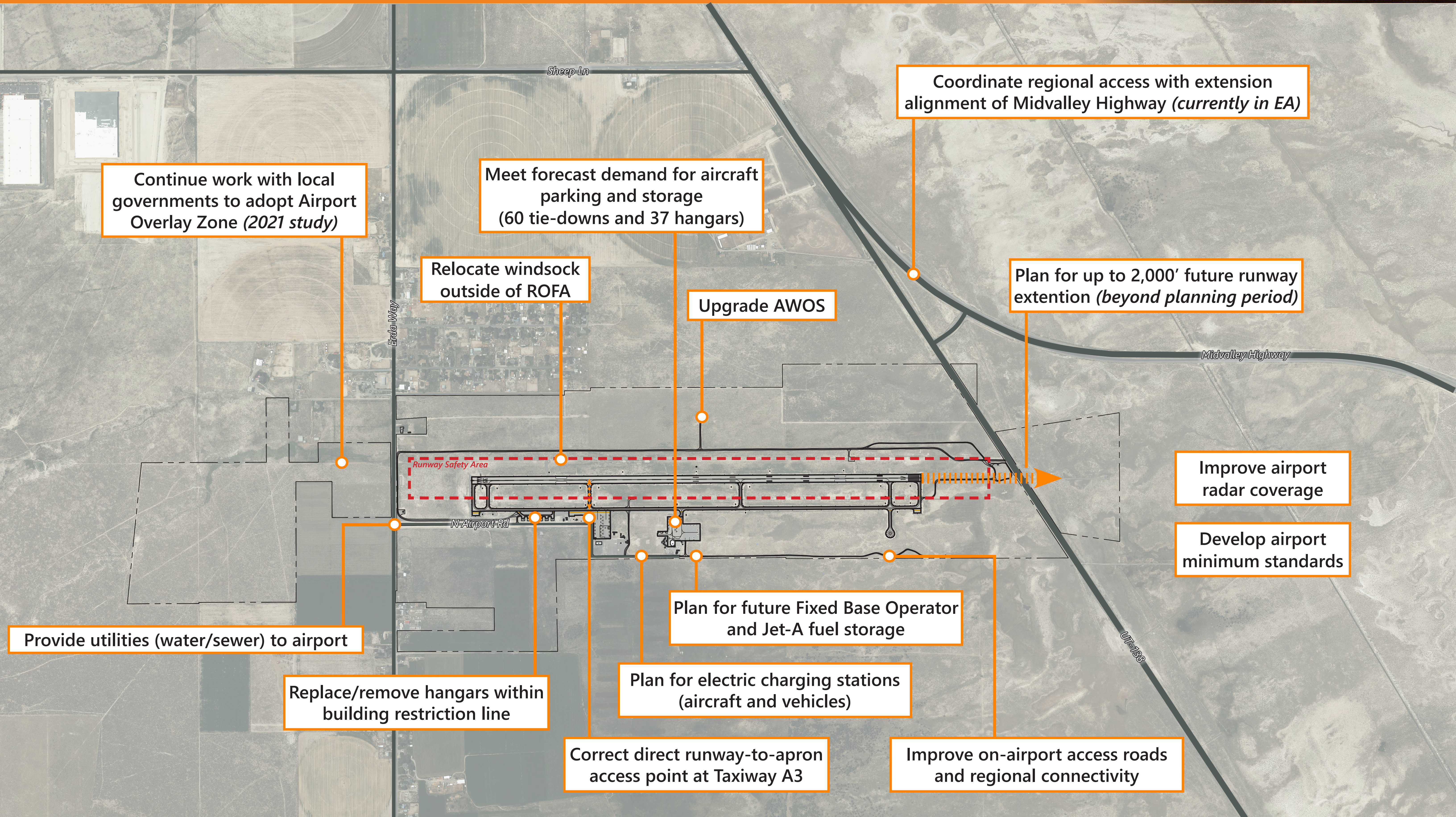
1. Maintain the existing Instrument Landing System (ILS) to Runway 17
2. Maintain the existing Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) to Runway 17
3. Upgrade the existing Automated Weather Observing Station (AWOS) to AWOS-3P/T
4. Install remote Automatic Dependent Surveillance-Broadcast (ADS-B) Receivers
5. Modify the Runway 35 Precision Approach Path Indicator (PAPI)

Runway 35 RNAV (GPS) approach feasibility was investigated with results showing that a slightly offset final approach course and an increased glide path angle (GPA) can mitigate the mountainous terrain. An approach with a 3.0 degree west offset final approach course would require a minimum GPA of 3.75 degrees. Published GPAs in excess of 3.50 degree preclude publication of Category D visibility minima, meaning that a Runway 35 RNAV (GPS) approach would be limited to serving Category A through C aircraft but meet future forecast needs.

Source: Lean Engineering

Google Earth

A wide-angle photograph of a small, single-engine propeller airplane flying horizontally across the frame. The plane is silhouetted against a bright, hazy sky during sunset or sunrise. The horizon is marked by a range of low mountains and a flat, open landscape in the foreground. The lighting is warm and golden, creating a serene atmosphere.



DEVELOPMENT ALTERNATIVES



The primary purpose behind identifying and evaluating various alternative development options is to ensure airport facilities are capable of meeting projected activity demand levels, make efficient and effective use of available airport land, and meet FAA airfield design standards. Every potential alternative in the Master Plan was thoroughly analyzed, refined, and vetted through the stakeholder involvement process to create a plan reflective of user needs, community values, SLCDAs preferences, and the unique operational nature of the airport.

At TVY, the approach to airport alternatives development was structured into the following steps:

1. Gather information related to airport users/community vision for airport development
2. Describe and evaluate existing airport land use patterns
3. Define evaluation criteria
4. Delineate constraining factors such as environmental conditions
5. Craft an ultimate on-airport land use pattern vision
6. Create alternative development options in-line with on-airport land use pattern vision as well as off-airport land use regulations
7. Analyze preferred options against planning, engineering, operational, and financial criteria
8. Select preferred development future

Throughout the alternative development process, evaluation was performed based on guidance provided from a combination of SLCDAs visioning goals and general airport planning criteria. At a high level, each concept was evaluated against the following criteria:

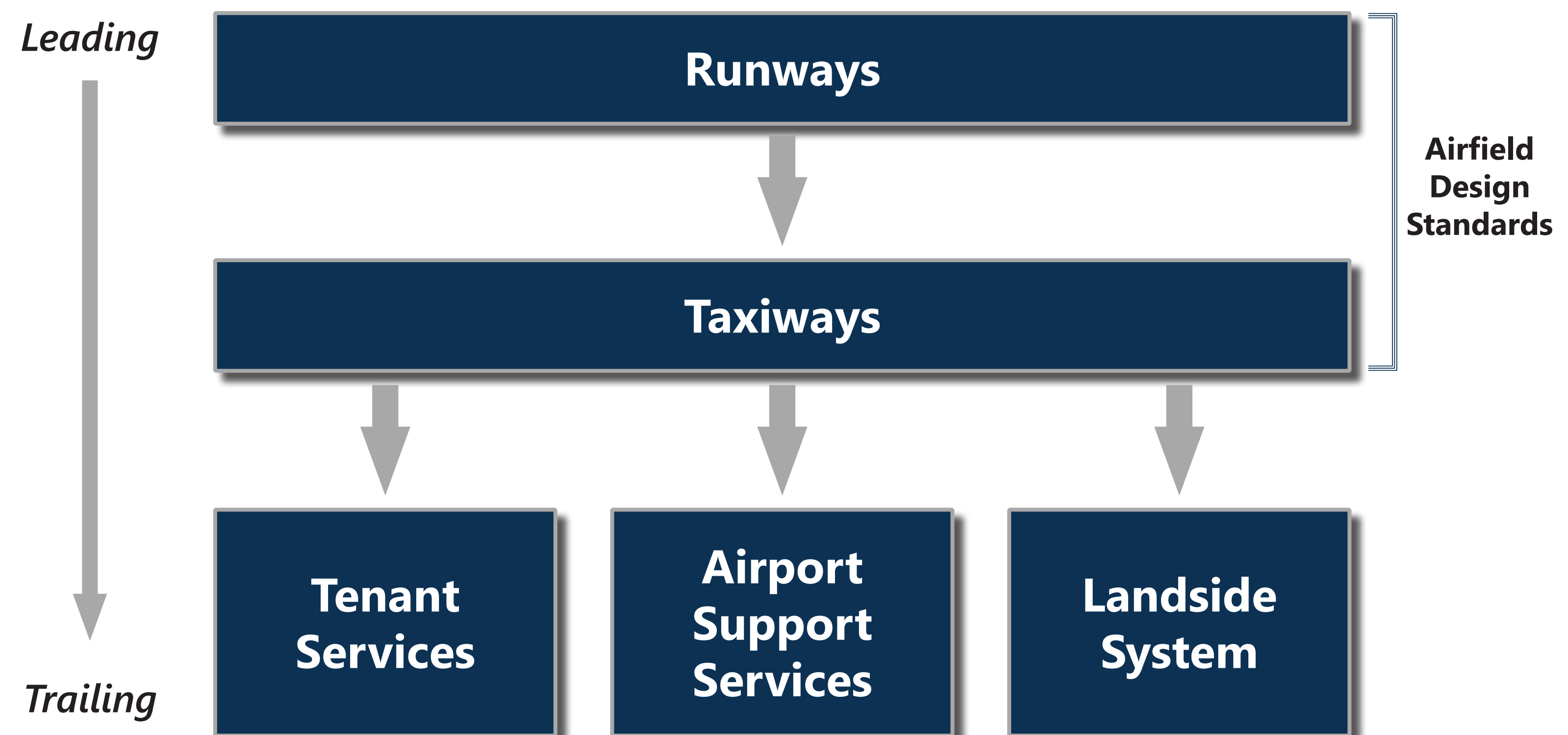
- » Operational and public safety
- » Operational efficiency
- » Ability to meet FAA airfield design standards
- » Effectiveness to service target users
- » Resolution of current issues
- » Long-term facility requirements are met
- » Appropriate level of service is provided
- » Ease of implementation
- » Realistic cost to implement (capital investment and operating)
- » Flexibility and future expansion potential
- » Supports sustainable development principles

The generated alternatives were categorized into seven distinct study areas:

- » Airfield
- » Landside Access
- » Utilities
- » Tenant/User Facilities
- » Skydiving Facilities
- » Airport Support Facilities
- » Electric Vertical Takeoff-Landing (eVTOL) Facilities

In crafting development alternatives, it's essential to distinguish between leading and trailing planning elements. Leading elements, like runways and taxiways, require significant land and capital investment and take priority in formulating alternatives. Trailing elements, such as aircraft storage facilities and the landside/roadway system, are influenced by decisions made for leading elements. This division helps prioritize analysis on finding solutions for high-cost, permanent leading elements, which then influence the layout of trailing elements.

Airport Planning Elements



DEVELOPMENT ALTERNATIVES



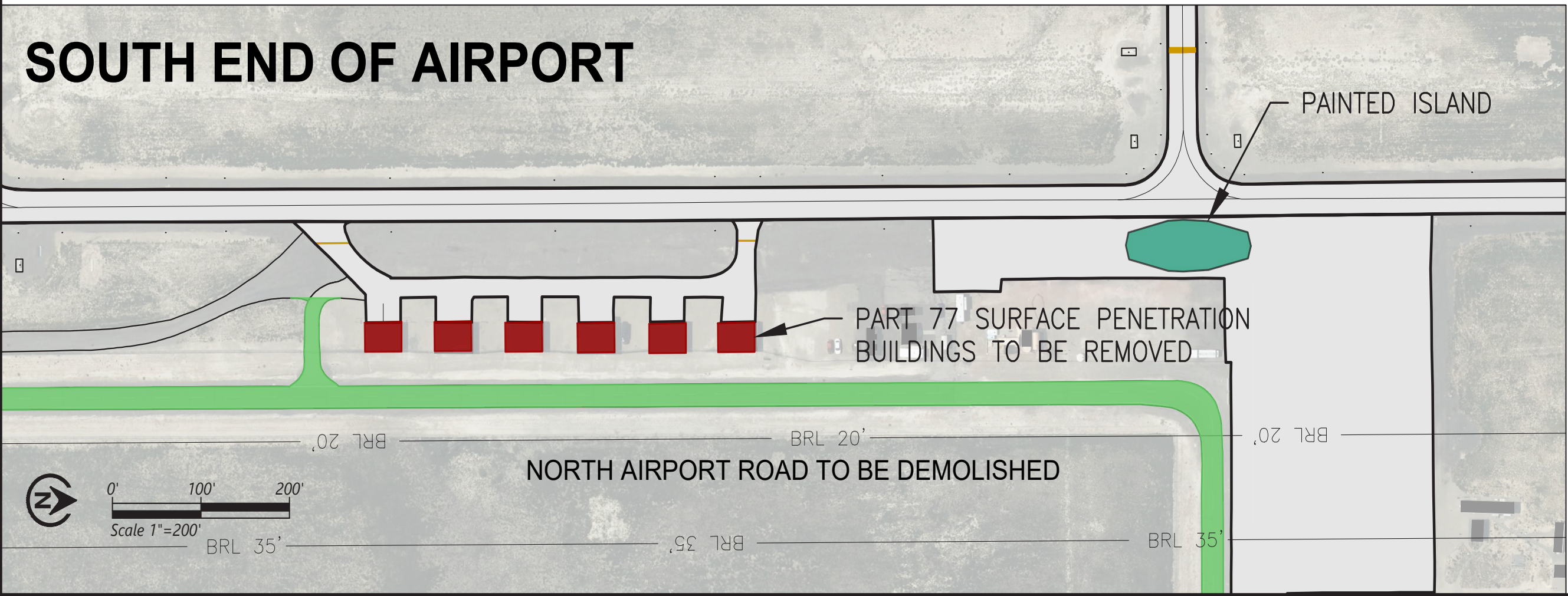
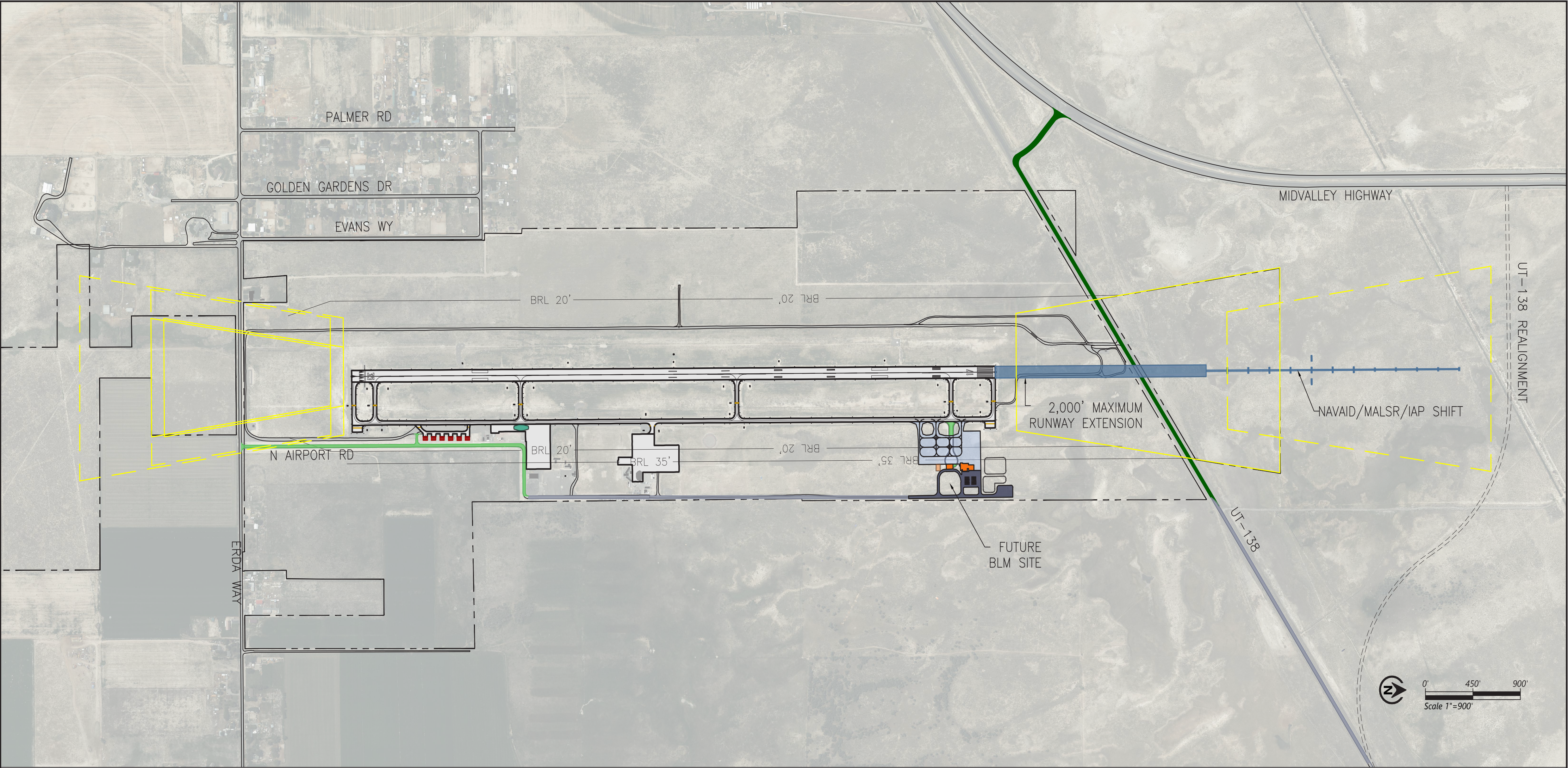
Airfield

The airfield development plan addresses FAA design standard deficiencies (Advisory Circular 150/5300-13B, *Airport Design*) and prepares SLCDAs for facility demands beyond the planning period. Airfield alternatives primarily aimed to address the following key issues:

» **Replacing and removing six hangars penetrating the Part 77 transitional surface** – Replacing the six hangars penetrating the Part 77 transitional surface is crucial for ensuring safe and efficient air navigation at TVY.

» **Correcting a direct apron-to-runway access point at Taxiway A3** – Implementation of a painted island according to FAA design standards addresses safety concerns related to direct runway access from the apron.

» **Acquiring land to enable a future runway extension up to 2,000 feet and realigning UT-138 to avoid a future RPZ** – The future critical aircraft at TVY requires up to 8,283 feet of runway for unrestricted operations. Although current operations do not qualify for AIP supported funding for a runway extension to meet these needs, it is prudent to plan for this beyond the 20-year planning period. Planning for this extension involves identifying land acquisition needs and assessing the impact on UT-138, potentially necessitating a realignment path to meet the Midvalley Highway.



LEGEND			
DESCRIPTION	EXISTING	FUTURE	ULTIMATE
PROPERTY LINE	---	N/A	N/A
BUILDING RESTRICTION LINE	BRL	N/A	N/A
RUNWAY PROTECTION ZONE		N/A	
AIRSIDE PAVEMENT			
LANDSIDE PAVEMENT			
PAVEMENT TO BE REMOVED	N/A		
BUILDINGS			N/A
BUILDINGS TO BE REMOVED	N/A		N/A

DEVELOPMENT ALTERNATIVES



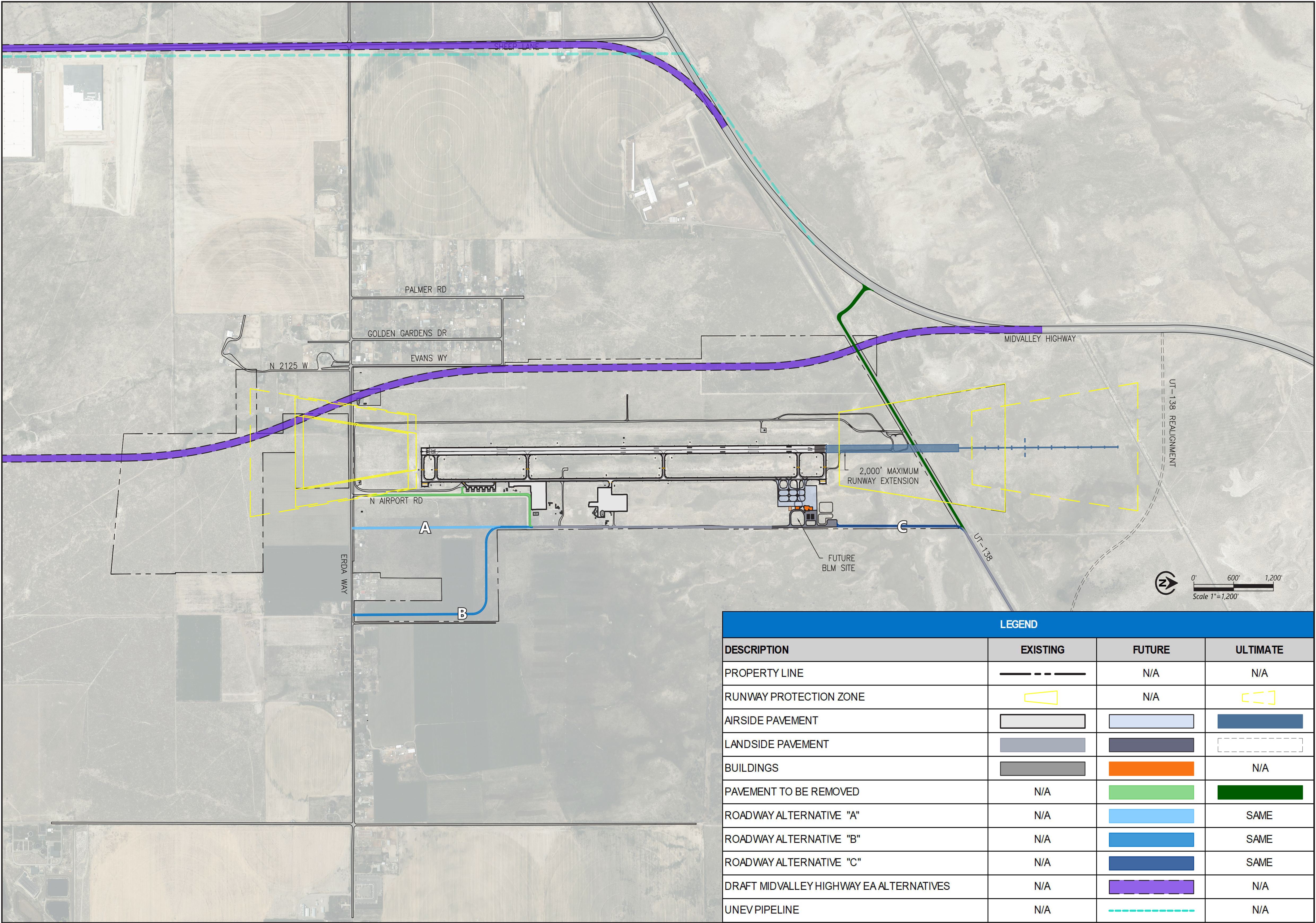
Landside Access

Since the original construction of N Airport Rd, the primary airport access road, SLCDA had acquired property to the east, encompassing several parcels along Erda Way toward 1200 W.

Three potential on-airport roadway alignments were examined to enhance access and availability of aeronautical land at TVY:

- A** – Establish a new intersection of N Airport Rd and Erda Way to align with the easternmost segment of N Airport Rd.
- B** – Establish a new intersection of N Airport Rd and Erda Way at the easternmost owned land along Erda Way, creating a new entry that follows property lines to meet existing N Airport Rd.
- C** – Create a northern airport entry aligning with the easternmost segment of N Airport Rd and meeting the dead-end road at the new BLM site.

Alternative B was chosen as the preferred alternative over Alternatives A and C for addressing access needs at TVY due to its provision of more land for aeronautical uses and better support for skydiving operations. While Alternative A offers safe access, it provides less land for development, and Alternative C, while creating a new connection, poses challenges with wetland impacts and lacks the same advantages.



DEVELOPMENT ALTERNATIVES



Utilities

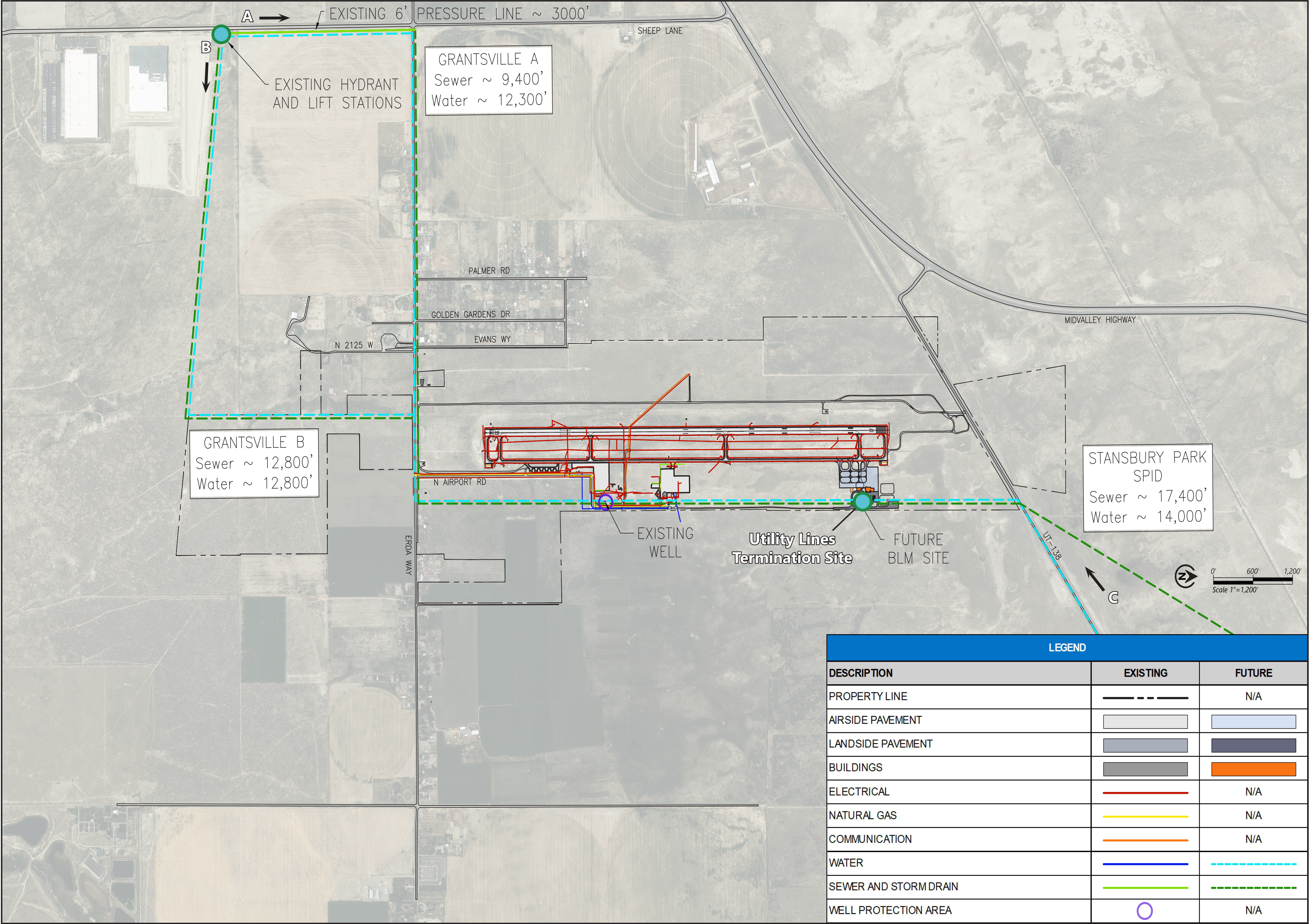
Presently, the airport’s utilities include a water system reliant on a single non-potable well, pipelines, and fire hydrants. While this system caters to the needs of the restroom facility and BLM firefighting crews, other structures lack access to water service, and there is no central sewer system in place.

At the onset of the planning process, RS&H enlisted Bowen, Collins & Associates (BC&A) to develop a utility master plan that aligns with the anticipated future conditions at the airport.

The study revealed several key findings, as follows:

- » While the distribution system adequately meets existing, near-term, and long-term demands, the water system’s supply is insufficient due to its nonpotable nature and reliance on a single source.
- » The absence of central wastewater collection or treatment poses challenges for future development.
- » Near-term developments will necessitate both sewer and water infrastructure to operate effectively, while the long-term development needs will entail small individual extensions of water services and sewer laterals.

To address these challenges, SLCD A is actively pursuing enhanced water and sewer utility services for new facilities.



DEVELOPMENT ALTERNATIVES



Tenant/User Facilities

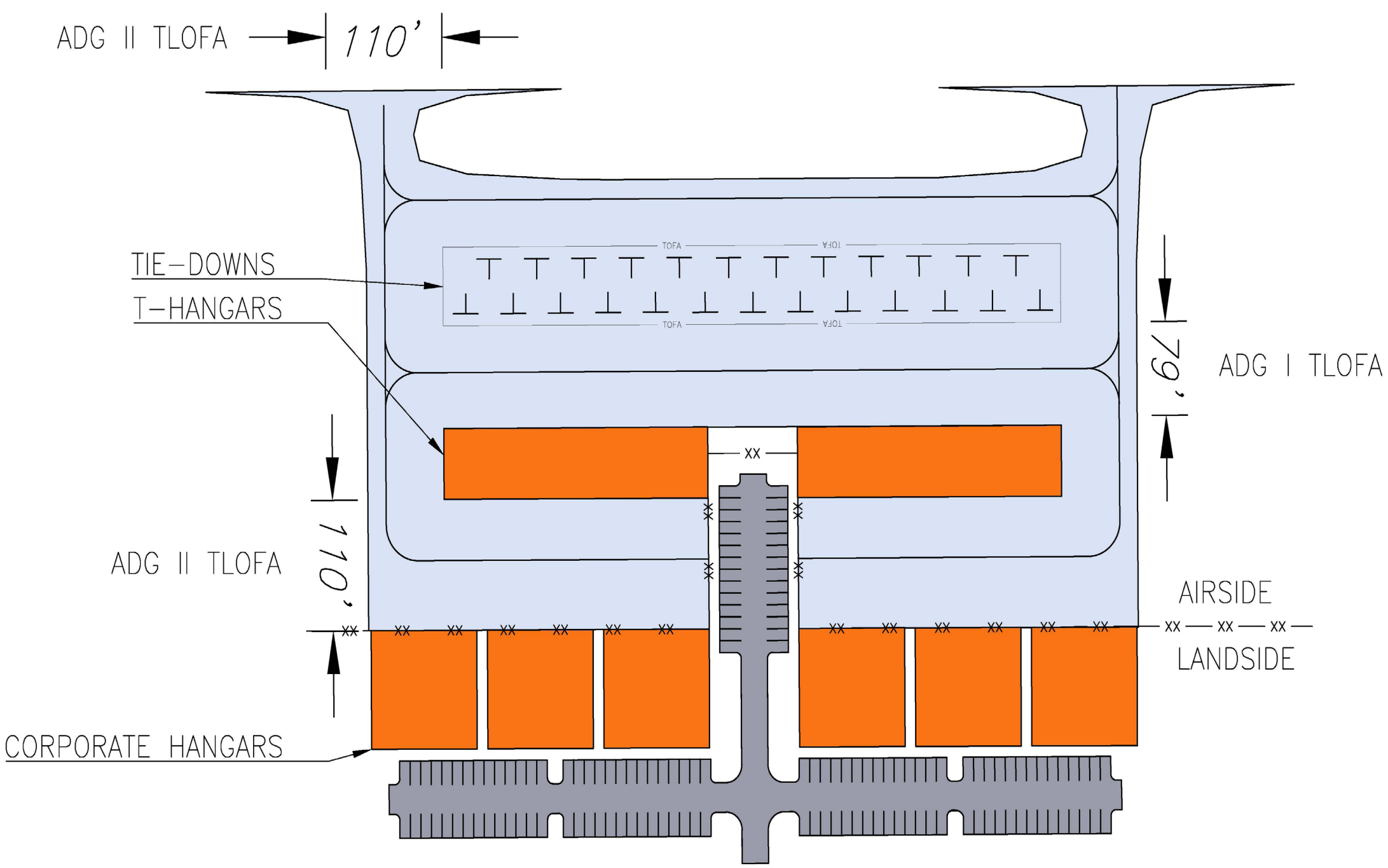
The analysis of tenant/user facility development primarily concentrated on determining the size and layout of future fixed base operator facilities. This included planning for a modest general aviation terminal building, along with supporting infrastructure such as taxiways, tie-down apron, hangars, fuel storage, and landside facilities.

The FBO should feature a single hangar structure of at least 10,000 square feet with specific door and height requirements, and a customer service building of at least 4,000 square feet, alongside fuel storage including minimum tank capacities for Avgas and Jet-A fuel.

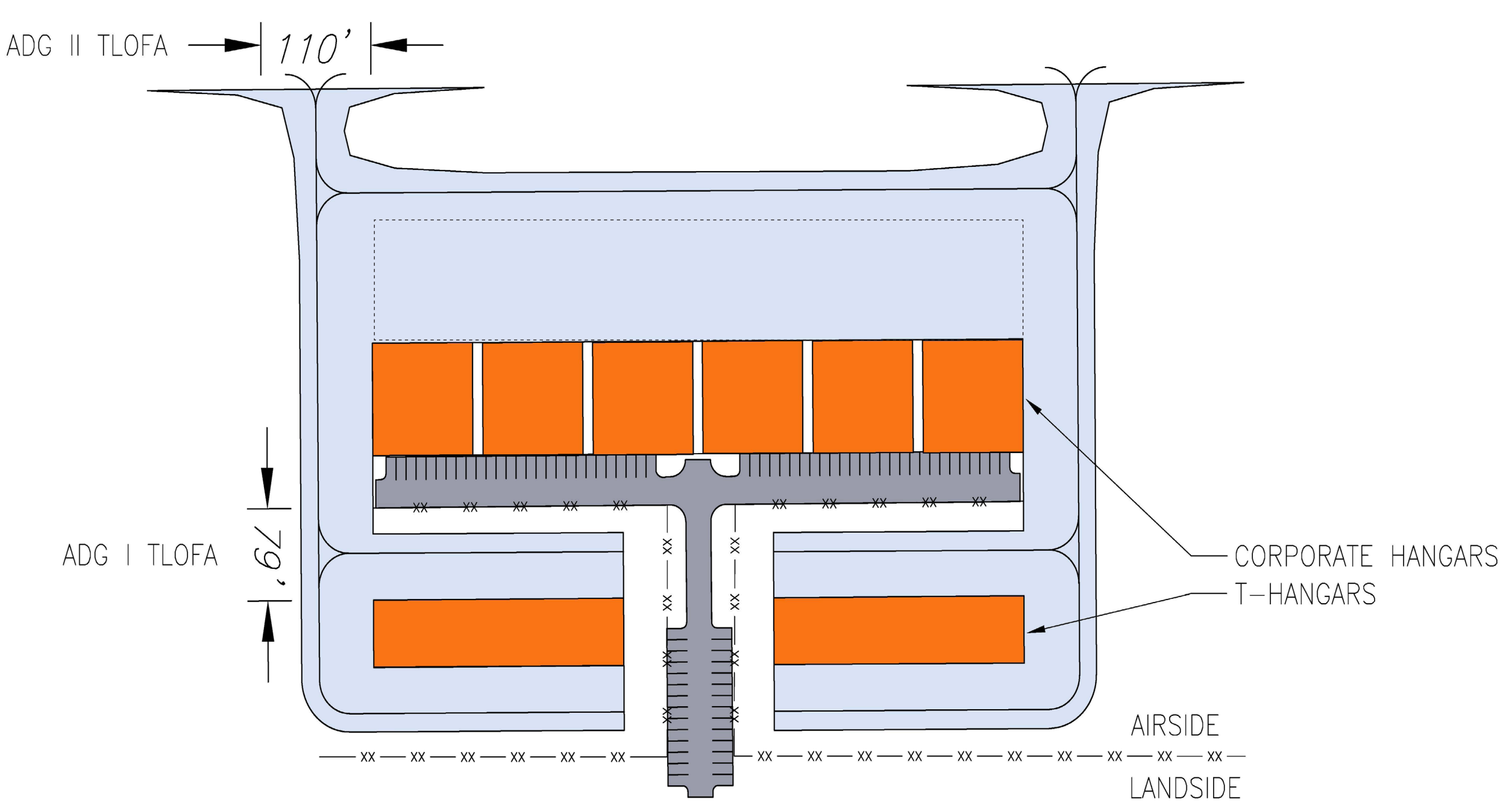
The images to the right alternative layouts evaluated for varying hangar sizes and an FBO area. Apron entry and exit taxilanes at TVY must be designed to accommodate ADG-II aircraft to meet critical aircraft design requirements, specifically a 110-foot TLOFA (Taxilane Object Free Area).

LEGEND		
DESCRIPTION	INTERIM	FUTURE
AIRSIDE PAVEMENT		N/A
LANDSIDE PAVEMENT		N/A
FENCE	— XX — XX —	N/A
TAXILANE OBJECT FREE AREA	—— TOFA ——	N/A
BUILDINGS		

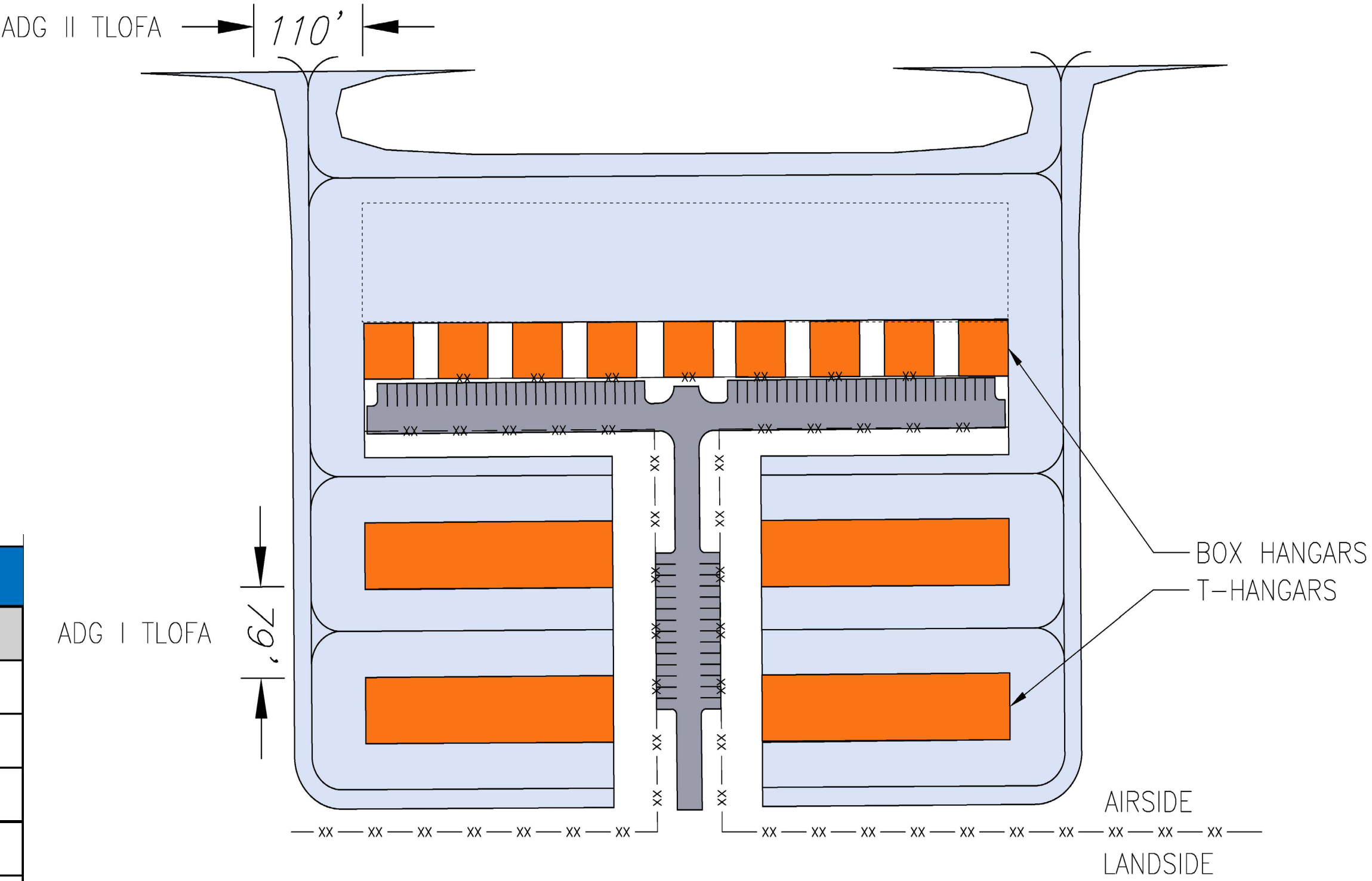
Layout Option 1



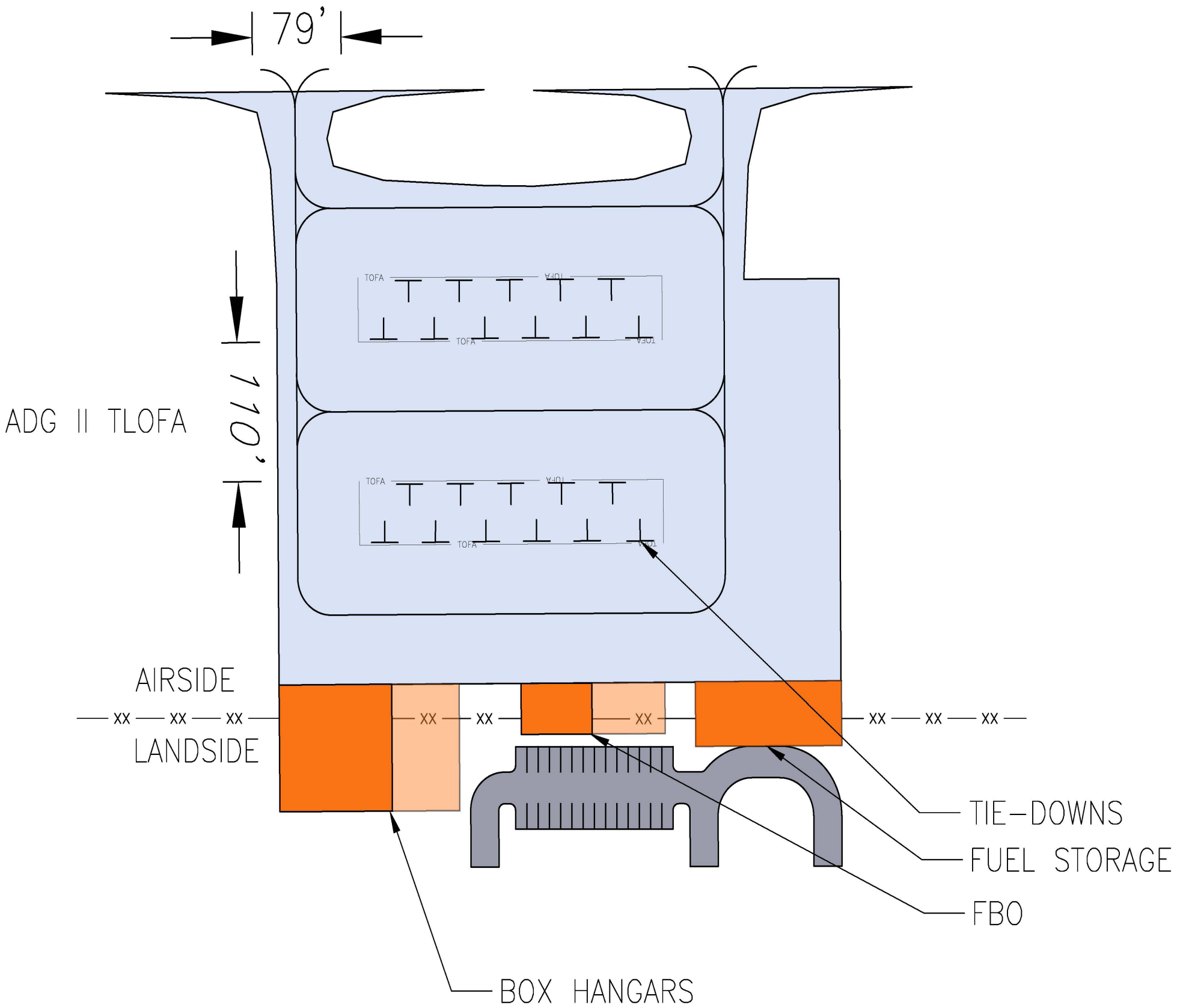
Layout Option 2



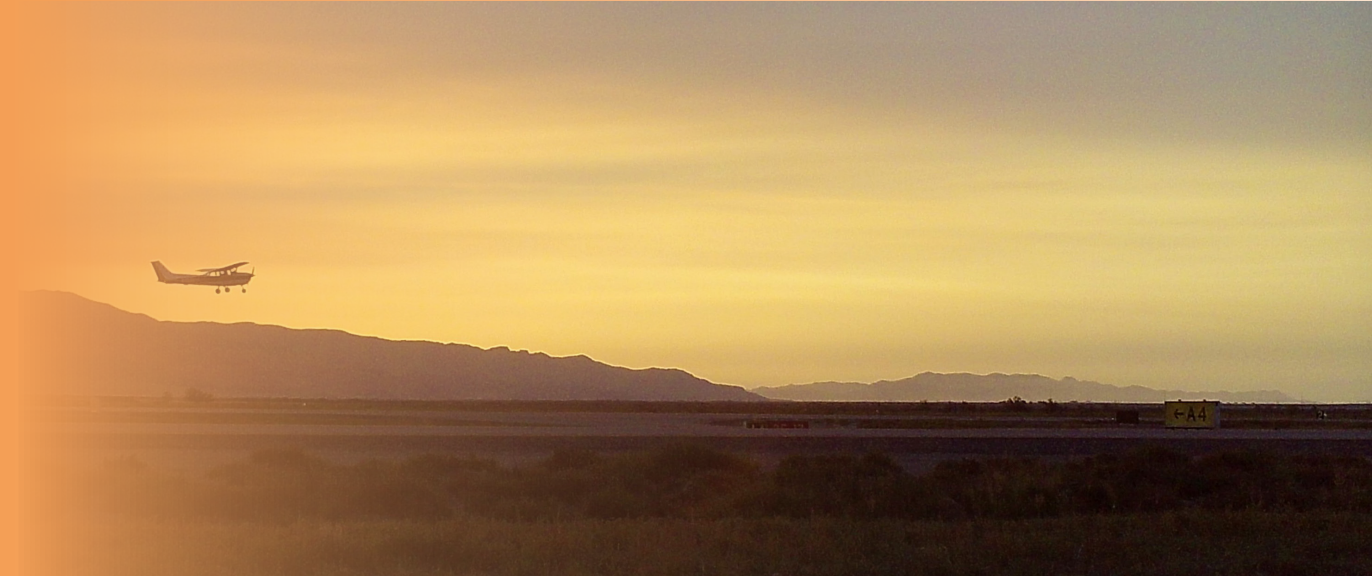
Layout Option 3



FBO Area Layout



DEVELOPMENT ALTERNATIVES



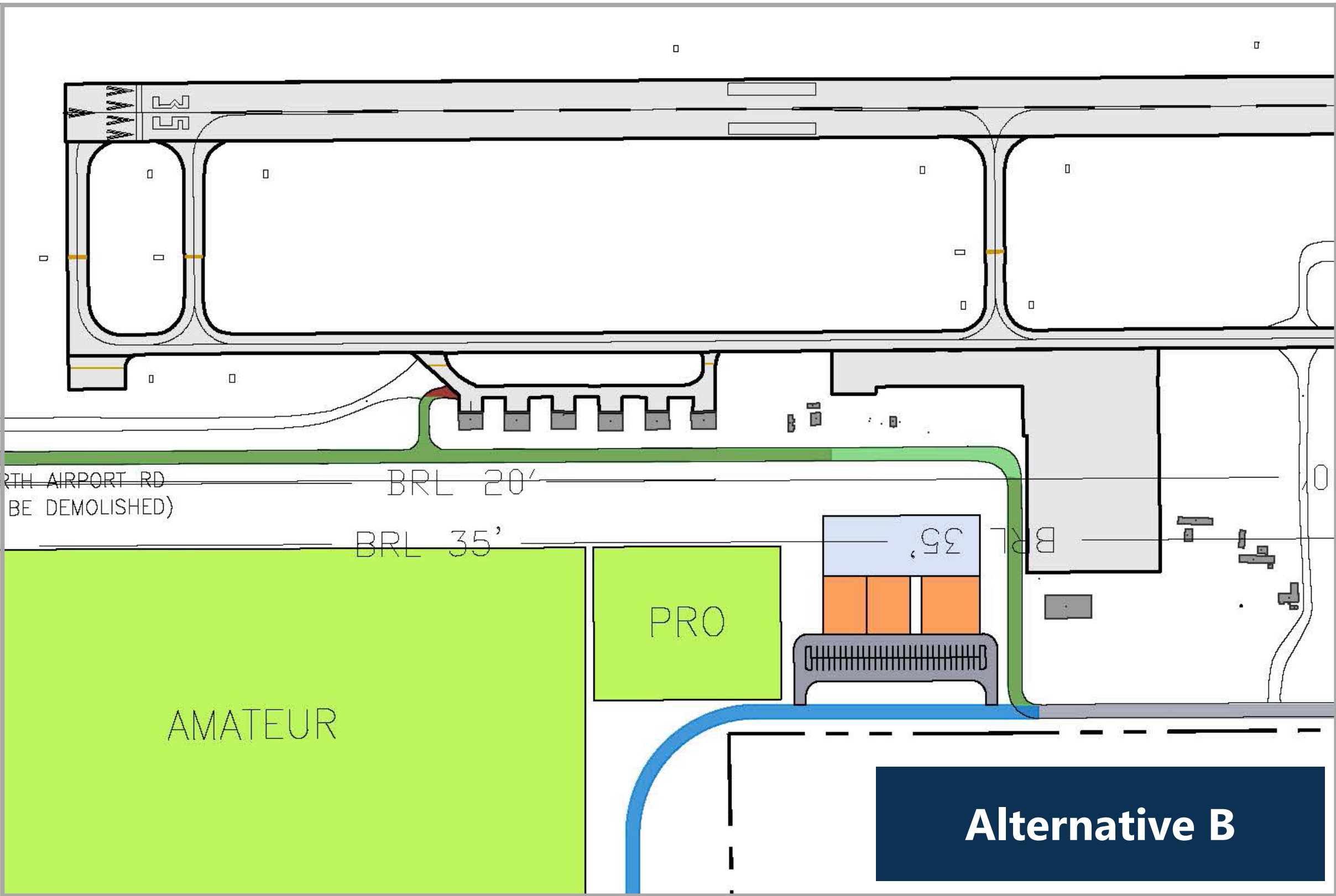
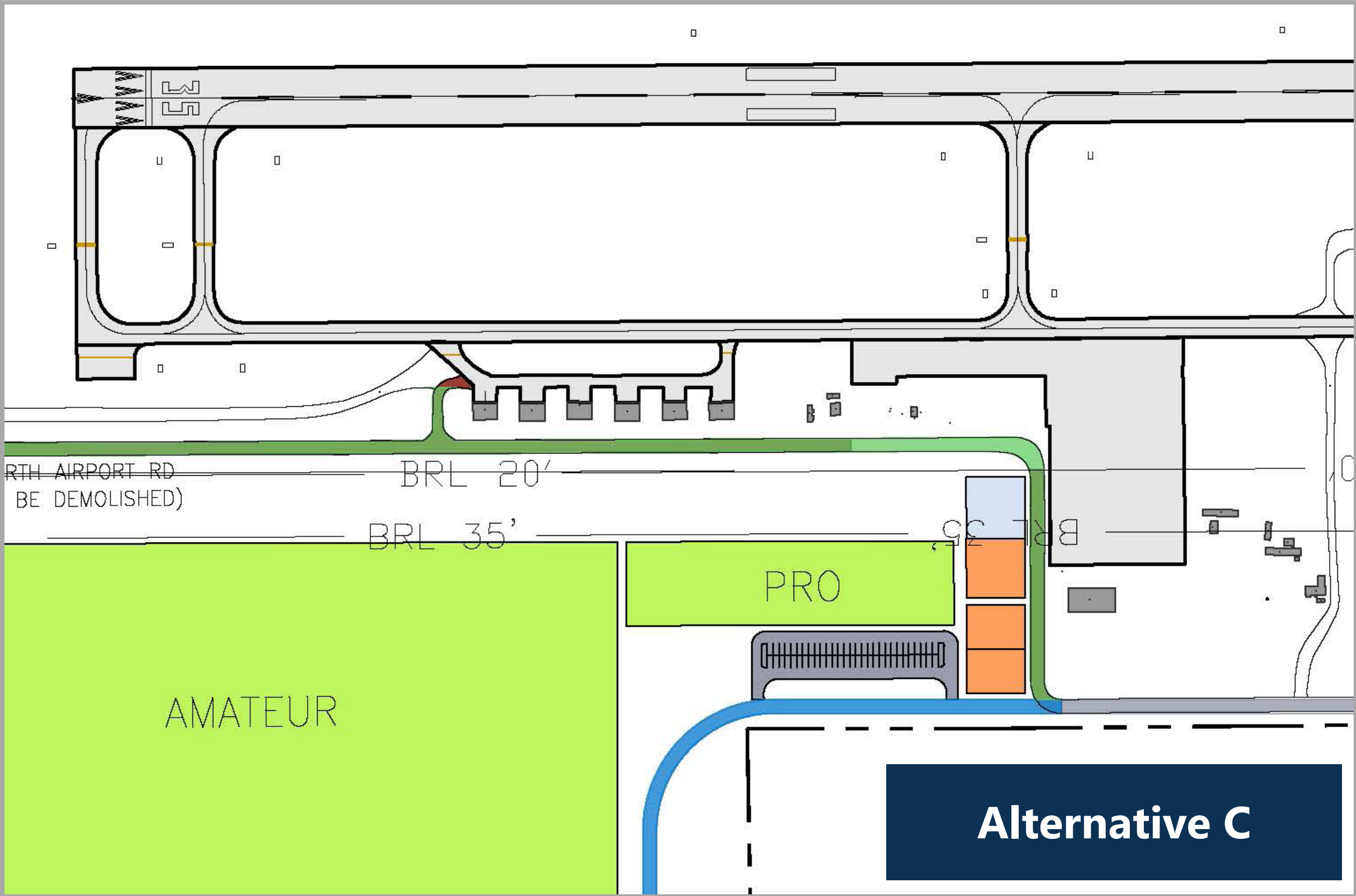
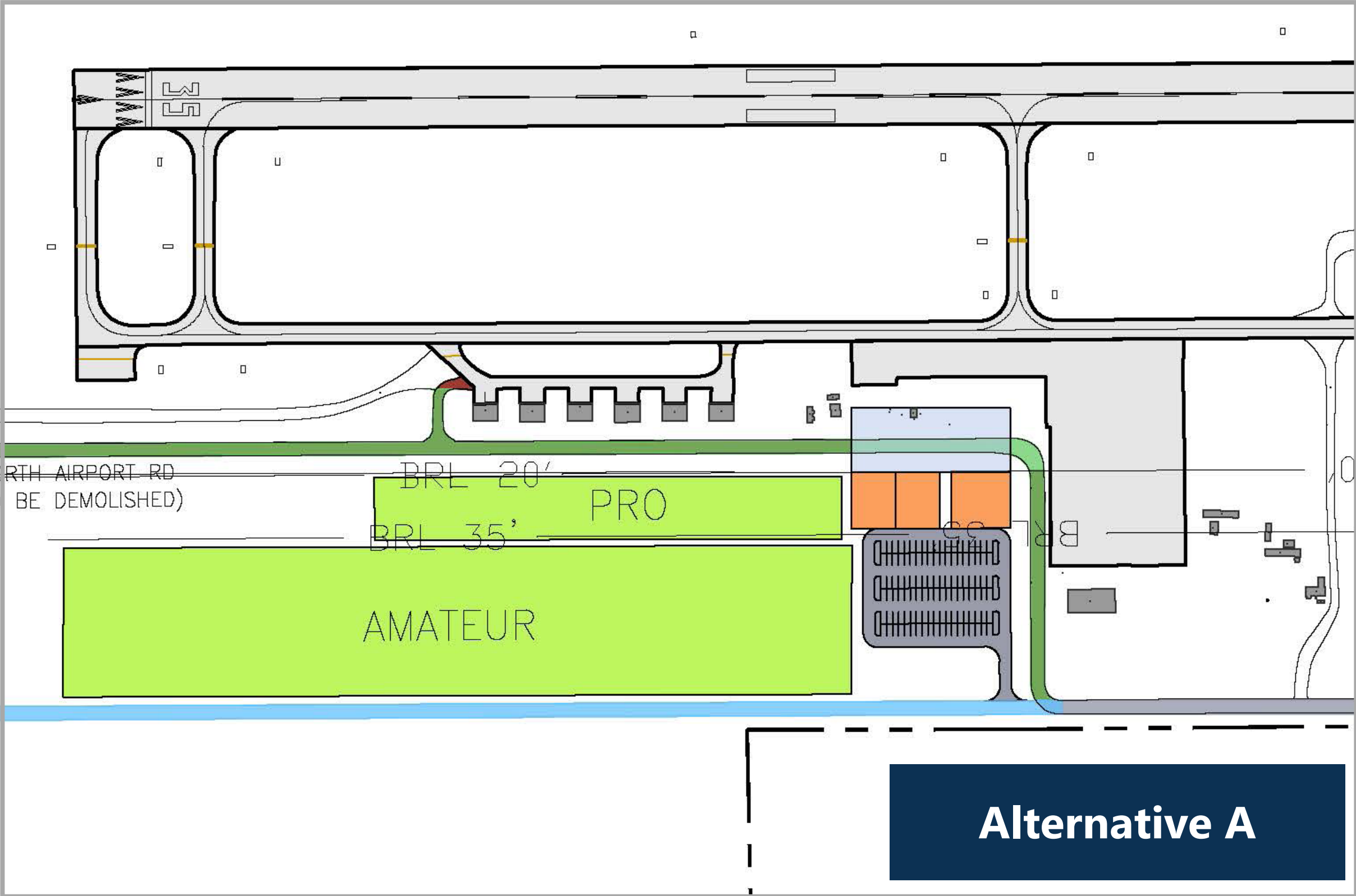
Skydiving Facilities

DOT/FAA/AR-11/30, *Development of Criteria for Parachute Landing Areas on Airports*, emphasizes the importance of hazard-free Parachute Landing Areas (PLAs), identifying potential risks such as power lines, buildings, water bodies, dense clusters of trees, fencing, paved surfaces, and aircraft-related equipment.

The guidelines suggest maintaining a minimum distance of 40 feet from any hazard when locating a PLA. Landing area sizes are determined based on the specific activities occurring at the airport, with recommendations provided in the table below detailing minimum sizes and hazard distances for various types of activities.

Aside from parachute landing areas, TVY's skydiving facilities include customer-facing buildings, vehicle parking, administrative buildings, packing and staging facilities, and an aircraft storage hangar. Three alternative layouts for these facilities at the south end of the airport were examined.

Alternative C is the preferred development because it accommodates skydive business operational flows, enables a positive customer experience, allows flexibility for future aeronautical expansion, and meets all safety design criteria.



LEGEND		
DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE	---	N/A
BUILDING RESTRICTION LINE	— BRL —	N/A
AIRSIDE PAVEMENT		
LANDSIDE PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
BUILDINGS		
PROPOSED SKYDIVE LANDING ZONES	N/A	
ROADWAY ALTERNATIVE "A"	N/A	
ROADWAY ALTERNATIVE "B"	N/A	

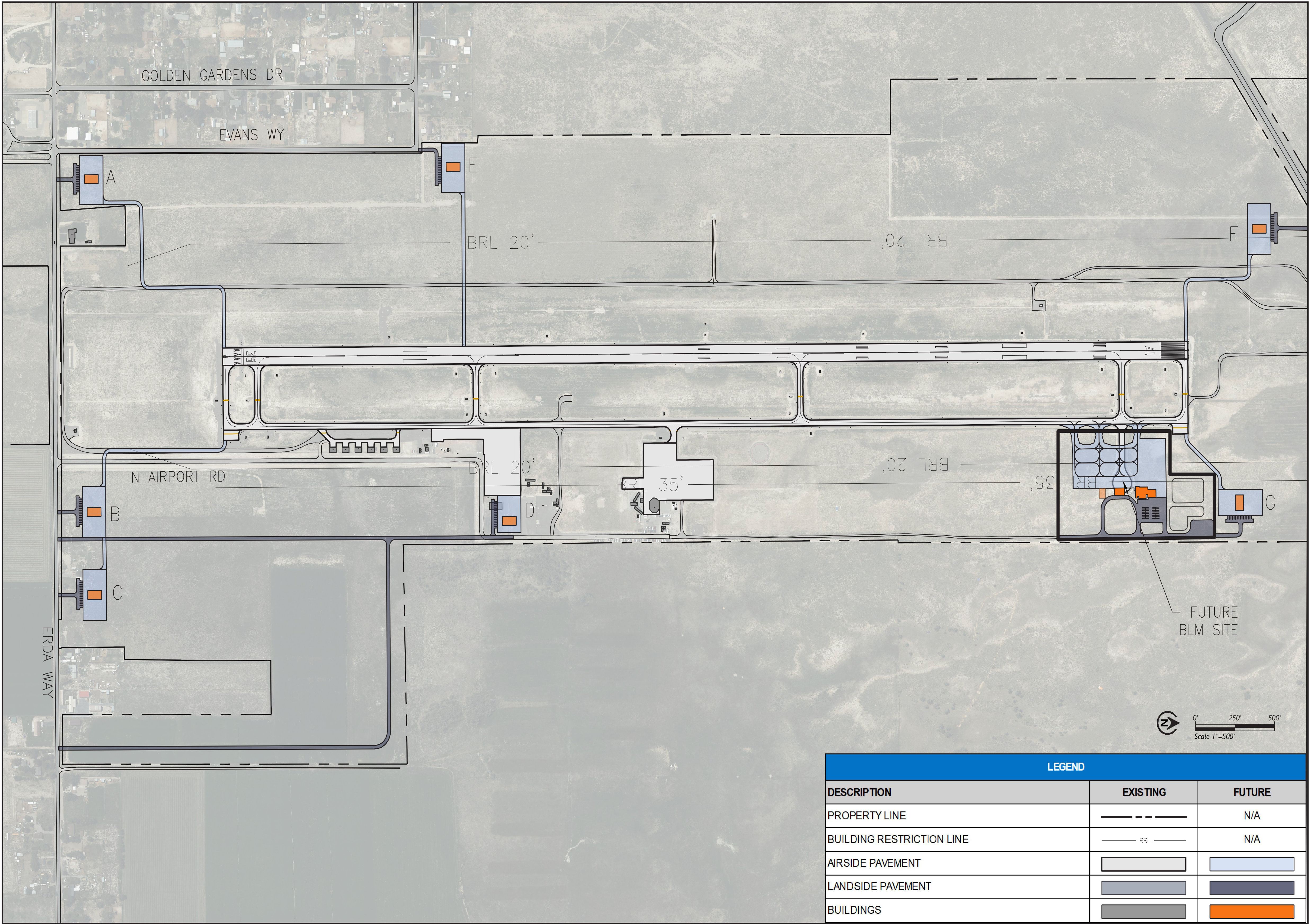
DEVELOPMENT ALTERNATIVES



Airport Support Facilities

TVY currently lacks snow removal equipment (SRE) and on-site support staff for clearing the airfield during winter weather. Maintenance personnel must transport SRE from SLCIA once it’s no longer needed there. There’s no dedicated building for storing this equipment; smaller ground equipment is stored in a maintenance shed adjacent to the apron, which is better suited for aeronautical development. Having dedicated space for administrative, operations, and maintenance functions at TVY is crucial for safe and efficient operations. Combining airport administration with maintenance and SRE storage is cost-effective and ensures quality services for users and the community. For a combined facility at TVY, a linear design with drive-through maintenance bays is recommended.

Alternative B performed the best when evaluated against established criteria and is the preferred location for future support facilities. This site allows easy access for airport staff from both the landside and airside. The location also leaves more valuable land near the airfield open for aeronautical uses. Operationally, the site is near the runway end which creates an efficient flow for snow removal operations. Additionally, the building lot provides an opportunity to create a formal entryway to the airport.



DEVELOPMENT ALTERNATIVES



Electric Vertical Takeoff-Landing (eVTOL) Facilities

In September 2022, the FAA issued Engineering Brief 105, *Vertiport Design*, to offer guidance on planning for vertiports at airports, which includes the location and design of pads for electric vertical takeoff and landing (eVTOL) aircraft.

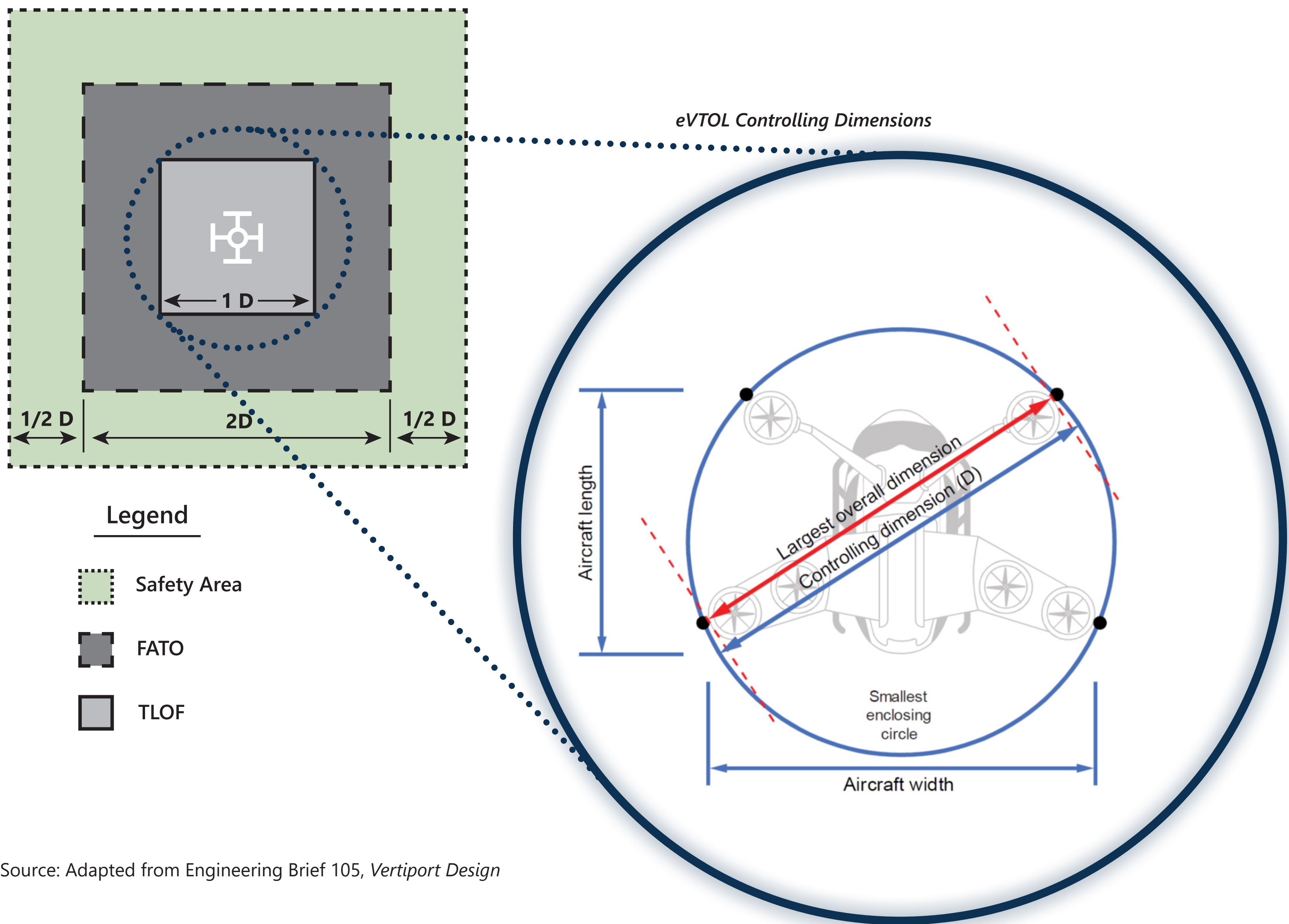
Notably, the brief acknowledges that the FAA lacks sufficient validated eVTOL aircraft performance data at the time of publication and, consequently, adopts a “prescriptive and conservative approach” for the recommendations provided in the briefing.

Vertiport design and geometry are determined by the touchdown and liftoff (TLOF) area, the final approach and takeoff area (FATO), and the safety area.

TLOF area is a load bearing, generally paved area centered in the FATO, on which the aircraft performs a touchdown or liftoff. The FATO is a defined, load-bearing area over which the aircraft completes the final phase of the approach, to a hover or a landing, and from which the aircraft initiates takeoff. The Safety Area is a defined area surrounding the FATO intended to reduce the risk of damage to aircraft accidentally diverging from the FATO.

The aircraft length and width, known as the “controlling dimension,” is defined as “the diameter of the smallest circle enclosing the eVTOL aircraft projection on a horizontal plane, while the aircraft is in the takeoff or landing configuration, with rotors/propellers turning, if applicable.”

eVTOL Pad Design



Source: Adapted from Engineering Brief 105, *Vertiport Design*

Engineering Brief 105 outlines FAA specifications for the assumed reference aircraft used to plan eVTOL pad space needs for the Master Plan, including sizing the vertiport and protected areas, as well as providing guidance on recommended separation distances for vertiports from runways.

Design Characteristics		Criteria
Propulsion	Electric battery driven, utilizing distributed electric propulsion	
Propulsive Units	2 or more	
Battery Systems	2 or more	
Maximum Takeoff Weight (MTOW)	12,500 lbs or less	
Aircraft Length	50 feet or less	
Aircraft Width	50 feet or less	

Reference eVTOL Aircraft MTOW	Airplane Size	Distance from Vertiport FATO Center to Runway Centerline
12,500 lbs or less	Small Airplane (12,500 lbs or less)	300 feet
	Large Airplane (12,500 lbs-300,000 lbs)	500 feet
	Heavy Aircraft (over 300,000 lbs)	700 feet

Source: Engineering Brief 105, *Vertiport Design*

Scan the QR code to see what UDOT is planning for the future of advanced air mobility in Utah



DEVELOPMENT ALTERNATIVES

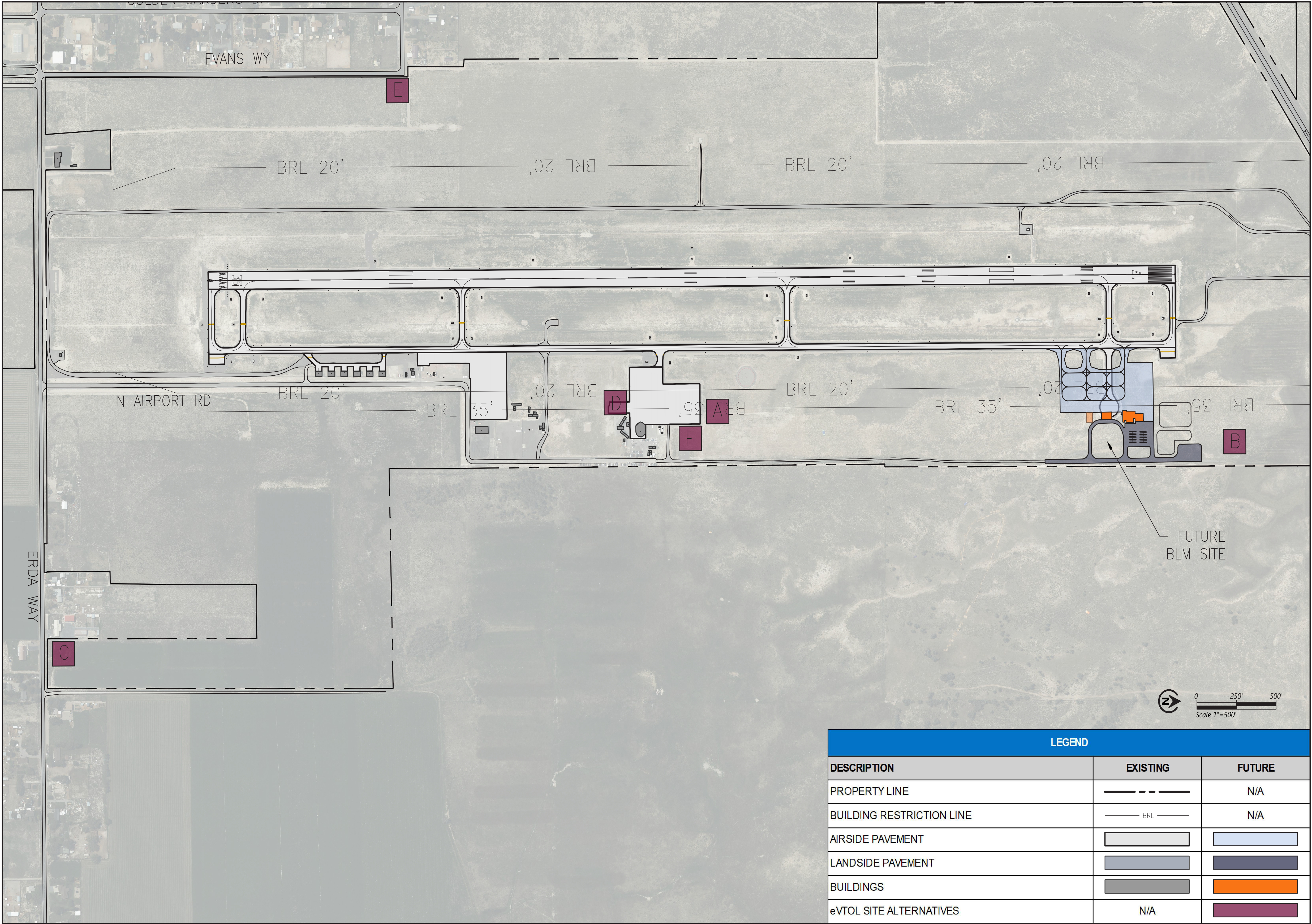


UDOT has taken a proactive approach to planning for the emerging Urban Air Mobility (UAM) market. In coordination with Utah Legislature, the UDOT Division of Aeronautics established the Utah Advanced Air Mobility (AAM) Working Group to research and publish the Advanced Air Mobility Infrastructure and Regulatory Study in coordination to analyze state infrastructure assets and anticipated needs to make AAM possible in Utah.

Several viable eVTOL pad site alternatives were identified at TVY, with each option assuming an area of 22,500 square feet of land.

Accommodating an eVTOL aircraft at TVY is currently of lesser priority due to ongoing efforts to establish water and stormwater utilities. However, it’s wise to prepare for the need for at least one eVTOL pad within existing constraints.

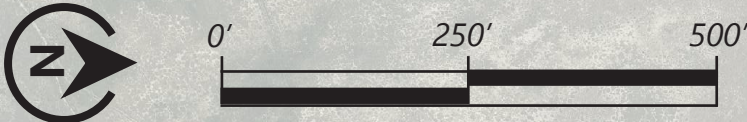
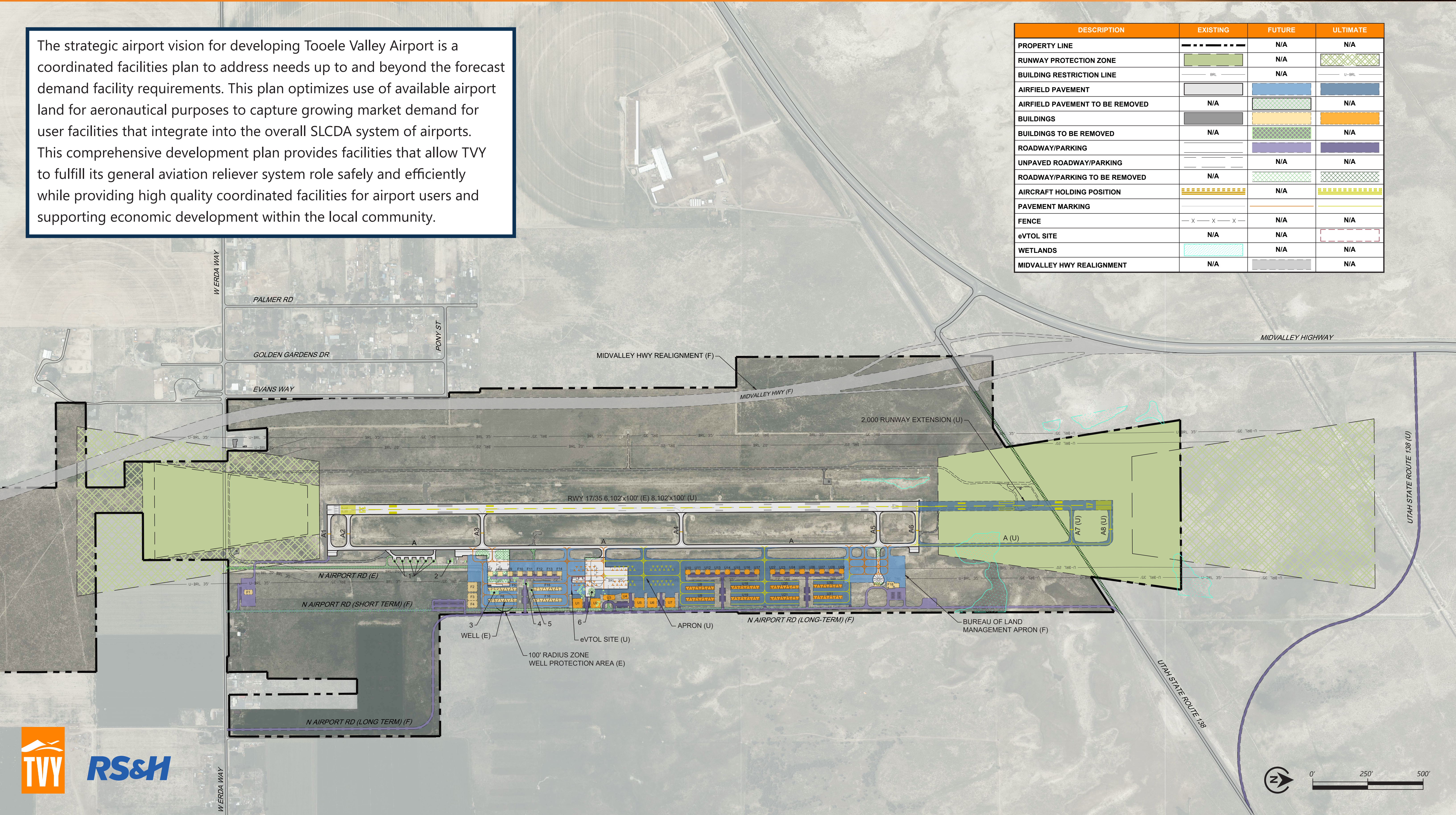
While, at this stage, all proposed options seem feasible, Alternative D stands out as the more advantageous site. It aligns with the preferred land use plan and is situated near planned FBO services and existing utilities, such as electrical and telecom. Alternative D is the preferred location for the eVTOL pad, however, there are many uncertainties surrounding market development and eVTOL technology implementation.



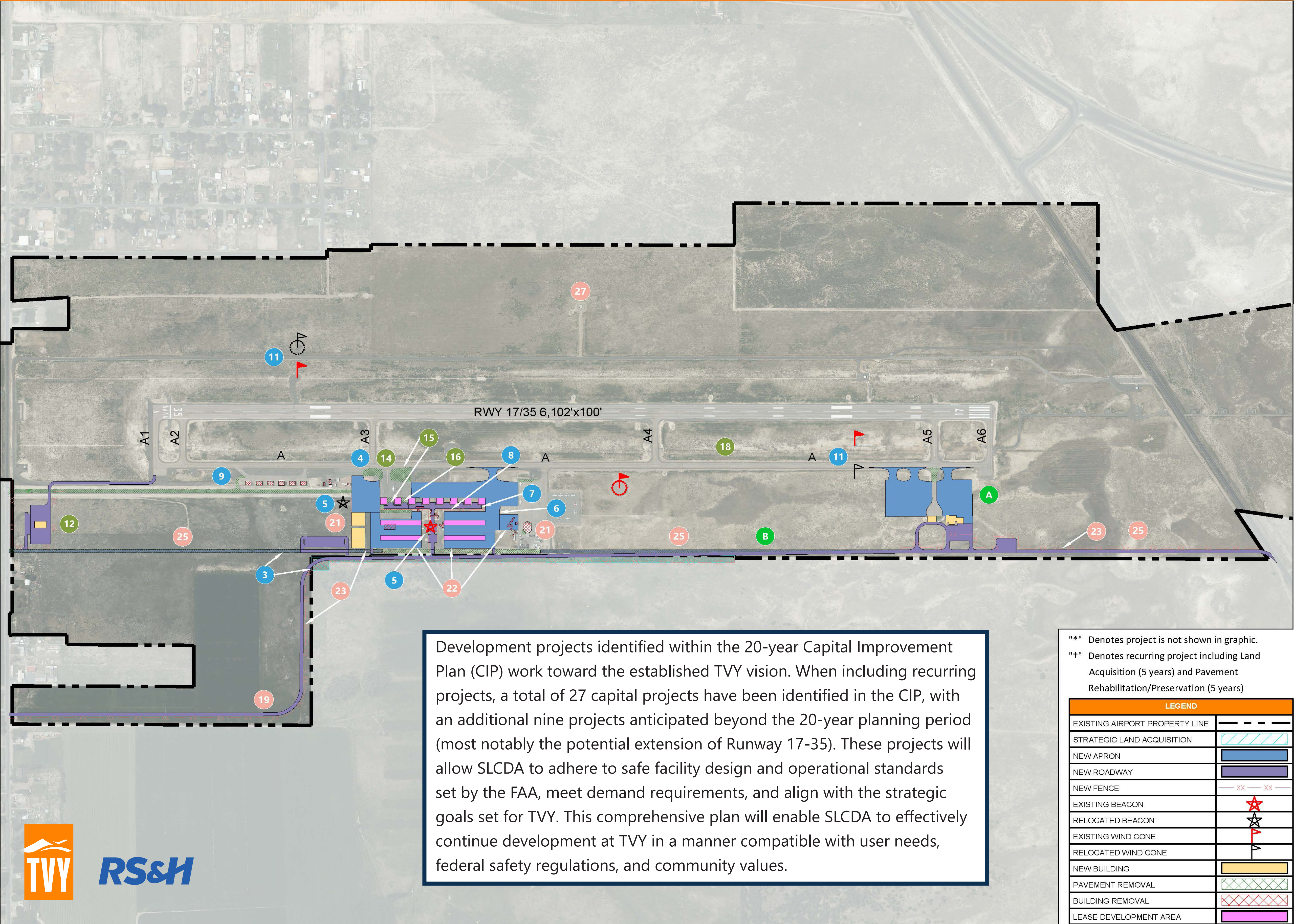
STRATEGIC AIRPORT VISION

The strategic airport vision for developing Tooele Valley Airport is a coordinated facilities plan to address needs up to and beyond the forecast demand facility requirements. This plan optimizes use of available airport land for aeronautical purposes to capture growing market demand for user facilities that integrate into the overall SLCD system of airports. This comprehensive development plan provides facilities that allow TVY to fulfill its general aviation reliever system role safely and efficiently while providing high quality coordinated facilities for airport users and supporting economic development within the local community.

DESCRIPTION	EXISTING	FUTURE	ULTIMATE
PROPERTY LINE	---	N/A	N/A
RUNWAY PROTECTION ZONE	█	N/A	█
BUILDING RESTRICTION LINE	---	N/A	---
AIRFIELD PAVEMENT	█	█	█
AIRFIELD PAVEMENT TO BE REMOVED	N/A	█	N/A
BUILDINGS	█	█	█
BUILDINGS TO BE REMOVED	N/A	█	N/A
ROADWAY/PARKING	---	█	█
UNPAVED ROADWAY/PARKING	---	N/A	N/A
ROADWAY/PARKING TO BE REMOVED	N/A	█	█
AIRCRAFT HOLDING POSITION	---	N/A	---
PAVEMENT MARKING	---	---	---
FENCE	- X - X - X -	N/A	N/A
eVTOL SITE	N/A	N/A	█
WETLANDS	█	N/A	N/A
MIDVALLEY HWY REALIGNMENT	N/A	█	N/A



DEVELOPMENT PHASING



Development projects identified within the 20-year Capital Improvement Plan (CIP) work toward the established TVY vision. When including recurring projects, a total of 27 capital projects have been identified in the CIP, with an additional nine projects anticipated beyond the 20-year planning period (most notably the potential extension of Runway 17-35). These projects will allow SLCD to adhere to safe facility design and operational standards set by the FAA, meet demand requirements, and align with the strategic goals set for TVY. This comprehensive plan will enable SLCD to effectively continue development at TVY in a manner compatible with user needs, federal safety regulations, and community values.

*** Denotes project is not shown in graphic.	
**+ Denotes recurring project including Land Acquisition (5 years) and Pavement Rehabilitation/Preservation (5 years)	
LEGEND	
EXISTING AIRPORT PROPERTY LINE	---
STRATEGIC LAND ACQUISITION	
NEW APRON	
NEW ROADWAY	
NEW FENCE	XX XX
EXISTING BEACON	
RELOCATED BEACON	
EXISTING WIND CONE	
RELOCATED WIND CONE	
NEW BUILDING	
PAVEMENT REMOVAL	
BUILDING REMOVAL	
LEASE DEVELOPMENT AREA	

Tooele Valley Airport Development Phasing Plan

PROJECTS CURRENTLY UNDERWAY

- A Bureau of Land Management Facilities
- B N Airport Rd Extension (Ph. I)
- C Remote ADS-B Receivers Installation*

NEAR-TERM PROJECTS (2024-2028)

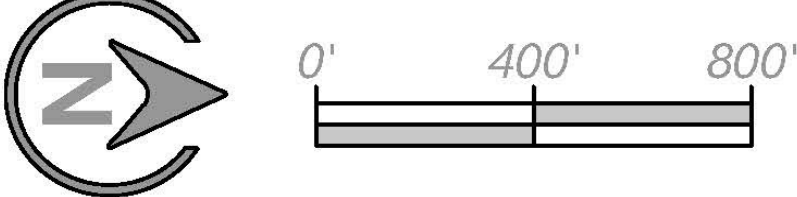
- 1 Land Acquisition*
- 2 Utilities*†
- 3 N Airport Rd Extension (Ph. II) & Strategic Land Acq.
- 4 Apron Expansion
- 5 Beacon Relocation
- Airfield Development Program #1
 - 6 Apron/Taxilane
 - 7 Parking/Roadway
 - 8 Fence
- 9 Hangar/Partial N Airport Rd Demolition
- 10 Pavement Rehabilitation/Preservation*†
- 11 Segmented Circle/Lighted Wind Cone Relocation

MID-TERM PROJECTS (2029-2033)

- 12 Airport Support Facilities
- 13 Land Acquisition*†
- 14 South Apron Pavement Rehabilitation/Preservation
- Airfield Development Program #2
 - 15 Parking/Roadway & Taxiway Demolition
 - 16 Fence
- 17 Pavement Rehabilitation/Preservation*†
- 18 Taxiway A Pavement Rehabilitation/Preservation

LONG-TERM PROJECTS (2034-2043)

- 19 N Airport Rd Extension (Ph. III)
- 20 Land Acquisition*†
- 21 Future Tenant Facilities
- Airfield Development Program #3
 - 22 Apron/Taxilane
 - 23 Fence
- 24 Pavement Rehabilitation/Preservation*†
- 25 N Airport Rd Extension (Ph. IV)
- 26 Land Acquisition*†
- 27 AWOS III to AWOS III P/T Upgrade





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