APPENDIX D

PUBLIC ENGAGEMENT

D. STAKEHOLDER AND PUBLIC ENGAGEMENT

Stakeholder and public engagement are essential in developing an accurate master plan, beneficial to an airport's stakeholders and community. The FAA provides guidance for community involvement in all types of airport planning in Advisory Circular 150/5050-4A, *Community Involvement in Airport Planning*. The advisory circular notes that "The extent of community involvement for an airport project can vary greatly depending on airport size, community, environmental characteristics, complexity of proposed development plans, and level of anticipated controversy or opposition." This guidance allows airport operators to determine the types of activities that are appropriate for their particular projects.

For this master plan, the GCIAA determined that stakeholders should be engaged through a Technical Advisory Committee, or TAC, that would meet regularly, up to four times, at key points in the project. TAC members include tenants, the FAA, INDOT, the Airport Traffic Control Tower Chief, Airport Engineer, Chicago Department of Aviation, and others who are engaged with the Airport on a regular basis. The community was provided with opportunities to engage through two public meetings.

This chapter includes information from the TAC and public meetings in the following documents:

- List of TAC Members
- TAC Meeting #1 Presentation (10/13/2016)
- TAC Meeting #2 Presentation – Review of Forecast (12/20/2016)
- TAC Meeting #3 Presentation (12/11/2018)
- TAC Meeting #4 Presentation (12/3/2020)
- TAC Meeting #4 Supplemental Materials (12/22/2020)
- Additional comments (and responses) from Master Plan TAC Following Meeting #4 (2/5/2021)

- Master Plan Public Workshop #1 (2/13/2017)
    - Presentation materials
    - Workshop Station Boards
    - Workshop Brochure
- Master Plan Public Workshop #2
    - Presentation Materials
    - Public comments and responses

Gary/Chicago International Airport Master Plan Update
Technical Advisory Committee
Updated 11/9/2020

Federal Aviation Administration, Great Lakes Region

- Deb Bartell, Manager, Chicago Airports District Office
- Rob Esquivel, Assistant Manager, Chicago Airports District Office
- Gary D. Wilson, Program Manager, Chicago Airports District Office
- Kyle Dorf, EIT, Program Manager, Chicago Airports District Office

Indiana Department of Transportation

- Marty Blake, Manager, Office of Aviation, Indiana Department of Transportation
- Michael Buening, Chief Airport Engineer, Indiana Department of Transportation

City of Gary/Airport

- Duane Hayden, Executive Director, Gary/Chicago International Airport
- Dan Vicari, City of Gary, Gary/Chicago International Airport
- Ken Cast, Airport Manager, Gary/Chicago International Airport
- Hank Mook, Assistant Airport Manager, Gary/Chicago International Airport

Airport Tenants

- Wil Davis, President & CEO, Gary Jet Center
- Major Clinton Ward, Limited Army Aviation Support Facility, Indiana Army National Guard
- John Girzadas, President, B. Coleman Aviation
- Mark Jackson, Director, Boeing Flight Operations

Others

- Ken Ross, P.E., NGC Corp.
- Margaret Goolsby, Manager, Airport Traffic Control Tower, Gary/Chicago International Airport
- Ken Rapier, President, Tuskegee Airmen, Inc.
- Adam Rod, Chicago Department of Aviation
- Charles Kurtz, EVP Technical Services, AvPORTS
- Johnson Chang-Fong, Manager, Engineering and Technical Services, AvPORTS

TAC Meeting #1 Presentation (10/13/2016)

D-5

TECHNICAL ADVISORY COMMITTEE MEETING #1

Gary / Chicago International Airport Master Plan Update

10/13/2016

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

D-6

AGENDA

- Introductions
- Master Plan Process Overview
- Roles of the Technical Advisory Committee
- Master Plan Goals and Objectives
- Inventory of Existing Conditions
- Forecasts of Aviation Activity
- Next Steps

MASTER PLAN PROCESS OVERVIEW

Technical Advisory Committee Meeting #1

WHAT IS A MASTER PLAN?

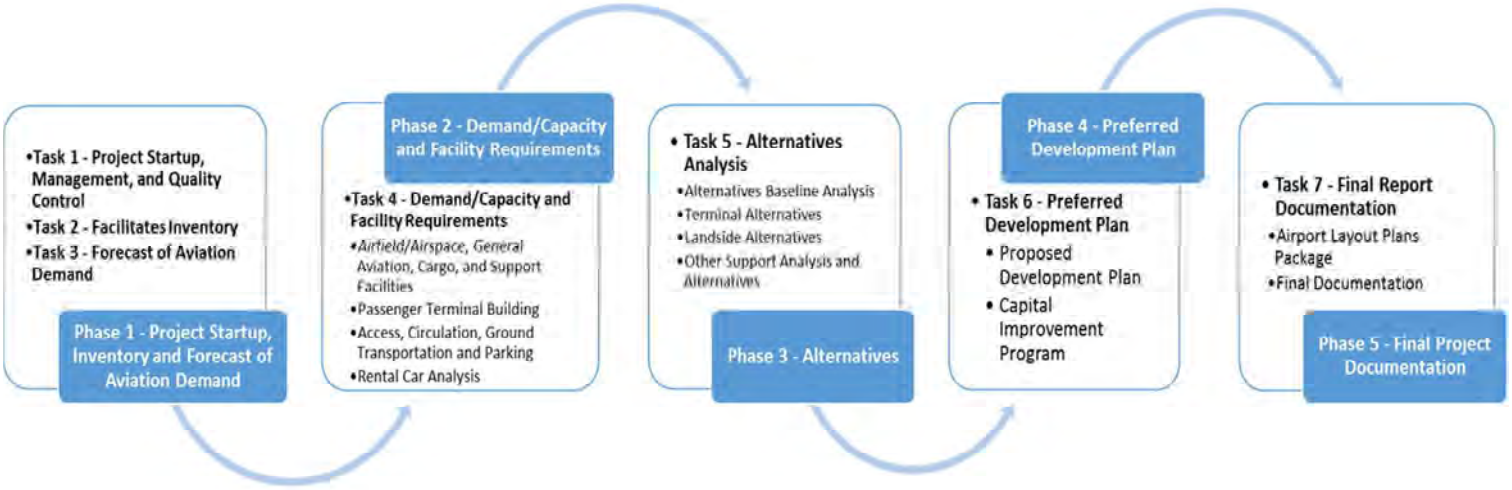
Master Plan Process Overview

- 20 year infrastructure development plan
- Assess and determine facility needs
- Provides development options to address needs
- Provides a timeline and financial schedule for implementation
- Conducted in combination with Airport Layout Plan (ALP) update
  - Graphical depiction of existing and future airport development
  - Facilities must be shown on the ALP to be eligible for FAA funding

MASTER PLAN COMPONENTS

D-9

Master Plan Process Overview



PUBLIC / STAKEHOLDER ENGAGEMENT

D-10

Master Plan Process Overview

- Technical Advisory Committee
  - 4 meetings anticipated
- Community Advisory Committee / Public Workshop
  - 3 meetings anticipated
- Airport Board Presentations
  - Periodic project updates
- Project Website
  - Updates at key project milestones

ROLE OF THE TECHNICAL ADVISORY COMMITTEE

Technical Advisory Committee Meeting #1

OVERVIEW OF TAC ROLE

Roles of the Technical Advisory Committee

- Provide input to project team
- Sounding board for proposed development alternatives
- Represent interests of stakeholders
- Shares data and other information with stakeholders in a two-way exchange with project team
- Reviews and comments on project progress

VISION, GOALS AND OBJECTIVES

Technical Advisory Committee #1

GYY AIRPORT VISION

Vision, Goals and Objectives

"Position the Airport as a driver of economic growth, create a business-friendly environment for firms that require support, rail, highway, marine, pipeline, and air-oriented modes of transport, and market Gary and Northwest Indiana as a nexus of robust transportation and infrastructure networks"

GYY VISIONING DOCUMENT

D-15

Vision, Goals and Objectives

- The Airport
  - Secure customs capability
  - Return of commercial service
  - Market and promote the runway extension
- Surrounding Land
  - Advance road improvement projects
  - Promote development opportunities domestically and abroad
  - Respond to inquiries and engage broker community
- Infrastructure
  - Advance Buffington Harbor, Airport Road, and Clark Road improvement initiatives
  - Advocate for higher and better use of lakefront properties
  - Integrate long-term airport access vision
- Natural Assets
  - Formalize the Airport's sustainable practices protocol
  - Implement Rails to Trails Project
  - Pursue comprehensive approach to wetland issues
- Community Participation
  - Assemble a central information resources database
  - Create a one-stop website for job seekers
  - Establish a regional workforce development commission

MASTER PLAN GOALS AND OBJECTIVES

D-16

Vision, Goals and Objectives

- Forecast
  - Consult with FAA to reach agreement on methodology to develop a realistic passenger and operations forecast
  - Propose feasible air service scenarios by demonstrating demand for air service
- Airside
  - Extend/Widen Runway 2-20 to provide additional capacity and support to the Airport as a secondary option to the Airport's primary Runway 12-30
  - Improve the Airport's Approach capabilities which would allow for additional aircraft operations in inclement weather
  - Mitigate airspace impacts to surrounding land around the airport environment while also taking into consideration regional impacts to both Chicago O'Hare and Midway Airspaces
  - Decommission unused and outdated navigational aid equipment at the Airport
  - Determine optimal runway lengths
  - Evaluate the construction of a parallel taxiway for Runway 2-20
- Landside
  - Develop an Intermodal Facility that would integrate the region's rail connectivity to the airport
  - Acquire property around the airport to allow for future expansion and development (i.e. property west of the airport)
  - Improve wayfinding and access to the airport such as direct access from the interstate
  - Enhance traffic flow to various areas within the Airport property
- Terminal
  - Provide international services such as Federal Inspection Services (FIS), and Customs and Border Protection (CBP)
  - Expand and reconfigure existing facilities to accommodate future growth

MASTER PLAN GOALS AND OBJECTIVES

Vision, Goals and Objectives

- Support Facilities
  - Expand Fixed Base Operator (FBO) facilities to accommodate future growth as a result of operations being moved from Chicago O'Hare and Midway
  - Create and expand Cargo Operations as an alternate option in the region
  - Improve and/or relocate Airport Administration, Airport Rescue and Fire Fighting (ARFF), Air Traffic Control Tower and Airport Security (i.e. CCTV's and Perimeter Control to optimize facility placement, response times and visibility
  - Increase ramp and apron space to allow the Airport to facilitate diversion aircraft
- Environmental
  - Mitigate environmental impacts as a result of any airport development projects which include Runway 2-20 extension
  - Review and evaluate wetlands on airport property and in the vicinity to minimize development challenges
  - Provide for the development of efficient and environmentally friendly energy solutions (i.e. Solar Farm), including non-aviation uses
  - Evaluate zoning ordinance (to consider compatible Land-Use for both on and off-airport)
  - Consider and mitigate ground water issues
- Financial
  - Maximize revenue sources to allow the Airport to be financially sustainable
  - Provide infrastructure and amenities to grow and attract new tenants
  - Identify opportunities to expand non-aviation revenue (i.e. restaurants, hotels, etc.), both at the Airport and within the airport environment (i.e. along Airport Road)
  - Maintain relationship with the Chicago Department of Aviation (through the Compact) and continue to market the Airport as Chicago's 3rd Airport

INVENTORY OF EXISTING CONDITIONS

Technical Advisory Committee Meeting #1

DATA COLLECTION OVERVIEW

D-19

Inventory of Existing Conditions

- Site Visits (9/19)
  - Fuel Farm
  - Airport Outer/Inner Perimeter Road
  - Terminal Building
  - Airport Maintenance
  - Airport Air Traffic Control Tower
- Tenant Interviews (9/20 & 9/27)
  - NiSource, Sage Popovich, B.Coleman, Boeing Company, Army Air National Guard, White Lodging, & Gary Jet Center

INITIAL FEEDBACK

D-20

Inventory of Existing Conditions

- Tenant Requested Improvements
  - Crosswind Runway Extension
  - Approach Lighting System
  - Apron Pavement Reconstruction
  - Customs & Border Protection
  - Wayfinding (Signage to and from Airport)
  - Direct Access from the Interstate
  - Airport Road
  - Airport Security

FORECASTS OF AVIATION ACTIVITY

Technical Committee Meeting #1

FACTORS AFFECTING AVIATION DEMAND

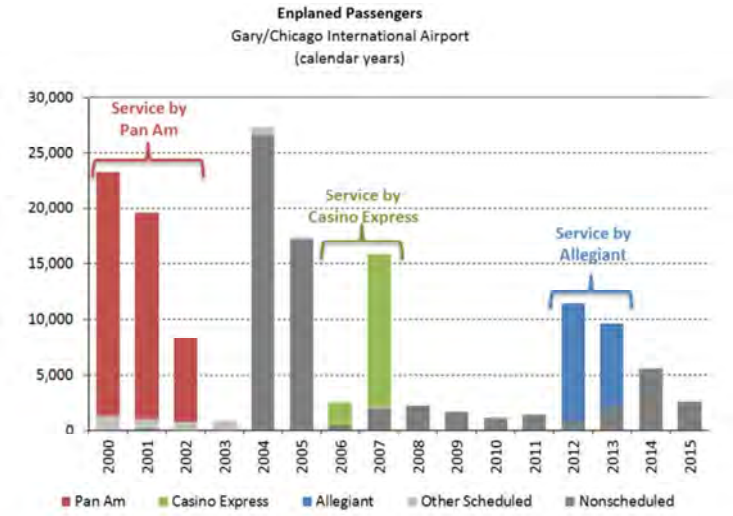
Forecasts of Aviation Activity

- Primary
  - Population Growth
  - Employment Growth
  - Disposable Income
  - Business/Tourism Draw
- Secondary
  - Air Service & Competition
  - Average Airfares

AIR SERVICE HISTORY AT GYY

D-23

Forecasts of Aviation Activity



Notes: Periods of scheduled service are noted on chart.
Other scheduled includes airlines that reported passengers on scheduled flights to T100, but did not file associated schedules with OAG.
Source: U.S. DOT, Schedule T100; OAG Aviation Worldwide Ltd, OAG Analyser database, accessed September 2016.

AVIATION FORECAST METHODS

D-24

Forecasts of Aviation Demand

- Regression or Trend Analysis
- Market Share Analysis
- Peer Airport Comparison
- Range Projections
- Multiple Scenarios

- Plan for this engagement is a minimal growth baseline, like FAA TAF, with high scenario(s) developed through peer airport comparison

OTHER CONSIDERATIONS

D-25

Forecasts of Aviation Demand

- Need for optimistic, yet reasonable, high-growth scenarios to plan for future terminal and airfield needs
- Benchmark peer airports should be carefully selected, assumptions clearly documented
- Early involvement of FAA in forecasting process should support open dialogue and smooth review

D-26

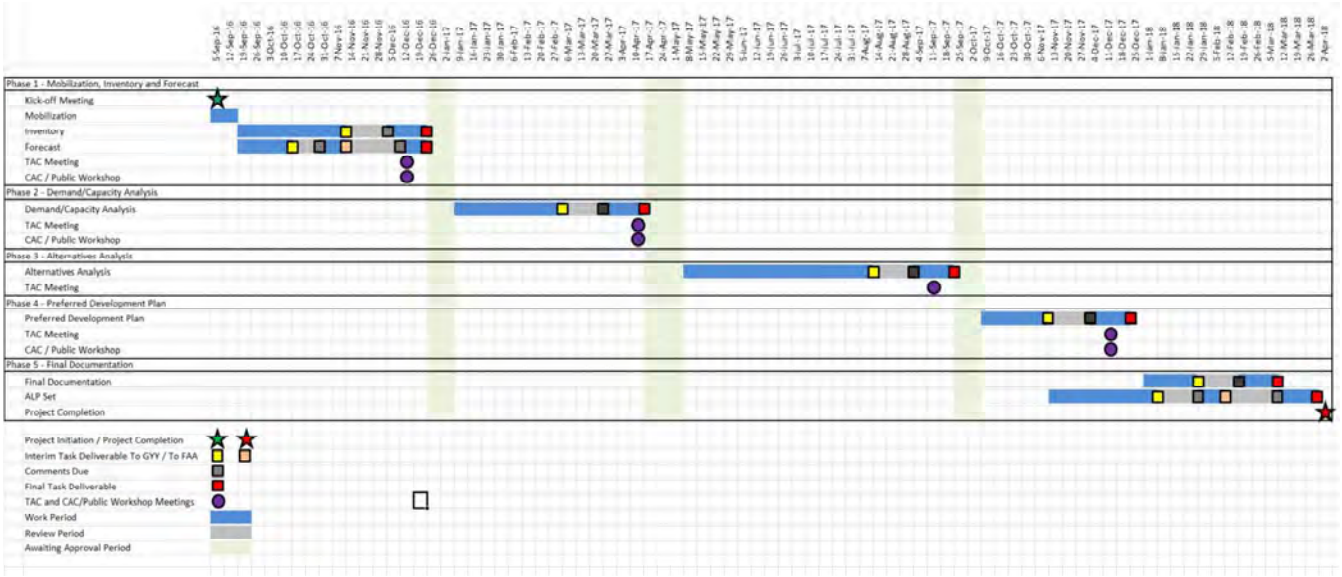
NEXT STEPS

Technical Advisory Committee Meeting #1

ANTICIPATED PROJECT SCHEDULE

D-27

Next Steps



TAC Meeting #2 Presentation (12/20/2016)

TECHNICAL ADVISORY COMMITTEE REVIEW OF FORECAST

Gary / Chicago International Airport Master Plan Update

12/20/2016

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

AGENDA

- Forecasts of Aviation Demand
- Next Steps

- Forecasts are a key component of Airport Master Plans, forming the basis for near-term and long-term facility planning and decision-making
- Anticipated future aviation activity drives terminal, airfield, and landside development needs
- The inherent uncertainty in long-range forecasts makes a scenario-based approach prudent, allowing for a modular and flexible approach to planning
- Facility development is triggered at specific Planning Activity Levels (PALs) which may be reached more or less quickly, depending upon the actual pace of growth that occurs
- Master Plan forecasts require FAA review and approval, to ensure reasonability of methodology and results

- Base Forecast
  - A more conservative baseline, designed for comparability with FAA TAF
  - Driven by incremental and organic growth
  - No relaunch of commercial passenger service; only slight gains in GA market share

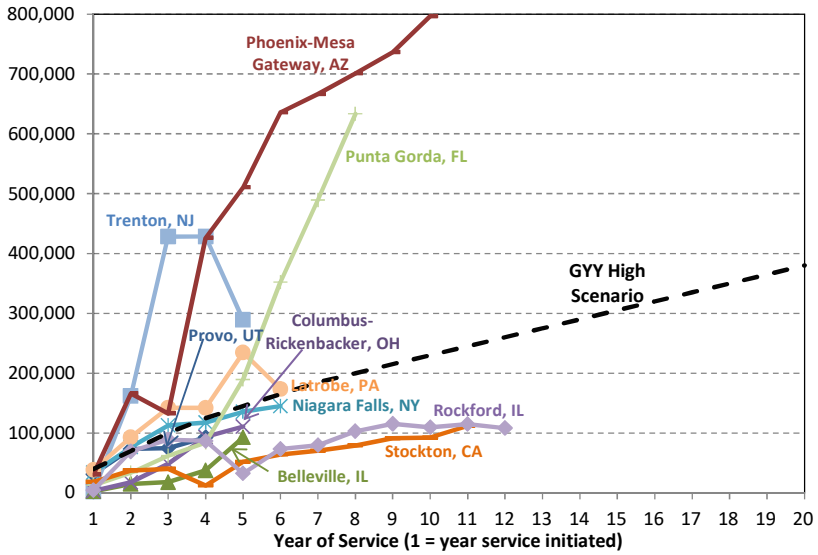
- High Scenario
  - A more optimistic projection, designed to gauge potential future facility needs
  - Commercial passenger service growth estimated using peer benchmarking
  - GA growth estimated using market-share analysis vs. MDW

- Base Forecast
  - Modest economic growth for the nation
  - Similar rate of economic growth for (Chicago) MSA, lower rate of growth for (Gary) Metropolitan Division
  - No scheduled passenger airline service launched at the Airport; two major competing airports within a 90-minute drive
  - GYY will make slight gains in GA market share due to constraints at MDW and, to a lesser extent, ORD
  - Generally stable international political environment; effective safety and security precautions
  - No disruption of airline travel behavior as a result of international hostilities or terrorist acts or threats

- High Scenario
  - Demographic and economic trends outperform historical trends; economic growth outpaces national average
  - 'Niche' airline(s), e.g., small LCCs, charter carriers, launch regular service at the Airport (though it is unlikely that any airline presently serving MDW or ORD will serve GYY)
  - Ground access to MDW/ORD becomes more difficult, lengthening transit time and encouraging more airlines and travelers to consider GYY
  - Congestion at competing airports, greater awareness of GYY's facilities, competitive costs for aircraft handling and fuel allows the Airport to gain share of regional GA market, mostly at the expense of MDW

COMMERCIAL SERVICE PEER BENCHMARKING

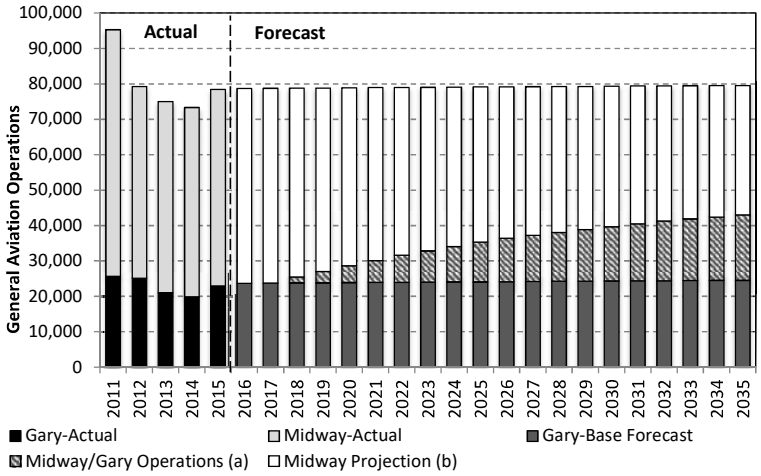
Scheduled Departing Seats
Gary/Chicago International Airport High Scenario and
Selected Peer Airports



Sources: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed October 2016; LeighFisher, December 2016.

GA MARKET SHARE ANALYSIS

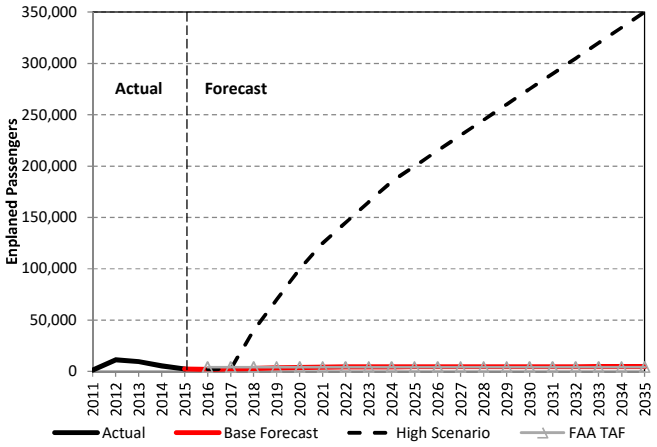
General Aviation Operations Forecasts
Gary/Chicago International Airport and Midway International Airport
(calendar years)



Note: Includes general aviation, as well as flights that are not otherwise classified as passenger airline, all-cargo airline, or military.
(a) These operations are accommodated at Midway in the Base Forecast, but at Gary in the High Scenario.
(b) FAA TAF rates of growth were applied to Midway's most recent actual GA operations to create a projection GA activity.
Sources: Actual—Gary/Chicago International Airport records; Midway International Airport records.
Forecast—LeighFisher, December 2016.

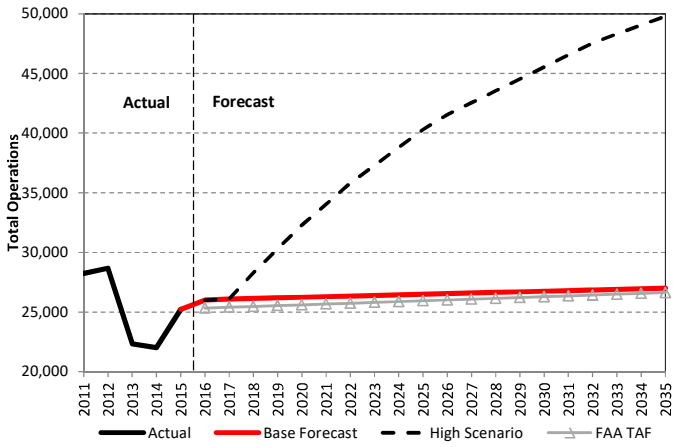
BASE AND HIGH FORECASTS (PAX / OPS)

Enplaned Passengers
Gary/Chicago International Airport
(calendar years, unless otherwise noted)



Note: The FAA TAF is in Federal Fiscal Years ended September 30.
Source: Actual—U.S. DOT, Schedule T100.
Forecast—LeighFisher, December 2016; FAA TAF, issued January 2016.

Operations Forecasts
Gary/Chicago International Airport
(calendar years, unless otherwise noted)



Note: The FAA TAF is in Federal Fiscal Years ended September 30.
Source: Actual—Gary/Chicago International Airport records.
Forecast—LeighFisher, December 2016; FAA TAF, issued January 2016.

TAC Meeting 3 Presentation (12/11/18)

TECHNICAL ADVISORY COMMITTEE MEETING #3

Gary / Chicago International Airport Master Plan Update

12/11/2018

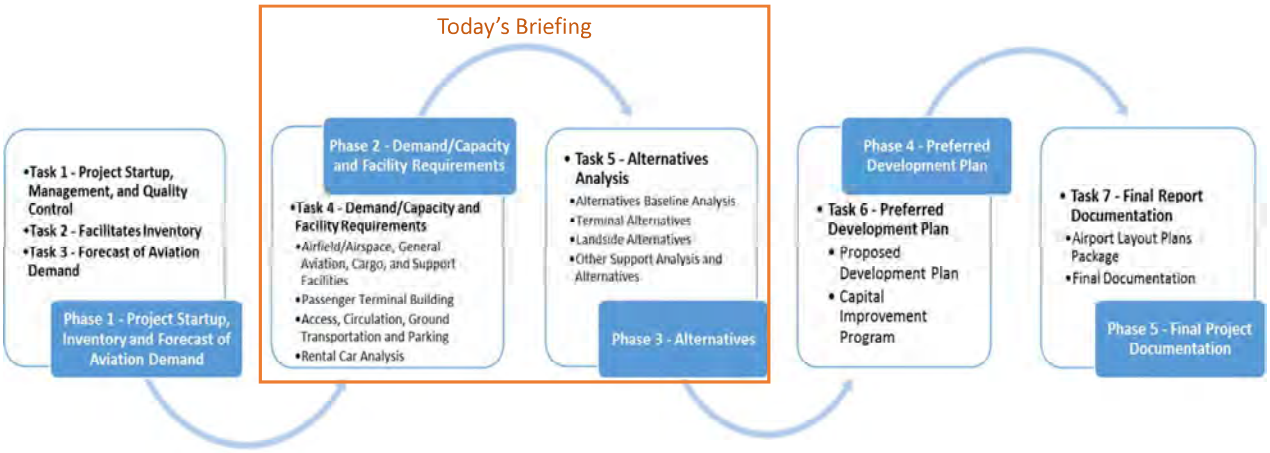
JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

AGENDA

- Introductions
- Master Plan Process Overview
- Roles of the Technical Advisory Committee
- Review of Aviation Activity Forecast
- Summary of Requirements
- Master Plan Alternatives
- Next Steps

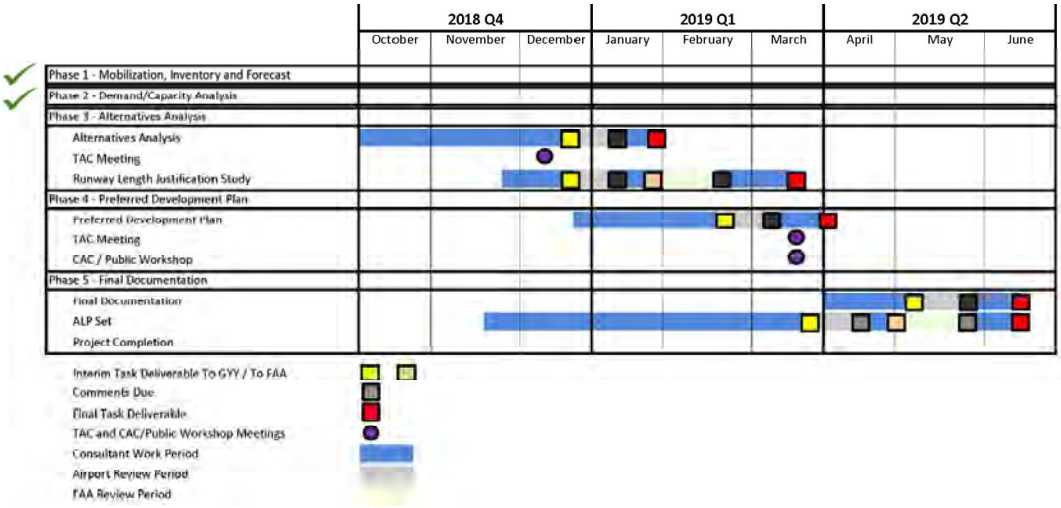
MASTER PLAN COMPONENTS

Master Plan Process Overview



SCHEDULE OVERVIEW

GYY Master Plan Update



OVERVIEW OF TAC ROLE

Roles of the Technical Advisory Committee

- Provide input to project team
- Sounding board for proposed development alternatives
- Represent interests of stakeholders
- Shares data and other information with stakeholders in a two-way exchange with project team
- Reviews and comments on project progress

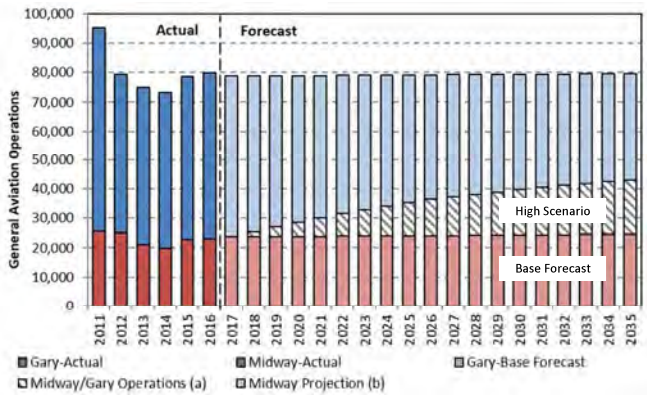
REVIEW OF AVIATION ACTIVITY FORECAST

GYY Master Plan Update

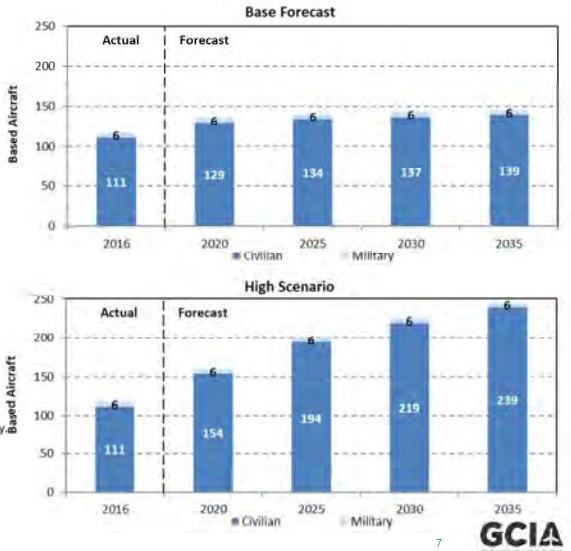
GENERAL AVIATION FORECAST

High growth scenario includes increased market share from other regional airports

Operations



Based Aircraft



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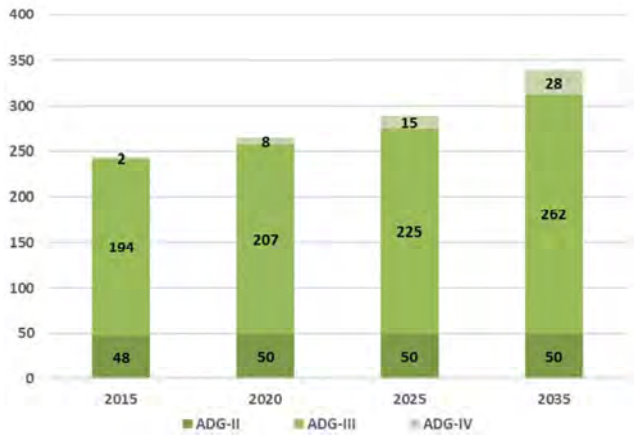
(b) FAA TAF rates of growth were applied to Midway's most recent actual GA operations to create a projection GA activity.
Sources: Actual—Gary/Chicago International Airport records; Midway International Airport records.
Forecast—LeighFisher, December 2016.

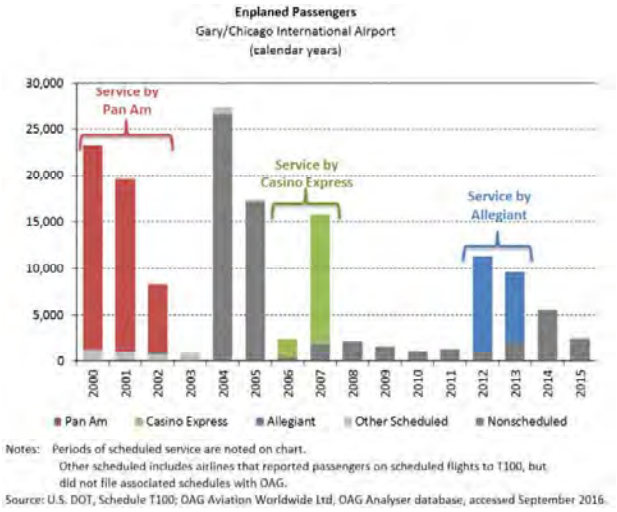
AIR CARGO FORECAST

Air cargo forecast reflects historical trends, and does not consider new cargo entrants



HISTORICAL PASSENGER AIR SERVICE AT GYY

Multiple airlines have served GYY in the past



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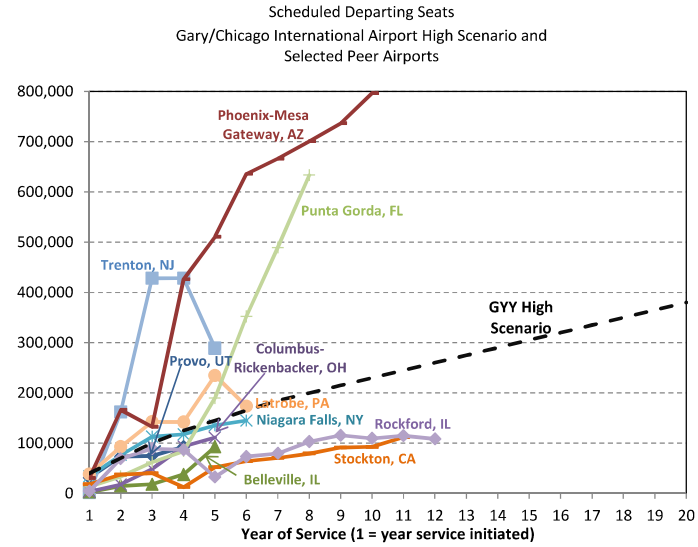
Source: U.S. DOT, Schedule T100; OAG Aviation Worldwide Ltd, OAG Analyser database, accessed September 2016.

COMMERCIAL SERVICE PEER BENCHMARKING

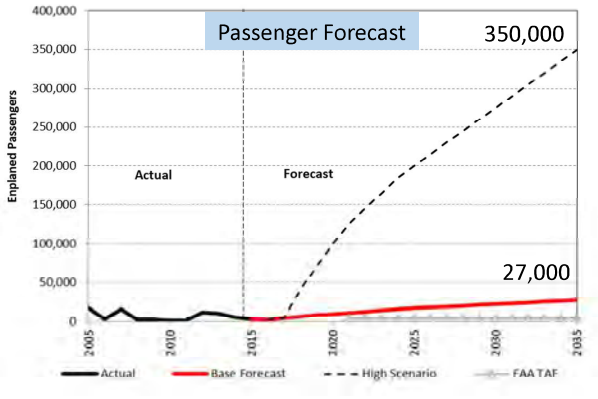
High scenario developed from similar startup markets



Sources: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed October 2016; LeighFisher, December 2016.

BASE AND HIGH FORECASTS

Forecasts of Aviation Demand Overview



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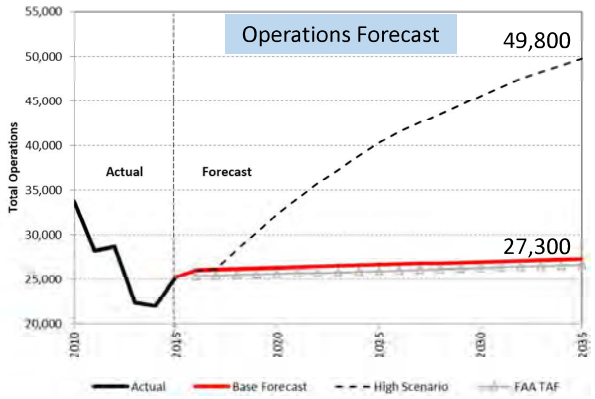

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Source: Actual—Gary/Chicago International Airport records.
Forecast—LeighFisher, December 2016; FAA TAF, issued January 2016.

PLANNING ACTIVITY LEVELS

Levels and characteristics of activity on which planning is based – Planning Activity Levels (PALs)

	Actual	Base Forecast - Approved			High Scenario – "what if?"	
Planning Activity Level		PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Forecast Year	2015	2020	2025	2035	2020	2035
PASSENGER ENPLANEMENTS	2,547	9,500	17,000	27,000	100,000	350,000
Air Carrier	2,458	9,167	16,404	26,054	99,667	349,054
Commuter	89	333	595	945	333	945
Peak Month	543	1,666	2,981	4,735	16,500	52,500
Average Day	**18**	**54**	**96**	**153**	**532**	**1,694**
AIRCRAFT OPERATIONS	25,229	26,322	26,648	27,263	32,298	49,781
Commercial Operations	1,748	1,920	1,995	2,145	3,123	6,247
Air Carrier	494	600	650	750	1,803	4,852
Commuter/Air Taxi	1,254	1,320	1,345	1,395	1,320	1,395
General Aviation	21,500	22,422	22,673	23,138	27,195	41,555
Military	1,981	1,980	1,980	1,980	1,980	1,980
Peak Month	3,160	3,559	3,603	3,686	4,366	6,730
Average Day	**102**	**115**	**116**	**119**	**141**	**217**
BASED AIRCRAFT	**97**	**135**	**140**	**145**	**160**	**245**

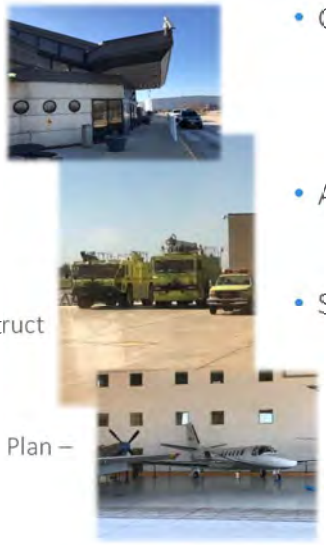
SUMMARY OF REQUIREMENTS

GYY Master Plan Update

FACILITY REQUIREMENTS ANALYSIS

Assesses functional area needs to meet forecast activity, focusing on:

- Airfield
  - Geometry for critical aircraft
  - Runway 2-20 extension
- Terminal
  - Gates and aircraft parking
  - Passenger processing
  - Vehicle parking and curbfront
  - Rental car
  - Expansion vs. relocate/reconstruct
- Access and roadways
  - South Shore Line
  - 2040 Comprehensive Regional Plan – Vision for Northwest Indiana

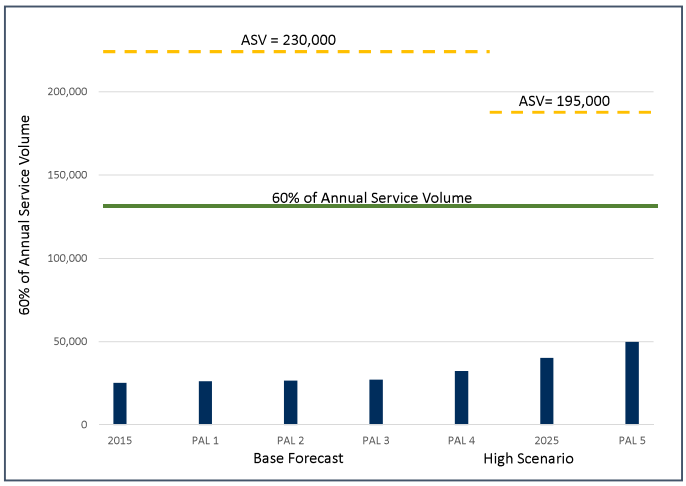


- General Aviation
  - Hangars (t-hangars, corporate, FBO)
  - Apron
  - Aircraft access and maneuvering
  - Vehicle parking
- Air Cargo
  - Aircraft parking
  - Building/landside facilities
- Support Facilities
  - ATCT
  - ARFF
  - Maintenance
  - Administrative offices

AIRFIELD CAPACITY - ANNUAL

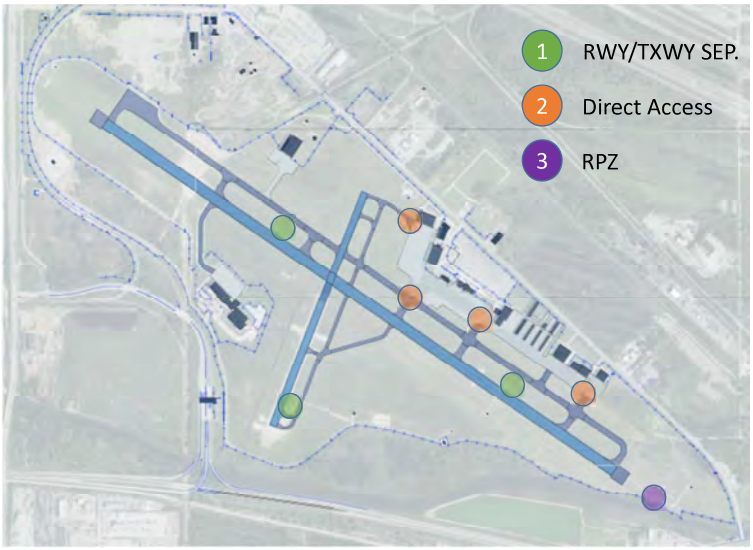
Annual Service Volume (ASV)

- ASV is an estimate of annual capacity reflecting hourly, daily and seasonal variations
- Considers current and future fleet mix; PAL 4 drop in ASV attributable to variability in the future fleet
- Assessed with FAA AC 150/5060-5, Airport Capacity and Delay



EXISTING AIRFIELD GEOMETRY

Current FAA Standards and taxi paths for critical aircraft



1. Runway to Taxiway Separation – 392’
2. Direct Access to Runway from Ramp/Apron
3. Runway Protection Zone

Coordinate with FAA on retention of current applicable Modifications of Standards

RUNWAY 2-20 EXTENSION

Extension is based on current and future fleet needs

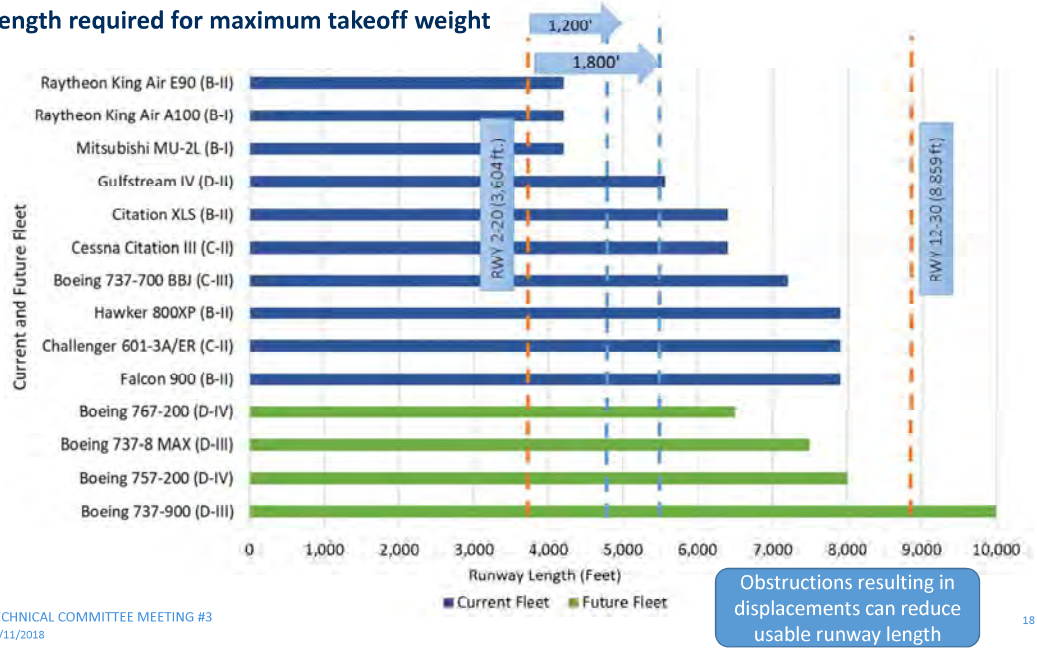
- Crosswind runway is needed during certain wind conditions
- Runway 2-20 is classified as B-II and is used for departures and arrivals by small aircraft
- Obstructions off north end of runway drive elevated runway end point
- Benefits to current and future fleet are more at 1,800 feet than 1,200 feet
- Rail line precludes extensions longer than 1,800 feet without relocation

Ability of Runways to accommodate current and future fleet

	Fleet	Existing 12-30	Existing 2-20	+1,200 ft	+1,800 ft
Departure Length	Current	All	None	Few	Few
	Future	Most	None	Few	Few
Arrival Length	Current	All	Some	Some	All
	Future	All	Few	Few	Most

DEPARTURE RUNWAY LENGTH

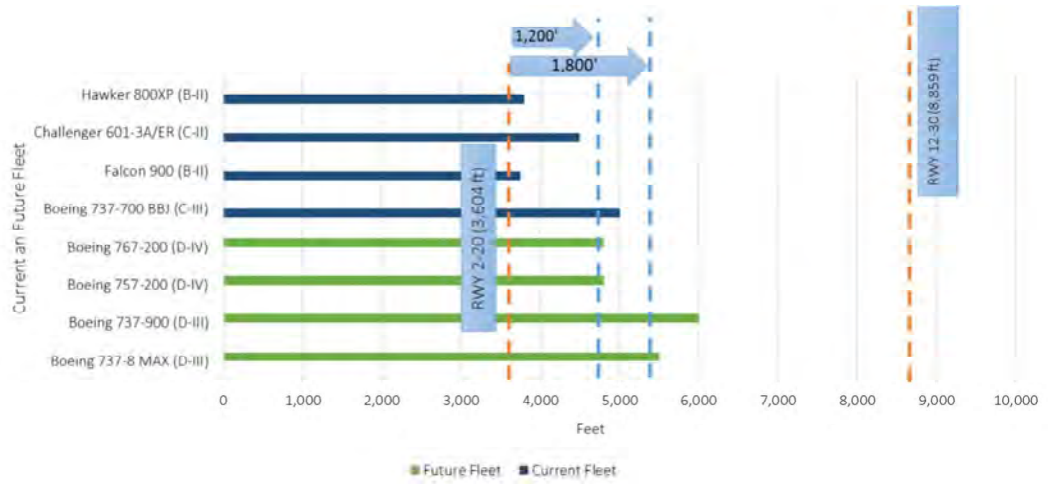
Length required for maximum takeoff weight



Obstructions resulting in displacements can reduce usable runway length

ARRIVAL RUNWAY LENGTH

Length required for maximum landed weight



Obstructions resulting in displacements can reduce usable runway length

GENERAL AVIATION

Additional conventional hangar and apron needed

- Existing Hangar/Apron Storage:
  - Conventional Hangar = 212,050 sf
  - Box/T-Hangars = 44,280 sf
  - Based Aircraft Apron = 197,378 sf
- Existing Apron = 330,476 sf
  - Excludes apron adjacent to hangar doors required for maneuvering aircraft

Planning Activity Level	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
	HANGAR/APRON STORAGE REQUIREMENTS (SF)					
Conventional Hangar Demand[2]	182,400	232,560	242,640	255,720	286,800	487,440
Conventional Hangar Surplus/(Deficit)		(25,638)	(38,238)	(54,588)	(93,438)	(344,238)
Box/T-Hangar Demand[1]		44,280	44,280	44,280	44,280	44,280
Box/T-Hangar Surplus/(Shortfall)		-	-	-	-	-
Apron Demand	29,700	13,500	16,200	16,200	27,000	62,100
Apron Surplus/(Deficit)	167,678	183,878	181,178	181,178	170,378	135,278
	APRON REQUIREMENTS (SF)					
Transient Apron Demand	194,400	249,840	255,240	264,960	323,280	482,831
Transient Apron Surplus/(Deficit)	136,076	80,636	75,236	65,516	7,196	(152,355)
Total Apron Surplus/(Deficit)	303,754	264,514	256,414	246,694	177,574	(17,077)

[1]Assumes no net new construction of T-Hangars
[2]Includes office space

AVIATION FUEL REQUIREMENTS

Fuel storage facilities are adequate through PAL 5

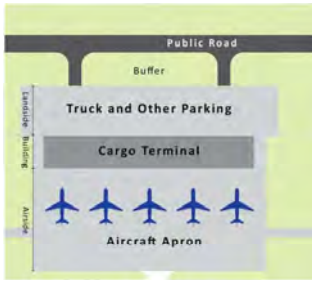
	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
	FUEL DEMAND					
Total Jet-A Flights – PMAD (#)	7	38	39	46	58	72
Annual Fuel Flowage - Jet-A (GAL)	2,408,687	2,510,648	2,534,298	2,581,600	3,441,092	4,245,590
Approximate Days of Storage - Jet-A (#)	8	8	7	6	5	4
Total 100LL Flights – PMAD (#)	19	21	21	22	25	37
Annual Fuel Flowage - 100LL (GAL)	36,007	37,531	37,885	38,592	51,400	63,467
Approximate Days of Storage - 100LL (#)	72	65	65	62	44	37

- Analysis aggregated flow between the GJC and B. Coleman based on available data
- August is peak month
- Jet-A & 100LL in total adequate through PAL 5 to meet PMAD demand
- Additional tanks may be needed if fueling contracts change.

AIRPORT SUPPORT

Support facilities to be updated and modernized

- ATCT to be replaced in nearby location with increased height
- Air Cargo space to be reserved with typical planning footprint and space for additional growth
- Airport Maintenance to be expanded with covered storage and would benefit from colocation with ARFF
- ARFF facility to be upgraded near term, replaced long-term and collocated with Airport maintenance
- Administrative Offices are adequate in near-term, but could be relocated if site can be better used for revenue generation



PASSENGER TERMINAL

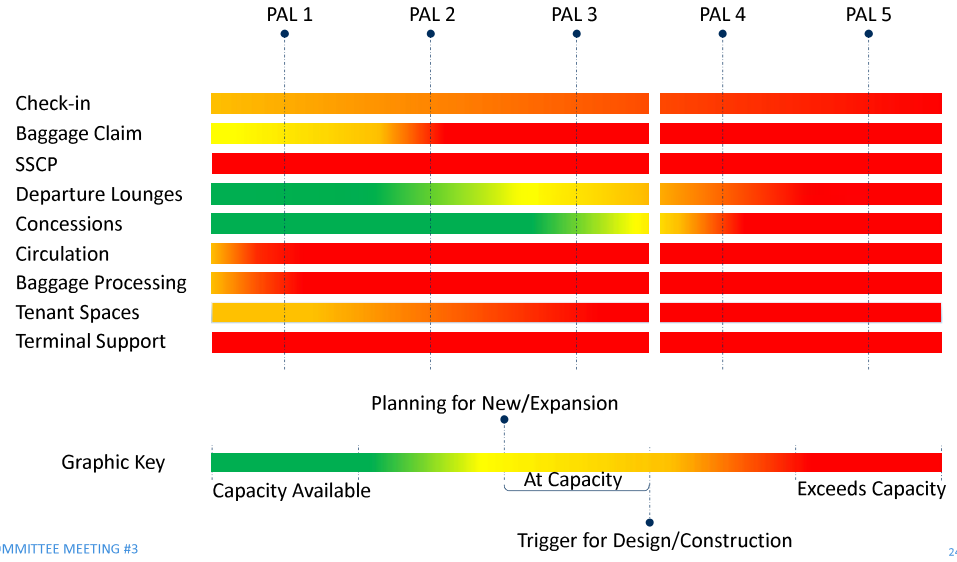
General planning criteria

- Planning based on:
  - FAA Advisory Circulars; International Air Transport Association (IATA) standards
  - Airport Cooperative Research Program (ACRP)Guidance
  - TSA and Customs and Border Protection Design Guidelines
  - Professional judgement and experience
- Size and configuration of the current facility may not meet design standards:
  - Secure circulation included in holdroom configuration
  - Passenger screening checkpoint configuration may be undersized

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Annual Enplanements	2,547	9,500	17,000	27,000	100,000	350,000
Peak Hour Enplaned	18	54	96	153	266	424
Gates	3	2	2	2	3	4

PASSENGER TERMINAL

Most functions require additional capacity to meet forecast demand



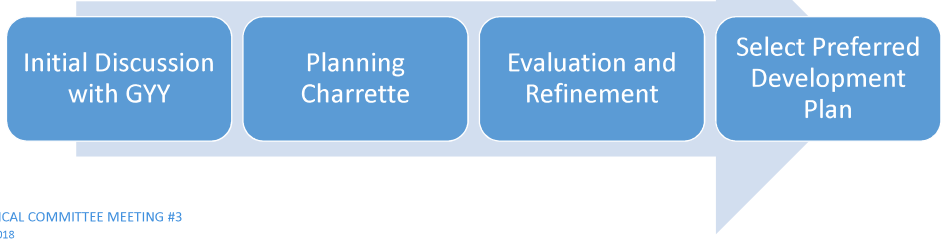
MASTER PLAN ALTERNATIVES

GYY Master Plan Update

ALTERNATIVES PHASE

Primary objectives and process

- Meet demand for PAL 3 (approved Base Forecast)
- Consider demand and alternatives to meet PALs 4 and 5
- Identify areas of impact to wetlands and from contamination
- Develop and consider multiple alternatives for siting or configurations within siting of facilities

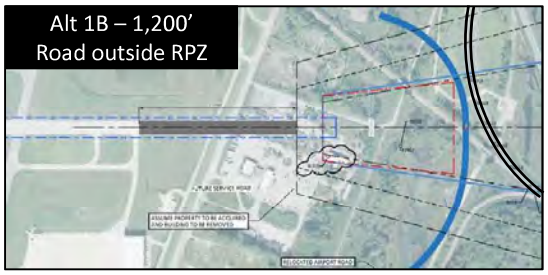


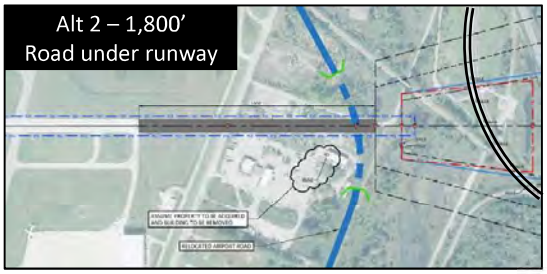
DECISION PROCESS FOR ALTERNATIVES

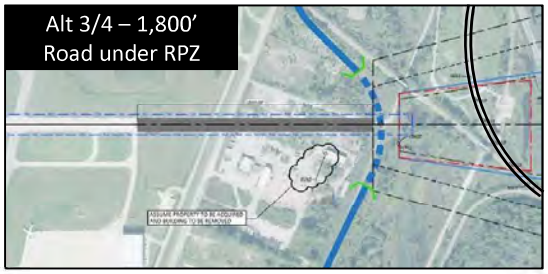
Runway Extension	• Alt 1A/ Alt 1B • Alt 2 • Alt 3/ Alt 4
General Aviation	• T-hangars • Corporate hangars
Terminal	• Alt 1 – Renovate + Expand 2-level • Alt 2 – Renovate + Expand 1-level • Alt 3 – Replace with new 2-level • Alt 4 – Replace with new 1-level
Terminal Area Site Development	• Aircraft apron improvements • Adjacent supporting development
Public parking	• Continuous surface parking lot • Multiple surface parking lots • Parking deck structure
Airport Road	• Relocate to the north • Use in existing location
Others	• Air cargo site location • Airport support functions

RUNWAY EXTENSION ALTERNATIVES

Four runway alternatives have been developed

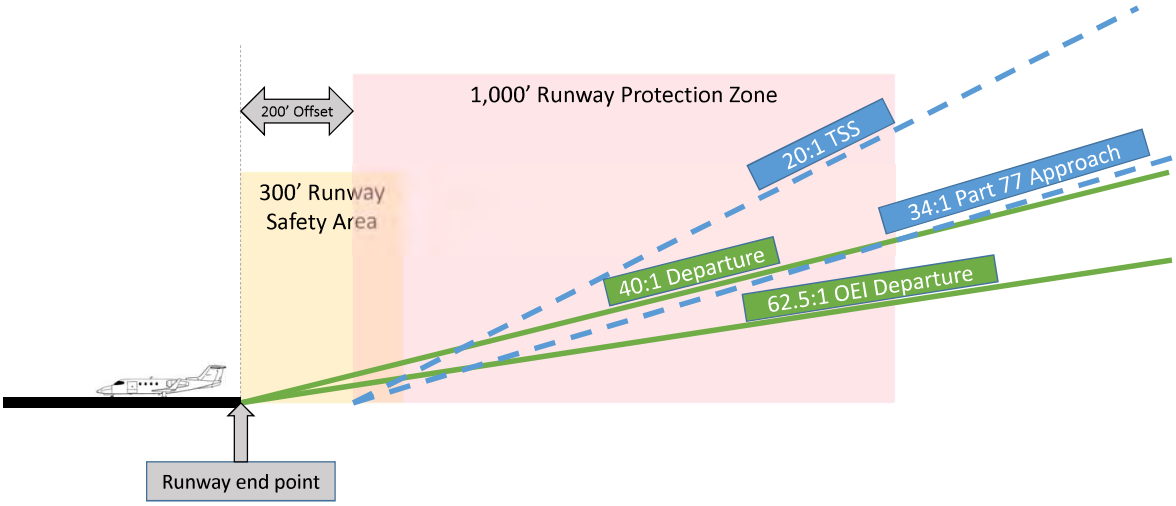




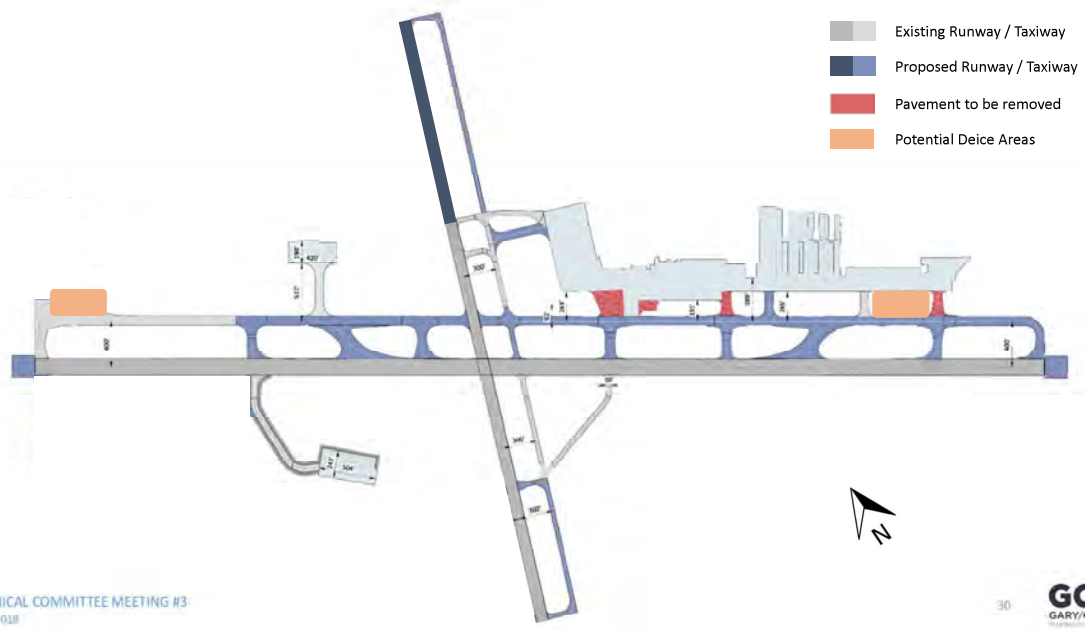


DEPARTURE AND APPROACH SURFACES

Approach surfaces are more applicable, as primary runway will still be preferred for departures

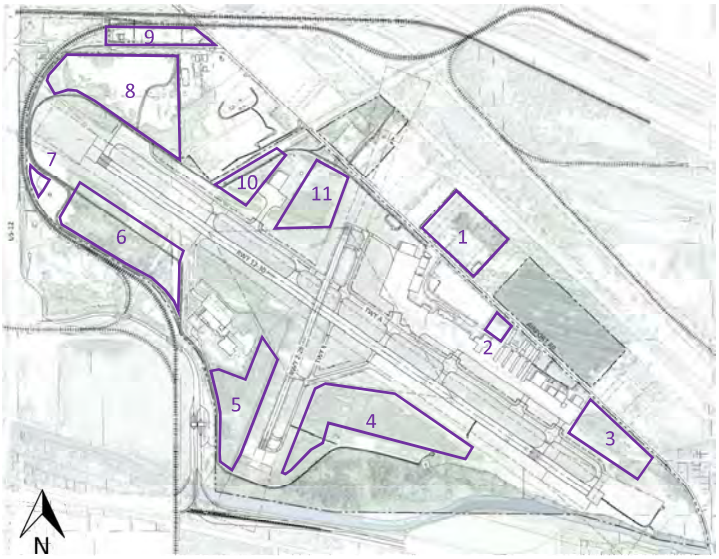


OTHER AIRFIELD IMPROVEMENTS



DEVELOPABLE PARCELS

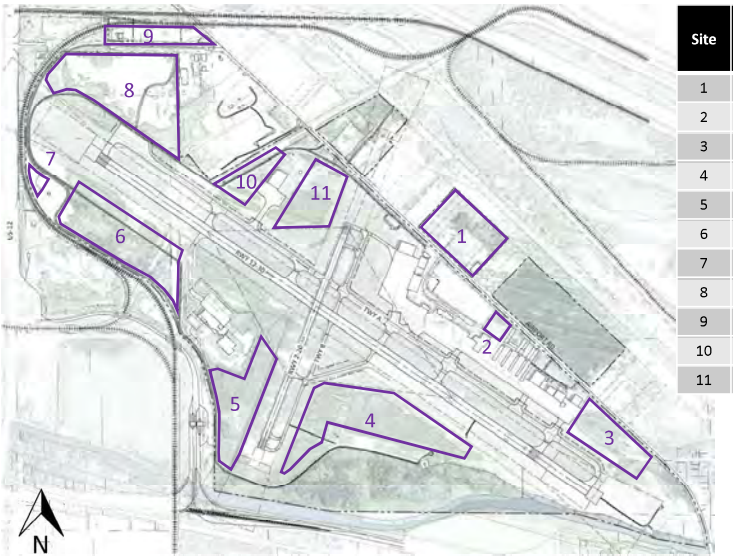
Remaining Airport developments to be sited on available parcels



- Air Cargo apron and hangar
- Corporate general aviation apron and hangar
- Additional T-hangars
- Passenger Terminal
- Airport administration
- Airport maintenance
- Airport Traffic Control Tower
- Relocated ARFF facility

DEVELOPABLE PARCELS

Remaining Airport developments to be sited on available parcels



Site	Airport Support	Air Cargo	T-Hangar	Corporate General Aviation	Commercial Development
1	✗	✗	✗	✗	✓★
2	✓	✗	✓	✓	✓
3	✗	✗	✓	✓	✓
4	✓★	✗	✓	✗	✗
5	✓	✗	✓★	✓	✗
6	✓	✗	✓	✓★	✗
7	✓★	✗	✗	✗	✗
8	✓	✓★	✓	✓	✗
9	✗	✗	✗	✗	✓★
10	✓	✗	✓	✓★	✗
11	✓★	✗	✓	✓	✗

Legend

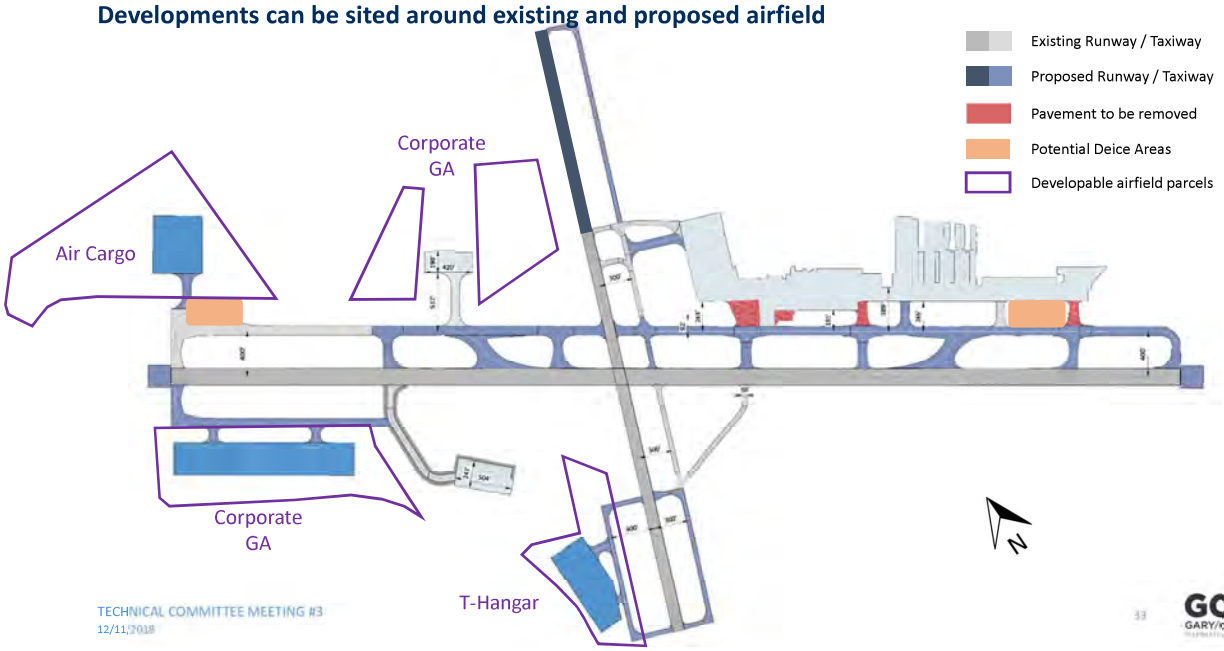
✓ Land use compatible with site

✗ Land use non-compatible with site

★ Recommended site for land use

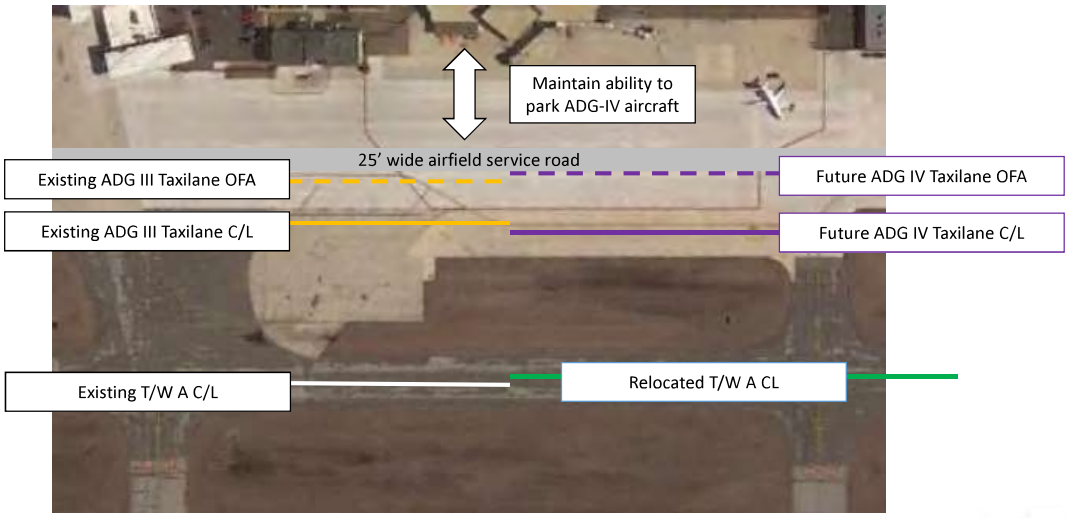
SITING AERONAUTICAL DEVELOPMENT

Developments can be sited around existing and proposed airfield



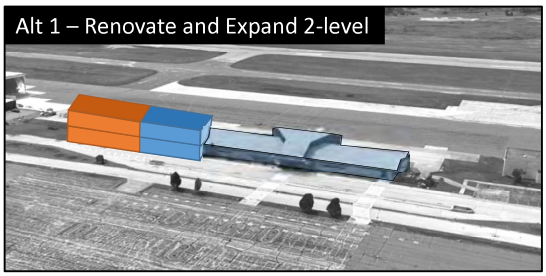
CONSIDERING FUTURE AIRFIELD GEOMETRY

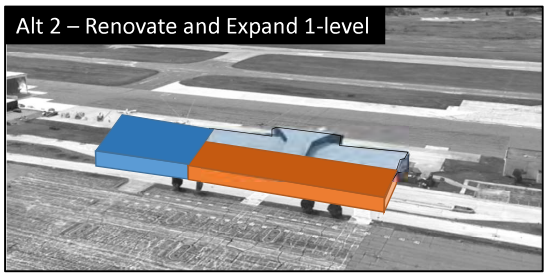
Potential ADG-III or ADG-IV apron edge taxilane

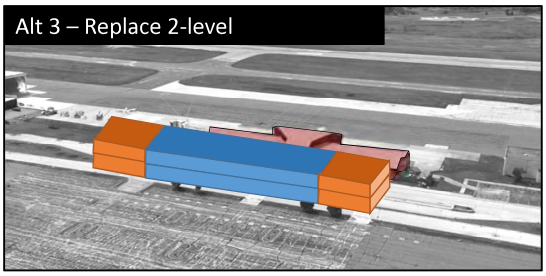


TERMINAL ALTERNATIVES

Three terminal alternatives have been developed





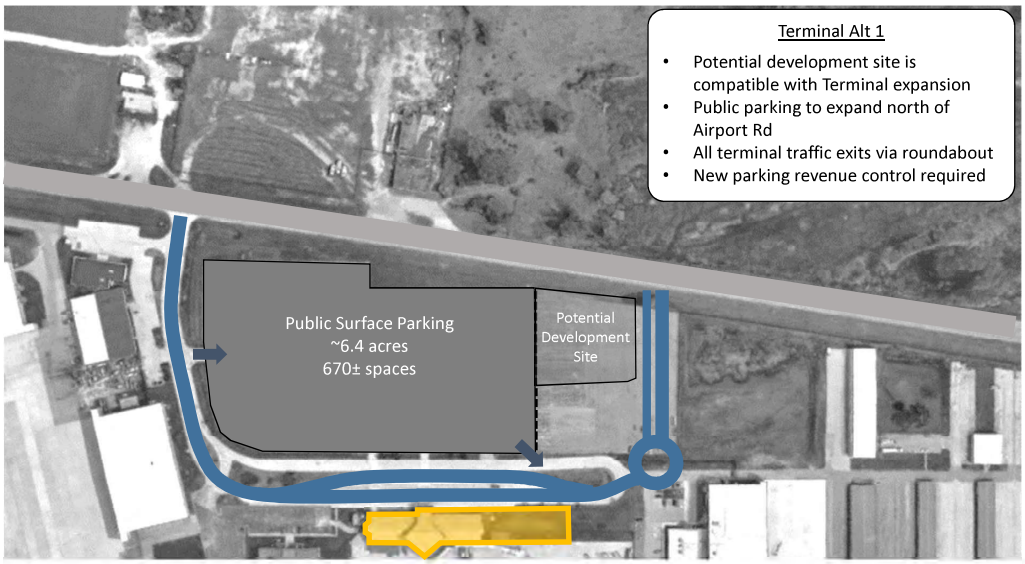


TERMINAL ALTERNATIVES EVALUATION

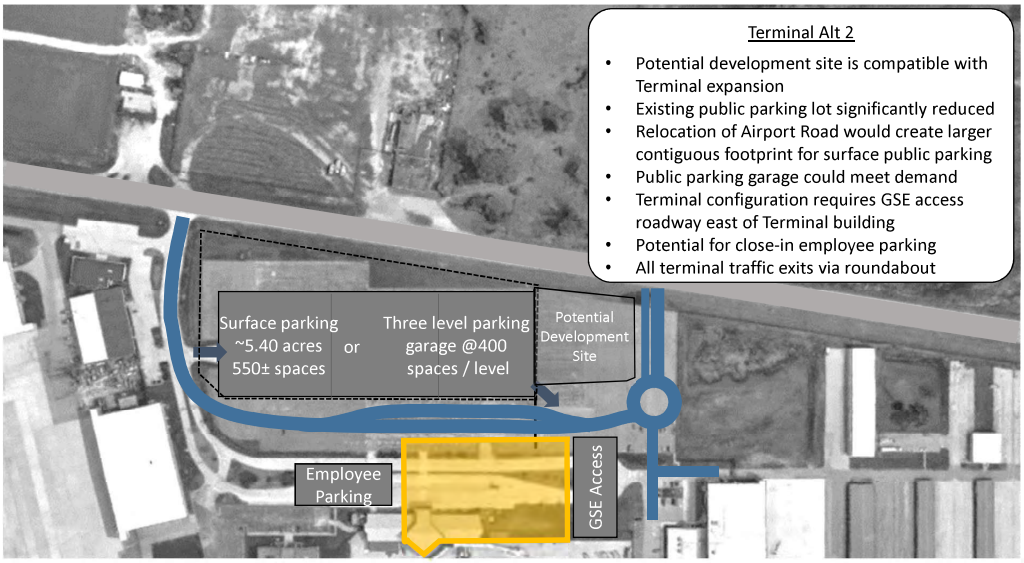
Determining opportunities and constraints

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3
			
Optimizes passenger flows and customer experience	No wayfinding u-turns One level change	No wayfinding u-turns No level changes	Requires customers to u-turn to use vertical circulation; One level change
Ease of expansion from PAL 3 to PAL 5	New north façade; Expand building to the east	Substantial infill expansion to the north	Flexible expansion to both sides of the building
Airside can accommodate ADG-IV aircraft	East position angled parking only	East position angled parking only	Potentially in more than one position, depending on building placement
Maintains adequate space for public parking	Existing parking and curbside roadways remain largely unchanged	Total public parking capacity reduced significantly; Relocated curbside roadways	Moderate impact to public parking space; Relocated curbside roadways
Capital investment and O&M	25k sq ft in PAL 3 (63k sq ft total) Vertical circulation required Mix of new and old asset conditions	22k sq ft in PAL 3 (62k sq ft total) No vertical circulation required Mix of new and old asset conditions	38k sq ft in PAL 3 (88k sq ft total) Vertical circulation required All new asset conditions

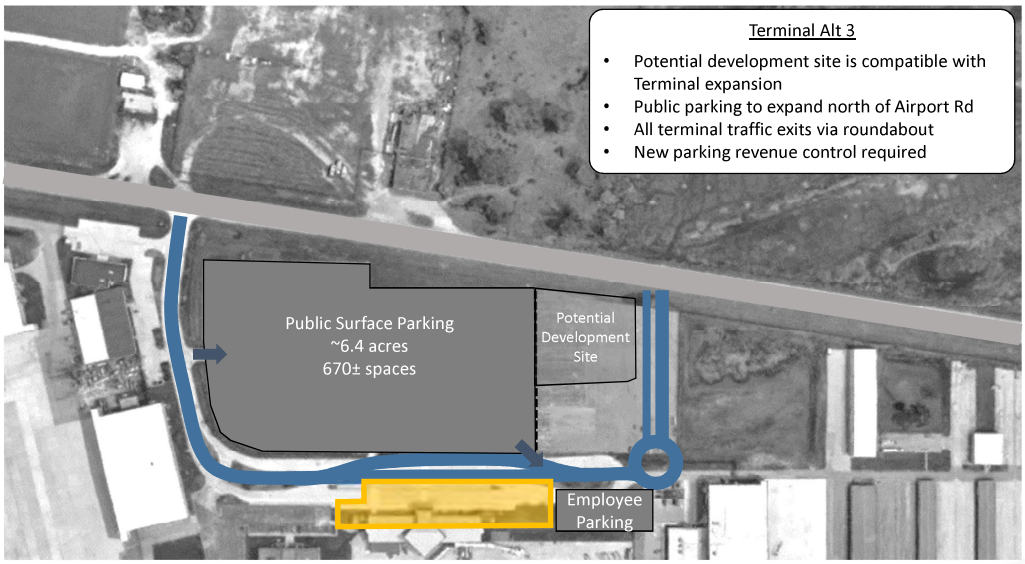
TERMINAL ALT 1 LANDSIDE



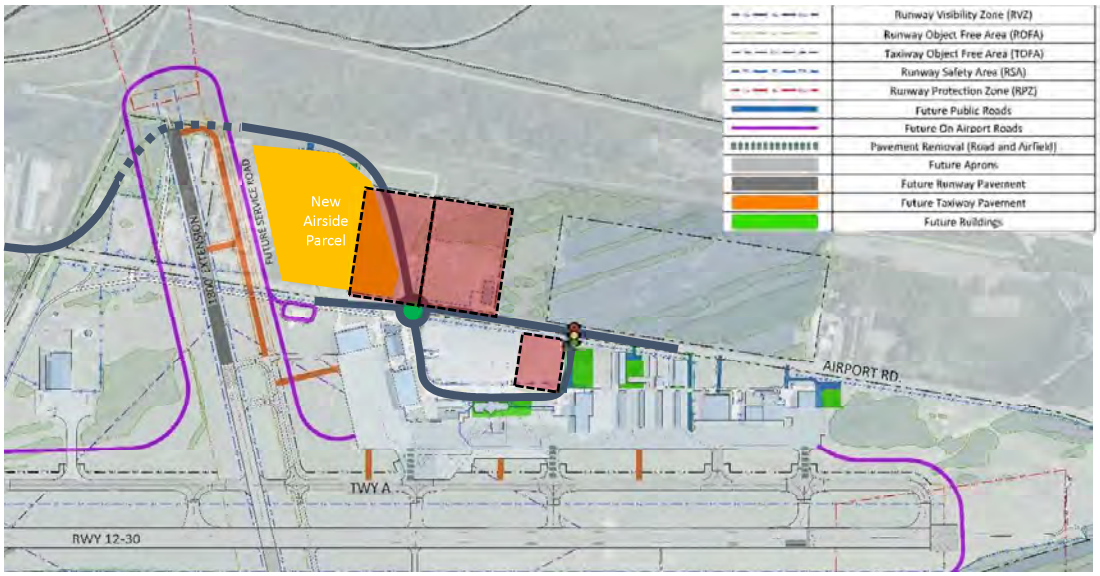
TERMINAL ALT 2 LANDSIDE



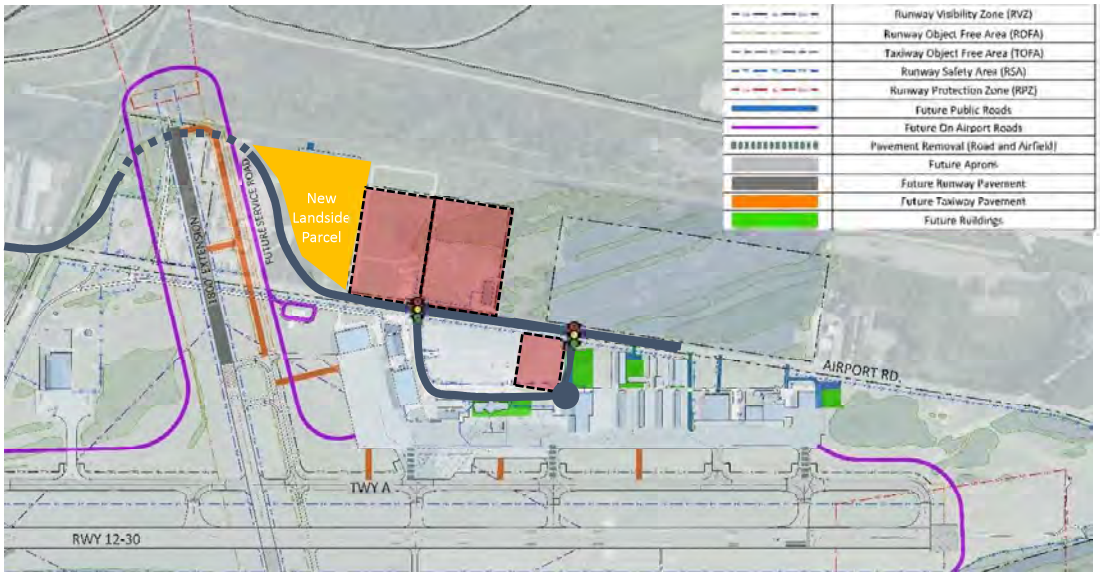
TERMINAL ALT 3 LANDSIDE



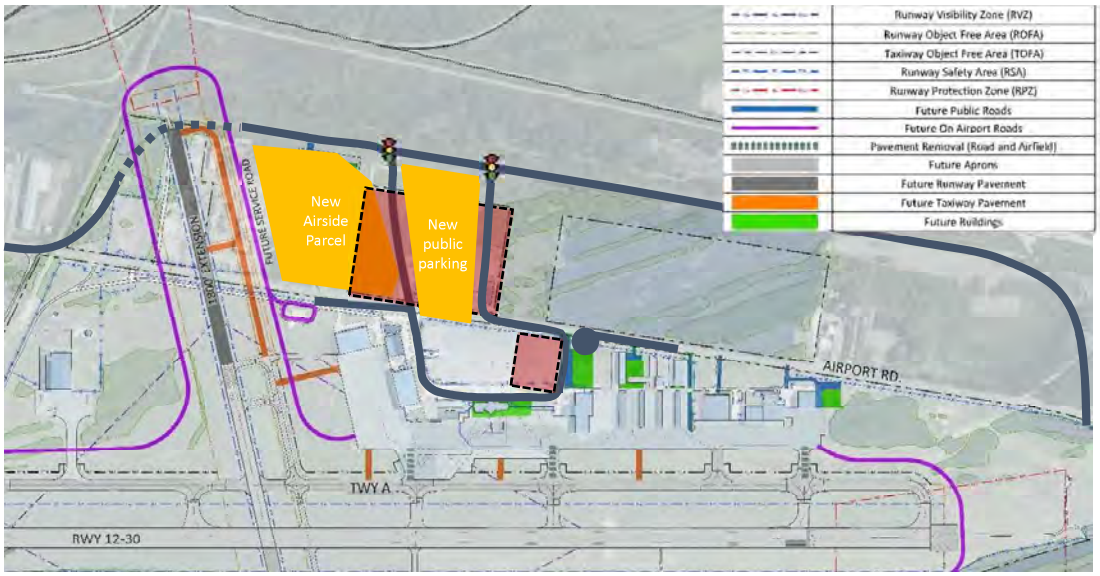
AIRPORT ROAD RELOCATION ALT #1



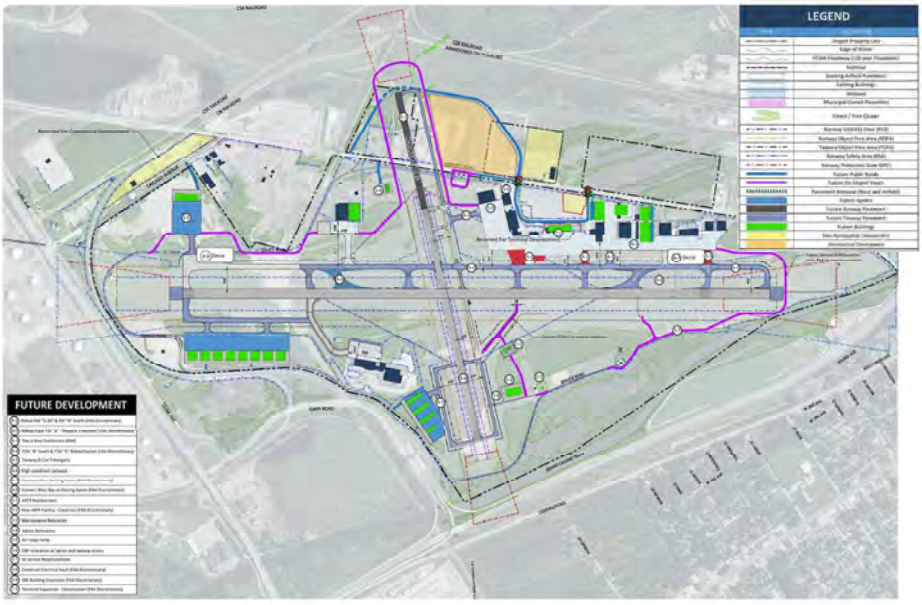
AIRPORT ROAD RELOCATION ALT #2



AIRPORT ROAD RELOCATION ALT #3



DISCUSSION ON POTENTIAL ALTERNATIVES

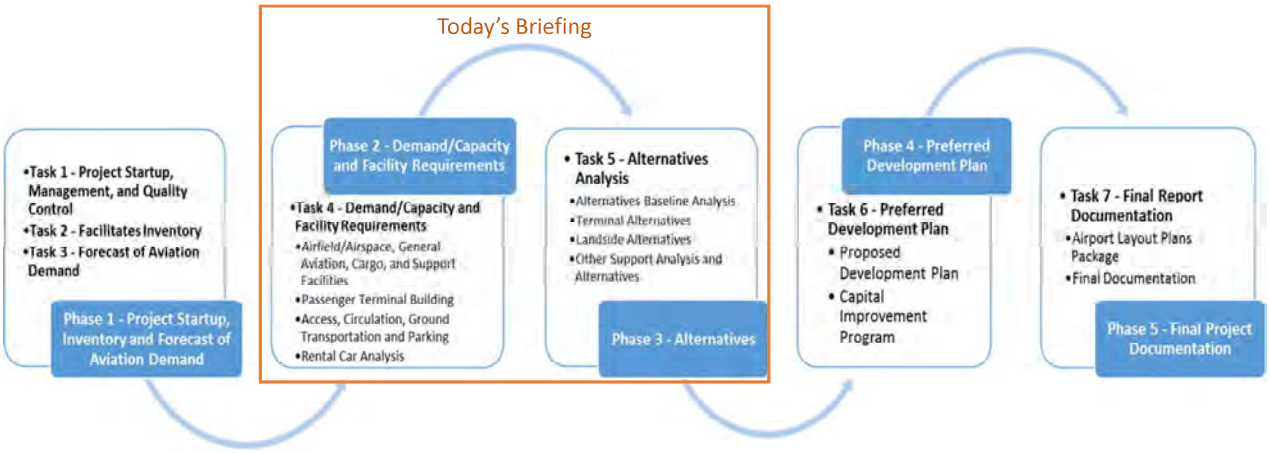


NEXT STEPS

GYY Master Plan Update

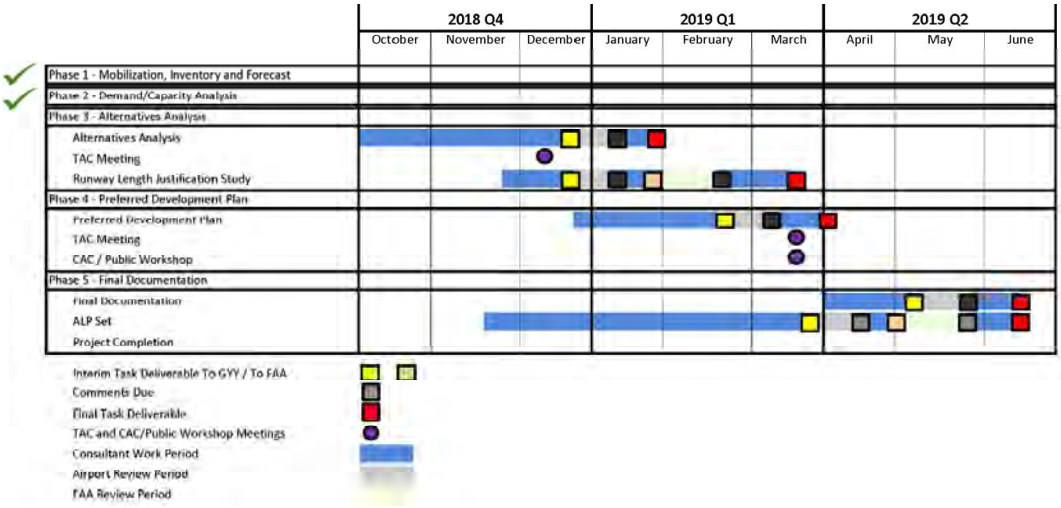
MASTER PLAN COMPONENTS

Master Plan Process Overview



SCHEDULE OVERVIEW

GYY Master Plan Update



PROCESS FOR FAA APPROVAL OF THE ALP

- Master Plan stakeholder feedback
- Runway length justification
- Master Plan documentation
- Draft Airport Layout Plan
- Conditional ALP approval(s)

TAC Meeting 4 Presentation (12/3/2020)

GCIA GARY/CHICAGO INTERNATIONAL AIRPORT

TECHNICAL ADVISORY COMMITTEE MEETING #4

Gary / Chicago International Airport Master Plan Update

12-03-2020

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

AGENDA

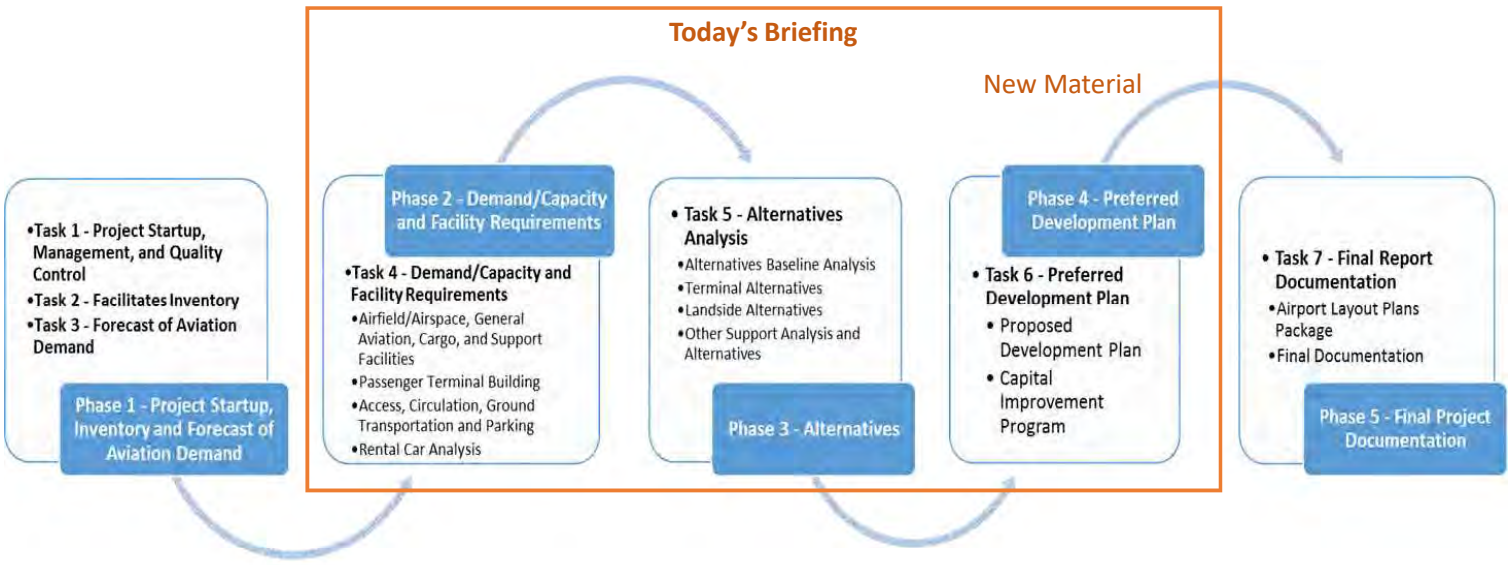
- Introductions
- Role of the Technical Advisory Committee
- Master Plan process overview and milestones
- Review of previously presented findings:
  - Aviation activity forecast
  - Facility requirements
  - Development alternatives
- Proposed Development Plan
- Next Steps

So that we can accurately document the meeting discussion, please identify yourself when speaking.

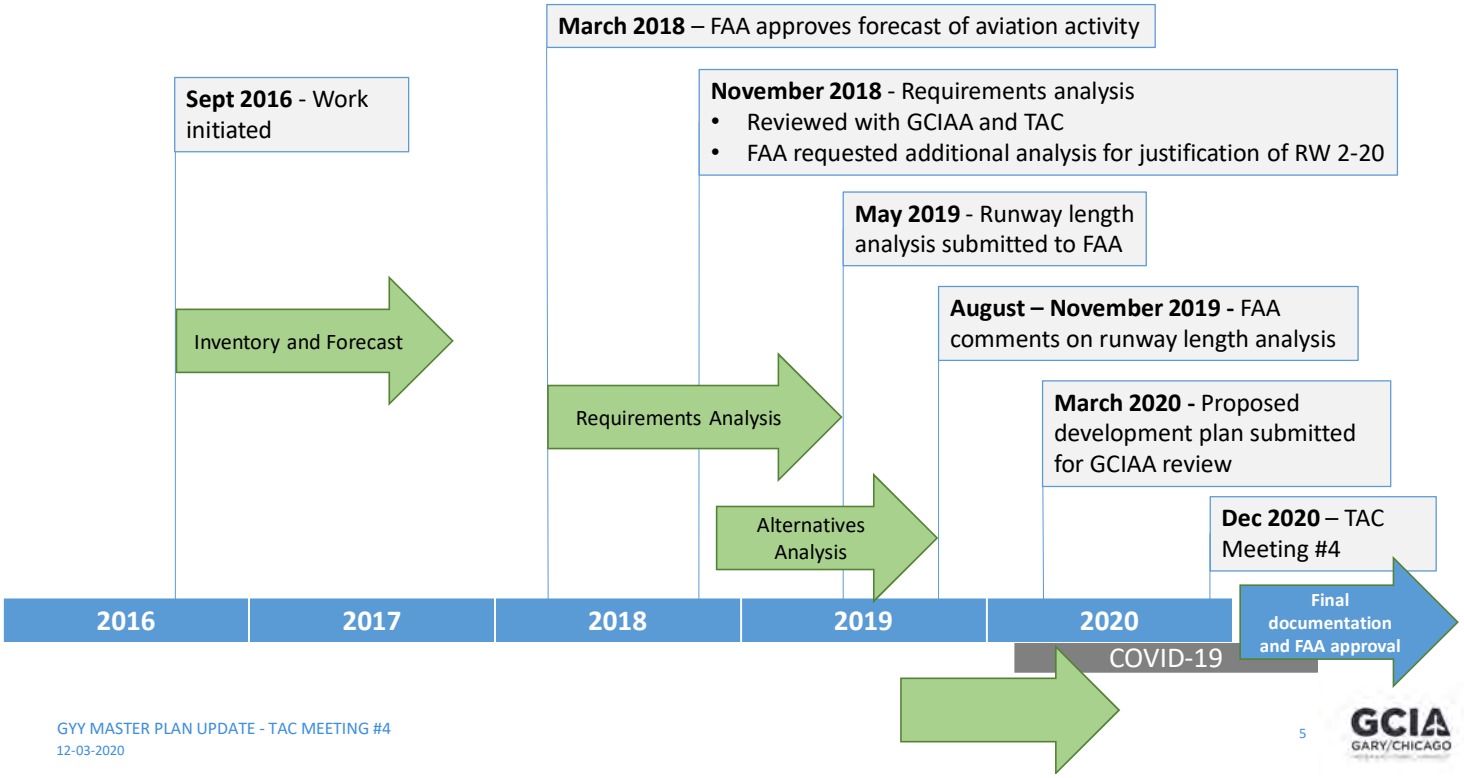
TECHNICAL ADVISORY COMMITTEE ROLE

- Provide input to project team
- Sounding board for proposed development alternatives
- Represent interests of stakeholders
- Shares data and other information with stakeholders in a two-way exchange with project team
- Reviews and comments on project progress

MASTER PLAN COMPONENTS



KEY SCHEDULE MILESTONES



Review of previously presented information

PLANNING BASED ON ACTIVITY LEVELS

Planning Activity Levels (PALs) derived from Base Forecast and High Scenario, 20-year outlook

PAL 3 – Base Forecast

Passengers:

- Annual: 27,000
- Peak month, average day: 153

Aircraft Operations

- Annual: 27,263
- Peak month, average day: 119

Based Aircraft: 145

PAL 5 – High Scenario

Passengers:

- Annual: 350,000
- Peak month, average day: 694

Aircraft Operations

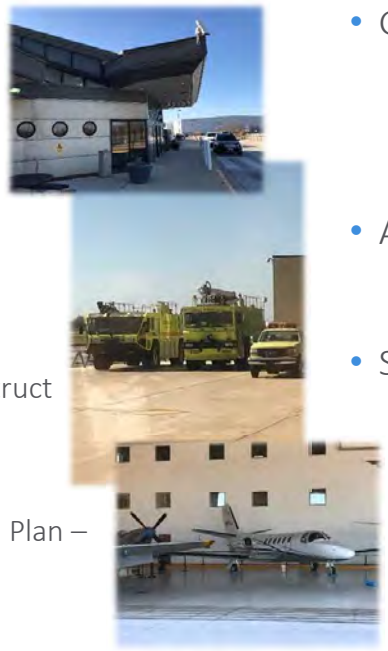
- Annual: 49,781
- Peak month, average day: 217

Based Aircraft: 245

Review of previously presented information

Assesses functional area needs to meet forecast activity, focusing on:

- Airfield
  - Geometry for critical aircraft
  - Runway 2-20 extension
- Terminal
  - Gates and aircraft parking
  - Passenger processing
  - Vehicle parking and curbfront
  - Rental car
  - Expansion vs. relocate/reconstruct
- Access and roadways
  - South Shore Line
  - 2040 Comprehensive Regional Plan – Vision for Northwest Indiana

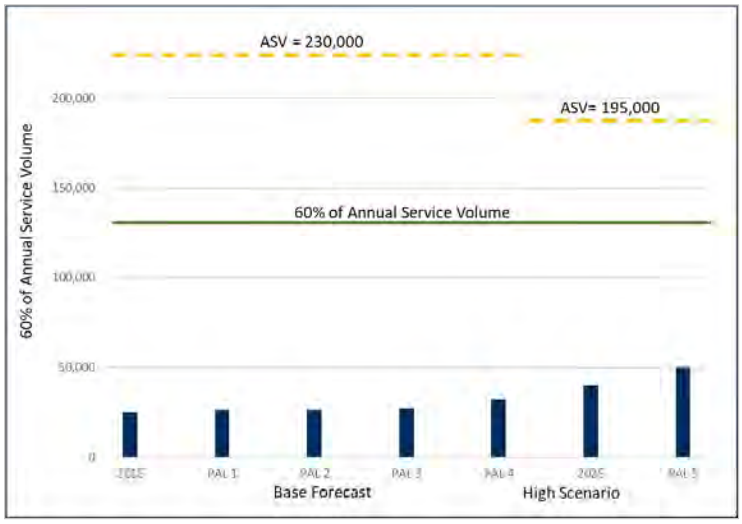


- General Aviation
  - Hangars (t-hangars, corporate, FBO)
  - Apron
  - Aircraft access and maneuvering
  - Vehicle parking
- Air Cargo
  - Aircraft parking
  - Building/landside facilities
- Support Facilities
  - ATCT
  - ARFF
  - Maintenance
  - Administrative offices

AIRFIELD CAPACITY

Adequate through planning period

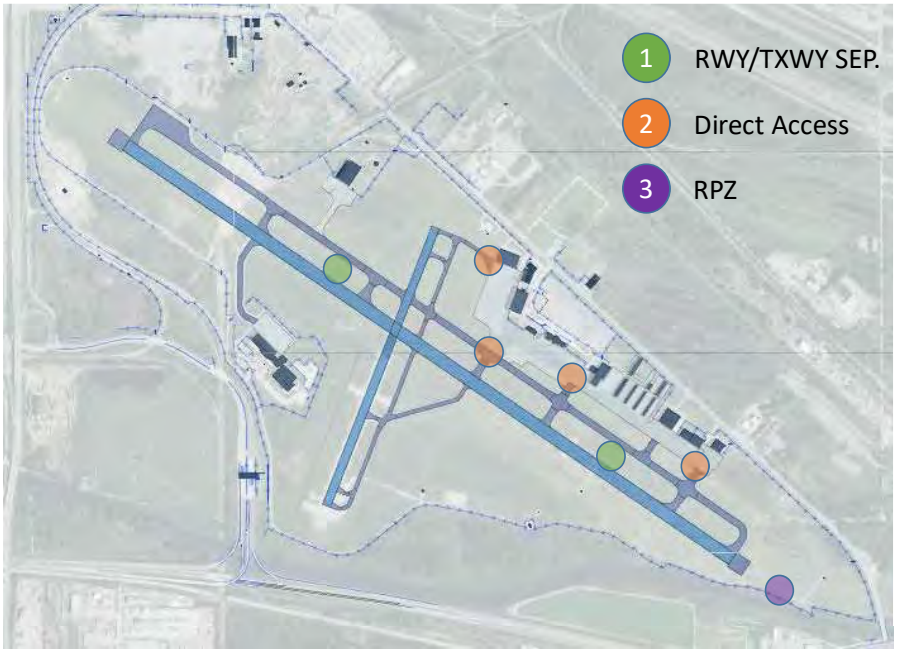
- Assessed with FAA AC 150/5060-5, Airport Capacity and Delay
- Annual Service Volume
  - ASV is an estimate of annual capacity reflecting hourly, daily and seasonal variations
  - Considers fleet mix
- Peak Hour Capacity
  - VFR and IFR
  - Considers fleet mix



	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Forecast Peak Hour Operations	12	12	12	14	22
VFR Capacity (Operations/Hour)	98	98	98	77	77
IFR Capacity (Operations/Hour)	59	59	59	57	57

AIRFIELD GEOMETRY

Current FAA Standards and taxi paths for critical aircraft



1. Runway to Taxiway Separation – 392’
2. Direct Access to Runway from Ramp/Apron
3. Runway Protection Zone

Coordinated with FAA on retention of current applicable Modifications of Standards

- Departure Length Conclusions:
  - Runway 12-30 is adequate for all current and nearly all future fleet
  - Runway 2-20 requires extension to serve the current and future fleet
    - Runway 2-20 remains B-II
    - Neither a 1,200’ nor an 1,800’ extension satisfies departure needs of current or future fleet

- Landing Length Conclusions:
  - Runway 12-30 is adequate for all current and nearly all future fleet
  - Runway 2-20 requires extension to fully serve future B-II fleet
    - 1,200’ extension serves most of current fleet
    - 1,800’ extension serves all of current and most of future fleet

GENERAL AVIATION

Additional conventional hangar needed in near term and apron needed under High Scenario

- Conventional hangar needed in near term
- Assumes T-hangar demand is steady

Planning Activity Level	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
	HANGAR/APRON STORAGE REQUIREMENTS (SF)					
Conventional Hangar Demand[1]	182,400	232,560	242,640	255,720	286,800	487,440
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Transient Apron Demand	194,400	249,840	255,240	264,960	323,280	482,831
Transient Apron Surplus/(Deficit)	136,076	80,636	75,236	65,516	7,196	(152,355)
Total Apron Surplus/(Deficit)	303,754	264,514	256,414	246,694	177,574	(17,077)

[1] Includes associated office space
[2]Assumes no net new construction of T-Hangars

AVIATION FUEL REQUIREMENTS

Adequate to accommodate forecast demand through PAL 5*

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
	FUEL DEMAND					
Total Jet-A Flights – PMAD (#)	7	38	39	46	58	72
Annual Fuel Flowage - Jet-A (GAL)	2,408,687	2,510,648	2,534,298	2,581,600	3,441,092	4,245,590
Approximate Days of Storage - Jet-A (#)	8	8	7	6	5	4
Total 100LL Flights – PMAD (#)	19	21	21	22	25	37
Annual Fuel Flowage - 100LL (GAL)	36,007	37,531	37,885	38,592	51,400	63,467
Approximate Days of Storage - 100LL (#)	72	65	65	62	44	37

- Analysis aggregated flow between the GJC and B. Coleman based on available data
- August is peak month
- Jet-A & 100LL in total adequate through PAL 5 to meet PMAD demand

* Additional tanks may be needed if fueling contracts change

- Planning based on industry space allocation standards
- Level of Service "C" at peak hour, peak month, average day
- Size and configuration of the current facility requires judgement in application of standards

Functional Space (SF)	Existing	PAL 3	PAL 5
Check-in	524	800	1,600
Baggage Claim	1,515	3,300	6,600
Security Screening Checkpoint	833	2,460	3,700
Departure Lounges	4,815	4,570	9,140
Concessions Space	1,172	790	5,590
Circulation and Other Public Functions	4,731	6,660	12,380
Baggage Processing	1,512	2,670	4,920
Tenant Spaces	679	1,100	1,890
Terminal Support Functions	2,647	5,720	10,220
Total Terminal Space:	18,428	28,070	56,040

- Federal Inspection Services (FIS) would likely require ~18,000 additional SF
- ** Two-level alternatives would require additional space for vertical circulation

Consider range of requirements based on sensitivity to key assumptions

Assumptions	PAL 3	PAL 5
Airline seats per day	120 (4x per week)	1,200 (daily)
Airline load factor	80%	80%
Annual enplanements	27,000	350,000
Resident mix	75% to 90%	50% to 60%
Parking market share	65% to 85%	60% to 70%
Passenger per vehicle	1.2 to 1.3	1.2 to 1.3
Circulation factor	10%	10%
Public parking space requirement	**120 to 205**	**870 to 1,280**

Additional parking will be needed for employees and rental cars

AVIATION SUPPORT

D-103

ATCT, Air Cargo

- ATCT
  - Replace near current location
  - Increase height slightly to improve LOS.
- Air Cargo
  - Initial planning module of 6.1 acres for freight and belly
  - Typical cargo planning footprint used for siting in alternatives
  - Reserve additional acreage for growth

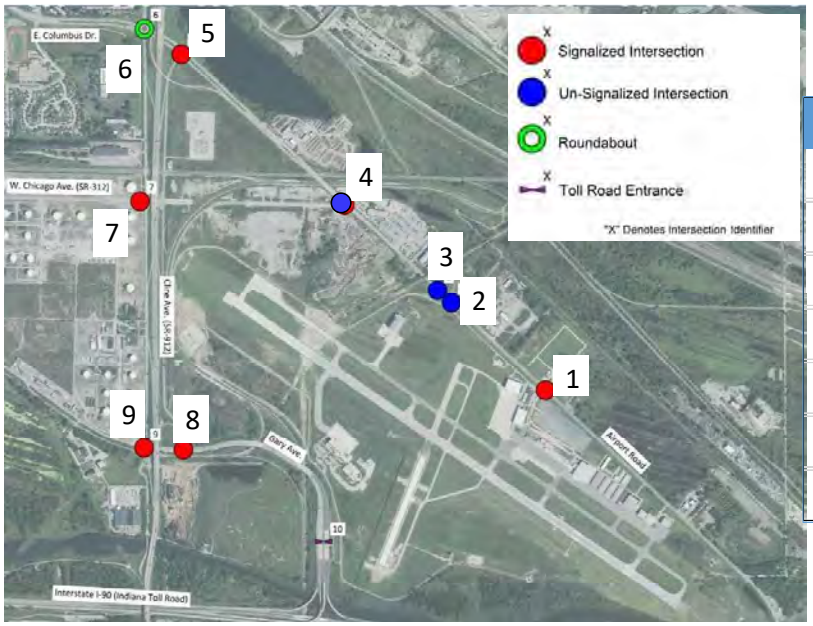
GCIAA FUNCTIONS

D-104

- Maintenance
  - Additional covered equipment storage needed
  - Consolidation with ARFF would be beneficial
- ARFF
  - Coverage:
    - Meets Index B (aircraft lengths greater than 90', less than 126'), or Index C with 4-hour notice
    - Index C coverage required for future fleet (B737-800/900, B757, B767)
  - Facility – recommend replacement
- Administrative Offices
  - Adequate for near term
  - May be adequate long-term depending on GCIAA staffing strategy
  - Location could be used for future GA expansion

OFF-AIRPORT ROADWAYS & INTERSECTIONS

Most intersections maintain good level of service through the planning period



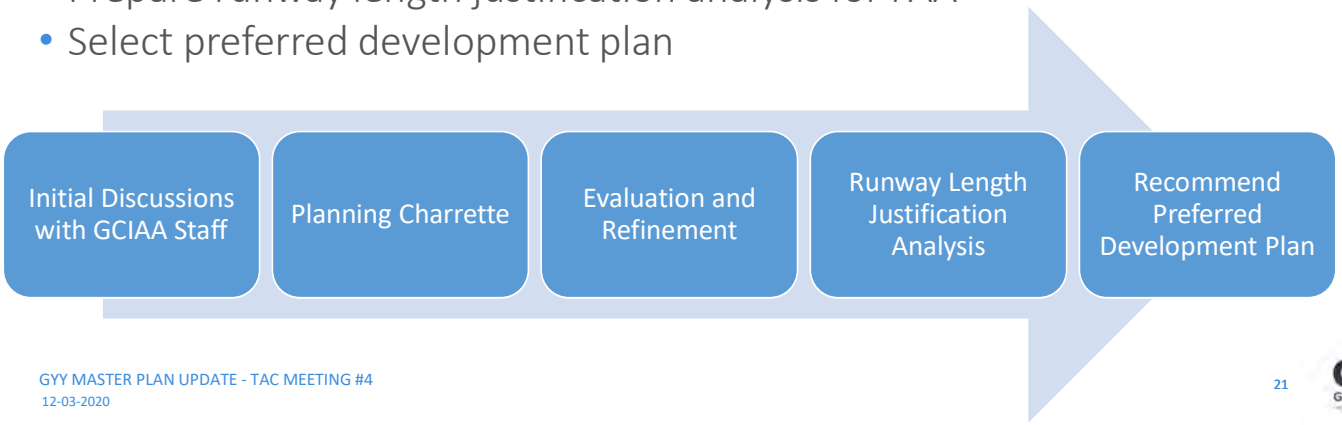
#	Location	2016 AM	2016 PM	PAL 3 AM	PAL 3 PM	PAL 5 AM	PAL 5 PM
1	Airport Rd & Airport Entrance	A	A	B	B	B	B
4	Airport Rd & Chicago Ave	B	A	C	C	C	C
5	Airport Rd & NB Cline Ave Frontage	B	B	B	B	B	B
7	Chicago Ave & NB Cline Ave Frontage	B	A	B	B	B	B
7	Chicago Ave & SB Cline Ave Frontage	A	B	B	B	B	B
8	Gary Ave & NB Cline Ave Frontage	A	A	C	B	C	B
9	Gary Ave & SB Cline Ave Frontage	A	C	B	F	B	F

MASTER PLAN ALTERNATIVES

ALTERNATIVES PROCESS

Primary objectives and approach

- Meet demand for PAL 3 (approved Base Forecast)
- Consider demand and alternatives to meet High Scenario
- Identify areas of impact to wetlands and from contamination
- Develop and consider multiple alternatives for siting or configurations within siting of facilities
- Prepare runway length justification analysis for FAA
- Select preferred development plan

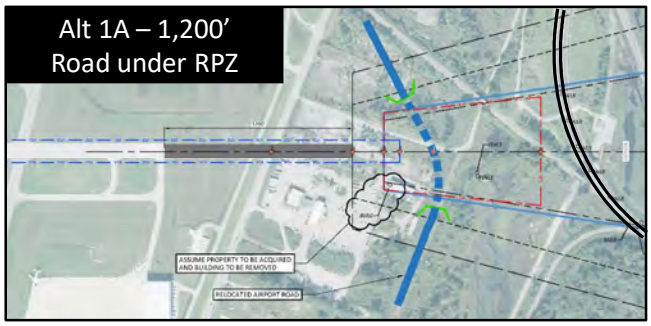


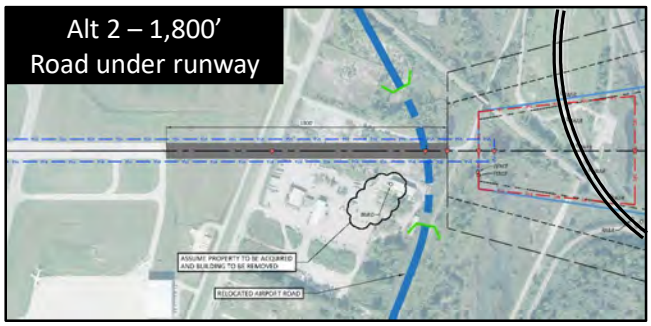
- Consider elements with the largest impacts first – typically airfield
- GA, as largest component of activity was addressed after airfield
- Determine terminal building configuration and placement before public parking, curbfront and access roads
- Determine developable parcels and siting of other functions

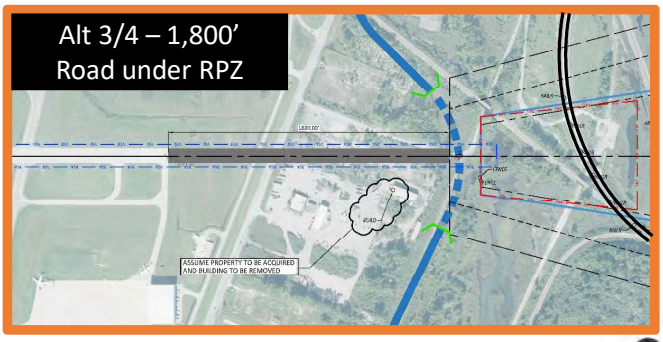
RUNWAY EXTENSION ALTERNATIVES

D-109

Four runway alternatives were developed

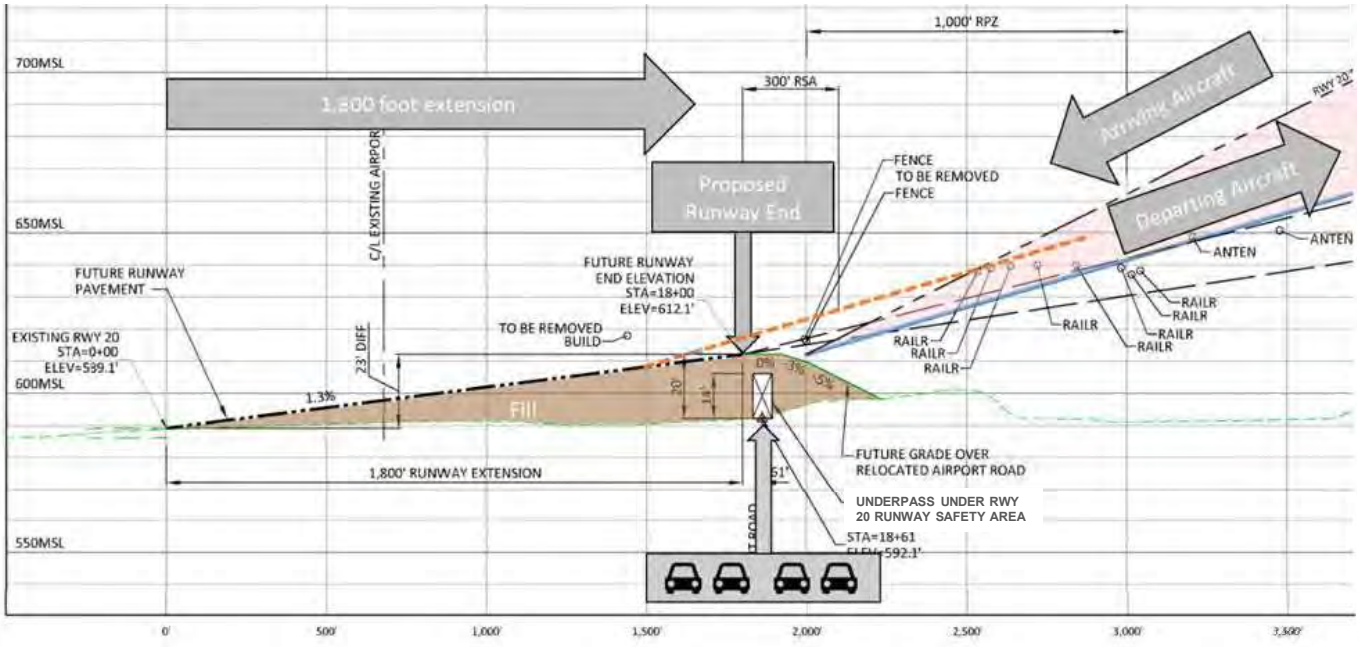


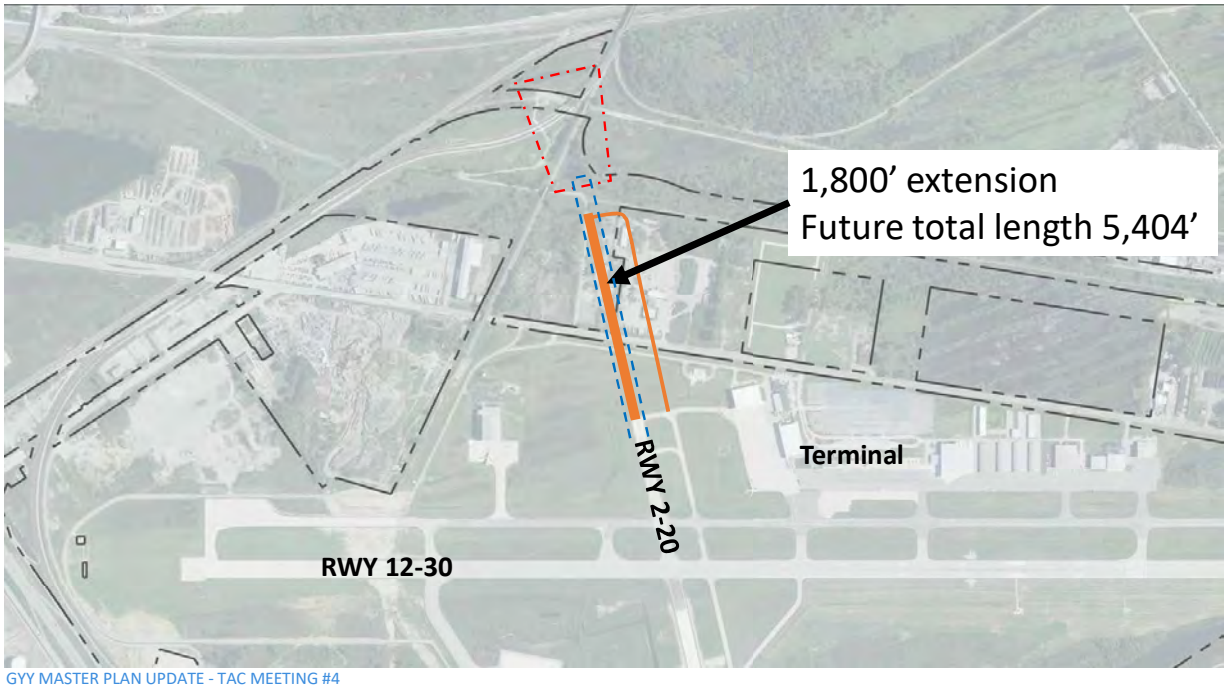




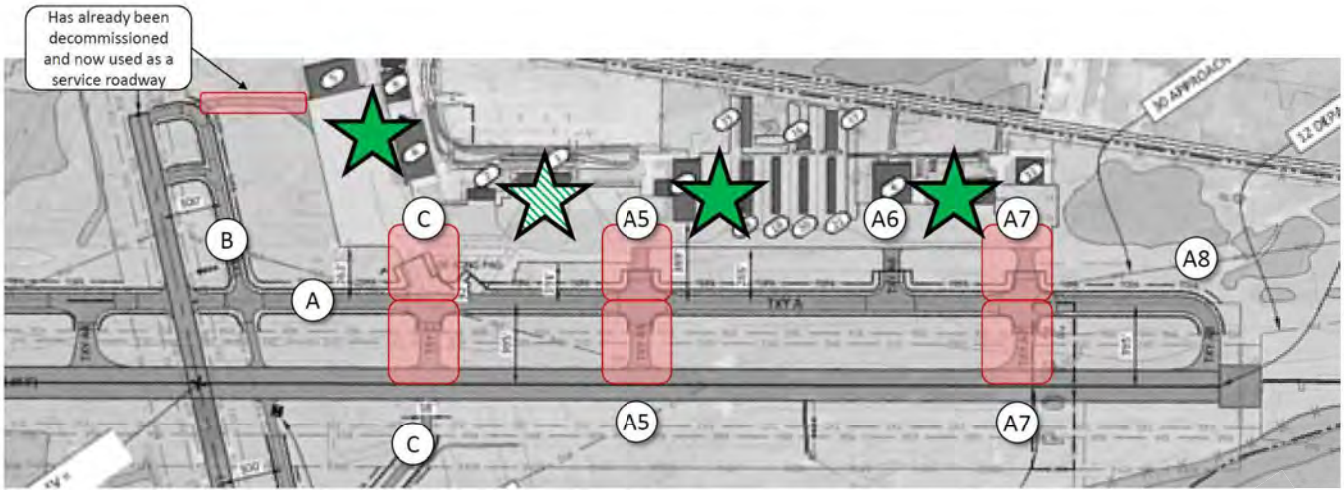
PROPOSED RWY 2-20 EXTENSION - PROFILE

D-110



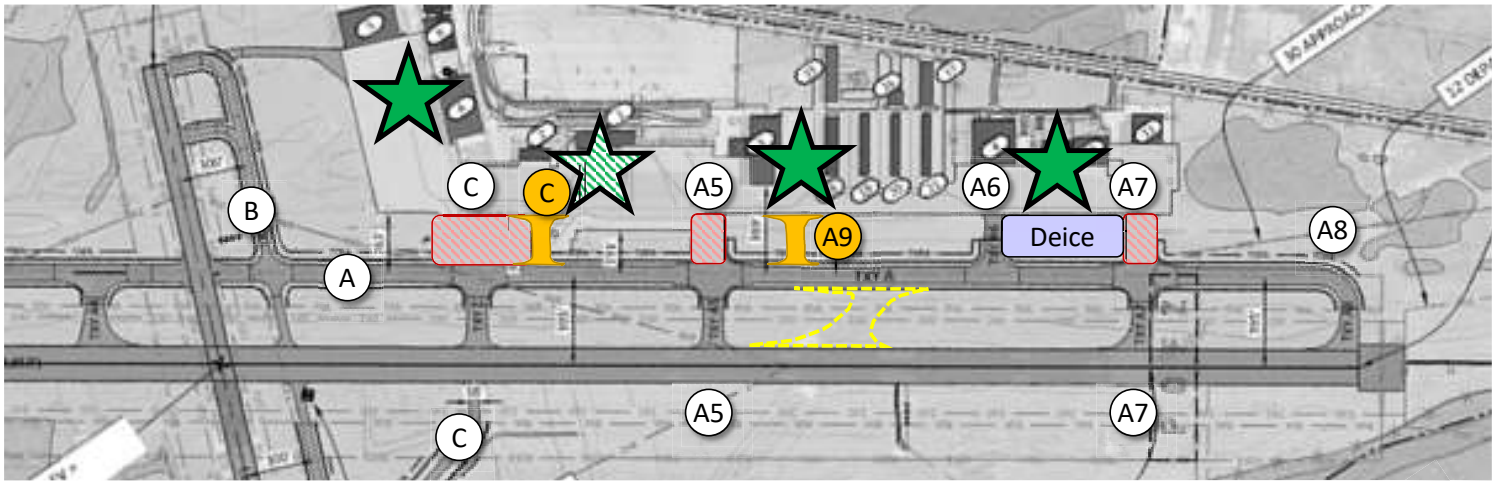


AIRFIELD GEOMETRY – DIRECT CONNECTIONS



ALTERNATIVE #1 PROPOSED AT TAC MEETING #3

D-113



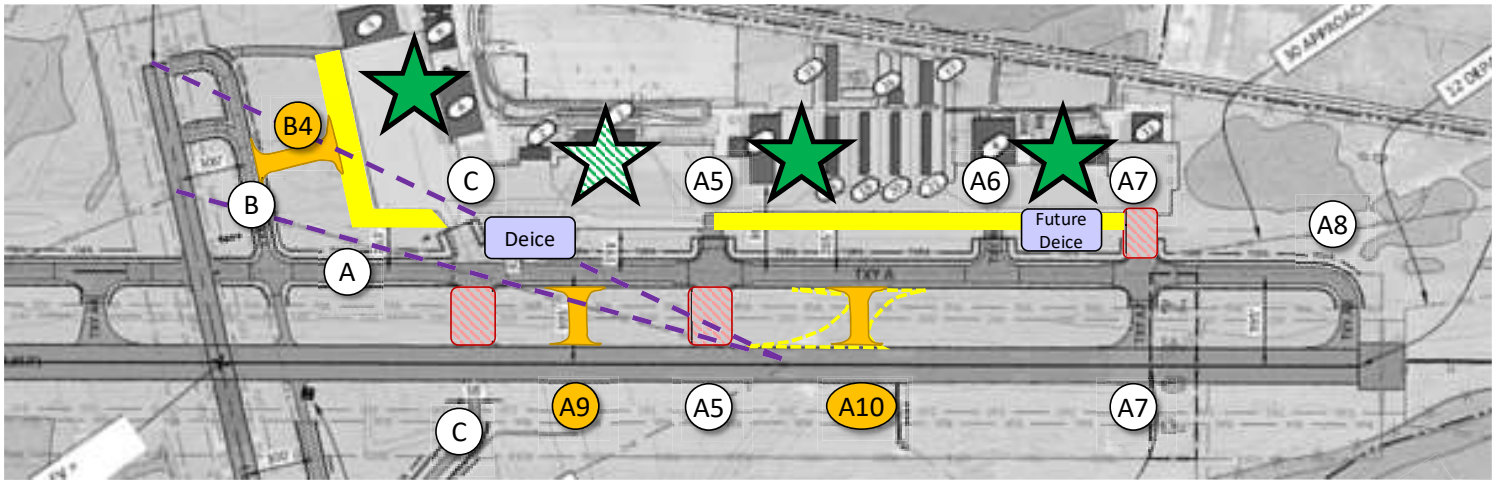
- "C" between TW A and apron
- "A5" between TW A and apron
- "A7" between TW A and apron

- "A9" between TW A and apron
- "C" between TW A and apron

TAC requested that other alternatives be explored to provide better access to the north terminal area, keeping deicing in its current vicinity

NEW ALTERNATIVE #2

D-114

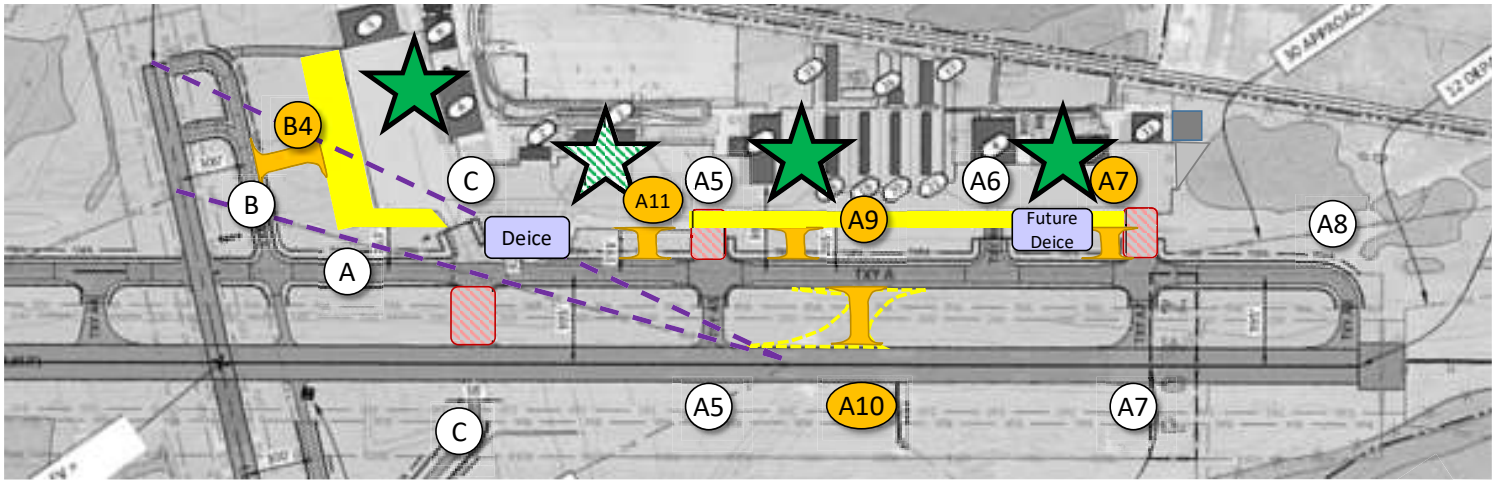


- "C" and "A5" between RW 12-30 and TW A
- "A7" between TW A and apron

- New "A9" and "A10" between RW 12-30 and TW A
- New "B4" between north ramp and TW B
- Extend apron edge along north ramp to TW C and between "A5" and "A7"

NEW ALTERNATIVE #3A

D-115

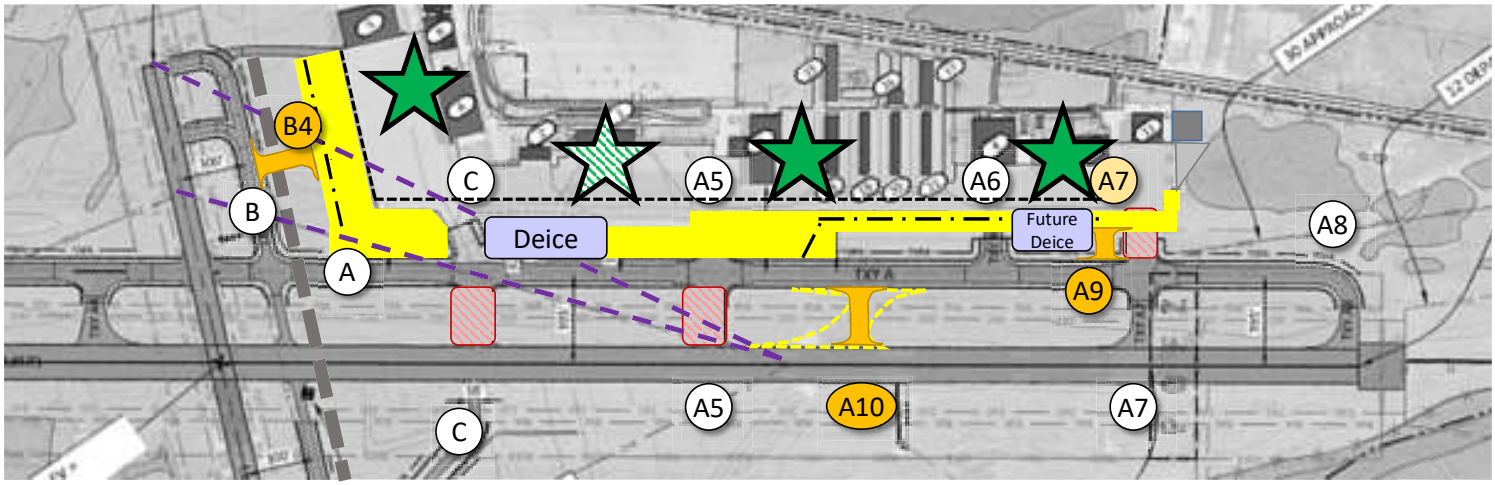


- "C" between RW 12-30 and TW A
- "A5" and "A7" between TW A and apron

- New "A7", "A9" and "A11" between TW A and apron
- New "A10" between RW 12-30 and TW A
- Extend apron edge along north ramp to TW C and between "A5" and "A7"
- New "B4" between north ramp and TW B

NEW ALTERNATIVE #3B – APRON FILL

D-116

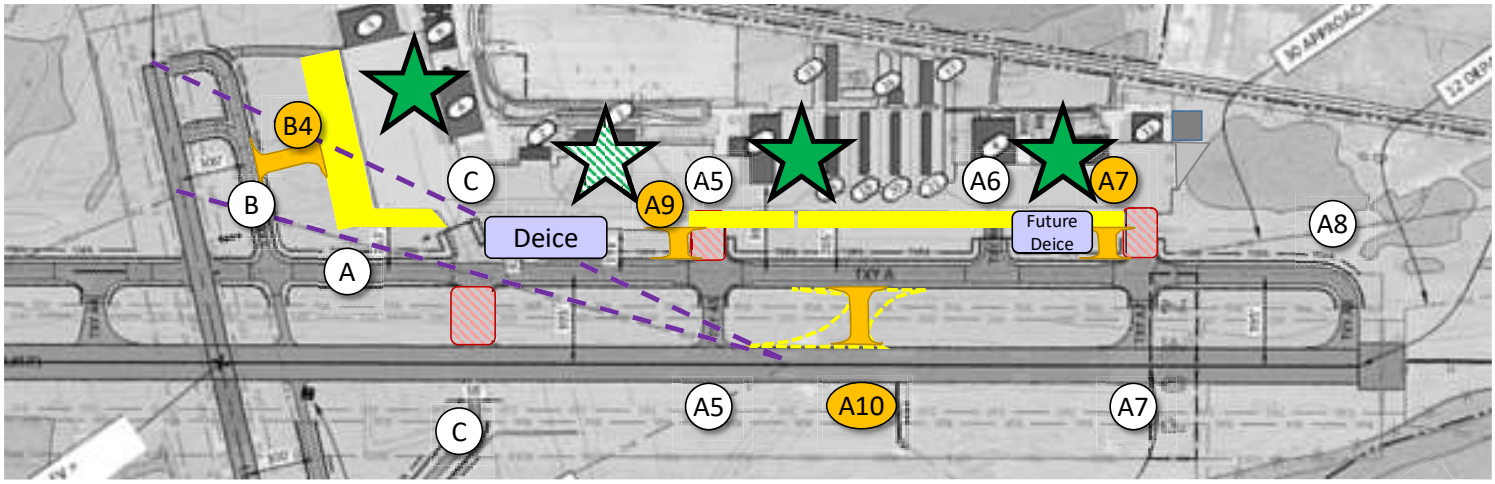


- "C" and "A5" between RW 12-30 and TW A
- "A7" between TW A and apron

- New "A9" between TW A and apron
- New "A10" between RW 12-30 and TW A
- New "B4" between north ramp and TW B

NEW ALTERNATIVE #4

D-117

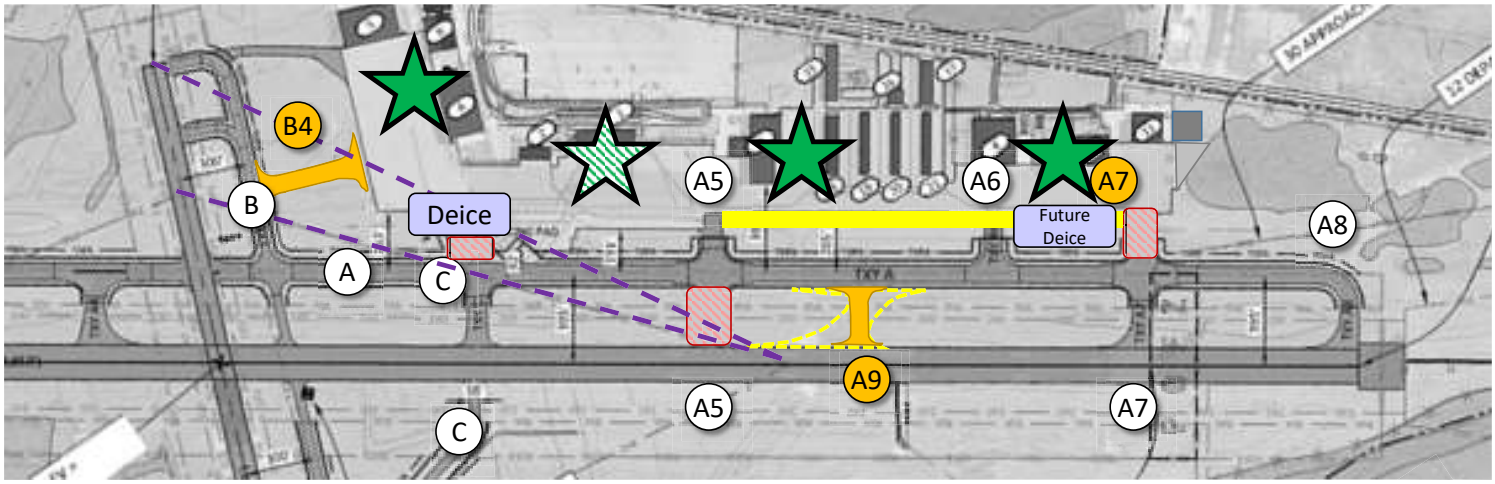


- "C" between RW 12-30 and TW A
- "A5" and "A7" between TW A and apron

- New "A9" and "A7" between TW A and apron
- New "A10" between RW 12-30 and TW A
- New "B4" between north ramp and TW B

NEW ALTERNATIVE #5

D-118

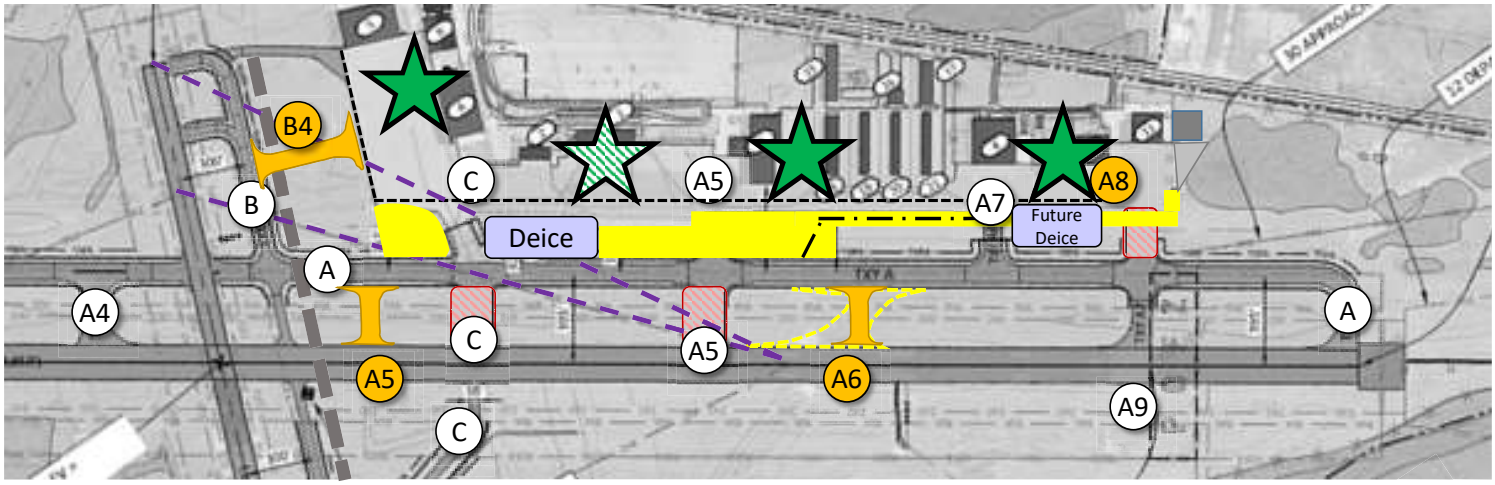


- Remove a portion of "C" between apron and TW A to create a jog.
- "A7" between apron and TW A
- "A5" between RW 12-30 and TW A

- New "B4" between north ramp and TW B
- New "A9" between RW 12-30 and TW A

NEW ALTERNATIVE #6 – APRON FILL

D-119



- "C" and "A5" between RW 12-30 and TW A
- "A8" between TW A and apron

- New "A5" to replace "C" and New "A6" to replace "A5" between RW 12-30 and TW A
- New "A8" to replace demo'd "A8" between TW A and apron
- New "B4" between north ramp and TW B

COMPARISON OF NEW CONNECTOR ALTS

D-120

Criteria	Alt 2	Alt 3A	Alt 3B	Alt 4	Alt 5	Alt 6
Number of Apron access points from TW Alpha	3	5 (incl. dedicated Terminal ramp access)	3 (incl. wide expanse at Terminal ramp)	4	3	3 (incl. wide expanse at Terminal ramp)
Number of Runway exits onto TW Alpha S. of TW B	4	4	3	4	4	4
Runway exit distances (TW B @ 4,230)	5380, 6690, 7930, 8850	6060, 6690, 7930, 8850	6690, 7930, 8850	6060, 6690, 7930, 8850	5050, 6690, 7930, 8850	4680, 6690, 7930, 8850
Total new connectors to / from TW Alpha	Remove 3 Build 2	Remove 3 Build 4	Remove 3 Build 1+wide apron expanse	Remove 3 Build 4	Remove 3 Build 1	Remove 3 Build 3 + wide apron expanse

TERMINAL

D-121

- Objectives
  - Accommodate commercial service
  - Meet PAL 3 demand
  - Plan for expansion to PAL 5 demand
  - Preserve space for future FIS
  - Consider reuse of existing facility – start-up of operations
  - Include landside developments that support terminal and passenger activity
- Early decision was made to keep terminal in its current area since projected activity could be accommodated allowing reuse of infrastructure.

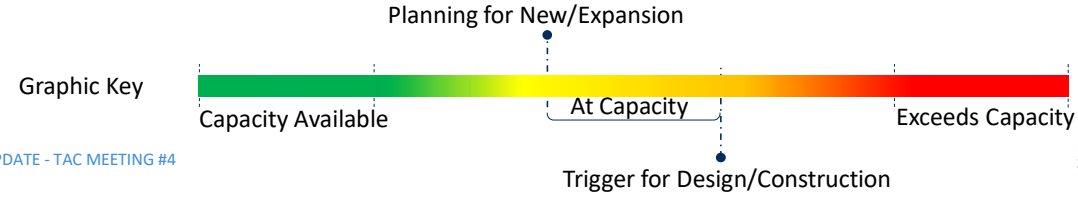
TERMINAL GATES

D-122

Passenger Activity Levels and Gates

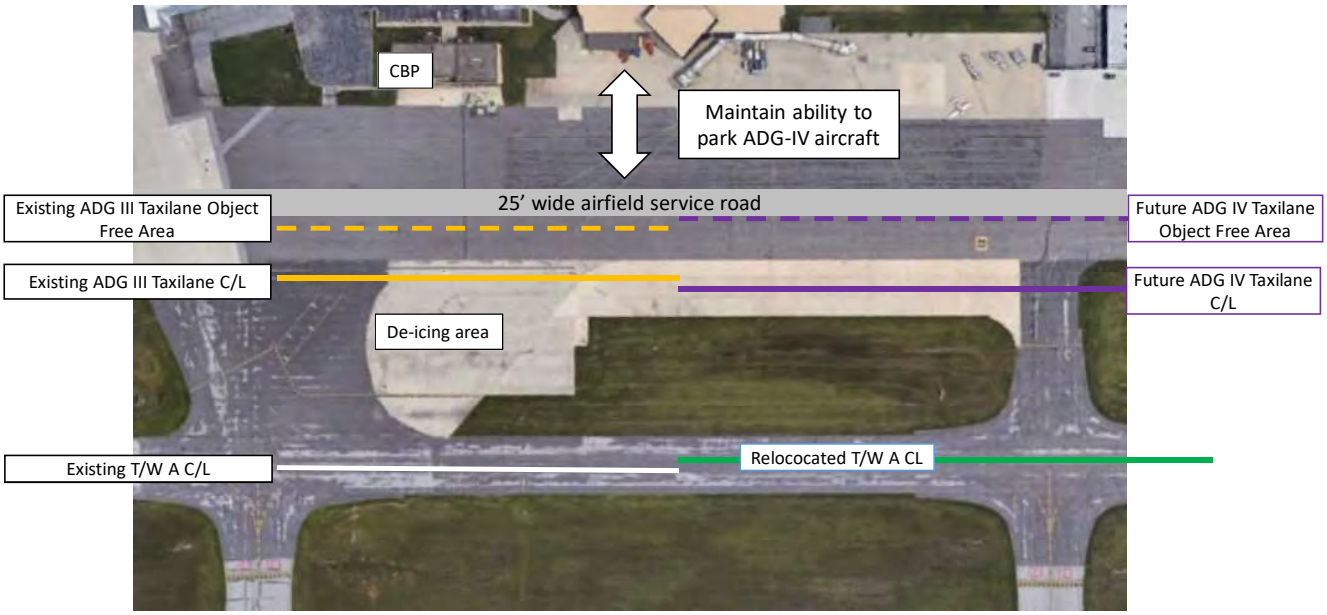
	Existing	PAL 1	PAL 2	**PAL 3**	PAL 4	**PAL 5**
Annual Enplanements	2,547	9,500	17,000	27,000	100,000	350,000
Peak Hour Enplaned	18	54	96	153	266	424
Gates	3	2	2	**2**	3	**4**

- Peak month average day (PMAD) enplanements used to determine the Peak Hour enplanements for programming
- PAL 3 should include 2 gates; PAL 5 should include 4 gates



RECOMMENDED AIRFIELD SPACING

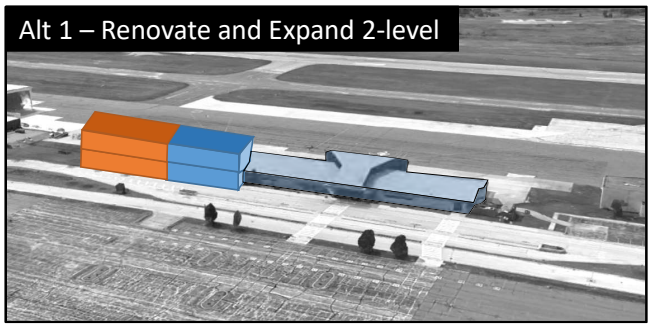
D-123

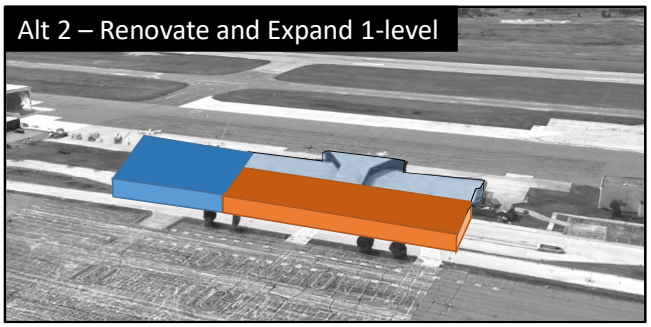


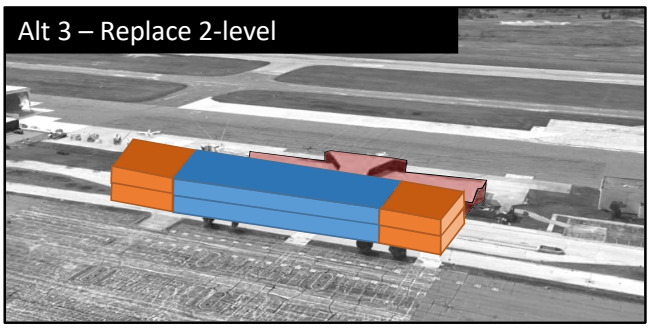
TERMINAL ALTERNATIVES

D-124

Three terminal alternatives were developed

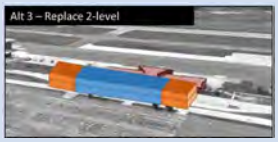






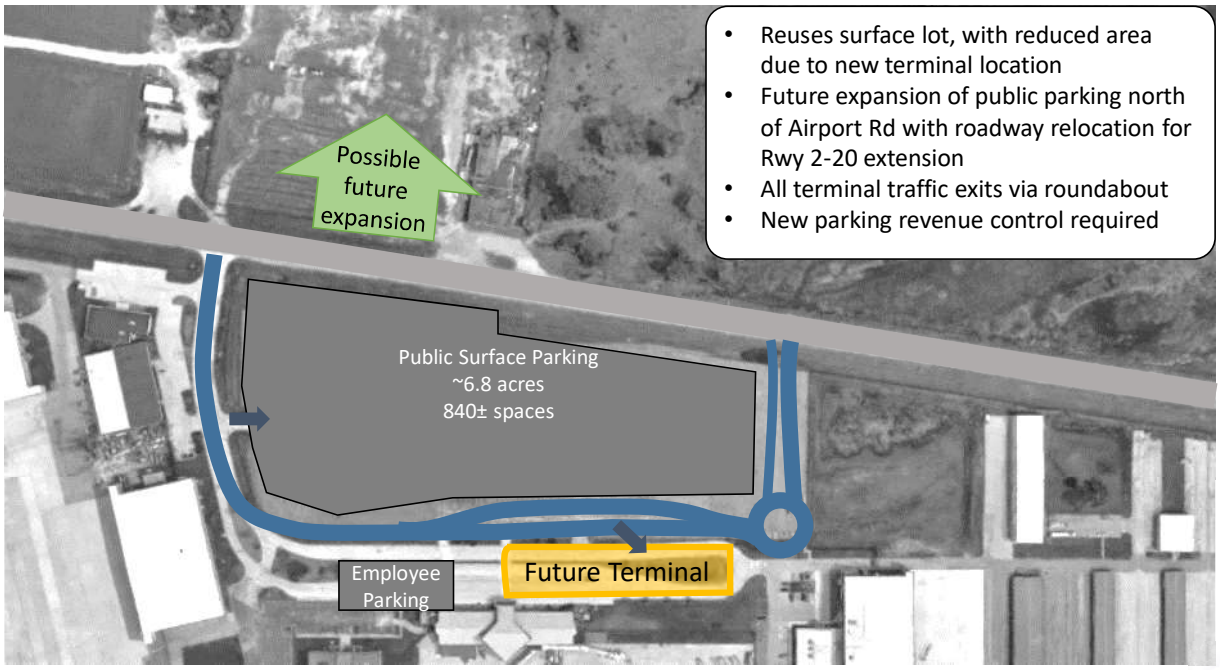
TERMINAL ALTERNATIVES EVALUATION

D-125

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3
			
Optimizes passenger flows and customer experience	No wayfinding u-turns One level change	No wayfinding u-turns No level changes	Requires customers to u-turn to use vertical circulation as shown; one level change
Ease of expansion from PAL 3 to PAL 5	New north façade; Expand building to the east	Substantial infill expansion to the north	Flexible expansion to both sides of the building
Airside can accommodate ADG-IV aircraft	East position angled parking only	East position angled parking only	Potentially in more than one position, depending on building placement
Maintains adequate space for public parking	Existing parking and curbside roadways remain largely unchanged	Total public parking capacity reduced significantly; Relocated curbside roadways	Moderate impact to public parking space; Relocated curbside roadways
Capital investment and O&M	25k sq ft in PAL 3 (63k sq ft total) Vertical circulation required Mix of new and old asset conditions	22k sq ft in PAL 3 (62k sq ft total) No vertical circulation required Mix of new and old asset conditions	38k sq ft in PAL 3 (88k sq ft total) Vertical circulation required All new asset conditions
Overall ranking	3	2	1 ✓

TERMINAL ALT 3 LANDSIDE

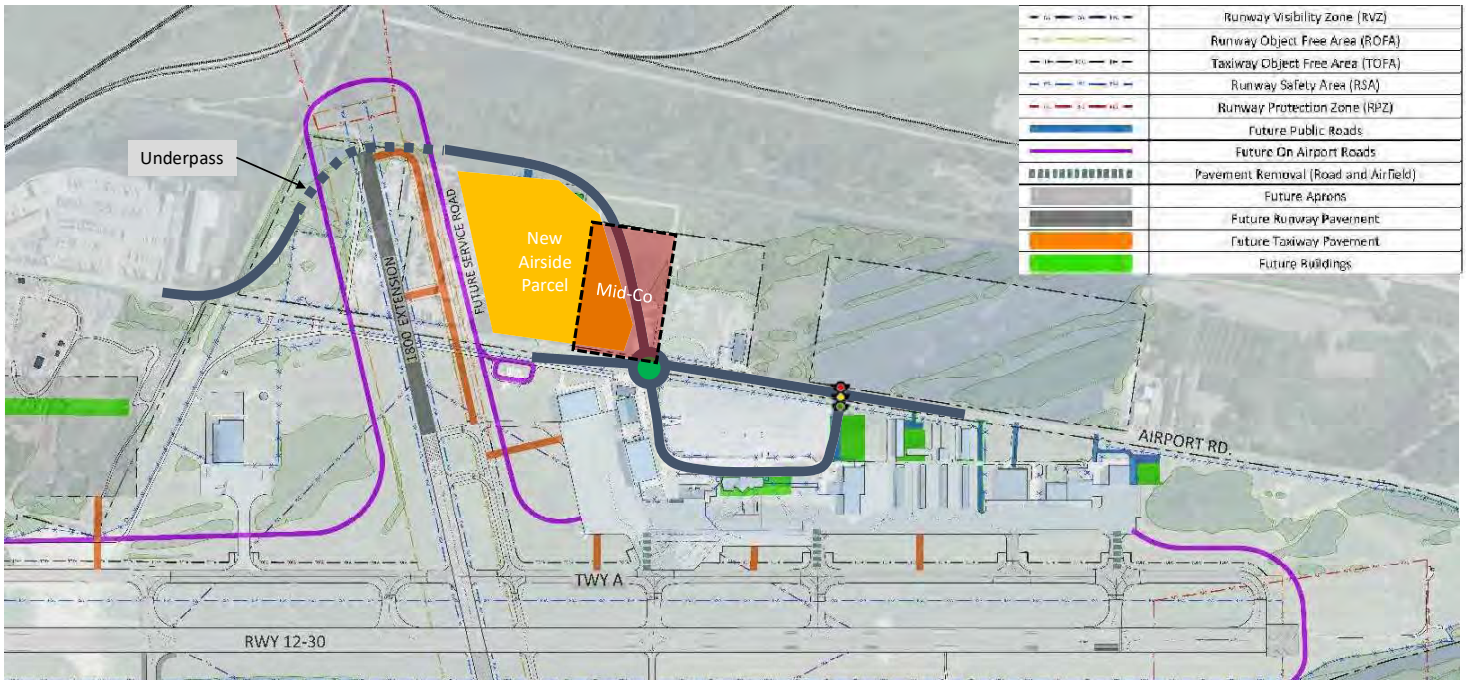
D-126



- Reuses surface lot, with reduced area due to new terminal location
- Future expansion of public parking north of Airport Rd with roadway relocation for Rwy 2-20 extension
- All terminal traffic exits via roundabout
- New parking revenue control required

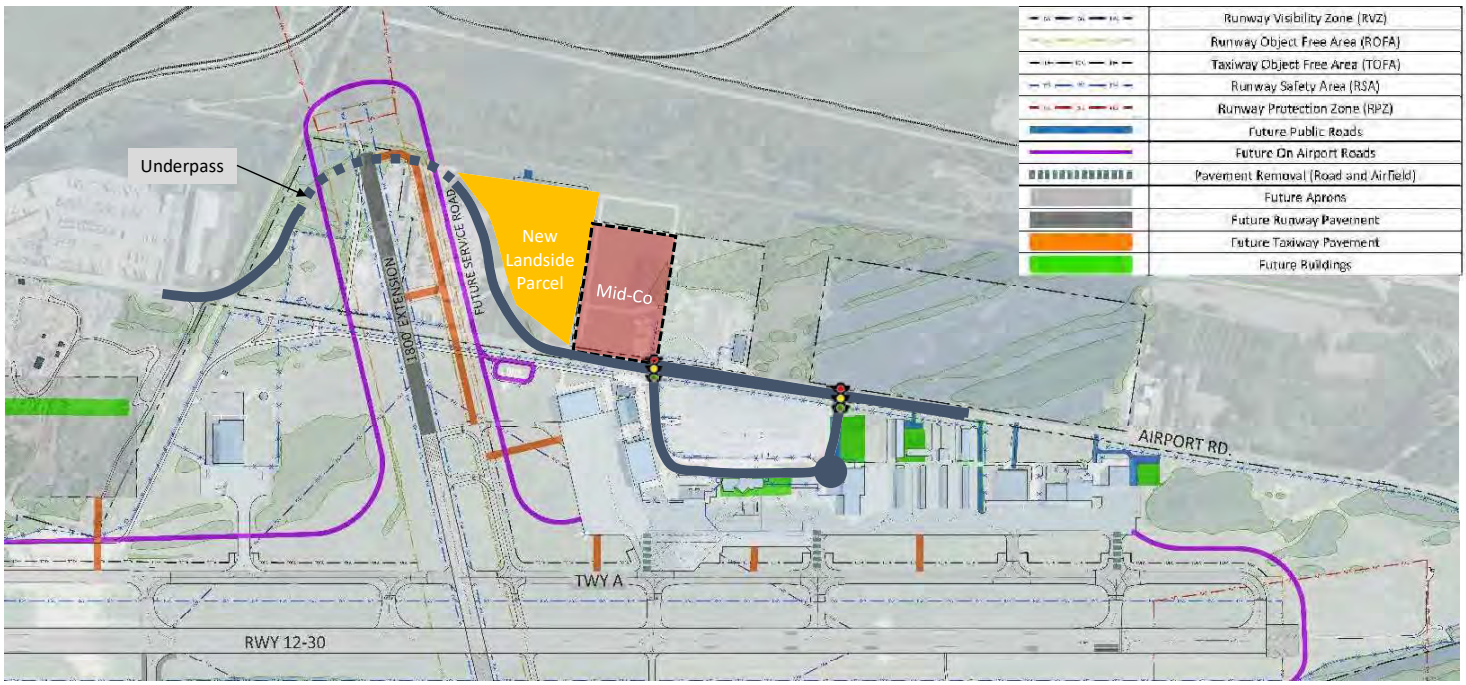
AIRPORT ROAD RELOCATION ALT #1

D-127



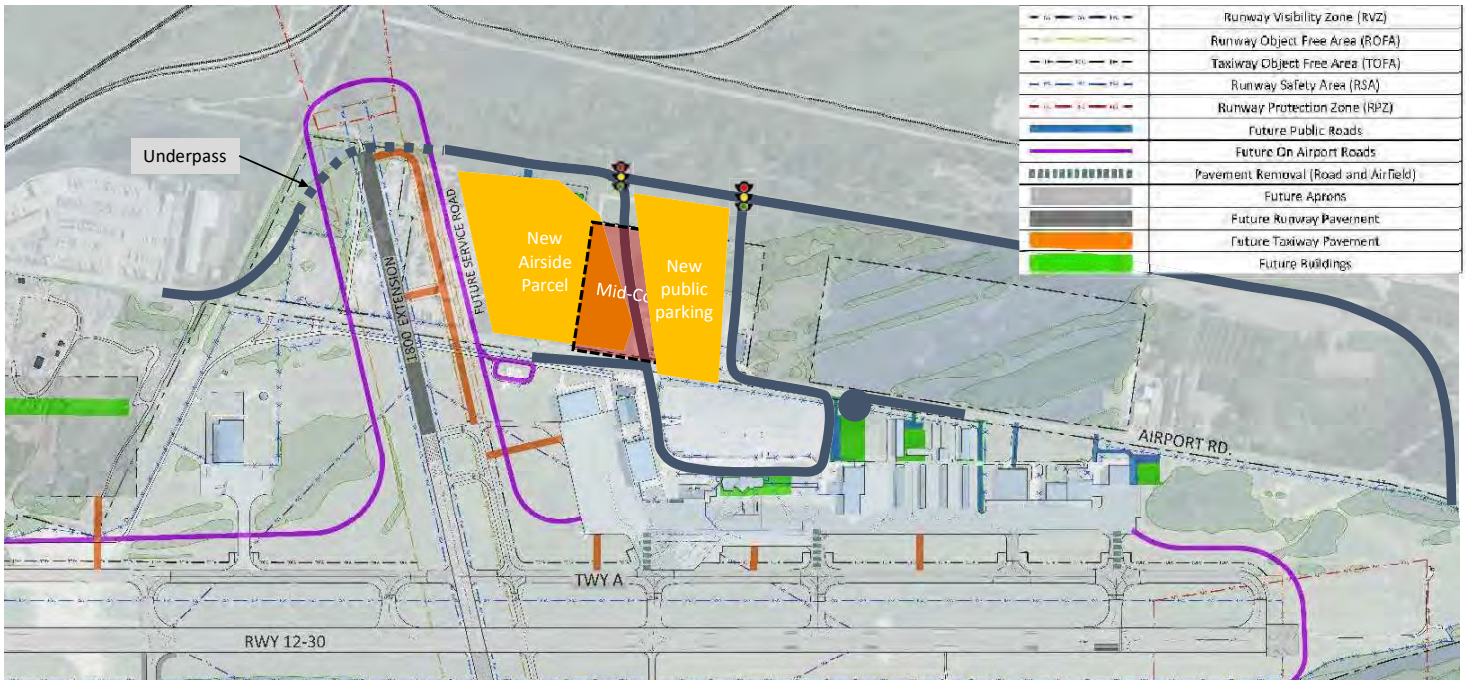
AIRPORT ROAD RELOCATION ALT #2

D-128

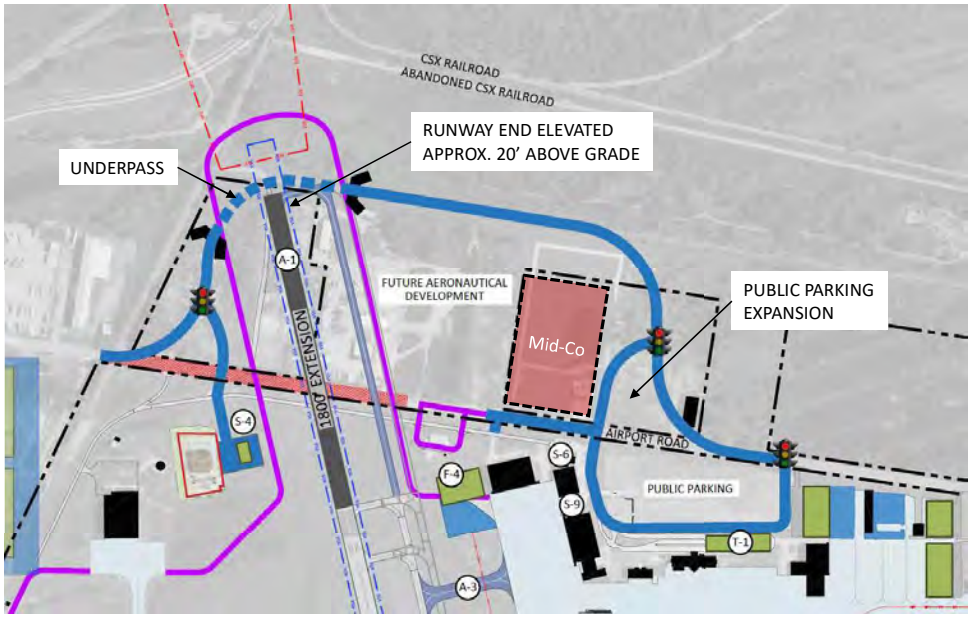


AIRPORT ROAD RELOCATION ALT #3

D-129



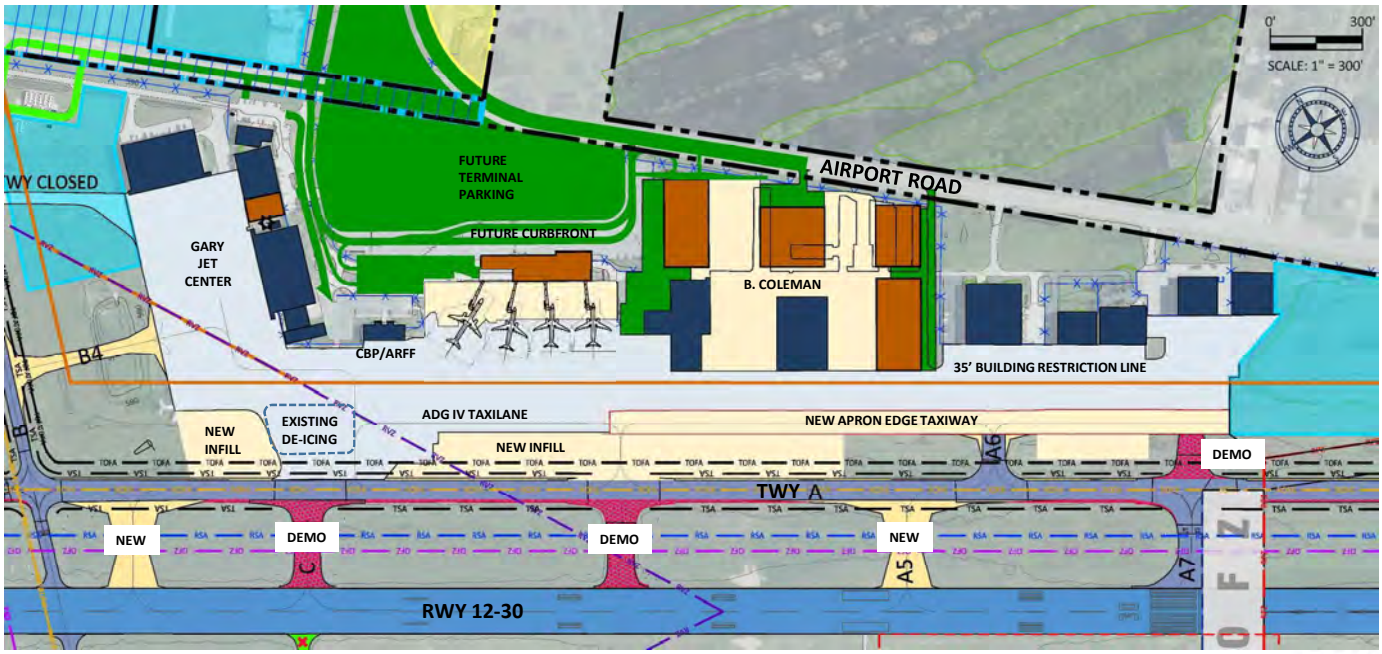
D-130



- Maintains tenant access and connectivity
- Expands public parking
- Avoids Mid-Co site
- Utilizes existing City of Gary ROW along old railroad grade
- Creates future developable land adjacent to airfield

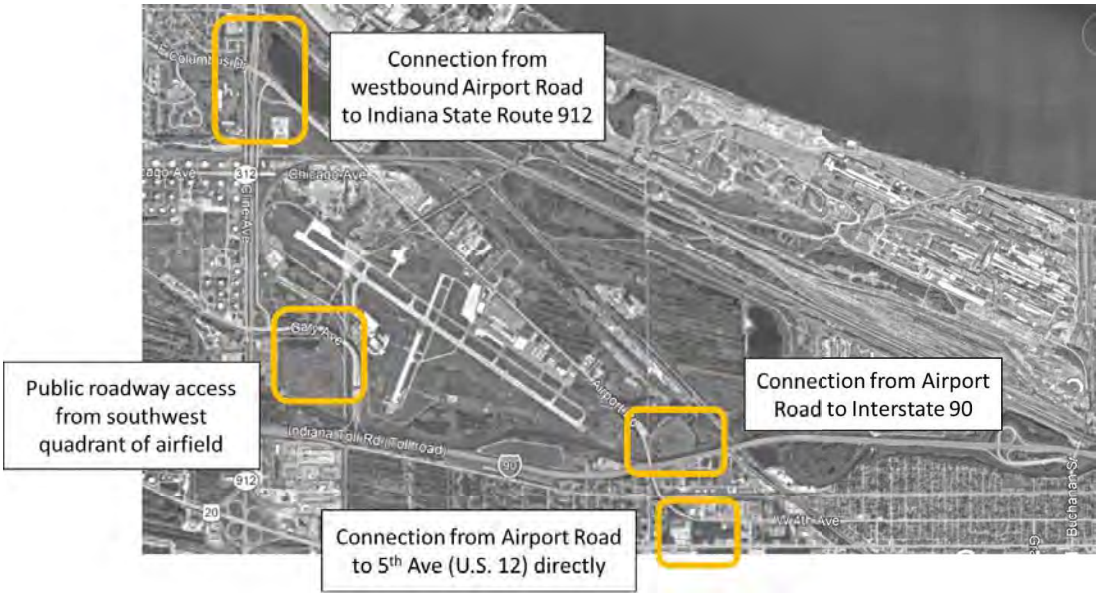
RECOMMENDED TERMINAL AREA CONCEPT

D-131



REGIONAL ACCESS

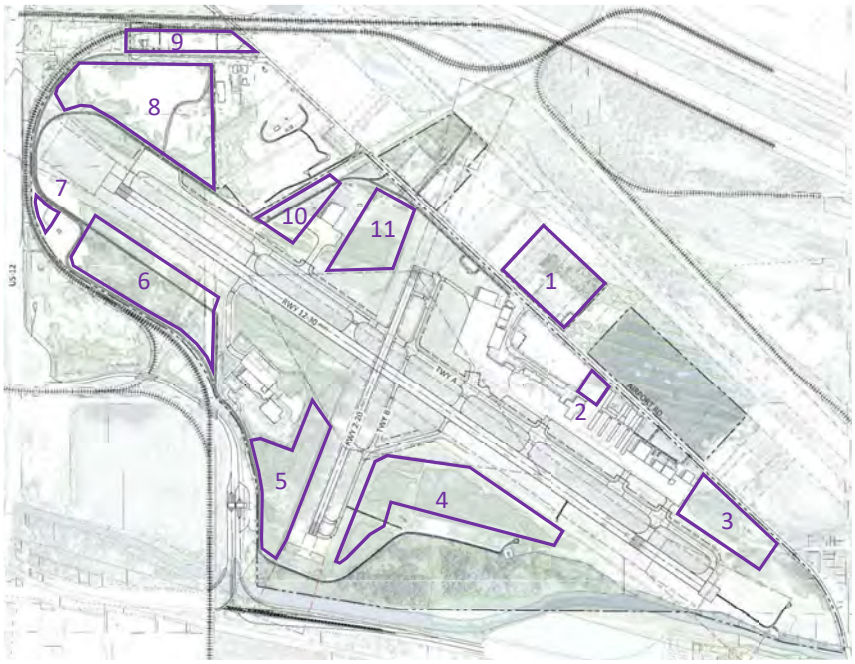
D-132



- Cost to build a spur into the Airport* is not feasible to serve the number of passengers forecast
- Options available for "last mile" travel
  - Taxi and other resources provided on SSL website
  - Lyft/Uber
  - FBOs provide rides for their clients when requested
- Revisit direct rail access and last mile options with sustained passenger service

*In January 2018, Bloomberg CityLab reported that the cost of light rail in the US was more than $100 million per mile.
https://www.bloomberg.com/news/articles/2018-01-26/the-u-s-gets-less-subway-for-its-money-than-its-peers

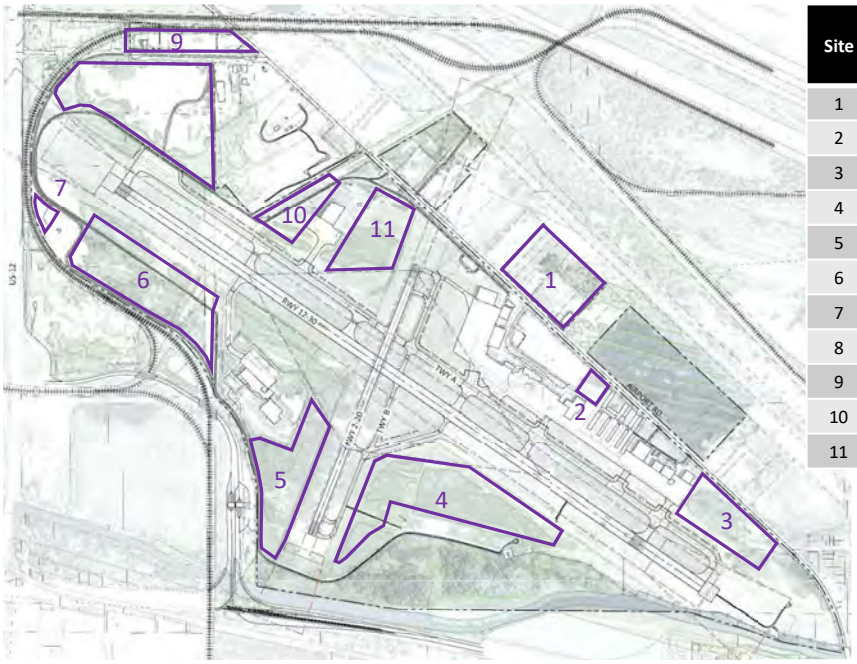
DEVELOPABLE PARCELS FOR OTHER FACILITIES



- Corporate GA apron and hangar (beyond PAL 3)
- T-hangar replacement campus
- Airport administration
- Airport maintenance
- Air cargo apron and hangar
- Airport Traffic Control Tower
- Relocated ARFF facility

DEVELOPABLE PARCELS

Remaining Airport developments to be sited on available parcels



Site	Airport Support	Air Cargo	T-Hangar	Corporate General Aviation	Commercial Development
1	✗	✗	✗	✗	✓★
2	✓	✗	✓	✓★	✓
3	✗	✗	✓	✓★	✓
4	✓★	✗	✓★	✗	✗
5	✓	✗	✓	✓	✗
6	✓	✗	✓	✓★	✗
7	✓★	✗	✗	✗	✗
8	✓	✓★	✓	✓	✗
9	✗	✗	✗	✗	✓★
10	✓	✗	✓	✓★	✗
11	✓★	✗	✓	✓	✗

Legend

✓ Land use compatible with site

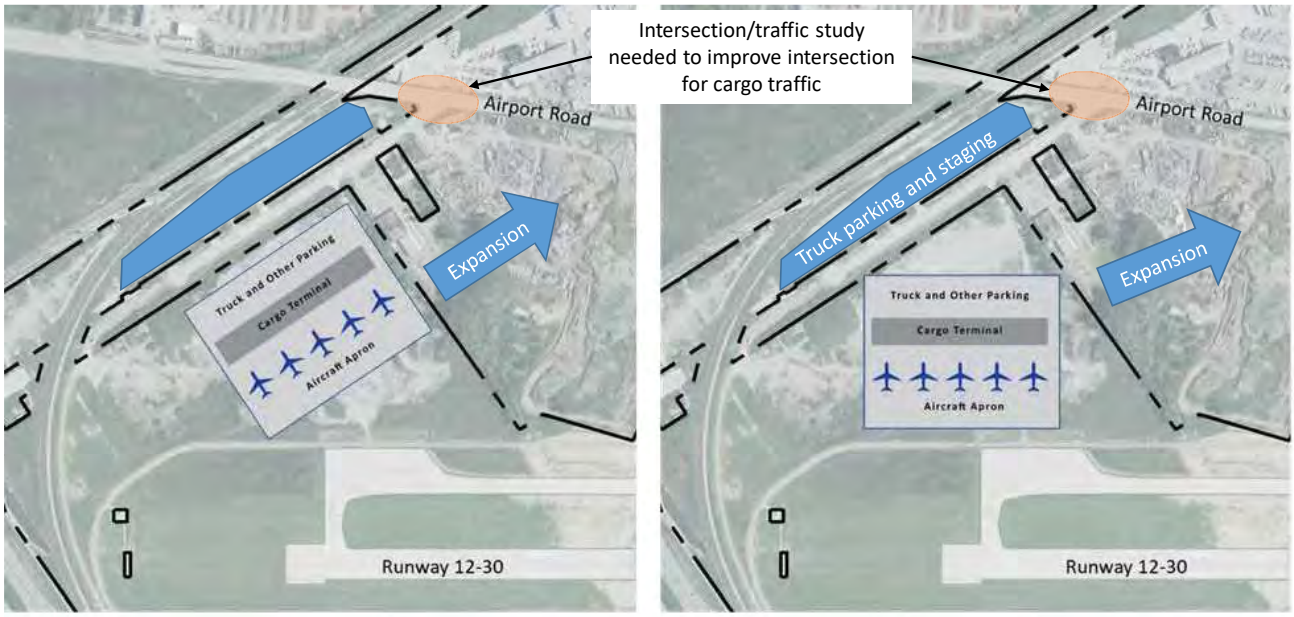
✗ Land use non-compatible with site

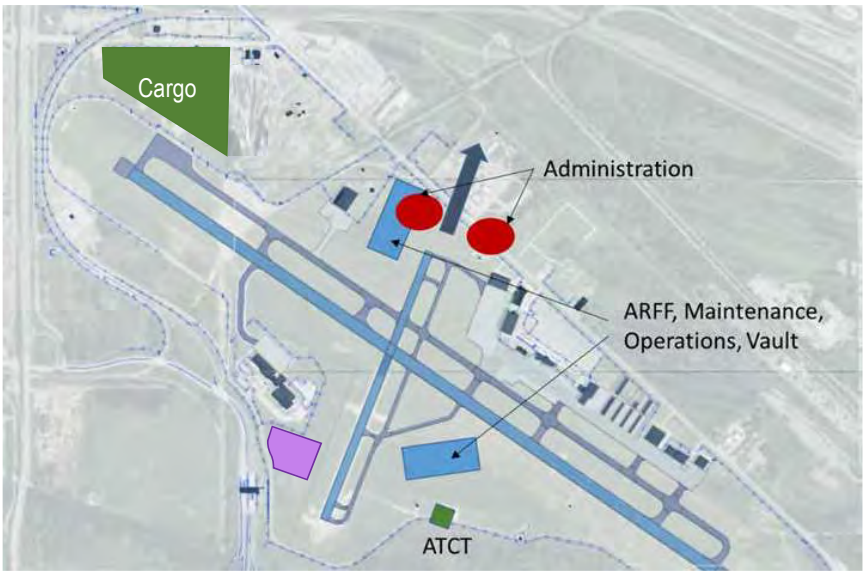
★ Recommended site for land use

- Current FBO expansion plans on file meet demand through PAL 4
- Additional hangar space and associated apron needed by PAL 5 (High Scenario)
- Potential locations for future corporate GA development identified and evaluated
- Areas A and F provide best opportunities, although Area A would require construction of a parallel taxiway

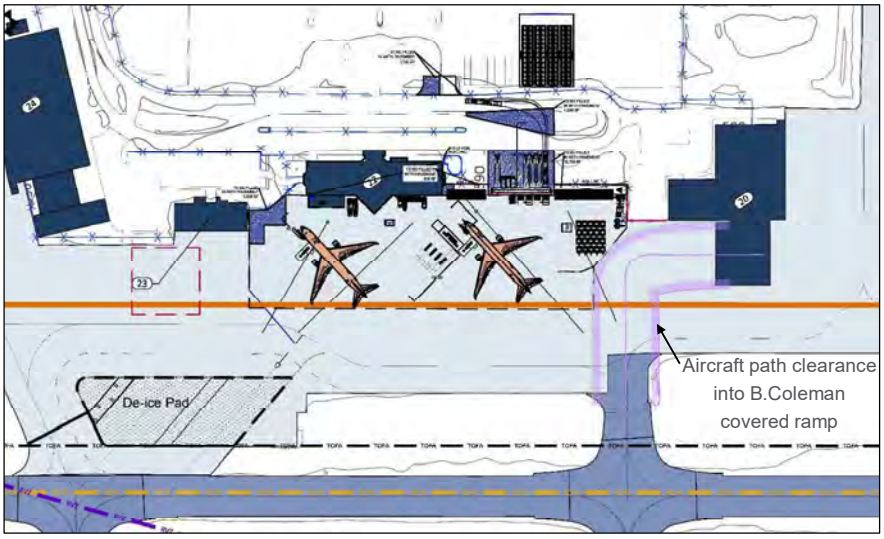
- FBO development in the terminal area requires relocation of T-hangars
- Campus setting preferred as easier to manage and could allow self-serve fueling
- Three areas evaluated
- Area B was recommended:
  - No additional airfield infrastructure required
  - Access via perimeter road is possible since tenants are badged
  - Doesn't conflict with other uses

- Forecasts did not anticipate significant increase in cargo however, opportunities have arisen with UPS and others
- GCIAA owns land that could be developed for cargo use
- Area could be expanded with future land acquisition
- Traffic analysis will be needed





- Multiple locations were evaluated for each function
- Areas dependent on the runway extension were considered less desirable
- South airfield offered the ability to create a new development area for multiple support functions along with the T-hangar campus
- Administration should be publicly accessible



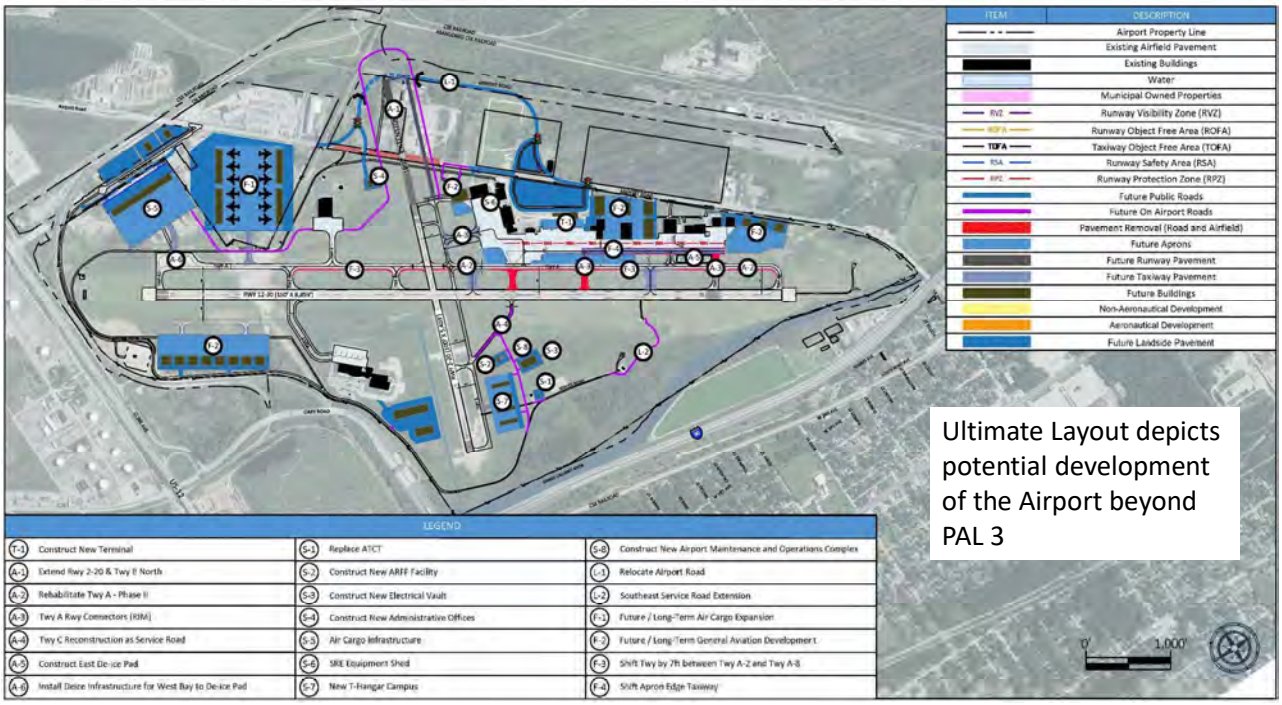
- Remove jet bridges
- Add pavement for equipment movement
- Modify terminal for office space
- Fencing and access

DEVELOPMENT AREAS BY FUNCTION

Compiling decisions made in alternatives development

- Cargo
- Corporate GA and FBO
- Terminal
- T-Hangars, Maintenance and Ops
- ARFF
- ATCT
- Administration
- NISSA

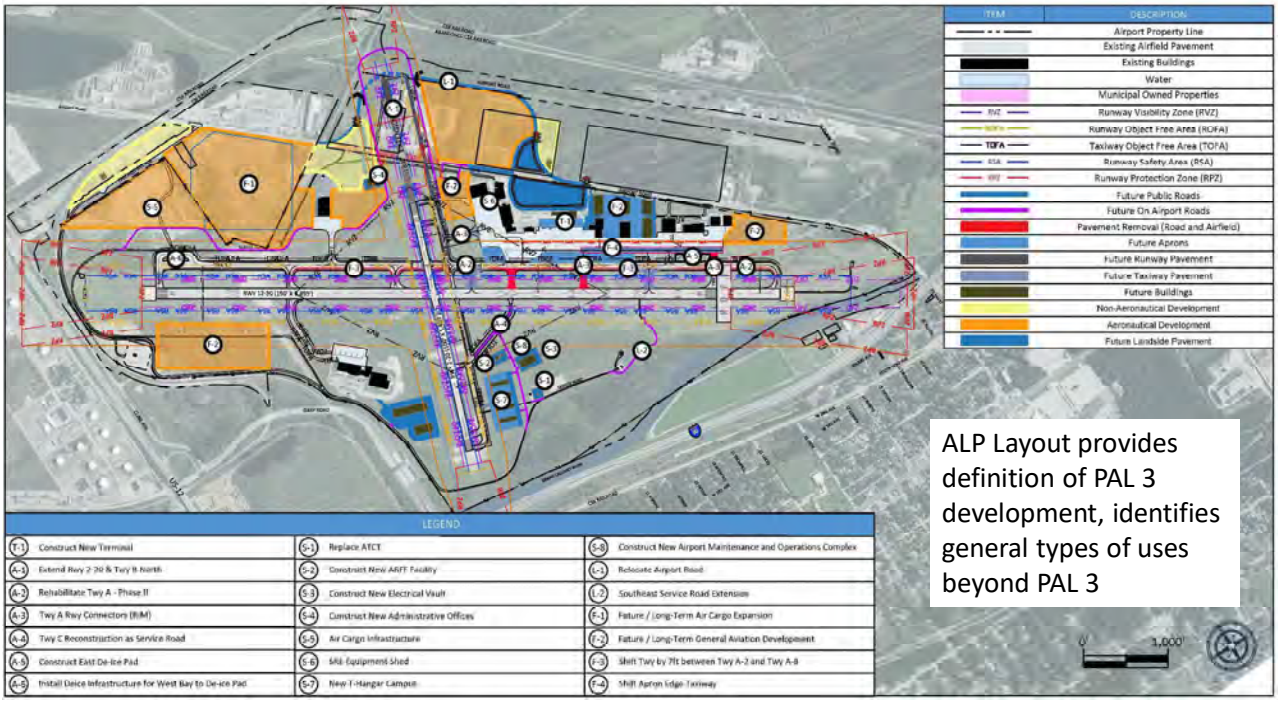
PREFERRED DEVELOPMENT – ULTIMATE



Ultimate Layout depicts potential development of the Airport beyond PAL 3

FUTURE DEVELOPMENT PLAN – ALP

D-145



ALP Layout provides definition of PAL 3 development, identifies general types of uses beyond PAL 3

D-146

- Defines project scopes, recommended timing* for starting the work, and costs
- Rough, order-of-magnitude costs based on master plan-level planning
- Costs in 2Q 2020 dollars, pre-COVID-19
- Includes construction and soft costs
  - General contractor mark-ups 25%
  - Owner's soft costs 21.3%
- Land acquisition:
  - $25M allowance for Rwy 2-20 extension and Airport Rd relocation acquisition
  - 51 acres for future cargo not included
- Allowances for wetlands mitigation based on estimated acreage

Time Period	Years from Master Plan completion	Calendar Years
Near-Term	1 - 5 years	2022 to 2027
Mid-Term	6 - 10 years	2028 to 2032
Long-Term	11 + years	2033 to 2042

*Actual timing may vary based on funding and demand

AIRFIELD PROJECTS			
ID	Project Title	Project Initiation Timeframe	Estimated Cost (millions)
A-1	Extend Runway 2-20 & Taxiway B North	Near-term, beginning with environmental assessment	$42.1
A-2	Rehabilitate Taxiway A - Phase II	Near-term	$11.3
A-3	Taxiway A to Runway Connectors (RIM - Direct Access)	Mid-term	$16.7
A-4	Taxiway C Decommissioning to Service Road	Mid-term	$0.07
A-5	Construct East De-ice Pad	Near-term	$2.3
A-6	Install Deice infrastructure for West Bay to De-ice Pad	Near-term	$1.5
F-3	Shift Taxiway A by 7 feet between Taxiways A2 and A8	Long-term	$2.3
F-4	Shift Apron Edge Taxilane	Long-term	$6.8

TERMINAL PROJECTS			
ID	Project Title	Project Initiation Timeframe	Estimated Cost (millions)
T-1	Construct New Terminal	Long-term, demand-driven	$72.6

LANDSIDE AND ACCESS PROJECTS			
ID	Project Title	Project Initiation Timeframe	Estimated Cost (millions)
L-1	Relocate Airport Road	Near-term with Runway 2-20 extension	$76.1
L-2	Southeast Service Road Extension	Mid-term	$1.4

SUPPORT FACILITIES PROJECTS			
ID	Project Title	Project Initiation Timeframe	Estimated Cost (millions)
S-1	Replace ATCT	Near-term	$11.5
S-2	Construct New ARFF Facility	Near-term	$9.6
S-3	Construct New Electrical Vault	Near-term	$5.5
S-4	Construct New Administrative Offices	Long-term	$7.3
S-5	Air Cargo Infrastructure	Near-term	$9.7
S-6	SRE Building Expansion	Near-term	$6.3
S-7	New T-Hangar Campus	Near- to Mid-term	$23.1
S-8	Construct New Airport Maintenance and Operations Complex	Long-term	$16.5

NEXT STEPS

- Stakeholder engagement
  - "Virtual Public Meeting"
  - Narrated presentation posted to Airport website
  - Ability to comment
- Finalize report
  - Final edits to chapters
  - Prepare a draft Executive Summary for GCIAA review
  - Complete documentation
    - Electronic
    - Post on Airport website
- Airport Layout Plan (ALP) completion
  - Finalize drawings
  - Submit to FAA Chicago ADO and INDOT for review and comment
  - Address comments received
  - Resubmit for FAA and INDOT approval
  - Finalize drawings with approval letters
  - Deliver electronic and printed copies
- FAA review will take 6 to 9 months
- ALP is last element to be completed

TAC Meeting 4 Supplemental Materials (12/22/20)

D-151

GCIA
GARY/CHICAGO
INTERNATIONAL AIRPORT

Additional detail on airfield, terminal and landside alternatives development and evaluation

12/22/2020

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

D-152

RUNWAY 2-20 EXTENSION ALTERNATIVES

Initial requirements analysis supplemented by Runway Length Justification Analysis

- Railroads block extension beyond 1,800 feet, relocation not feasible
- Two sets of alternatives considered
  - 1,200-ft extension with RPZ clear of railroads
  - 1,800-ft extension per plan on file with FAA
- Evaluation Criteria
  - Ability to serve fleet/adequate runway length
  - Obstruction clearance/governing surfaces
  - Accommodate Airport Road relocation without depressing roadway
  - RPZ considerations
  - Environmental consequences – wetlands, compatible land use (detailed noise analysis was not part of the master plan scope)
  - Cost

ASSUMPTIONS AND REQUIREMENTS

Define recommended length and threshold siting considerations

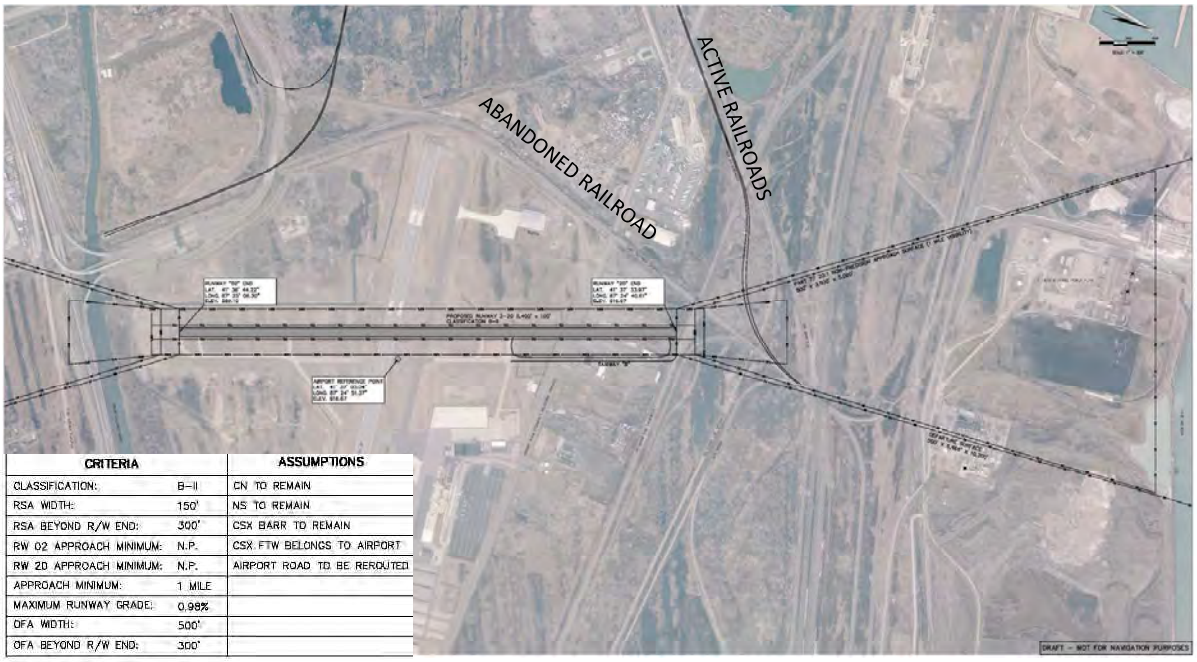
- Runway remains B-II
- Non-precision instrument approach (currently Utility)
  - 40:1 departure surface
  - 34:1 Part 77 approach surface
- Runway length justification analysis
  - Followed FAA AC 150/5325-4B
  - Produced length requirements for current and anticipated B-II fleet

Criteria	Recommended Length (feet)	
	60% useful load	90% useful load
Fleet Accommodated: 100% (Table 3-2)	5,300	7,900
Adjustment for grade	200	200
Adjustment for wet conditions	Up to 5,500	Up to 7,500
Total recommended length	5,500	8,100

CURRENT PLAN ON FILE – PLAN VIEW

D-155

Prepared November 2014

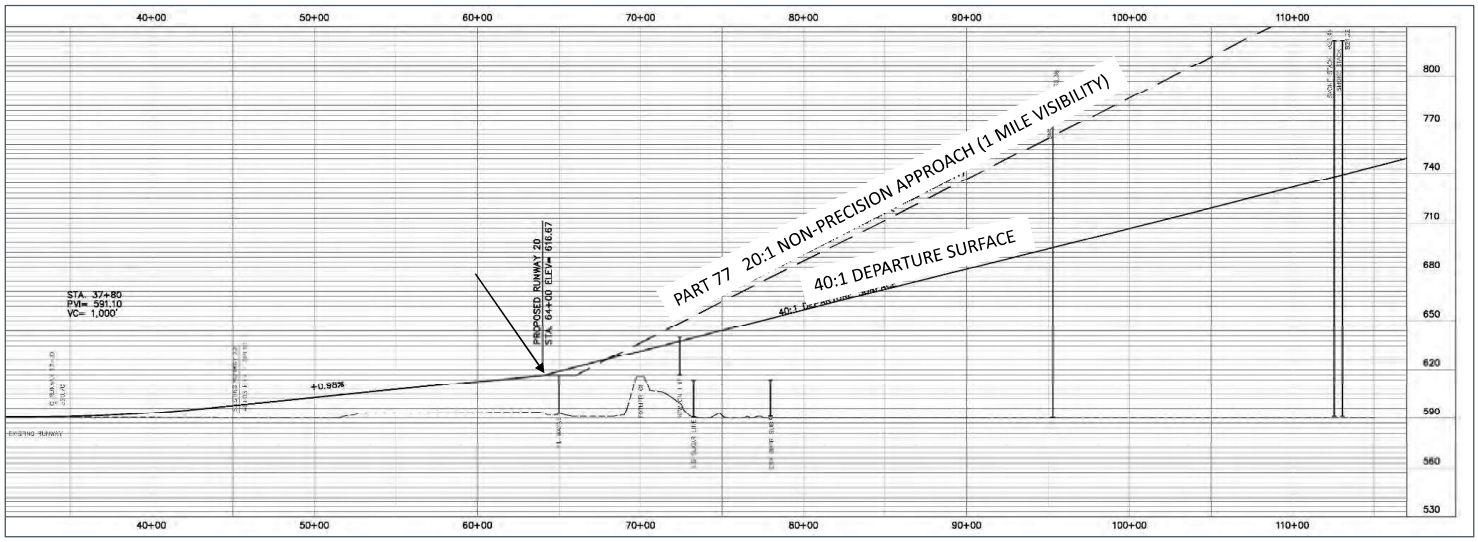


CRITERIA		ASSUMPTIONS
CLASSIFICATION:	B-II	CN TO REMAIN
RSA WIDTH:	150'	NS TO REMAIN
RSA BEYOND R/W END:	300'	CSX BARR TO REMAIN
RW 02 APPROACH MINIMUM:	N.P.	CSX FTW BELONGS TO AIRPORT
RW 20 APPROACH MINIMUM:	N.P.	AIRPORT ROAD TO BE REROUTED
APPROACH MINIMUM:	1 MILE	
MAXIMUM RUNWAY GRADE:	0.98%	
OFA WIDTH:	500'	
OFA BEYOND R/W END:	300'	

CURRENT PLAN ON FILE - PROFILE

D-156

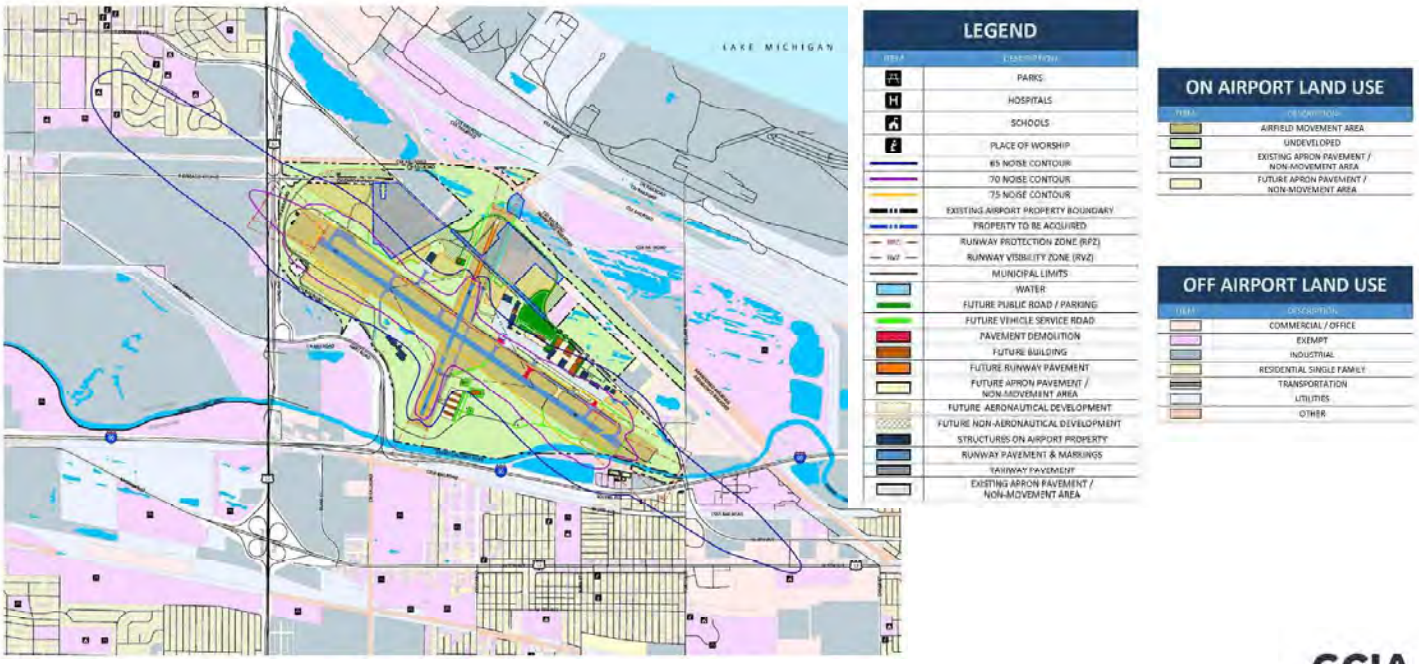
Prepared November 2014



CURRENT LAND USE

D-157

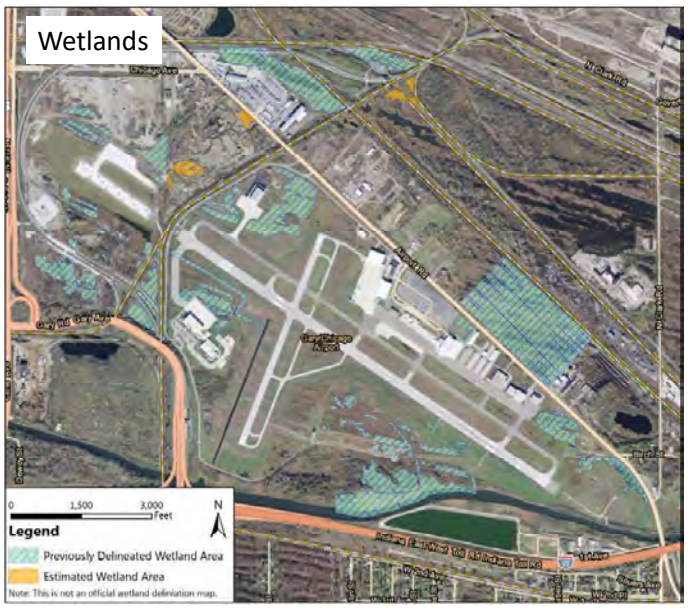
Land use off both ends of Runway 2-20 is compatible

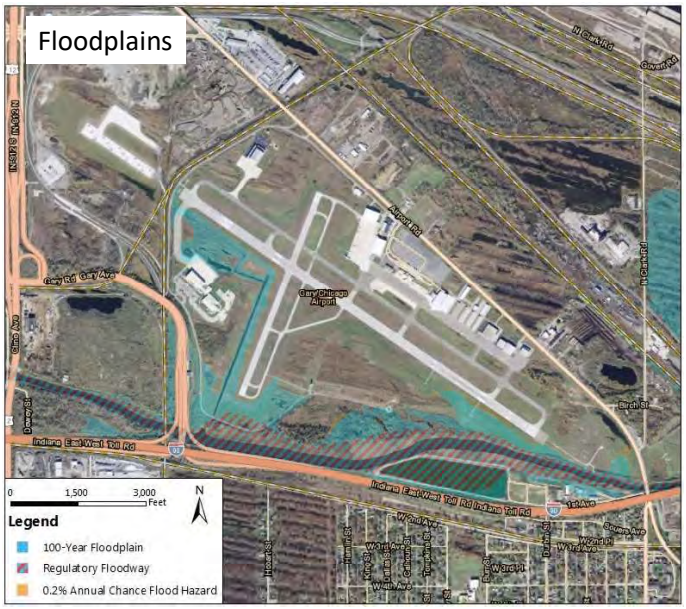


ENVIRONMENTAL: WETLANDS & FLOODPLAINS

D-158

Consider consequences of runway extension and Airport Road relocation



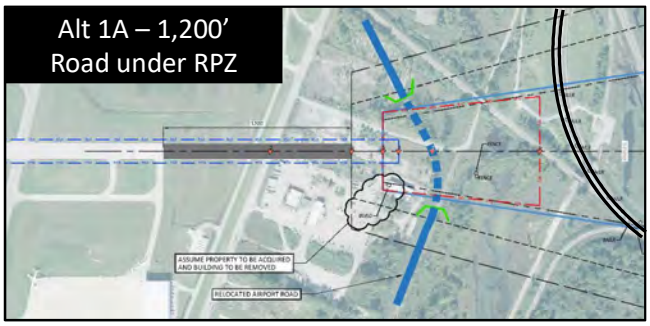


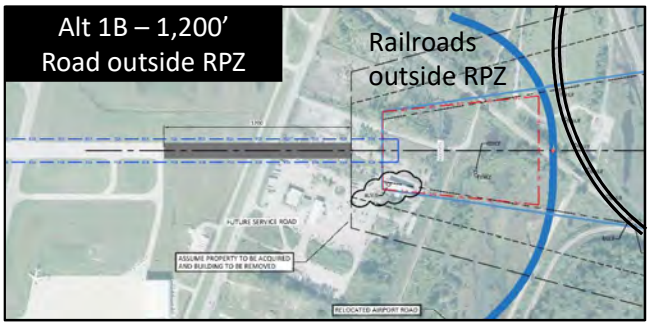
Sources: Gary/Chicago International Airport Authority, 2013; DLZ Indiana, LLC, 2015; Esri, 2016;
Prepared by: RS&H, 2016

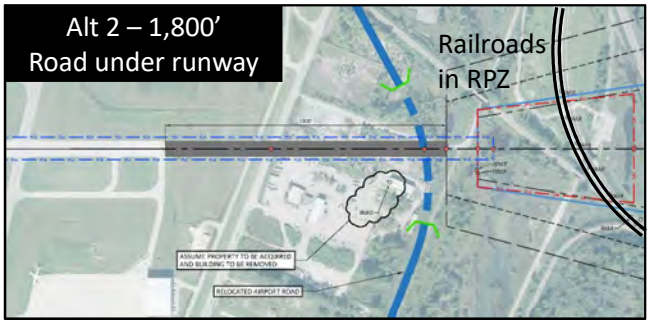
RUNWAY EXTENSION ALTERNATIVES

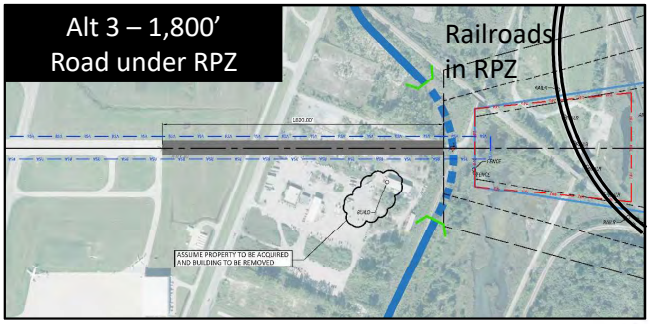
D-159

Four runway alternatives were developed based on initial alternatives discussion with GCIAA





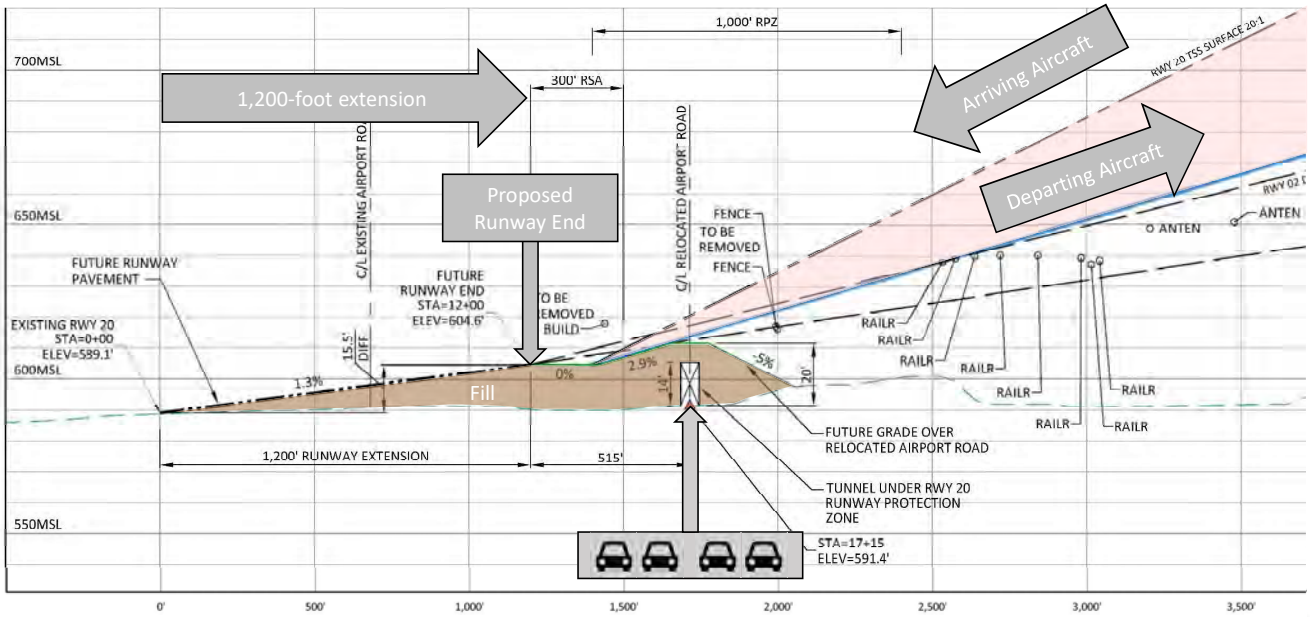




RUNWAY EXTENSION ALTERNATIVE 1A

D-160

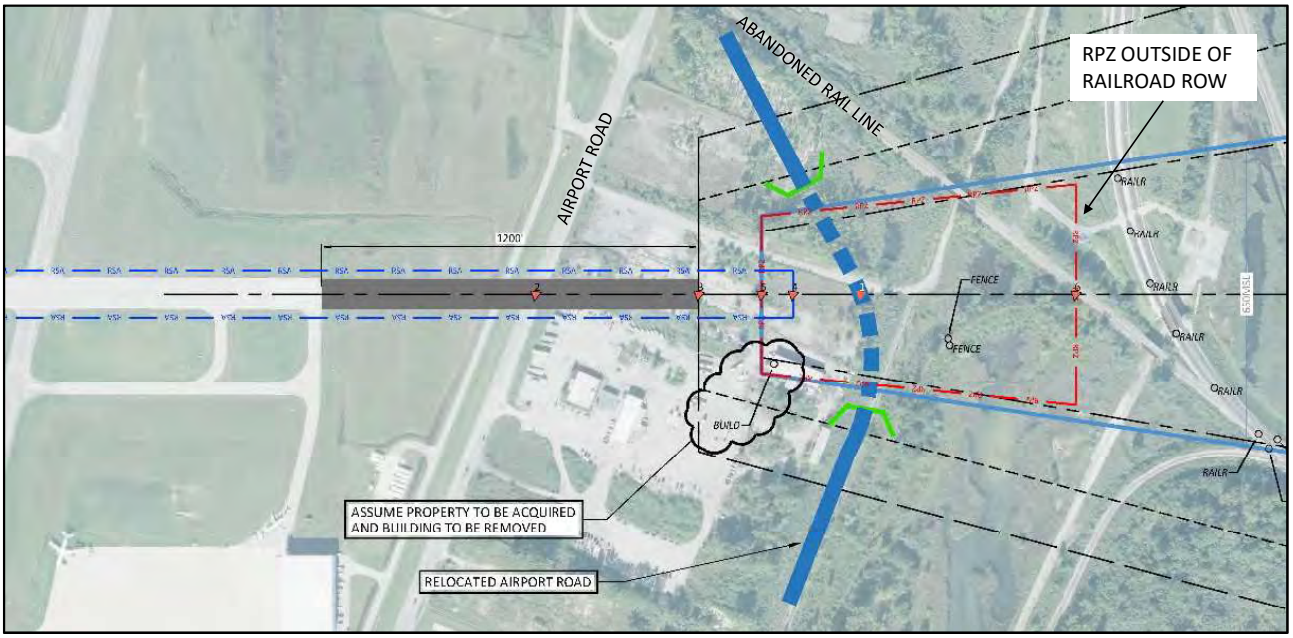
Elevate extension at minimal grade to clear obstructions, underpass for Airport Road



RPZ CONSIDERATIONS

D-161

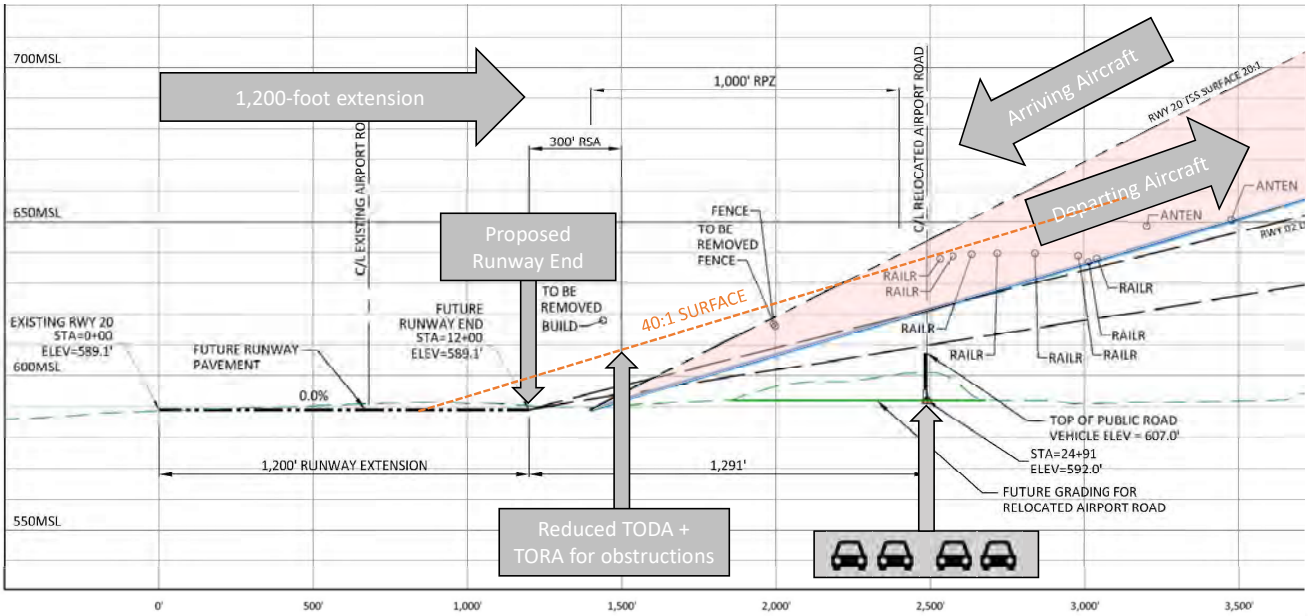
Alternative 1A – 1,200’ Extension with Airport Road in underpass below RPZ



RUNWAY EXTENSION ALTERNATIVE 1B

D-162

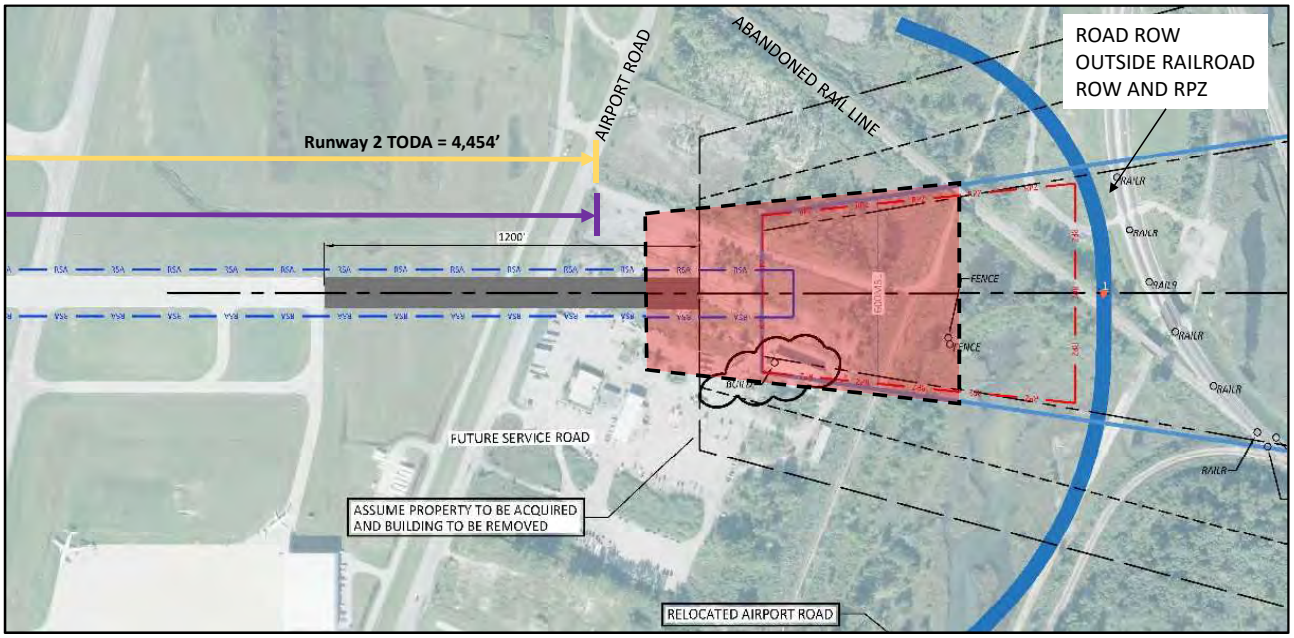
Construct extension at-grade with reduced declared take-off length, Airport Road outside RPZ



RPZ CONSIDERATIONS

D-163

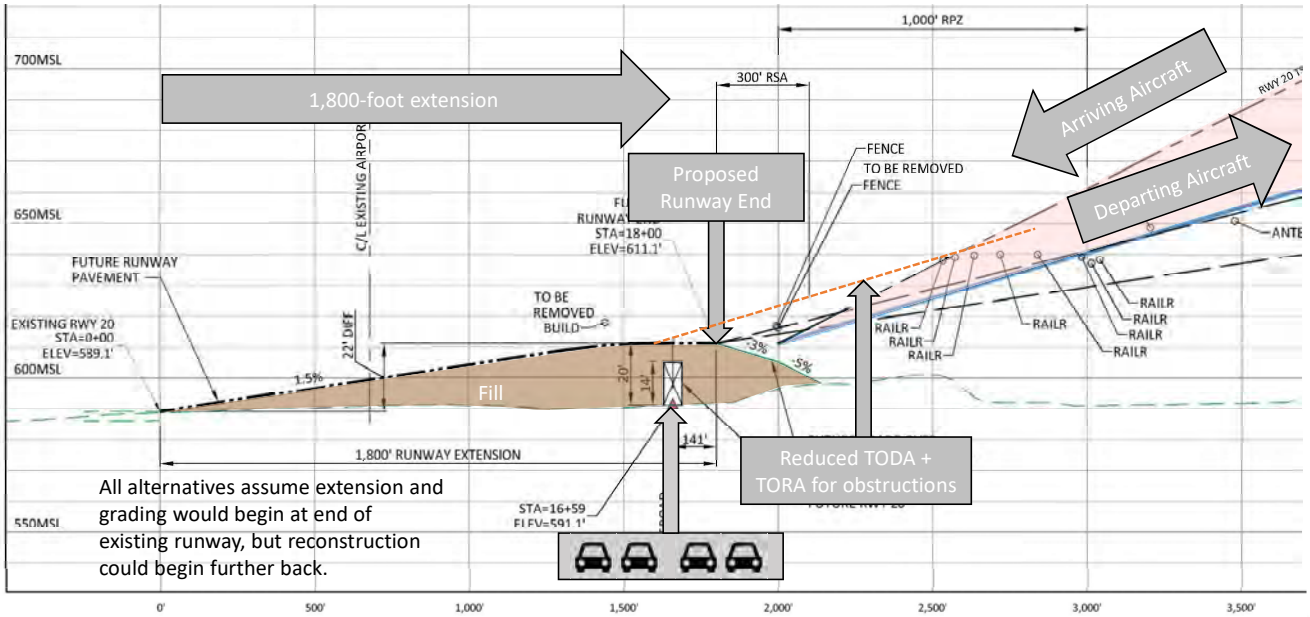
Alternative 1B – 1,200’ Extension with Road around RPZ



RUNWAY EXTENSION ALTERNATIVE 2

D-164

Elevate extension over roadway and clear arrivals obstructions, maximize runway grade to minimize threshold displacement, Airport Road under runway

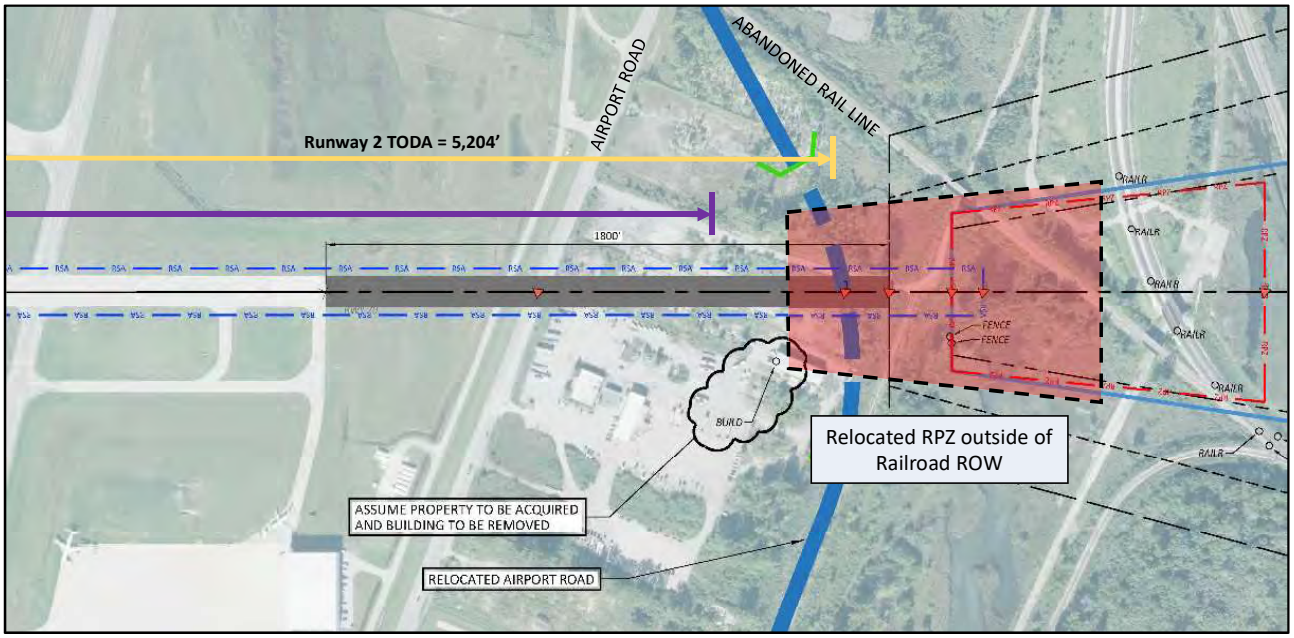


All alternatives assume extension and grading would begin at end of existing runway, but reconstruction could begin further back.

RPZ CONSIDERATIONS

D-165

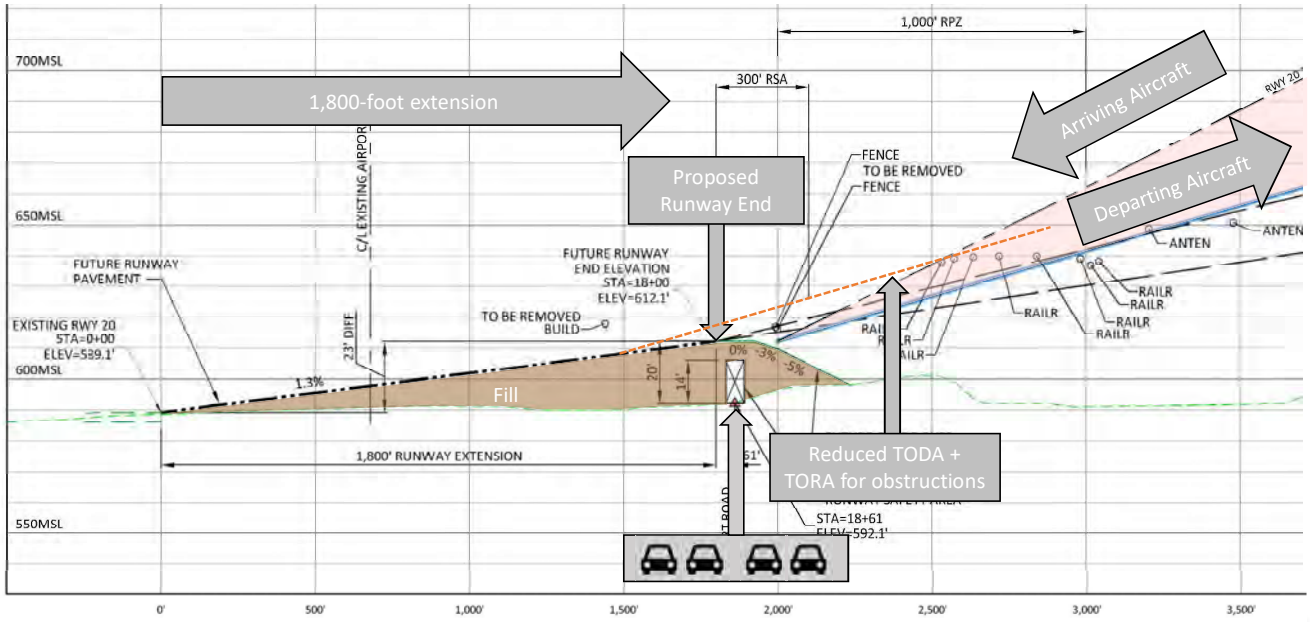
Alternative 2 – 1,800’ Extension with Road under Runway



RUNWAY EXTENSION ALTERNATIVE 3

D-166

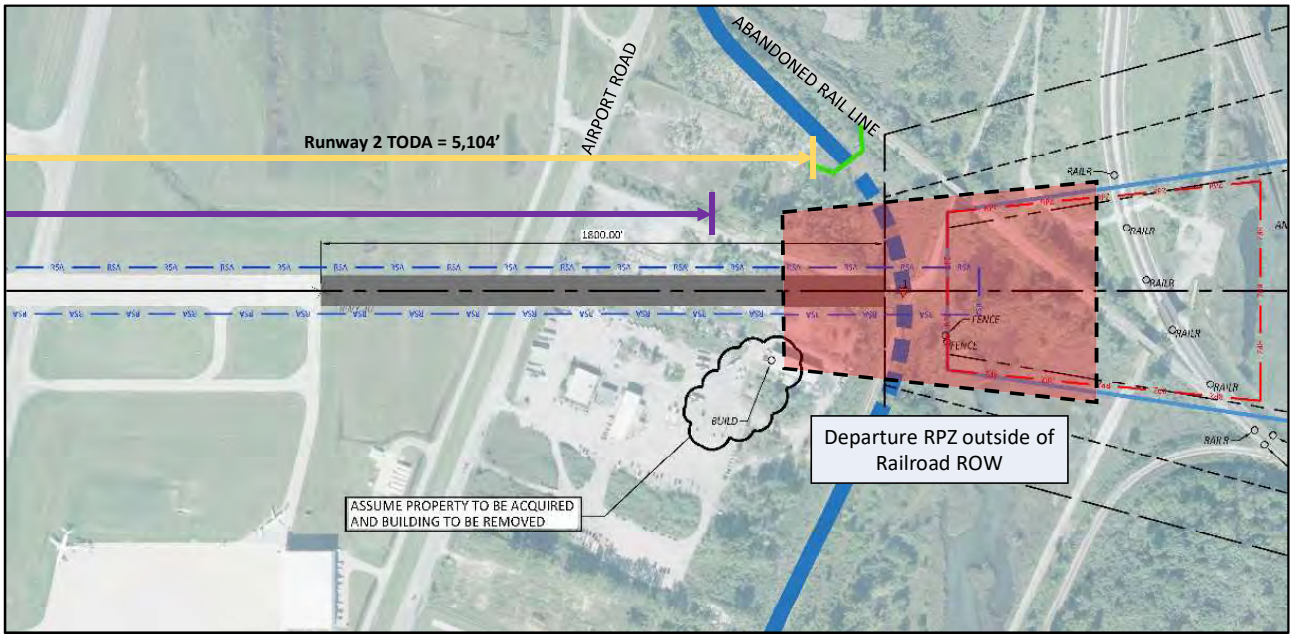
Elevate extension over roadway and clear arrivals obstructions, minimize runway grade and fill, Airport Road under RSA



RPZ CONSIDERATIONS

D-167

Alternative 3 – 1,800’ Extension with Airport Road around end of Runway



RUNWAY EXTENSION DECLARED DISTANCES

D-168

Runway 02 + Runway 20 Arrivals require declared distances due to obstructions off runway end

Factor	1A	1B	2	3
Extension length	1,200’	1,200’	1,800’	1,800’
Improved Runway Length	4,804’	4,804’	5,404’	5,404’
Take-off Run Available – TORA *(reduction from physical-length)*	-	4,454’ *(350’)*	4,868’ *(536’)*	4,868’ *(536’)*
Take-off Distance Available – TODA *(reduction from physical-length)*	-	4,454’ *(350’)*	5,204’ *(200’)*	5,104’ *(300’)*
ASDA (Accelerate Stop Distance Available)	-	4,804’	5,404’	5,404’
LDA (Landing Distance Available)	-	4,804’	5,404’	5,404’
RWY 20 LDA	-	4,454’	4,868’	4,868’

*Reduction of landing length available as a result of incompatible land use (railroad) within the approach RPZ.

INITIAL REVIEW AND DISCUSSION

- Alternatives 1A and 1B (1,200-ft extension)
  - Do not meet length requirements defined by FAA AC 150/5325-4B of 5,500 feet for 60% useful load for the B-II fleet
  - Do not provide 5,000-foot departure length defined by tenants as desirable for use
- Alternatives 2 and 3 (1,800-ft extension)
  - Railroad in RPZ may require a separate RPZ study
  - May require obstruction clearing north of Airport
- Determined that Alternatives 1A and 1B should be eliminated from consideration

RUNWAY EXTENSION EVALUATION MATRIX

Evaluation Criteria	1A	1B	2	3
Extension length	1,200’	1,200’	1,800’	1,800’
Landing benefit to B-II aircraft Current fleet / Future fleet				
Departure benefit to aircraft Current fleet / Future fleet				
RPZ considerations	Compatible	Compatible	Railroad in RPZ – requires study	Railroad in RPZ – requires study
Preliminary cost estimate	$72.0M	$18.3M	$91.8M	$89.8M
Compatible land use				
Wetlands/Floodplains	Ponds/possible wetlands within RPZ, no floodplains	Ponds/possible wetlands within RPZ, no floodplains	Ponds/possible wetlands within RPZ, no floodplains	Ponds/possible wetlands within RPZ, no floodplains
Compatibility with future runway design criteria / classification	Possible obstacle clearance limitations	Obstacle clearance limits length	End elevation could support future extension	End elevation could support future extension
0 1 2	9	8	14	12

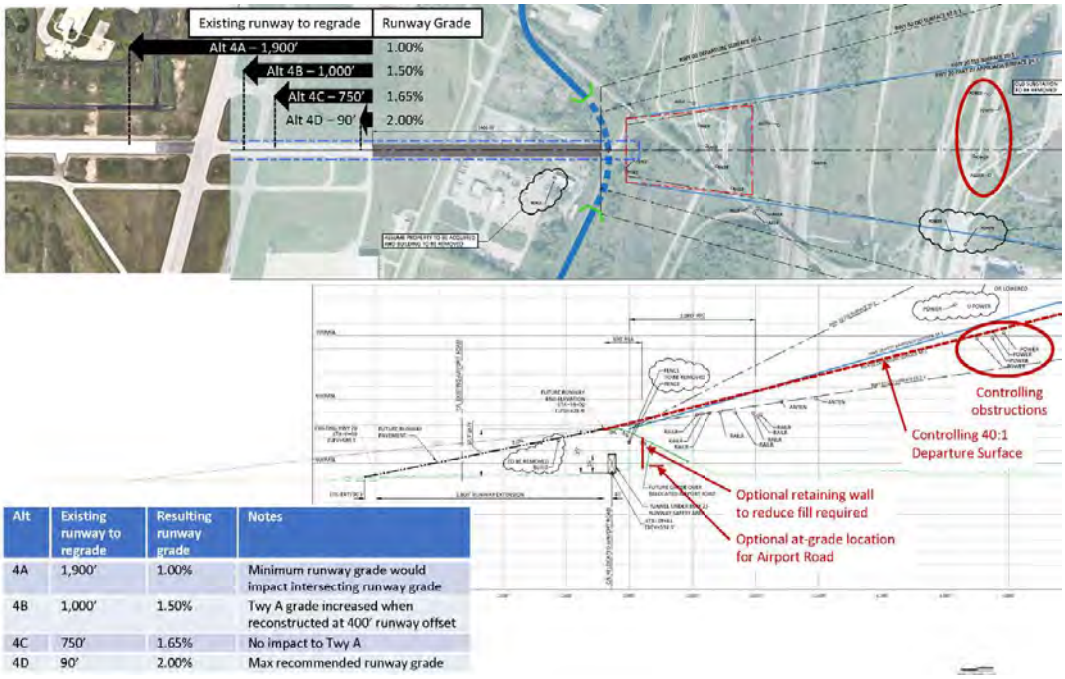
DOES NOT MEET PROGRAM

DOES NOT MEET PROGRAM

ADDITIONAL ANALYSIS/ALTERNATIVE 4

D-171

Evaluate setting future runway end elevation for 40:1 departure surface obstruction clearance

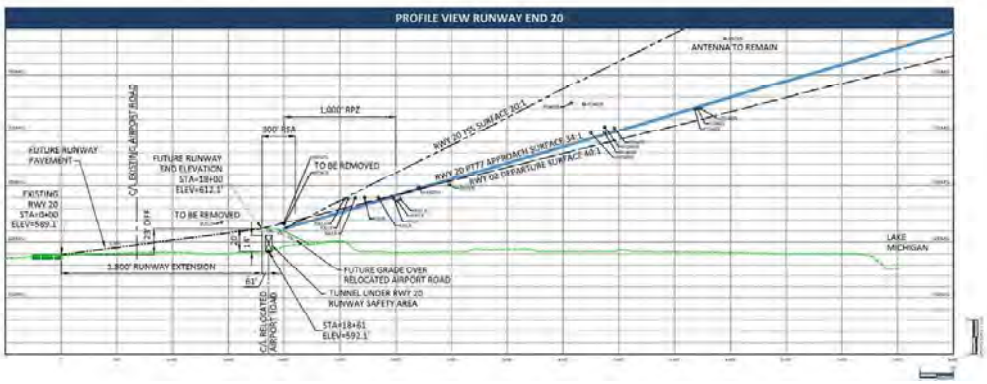


Alt	Existing runway to regrade	Resulting runway grade	Notes
4A	1,900'	1.00%	Minimum runway grade would impact intersecting runway grade
4B	1,000'	1.50%	Twy A grade increased when reconstructed at 400' runway offset
4C	750'	1.65%	No impact to Twy A
4D	90'	2.00%	Max recommended runway grade

- Elevate runway end for 40:1 surface to clear all obstructions:
  - Increases fill and cost
  - Limits adjacent development due to height above existing ground
  - Runway end elevation approx. 35' above grade
- Conclusion: Use Part 77 surface (34:1) to set runway end elevation

PREFERRED PLAN IS REFINED ALTERNATIVE 2

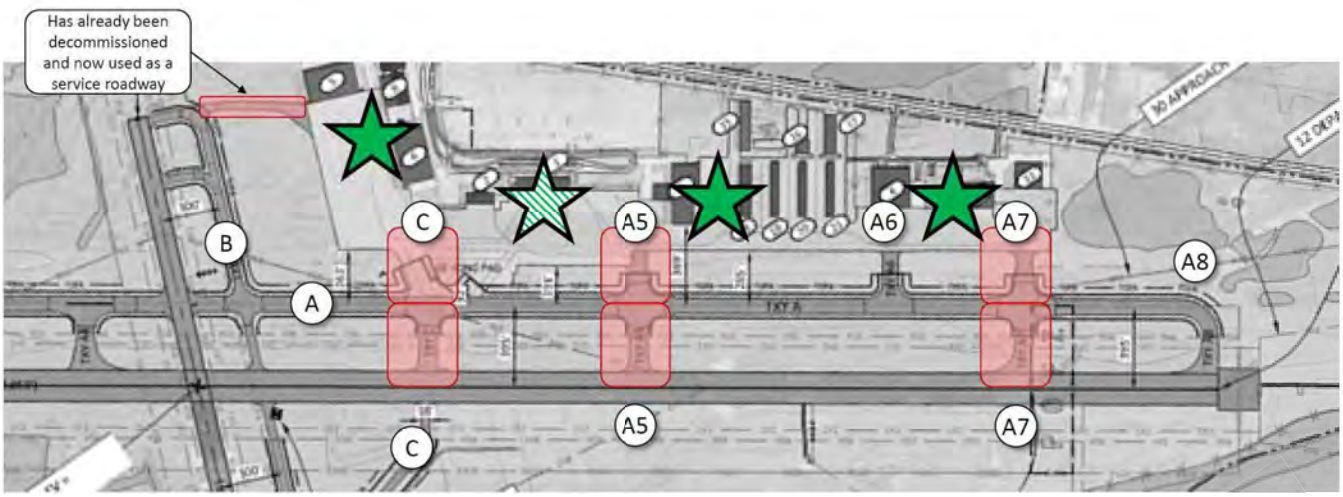
D-172



- Requires:
  - RPZ study
  - Specific data documenting need for crosswind extension*
- Extension assumed to begin at end of existing runway
- Estimated cost: $42.06M including EA and excluding Airport Road realignment

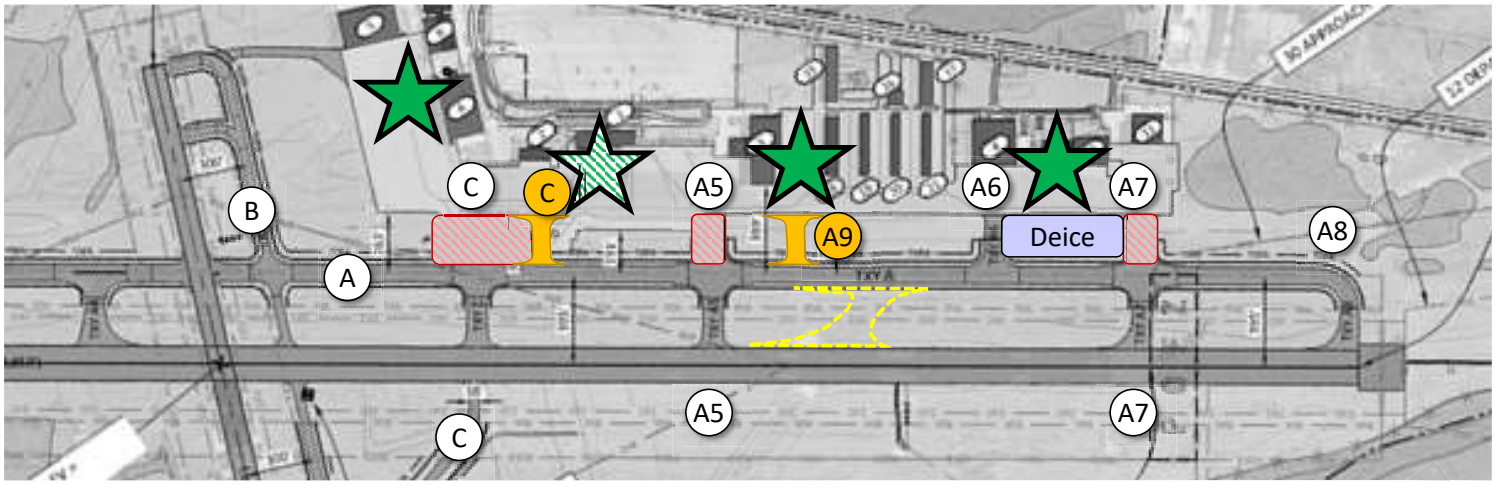
AIRFIELD GEOMETRY – DIRECT CONNECTIONS

D-174



ALTERNATIVE #1 PROPOSED AT TAC MEETING #3

D-176



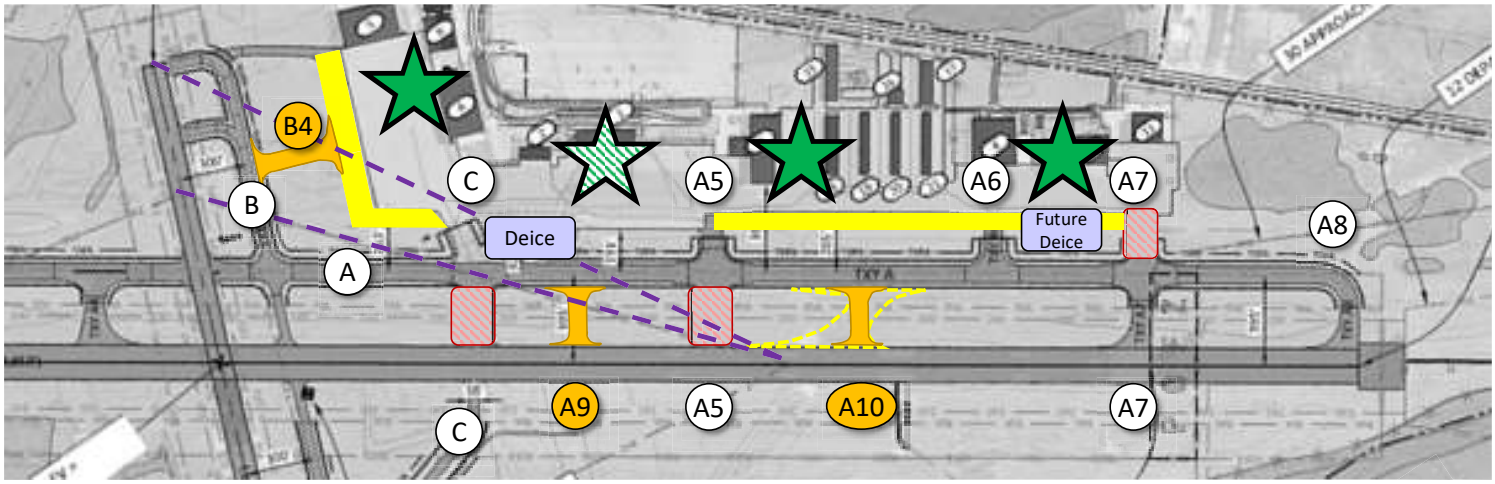
- "C" between TW A and apron
- "A5" between TW A and apron
- "A7" between TW A and apron

- "A9" between TW A and apron
- "C" between TW A and apron

TAC requested that other alternatives be explored to provide better access to the north terminal area, keeping deicing in its current vicinity

NEW ALTERNATIVE #2

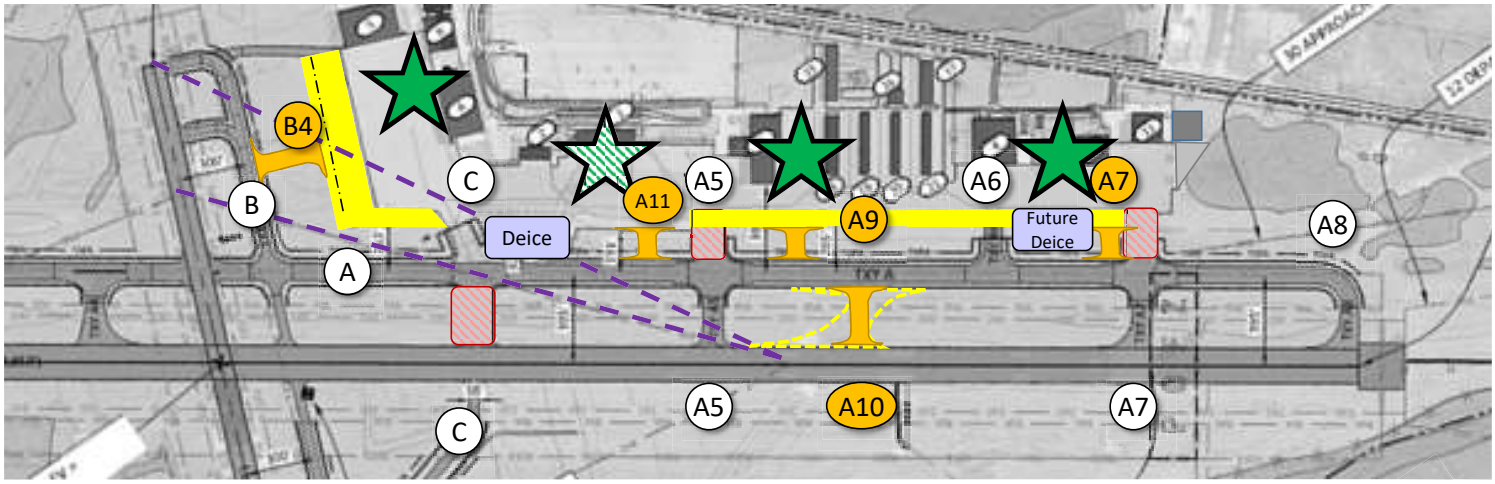
D-176



- "C" and "A5" between RW 12-30 and TW A
- "A7" between TW A and apron

- New "A9" and "A10" between RW 12-30 and TW A
- New "B4" between north ramp and TW B
- Extend apron edge along north ramp to TW C and between "A5" and "A7"

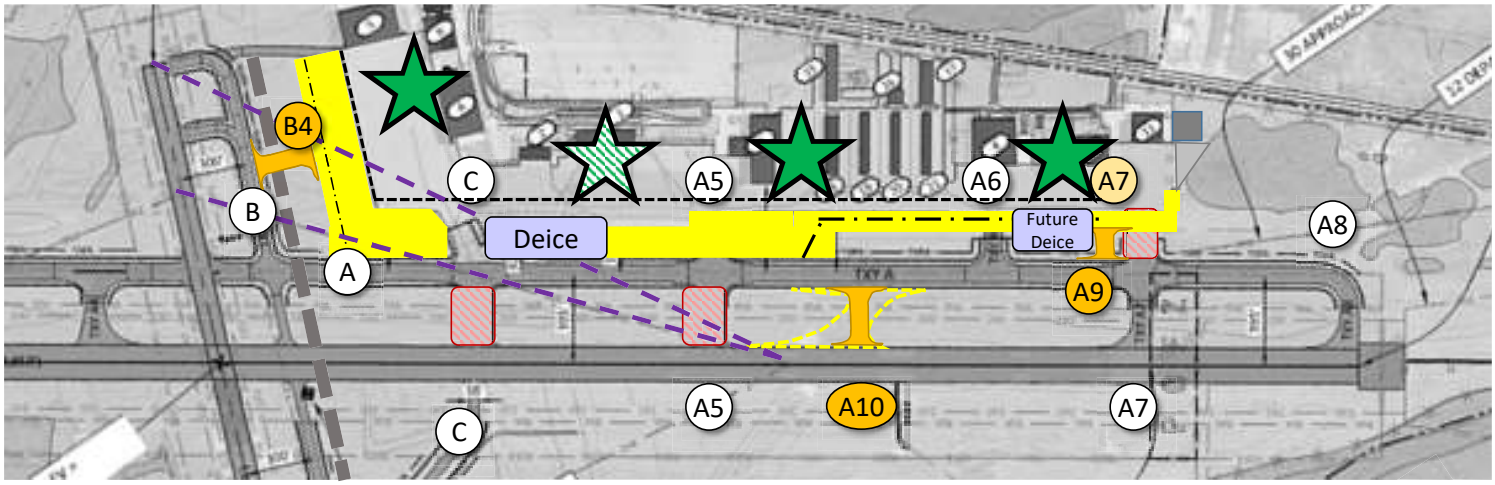
NEW ALTERNATIVE #3A



- "C" between RW 12-30 and TW A
- "A5" and "A7" between TW A and apron

- New "A7", "A9" and "A11" between TW A and apron
- New "A10" between RW 12-30 and TW A
- Extend apron edge along north ramp to TW C and between "A5" and "A7"
- New "B4" between north ramp and TW B

NEW ALTERNATIVE #3B – APRON FILL

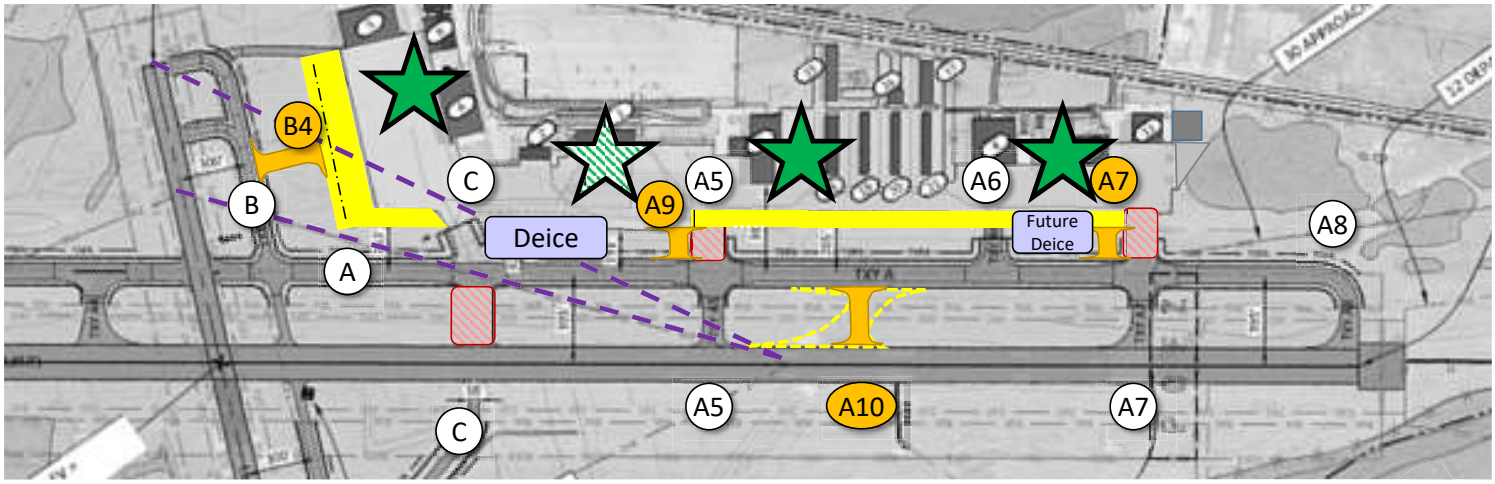


- "C" and "A5" between RW 12-30 and TW A
- "A7" between TW A and apron

- New "A9" between TW A and apron
- New "A10" between RW 12-30 and TW A
- New "B4" between north ramp and TW B

NEW ALTERNATIVE #4

D-179

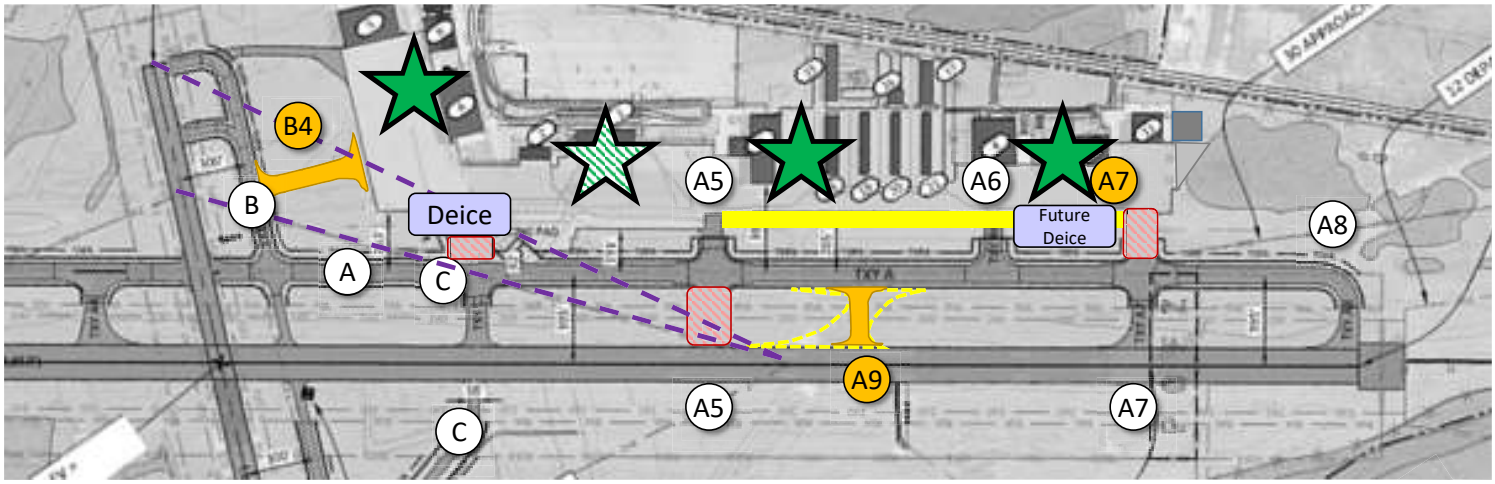


- "C" between RW 12-30 and TW A
- "A5" and "A7" between TW A and apron

- New "A9" and "A7" between TW A and apron
- New "A10" between RW 12-30 and TW A
- New "B4" between north ramp and TW B

NEW ALTERNATIVE #5

D-180

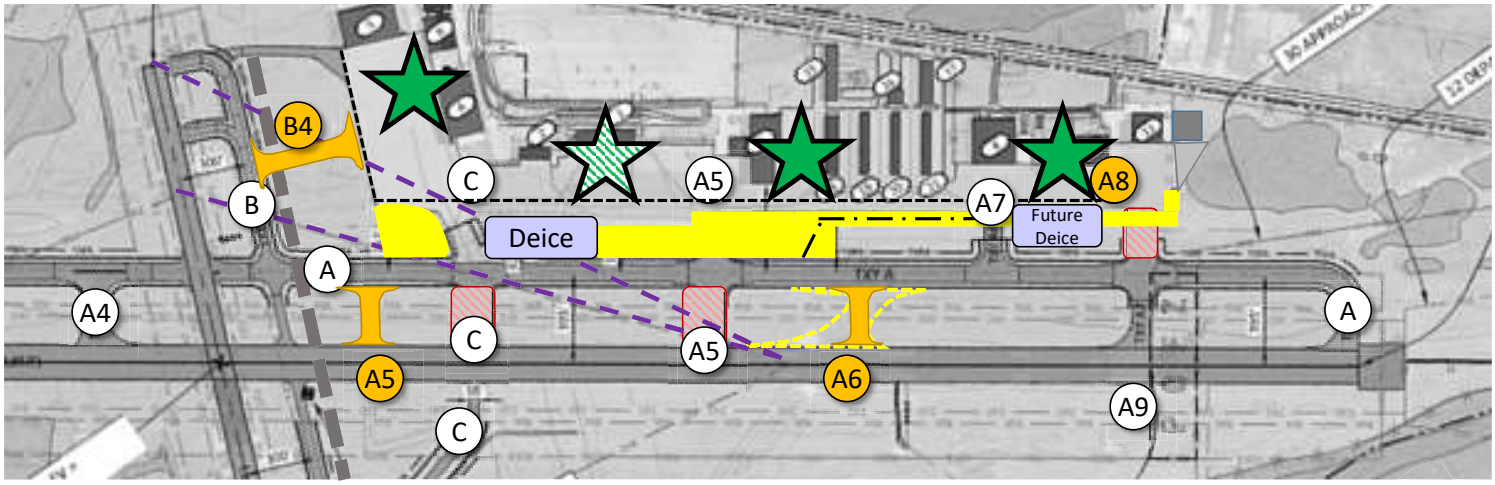


- Remove a portion of "C" between apron and TW A to create a jog.
- "A7" between apron and TW A
- "A5" between RW 12-30 and TW A

- New "B4" between north ramp and TW B
- New "A9" between RW 12-30 and TW A

NEW ALTERNATIVE #6 – APRON FILL

D-181



- "C" and "A5" between RW 12-30 and TW A
- "A8" between TW A and apron

- New "A5" to replace "C" and New "A6" to replace "A5" between RW 12-30 and TW A
- New "A8" to replace demo'd "A8" between TW A and apron
- New "B4" between north ramp and TW B

COMPARISON OF CONNECTOR ALTERNATIVES

D-182

Criteria	Alt 1	Alt 2	Alt 3A	Alt 3B	Alt 4	Alt 5	Alt 6
Airfield pavement removal / construction (SY)	17,683 / 3,444	9,511 / 45,699	8,022 / 46,421	9,511 / 72,770	8,022 / 44,699	9,458 / 31,277	9,511 / 62,738
Relocates current de-icing pad?	Yes – to future south location	No	No	No	No	Yes, west of existing	No
RW 12 exit distances (TW B @ 4,230, A8 @ 8850)	5050, 6080, 7930 (no change from existing)	5380, 6690, 7930	6060, 6690, 7930	6690, 7930	6080, 6690, 7930	5050, 6690, 7930	4680, 6690, 7930
Eases congestion in terminal, CBP and de-icing area	May increase congestion with relocation of connectors C and A5	Some improvement from apron widening south of terminal	Some improvement from apron widening south of terminal and new A11 connector	Significant improvement from apron infill in terminal area	Some improvement from apron widening south of terminal	May increase congestion with relocation of de-icing pad	Significant improvement from apron infill in terminal area
Operational benefit to W Ramp	No change	Addt'l ramp may hinder ops	Addt'l ramp may hinder ops	Addt'l ramp may hinder ops	Addt'l ramp may hinder ops	Improves Twy B access	Improves airfield access
Parking apron in RVZ (existing/future)	No/No	No/No	No/Yes	No/Yes	No/Yes	No/No	No/No
Overall score	8	9	7	6	7	7	11

0 1 2

TERMINAL ALTERNATIVES

Process and findings

- Developed three families of concepts
  - Two-story addition plus renovate existing
  - Single-story addition plus renovate existing
  - Two-story replacement of existing
- Considerations:
  - Ability to meet requirements
  - Potential to reuse existing terminal in long-term
  - Adequate airside for aircraft parking and operations
  - Constructability for start-up and ability to expand beyond PAL 3
  - Operational impacts
  - Comparative costs
  - Potential for future FIS
  - All concepts expected to have similar environmental consequences

TERMINAL ALTERNATIVES DEVELOPMENT

Process builds on understanding of possible options as concepts are refined

BLOCK PLANNING

- Based on space requirements by function
- Arrange blocks for passenger flow and terminal operations
- Big picture

Alternatives charrette with GCIAA to explore ideas and evaluation criteria

SKETCH PLANNING

- Better define spaces within existing constraints
- Interior layout
- Consider existing footprint
- Passenger flow/airside ops
- Landside
- Initial comparative costs

CONCEPT LAYOUT

- Refine interior space for passenger flow and building efficiency
- Constructability and phasing of development
- Aircraft parking
- Landside changes and phasing
- Existing building constraints
- Evaluation of alternative concepts

Alternatives workshop with GCIAA to review alternatives, evaluation and potential refinements

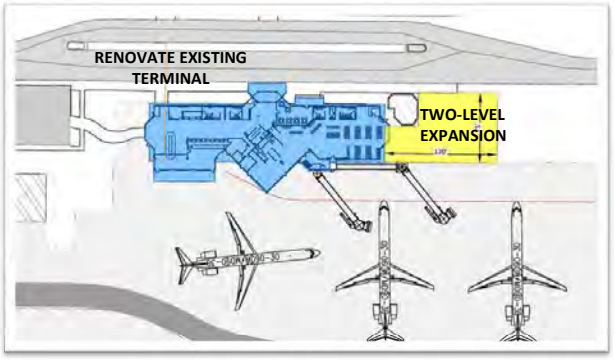
REFINE PREFERRED ALTERNATIVE

- Reduce constructability issues
- Improve internal flow and space organization
- Optimize aircraft parking and airside operation
- Better define curbfront and roadway
- Refined cost estimate for terminal, apron and landside

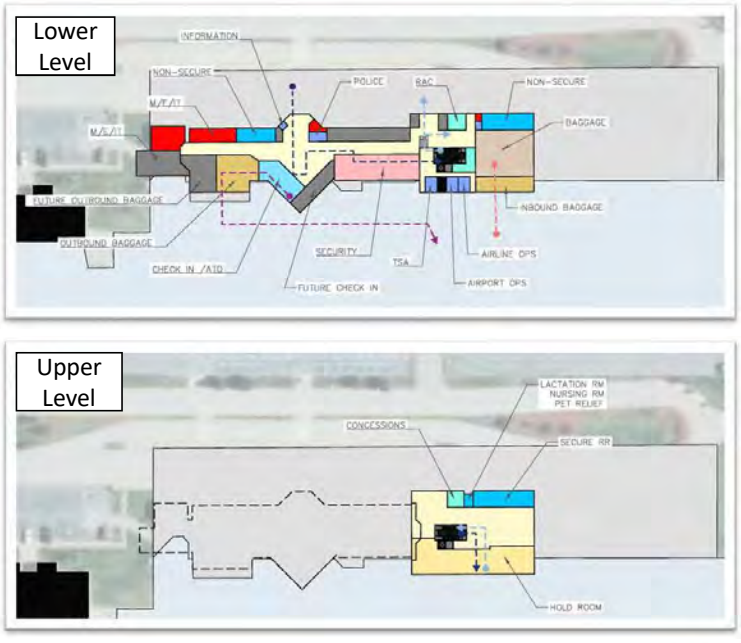
ALTERNATIVE 1 – PAL 3

TWO LEVEL EXPANSION + RENOVATION

9-21-18 concepts for initial pricing



11-14-18 concepts for GCIAA alternatives workshop

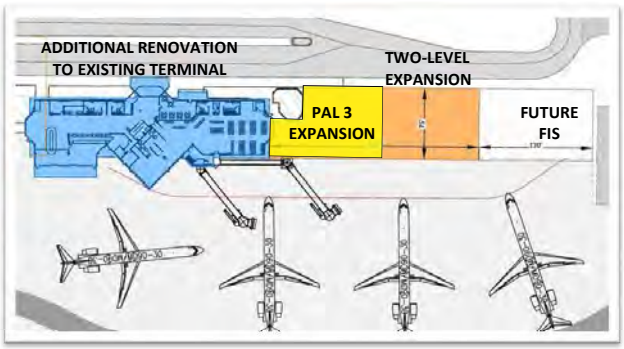


ALTERNATIVE 1 – PAL 5

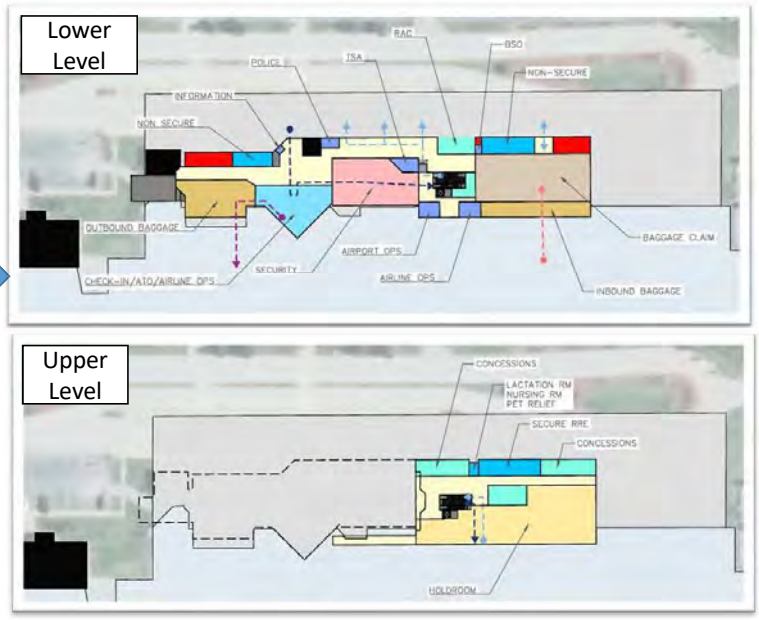
D-187

TWO LEVEL EXPANSION + RENOVATION

9-21-18 concepts for initial pricing



11-14-18 concepts for GCIAA alternatives workshop



ALT 1 REFINEMENTS

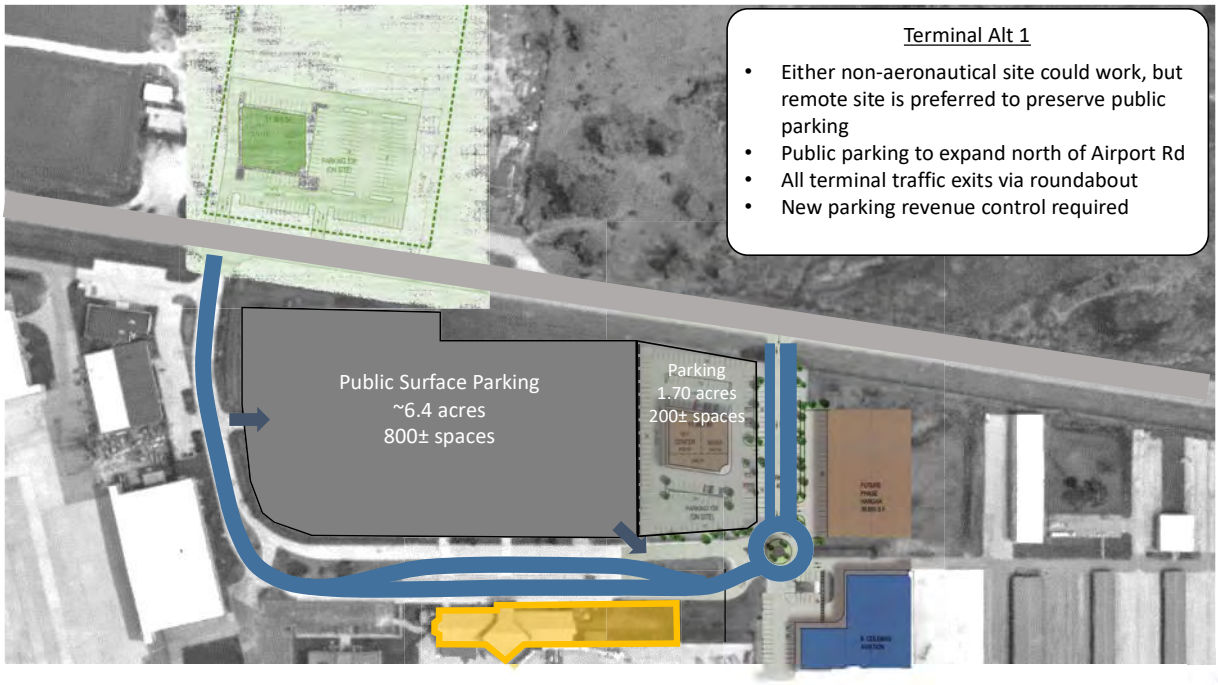
D-188

Initial block planning to concept layout

- Use of interior space in existing terminal
  - Initial renovation for PAL 3 – sizing, practicality and passenger flow
  - Additional renovations for PAL 5 – adequacy and constructability
  - Extents of existing terminal and equipment to be used
- Size and layout of two-level addition
  - Vertical circulation and passenger flow
  - Inbound baggage – size and operations
  - Holdrooms and gates – ability to gate aircraft, passenger flow
- Potential for FIS – internal flow from gates into facility
- Landside – roadway and parking

TERMINAL ALT 1 LANDSIDE

D-189



ALTERNATIVE 2

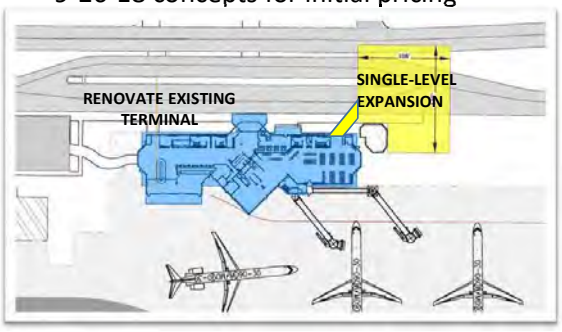
D-190

SINGLE LEVEL EXPANSION + RENOVATION

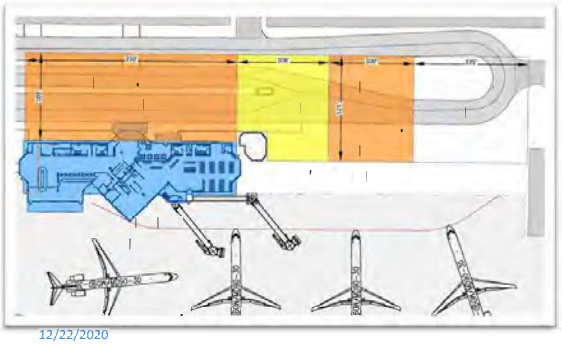
9-26-18 concepts for initial pricing

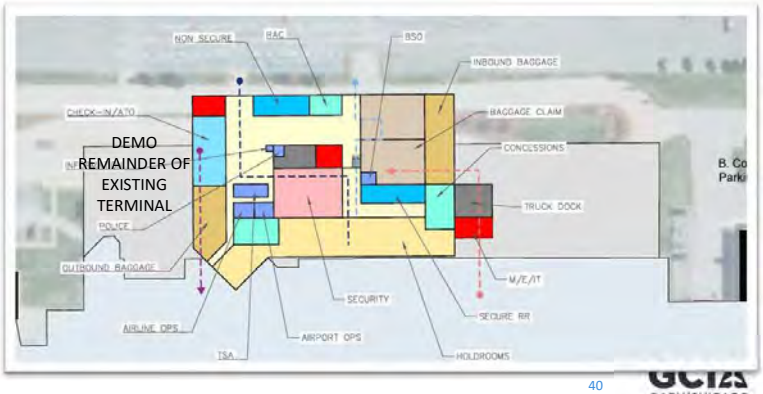
11-14-18 concepts for GCIAA alternatives workshop

PAL 3



PAL 5



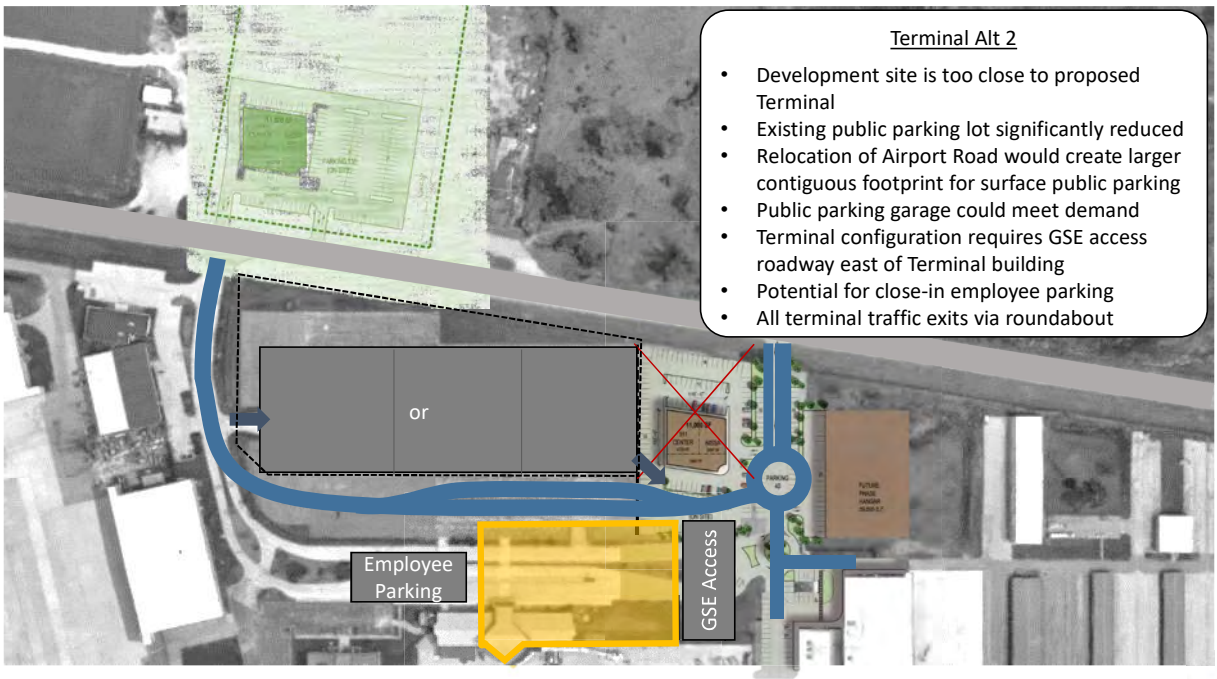


ALT 2 REFINEMENTS

Initial block planning to concept layout

- Use of interior space in existing terminal
  - Initial renovation for PAL 3 – sizing, practicality and passenger flow
  - Additional renovations for PAL 5 – adequacy and constructability
  - Extents of existing terminal and equipment to be used
  - Minimize structural and roof modifications beyond PAL 3
- Size and layout of two-level addition
  - Circulation and passenger flow
  - Inbound baggage – cart path and congestion
  - Baggage claim – passenger connection to landside
  - Holdrooms and gates = ability to gate aircraft
  - PAL 3 to PAL 5 expansion feasibility
- Landside – roadway and parking

TERMINAL ALT 2 LANDSIDE

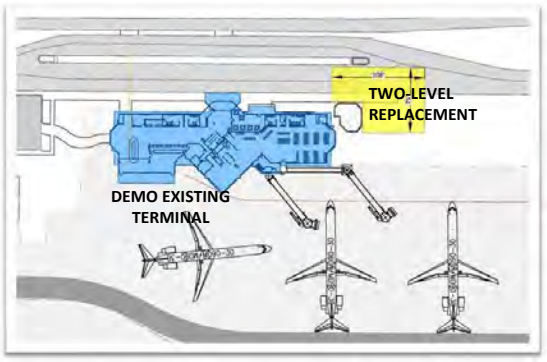


ALTERNATIVE 3 – PAL 3

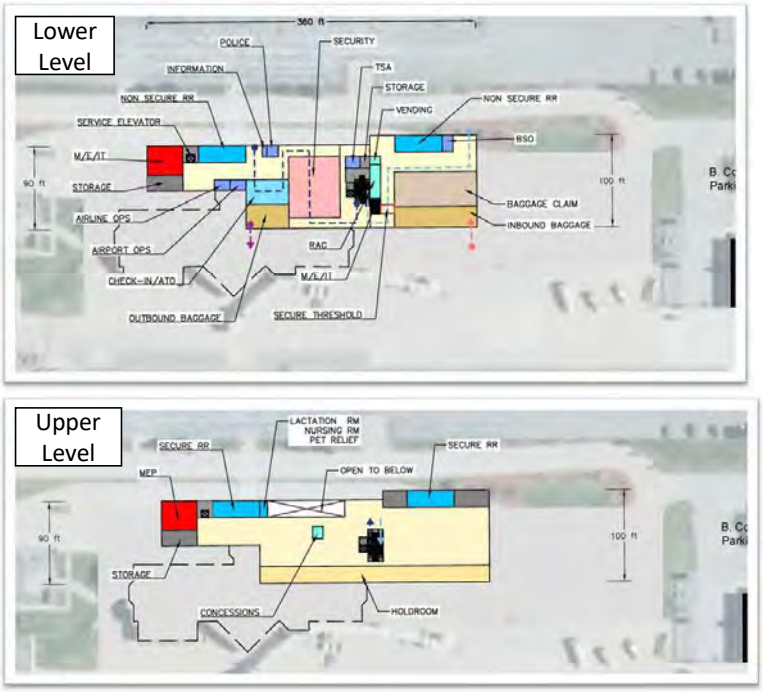
TWO-LEVEL REPLACEMENT

D-193

9-21-18 concepts for initial pricing



11-14-18 concepts for GCIAA alternatives workshop

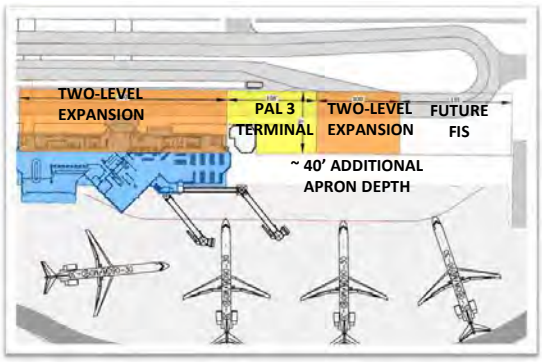


ALTERNATIVE 3 – PAL 5

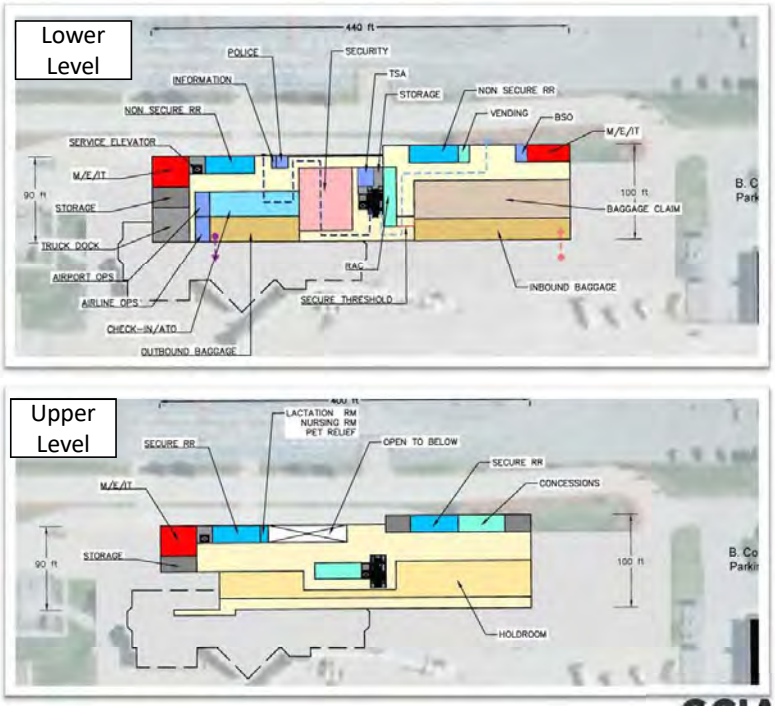
TWO-LEVEL EXPANSION EAST AND WEST

D-194

9-21-18 concepts for initial pricing



11-14-18 concepts for GCIAA alternatives workshop

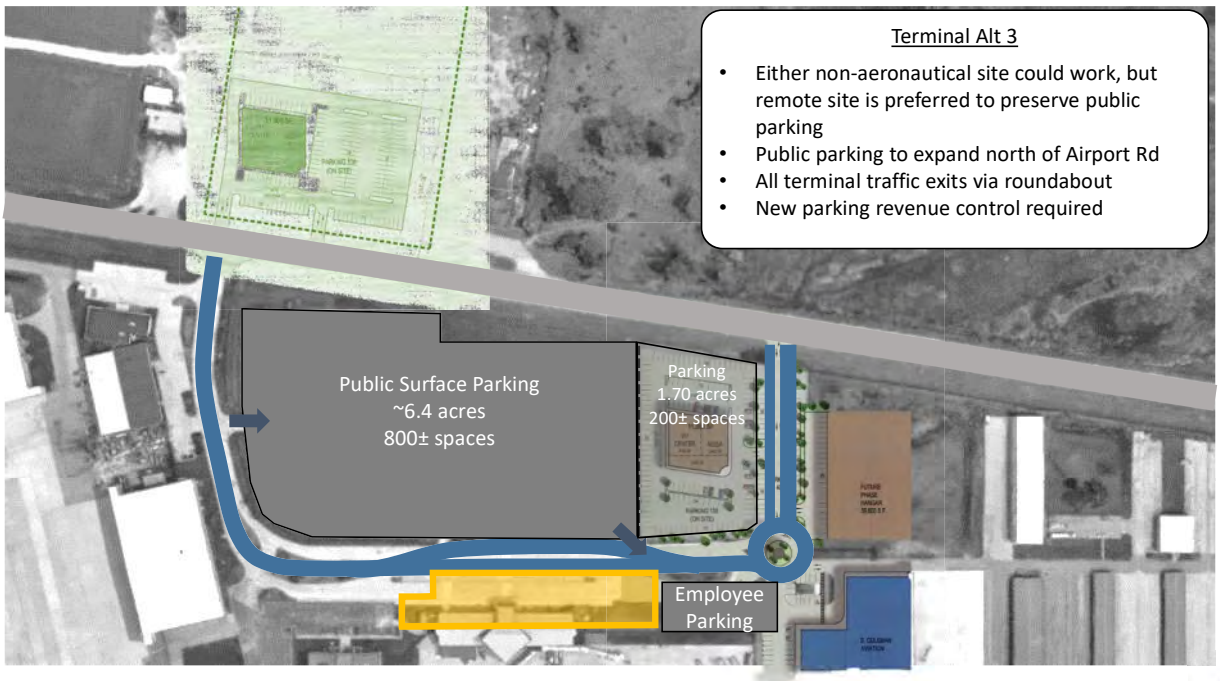


ALT 3 REFINEMENTS

Initial block planning to concept layout

- Floor plan appropriate for anticipated operations
  - Reviewed plans from other small airports
  - Define potential space available
- Size and layout of two-level replacement
  - Minimize impacts on existing terminal operations
  - Aircraft parking and circulation – expand apron, balance with landside impacts
  - Circulation and passenger flow – vertical circulation
  - Balance required functions/footprint of first level with those of second level
  - Holdrooms and gates – ability to gate aircraft
  - PAL 3 to PAL 5 expansion feasibility
- Landside – roadway and parking

TERMINAL ALT 3 LANDSIDE



EVALUATION OF TERMINAL CONCEPTS

D-197

	Alt 1		Alt 2		Alt 3		Alt 1	Alt 2	Alt 3
Criteria	**PAL 3**	**PAL 5**	**PAL 3**	**PAL 5**	**PAL 3**	**PAL 5**	**Score**	**Score**	**Score**
Estimated terminal cost	$47.78M	$55.73M	$42.35M	$65.83M	$49.95M	$36.17M	3	4	3
Meets program	Some areas slightly undersized	Some areas slightly undersized	Some areas slightly undersized	Meets program	Second level has areas over program requirements to match lower-level footprint	Meets program	3	5	4
Passenger movements	No wayfinding u-turns, one level change	No wayfinding u-turns, one level change	No wayfinding u-turns, no level change	No wayfinding u-turns, no level change	U-turn for vertical circulation, one level change	U-turn for vertical circulation, one level change	6	6	4
Airline operations	Reuse of existing building results in awkward layout for airline operation and congested ramp	Reuse of existing building results in awkward layout for airline operation and congested ramp	Reuse of existing building results in awkward layout for airline operation and congested ramp	Expansion and significant renovation of existing building create better space layout. Ramp congested.	Adequate operations space in terminal, space for Airport operations, apron area more spacious	Adequate operations space in terminal, space for Airport operations, apron area more spacious	1	4	6
Landside work	Use existing curbfront	North face of building pushed landside, so will require modification of curbfront lanes	Termporary curbfront roadway reconfiguration around building addition	New terminal curbfront roadways required landside of existing	Realignment of terminal curbfront roadways required landside of existing	Some modification to extend curbfront east and west with addition.	5	3	4
Aircraft parking and access	No change (airside face of terminal maintained)	No change (airside face of terminal maintained). Requires fixed loading bridge extension to serve PAL 5 gates.	Maintains airside building face but requires longer bridges to reach aircraft door. In PAL 3, aircraft must be positioned east to fit.	ADG IV aircraft can park but cannot be gated due to constrained apron. angled parking, some congestion at PAL 5	Additional 40' of apron depth from new airside bldg face (560 SY) accommodates ADG IV aircraft with angle parking.	Additional 40' of apron depth from new airside bldg face (1,087 SY) allows ADG IV aircraft with angled parking, some congestion at PAL 5	3	1	6
Ease of construction and expansion	Addition is independent of existing except for building tie-in. Extensive remodeling to existing building needed. Complicated remodeling phasing would impact passenger operations, but little change to curbfront.	Two-level addition to the east also requires expanding existing building north, creating some roof framing challenges. Roadway mods for additional curbfront would be needed.	Roadway relocation, extensive remodeling of existing terminal. Addition with baggage claim and handling is relatively easy to accomplish. May relocate mechanical court.	Extensive remodeling of existing building to create ground level gates will disrupt passenger operations.	Overlapping new/existing footprints add complexity to construction. Existing terminal cannot remain operational during replacement.	Expansion can be constructed with minimal impact to operations. Overlapping footprints create complexity with foundations.	4	2	4
Ease of adding future FIS	Could be added to the east if needed but would block holdroom expansion.	Could be added to the east if needed.	Could be added to the east if needed with modification of truck dock and inbound baggage access.	Could be added to the east if needed with modification of truck dock and inbound baggage access.	Could be added to the east if needed but would block gate and baggage claim expansion.	Could be added to the east if needed with modifications to outbound terminal roadway or B. Coleman parking.	5	3	3
Flexibility to accommodate future changes in passenger processing and operations	Reuse of existing terminal limits flexibility of west end	Greater flexibility in new areas, but west end (existing terminal) still constrained by building envelope	Reuse of existing terminal limits flexibility of west end	Better grouping of functions and ability to expand north or modify interior in PAL 5 layout	New construction creates more clear space and circulation around a central checkpoint.	Potential for north or east expansion, opportunity to design for flexibiliy.	2	4	6
Overall ranking							**32**	**32**	**40**

Scoring 1-2 3-4 5-6

CONCLUSIONS FOR REFINEMENT

D-198

Based on alternatives evaluation

- Additional apron space is needed for safe and efficient operations and to gate all aircraft in future PAL 5
- Reusing existing building saves some cost at the expense of operational sufficiency and future flexibility
- Single-level structure is not significantly more efficient and requires additional footprint
- Existing building is not configured for ease of expansion
- There is adequate landside space to move the future terminal north, increasing apron depth
- Initial minimal modifications will be needed in all cases to restart commercial passenger service
- PAL 3 end state should allow for ease of expansion

ALT 3 FINAL REFINEMENTS

D-199

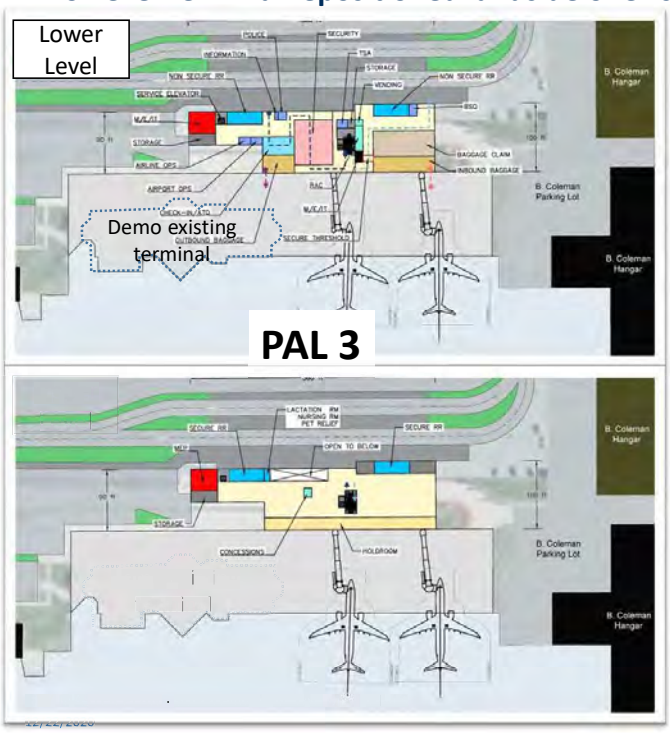
Improve poorly rated elements

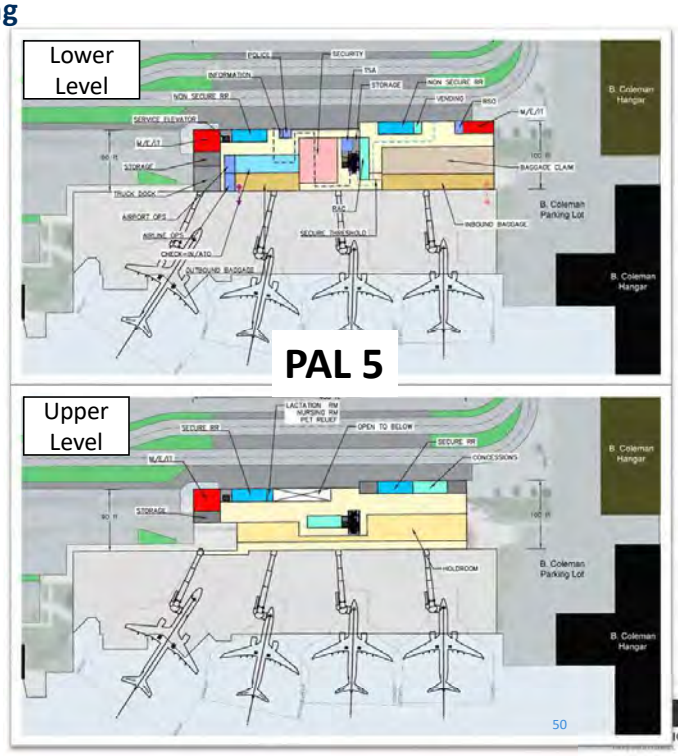
- Move initial replacement north of existing terminal
  - Construct road changes with replacement in final configuration – minimizes temporary work
  - Existing terminal remains operational during construction
  - Apron can accommodate ADG III and IV aircraft (forecast fleet) with service road and space for airline ops
  - All aircraft can be gated in PAL 5
- Recommend for design development:
  - Study reduction in PAL 3 footprint, reducing overall cost
  - Consider east/west placement to maximize distance to B. Coleman for future aircraft parking and potential for FIS

PREFERRED ALTERNATIVE

D-200

Two-Level Terminal repositioned landside of existing

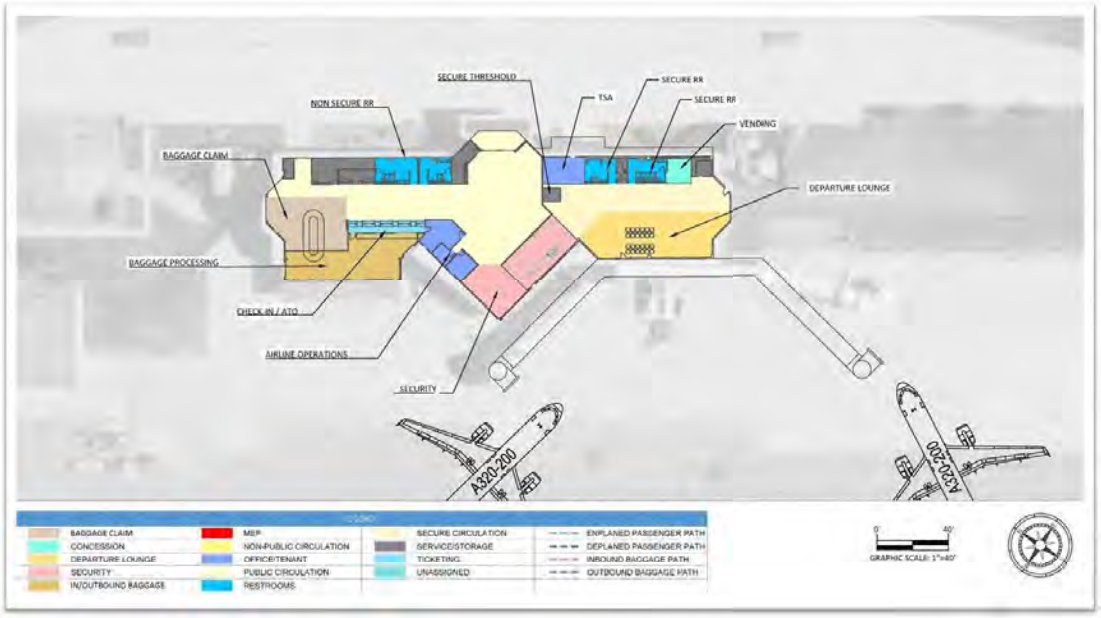




POTENTIAL MODS FOR START OF SERVICE

D-201

Minimal modifications to begin service



- Minimize time to complete and cost, given short notice of start-up
- Some functions may not be ideally sized
- Consider aircraft loading bridges and parking when fleet is known
- Estimate $7.5M to $10M cost for budgeting

D-202

LANDSIDE OBJECTIVES

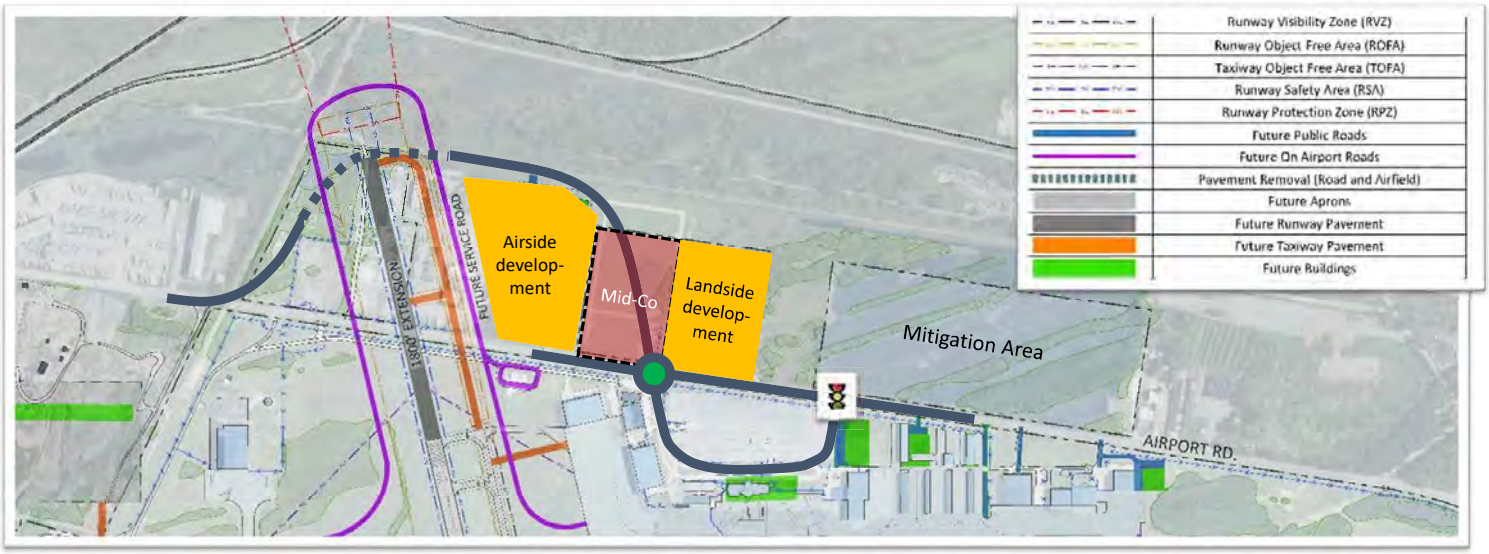
D-203

- Airport Road geometry - performance for through traffic
- Maintain or improve airline passenger wayfinding and experience
- Maintain or improve tenant wayfinding and experience
- Opportunity for developable parcels
- Potential to expand terminal parking
- Optimize development cost
- Minimize environmental consequences
- Compatible with runway and terminal development

OTHER CONSIDERATIONS

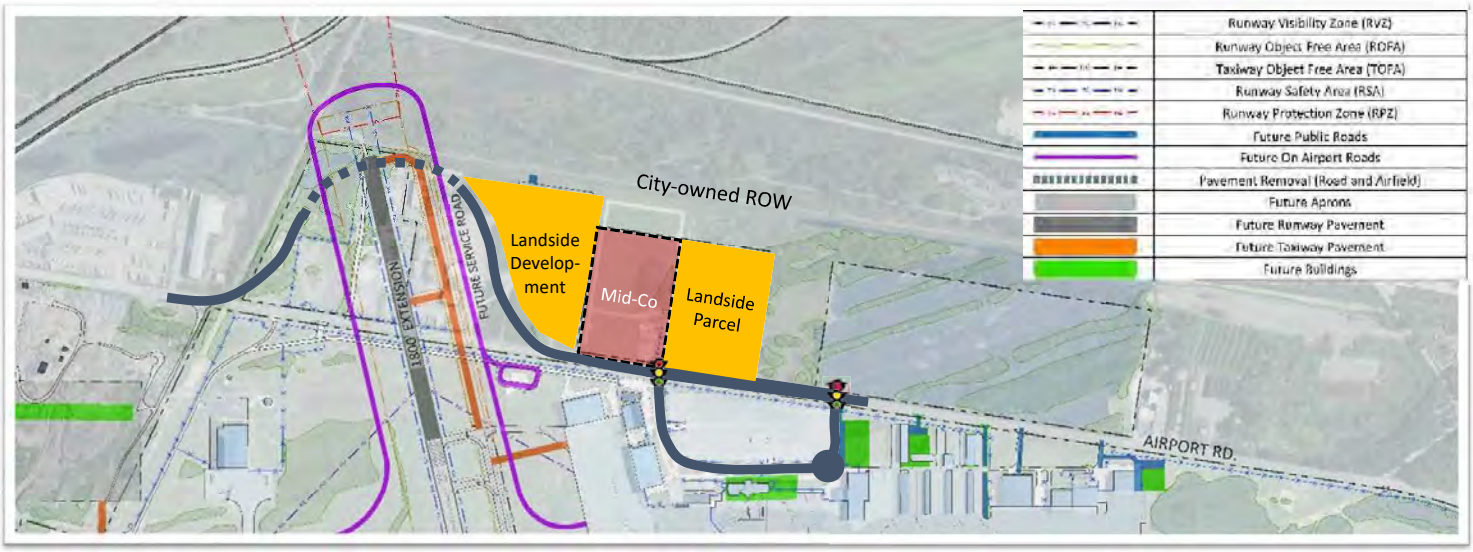
D-204

- Plan should optimize use of City-owned parcels and those anticipated for acquisition
  - GCIAA / City of Gary continue to acquire parcels adjacent to the Airport to support development and maintain land use compatibility.
  - Alternatives developed based on discussion with GCIAA
- Mid-Co site is owned by the City
  - EPA released the land with provision that development should not penetrate clay cap over contamination
  - Could be used for surface parking
  - Any development must be approved by EPA
- Roadway alignment would likely include a utility corridor



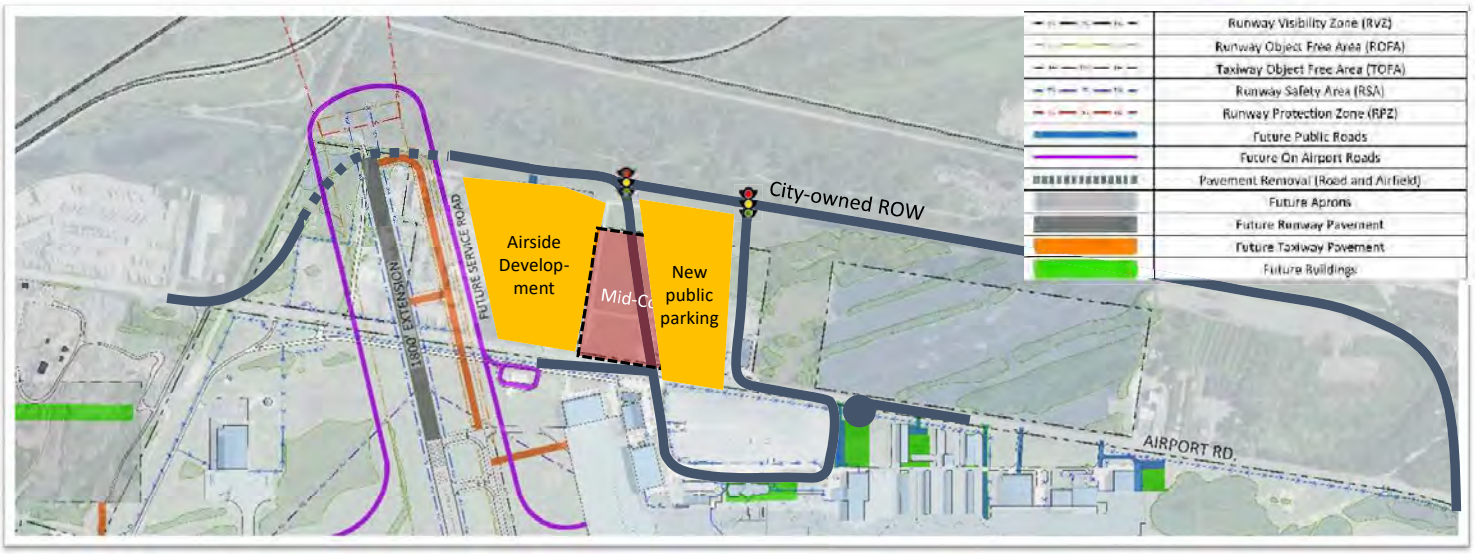
- Roundabout at terminal entrance, signal at exit
- Alignment reasonable for traffic speeds
- Traverses Mid-Co site (environmental concern)
- ~5,400 LF new Airport Road

AIRPORT ROAD RELOCATION ALT #2



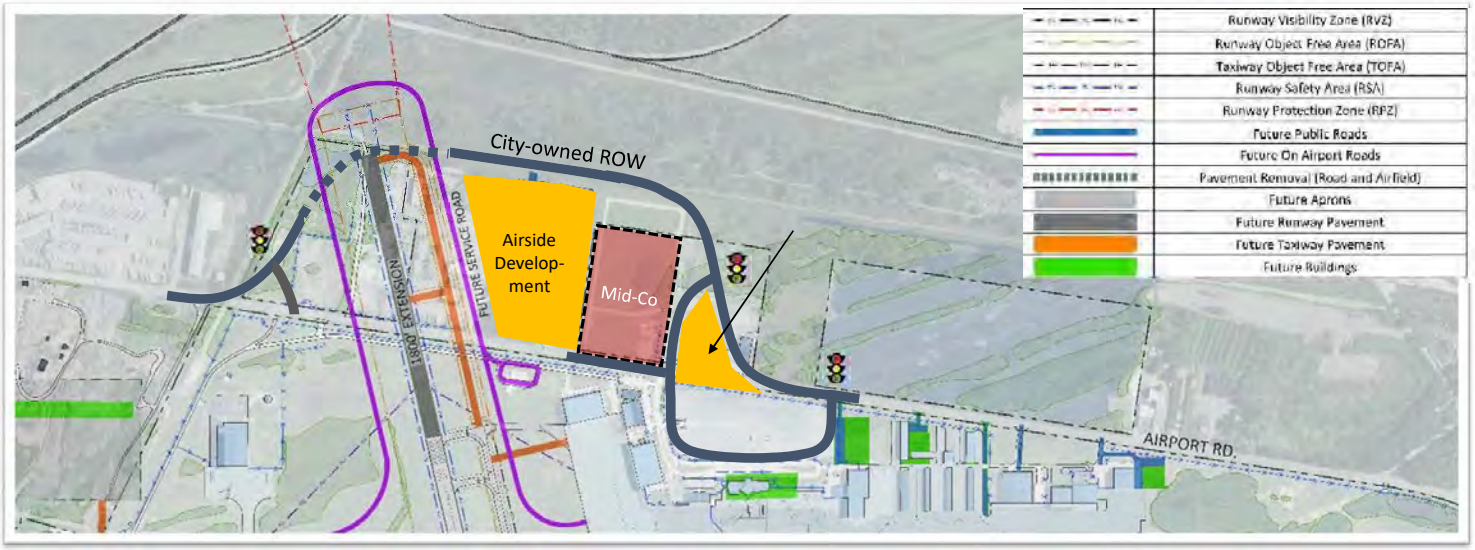
AIRPORT ROAD RELOCATION ALT #3

D-207



AIRPORT ROAD RELOCATION ALT #4

D-208



- Avoids Mid-Co site
- ~5,150 LF new Airport Road
- ~700 LF new Terminal Loop extension

ROADWAY ALTERNATIVES EVALUATION

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Roadway performance	Roundabout on Airport Road may be problematic given typical speeds	Curves on Airport Road and in tunnel are tight and may create safety concerns.	Long straight alignment with curves north and south suitable for speed limit.	Curves suitable for speed limit line of sight, traffic lights at terminal entrance/exit will also calm traffic.
Passenger wayfinding	Like current condition except for one-way Terminal Road	Like current condition except for one-way Terminal Road	Airport Road moved further from terminal, but signalized intersection at entrance can be signed prominently	Visibility of terminal maintained from Airport Road, signalized intersection can be signed prominently
Tenant access	Requires additional roads parallel to Terminal Drive for tenant access. Wayfinding more complicated.	Requires additional roads parallel to Terminal Drive for tenant access. Wayfinding more complicated.	Two-way traffic on part of Terminal Rd. Dead end on Airport Road not desirable. Tenants lose visibility.	Requires additional road for Admin and Gary Jet Center. Tenants maintain visibility from Airport Road.
Developable parcels	New airside parcel E of Rwy 2-20, small area W of runway and E of realigned Airport Road	New landside parcel E of Rwy 2-20, small area W of runway and E of realigned Airport Road	Full relocation does not provide substantially more revenue-producing parcels – no more than other alts.	New airside parcel E of Rwy 2-20, small area W of runway and E of realigned Airport Road
Terminal parking expansion	Possible, but not contiguous	Possible, but not contiguous	Yes	Yes
Environmental consequences	Realignment of Airport Road through Mid-Co site not desirable. Some wetlands impact.	No impact to Mid-Co or mitigation areas. Some wetlands impact.	Realignment of Terminal Drive through Mid-Co is not desirable. Some wetlands impact with Terminal Drive.	No impact to Mid-Co or mitigation area. Some wetlands impact.
Cost (in terms of length of new road)	5,400 LF Airport Rd	4,300 LF Airport Rd	10,300 Airport Rd +2,200 Terminal Loop	5,150 Airport Rd + 700 Terminal Loop
Overall rating	**8**	**9**	**5**	**11**

Additional comments (and responses) from Master Plan TAC Following Meeting #4 (2/5/2021)

ADDITIONAL COMMENTS FROM MASTER PLAN TECHNICAL ADVISORY COMMITTEE (TAC) FOLLOWING MEETING #4

GYY Master Plan

#	From	Organization	Date Rec'd	Comment	Resolution/Response
1	Adam Rod	Chicago Department of Aviation	12/3/2020	Cargo could be a surpirising growing opportunity for GYY--there is certainly plenty of ironic opportunity to go around for the Chicago area in the near-term, especially the apparent long-term surge in e-commerce. Unfortunately, it looks like us "regular" airports will have to recover first on passenger service at least through 2022 before GYY has any fair shot on that front--so air cargo could very well fill in as a serious new business prospect outside your normal bread and butter like GA.	The Master Plan recognizes the potential for air cargo growth, although the FAA-approved forecast did not foresee an operation such as UPS's. GCIAA will continue to pursue cost-effective opportunities for a stand-alone cargo development.
2	Adam Rod	Chicago Department of Aviation	12/3/2020	No strong opinion from me on the Taxiway A connector plan--it seemed that #6 got the most conversation, but I will leave that more to your own ops folks to guide on the best efficiency based on GYY history.	Acknowledged
3	Adam Rod	Chicago Department of Aviation	12/3/2020	Keep in mind to leverage as much additional funding as possible for your costs, like FAA AIP grants for the airside or perhaps city/state resources for the landside	Acknowledged
4	Michael Buening	INDOT Multimodal P&P, Office of Aviation	12/14/2020	Considerations that should be addressed from review of AC 150/5070-6B: • Justify proposed development through technical, economic and environmental investigation of concepts and alternatives • Propose achievable financial plan to support the implementation schedule. Include a Financial Feasibility Analysis • Each alternative should be evaluated on operational, environmental and financial impacts • Technical Advisory Committee will evaluate technical merits • Environmental factors are to be considered with the alternatives matrix in the alternatives analysis that gives each alternative and the potential environmental impacts and required permits • Noise considerations due to the extension of RW 2-20 • Pavement Strength Considerations • Will cost make any alternative infeasible? • Planners should examine each identified alternative's technical feasibility, economic and fiscal soundness and aeronautical utility • Cost estimates are a very effective way to compare alternatives and should be done in all alternative analyses • Stakeholder input should be used to select	These comments were provided to summarize discussion after TAC 4 meeting during a conference call with the Planning Team, GCIAA, and FAA. Many factors noted in the comments were discussed during the TAC meeting presentations, but not documented in the TAC meeting slides. Noise and financial analyses of the proposed plan are not part of the Master Plan scope of work. Noise analyses will be part of the EA for the runway extension. Planning Team has better documented the alternatives, evaluation factors and rankings in the supplemental materials prepared for the TAC. In cases where the scope did not allow for detailed analysis, such as preparing detailed cost estimates of each alternative, the Planning Team has used quantities of major elements (pavement construction, pavement demo, length of road) to evaluate the differential costs between alternatives.

ADDITIONAL COMMENTS FROM MASTER PLAN TECHNICAL ADVISORY COMMITTEE (TAC) FOLLOWING MEETING #4

GYY Master Plan

#	From	Organization	Date Rec'd	Comment	Resolution/Response
5	Michael Buening	INDOT Multimodal P&P, Office of Aviation	12/14/2020	Apron configuration • TAC 3 only had Alt 2 • TAC 4 had Alt 2, Alt 3A, Alt 3B, Alt 4, Alt 4, Alt 6 • No alternatives evaluation • No Cost Evaluation	Planning Team will address alternatives in greater detail in supplemental materials as they are in the Alternatives Chapter of the Master Plan. Quantity of apron to be added or removed will serve as proxy to compare costs of individual alternatives.
6	Michael Buening	INDOT Multimodal P&P, Office of Aviation	12/14/2020	Airport Road Relocation • TAC 3 had Alt 1, Alt 2, Alt 3 • TAC 4 had only a new revised hybrid Alternative that was selected • No Alternatives Evaluation • No Cost Evaluation	Planning Team addressed alternatives in greater detail in supplemental materials for the TAC (as they are in the Alternatives Chapter of the Master Plan). Length of new roadway serves as proxy to compare costs for individual alternatives since detailed cost estimates for all alternatives was in the scope of work.
7	Michael Buening	INDOT Multimodal P&P, Office of Aviation	12/14/2020	RW 2-20 Extension • TAC 3 had Alt 1A, Alt 1B, Alt 2, Alt 3/4 • TAC 4 had Alt 3/4 selected • No Alternatives Evaluation • No Cost Evaluation	Planning Team has addressed alternatives in greater detail in the supplemental materials for the TAC, as they are addressed in the Alternatives Chapter of the Master Plan. Preliminary cost estimates will be included in the alternatives evaluation, and will be considered on an equal basis with other evaluation criteria.
8	Michael Buening	INDOT Multimodal P&P, Office of Aviation	12/14/2020	Terminal Building • TAC 3 had Alt 1, Alt 2, Alt 3 • TAC 3 included minimal Alternatives Evaluation • No Cost Evaluation • TAC 4 selected Alt 3	Planning Team has addressed alternatives in greater detail in the supplemental materials for the TAC, as they are addressed in the Alternatives Chapter of the Master Plan. Preliminary cost estimates will be included in the alternatives evaluation, and will be considered on an equal basis with other evaluation criteria.
9	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	12/14/2020	Inform and keep all aviation stakeholders/public updated on the UPS operations, e.g., wake turbulence, jet blast, general noise awareness, etc.	GCIAA discusses ramp and other operations in the monthly tenant meetings as needed to identify concerns or resolve issues. Monthly meetings of the Airport Board are open to the public, and the public has been able to comment on this Master Plan. Interestingly there have been no noise complaints made to GCIAA since the start of UPS operations at GYY.
10	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	12/14/2020	Provide reasonable opportunity for airport tenants to comment on the proposed airfield alternatives. Maintain documentation.	Airport tenants have been part of the planning process as TAC members. Subsequent to TAC Meeting 4, the Planning Team provided additional materials for TAC review and requested additional comments from TAC, which includes tenants. Comments are documented in this table, which will be incorporated into the Master Plan Appendixes.

ADDITIONAL COMMENTS FROM MASTER PLAN TECHNICAL ADVISORY COMMITTEE (TAC) FOLLOWING MEETING #4

GYY Master Plan

#	From	Organization	Date Rec'd	Comment	Resolution/Response
11	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	12/14/2020	Status of proposed Runway 2/20 extension (repeated from previous comments): While the less than 95% wind coverage establishes that a crosswind is AIP eligible, there still needs to be justification to establish which aircraft needs the crosswind and will regularly use it. In order for the analysis to justify using Chapter 3 of the Runway Length AC, it needs to establish existing usage by aircraft over 12,500 lbs., or reasoning as to why they need the crosswind (i.e. penalties being experienced, diverted flights, etc.).	Justification of need from individual tenants and aircraft operators was not available for the Master Plan. GCIAA will work with tenants to compile this information for an update to the runway length justification. This update will be performed in conjunction with the EA.
12	Tom Mize	Airport Certification/Safety Inspector, FAA AGL 620	12/14/2020	Slide 18 - GYY is a Class IV airport, no scheduled air carriers, approved for unscheduled large air carrier operations and required to meet Index A ARFF coverage since there is no scheduled air carrier operations. • Current Maintenance facility is at capacity • Current ARFF Station is outdated	Acknowledged. Will revise materials regarding ARFF coverage. Master Plan recognizes that ARFF station is outdated and Maintenance Facility is at capacity.
13	Tom Mize	Airport Certification/Safety	12/14/2020	Only Runway 12/30 is approved for carrier operations	Acknowledged. Will review Master Plan wording to ensure that this is clearly stated.
14	Michael Buening	INDOT Multimodal P&P, Office of Aviation	1/15/2021	RW 2-20: The RW 2/20 extension fleet mix should be clairified more with FAA comments regarding the fleet mix. Additionally, any extension will also require a runway length justification approved by the FAA.	See comment 11 response.
15	Michael Buening	INDOT Multimodal P&P, Office of Aviation	1/15/2021	Apron: • The Apron alternatives made a big jump from The TAC 3 single choice with 3,433 SY of new pavement to 7 alternatives that range from the 3,444 SY to 72,770 SY. • The evaluation of the Aprons did not mention any cost considerations. This still needs to be done. • The alternatives 3B and 6 include extensive apron connecting to the edge of TW A. Added pavement in the TW A object free area seems to be quite the cost for pavement that can not be used for Apron. • Alternative 2 may be the best alternative when looking at cost of extra pavement.	The Planning Team prepared a wide range of options for discussion with GCIAA and the TAC. Because detailed cost estimates were not prepared for each alternative, areas of new and demo pavement were quantified as a proxy for magnitude of cost to compare alternatives. The Planning Team discussed the connector alternatives again with GCIAA following receipt of TAC comments. Alternative 6 is still the preferred plan given that it provides opportunity for aircraft to exit the apron area in multiple locations in the terminal area. The work will be done in phases over multiple years, with the first elements of demo (C and A5 between TW A and RW 12-30) and construction (relocated A5) included in the Airport's FY 2022 - 2026 CIP. The limits of the non-movement area will be clearly marked on the apron. GCIAA will continue to re-evaluate the plan, particularly in the terminal area as UPS operations mature and activity at the CBP increases.
16	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	1/23/2021	TAC supplemental materials Slide 25: Add legend to to clairfy use of colors, particularly the yellow dashed lines	Will add legend to all graphics in the report. Yellow dashed line represents high speed runway exit from previous master plan.

ADDITIONAL COMMENTS FROM MASTER PLAN TECHNICAL ADVISORY COMMITTEE (TAC) FOLLOWING MEETING #4

GYY Master Plan

#	From	Organization	Date Rec'd	Comment	Resolution/Response
17	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	1/23/2021	TAC supplemental materials Slides 26-31: Assume yellow is for apron fill. Earlier slides do not have fill heading	Assumption is correct. Will add legend to graphics in report.
18	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	1/23/2021	TAC supplemental materials Slide 36: Suggest including a legend depicting AIP-eligible/non-eligible schematic, it will assist with funding estimate. I understand it may not be in this Master Planning scope; however I would like to include it as FYI.	Defining AIP-eligibility of the terminal elements is not part of the Master Plan scope. GCIAA finance team could prepare an exhibit using the preferred alternative. However, this project is proposed as long-term (beyond 2033) so is not necessarily ripe for an assessment of eligibility at this time. Additionally, eligibility criteria could change over the next 11+ years.
19	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	1/23/2021	TAC supplemental materials Slide 39: • Depict airport property line • Identify aeronautical and non-aeronautical land	Will add property lines to the roadway alternative exhibits. With respect to identification of aeronautical and non-aeronautical property, for the graphic on Slide 39, the property south of Airport Road is currently aeronautical land use while the property north of Airport Road is currently non-aeronautical land use.
20	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	1/23/2021	TAC supplemental materials Slide 40: Legend	Will add legend and additional labels to terminal alternatives drawings.
21	Gary D Wilson	FAA, Airports Planner, FAA Chicago ADO	1/23/2021	TAC supplemental materials Slide 55: • Road appears to be in RSA. Public road will need to remain outside of the RSA. • Proposed public road should be shown outside (north) of the airport road	Airport Road will be below the RSA, that is, in an underpass, below and separated from the extended runway centerline and RSA. The service road will be outside the RSA, at approximately the same elevation as the runway and taxiway extensions.
22	John Girzadas	President, B. Coleman Aviation	1/20/2021	Question: Is the existing fuel farm location impacted by the short runway extions? If it does, we need to have a new location identified.	The RW 2-20 extension does not impact the fuel farm location. The Master Plan recognizes that fuel farm expansion will probably be needed over the planning
23	Lynn Eplawy	President, Gary Jet Center	1/25/2021	We agree that we don't see a need to have a de-ice pad at the far east end of the airport. However, if UPS eventually expands and builds on the far west end of the airport, perhaps it will, in the future, make sense for an additional pad there.	The Planning Team agrees that moving the existing de-ice pad is not necessary until UPS relocates to a stand-alone facility on the north end of the airfield. At that time, the north de-ice pad infrastructure should be completed and the pad made operational. Then the current de-ice pad could be decommissioned. The de-ice pad projects are idenfied in the Airport's FY 2022 - 2026 CIP for possible construction in 2026.
24	Lynn Eplawy	President, Gary Jet Center	1/25/2021	Regarding the apron entrance points, the airport just spent significant money and time expanding and improving A5, so to remove at this point feels unnecessary. It was widened as well for UPS access to the terminal.	TW connector A5 was reconstructed in 2020 with no change in geometry or width due to deteriorating pavement condition. The project had been initiated prior to UPS service at GYY. GCIAA does not anticipate removing this section of pavement, but would fill in pavement around it under Alternative 6.

ADDITIONAL COMMENTS FROM MASTER PLAN TECHNICAL ADVISORY COMMITTEE (TAC) FOLLOWING MEETING #4

GYY Master Plan

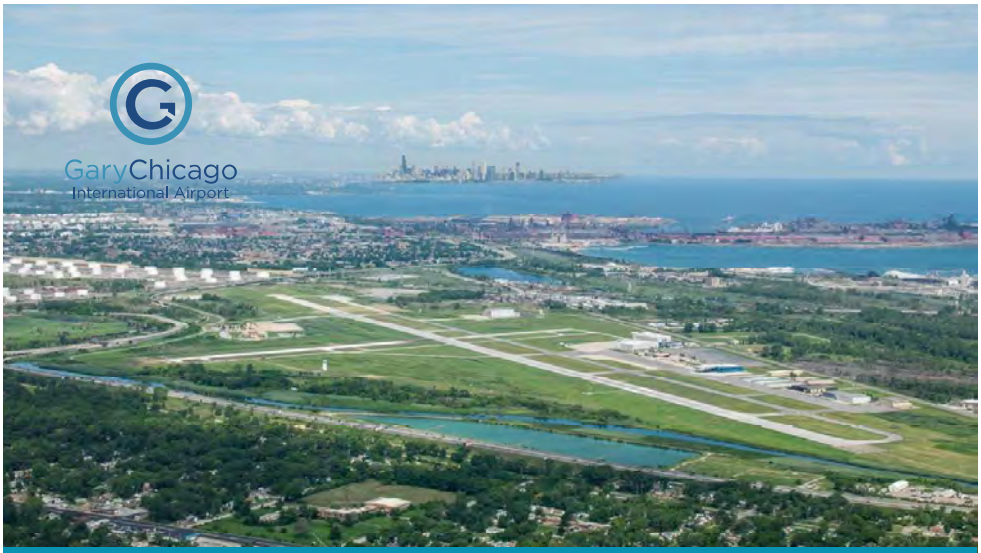
#	From	Organization	Date Rec'd	Comment	Resolution/Response
25	Lynn Eplawy	President, Gary Jet Center	1/25/2021	As it relates to Alt #3b and #6 with additional apron fill, there should be communication and decisions regarding who has control of additional apron space, and traditionally the tower has not had control of that, but increased apron will account for increased movement and parking and it needs to be of concern and decision as this potentially is a safety issue.	The Planning Team discussed the connector alternatives again with GCIAA following receipt of TAC comments. Alternative 6 is still the preferred plan given that it provides opportunity for aircraft to exit the apron area in multiple locations in the terminal area. The work will be done in phases over multiple years, with the first elements of demo (C and A5 between TW A and RW 12-30) and construction (relocated A5) included in the Airport's FY 2022 - 2026 CIP. The limits of the non-movement area will be clearly marked on the apron. GCIAA will continue to re-evaluate the plan, particularly in the terminal area as UPS operations mature and activity at the CBP increases.
26	Lynn Eplawy	President, Gary Jet Center	1/25/2021	Our comments regarding terminal changes seem unimportant at this time, as we still feel solidly that a future master plan would consider this converting to GA space, as we don't believe a tertiary airport in the Chicagoland area will be supported by commercial aviation. Certainly at this time UPS has control of that terminal so any improvements/changes will be dictated by that current leasehold.	Acknowledged. Future Master Plans will re-evaluate the need for and location of a new terminal based on sustainable passenger service and other aviation needs. The Master Plan classisfies this project as Long-Term, beginning after 2033, if demand dictates the need.
27	Lynn Eplawy	President, Gary Jet Center	1/25/2021	Thoughts on Road relocation alternatives: at this point we support alternative #4. Airport Rd gets a lot of street traffic avoiding the tollway that includes semi-trucks, and (oftentimes speeding) passenger cars traveling to and from the City of Gary. Additional traffic lights, with options for customers to enter our properties in a couple of locations feels like a good alternative to support expansion of 2-20.	Acknowledged
28	Joe Seymour	Boeing Executive Flight Ops	1/26/2021	Runway 2 & 20 extension. We agree with the proposed extension (1,800 ft.) to provide a total of 5,400 ft. of useable runway. Sitting on the south side of the lake and lacking a suitable crosswind runway presents challenges for business aircraft operators based in GYY. This proposal greatly enhances the usability of this runway for business aircraft and would likely be a catalyst for future growth in traffic and tenants.	Acknowledged

ADDITIONAL COMMENTS FROM MASTER PLAN TECHNICAL ADVISORY COMMITTEE (TAC) FOLLOWING MEETING #4

GYY Master Plan

#	From	Organization	Date Rec'd	Comment	Resolution/Response
29	Joe Seymour	Boeing Executive Flight Ops	1/26/2021	With the extension of the runway and the relocation of Airport Rd., it would appear areas "C" and "D" in addition to area "F" would be best for corporate GA and FBO development due to accessibility. Cargo seems to be the best fit for area "B" however, that could be repurposed to FBO/Corporate GA as well. These areas offer the best access to the various runways and deice locations, minimizing taxi time, carbon emissions and noise impact. We agree with cargo layout at approach end of RWY 12.	Area C would require construction of a parallel taxiway west of RW 2-20 for corporate GA development, unless the development shared the Boeing taxilane. This area also has known wetlands, which would require mitigation. Area A would also require a new taxiway, but has fewer potential wetland areas. Area B could accommodate GA development after the RW 2-20 extension. The extension will be elevated up to 20 feet above natural ground, so airfield access would be easier on the south end. Therefore, Areas C and D were ranked lower than areas A and F. Area B could serve many functions, with air cargo the most reasonable. With proposed aquisition of the adjacent tracts, there should be space for GA and other needed aeronautical development.
30	Joe Seymour	Boeing Executive Flight Ops	1/26/2021	Ramp and taxiway modifications – no additional comments. Alternative 6 seems reasonable. Regarding deicing locations, consideration should be given to locating an East Deice pad for Runway 30 departures and West Deice pad for Runway 12 departures. This would enhance capabilities and safety through reduced taxi time (post deice).	With respect to ramp and taxiway modifications, see responses to Comments 15 and 25. East and west de-ice pads are proposed for mid-term development. The west pad could be constructed earlier if UPS were to expand operations to a stand-alone location in that area.
31	Joe Seymour	Boeing Executive Flight Ops	1/26/2021	No comments on terminal expansion plans – the proposed plan with a scalable solution that supports future growth seems reasonable.	Acknowledged
32	Joe Seymour	Boeing Executive Flight Ops	1/26/2021	No comments on relocation of ARFF and ATCT.	Acknowledged

Public Workshop 1: Presentation Materials, Boards and Brochure (2/13/2017)



Gary/Chicago International Airport Master Plan Public Workshop

February 13, 2017

MASTER PLAN PUBLIC WORKSHOP # 1

Gary / Chicago International Airport Master Plan Update

2/13/2017

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

A Premier Airport and Critical Asset to the Region

- GCIA is the region's premier mid-sized, **public** airport providing world class service to the aviation community
- A significant asset to the City of Gary and the region as a driver of economic growth, job creation and link between the region and the world

GaryChicago
International Airport

Working together as an Airport Community

- Gary/Chicago International Airport Authority
  - Steward of the airport and its assets on behalf of the public
  - Develops and oversees implementation of the Airport's growth strategies and plans
- Federal, state and local government
- Tenants
  - Fixed-Based Operators (FBOs)
    - Hold contracts with and service airport users and other tenants
  - Indiana National Guard
- General Public and Users
- Chicago Department of Aviation

GaryChicago
International Airport

Recent Highlights at the Airport

- Made possible by a longer runway opened in 2015, **bigger and heavier planes are leaving GCIA and traveling to destinations further away** in the United States, North America and the globe
- **17.8% increase in annual airport operations since 2014** - the last full year before the extended runway opened (25,956 total operations in 2016)
- The airport's **FBOs are investing in the airport**
- A design of a **new Customs and Border Patrol Facility** is nearly complete and will be let for construction in 2017
- Master Planning Process is **charting the future of the airport**

GaryChicago International Airport

Master Plan Business Expo

- Hosted by the Airport Authority in March 2016
- Nearly 70 local businesses attended
- Participation of local firms in the Master Plan development team played a significant role in selection Jacobsen Daniels

GaryChicago International Airport

Indiana National Guard –Slovak Shield 2016

"It would have been very difficult to launch a mission from the airport with this type of heavy equipment and fully fueled aircraft before the runway extension. Given the airport's infrastructure, location and logistical support team, we hope Slovak Shield 2016 is the first of many missions and deployments in the future originating at Gary/Chicago International Airport."

Lieutenant Colonel Matthew Handy
Indiana National Guard.

Some recent headlines

AINonline
Gary Airport Eyes a Bigger Share of the Bizav Pie

THE TIMES
Gary airport striving to become 'Economic Engine'

INDIANA 105
Expanded Runway in Gary Plays Key Role in Landmark Mission

The Gary Crusader
Local firms win contracts with Gary/Chicago Airport

AINonline
Chicagoland FBO in Full Growth Mode

THE BOND BUYER
Gary, Indiana's Airport Looks to Next Stage

GaryChicago
International Airport

Planning for the Future

THE MASTER PLAN UPDATE IS THE NEXT STEP IN CHARTING THE AIRPORT'S FUTURE.

THANK YOU FOR BEING HERE AND PARTICIPATING!

GaryChicago International Airport

MASTER PLAN PUBLIC WORKSHOP # 1

Gary / Chicago International Airport Master Plan Update

2/13/2017

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

AGENDA

- Public Workshop Overview
  - What is a Master Plan?
  - What are the Goals?
  - What is an Aviation Forecast?
  - What is at the Airport Today?
- Next Steps

PUBLIC WORKSHOP OVERVIEW

Gary/Chicago International Airport

Airport Master Plan Public Workshop # 1

WORKSHOP STATIONS

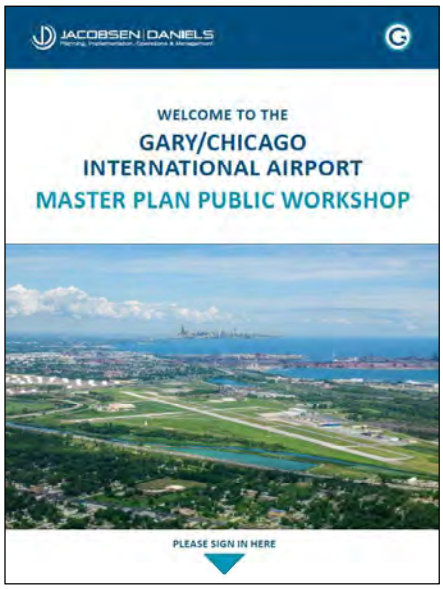
Public Workshop Overview

- Sign-in/Welcome Station
- Station 1: What is a Master Plan?
- Station 2: What are the Project Goals?
- Station 3: What is an Aviation Forecast?
- Station 4: What is at the Airport today?

SIGN-IN / WELCOME STATION

Public Workshop Overview

- Sign-in
- Comment Cards
- Master Plan Public Workshop Overview Handout



STATION 1 – WHAT IS A MASTER PLAN?

Gary/Chicago International Airport

Airport Master Plan Public Workshop # 1

MASTER PLANNING OVERVIEW

Station 1 - What is a Master Plan?

- 20 year infrastructure development plan
  - Projects future aviation activity
  - Assesses and determines facility needs
  - Evaluates development options to address needs
  - Provides a timeline and financial schedule for implementation
- Includes Airport Layout Plan (ALP) update
  - Graphical depiction of existing and future airport development
  - Facilities must be shown on the ALP to be eligible for FAA funding

PROCESS AND SCHEDULE

Station 1 - What is a Master Plan?

STATION 2 – WHAT ARE OUR GOALS?

Gary/Chicago International Airport

Airport Master Plan Public Workshop # 1

MASTER PLAN VISION

Station 2 – What are our Goals?

"To provide projections for future growth and recommend a development plan for Gary/Chicago International Airport outlining a progression of improvements to support the immediate and long-term needs of the Airport and economic growth in Gary and the region."

MASTER PLAN GOALS AND OBJECTIVES

Station 2 – What are our Goals?

- Overall Airport
- Forecast
- Airfield
- Landside
- Terminal
- Support Facilities
- Environmental
- Finance

STATION 3 – WHAT IS AN AVIATION FORECAST?

Gary/Chicago International Airport

Airport Master Plan Public Workshop # 1

COMPONENTS OF AN AVIATION FORECAST

Station 3 – What is an Aviation Forecast?

- Projections for Aviation Activity at the Airport for 20-year Planning Horizon including:
  - Passengers
    - Enplanements – Number of individuals boarding departing flights from GYY
    - Deplanements – Number of individuals arriving on flights to GYY
  - Operations
    - Commercial
    - General Aviation
    - Military
    - Cargo
  - Based Aircraft

FORECAST ASSUMPTIONS

Station 3 – What is an Aviation Forecast?

- Base Forecast
  - Modest economic growth for the nation
  - Similar economic growth for Chicago and Gary areas
  - GYY will make slight gains in GA market share
  - Generally stable international political environment
  - No disruption of airline travel behavior as a result of international hostilities or terrorist acts or threats
- High Scenario
  - Demographic and economic factors outperform historical trends
  - Regular commercial passenger air service returns to the Airport
  - GYY gains additional share of the overall regional GA market
  - Generally stable international political environment
  - No disruption of airline travel behavior as a result of international hostilities or terrorist acts or threats

FORECASTED ACTIVITY

Station 3 – What is an Aviation Forecast?

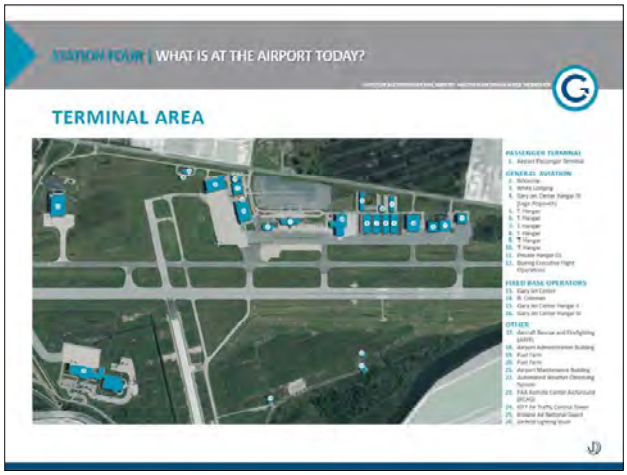
STATION 4 – WHAT IS AT THE AIRPORT TODAY?

Gary/Chicago International Airport

Airport Master Plan Public Workshop # 1

OVERVIEW OF EXISTING FACILITIES

Station 4 - What is at the Airport Today?



NEXT STEPS

Gary/Chicago International Airport

Airport Master Plan Public Workshop # 1

NEXT STEPS

GYY Master Plan Update

- Complete Phase 1 – Existing Conditions/Forecast
  - February 2017
- Begin Phase 2 – Demand/Capacity
  - February 2017 – April 2017
- Future Phases
  - Phase 3 Alternatives Analysis
  - Phase 4 Preferred Development Plan
  - Phase 5 Final Documentation
- Next Meeting – Third Quarter 2017

THANK YOU!

Gary/Chicago International Airport

Airport Master Plan Public Workshop # 1

For more information, visit the project website at:

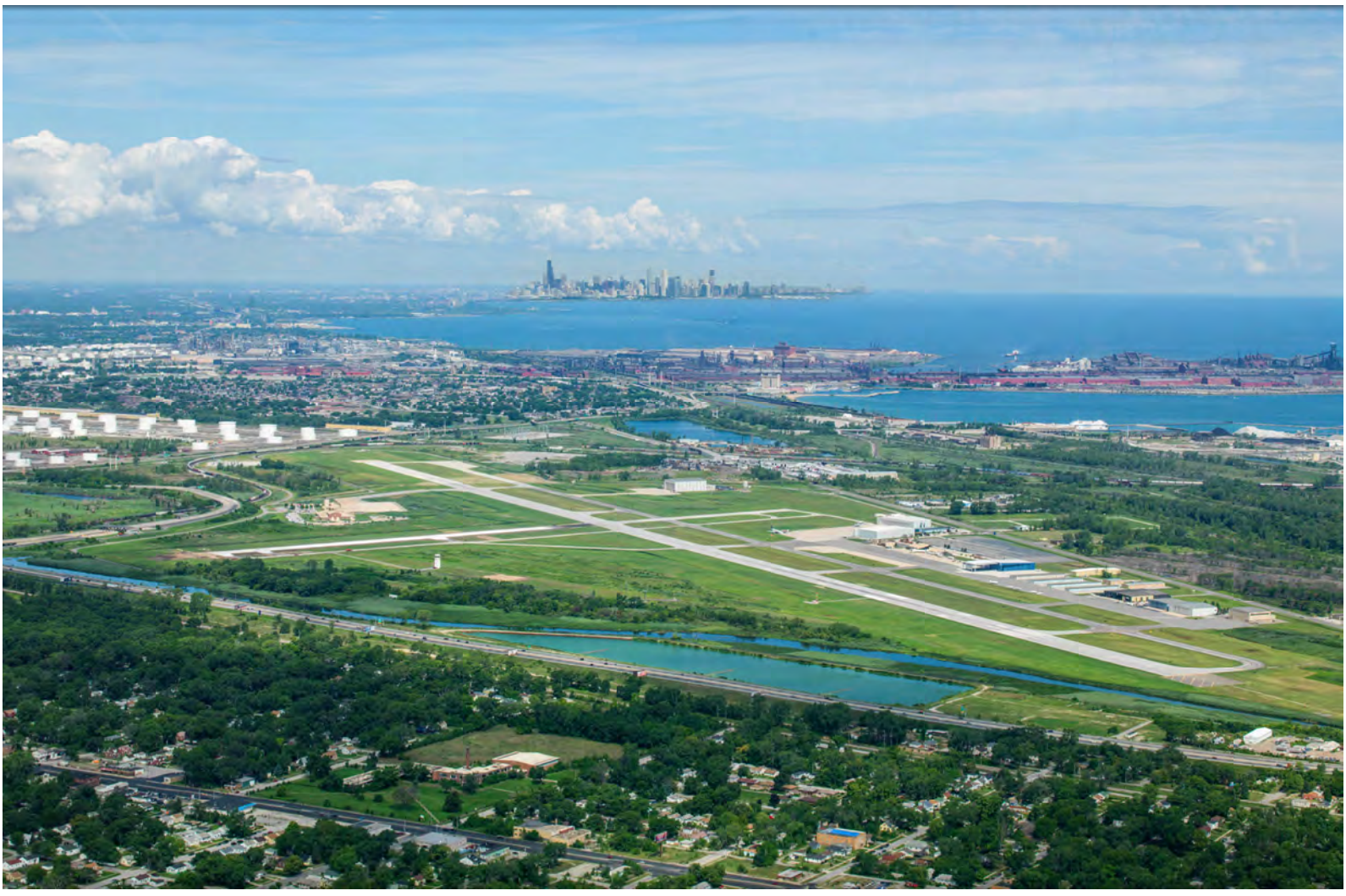
www.garychicagoairport.com

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

WELCOME TO THE

GARY/CHICAGO INTERNATIONAL AIRPORT

MASTER PLAN PUBLIC WORKSHOP



PLEASE SIGN IN HERE

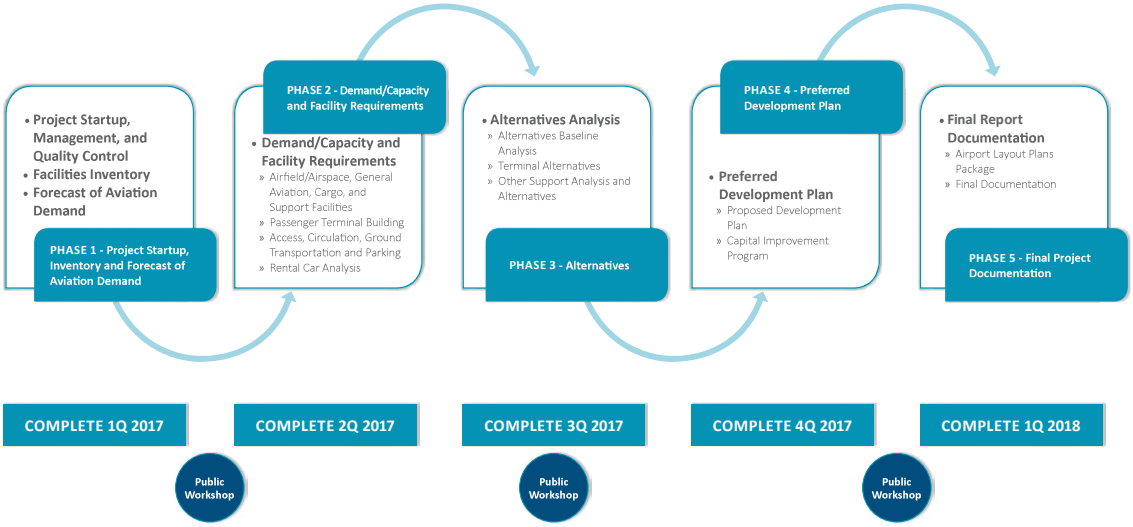
STATION ONE

WHAT IS A MASTER PLAN?

PROJECT OVERVIEW

- 20 year infrastructure development plan
  - » Project future aviation activity
  - » Assess and determine facility needs
  - » Evaluate development options to address needs
  - » Provide a timeline and financial schedule for implementation
- Includes Airport Layout Plan (ALP) update
  - » Graphical depiction of existing and future airport development
  - » Facilities must be shown on the ALP to be eligible for FAA funding

PROCESS AND SCHEDULE



STATION TWO

WHAT ARE OUR GOALS?

AIRPORT VISION

To provide projections for future growth and recommend a development plan for Gary/Chicago International Airport outlining a progression of improvements to support the immediate and long-term needs of the Airport and economic growth in Gary and the region.

STATION TWO | WHAT ARE OUR GOALS?

GARY/CHICAGO INTERNATIONAL AIRPORT - MASTER PLAN UPDATE PUBLIC WORKSHOP

PROJECT GOALS

OVERALL AIRPORT

- Identify improvements necessary to prepare the Airport to accommodate anticipated aviation demand
- Review the Airport's available property and determine whether strategic land acquisition is required to develop necessary aviation improvement
- Include the community in the Master Plan process to obtain their feedback and to provide an understanding of the future of the Airport

FORECAST

- Obtain FAA approval of an aviation forecast that reflects the realization of the growth opportunities envisioned by the Airport
- Develop a forecast of aviation demand that:
  1. Includes sustained commercial air service with consistent, modest growth through the planning horizon
  2. Reflects the Airport's continued positioning as the preferred general aviation Airport for the Greater Chicago Region

AIRFIELD

- Analyze widening and extending the crosswind runway to provide additional capacity and support to the Airport as a secondary option to the Airport's primary runway (Runway 12-30).
- Review the Airport's approach capabilities and recommend improvements to allow for additional aircraft operations in inclement weather
- Identify unused and outdated navigational aid equipment at the Airport and recommend improvements or decommissioning
- Validate optimal runway lengths based on projected aviation activity
- Review the airfield geometry to identify non-standard conditions
- Identify improvements necessary to meet airfield design standards based on projected aviation activity

LANDSIDE

- Study options to provide better connectivity between the Airport and the regional rail network
- Analyze access to the Airport and evaluate alternatives to provide more direct access to the terminal area – particularly from the tollway
- Ensure adequate public parking is provided to meet projected demand for commercial air service
- Identify opportunities to improve wayfinding and signage to the Airport
- Recommend improvements to the aesthetics on and around the Airport to provide an improved experience as customers arrive at the Airport
- Improve necessary landside vehicular access to potential new development sites in and around the Airport to support aviation

PROJECT GOALS

TERMINAL

- Evaluate the ability of the existing terminal to accommodate projected commercial passenger activity
- Identify expansion and renovation plans to address projected deficiencies in the functionality of the terminal building as commercial activity grows
- Develop a plan to accommodate future international passenger service in the terminal building that meets the standards of U.S. Customs and Border Protection (CBP)
- Evaluate whether the existing terminal site is the optimal location for the terminal to meet the long-term commercial activity demand of the Airport

SUPPORT FACILITIES

- Identify the additional general aviation facilities necessary – hangars, T-Hangars, and aircraft parking areas – to accommodate the anticipated continued growth in general aviation activity

- Provide flexibility for the Fixed Based Operators (FBO) to expand and provide facilities to meet the demands of their customers
- Explore alternatives to relocate T-Hangars and light GA aircraft away from corporate GA hangars and other FBO facilities
- Identify appropriate locations for accommodating potential future cargo operations
- Evaluate highest and best use of the Airports available land and identify optimal usage to meet projected future activity
- Evaluate whether existing other support facilities such as Airport Administration, Airport Rescue and Fire Fighting (ARFF), Air Traffic Control Tower and Airport Security are adequate to meet projected increases in activity
- Identify additional locations for ramp and apron space to allow the Airport to facilitate diversion aircraft

ENVIRONMENTAL

- Minimize environmental impacts as a result of any airport development projects
- Review and evaluate wetlands on airport property and in the vicinity to minimize development challenges
- Provide for the development of efficient and environmentally friendly energy solutions including non-aviation uses
- Identify compatible land-use for land in and around the Airport
- Consider and mitigate ground water issues

FINANCIAL

- Maximize revenue sources to allow the Airport to be financially sustainable
- Provide infrastructure and amenities to grow and attract new tenants
- Identify opportunities to expand non-aviation revenue, both at the Airport and within the airport environment (i.e. along Airport Road)
- Maintain relationship with the Chicago Department of Aviation (through the Compact) and continue to market the Airport as Chicago's 3rd Airport

STATION THREE

WHAT IS AN AVIATION FORECAST?

FORECAST COMPONENTS

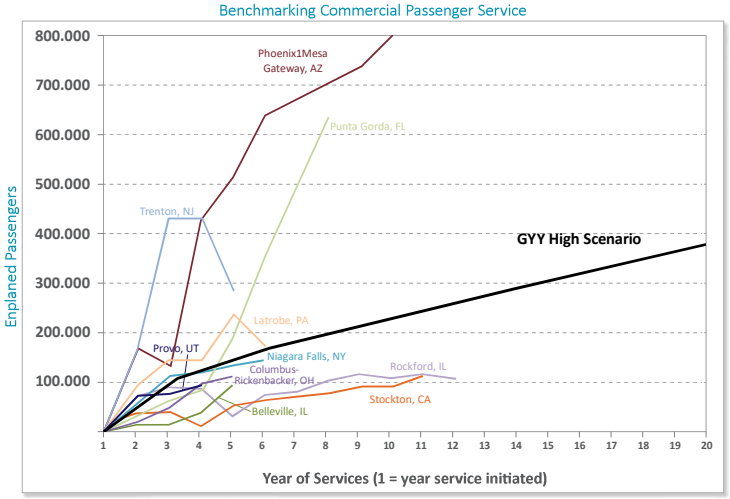
FORECAST BUILDING BLOCKS

- Enplaned passengers – from commercial flights and air taxi
- Aircraft Operations
  - » Commercial passenger carriers
  - » General aviation and other
  - » All Cargo
  - » Military
- Based aircraft – those aircraft that are based at the Airport

FORECAST METHODS

- Activity can be projected based on a number of factors. Part of the forecast methodology is to select those that can best indicate future activity. Methods include basing activity on:
  - » Historical trends
  - » Socioeconomic factors like income, population, and employment
  - » Market share of a region, state or US activity
  - » Benchmarking – comparing to other airports under similar conditions
- The methods selected as most appropriate for GYY include:
  - » Market share for the Base Forecast
  - » Benchmarking for the High Scenario of commercial activity

Benchmarking Commercial Passenger Service



STATION THREE | WHAT IS AN AVIATION FORECAST?

GARY/CHICAGO INTERNATIONAL AIRPORT - MASTER PLAN UPDATE PUBLIC WORKSHOP

AIRCRAFT OPERATIONS & ENPLANEMENTS

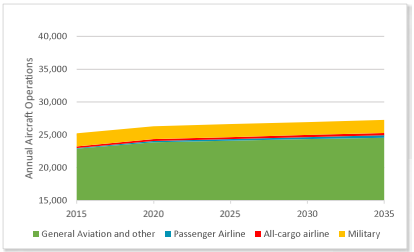
BASE FORECAST

- Modest economic growth for the nation
- Similar economic growth for Chicago and Gary areas
- GYY will make slight gains in GA market share
- Generally stable international political environment
- No disruption of airline travel behavior as a result of international hostilities or terrorist acts or threats

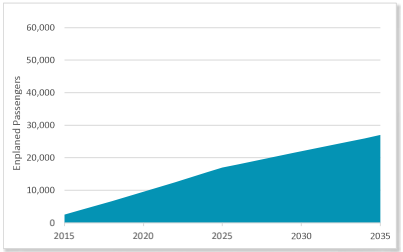
HIGH SCENARIO

- Demographic and economic factors outperform historical trends
- Regular commercial passenger air service returns to the Airport
- GYY gains additional share of the overall regional GA market
- Generally stable international political environment
- No disruption of airline travel behavior as a result of international hostilities or terrorist acts or threats

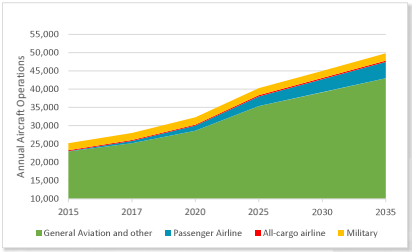
ANNUAL OPERATIONS - BASE FORECAST



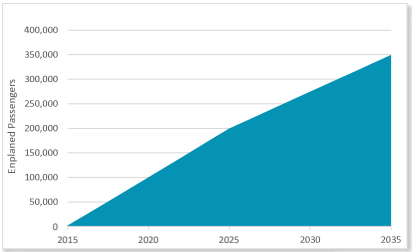
ENPLANEMENTS - BASE FORECAST



ANNUAL OPERATIONS - HIGH SCENARIO



ENPLANEMENTS - HIGH SCENARIO



STATION FOUR

WHAT IS AT THE AIRPORT TODAY?

OVERALL AIRPORT

TERMINAL AREA

PASSENGER TERMINAL
1. Airport Passenger Terminal

GENERAL AVIATION
2. NiSource
3. White Lodging
4. Gary Jet Center Hangar IV (Sage-Popovich)
5. T. Hangar
6. T. Hangar
7. T. Hangar
8. T. Hangar
9. T. Hangar
10. T. Hangar
11. Private Hangar 01
12. Boeing Executive Flight Operations

FIXED BASE OPERATORS
13. Gary Jet Center
14. B. Coleman
15. Gary Jet Center Hangar II
16. Gary Jet Center Hangar III

OTHER
17. Aircraft Rescue and Firefighting (ARFF)
18. Airport Administration Building
19. Fuel Farm
20. Fuel Farm
21. Airport Maintenance Building
22. Automated Weather Observing System
23. FAA Remote Center Air/Ground (RCAG)
24. GYY Air Traffic Control Tower
25. Indiana Air National Guard
26. Airfield Lighting Vault

Additional Information

Information about the Master Plan Update can be found on the airport's website at **garychicagoairport.com**, under the development tab, Master Plan. The website will be updated periodically throughout the project with additional information as the project progresses. All materials for this and future meetings will be posted on the site today.

NOTES

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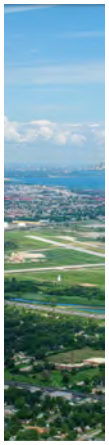
GaryChicago
International Airport



Public Comment

The Gary/Chicago International Airport Authority encourages you to provide comments and suggestions regarding the Airport Master Plan. There are several ways for you to provide comments:

- Complete a comment form and submit it in the comments box at the sign-in table near the entry of the Public Workshop.
- Additional comments may be sent to: **GYYMasterPlan@jacobsendaniels.com**



GARY/CHICAGO INTERNATIONAL AIRPORT - MASTER PLAN UPDATE PUBLIC WORKSHOP

Welcome

On behalf of the Gary/Chicago International Airport Authority, WELCOME! Thank you for joining us today at the first Public Workshop for the Gary/Chicago International Airport Master Plan Update. Your participation in this study is important to us and we hope you find the information provided today engaging and informative. Team members are positioned at four different stations around the room, where we can engage with you and discuss the Master Plan process and our progress thusfar.

Station Overviews

STATION 1: WHAT IS A MASTER PLAN?
This station provides general information about what the purpose of a Master Plan is, as well as an overview of the process and schedule of the project.

STATION 2: WHAT ARE OUR GOALS?
This station describes the overall vision for the Master Plan study and identifies specific goals and objectives.

STATION 3: WHAT IS AN AVIATION FORECAST?

This station describes the purpose of a forecast of aviation demand and provides an overview of the preliminary projections for aviation activity at the Airport over the 20-year planning horizon.

STATION 4: WHAT IS AT THE AIRPORT TODAY?
This station provides general information of the existing facilities at the Airport.

About

An Airport Master Plan is a document that details the improvements anticipated to serve the projected activity for the forecast period, which is typically 20 years. Recommendations are generally identified as near-term (within 5-years), mid-term (between 5 and 10 years) and long-term (10 years or more) improvements While an anticipated timeframe is identified in the Master Plan, projects are generally implemented based on the realization of actual activity at the Airport. A Master Plan is typically reviewed and updated every 5 to 10 years. An Airport Master Plan provides the airport and its community with the following:

- A summary of the Airport's existing facilities and conditions
- A projection of future aviation activity for the Airport
- A listing of requirements for future aviation facilities based on demand
- A series of studies examining alternatives to meet the facility requirements
- An implementation plan that satisfies local, state, and federal regulations
- An Airport Layout Plan (graphical representation of the future airport development)
- A narrative summarizing the process, studies, and recommendations

Master Plan Review

The Federal Aviation Administration (FAA) reviews and approves two components of an Airport Master Plan: the Airport Layout Plans Package and the Aviation Forecast.

These documents are reviewed by the FAA to comply with federal funding requirements, as well as conformance with planning, design, and forecast methodology guidelines.

MASTER PLAN COMPONENTS

- Goals and Objectives
- Inventory of Existing Conditions
- Aviation Forecasts
- Demand/Capacity Analysis
- Facility Needs (Requirements)
- Alternatives Development
- Financial Feasibility
- Environmental Overview
- Implementation Plan for Development
- Airport Layout Plan

Public Workshop 2: Presentation Materials and Public Comments with Responses (3/29/2021)

Thank you for joining this evening's Master Plan presentation. The event will begin shortly. For the duration of the presentation, you will be muted, and the chat function will be unavailable.

Please direct any questions or comments to our email at masterplan@flygyy.com.

Tonight's presentation will be available on our website and will be livestreamed on the Gary / Chicago International Airport YouTube page.

GCIA
GARY/CHICAGO
INTERNATIONAL AIRPORT

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

PUBLIC MEETING #2

Gary / Chicago International Airport Master Plan Update

03-29-2021

https://vimeo.com/439371573/2e9b5cffaa

AGENDA

D-268

- Welcome remarks
  - Duane Hayden, Executive Director of Gary/Chicago International Airport
  - City of Gary Mayor, Jerome A. Prince
  - Testimonials from Gary/Chicago International Airport Board
- Recognition of stakeholders
- Master Plan analysis and recommendations
- Closing remarks

WELCOME FROM MAYOR JEROME A. PRINCE

D-269

SUPPORT FROM THE GCIA AUTHORITY BOARD

D-270

"We are proud of the sustained growth and investment that we have seen the past few years at the Gary / Chicago International Airport, beginning with the expansion of the main runway to be the second longest in the Chicagoland region after O'Hare International Airport, followed by the construction of our Customs Facility that brought Gary to the world, and indeed, the world to Gary.

The updated Master Plan will provide the Airport Authority with a strong guide to chart the next phase of future aviation growth to the airport, and we eagerly anticipate seeing this plan put into motion!"

-- GCIA Authority Chairman Timothy Fesko

SUPPORT FROM THE GCIA AUTHORITY BOARD

D-271

"The Gary / Chicago International Airport has seen significant growth since our last Master Plan process in 2001, including the expansion of our main runway, the new state-of-the-art U.S. Customs and Border Protection Facility and our offerings including the new terminal and hangars.

These additions have made our Airport the premier mid-sized airport in the region, solidified our role as a vital partner in the Chicago Air Traffic System along with O'Hare International Airport and Midway International Airport and laid a strong foundation for our future growth."

-- GCIA Authority Vice President Stephen Mays

SUPPORT FROM THE GCIA AUTHORITY BOARD

D-272

"It is exciting to see the recent growth and expansion that the Gary / Chicago International Airport has experienced in the past few years, and these investments have provided a strong foundation for the next 20-25 years of aviation growth at the Airport.

This new Master Plan will provide a strong guide for the Airport Authority as we continue to grow the airport and in the process, unlock the economic development and job creation engines that will benefit Gary and Northwest Indiana in the coming decades."

-- GCIA Authority Secretary Alesia Pritchett, CPA

SUPPORT FROM THE GCIA AUTHORITY BOARD

D-273

"This new Master Plan will provide us with the guide we need to chart the next 20-25 years of airport development and aviation growth. This plan is the culmination of our continued investments, recent facilities and services and ongoing developments that have positioned us well for the first part of the 21st Century, and these have laid the foundation for the Gary / Chicago International Airport to continue to solidify its role as Chicago's "3rd Official Airport" and play an increasingly Important role in the Chicago regional air system."

-- GCIA Commissioner Denise Dillard

SUPPORT FROM THE GCIA AUTHORITY BOARD

D-274

"The new Master Plan for the Gary / Chicago International Airport will provide a catalyst for continued economic growth and development for the City of Gary and Northwest Indiana Region. Our airport has seen significant economic investments over the past several years, and the completion of this important planning document will provide the Gary / Chicago International Airport Authority a strong guide for future development and aviation growth at the Airport. We look forward to the continued success of the Airport and its impact on the region in the coming decades."

-- GCIA Commissioner Shontrai Irving

SUPPORT FROM THE GCIA AUTHORITY BOARD

D-275

"The finalized Master Plan is the culmination of years of hard work and dedication to ensure the Gary / Chicago International Airport continues attracting private investment and provides a guide to the next 20-25 years of aviation growth. It is exciting to see the next chapter of the Gary / Chicago International Airport being written, and we look forward to this plan helping the Airport further grow and continue to solidify its role as Chicago's 3rd official airport!"

-- GCIA Authority Commissioner Phil Mullins

- Gary / Chicago International Airport Authority GCIAA)
- Technical Advisory Committee (TAC) Members, including
  - Gary Jet Center
  - B. Coleman Aviation
  - Boeing
  - UPS
  - Sage Popovich
  - NiSource
  - National Guard
  - White Lodging
  - NGC
- Chicago Department of Aviation (CDA)
- Federal Aviation Administration (FAA)
- Indiana Department of Transportation (INDOT)
- AvPORTS
- AFCO
- City of Gary Mayor Jerome A. Prince
- Gary Common Council

MASTER PLAN STUDY

Vision, Goals and Objectives

VISION STATEMENT

"Position the Airport as a driver of economic growth, create a business-friendly environment for firms that require support, rail, highway, marine, pipeline, and air-oriented modes of transport, and market Gary and Northwest Indiana as a nexus of robust transportation and infrastructure networks"

- Visioning session held during project kickoff on September 7, 2016
- Defined specific goals and objectives that the master plan should support in various areas.
  - Airside
  - Landside
  - Terminal
  - Support facilities
  - Environmental considerations
  - Forecast assumptions
  - Financial
    - Maximize revenue sources
    - Maintain Airport Compact
  - Safety and security

WHAT IS A MASTER PLAN?

Master Plan Process Overview

- Comprehensive study mandated by the FAA
- Provides development guidance to accommodate anticipated activity in the:
  - Near-term: 1 to 5 years
  - Medium-term: 6 to 10 years
  - Long-term: 11 to 20 years
- Results in two documents:
  - Planning report that guides development strategy
  - Airport Layout Plan (ALP) drawings that describe current and future conditions

PLANNING PROCESS

Forecast of Aviation Activity

Facility Requirements

Alternatives Analysis

- What are the possible ways to meet demand for each of the functional areas, at each PAL?
- Which alternatives are the best suited for GYY?

Proposed Development Plan

- How do the selected alternatives fit together in an overall plan?
- How can the overall plan be defined in terms of projects that can be phased logically over the course of the planning period?
- What is the estimated cost and timing of projects in the plan?

KEY SCHEDULE MILESTONES

March 2018 – FAA approves forecast of aviation activity

Sept 2016 - Work initiated

November 2018 - Requirements analysis
- Reviewed with GCIAA and TAC
- FAA requested additional analysis for justification of RW 2-20

May 2019 - Runway length analysis submitted to FAA

August – November 2019 - FAA comments on runway length analysis

March 2020 - Proposed development plan submitted for GCIAA review

Dec 2020 – TAC Meeting #4

Inventory and Forecast

Requirements Analysis

Alternatives Analysis

Public Meeting #1

Public Meeting #2

Final documentation and FAA approval

COVID-19

2016 | 2017 | 2018 | 2019 | 2020

STAKEHOLDER ENGAGEMENT

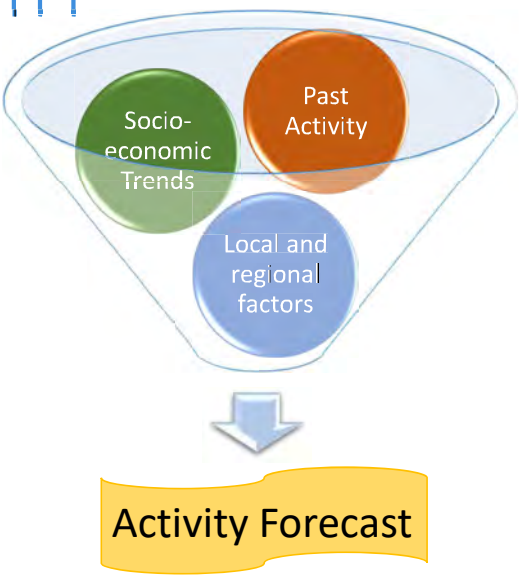
D-282

- Technical Advisory Meetings – 4+ throughout
  - Includes tenants, FAA, INDOT, Chicago DOA, FAA Airport Traffic Control, and others
  - Met with individual tenants to initiate the first planning tasks
  - All meetings were interactive in-person or via Zoom
- Public workshop
  - Public Workshop #1 on February 13, 2018
  - Presentation, one-on-one discussions with planning team members and opportunity to provide comments
- Briefings to FAA and INDOT – 2+ throughout the process
- Website posting of study materials
- Briefings to GCIAA Board at regular meetings and retreats

FORECAST OF AVIATION ACTIVITY

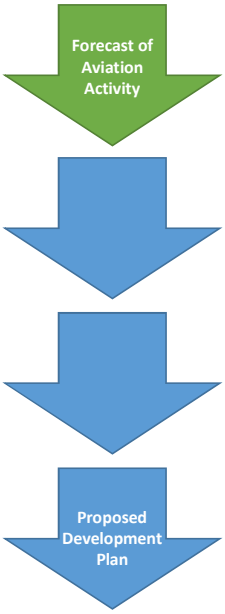
D-283

What elements are included?



- Categories of activity
  - Commercial passenger service
    - Passengers
    - Aircraft operations and fleet
  - General aviation
    - Aircraft operations and fleet
    - Based aircraft
  - Air cargo operations
  - Military operations
- Base Forecast defines development plan
- High Scenario used to plan for more aggressive growth and/or longer-term demand

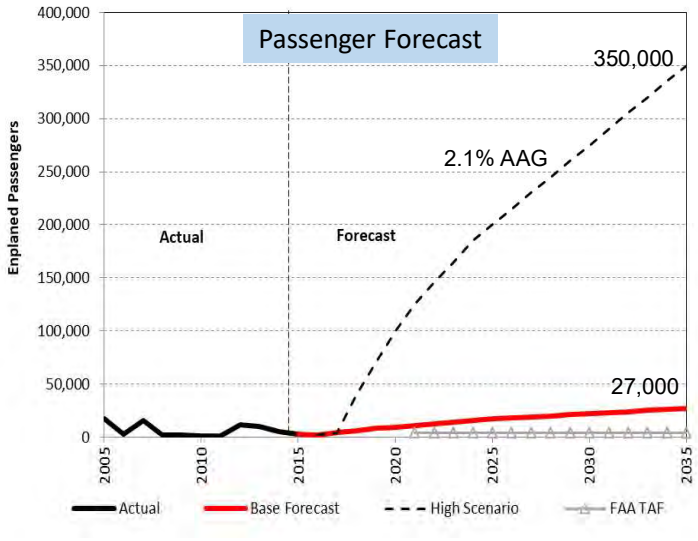
Forecasts of Aviation Demand Overview



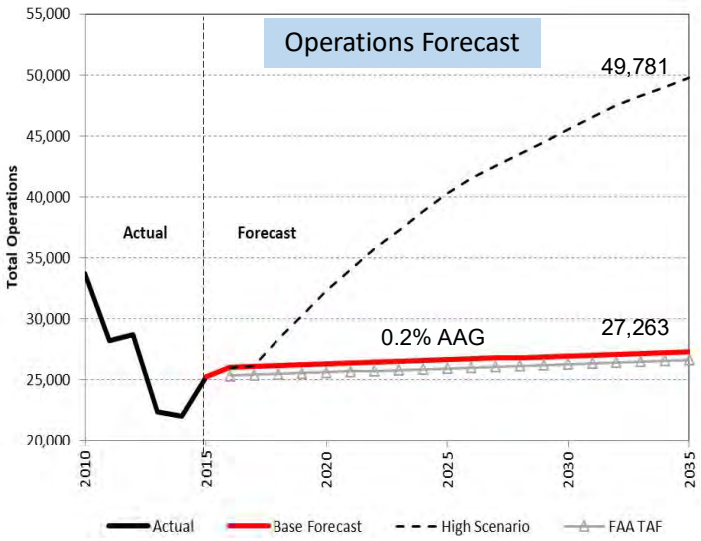
- Base Forecast (Conservative)
  - **Modest economic growth** for the nation and (Chicago) MSA, lower rate of growth for (Gary) metro area
  - **Scheduled passenger airline service will resume** at modest levels, along with unscheduled charter flights.
  - GYY will make **slight gains in GA market share** due to constraints at MDW and, to a lesser extent, ORD
  - **Generally stable international political environment**; effective safety and security precautions
  - **No disruption of airline travel behavior**

- High Scenario (Optimistic)
  - **Demographic and economic trends outperform historical trends**; economic growth outpaces national average
  - **'Niche' airline(s), (small LCCs and charter carriers) launch regular service** at the Airport
  - More congested ground access to MDW/ORD encourages **more airlines and travelers to consider GYY**
  - **Larger increase in GA market**, due to congestion at competing airports, greater awareness of GYY's facilities, competitive costs for aircraft handling and fuel

BASE AND HIGH FORECASTS



Note: The FAA TAF is in Federal Fiscal Years ended September 30.
Source: Actual—U.S. DOT, Schedule T100.
Forecast—LeighFisher, December 2016; FAA TAF, issued January 2016.



Note: The FAA TAF is in Federal Fiscal Years ended September 30.
Source: Actual—Gary/Chicago International Airport records.
Forecast—LeighFisher, December 2016; FAA TAF, issued January 2016.

PLANNING BASED ON ACTIVITY LEVELS

Planning Activity Levels (PALs) derived from Base Forecast and High Scenario, 20-year outlook

PAL 3 – Base Forecast 2035

Passengers:

- Annual: 27,000
- Peak month, average day: 153

Aircraft Operations

- Annual: 27,263
- Peak month, average day: 119

Based Aircraft: 145

PAL 5 – High Scenario 2035

Passengers:

- Annual: 350,000
- Peak month, average day: 694

Aircraft Operations

- Annual: 49,781
- Peak month, average day: 217

Based Aircraft: 245

Facility Requirements

Alternatives Analysis

Proposed Development Plan

- Airfield
  - Airfield capacity
  - Geometry for critical aircraft
  - Runway 2-20 extension
- Terminal
  - Gates and aircraft parking
  - Passenger processing
  - Vehicle parking and curbfront
  - Rental car
  - Expansion vs. relocate/reconstruct
- Access and roadways
  - South Shore Line
  - 2040 Comprehensive Regional Plan – Vision for Northwest Indiana

- General Aviation
  - Hangars (t-hangars, corporate, FBO)
  - Apron
  - Aircraft access and maneuvering
  - Vehicle parking
- Air Cargo
  - Aircraft parking
  - Building/landside facilities
- Support Facilities
  - ATCT
  - ARFF
  - Maintenance
  - Administrative offices

- Airfield has adequate capacity to handle expected flights
- Pavement geometry changes needed to meet FAA guidance
- Runway length
  - Runway 12-30 meets length requirements for fleet and destinations
  - Runway 2-20, currently at 3,604 feet long, should be extended to better serve current and future GA fleet

RUNWAY ASSUMPTIONS AND REQUIREMENTS

Define recommended length and threshold siting considerations for Runway 2-20

- Runway remains category B-II (general aviation)
- Non-precision instrument approach (currently Utility)
  - 40:1 departure surface
  - 34:1 Part 77 approach surface
- Runway length justification analysis
  - Followed FAA AC 150/5325-4B
  - Produced length requirements for current and anticipated B-II fleet

Criteria	Recommended Length (feet)	
	60% useful load	90% useful load
Fleet Accommodated: 100% (Table 3-2)	5,300	7,900
Adjustment for grade	200	200
Adjustment for wet conditions	Up to 5,500	Up to 7,500
Total recommended length	5,500	8,100

- For Baseline Forecast by PAL 3
  - Two to four aircraft gates required
  - Additional space needed before for passenger and baggage processing
  - Parking area can meet demand
  - Additional aircraft parking depth would improve ramp operations and safety
- Interim improvements would be required to quickly accommodate restart of passenger service

Functional Space (SF)	Existing	PAL 3	PAL 5
Check-in	524	800	1,600
Baggage Claim	1,515	3,300	6,600
Security Screening Checkpoint	833	2,460	3,700
Departure Lounges	4,815	4,570	9,140
Concessions Space	1,172	790	5,590
Circulation and Other Public Functions	4,731	6,660	12,380
Baggage Processing	1,512	2,670	4,920
Tenant Spaces	679	1,100	1,890
Terminal Support Functions	2,647	5,720	10,220
Total Terminal Space:	18,428	28,070	56,040

- Relocate Airport Road for compatibility with possible extension of Runway 2-20
- Improve Terminal Loop Road
  - Increase capacity
  - Create traditional one-way flow
- Influence regional access improvements

#	Location	2016 AM	2016 PM	PAL 3 AM	PAL 3 PM	PAL 5 AM	PAL 5 PM
1	Airport Rd & Airport Entrance	A	A	B	B	B	B
4	Airport Rd & Chicago Ave	B	A	C	C	C	C
5	Airport Rd & NB Cline Ave Frontage	B	B	B	B	B	B
7	Chicago Ave & NB Cline Ave Frontage	B	A	B	B	B	B
7	Chicago Ave & SB Cline Ave Frontage	A	B	B	B	B	B
8	Gary Ave & NB Cline Ave Frontage	A	A	C	B	C	B
9	Gary Ave & SB Cline Ave Frontage	A	C	B	F	B	F

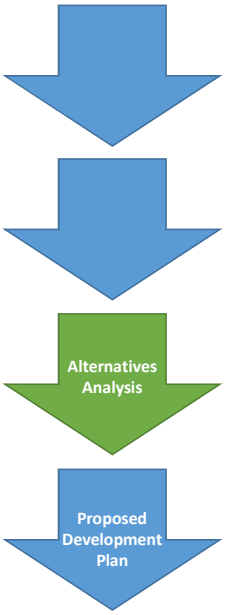
- Additional hangars needed in near-term
  - Planned development would meet requirements through PAL 4
- Additional apron needed in long-term
- T-hangar replacement to allow FBO expansion

- Aircraft apron, building and landside area
- Plan for initial development of about 6.1 acres, with future incremental expansion

Typical planning module used for siting

- Fueling capacity should be adequate through PAL 5
- Replace Air Traffic Control Tower (ATCT) in near term
- Replace Aircraft Rescue and Fire Fighting (ARFF) station in near term
- Expand and later replace Airport's Maintenance Facility
- Replace Administrative offices in long-term
- Identify locations for other collateral development

MULTIPLE ALTERNATIVES STUDIED



- Individual functional areas were assessed
  - Runway 2-20 – four alternatives
  - Airfield geometry – seven alternatives
  - Terminal – extensive sketching led to three alternatives
  - General Aviation – planning blocks created to site corporate hangars and t-hangars in various locations
- Overall land use was evaluated to site other facilities
- Preferred alternatives for each functional area were combined and refined to produce the Proposed Development Plan

RUNWAY 2-20 EXTENSION ALTERNATIVES

D-296

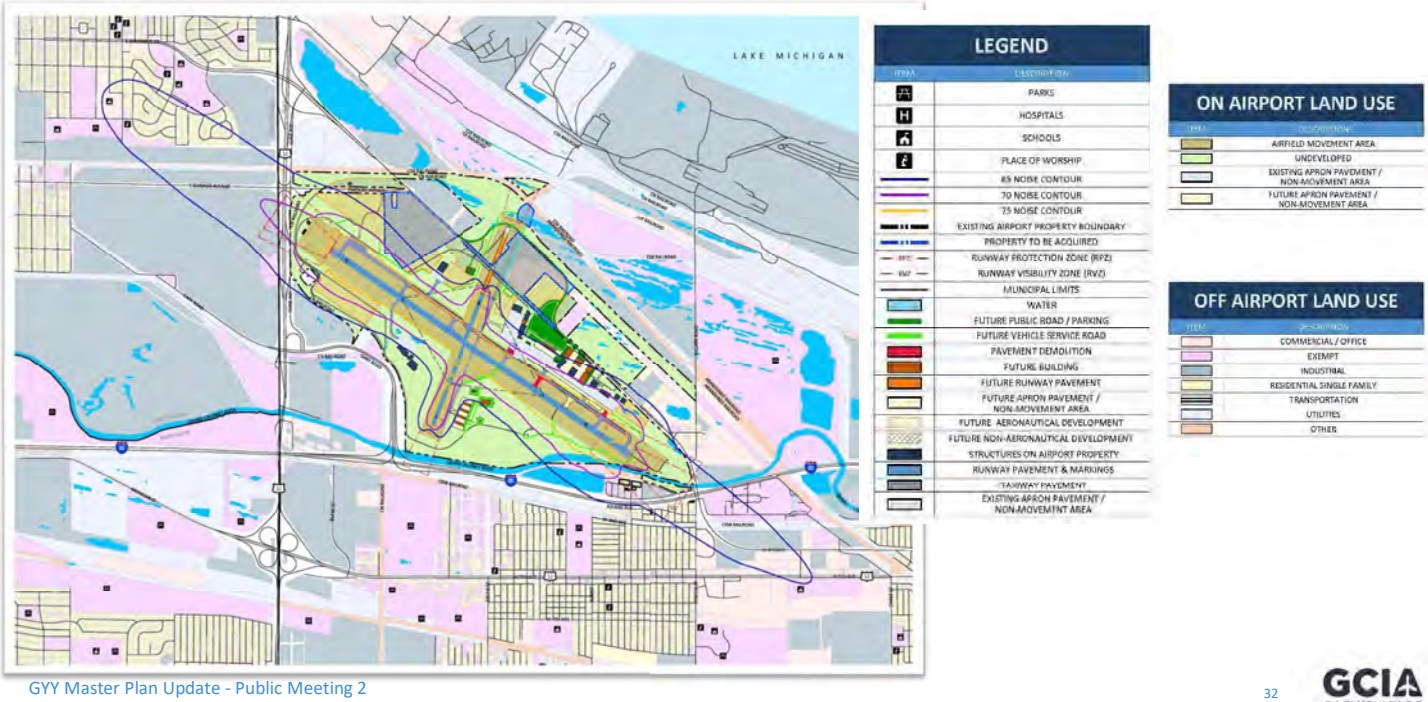
Initial requirements analysis supplemented by Runway Length Justification Analysis

- Railroads block extension beyond 1,800 feet, relocation not feasible
- Two sets of alternatives considered
  - 1,200-ft extension with Runway Protection Zone (RPZ) clear of railroads
  - 1,800-ft extension per plan on file with FAA
- Evaluation Criteria
  - Ability to serve fleet/adequate runway length
  - Obstruction clearance/governing surfaces
  - Accommodate Airport Road relocation without depressing roadway
  - RPZ considerations
  - Environmental consequences – wetlands, compatible land use (detailed noise analysis was not part of the master plan scope)
  - Cost

CURRENT LAND USE

D-297

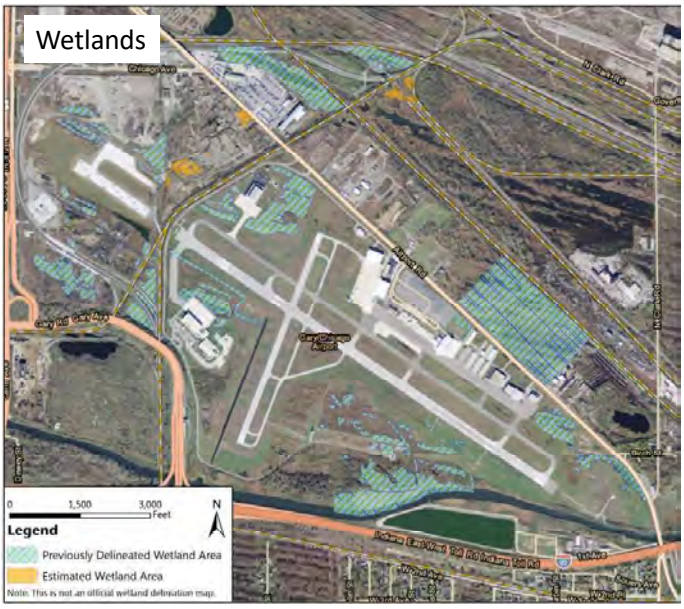
Land use off both ends of Runway 2-20 is compatible

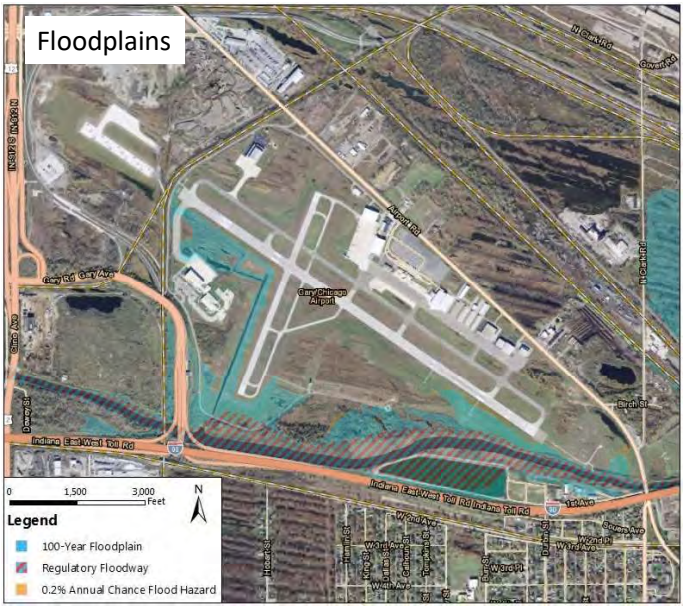


ENVIRONMENTAL: WETLANDS & FLOODPLAINS

D-298

Consider consequences of runway extension and Airport Road relocation



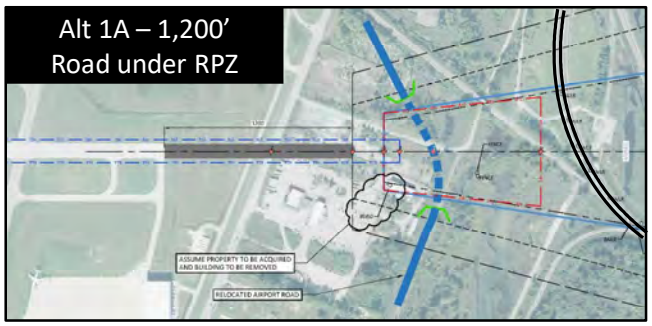


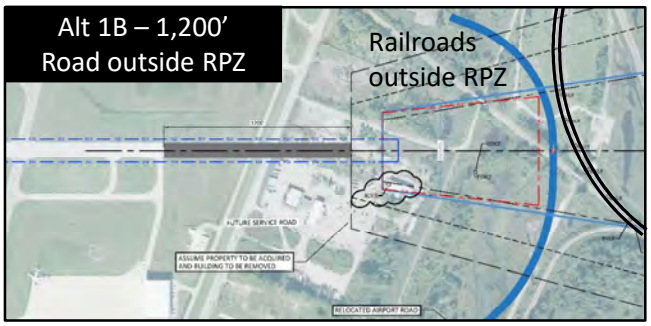
Sources: Gary/Chicago International Airport Authority, 2013; DLZ Indiana, LLC, 2015; Esri, 2016;
Prepared by: RS&H, 2016

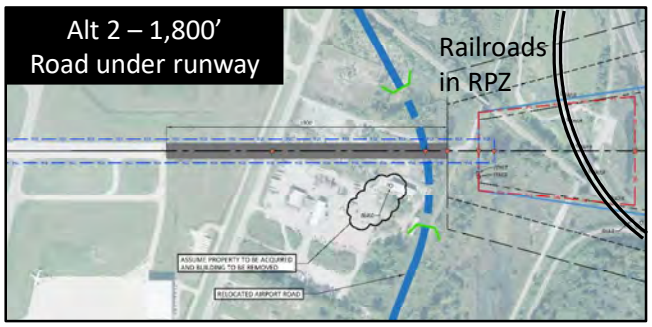
RUNWAY EXTENSION ALTERNATIVES

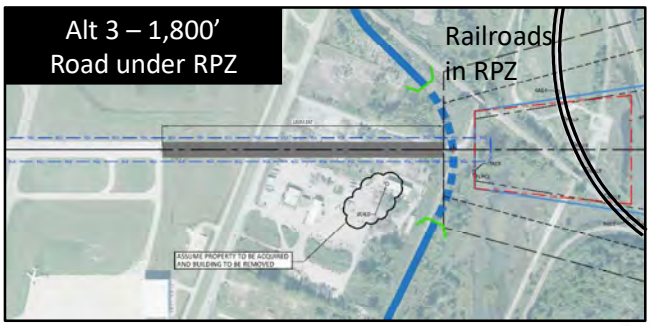
D-299

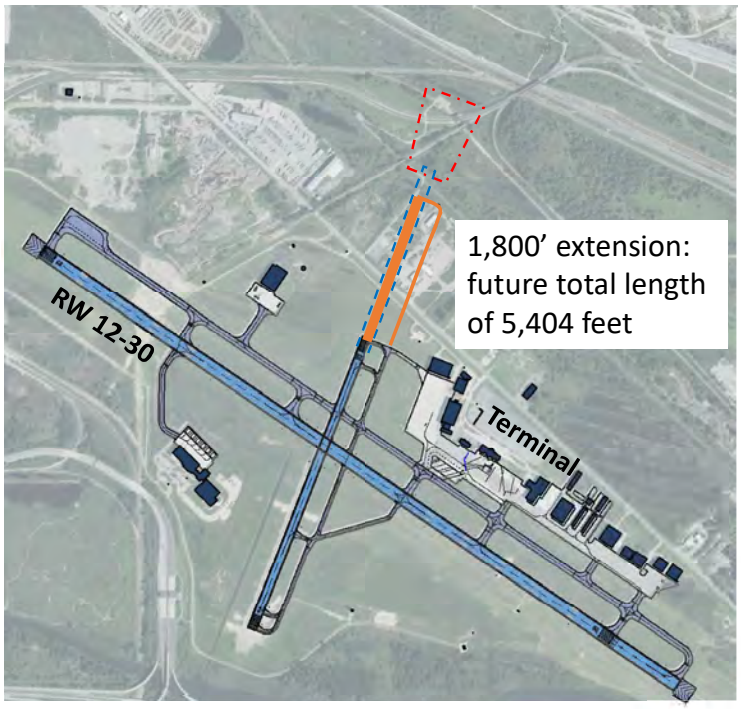
Four runway alternatives were developed based on initial alternatives discussion with GCIAA







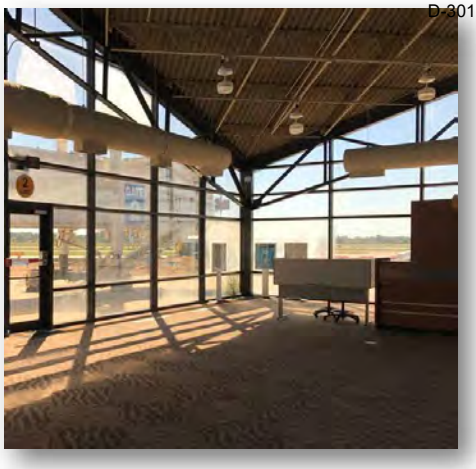




- Maximized length within existing constraints, 1,800-foot extension to the north
- Railroads limit further extension to the north
- Grand Calumet River limits extension to the south

TERMINAL ALTERNATIVES

Context of analysis



- Developed three families of concepts
  1. Two-story addition plus renovate existing
  2. Single-story addition plus renovate existing
  3. Two-story replacement of existing
- Considerations:
  - Ability to meet requirements
  - Potential to reuse existing terminal in long-term
  - Adequate airside for aircraft parking and operations
  - Constructability for start-up and ability to expand beyond PAL 3
  - Operational impacts
  - Comparative costs
  - Potential to serve future international flights and passenger processing
  - All concepts expected to have similar environmental consequences

TERMINAL ALTERNATIVES DEVELOPMENT

D-302

Process builds on understanding of possible options as concepts are refined

BLOCK PLANNING

- Based on space requirements by function
- Arrange blocks for passenger flow and terminal operations
- Big picture

Alternatives charrette with GCIAA to explore ideas and evaluation criteria

SKETCH PLANNING

- Better define spaces within existing constraints
- Interior layout
- Consider existing footprint
- Passenger flow/airside ops
- Landside
- Initial comparative costs

CONCEPT LAYOUT

- Refine interior space for passenger flow and building efficiency
- Constructability and phasing of development
- Aircraft parking
- Landside changes and phasing
- Existing building constraints
- Evaluation of alternative concepts

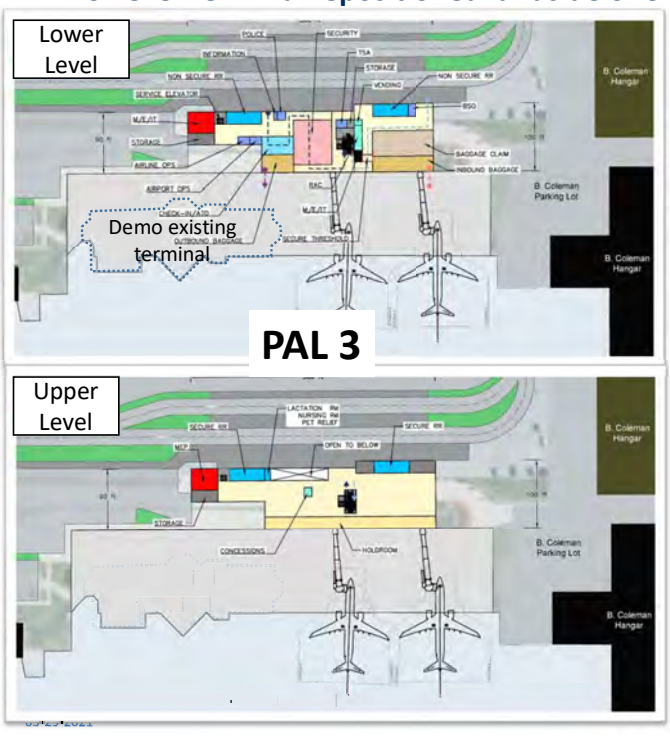
Alternatives workshop with GCIAA to review alternatives, evaluation and potential refinements

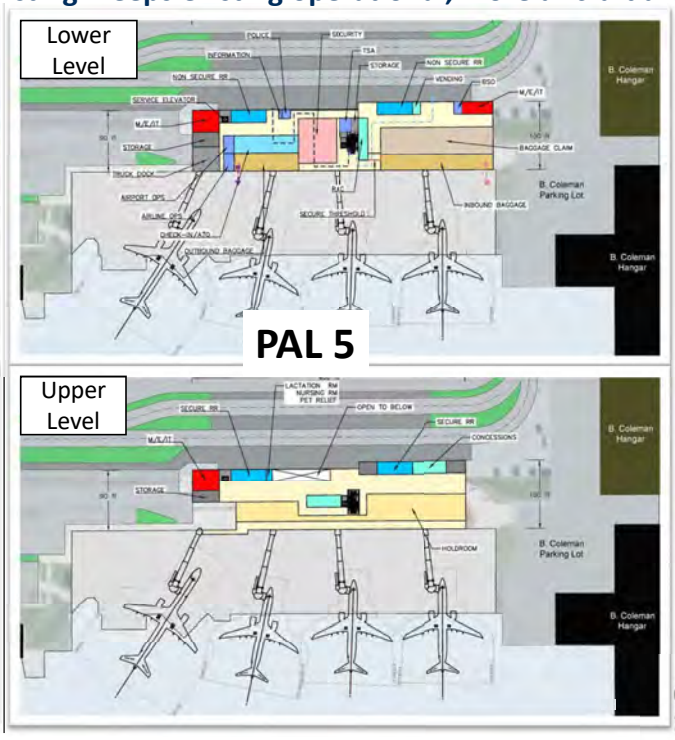
REFINE PREFERRED ALTERNATIVE

- Reduce constructability issues
- Improve internal flow and space organization
- Optimize aircraft parking and airside operation
- Better define curbfront and roadway
- Refined cost estimate for terminal, apron and landside

D-303

Two-Level Terminal repositioned landside of existing. Keeps existing operational, more aircraft area

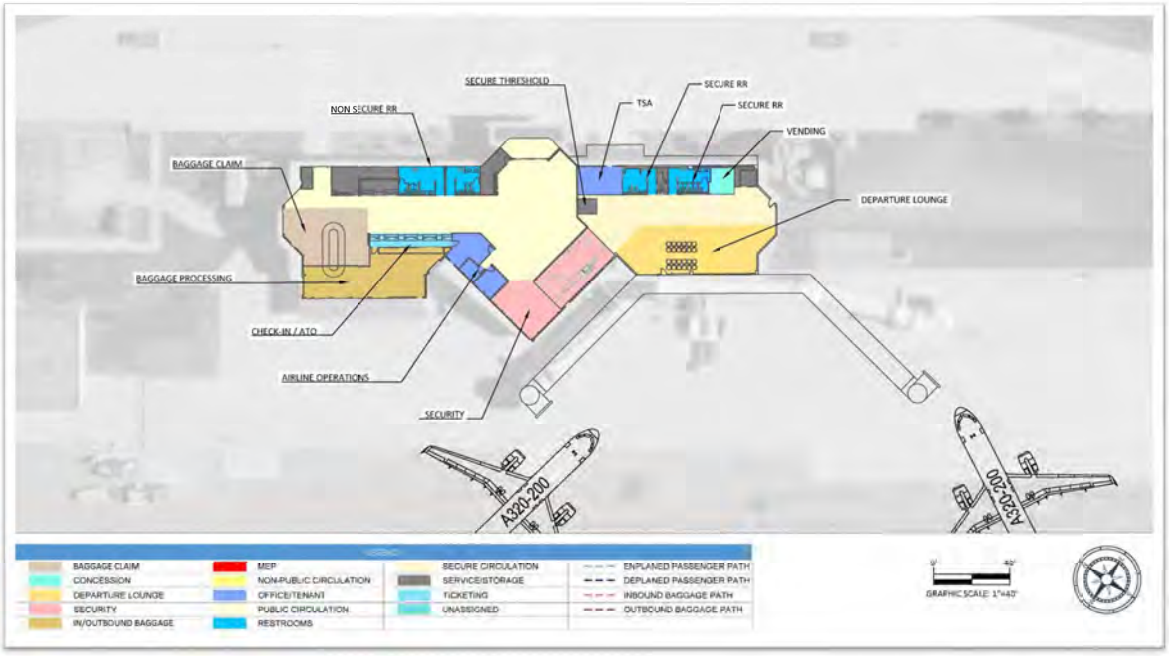




POTENTIAL MODS FOR START OF SERVICE

D-304

Minimal modifications to begin passenger service



- Minimize schedule and cost, given typical short notice of start-up
- Some functions may not be ideally sized
- Consider aircraft loading bridges and parking when fleet is known
- Estimate $7.5M to $10M cost for budgeting

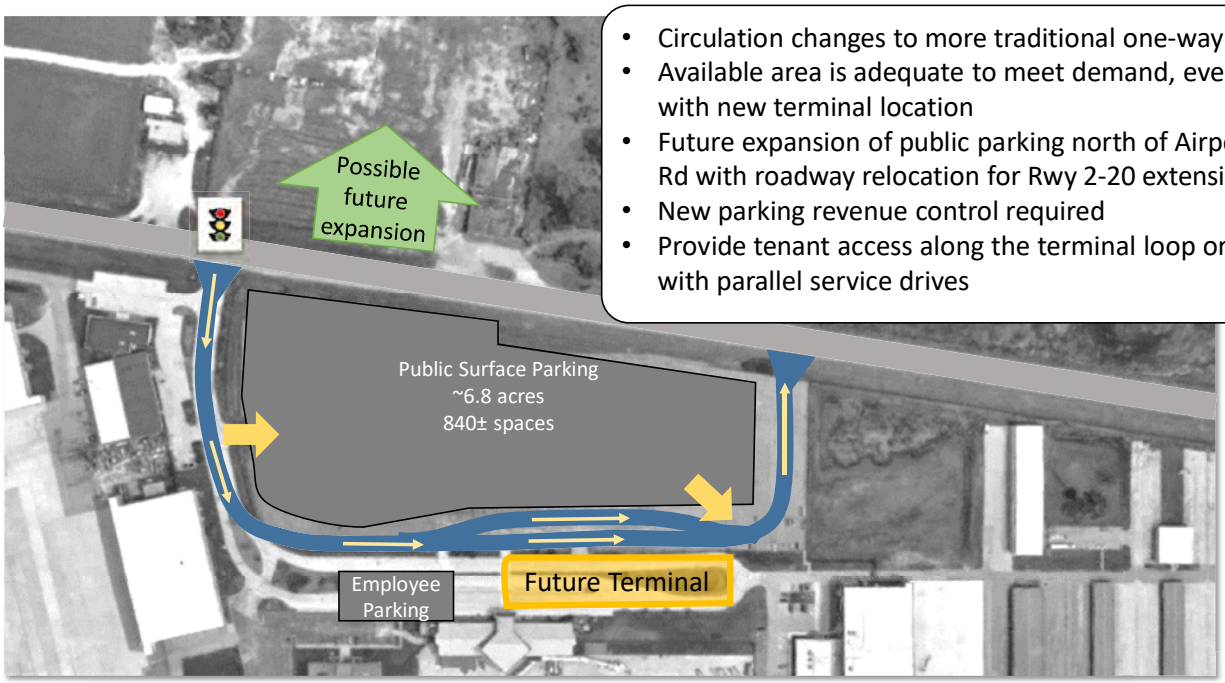
LANDSIDE OBJECTIVES

D-305

- Airport Road geometry - performance for through traffic
- Maintain or improve airline passenger wayfinding and experience
- Maintain or improve tenant wayfinding and experience
- Opportunity for developable parcels
- Potential to expand terminal parking
- Optimize development cost
- Minimize environmental consequences
- Compatible with runway and terminal development

TERMINAL PARKING AND ACCESS

D-306



- Circulation changes to more traditional one-way flow
- Available area is adequate to meet demand, even with new terminal location
- Future expansion of public parking north of Airport Rd with roadway relocation for Rwy 2-20 extension
- New parking revenue control required
- Provide tenant access along the terminal loop or with parallel service drives

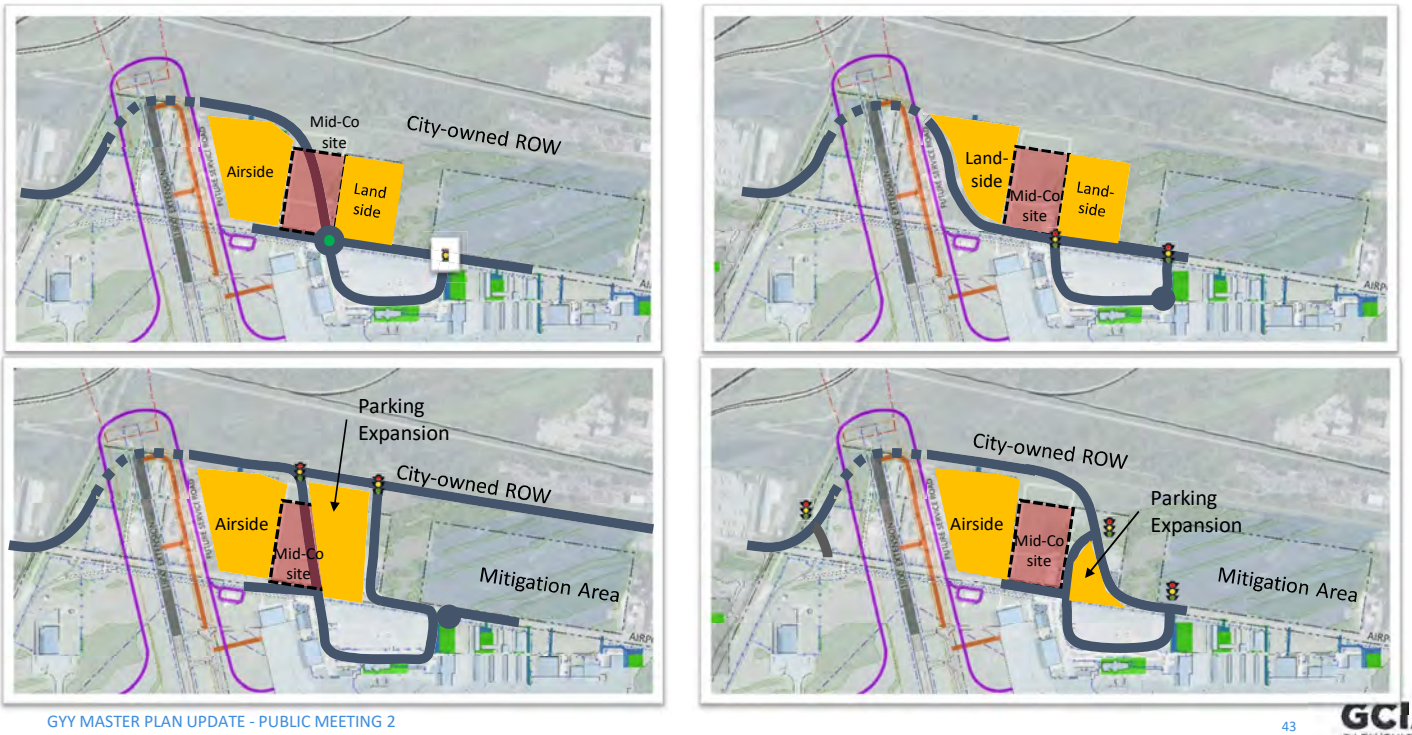
OTHER CONSIDERATIONS

D-307

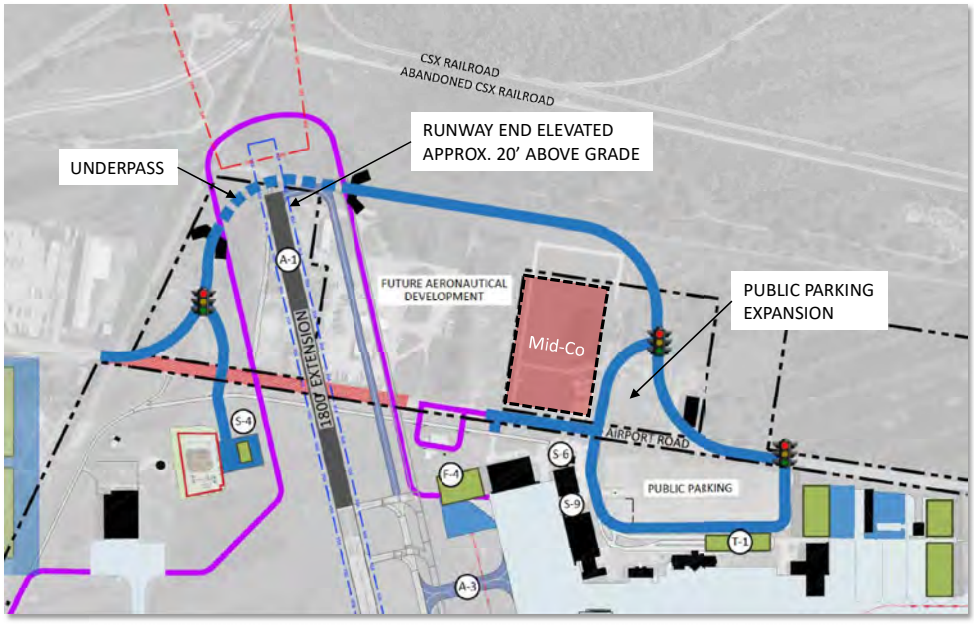
- Optimize use of City-owned parcels and those anticipated for acquisition
  - GCIAA / City of Gary continue to acquire parcels adjacent to the Airport to support development and maintain land use compatibility.
  - Alternatives developed based on discussion with GCIAA
- Avoid routing through Mid-Co site
  - City owned, but restricted use.
  - EPA released the land with provision that development should not penetrate clay cap over contamination
  - Could be used for surface parking
  - Any development must be approved by EPA
- Roadway alignment would likely include a utility corridor

FOUR ROADWAY ROUTES EXPLORED

D-308



D-309

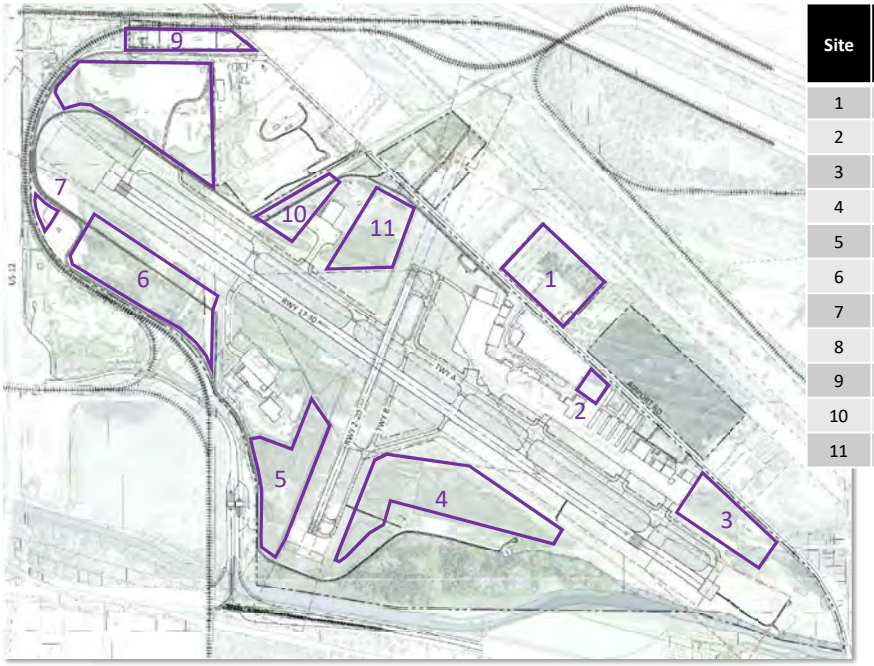


- Maintains tenant access and connectivity
- Expands public parking
- Avoids Mid-Co site
- Utilizes existing City of Gary ROW along old railroad grade
- Creates future developable land adjacent to airfield

DEVELOPABLE PARCELS – SUITABLE USES

D-310

Remaining Airport developments to be sited on available parcels



Site	Airport Support	Air Cargo	T-Hangar	Corporate General Aviation	Commercial Development
1	✗	✗	✗	✗	✓★
2	✓	✗	✓	✓★	✓
3	✗	✗	✓	✓★	✓
4	✓★	✗	✓★	✗	✗
5	✓	✗	✓	✓	✗
6	✓	✗	✓	✓★	✗
7	✓★	✗	✗	✗	✗
8	✓	✓★	✓	✓	✗
9	✗	✗	✗	✗	✓★
10	✓	✗	✓	✓★	✗
11	✓★	✗	✓	✓	✗

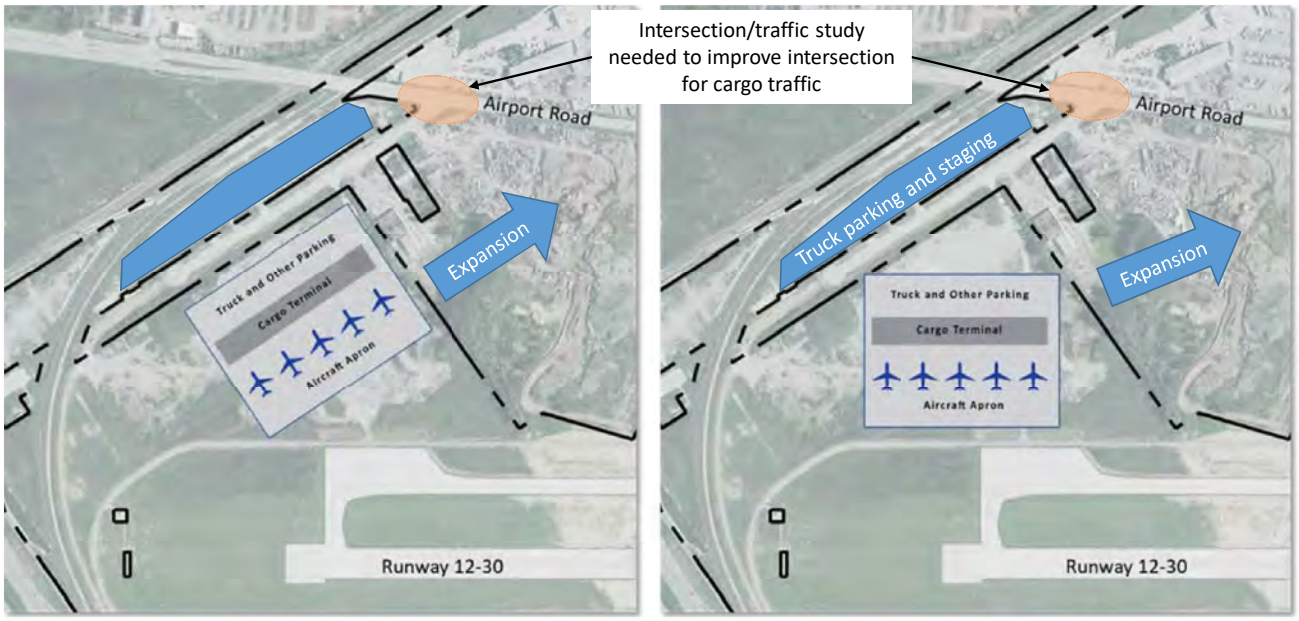
Legend

✓ Land use compatible with site

✗ Land use non-compatible with site

★ Recommended site for land use

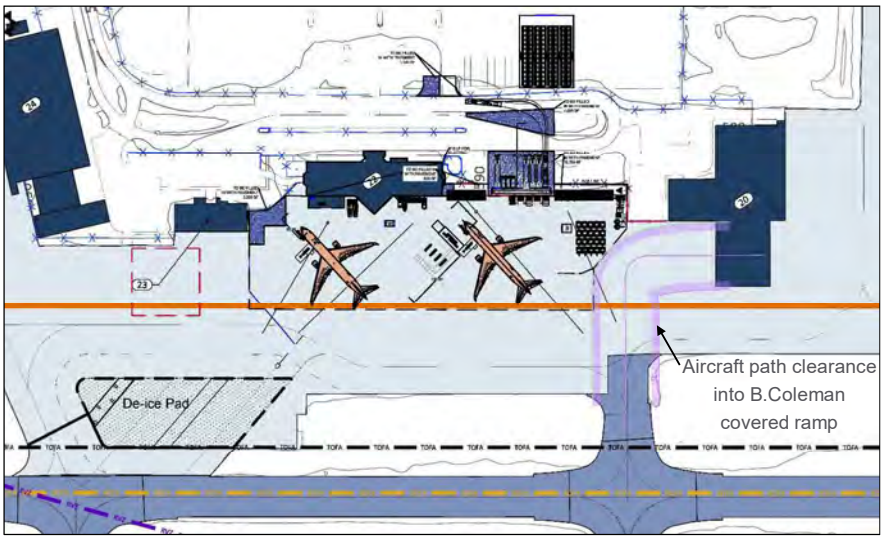
D-311



DEVELOPMENT AREAS BY FUNCTION

D-312

D-313



- Remove jet bridges
- Add pavement for equipment movement
- Modify terminal for office space
- Fencing and access

- Cost to build a spur into the Airport* is not feasible to serve the number of passengers forecast
- Options available for "last mile" travel
  - Taxi and other resources provided on SSL website
  - Lyft/Uber
  - FBOs provide rides for their clients when requested
- Revisit direct rail access and last mile options with sustained passenger service

*In January 2018, Bloomberg CityLab reported that the cost of light rail in the US was more than $100 million per mile.
https://www.bloomberg.com/news/articles/2018-01-26/the-u-s-gets-less-subway-for-its-money-than-its-peers

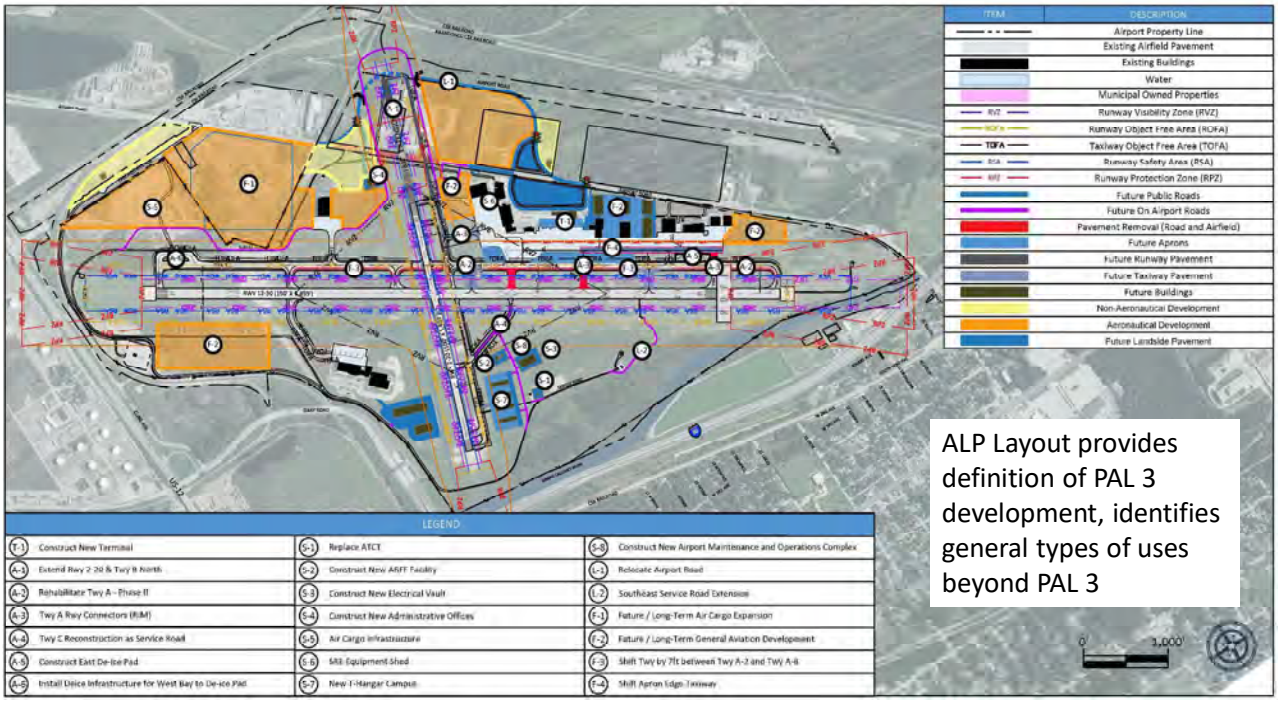
FUTURE DEVELOPMENT PLAN

Proposed Development Plan

- Compiles preferred alternatives for all functional areas
- Creates an overall plan for development
  - For PAL 3 – shown on Airport Layout Plans
  - Ultimate development – beyond PAL 3 for longer-term guidance
- Individual projects are defined in a Capital Improvement Program (CIP)
- Projects are not shovel-ready – additional definition provided through environmental study, advance planning and design.

FUTURE DEVELOPMENT PLAN – ALP (PAL 3)

D-316



ALP Layout provides definition of PAL 3 development, identifies general types of uses beyond PAL 3

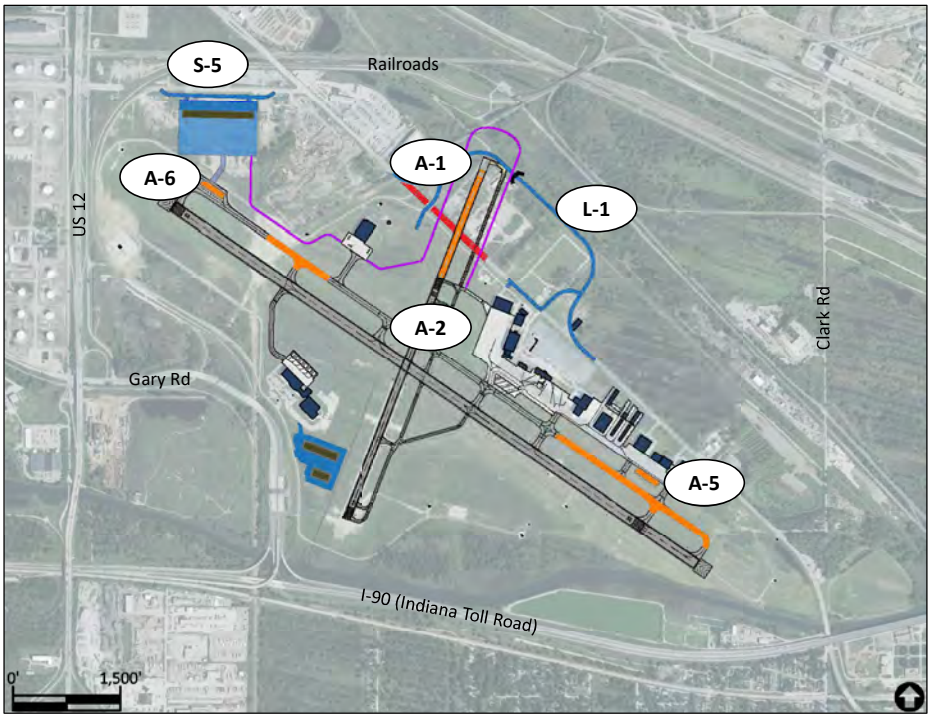
D-317

- Defines project scopes, recommended timing* for starting the work, and costs
- Rough, order-of-magnitude costs based on master plan-level planning
- Costs in 2Q 2020 dollars, pre-COVID-19
- Includes construction and soft costs
  - General contractor mark-ups 25%
  - Owner's soft costs 21.3%
- Land acquisition:
  - $25M allowance for Rwy 2-20 extension and Airport Rd relocation acquisition
  - 51 acres for future cargo not included
- Allowances for wetlands mitigation based on estimated acreage

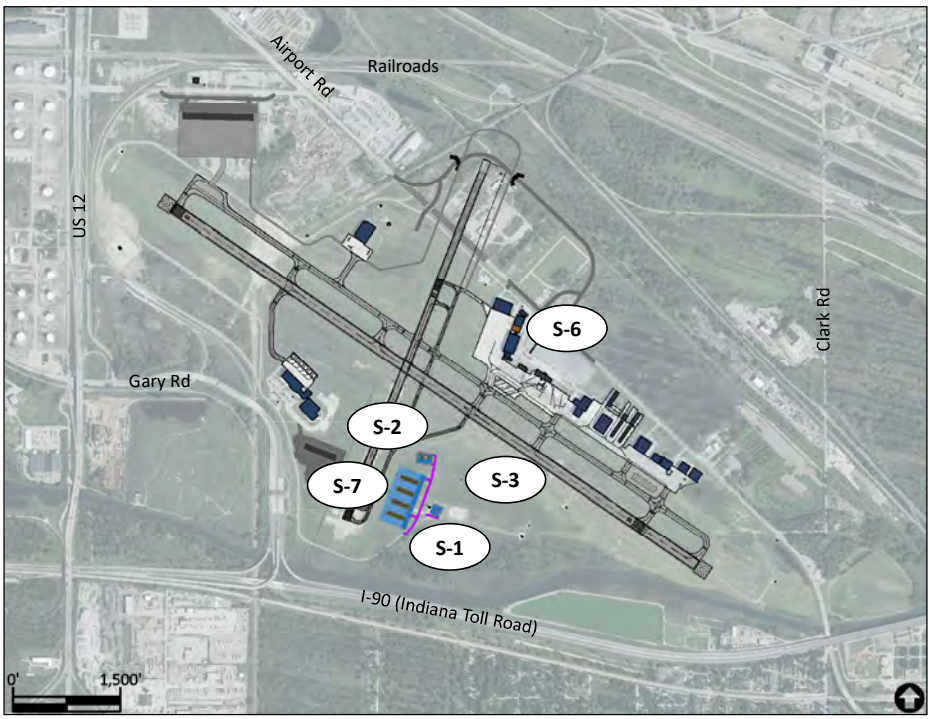
Time Period	Years from Master Plan completion	Calendar Years
Near-Term	1 - 5 years	2022 to 2027
Mid-Term	6 - 10 years	2028 to 2032
Long-Term	11 + years	2033 to 2042

*Actual timing may vary based on funding and demand

PROPOSED DEVELOPMENT – NEAR-TERM



Project ID	Project Title	Estimated Cost (millions)
A-1	Extend Rwy 2-20 & Twy B North	$42.06
A-2	Rehabilitate Twy A - Phase II	$11.34
A-5	New East De-ice Pad	$2.30
A-6	Deice Infrastructure for West Bay to De-ice Pad	$1.53
L-1	Relocate Airport Road	$76.09
S-1	Replace ATCT	$11.52
S-2	New ARFF Facility	$9.59
S-3	Construct New Electrical Vault	$5.54
S-5	Air Cargo Infrastructure	$9.68
S-6	SRE Building Expansion	$6.31
S-7	New T-Hangar Campus	$23.07
Total Near-Term		**$199.02**



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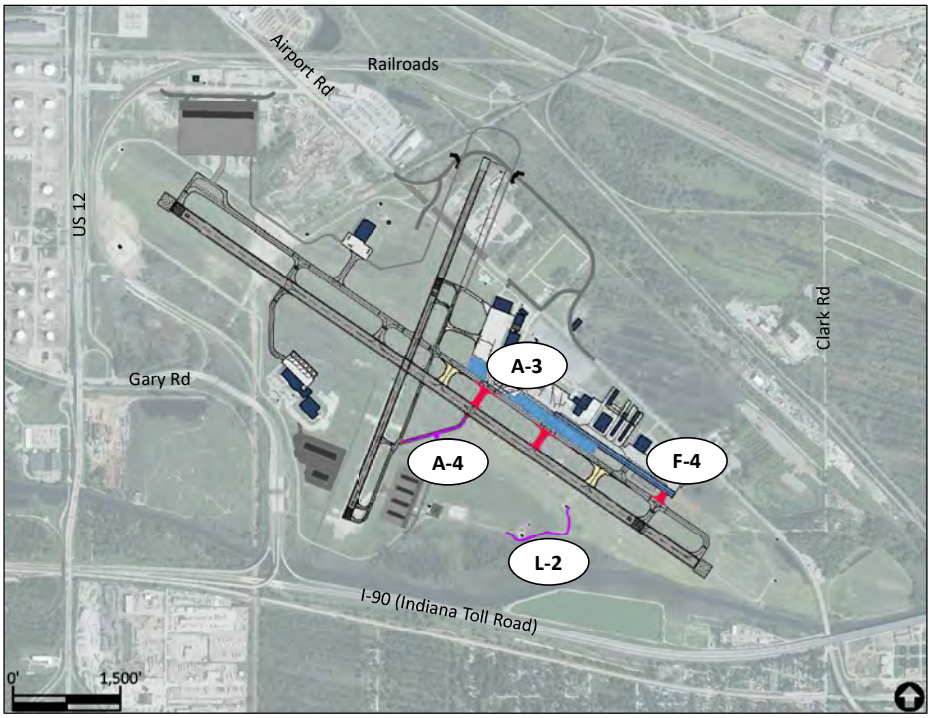
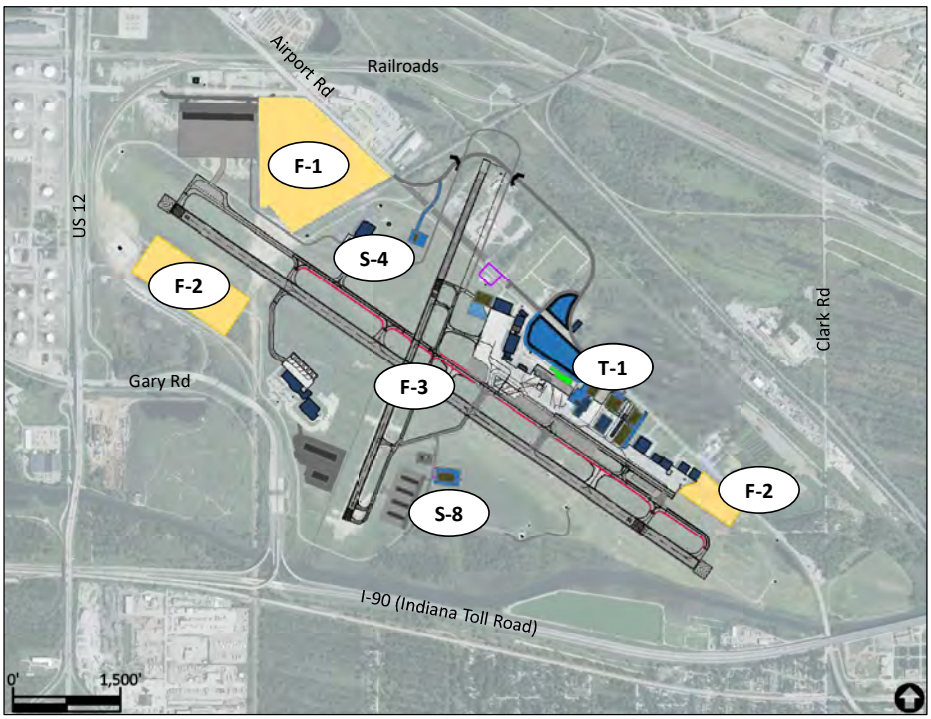


Project ID	Project Title	Estimated Cost (millions)
A-3	Twy A Rwy Connectors (RIM - Direct Access)	$16.67
A-4	Twy C Decommissioning to Service Road	$0.07
F-4	Shift Apron Edge Taxiway	$6.78
L-2	Southeast Service Road Extension	$1.37
Total Mid-Term		**$24.89**



Project ID	Project Title	Estimated Cost (millions)
F-1	Air Cargo Expansion	TBD
F-2	Future Corporate/Private Hangar Development	Private funding
F-3	Shift Twy A by 7 ft between Twy A2-A8	$2.28
S-4	New Administrative Offices	$7.26
S-8	New Airport Maintenance and Operations Complex	$16.55
T-1	New Terminal	$72.60
Total Long-Term		**$98.69**

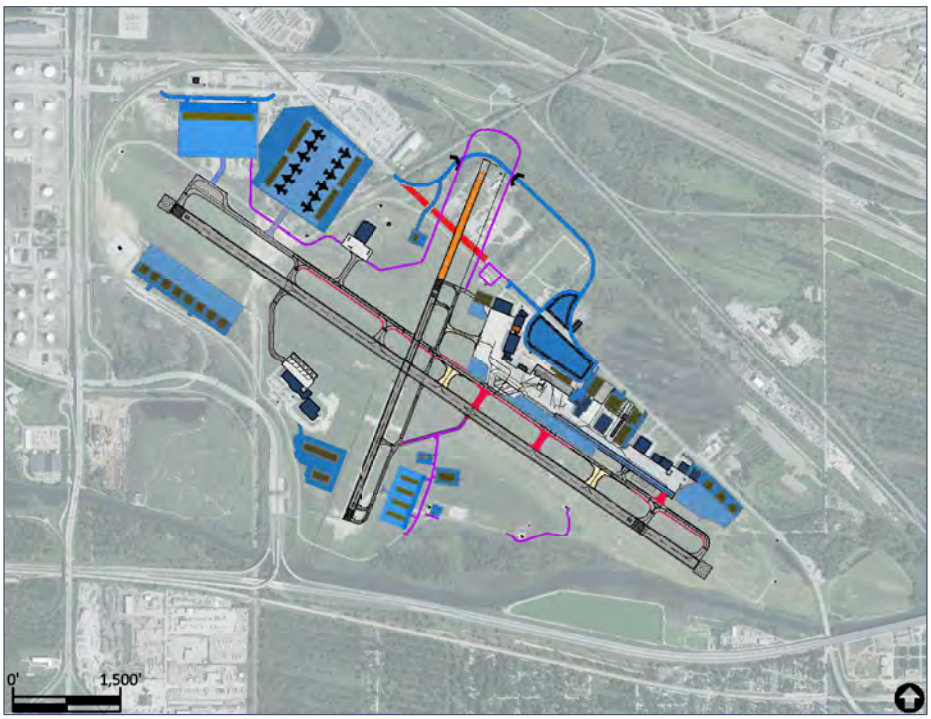
Summary of Estimated Cost (Millions)

Near-Term Total	$199.02
Mid-Term Total	$24.89
Long-Term Total	$98.69
Total 20-year Program	$322.60

- Projects will be funded through a variety of sources:
  - Federal Aviation Administration
  - Indiana DOT
  - Other Federal and state sources such as Federal Highway Administration
  - Airport revenues
  - Local funds
  - Private development

No funds originating from any of the federal stimulus package(s) have been used to finance the Airport Master Plan.

POTENTIAL ULTIMATE DEVELOPMENT



Ultimate Layout depicts potential development of the Airport beyond PAL 3.

The layout shows that the Airport can grow beyond the activity forecast in PAL 5.

FINAL STEPS

D-324

- Receive public comment on the plan
  - This presentation will be posted to the Airport website flygyy.com/master-plan/
  - All comments should be addressed to masterplan@flygyy.com
  - Comments will be reviewed
  - Responses to comments focused on Master Plan will be posted on the website
- Finalize and submit the Airport Layout Plans to FAA and INDOT for review and comment
- Finalize documentation and post to website

D-325

GCIA GARY/CHICAGO INTERNATIONAL AIRPORT

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

AIRPORT MASTER PLAN SUMMARY

Gary / Chicago International Airport Master Plan Update

03-29-2021

GYY Master Plan - Public Comments
Received with Public Meeting #2

#	First Name	Last Name	City	Email	Date of Email	Subject Matter / Topic	Comment / Question	Response
1	James	Quintas	Unknown	James.Quintas@zjetair.com	3/18/2021	Air service	Are there any plans to address better transportation to Chicago Downtown with non stop train service and regular helicopter services (to other airports as well)?	We are not aware of any plans for the South Shore Rail Line to offer non-stop service between the Gary/Chicago station and downtown Chicago. Helicopter service to downtown may be available through either Gary Jet Center or B. Coleman on a charter basis.
2	James	Quintas	Unknown	James.Quintas@zjetair.com	3/18/2021	Runway length	When expanding the second runway, why not expand to 6,500 feet to accommodate larger aircraft needs?	Potential runway length is limited by physical obstructions on the north and south ends. On the south is the Grand Calumet River, while on the north are several railroads. The proposed extension to approximately 5,400 feet is the maximum available without relocating the railroads. The cost of railroad relocation would not be commensurate with the aviation benefit.
3	Dave	Ryan	Gary (Lakeshore Chamber)	dryan@lakeshorechamber.com	3/24/2021	Parcels available for development on Airport	Is there a map available that delineates the "Available Acreage" for immediate development at the Gary/Chicato Intl Airport? It would be good to have that information available when we recieve inquiries. Additionally, are there any "Brownfield" properties around the airport that are available for development?	The Master Plan was prepared to create a forecast of anticipated activity and to develop a reasonable plan to accommodate the airfield facilities needed to support this anticipated aviation-related activity. The Airport Layout Plan Drawing that is a part of the Master Plan identifies areas within the Airport footprint that are likely candidates for aeronautical development. The Master Plan does not identify areas outside of the Airport footprint as non-aeronautical development is no longer something that the FAA reviews and approves due to the recent Section 163 legislation. The Master Plan did not include any identification of Brownfield properties on or off the Airport.
4	Carl D.	McFerren, Sr.	unknown	carl.mcferren@aeroscm.com	3/29/2021	Can the MD-11 operate @ GYY?	The Master Plan indicates that GYY is marketing to certain carriers for cargo cooperation: - Can we see the marketing plan? - Can you please advise if these carriers are in the domestic short haul business or international long-haul business? - What is the maximum size of aircraft these carriers would use? - What is the maximum sized cargo aircraft that can utilize runway 12-30 as well as taxiways and tarmac/parking areas? - Master Plan shows 767-200 widebody a/c. is this the maximum size a/c allowed?	The Master Plan was prepared to create a forecast of anticipated activity and to develop a reasonable plan to accommodate the airfield facilities needed to support this anticipated aviation-related activity. The Master Plan does not include the development of a marketing plan. Any questions regarding marketing of the Airport should be directed to Airport staff. Carriers use a variety of sizes of aircraft based on their needs and routes. Typically that information is not shared by carriers until they begin negotiations and commit to use of the facility. Runway 12-30 can accommodate up to a B747-size aircraft under special operational circumstances. However, medium narrow-body aircraft such as the B-737 are the predominant types. GCIAA anticipates regular use of the MD-11, A300, and B-767 with the current UPS activity. Existing and future aircraft parking areas can and will accommodate wide body aircraft.
5	Adam	Hall	Gary	adamhall@adamhall.org	4/12/2021	Wetlands	Will GYY provide assurance that even if the State of Indiana removes wetlands protections (under current proposed legislation) no on-site wetlands (as identified) will be developed?	Airport development is expected to follow both State of Indiana and National Environmental Protection Act (NEPA) regulations. If wetlands are to be impacted, they are anticipated to be mitigated in accordance with the applicable laws and at the rate determined appropriate by the agencies based on the quality of wetlands disturbed.

GYY Master Plan - Public Comments
Received with Public Meeting #2

#	First Name	Last Name	City	Email	Date of Email	Subject Matter / Topic	Comment / Question	Response
6	Adam	Hall	Gary	adamhall@adamhall.org	4/12/2021	Air Quality	The area is already designated a "non-attainment" zone for Air Quality. Is any development which will further impact that air quality permitted? What impact will each of the various projects have, and what mitigation measures are planned? What monitoring will be in place and will data be publicly accessible?	National Environmental Protection Act (NEPA) analyses will be required for each Federally funded project. This effort will include assessing potential air quality impacts of the proposed project and other alternatives. The analyses and findings will be public information and available through GCIA Authority.
7	Adam	Hall	Gary	adamhall@adamhall.org	4/12/2021	Financing the Capital Plan	Is any bond financing contemplated (this was not listed as a funding source)?	Each project will be evaluated on a case-by-case basis. Bonding is unlikely to be used on the smaller projects as a variety of funding sources that include the FAA, INDOT, PFCs and local funds may support the program.
8	Adam	Hall	Gary	adamhall@adamhall.org	4/12/2021	Intermodal connectivity	For an effective intermodal operation, there will be increased traffic between the airport and the port and rail lines (as well as the trucking described in the Plan). Will the port and rail connections all be via trucks, and if so is all that additional trucking activity accounted for in the Plan? If not, what will the interconnections look like?	Port and rail connections will be via truck. As part of development of a parcel, additional traffic studies will be performed to evaluate the effect of increased traffic on the roadway system. These analyses will include tenant-based specificity that isn't possible in a master plan. Coordination with local and state transportation agencies will be required to ensure that solutions address appropriate guidelines and regulations.
9	Adam	Hall	Gary	adamhall@adamhall.org	4/12/2021	Flight paths and noise	What are the flight paths, current and projected? Will the National Park/Shoreline (and residents) be affected by increased overhead flights? That would include air pollution, visual impact and noise. Will flight patterns be directed over the lake during overnight hours to minimize noise levels? I moved from my previous residence in part because it was under an increasingly busy flight path, and I would be very upset to experience that again.	Development proposed in the master plan will not create any changes in flight paths. Although this plan did not update the noise analysis, the first step in extending Runway 2-20 will be to prepare an environmental analysis that considers noise/compatible land use impacts as well as other potential consequences of development (water resources, air quality, wetlands, transportation patterns, etc.) following NEPA requirements.
10	John	Williams	San Diego	john.williams@watermark-finance.com	4/15/2021	Watermark - financing	Keeping our name in the mix to provide buisiness funding this year. Watermark provides rates as low as 2.5% with custom monthly terms for: - Working Capital - Equipment Leases - Commercial Real Estate We can send on over an app for approval anytime. If you need a new bank account or corporate card, please check out our Brex site to help you get setup today. www.Brex.com/watermark	Your comment has been noted.