

Stakeholder Engagement

CWA Terminal Area Master Plan | April 10, 2023

fly **CWA**



Opening Remarks

Brian Grefe / Mark Cihlar

Project Overview

Evan Barrett

Team Introduction



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GA Terminal &
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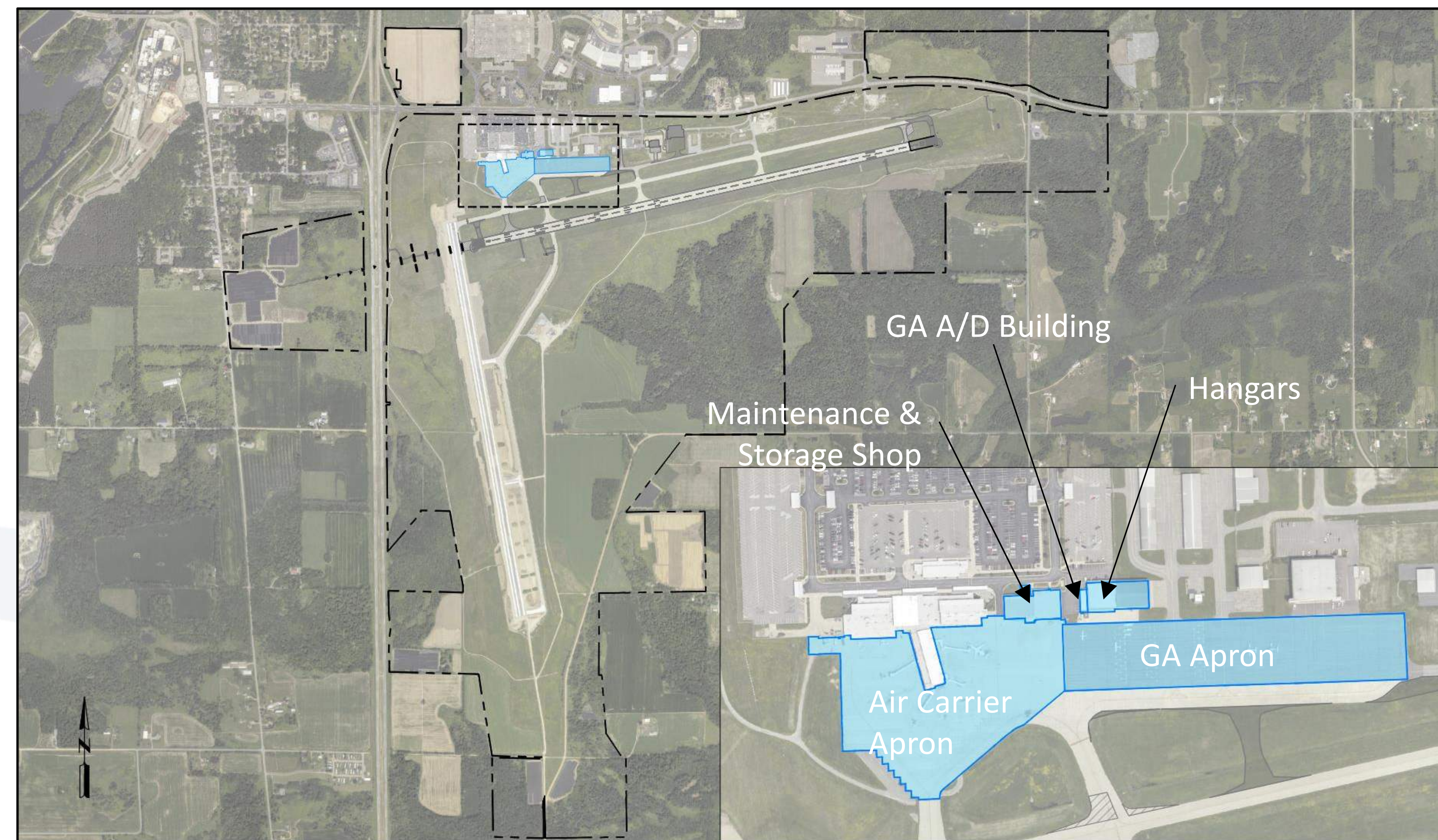
Project Background

- **Recently completed Master Plan focused primarily on airfield needs**
- **Size of airline and based aircraft are anticipated to increase over the next five years**
- **General aviation activity and based aircraft have outpaced Master Plan forecasts**
- **Master Plan landside concepts are no longer viable due to recent airport improvements**
- **Several landside facilities are reaching the end of their useful life**



Focus Areas

- **General Aviation (GA)
Arrival/Departure Building**
- **Airport Equipment Maintenance and
Storage Shop**
- **Air Carrier and GA Aircraft Parking
Aprons**
- **GA Aircraft Hangar Areas**
- **Sustainable Airport Construction,
Operations, and Maintenance**



Project Goals

- **Re-evaluate airport landside needs based on evolving activity trends**
- **Identify proposed short-term and long-term landside facility concepts that:**
 - Meet existing and forecasted airport user needs
 - Maximize productive use of limited developable space
 - Maintain compatibility between different airport uses
- **Prepare a practical and feasible capital improvement plan**
- **Apply sustainable practices to future airport construction, operations, and maintenance**
- **Position the airport to tap new and emerging capital funding sources**



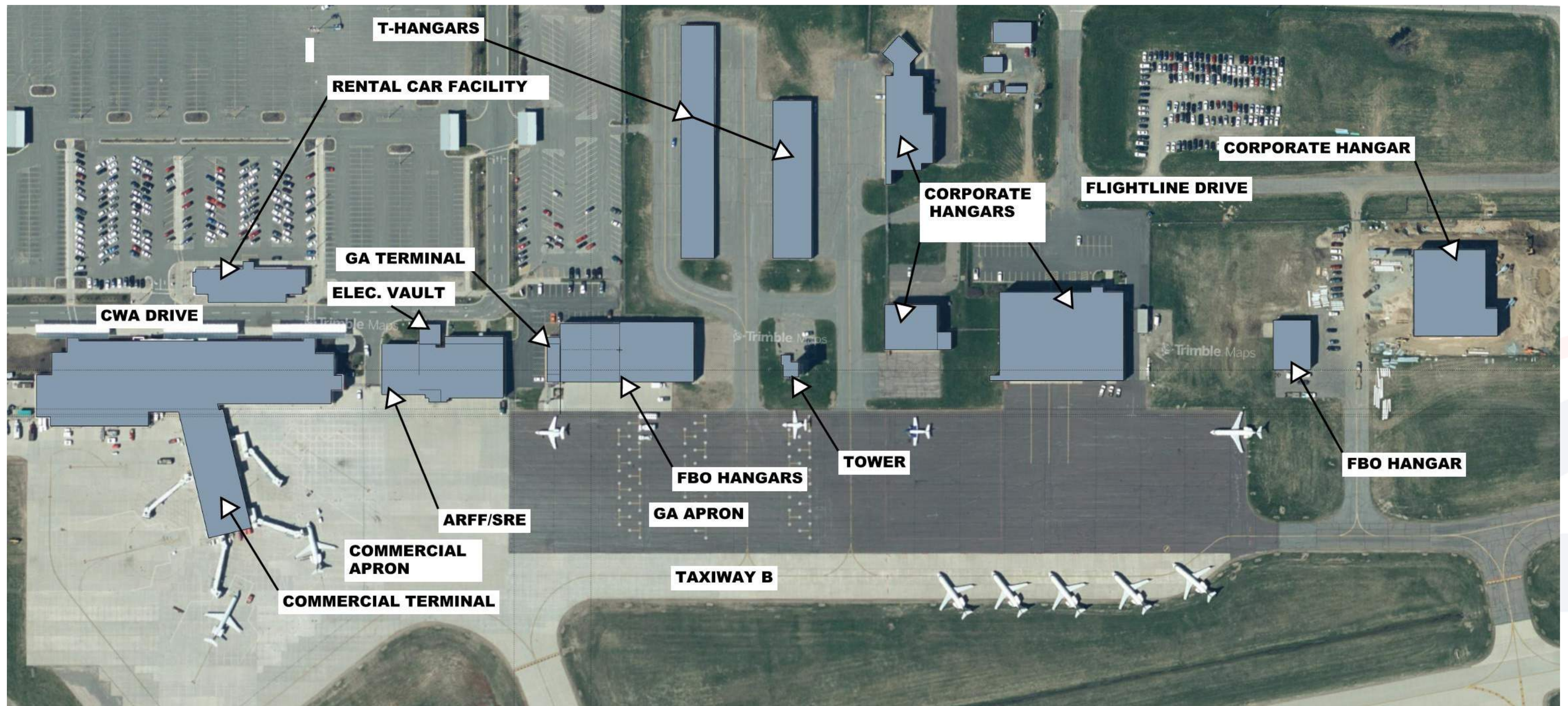
Stakeholder Feedback

- **General aviation should continue to grow at CWA and complement nearby airports (Downtown Wausau and Stevens Point)**
- **Make GA facilities more competitive with airports like ATW and MSP**
- **Consider youth education/STEM activities (e.g. Boy Scouts)**
- **Reduce competition for space between airlines and GA**

GA Terminal & ARFF/SRE Inventory & Issues Recap

Pat Casey

Existing Facilities Overview

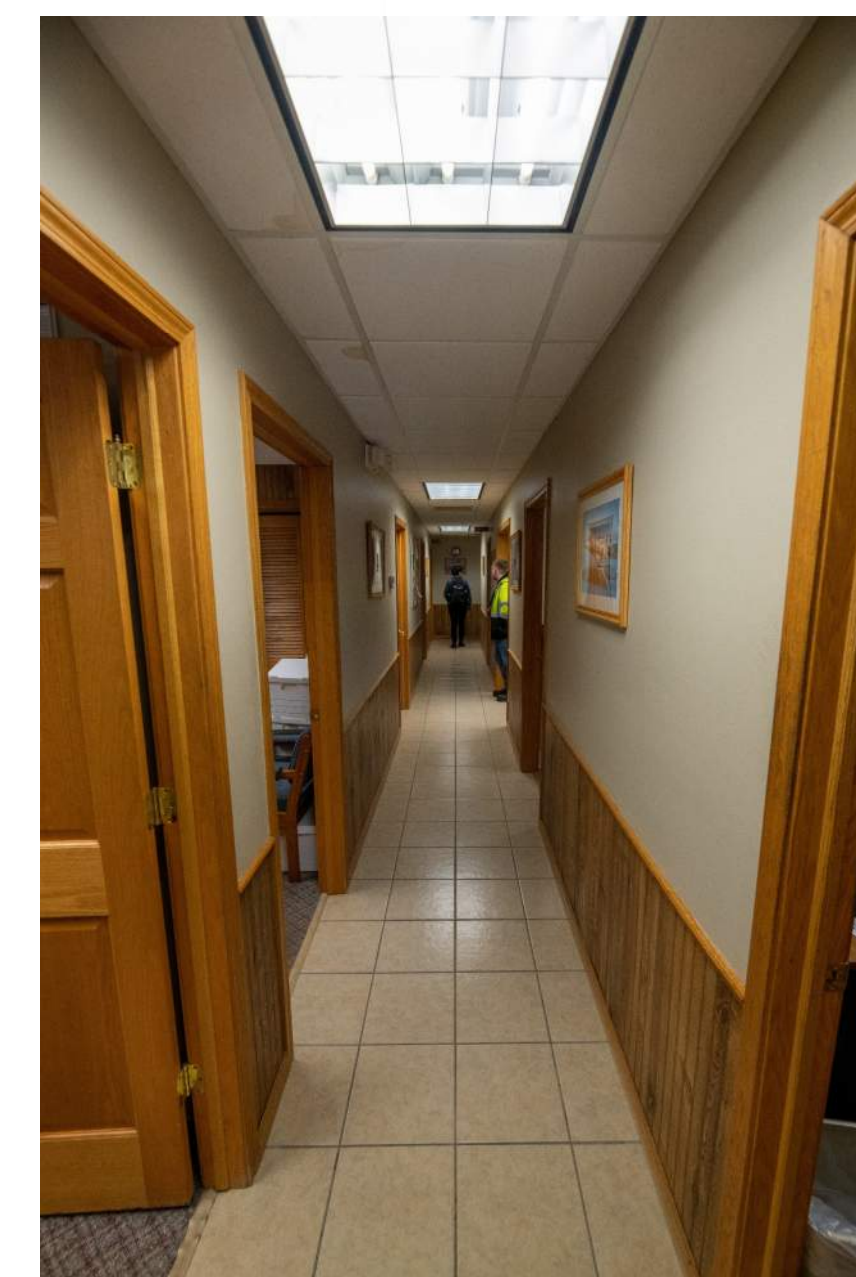
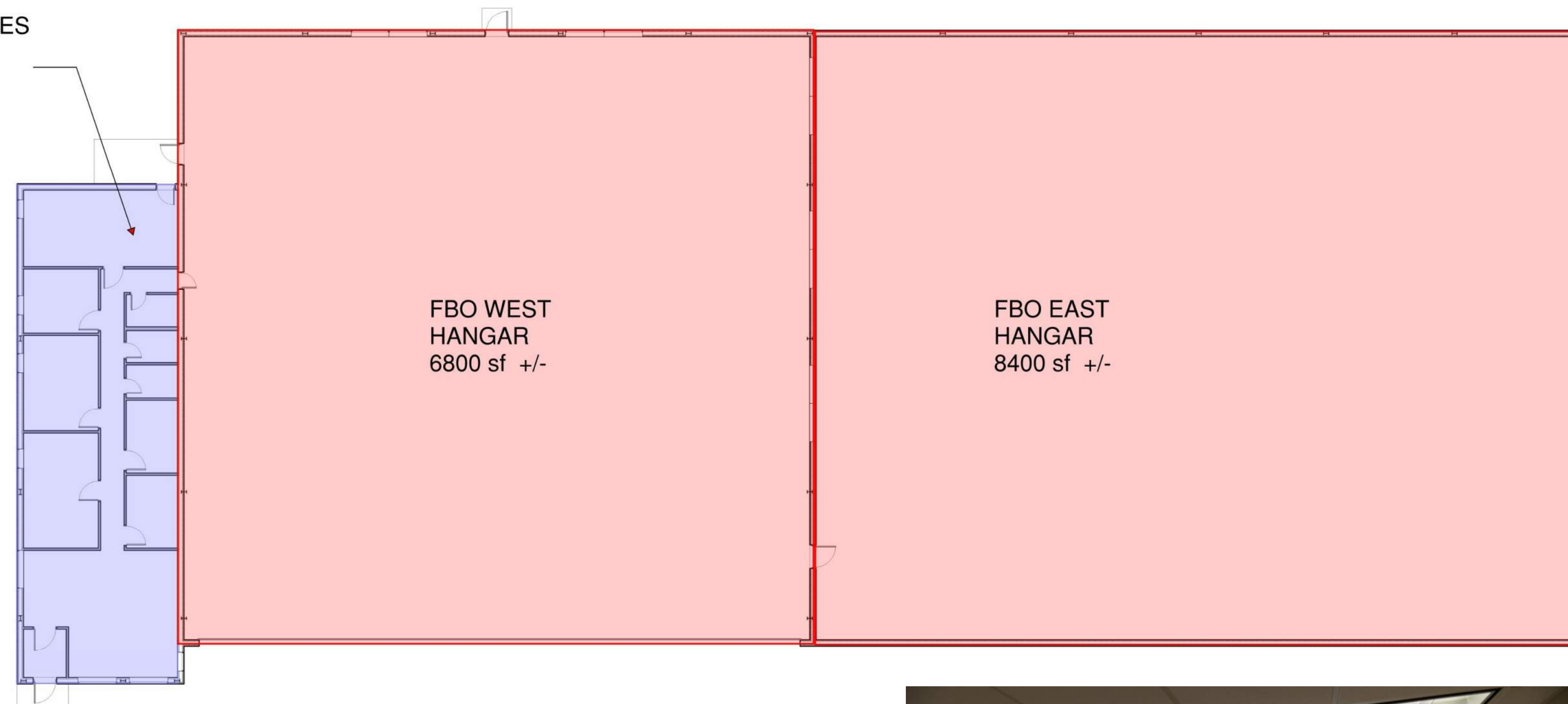


Existing GA Facilities & Estimated A/D Building Needs

- WAITING AREA HAS SEATING FOR ABOUT 6 PEOPLE
- HOSTS FLIGHT TRAINING SCHOOL
- FBO FUNCTIONS
- PILOTS LOUNGE

- **5,300 SF EST. A/D BLDG NEED**
- BASED ON 30 PAX CAPACITY
- INCLUDES SPACE FOR FLIGHT TRAINING

FBO OFFICES
AND A/D
LOUNGE
1400 sf +/-



NARROW HALL TO
RESTROOMS AND
VENDING AREAS

- TOTAL EXISTING = 16,600 SF
- **EXISTING A/D BLDG = 1,400 SF**
- WEST HANGAR = 6,800 SF
- EAST HANGAR = 8,400 SF

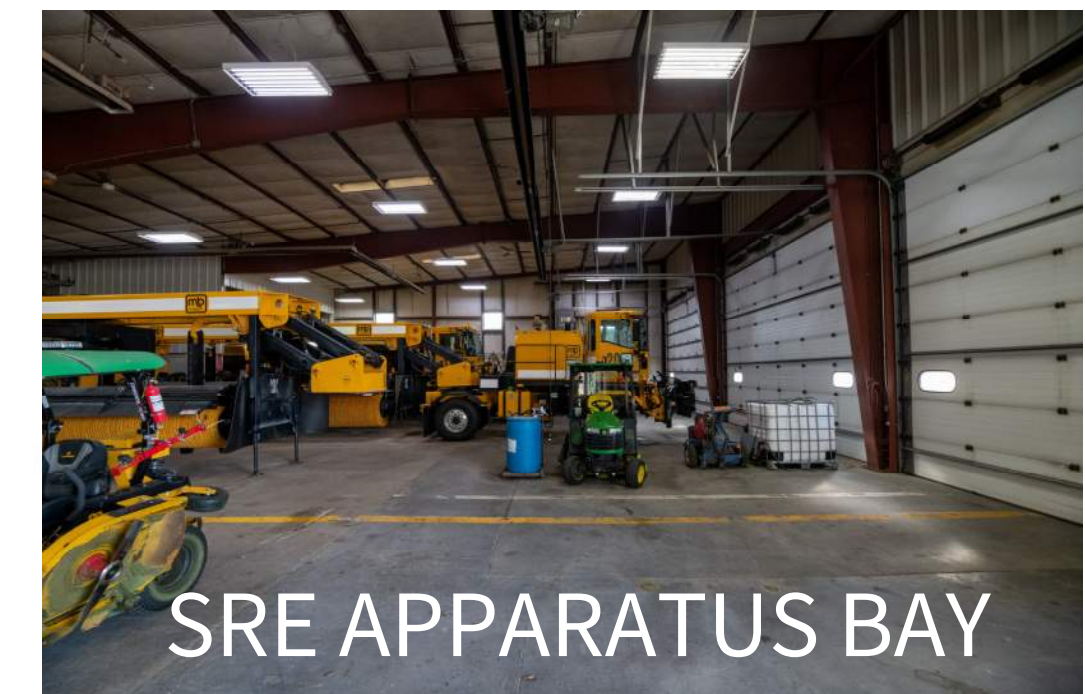


RECEPTION

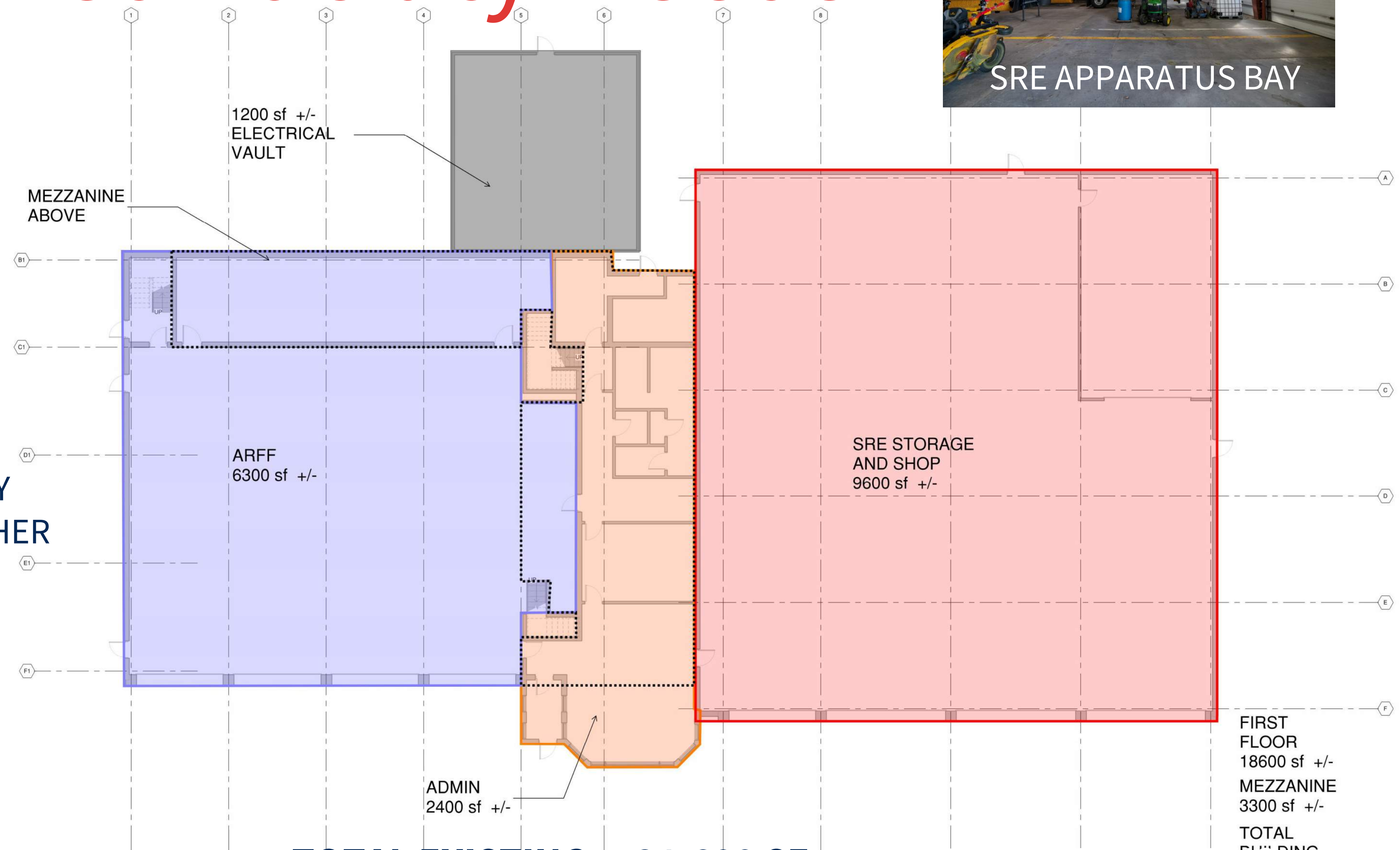


WAITING AREA

Existing SRE/ARFF Facilities & Estimated Combined Facility Needs



- ARFF APPARATUS BAY IS AN ADEQUATE SIZE BUT IS CURRENTLY ALSO USED FOR ADDITIONAL SRE EQUIPMENT STORAGE
- SRE FACILITY HAS HAD ADDITIONS TO IT PREVIOUSLY
- STORAGE FOR SRE EQUIPMENT NEEDS TO BE AT OTHER FACILITIES ON THE AIRPORT
- WATCHROOM / SNOW DESK
- EMERGENCY OPERATION CENTER (EOC)
- ARFF VEHICLE AND AGENT STORAGE
- MAINTENANCE SPACES
- OPERATIONS EQUIPMENT
- STORAGE FOR VEHICLES AND EQUIPMENT
- STORAGE FOR PARTS, SAND, DE-ICE
- **39,000 SF EST. COMBINED ARFF/SRE BLDG NEED**



- **TOTAL EXISTING = 21,600 SF**
- ARFF BAYS = 6,300 SF
- ADMIN = 2,400 SF
- SRE AND SHOP = 9,600 SF
- MEZZANINE = 3,300 SF

FIRST FLOOR 18600 sf +/-
 MEZZANINE 3300 sf +/-
 TOTAL BUILDING 21900 sf +/-

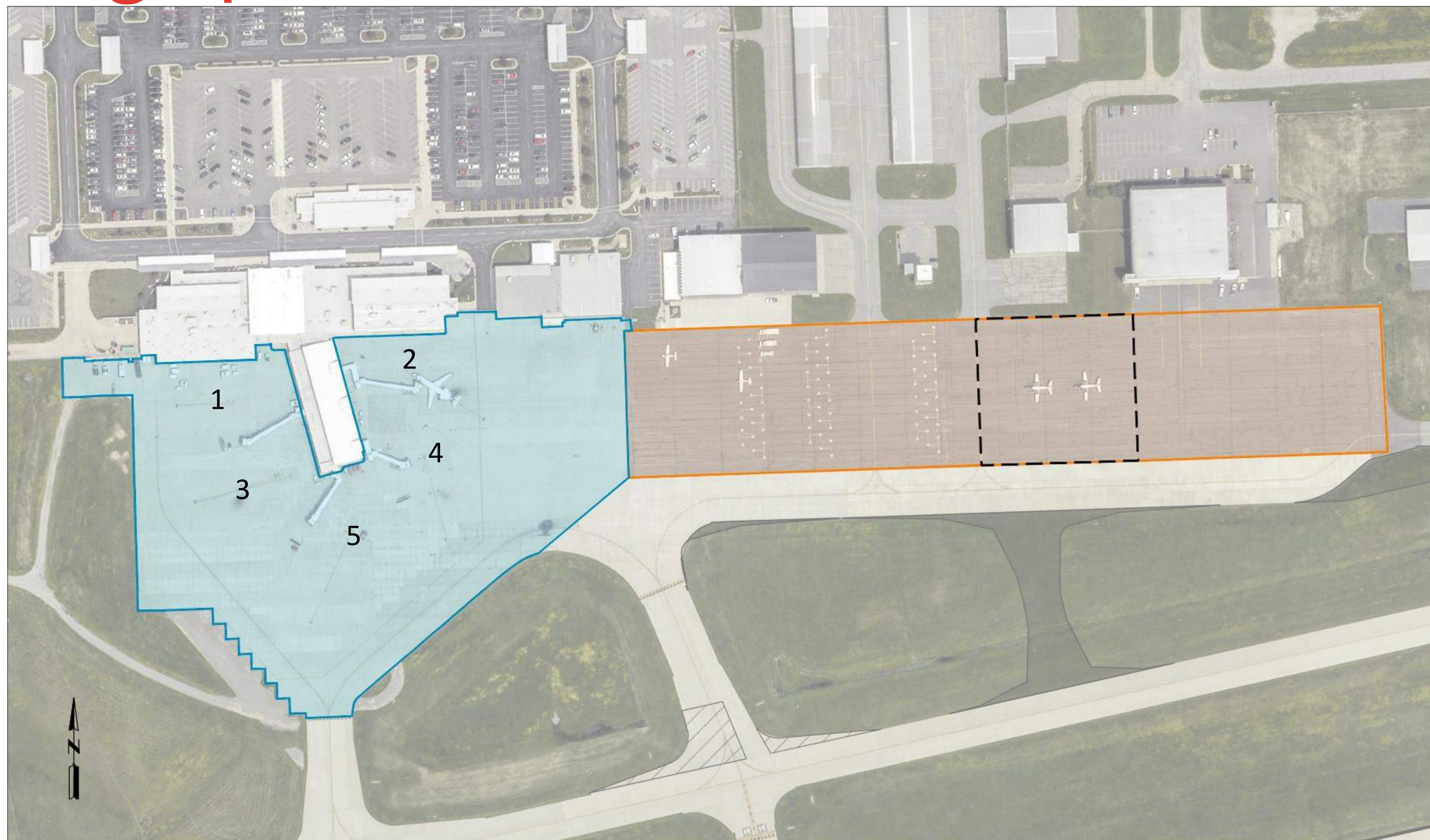
Stakeholder Feedback

- **Understand the needs of businesses we are trying to attract**
- **Consider the needs of different types of GA users**
- **Improve aesthetics of FBO terminal**
- **Provide adequate semi-private space, separation of spaces, informal social space**
- **Provide easy access to refreshments, rental cars**
- **Keep space open in front of FBO terminal for arriving airplanes**
- **Improve landside visibility of / wayfinding to the FBO terminal**
- **Consider needs of small freight operations**
- **Consider needs of passengers with disabilities**
- **Consider options to relocate FBO terminal**

Air Carrier & GA Apron Inventory & Issues Recap

Evan Barrett

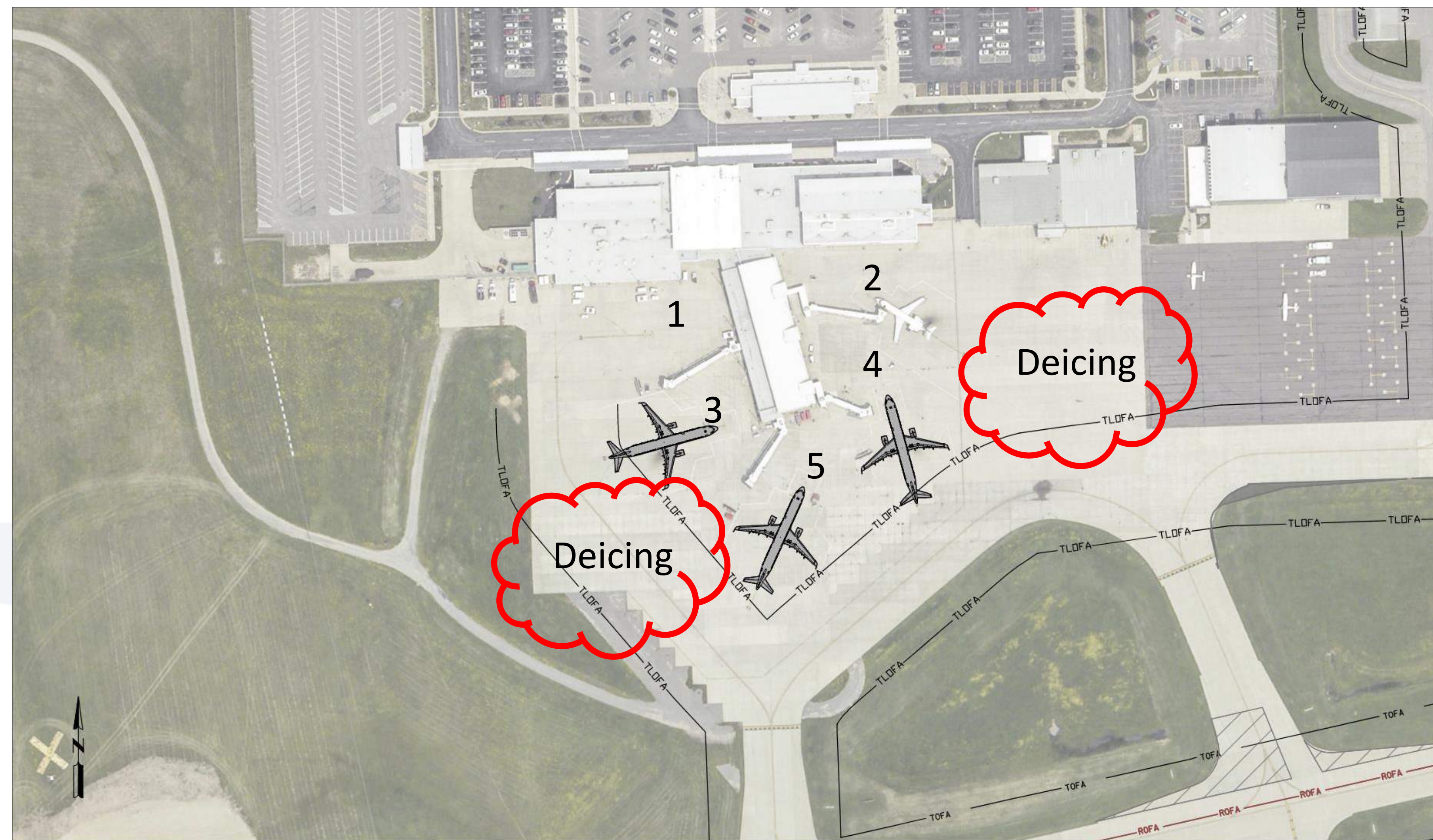
Existing Apron Overview



Air Carrier Apron Existing Issues

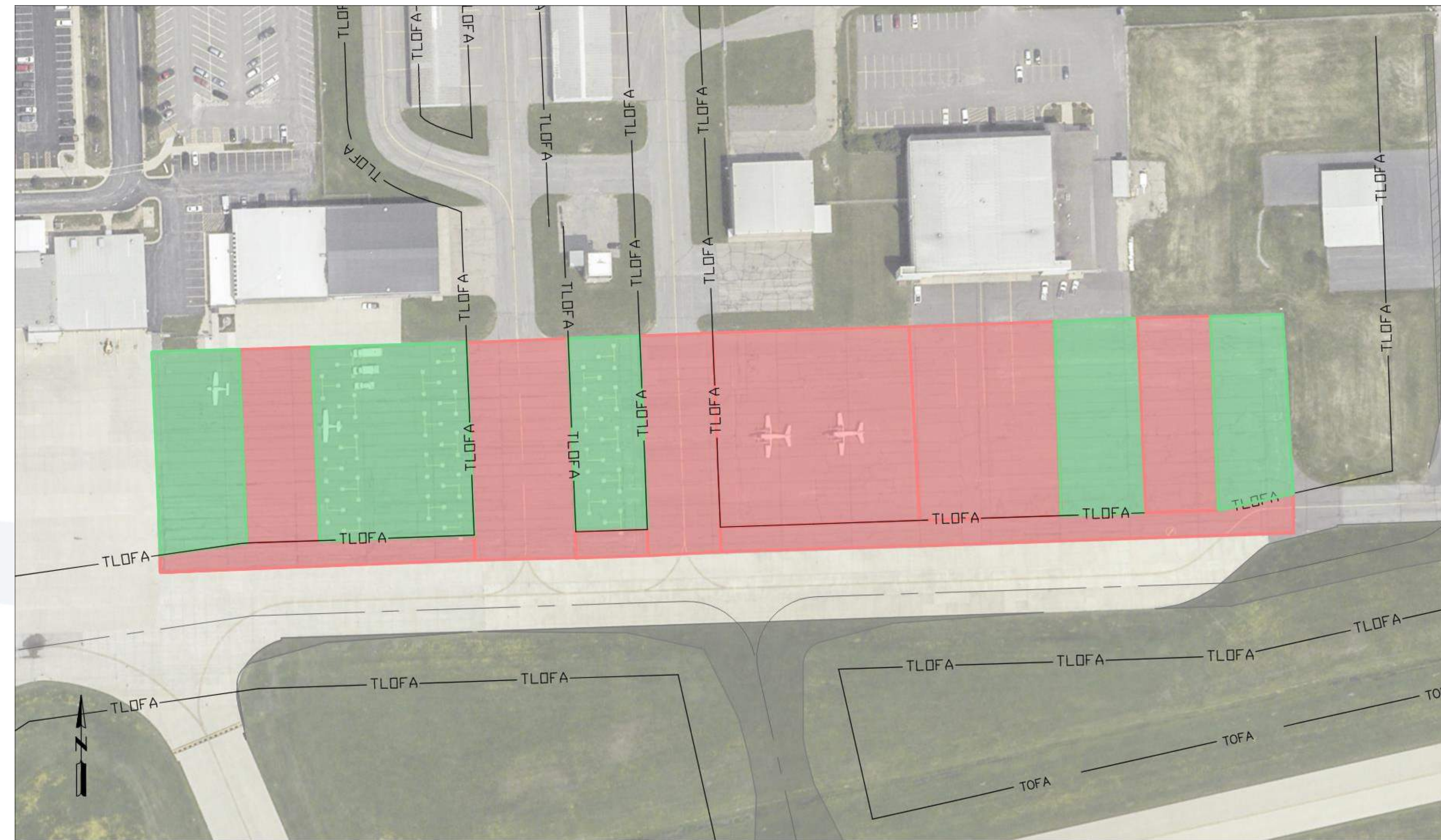
Issues:

- Some aircraft tails penetrate taxilane object free area
- Deicing activity interrupts gate pushback activity
- Ground Service Equipment scattered around apron



GA Apron Existing Issues

- **Apron is entirely asphalt**
 - Larger aircraft cannot park on asphalt and must park on concrete in front of ARFF/SRE building which interrupts activity
- **Apron depth = 210'**
 - Cannot park more than two ADG II aircraft side by side
- **Parked aircraft often need to be moved to get other aircraft in/out of hangars**
- **Fuel trucks park over tie down positions**
- **Taxilane Object Free Areas**
- **Cargo**
- **Poor pavement**



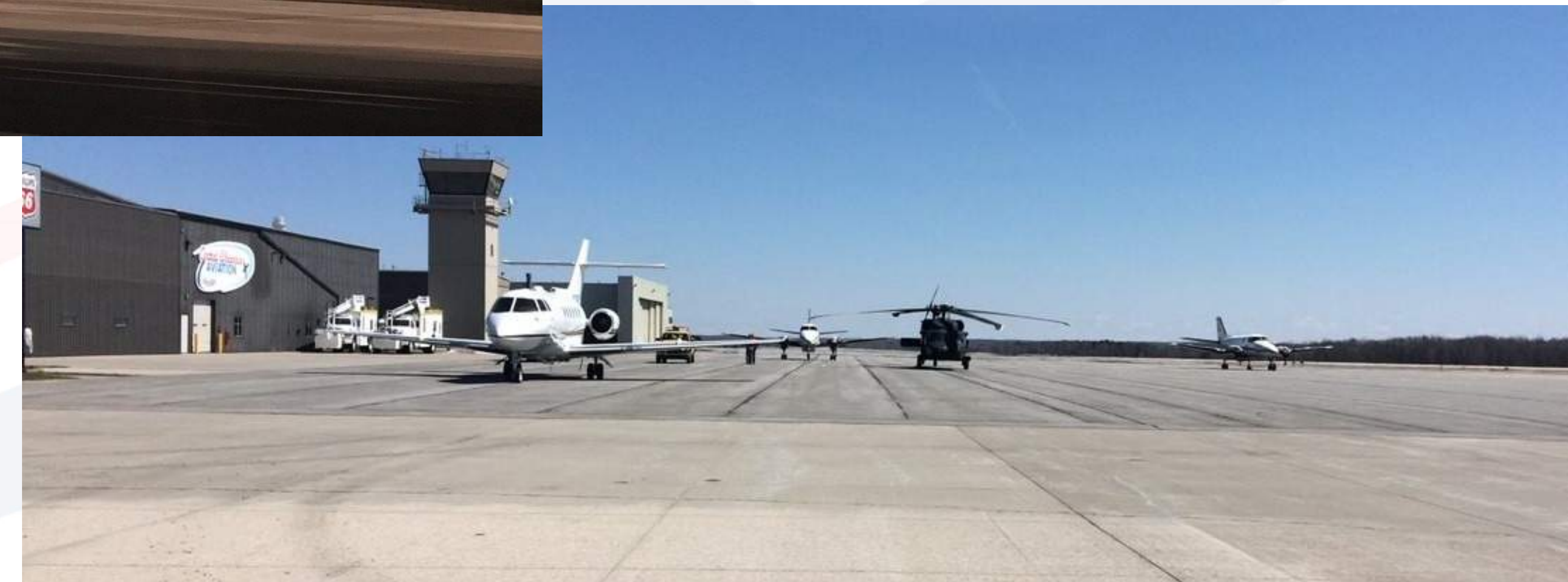
GA Apron Existing Issues



GA Apron Existing Issues



GA Apron Existing Issues



Stakeholder Feedback

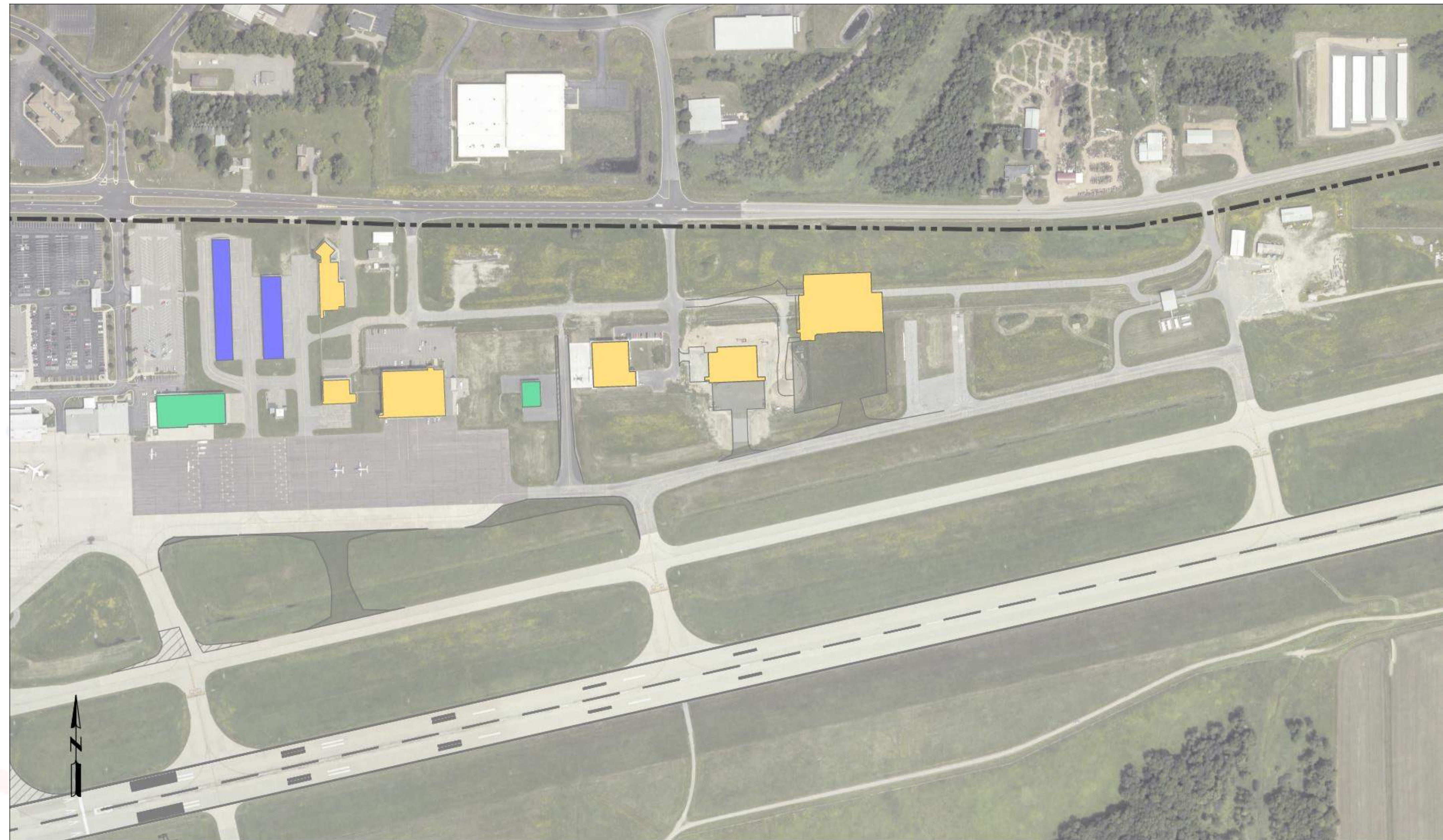
- **Separate fuel truck parking from aircraft parking**
- **Pave grass areas near aircraft parking to reduce airborne dirt/dust**
- **Concrete is often preferable to and more useful than asphalt**
- **Park corporate jets in front of FBO terminal**
- **Consider Endeavor maintenance hardstand on GA ramp**
- **Separate deicing, SRE operations, and corporate jet activity**

Hangar Development

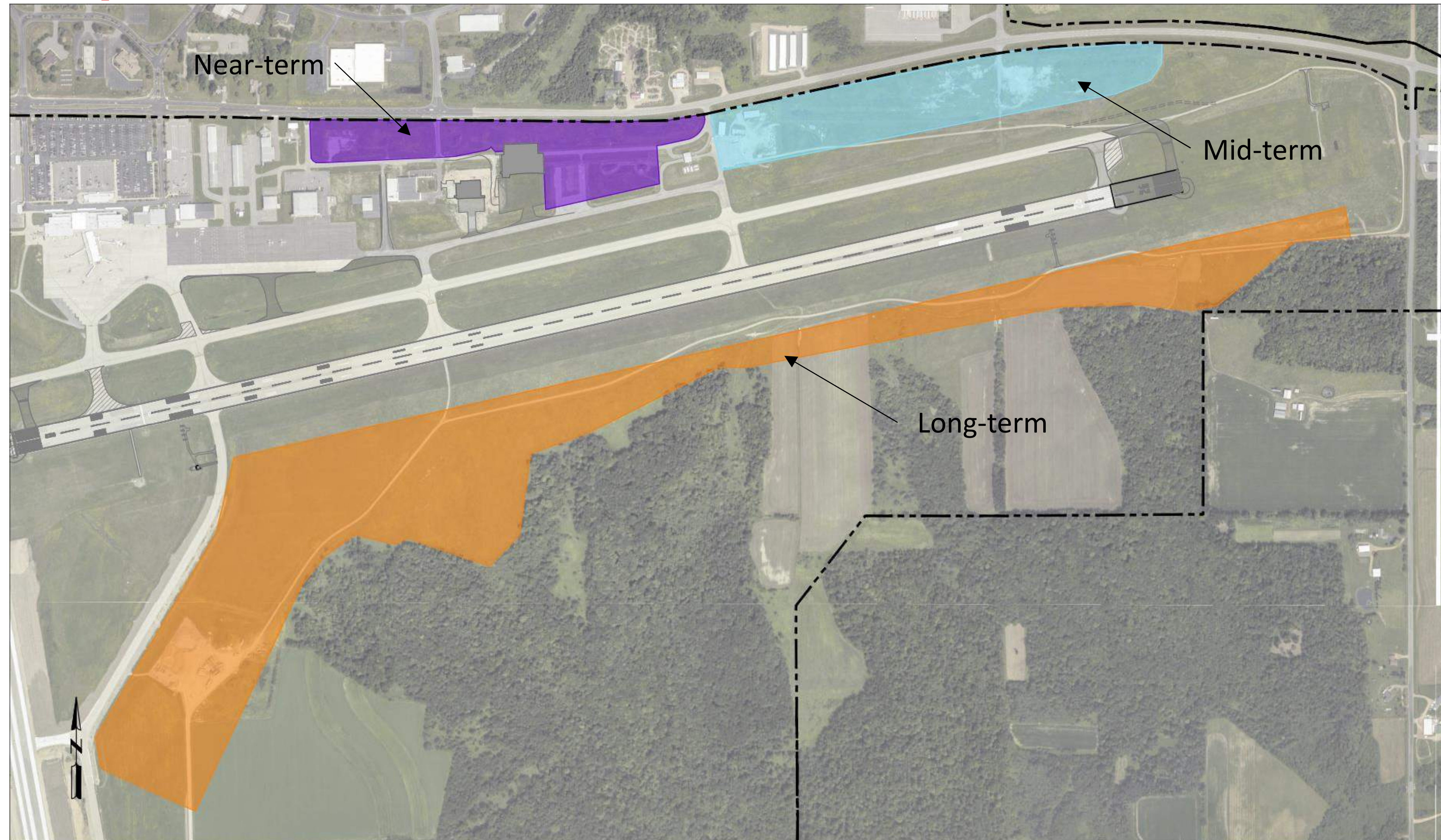
Evan Barrett

Hangar Development Overview

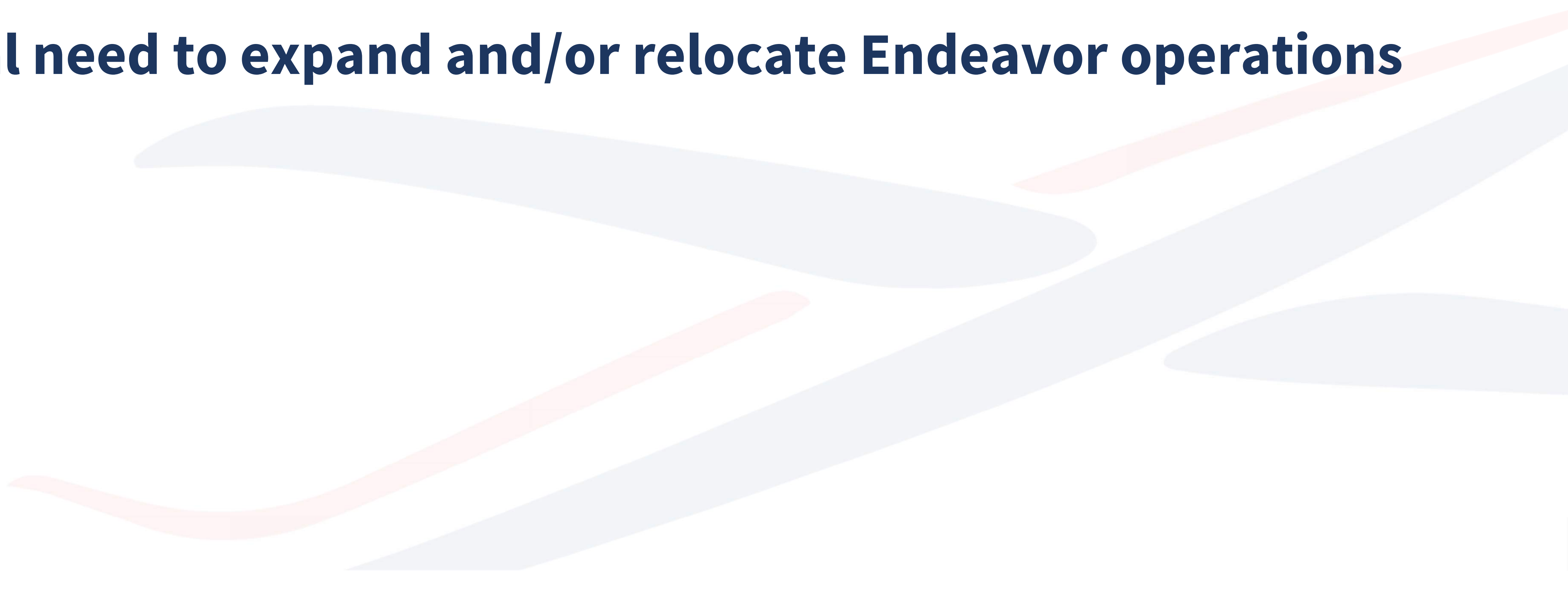
- **T-Hangars**
- **Corporate Hangars**
- **Transient Hangars**



Near-Term, Mid-Term, & Long-Term Development



Stakeholder Feedback

- **Provide a variety of aircraft storage options**
 - **Prefer T-hangar location near FBO**
 - **Consider outdoor parking for medevac helicopters**
 - **Current FBO hangar doors not tall enough for many aircraft**
 - **Consider potential need to expand and/or relocate Endeavor operations**
- 

Preliminary Concept Development GA Terminal, ARFF/SRE & Air Carrier/General Aviation Aprons

Pat Casey / Evan Barrett / Stephanie Nikho

GA Terminal Building Space Requirements

Program/Room	AIP Eligibility	Estimated SF Need	Existing SF
Client-Facing	ELIGIBLE	1,420	475
Client-Support	PRORATED	1,550	675
Flight-Support	INELIGIBLE	1,050	190
Building Support	PRORATED	1,320	100
TOTAL		5,340	1,440

Notes:

1 Based on AC 150-5210-15A

2 Based on AIP Table O-1

Concept Development GA Terminal

- **Waiting room capacity for 30 passengers**
- **Seating, coffee bar, and vending**
- **Pilots lounge separated from main traffic areas**
- **Access to transient hangars**
- **More customer focus reception area**
- **Multipurpose space**

SRE Space Requirements

Table 1-14: SRE Space Requirements		
Functional Area	Required SF	AIP Eligible
Vehicle Storage and Circulation	15,001	Yes
Maintenance/Wash Bays	1,500	Yes
Parts and Equipment Storage	1,500	No
Sand and Chemical Storage	7,500	Yes
Office and Support Space	1,000	No
	26,501	

Notes: Required space needs are estimated. Additional analysis will be required to determine federal funding eligibility and building/layout dimensions.

Source: Mead & Hunt, Airport Staff

ARFF/SRE Requirements

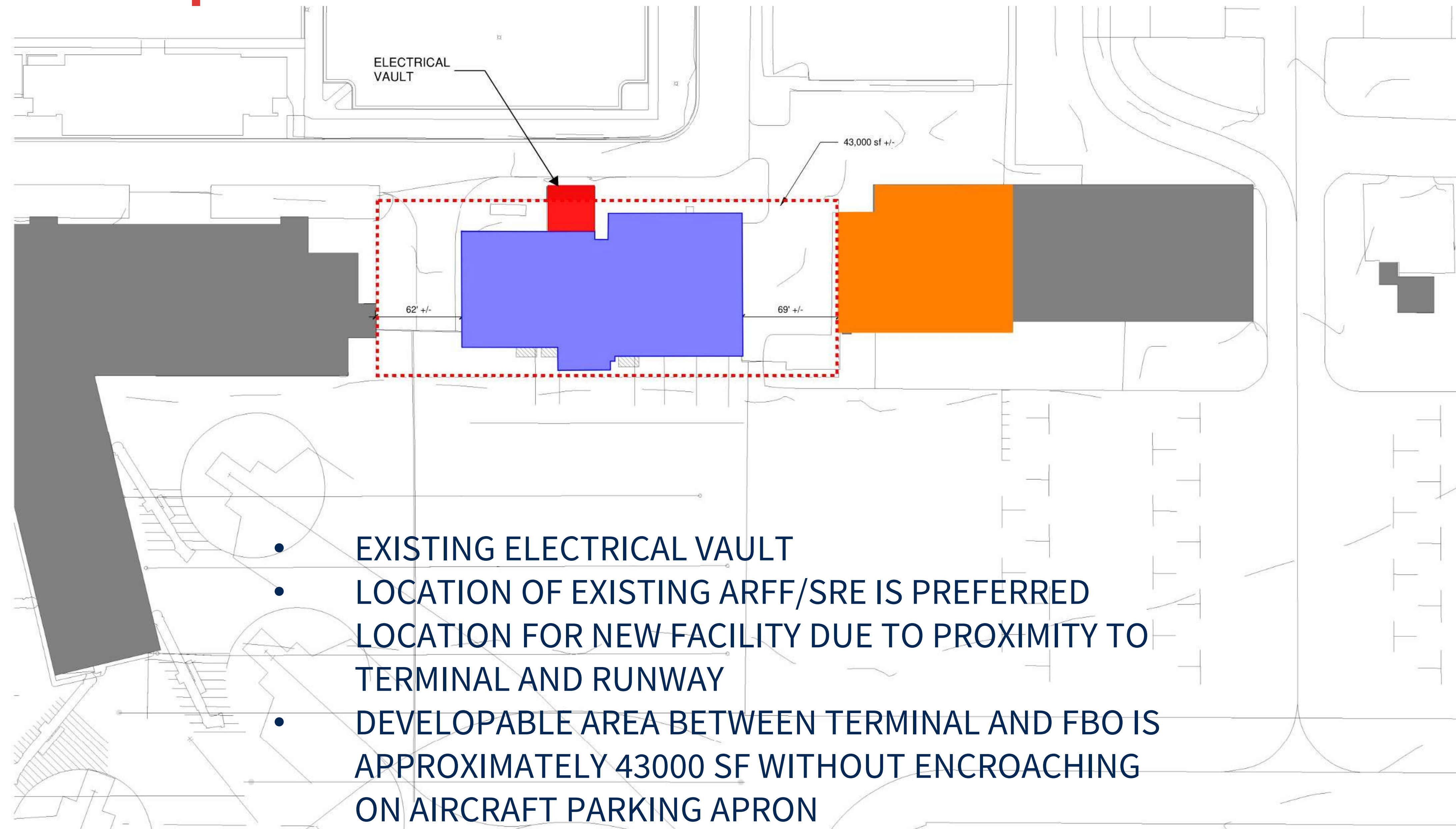
- **ARFF – (2) 1500 gal Oshkosh Strikers**
- **3 min Response to Midpoint of Furthest Runway**
- **Emergency Operation Center**
- **Resilience**

- **SRE – Eligible Equipment Storage Area = 15000 SF**
- **Onsite Equipment Maintenance Area = 1500 SF**
- **Sand and Chemical Storage**
- **Parts and Equipment Storage**
- **Overhead Hoist**
- **Offices and Support Spaces**

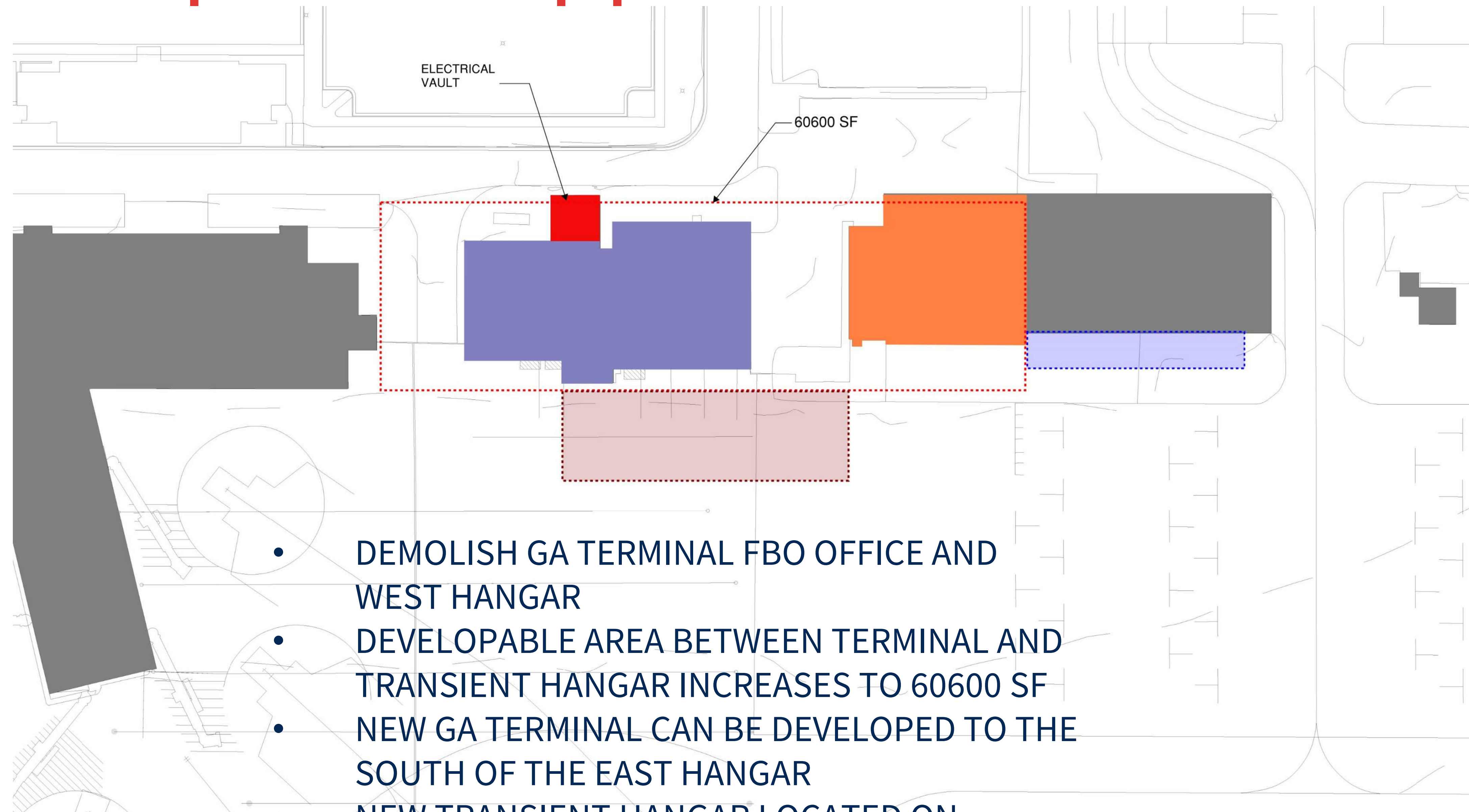
Concept Development ARFF/SRE

- **ARFF and SRE to remain a combined facility**
- **Shared personnel between functions**
- **Requirement for ARFF to meet response times limits relocating elsewhere on the airport**
- **Desire to have drive through bays for SRE equipment**
- **ARFF bays to house 2 vehicles and response trailer**
- **Landside delivery point**
- **Low maintenance construction**

Development Constraints

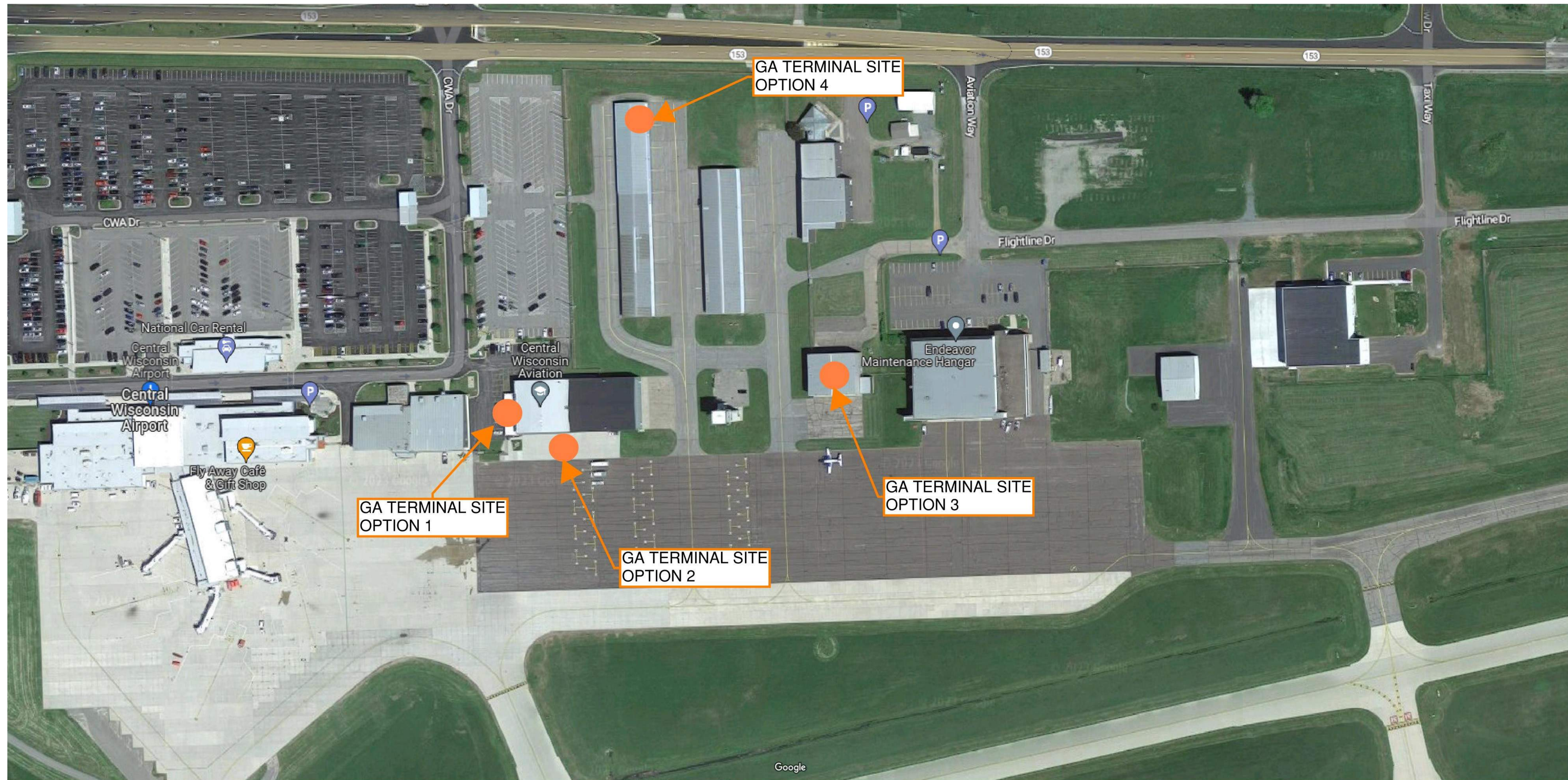


Development Opportunities



- DEMOLISH GA TERMINAL FBO OFFICE AND WEST HANGAR
- DEVELOPABLE AREA BETWEEN TERMINAL AND TRANSIENT HANGAR INCREASES TO 60600 SF
- NEW GA TERMINAL CAN BE DEVELOPED TO THE SOUTH OF THE EAST HANGAR
- NEW TRANSIENT HANGAR LOCATED ON ANOTHER SITE ON THE AIRPORT
- BUILD OUT ONTO THE EXISTING APRON

Public GA Terminal Study Locations



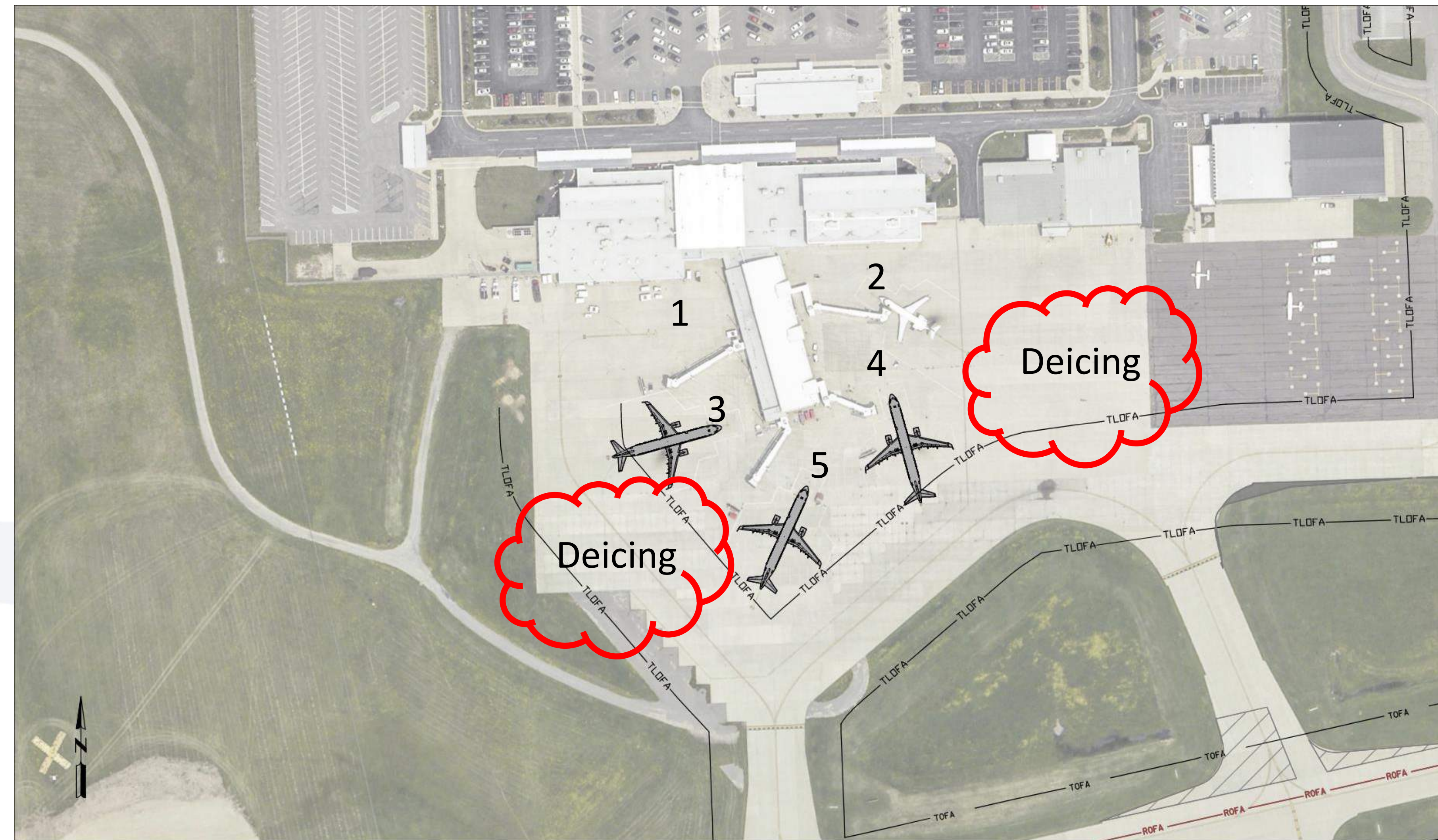
Program Elements

- **New GA Arrivals and Departures Lounge and FBO Offices**
- **Landside to Airside Access Point for GA Terminal**
- **Combined ARFF and SRE Facility**
- **Maintain or increase Transient Hangar space**

Air Carrier Apron Needs

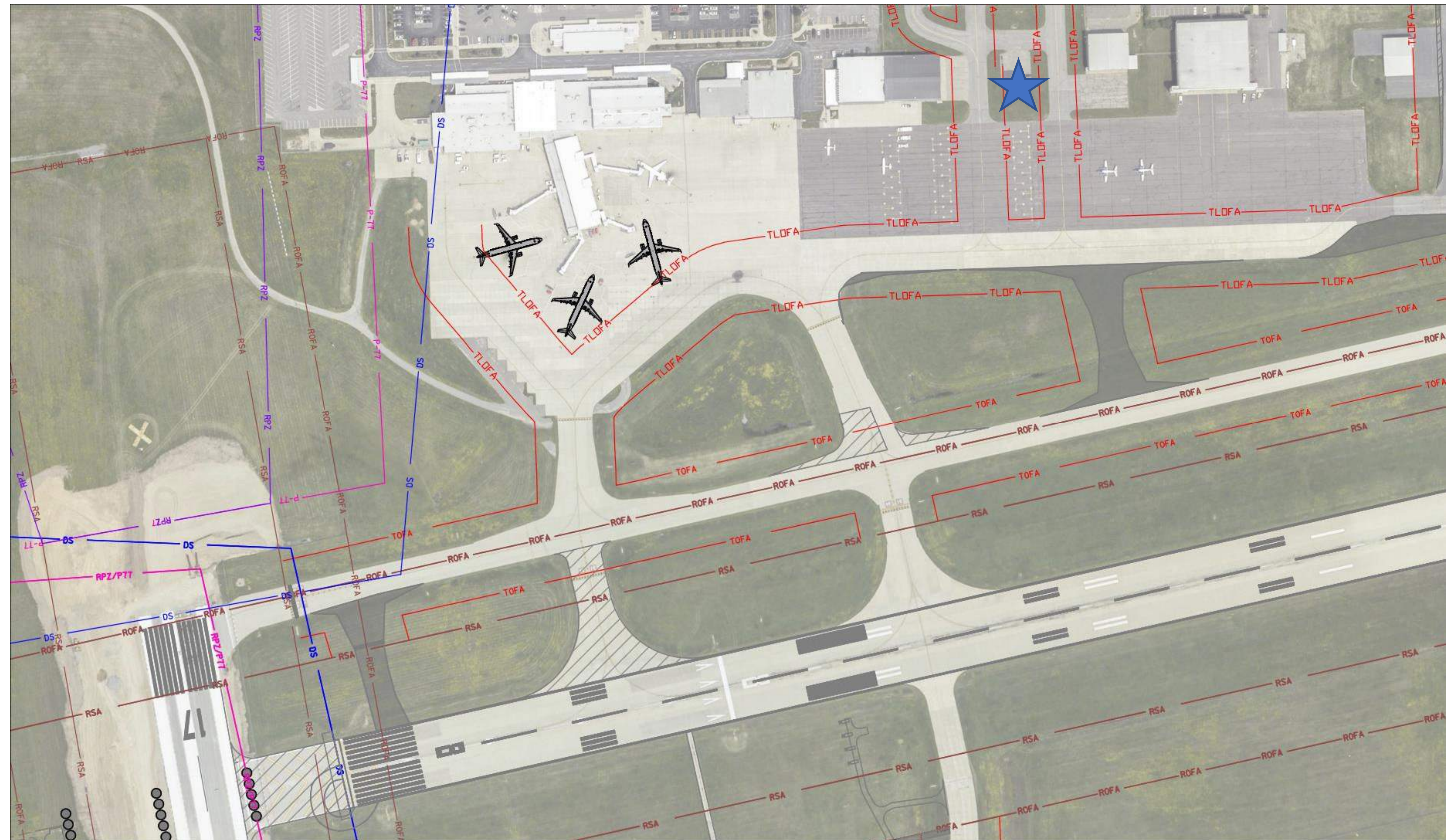
Needs:

- Additional apron depth
- Designated deicing location
- Outbound baggage area expansion

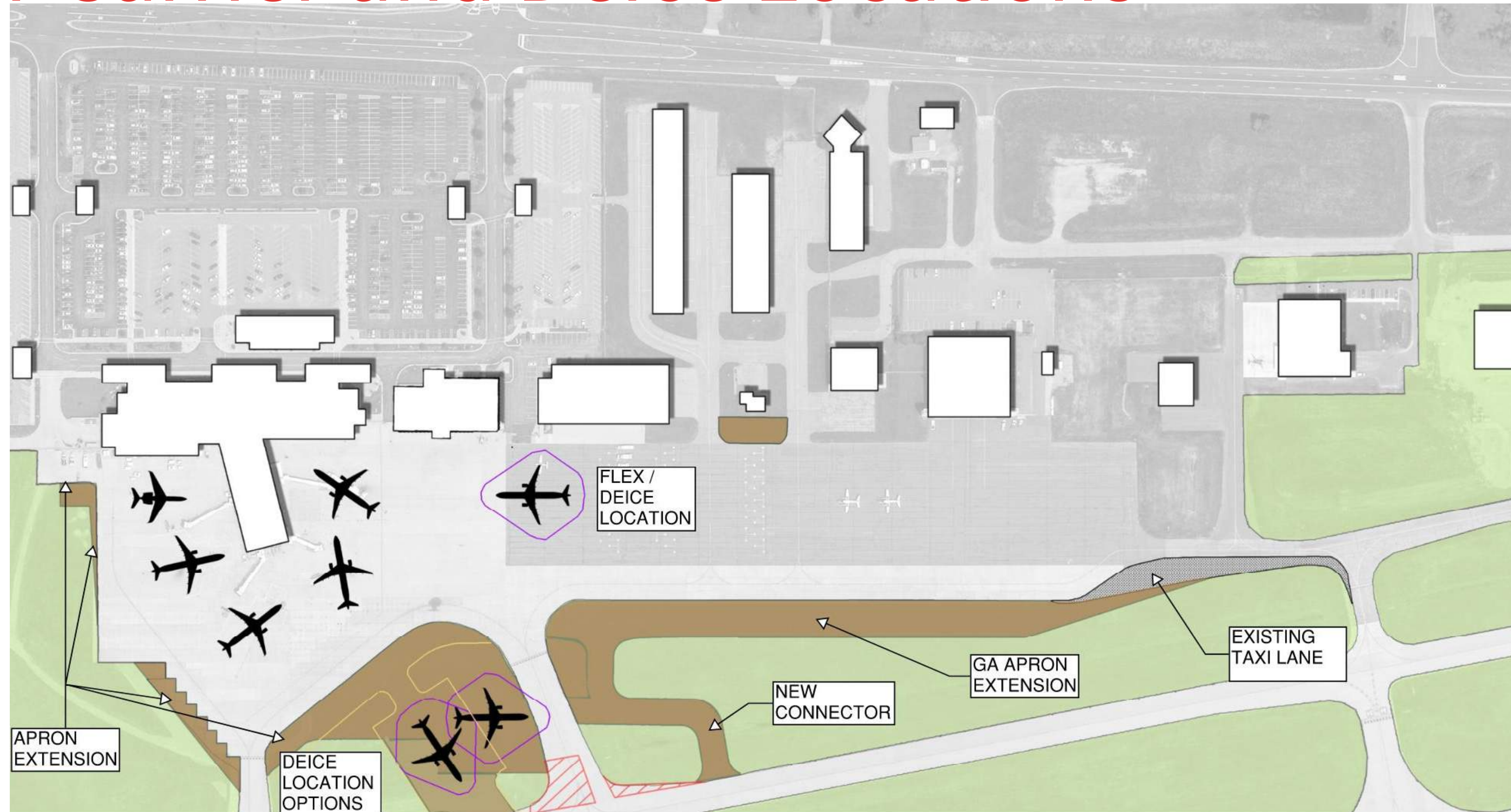


Air Carrier Apron Development Constraints

- New Passenger Boarding Bridges
- ARFF/SRE & GA Terminal Concepts
- Airspace Surfaces
- Object Free Areas

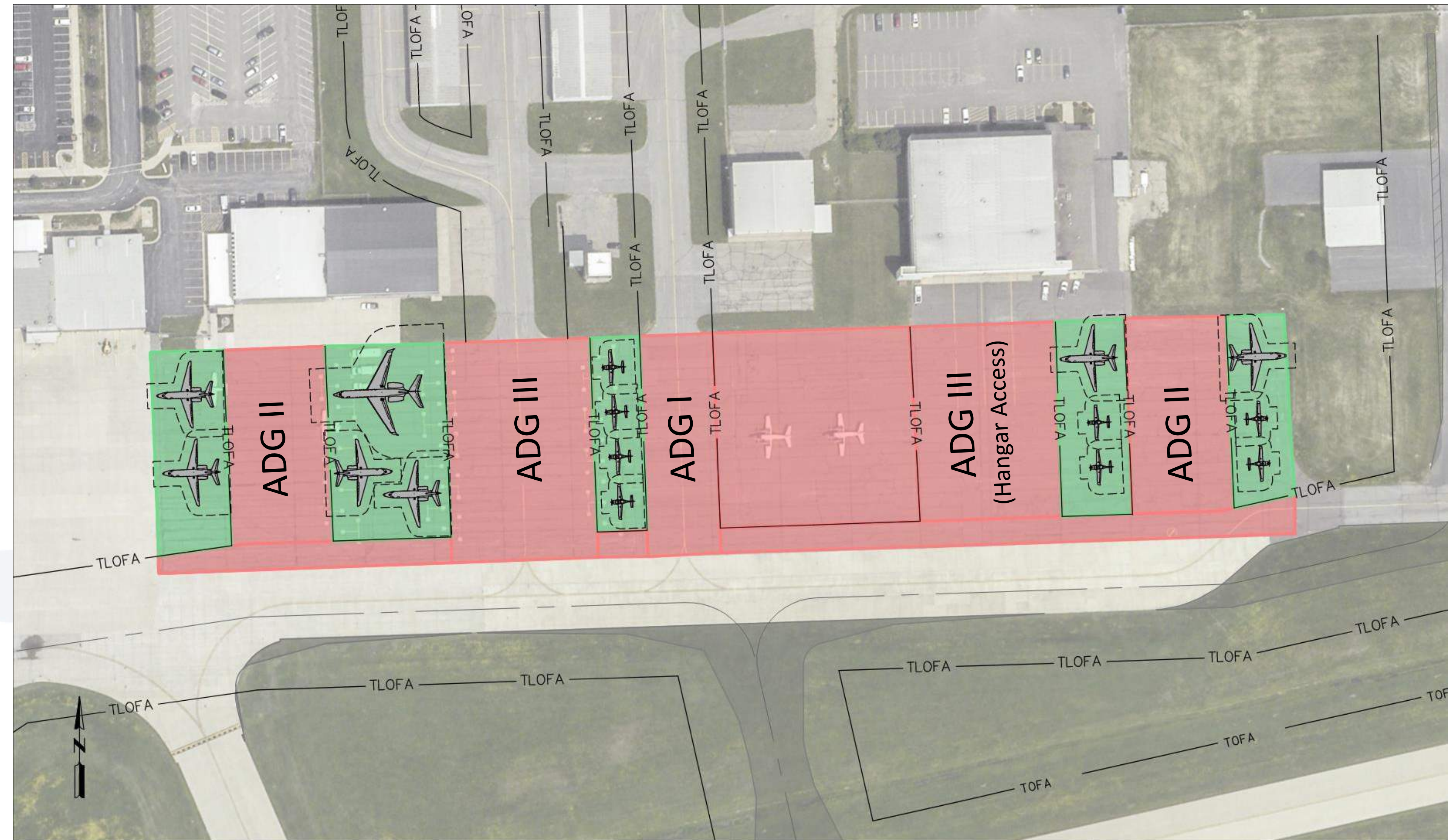


Air Carrier and Deice Locations



GA Apron Needs

- **Considering Three Scenarios**
 - ADPM Itinerant Operations
 - AirVenture
 - Itinerant ADG III activity (Two ADG IIIs)
- **For planning purposes areas in red are not available for aircraft parking**
- **Total available space approximately 83,800 SF**



GA Apron Estimated Needs

- **Area required per aircraft determined using FAA Minimum Parking Position Sizing table**
 - (Source: AC 150/5300-13B Table E-1)

ADPM Itinerant Operations

Aircraft Size	Baseline	2027	2032	2037	2042
ADG I					
Forecasted Aircraft	8	9	10	11	11
Aircraft Growth	-	+1	+2	+3	+3
ADG II					
Forecasted Aircraft	6	7	8	8	9
Aircraft Growth	-	+1	+2	+2	+3
ADG III					
Forecasted Aircraft	1	1	1	1	1
Aircraft Growth	-	+0	+0	+0	+0
TOTAL					
Forecasted Aircraft	15	17	19	20	21
Aircraft Growth	-	+2	+4	+5	+6
Total Apron Demand (sq. ft.)	93,280	104,685	116,090	119,040	127,495
Additional Required Apron (sq. ft.)	+9,480	+20,885	+32,209	+35,240	+43,695

GA Apron Estimated Needs

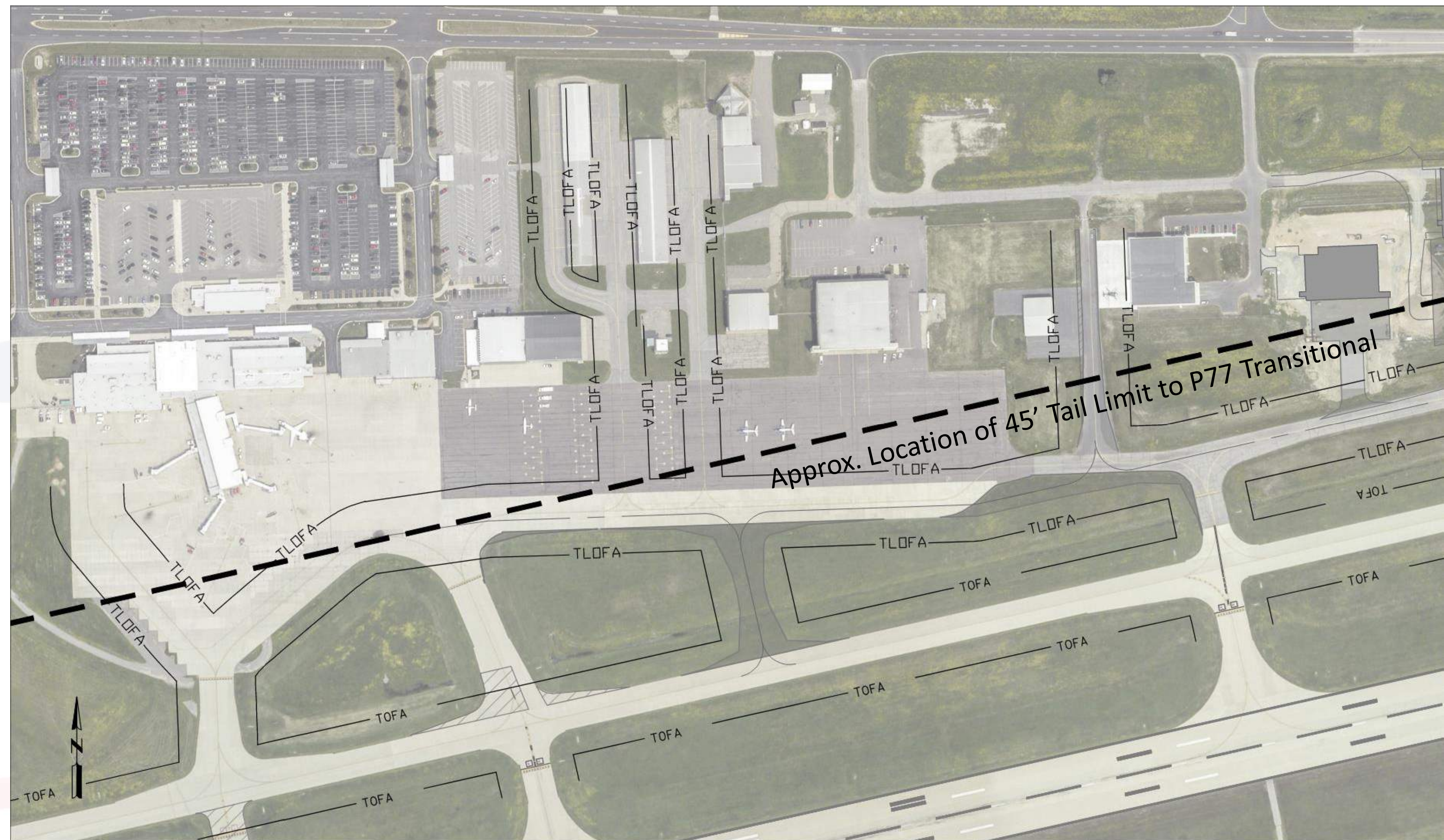
- This scenario accommodates the times that the airport sees two ADG III aircraft
- Provides flexibility with AirVenture and high peak times when the ADPM operations are not split 50/50

ADPM Itinerant Operations with ADG III

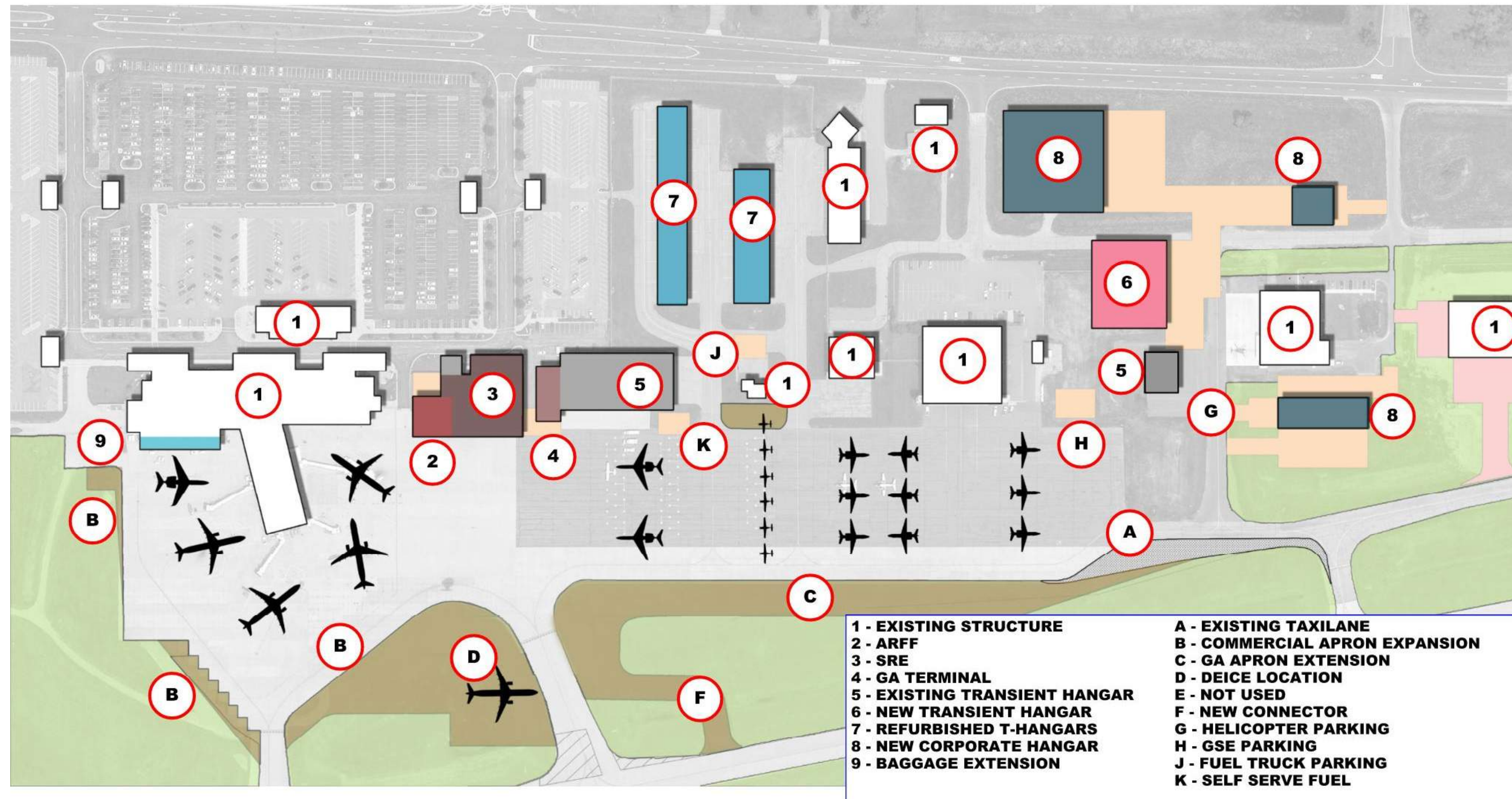
Aircraft Size	Baseline	2027	2032	2037	2042
ADG I					
Forecasted Aircraft	8	9	10	11	11
Aircraft Growth	-	+1	+2	+3	+3
ADG II					
Forecasted Aircraft	6	7	8	8	9
Aircraft Growth	-	+1	+2	+2	+3
ADG III					
Forecasted Aircraft	2	2	2	2	2
Aircraft Growth	-	+0	+0	+0	+0
TOTAL					
Forecasted Aircraft	16	18	20	21	22
Aircraft Growth	-	+2	+4	+5	+6
Total Apron Demand (sq. ft.)	112,230	123,635	135,040	137,990	146,445
Additional Required Apron (sq. ft.)	+28,430	+39,835	+51,240	+54,190	+62,645

GA Apron Development Constraints

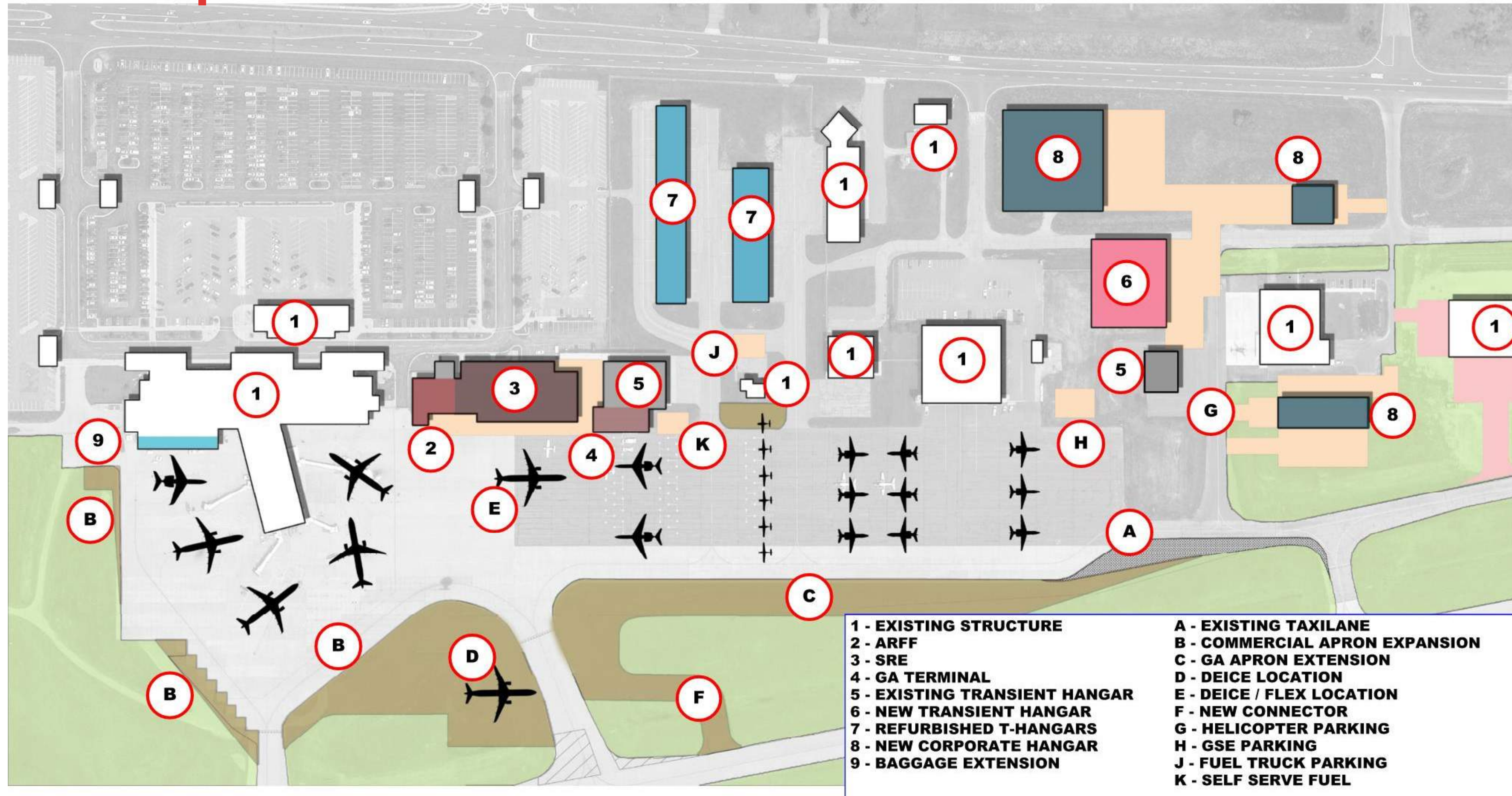
- ARFF/SRE and FBO Concepts
- Airspace Surfaces (P77 Transitional)
- Object Free Areas
- Reconfiguration Potential Limited
 - (hangars need taxilane access)



Concept 1

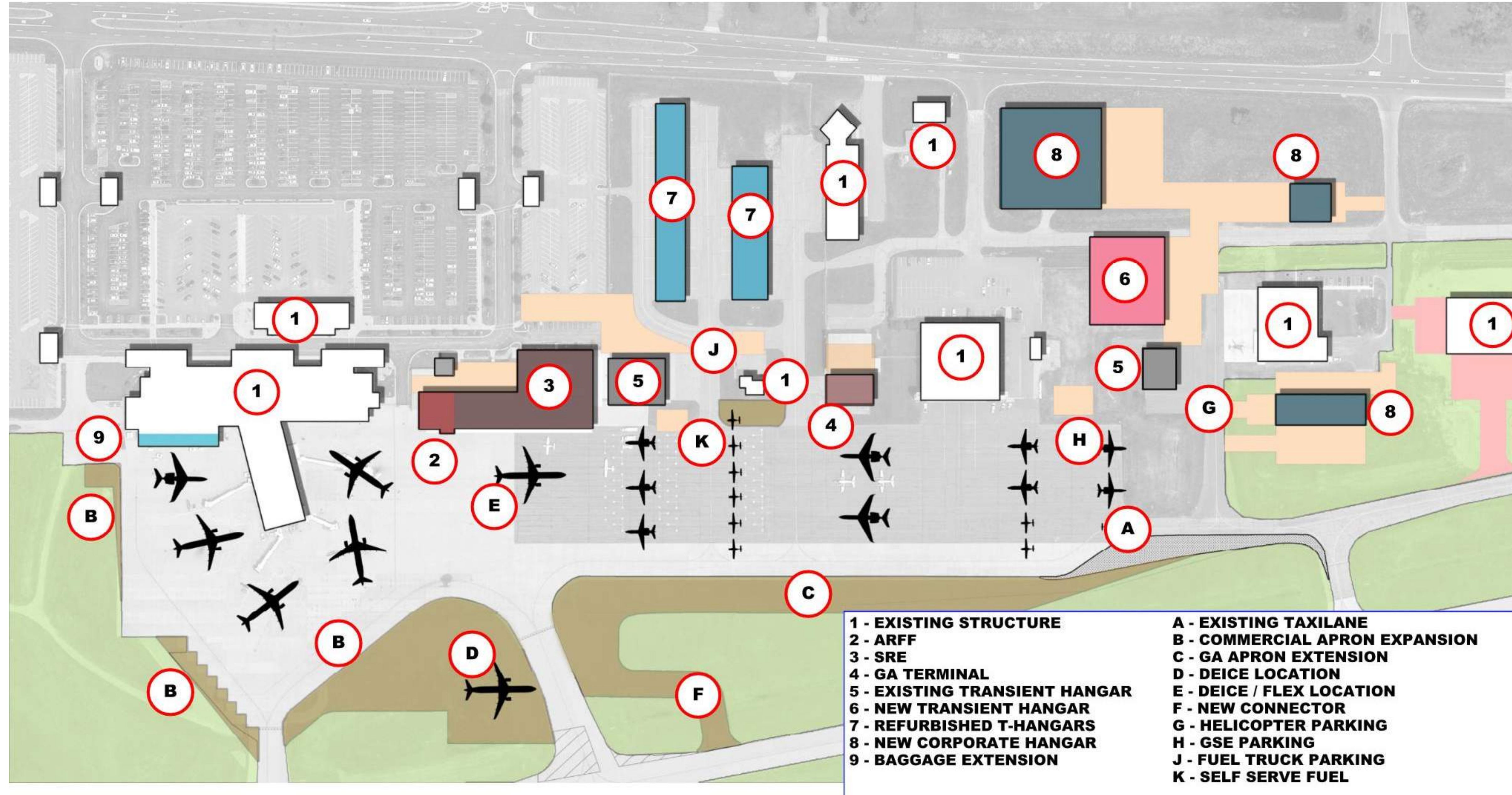


Concept 2

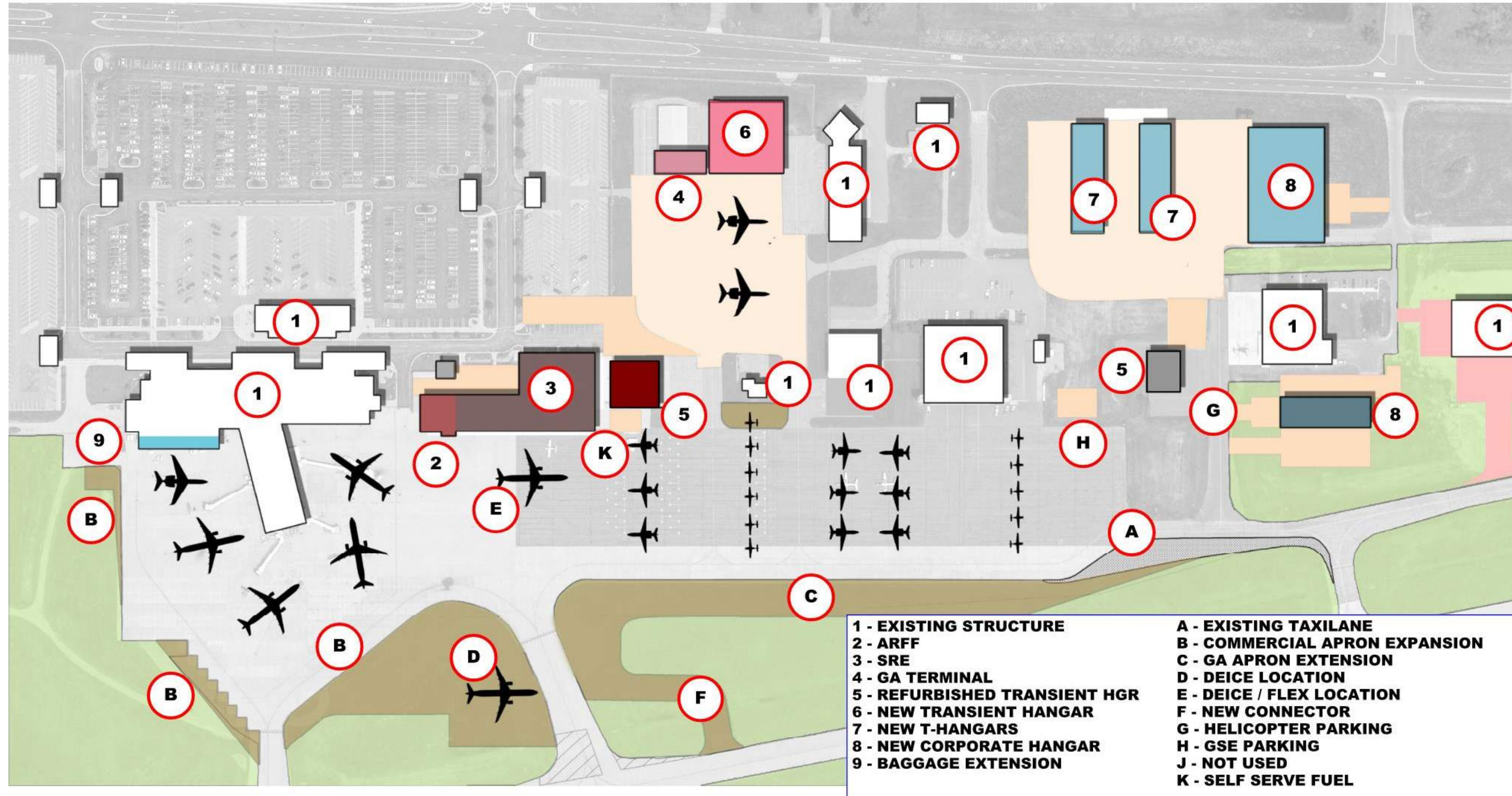


- | | |
|--------------------------------------|---------------------------------------|
| 1 - EXISTING STRUCTURE | A - EXISTING TAXILANE |
| 2 - ARFF | B - COMMERCIAL APRON EXPANSION |
| 3 - SRE | C - GA APRON EXTENSION |
| 4 - GA TERMINAL | D - DEICE LOCATION |
| 5 - EXISTING TRANSIENT HANGAR | E - DEICE / FLEX LOCATION |
| 6 - NEW TRANSIENT HANGAR | F - NEW CONNECTOR |
| 7 - REFURBISHED T-HANGARS | G - HELICOPTER PARKING |
| 8 - NEW CORPORATE HANGAR | H - GSE PARKING |
| 9 - BAGGAGE EXTENSION | J - FUEL TRUCK PARKING |
| | K - SELF SERVE FUEL |

Concept 3



Concept 4



Questions?



Mead
& Hunt

Thank You!