

# *Master Plan for the Cleveland Hopkins International Airport*

## *Evaluation of Terminal & Other Airport Facility Alternatives*

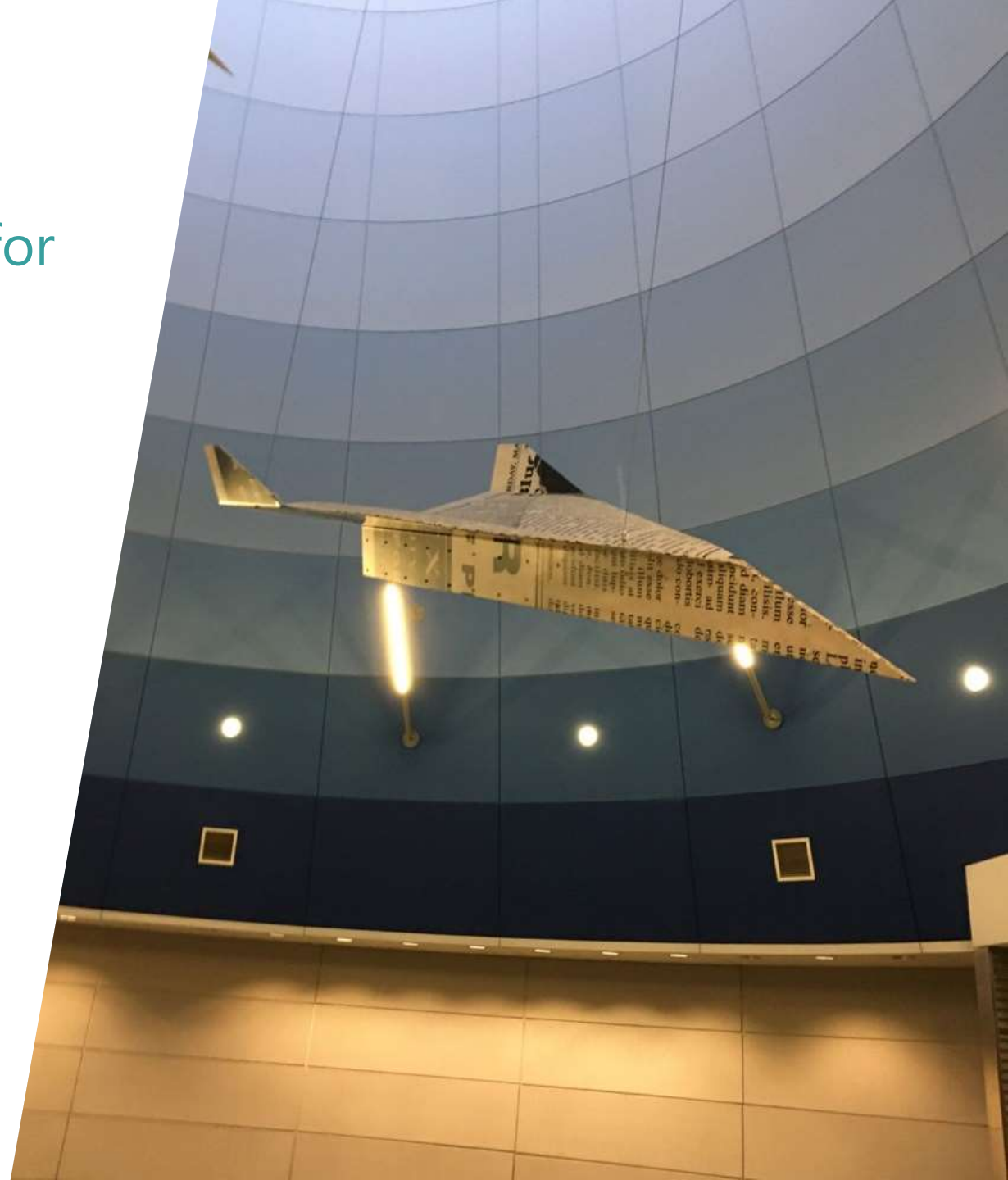
### *Working Committee Meeting #3*

*January 12, 2021*



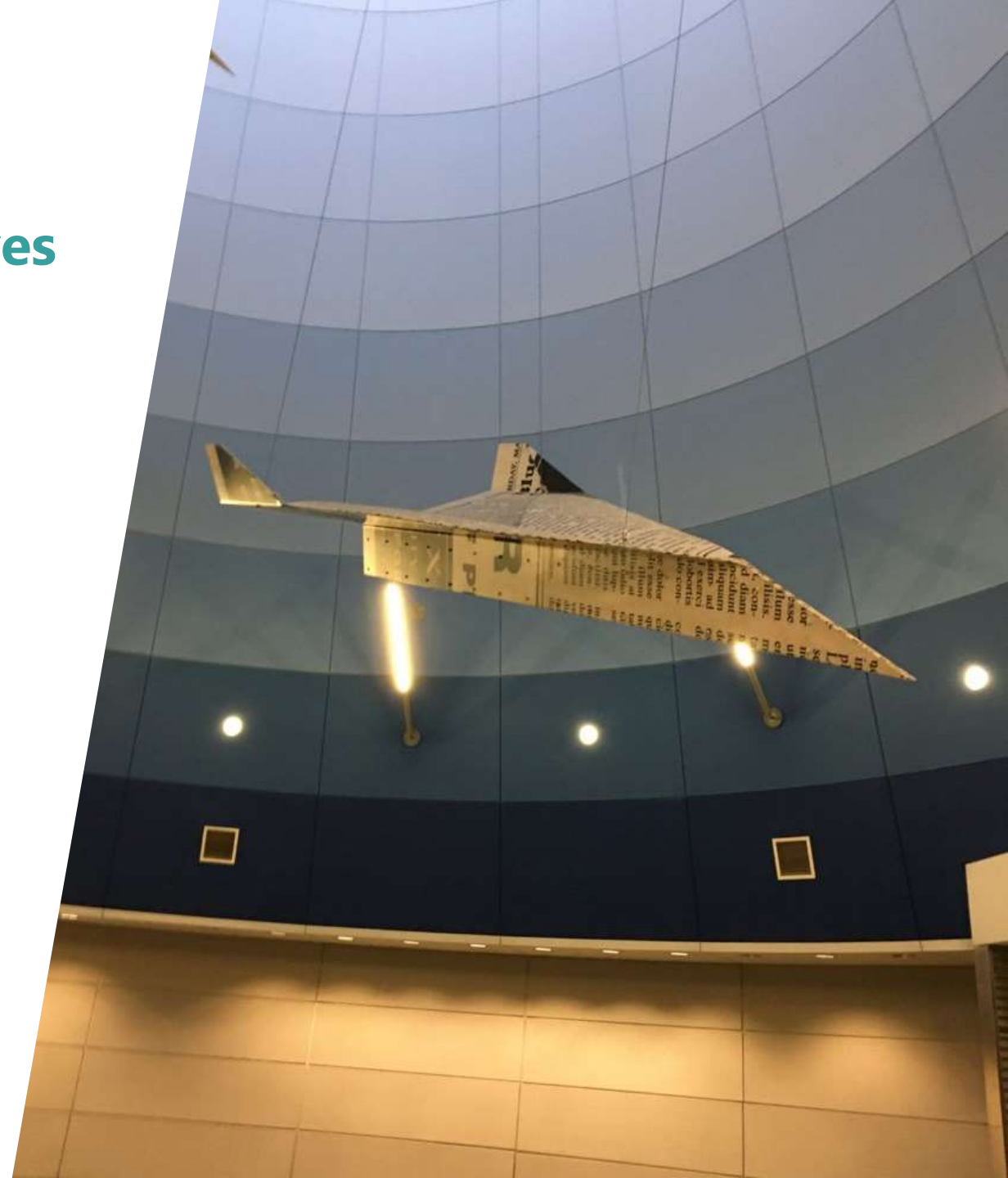
# Agenda

- » Identification of Terminal Alternatives for Further Evaluation
- » Reducing Terminal Alternatives to Two and Selecting Preferred Alternative
- » Family 2 Program
- » Financial Analysis
- » Other Airport Facility Alternatives
- » Next Steps

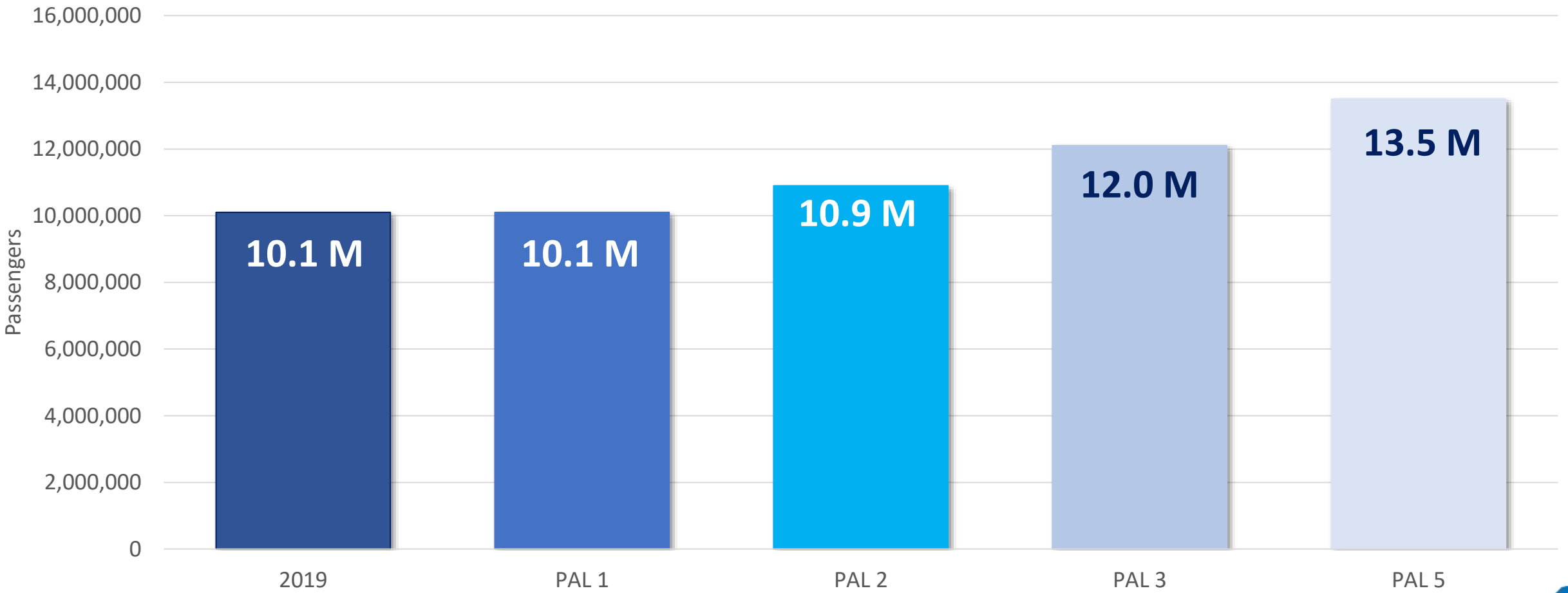


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# Total Passengers Planning Activity Levels (PALs)



# Critical Elements

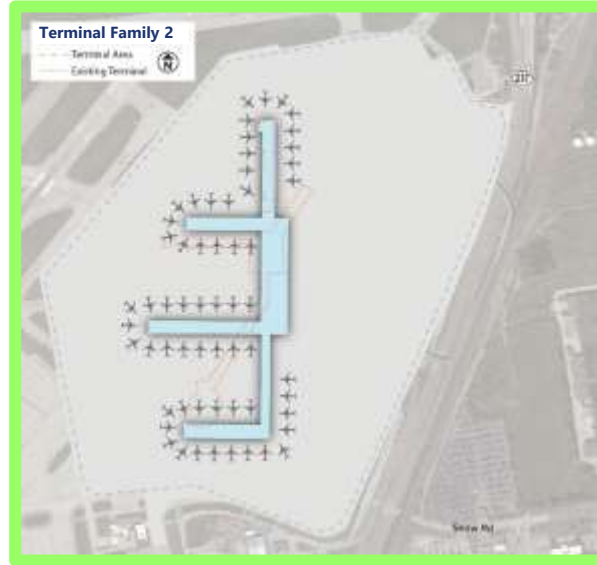
## Critical elements to address for space deficiencies in the near and long term

Area	Description	Existing	PAL 1 & 2
<b>Ticketing/ Check-in</b>	Ticketing lobby is too narrow and does not provide adequate depth for the typical airline check-in process with self-service kiosk and queue and bag check-in processes	7,700 sq. ft.	11,200 sq. ft.
<b>Checked Baggage Inspection Systems (CBIS)</b>	Two additional explosive detection system (EDS) devices and up to 14 additional checked baggage resolution area (CBRA) stations are required by the end of the planning period (there are currently three EDS devices and 11 CBRA stations)	11,200 sq. ft.	19,500 sq. ft.
<b>Security Screening Checkpoints</b>	A consolidated centralized Security Screening Checkpoint (SSCP) is preferred and the existing SSCP's are not sized adequately for current and future security lane configurations.	21,200 sq. ft.	43,000 sq. ft.
<b>Holdrooms</b>	Many holdrooms are currently undersized for projected demand.	101,200 sq. ft.	163,500 sq. ft.
<b>Gates</b>	To accommodate future passenger and aircraft operation growth	43	53

# Terminal Families Selected for Further Evaluation



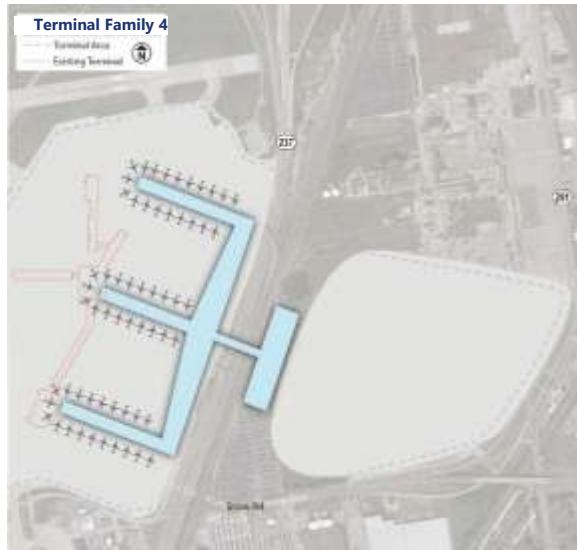
Family 1



Family 2



Family 3



Family 4



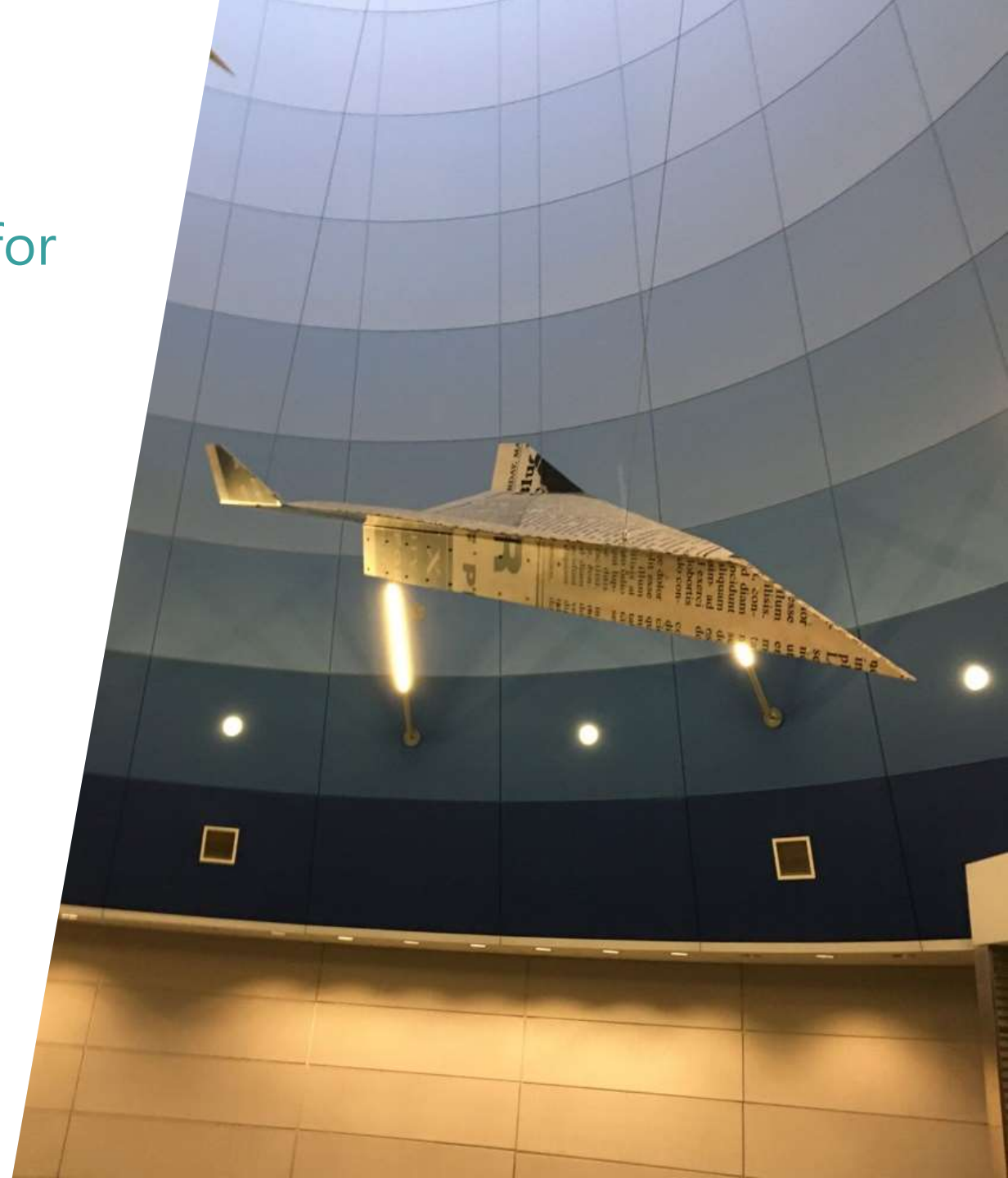
Family 5



Family 6

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# Family No. 6 Is No Longer Being Considered Due To:

- » Higher initial PAL 2 cost
- » Complicated construction phasing
- » Two additional level changes would be required to access the satellite concourse by way of a tunnel connection
- » Separate concession core for satellite concourse
- » Concept is not compatible with on-airport or regional access configurations

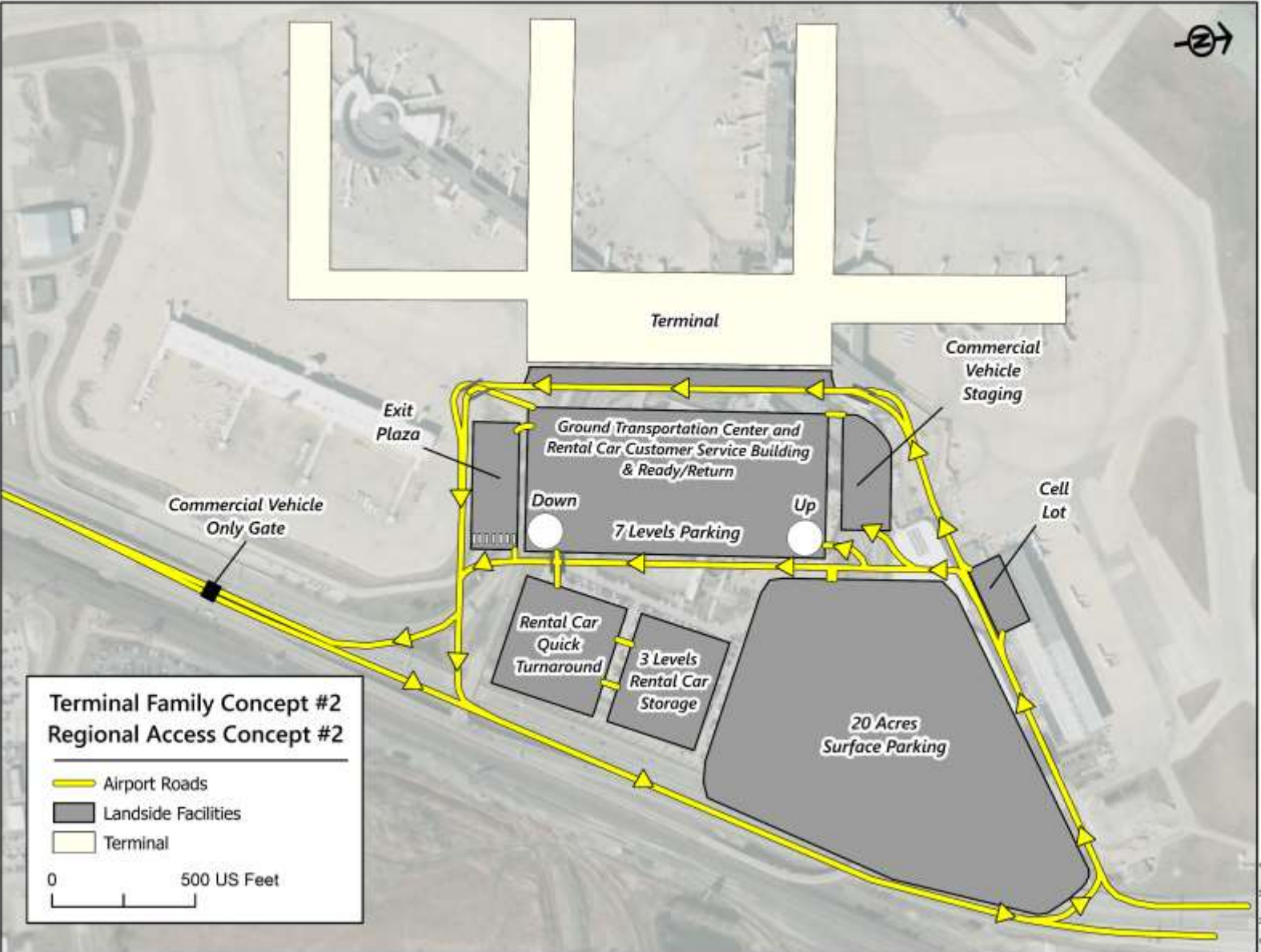
# Preferred Family 2 over Family 1

» Conducted detail phasing evaluation of Family 1 and Family 2 through PAL 2

## Family 2:

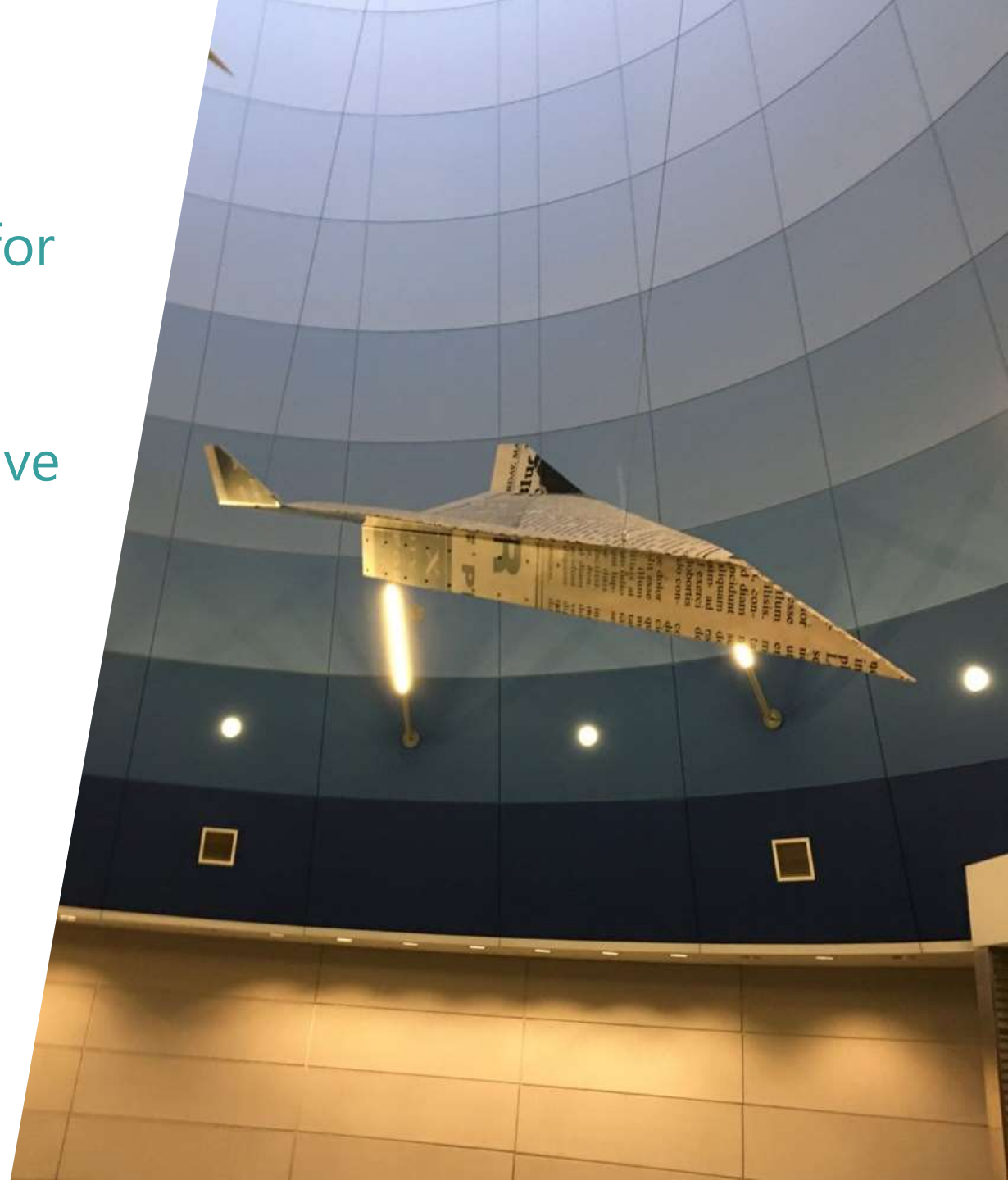
- » Provides superior customer experience & potential for iconic Terminal Building image beyond PAL 2
- » Results in a newer Terminal Building over the long-term
- » Has lower construction cost through PAL 2
- » Can be financed based upon assumptions developed in the financial model
- » Has lower maintenance/replacement costs
- » Provides more opportunities for concessions improvements
- » Provides more opportunities for future Terminal Building expansion
- » Enables a more efficient gate layout
- » Facilitates intuitive wayfinding

# Long-Term Plan - Family 2 Layout



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# Family 2 - PAL 2 - Level 1



- New Construction
- Demolition
- PAL 5 Development
- Existing Terminal

**1:** Concourse D + Connector Tunnel Reactivation

**6:** Concourse C Interior Renovation

**2:** Demolish Concourse B (Including Old Control Tower)

**3:** New Concourse B

**5:** Concourse A Addition

**4:** Concourse A Interior Renovation

**8:** Mechanical, Electrical, Plumbing, Concessions, Baggage Claim, Federal Inspection Services Facility (North)

**7:** Mechanical, Electrical, Plumbing, Checked Baggage Inspection System, Baggage Claim (South)

# Family 2 - PAL 2 - Level 2



- New Construction
- Demolition
- PAL 5 Development
- Existing Terminal

**1:** Concourse D + Connector Tunnel Reactivation

**6:** Concourse C Interior Renovation

**2:** Demolish Concourse B (Including Old Control Tower)

**3:** New Concourse B

**13:** Concourse A, B and C Connector

**9:** Ticketing - Mid Terminal

**5:** Concourse A Addition

Concourse A

**4:** Concourse A Interior Renovation

**12:** Level 2 Corridor by Federal Inspection Services Renovation

**7:** Level 2 - Security Screening Checkpoint (South)





**8:** Level 2 - Mechanical, Electrical, Plumbing, Concessions, Federal Inspection Services Facility (North)

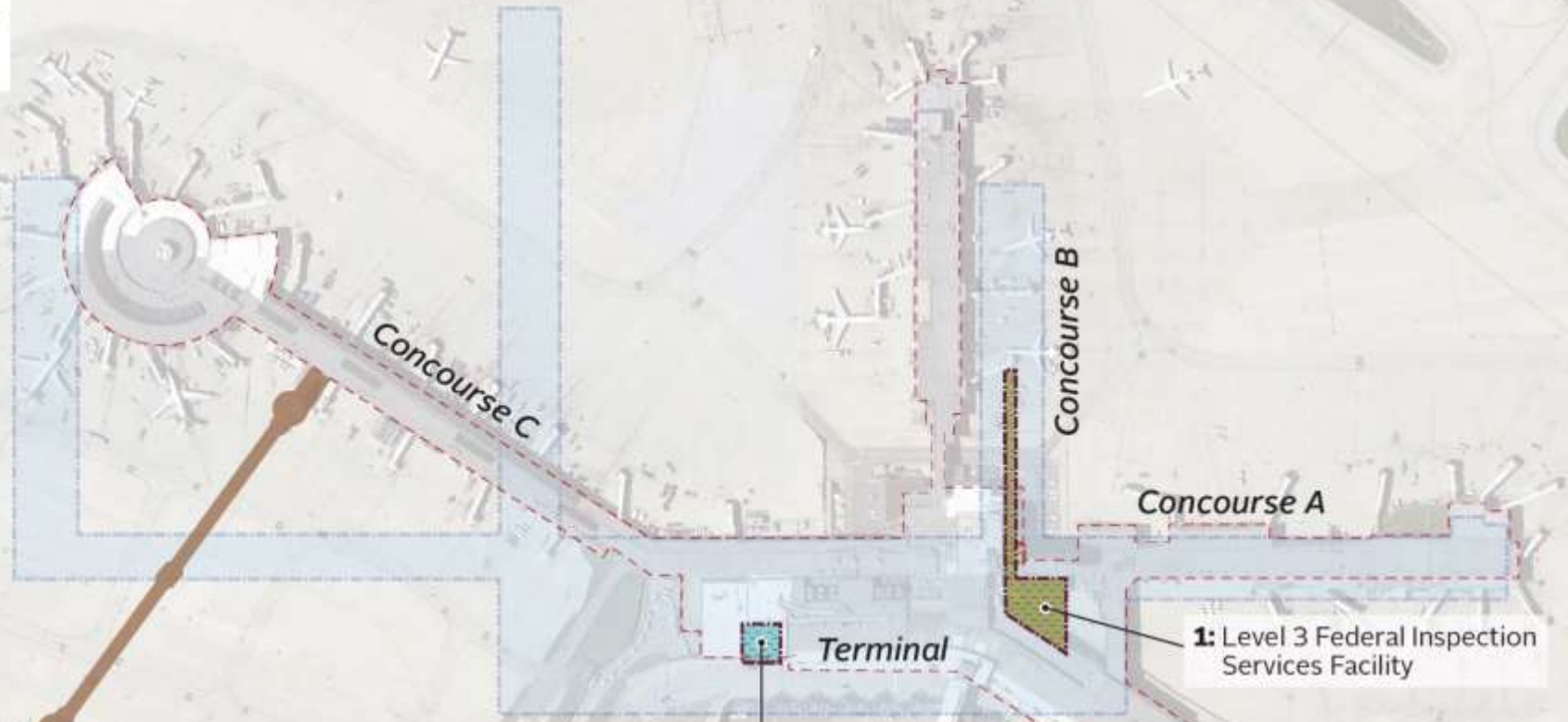
**10:** Ticketing - by Airline Ticketing Offices

**11:** Ticketing - North Terminal

# Family 2 - PAL 2 - Level 3



-  New Construction
-  Demolition
-  PAL 5 Development
-  Existing Terminal



**1:** Level 3 Federal Inspection Services Facility

**2:** Level 3 Airline Ticket Offices

# PAL 2 - Landside Facilities (Family 2)



--- Existing Terminal

Covered Walkway with Assist

1,500 Surface Parking Spaces

Ground Transportation Center & Taxis

Smart Garage

Rental Car Customer Service Building

Cell Phone Lot

Red Lot

237

Rental Car Quick Turnaround Facility

Rental Car Ready/Return

Up

Blue Lot

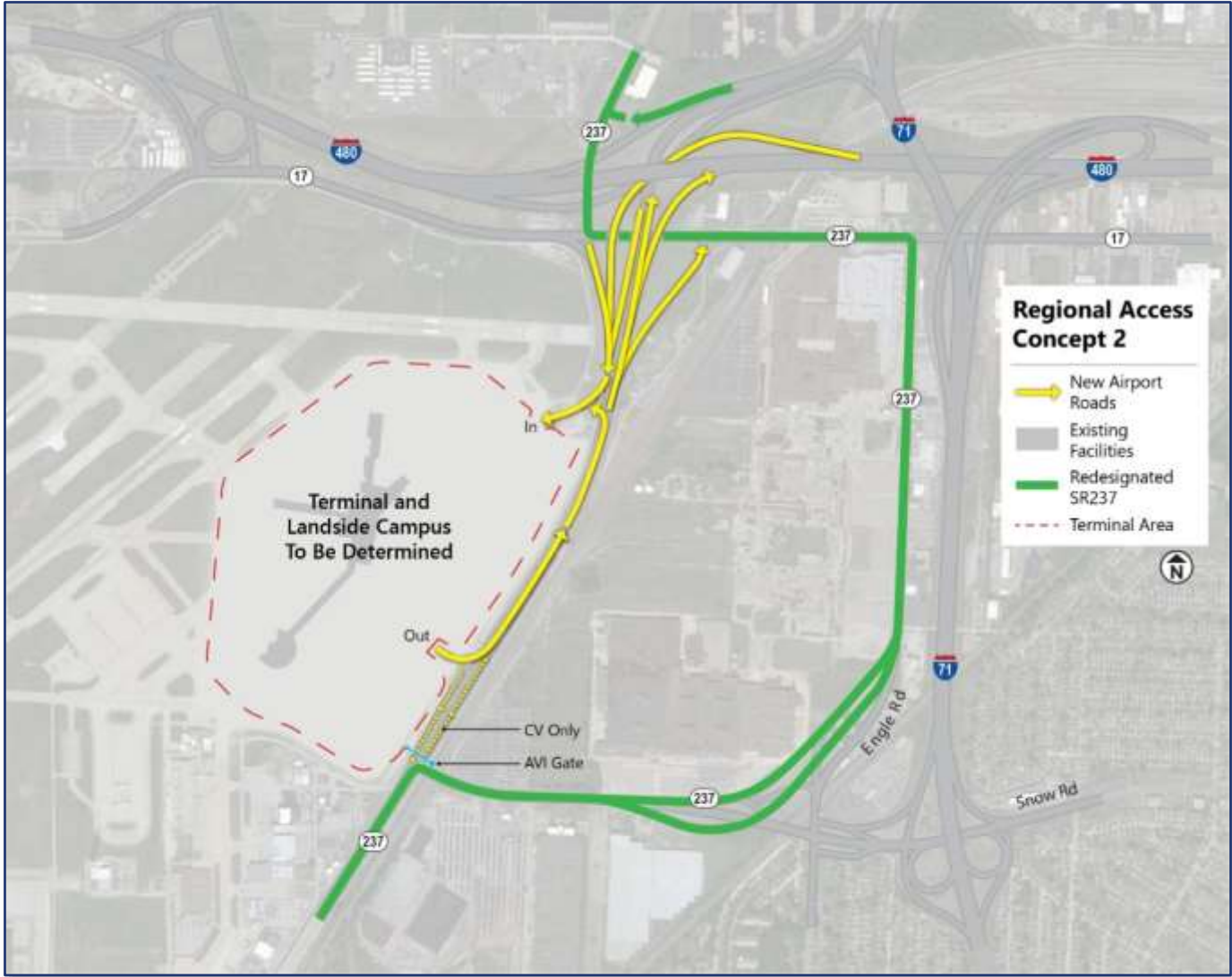
Down



# Regional Access Concept #1



# Regional Access Concept #2



# Regional Access Concept #3

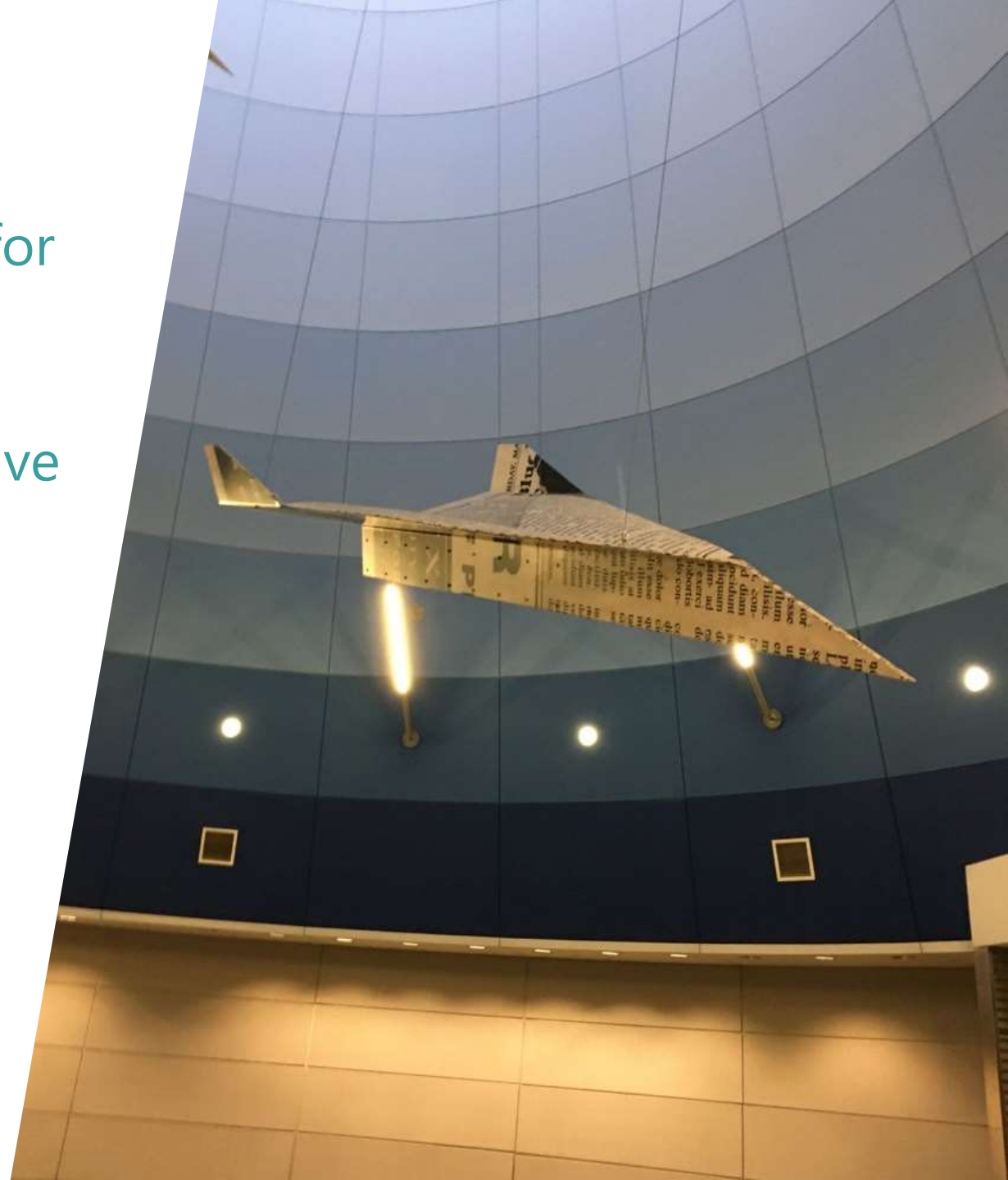


# Evaluation of Terminal Campus Options Associated with Regional Access Alternatives

- » Regional Access 2 has the best short- and long-term potential for the Airport
- » Regional Access 1 has limited life after the 20 years of this Master Plan and is the costliest on-airport
- » Regional Access 3 provides a high level of service while being costliest off-airport
- » Preference: Regional Access 2:
  - *Easiest to phase in over time*
  - *Greater flexibility with terminal options*
  - *All at-grade on-airport roadways cost less, provide best customer service*
  - *Facilitates transition to Regional Access 3 if ever implemented*

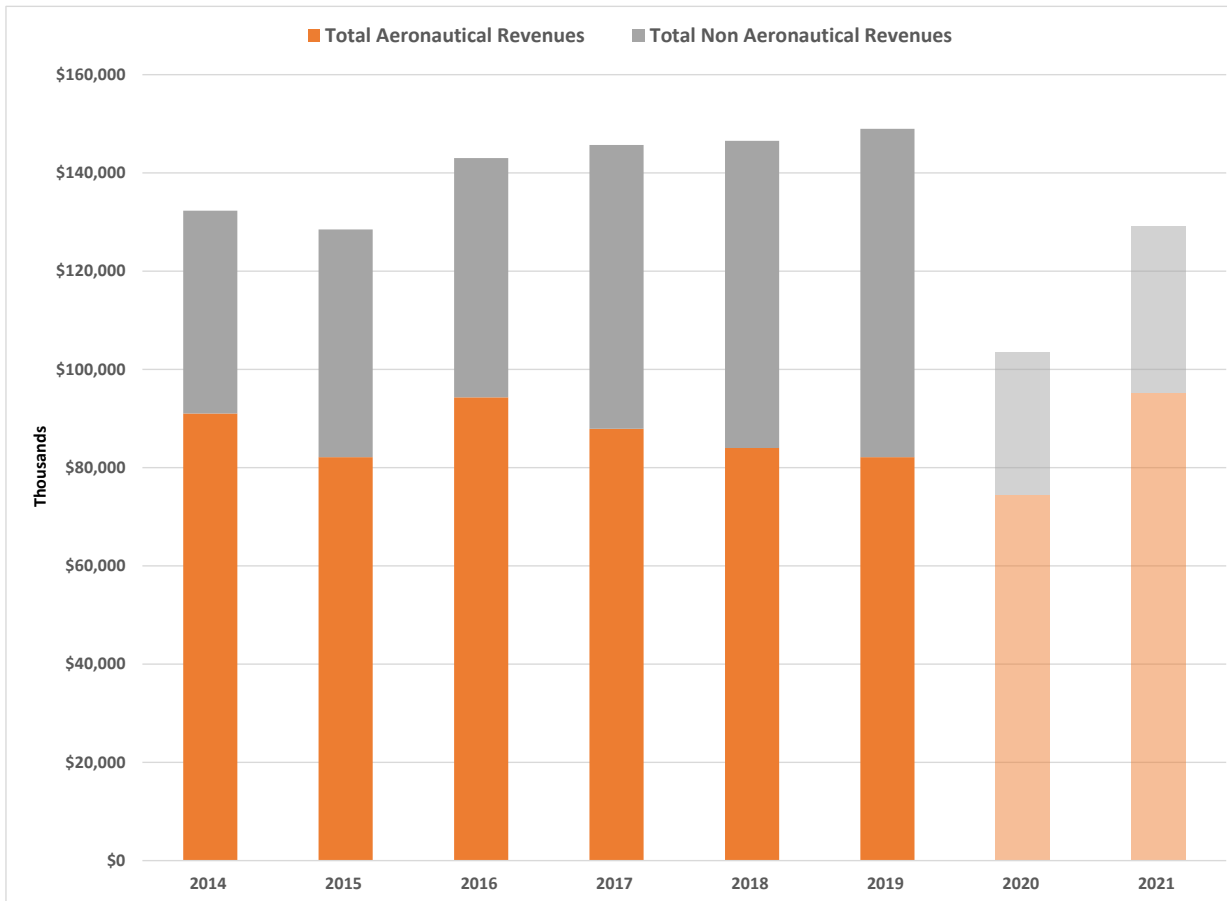
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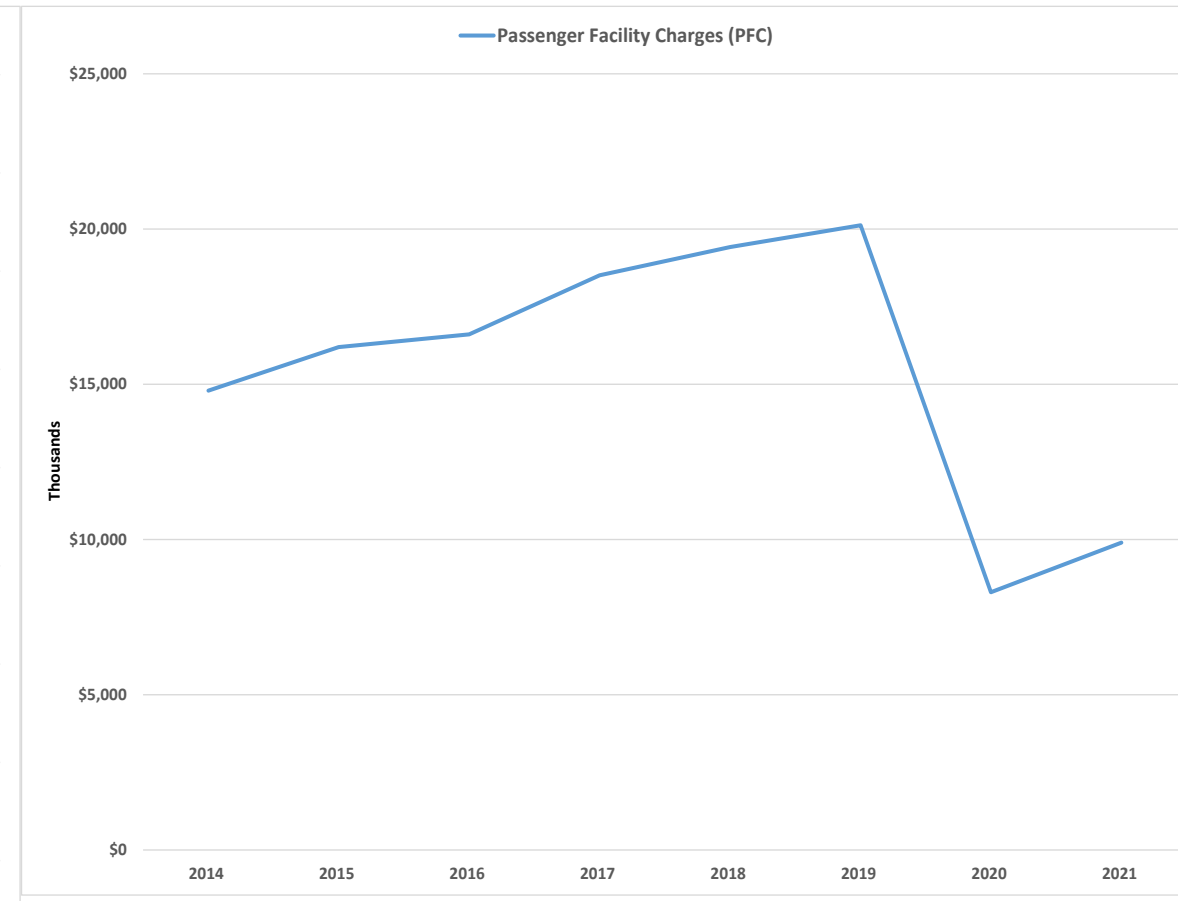


# Financial Capacity

- » The COVID-19 Pandemic has impacted CLE finances in the following aspects:
  - Lower aeronautical revenues
  - Much lower non-aeronautical revenues (parking, concessions, car rental, etc.)
  - Passenger Facility Charges (PFCs) much lower than anticipated



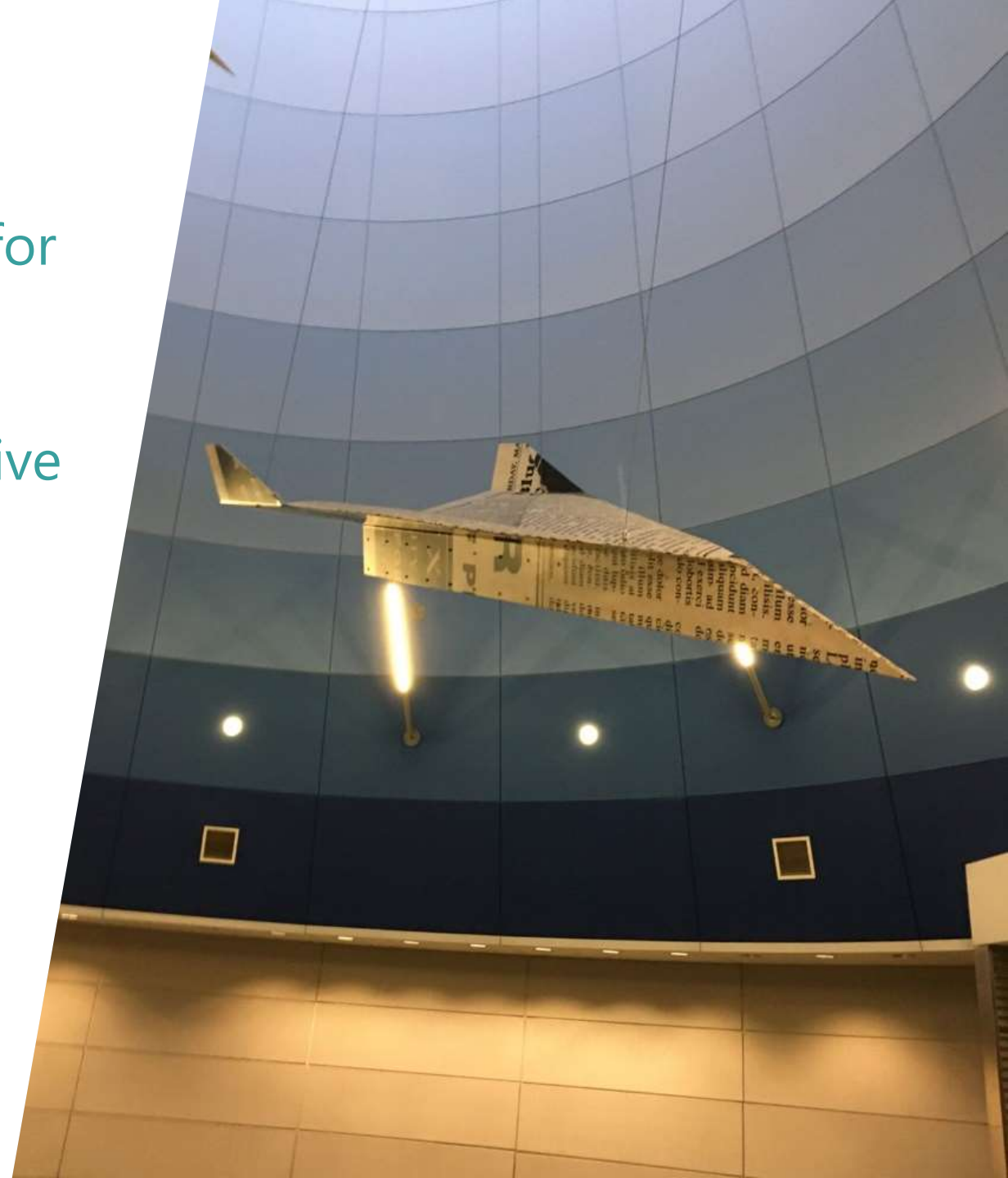
Notes: Preliminary Subject to Change  
2020 and 2021 amounts are estimated



Note: 2020 and 2021 amounts are estimated

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# Goals for Alternatives Development Plan

## » Goals

- Develop a plan with sufficient flexibility to address tenant needs
- Generate a highest and best use plan with a campus development approach

## » Meet Objectives

- Accommodate facility space requirements
- Address tenant desires to relocate/expand
- Consider the useful life of aging infrastructure and timing of lease expirations
- Develop an adaptable phasing plan

# Alternatives Development Process

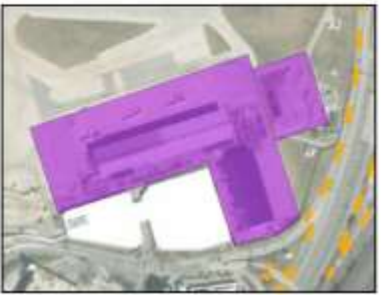
- » Sufficient land exists to accommodate facilities development through and beyond master planning period
- » Other Airport Functions
  - Air Cargo (freight, belly)
  - General Aviation (FBO, corporate)
  - Aircraft Maintenance
  - Airport Maintenance
  - Airport Support
- » Evaluate alternatives based upon goals and objectives

# Support Facility Alternatives – West / North



## West and North Development Alternatives

- Legend**
- Airport Property Line
  - ▨ No Development Area
  - ▨ Development / Redevelopment Area
  - ▭ Future TOFA
  - ▭ Future Taxiway / Taxilane
  - ▭ Future Service Road
  - ▭ Airport Maintenance
  - ▭ Cargo
  - ▭ General Aviation
  - ▭ Future Landside



## North Development Area

Source: Eric Mann, Golder, Database Compilation, NAD 83/NA 83, USGS, USGS, 2013, 2014, with the US Army Community







# Preferred Alternative 3

- » Accommodates facility requirements
- » Best addresses tenant desires to expand facility envelope at more accessible airfield locations
- » Creates a campus concept
- » Recognizes potential for needing to replaced aged infrastructure sooner than later
- » Provides a phasing strategy that relocates key facilities that are those anticipated to need expansion as enabling projects for phasing future development.
- » Provides the unanticipated benefit of enabling future terminal building envelope expansion beyond the master plan time frame.
- » Provides the most direct access to the runway/taxiway system to the I-X Center

# Long-Term Growth Development Phasing



# Long-Term Growth Development Phasing

- » Campus Development of South Development Area
- » Pave the way for long-term future terminal growth (beyond the planning horizon)
- » **Strategy:** As the opportunity presents itself, move facilities to the West Development area and along Taxiway L to enable the reconfiguration of the South Development Area
- » Opportunities based upon:
  - Accommodating facilities requirements
  - Infrastructure conditions start to deteriorate (age)
  - Tenant desire to relocate / expand
  - Enabling projects for other development

# Project Phasing

- » Multiple phasing sequences were developed for each function
- » Sub-alternative phasing options were developed to anticipate “What If” scenarios associated with the timing of tenant development opportunities
- » Scenarios assume the impetus for development could be different and occur sooner or later, necessitating a reordering of project sequencing

## Cargo Development - West Area

### Legend

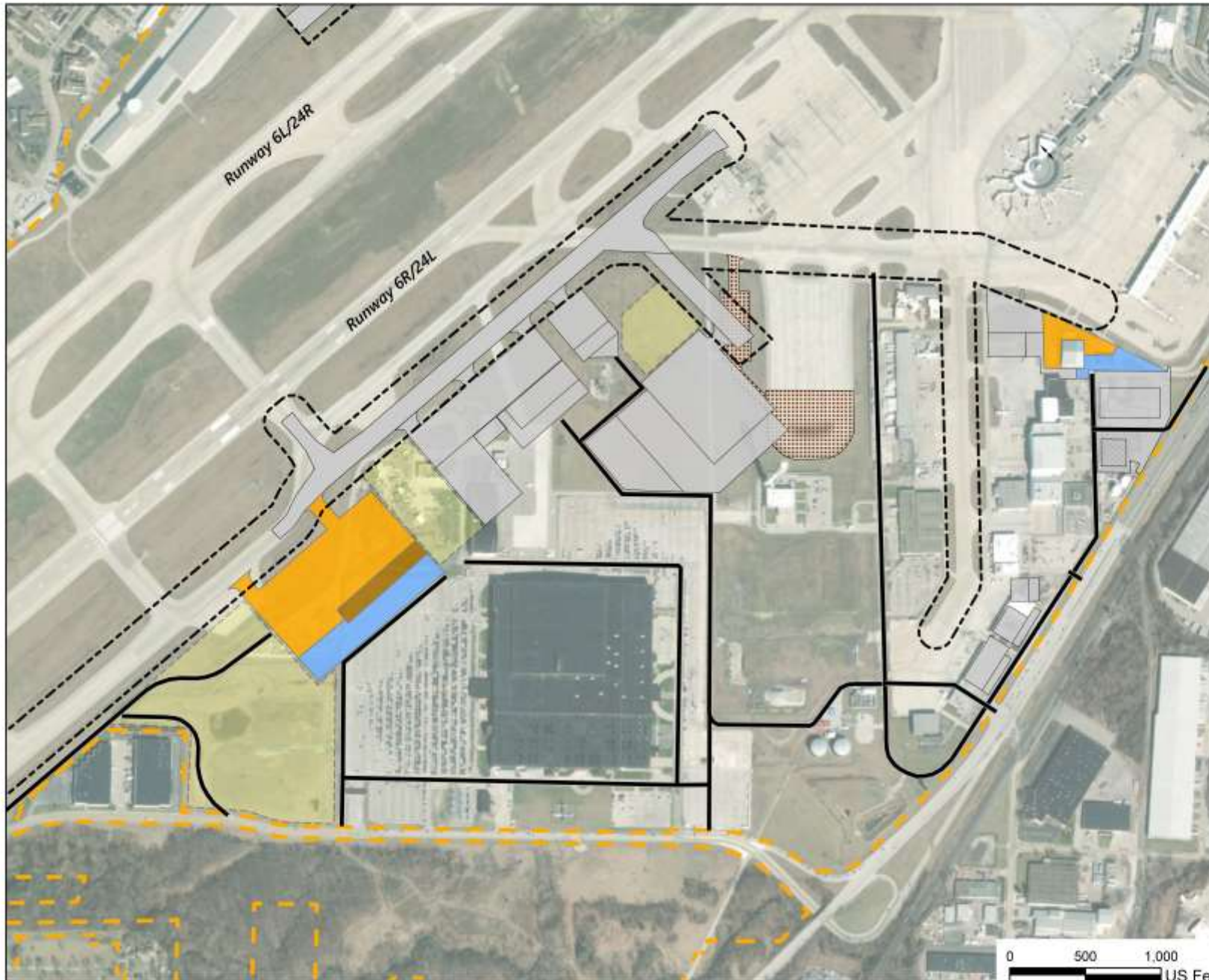
- Airport Property Line
- Roads
- New Cargo Apron
- New Cargo Building
- New Cargo Parking
- Other Projects
- Pavement Revmoved
- ⬡ TOFA
- Preserved



## Cargo Development - South Area

### Legend

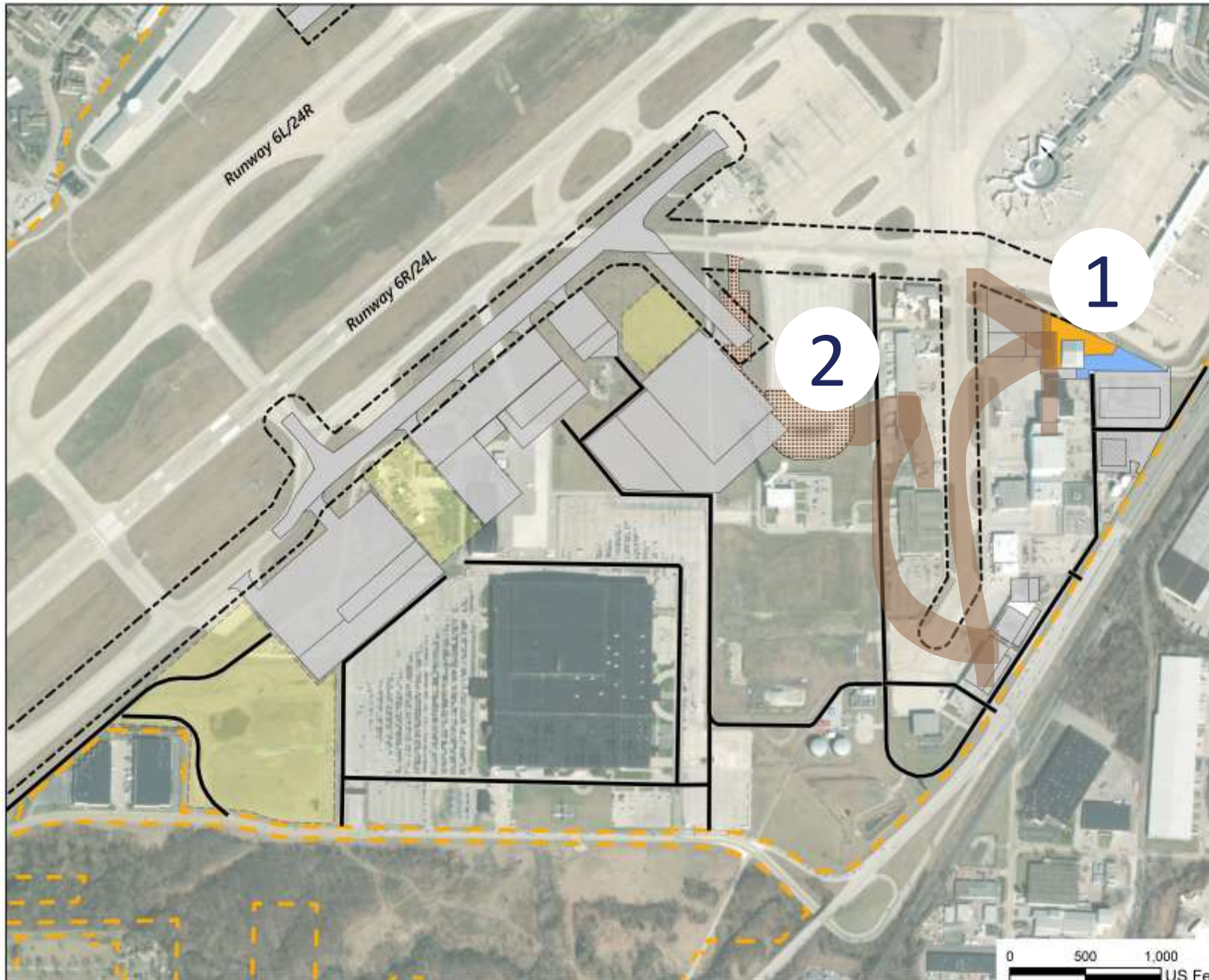
- Airport Property Line
- Roads
- New Cargo Apron
- New Cargo Building
- New Cargo Parking
- Other Projects
- ▨ Pavement Revmored
- ⊠ TOFA
- Preserved



## Belly Cargo Development - South Area

### Legend

- Airport Property Line
- Roads
- New Apron
- New Parking
- Other Projects
- ▨ Pavement Revmored
- ⊞ TOFA
- Preserved



# GA Development - West Area

## Legend

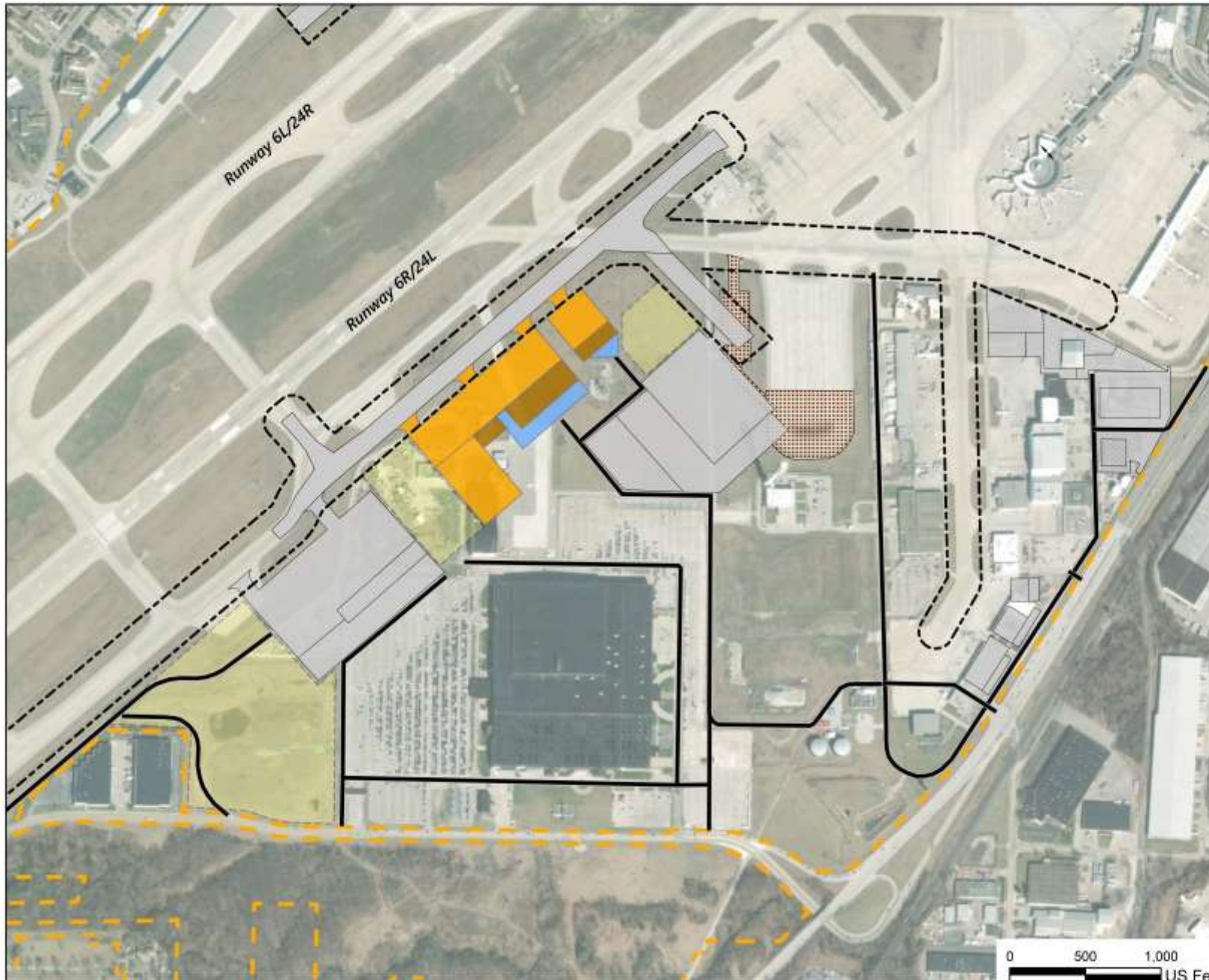
- - - Airport Property Line
- Roads
- New General Aviation Apron
- New General Aviation Building
- New General Aviation Parking
- Other Projects
- Pavement Revmoved
- TOFA
- Preserved



## GA Development - South Area

### Legend

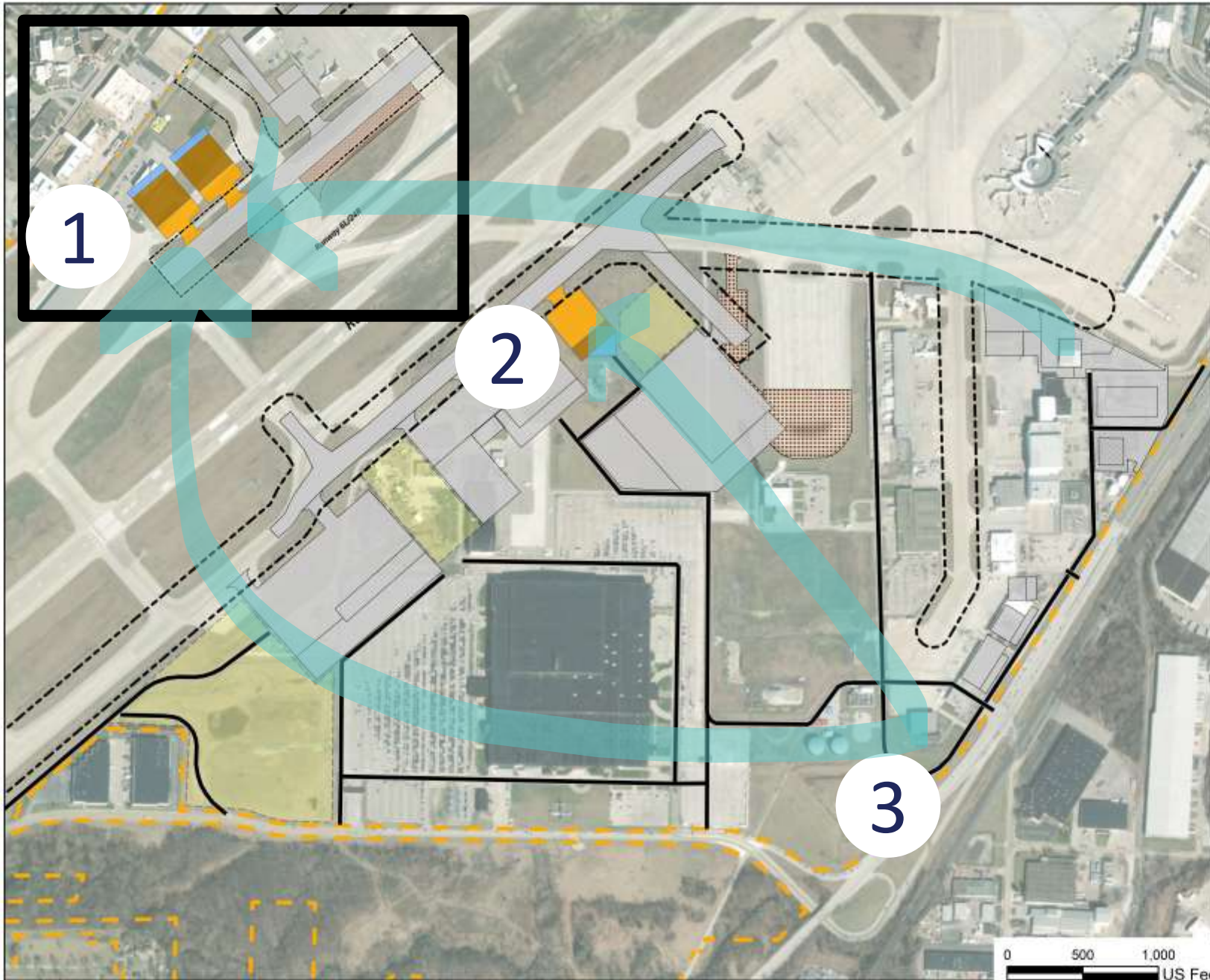
- Airport Property Line
- Roads
- New General Aviation Apron
- New General Aviation Building
- New General Aviation Parking
- Other Projects
- Pavement Revmored
- TOFA
- Preserved



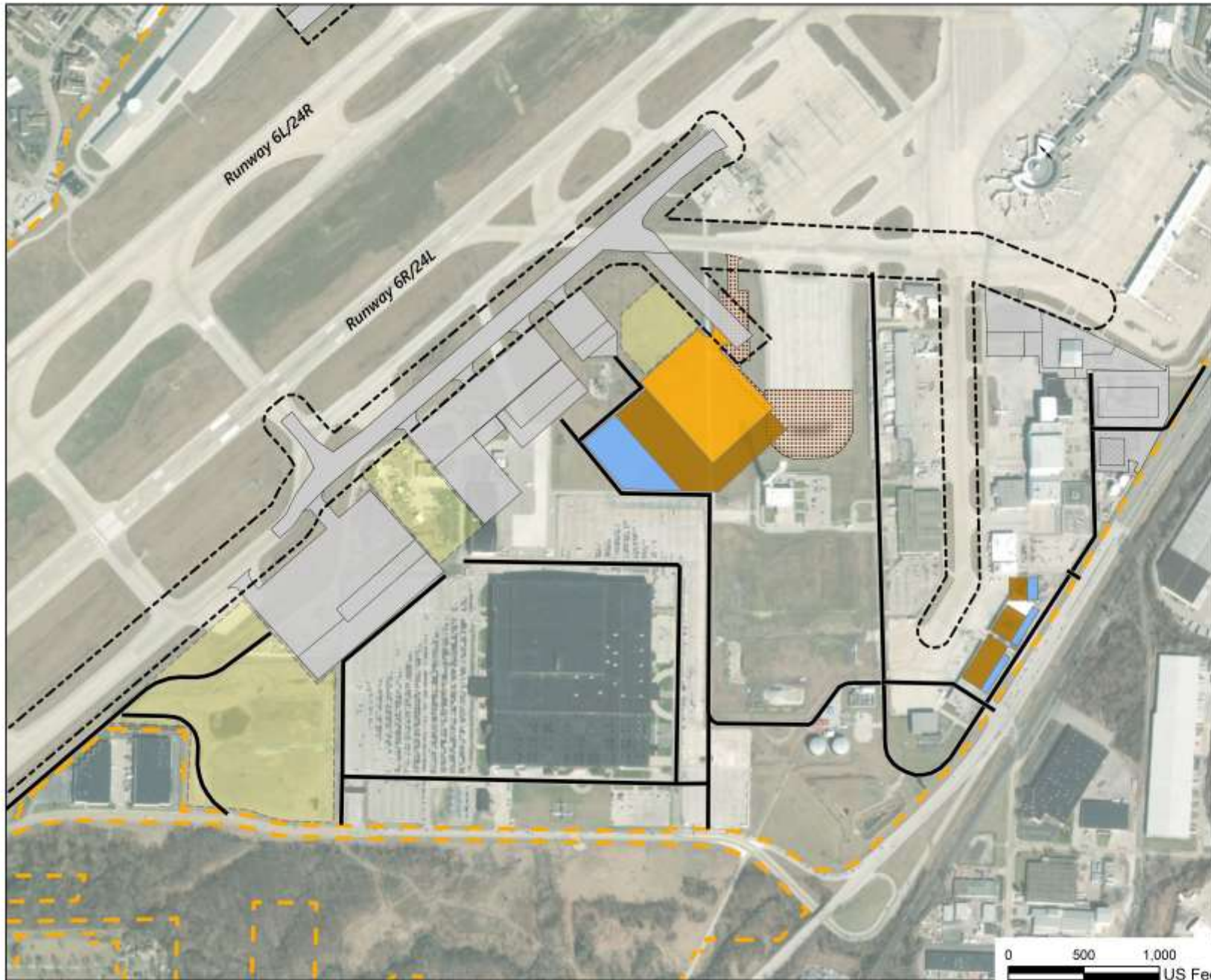
## Corporate GA Development

### Legend

- Airport Property Line
- Roads
- New Corporate GA Apron
- New Corporate GA Building
- New Corporate GA Parking
- Other Projects
- ▨ Pavement Revmoved
- ▭ TOFA
- Preserved



## Aircraft/Airline Maintenance & Support Development- South Area



### Legend

- Airport Property Line
- Roads
- New Aircraft Maintenance & Support Apron
- New Aircraft Maintenance & Support Building
- New Aircraft Maintenance & Support Parking
- Other Projects
- Pavement Revmored
- TOFA
- Preserved



# Airport Support Development - South Area

## Legend

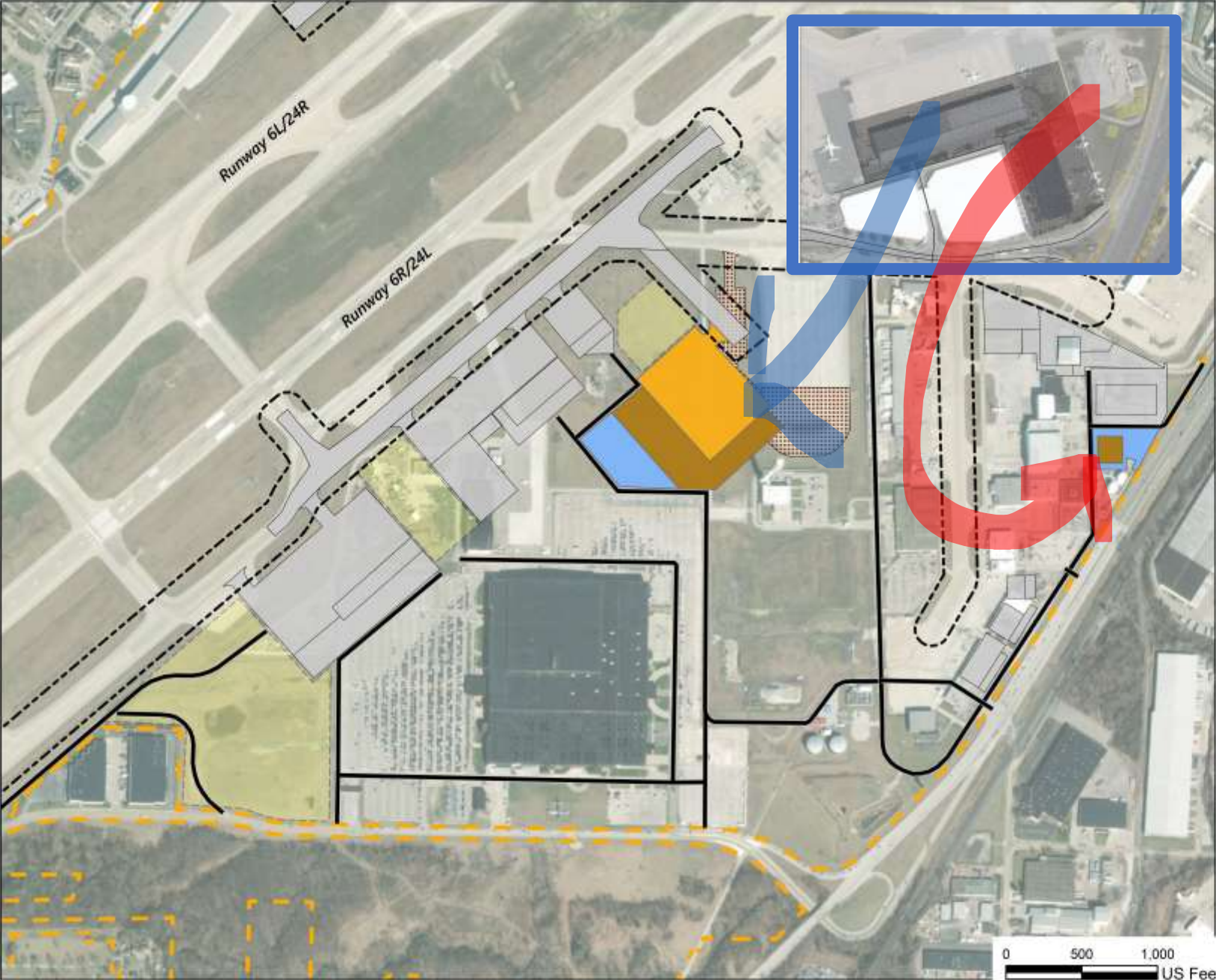
- Airport Property Line
- Roads
- New Airport Support Apron
- New Airport Support Building
- New Airport Support Parking
- Other Projects
- Pavement Revmoved
- TOFA
- Preserved



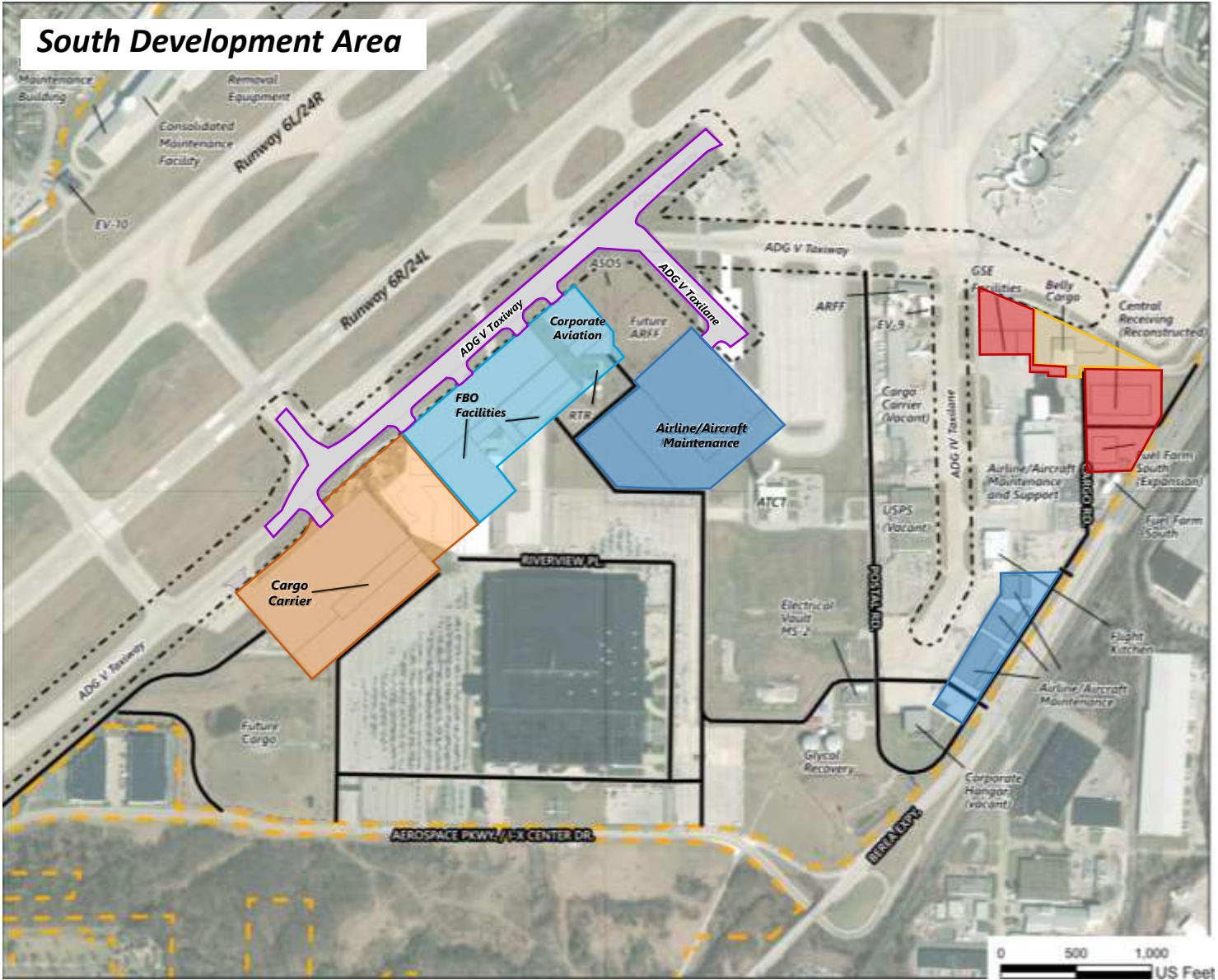
# MRO & Fuel Farm Development- South Area

## Legend

- - - Airport Property Line
- Roads
- New Apron
- New Building
- New Parking
- Other Projects
- ▨ Pavement Revmored
- ⊠ TOFA
- Preserved



# Preferred Alternative – PAL 5



**South Development Area**



**West Development Area**



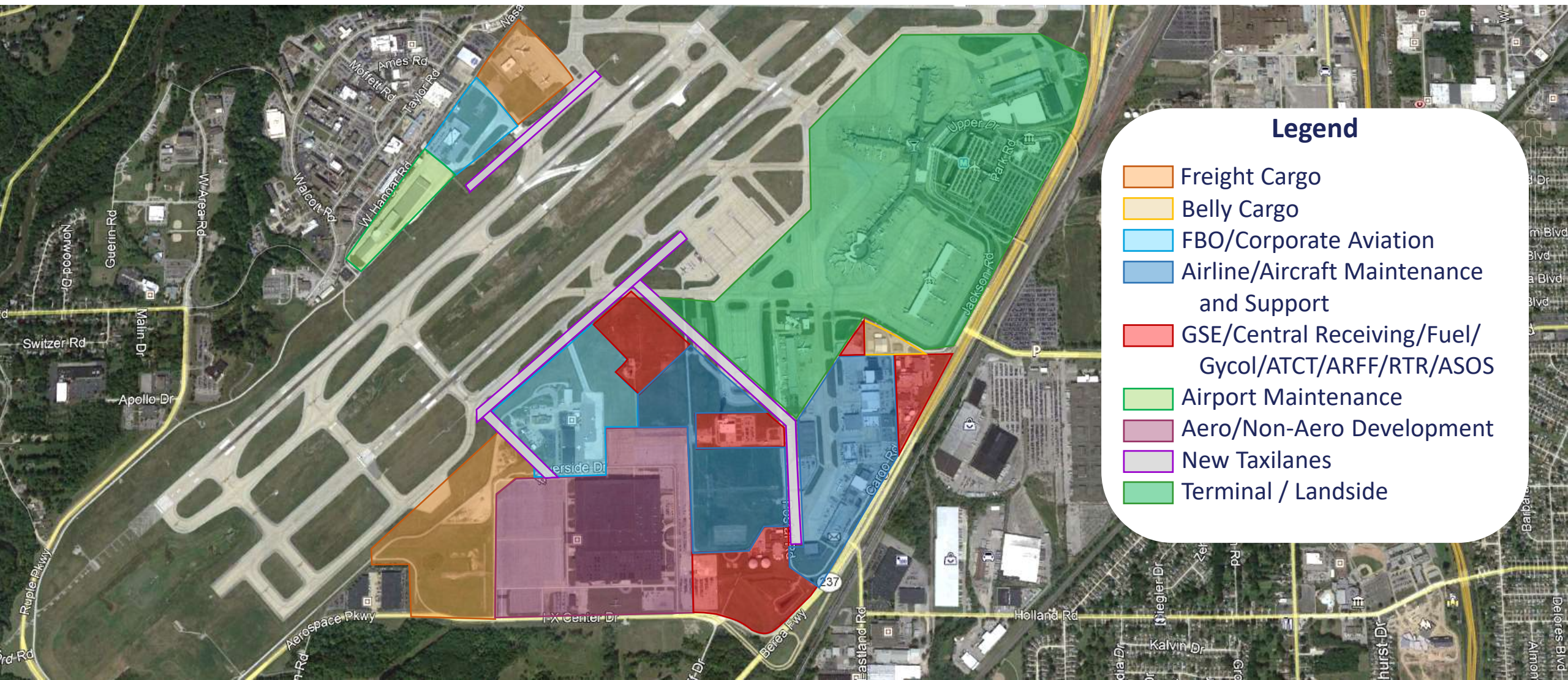
**North Development Area**

**Legend**

- Freight Cargo
- Belly Cargo
- FBO/Corporate Aviation
- Airline/Aircraft Maintenance and Support
- GSE/Central Receiving/Fuel
- Airport Maintenance
- New Taxilanes
- Terminal / Landside

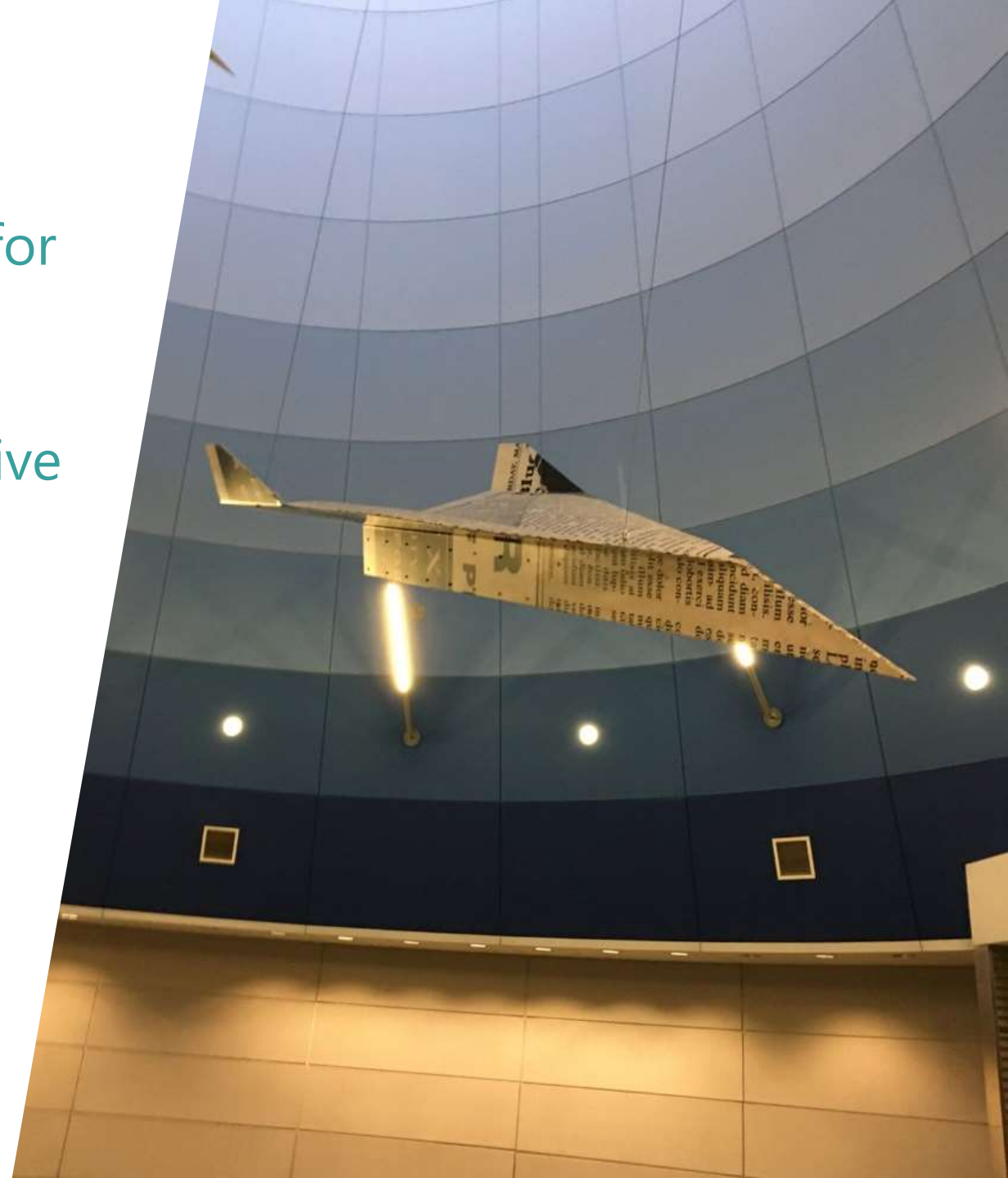


# Long-Term Campus Development – Land Use



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# Next Steps

- » Third Set of Working Committee Meetings
- » Prioritization of 20-Year Master Plan Program Projects
- » Evaluation of Potential Environmental Impacts of Master Plan Program
- » Full 20-Year Implementation/Financial Plan
- » Final Set of Working Committee Meetings



# Q&A

Thank you for your Attendance!