



EXPERIENCE mspTM

MSP Airport Long-Term Plan Presentation – 5:30



Welcome Remarks



Rick King
MAC Chair



Brian Ryks
MAC Executive
Director/CEO

Meet the Planning Team

Eric Gilles



Senior Airport
Planner
Project Manager
MAC

Dana Nelson



Director,
Stakeholder
Engagement
MAC

Larry Hilton



Aviation
Forecasts &
Terminal Planning
Ricondo &
Associates

Andrew Blaisdell



Airside Planning
HNTB

Bill Schmitz



Landside Planning
Kimley-Horn

Presentation Outline

- Long-Term Plan Introduction
- Planning Process and Key Findings
 - Aviation Activity Forecast
 - Facility Requirements
 - Development Concepts and Preferred Alternative
 - Aircraft Noise Analysis
- Next Steps
- Questions

MSP Airport Long-Term Plan Introduction



MSP Long-Term Plan Purpose

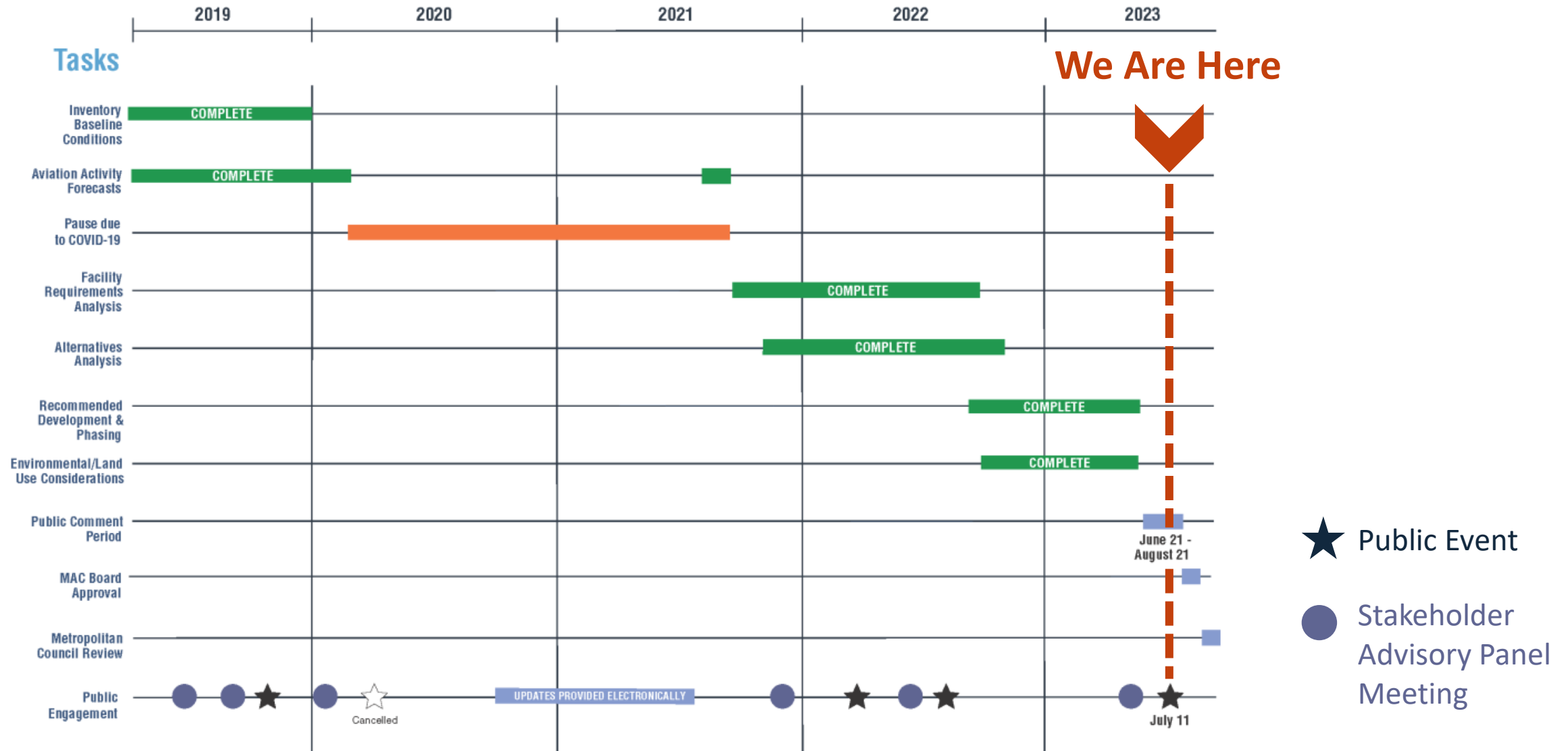
- The plan is:
 - A document that records existing and future needs of an airport
 - Focused on a 20-year horizon (2040)
 - Typically updated approximately every 7-10 years
- The plan does not:
 - Authorize construction or improvements to facilities, nor does it serve as a method for studying environmental impacts.



MSP Long-Term Plan Goals

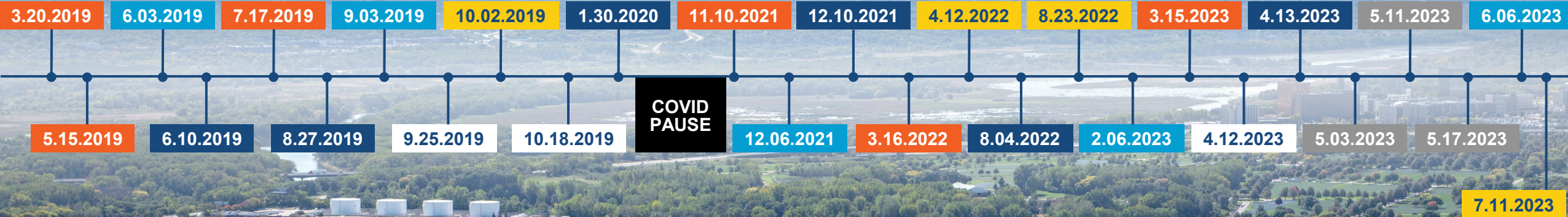
- Plan for future facilities that will meet projected passenger activity levels in a manner that maintains and enhances customer service, while facilitating a seamless passenger experience.
- Produce a development plan that positions the MAC to:
 - meet future demand levels
 - enhance financial strength
 - leverage environmental stewardship, and
 - infuse sustainable thinking
- Conduct the planning process in a manner that includes meaningful stakeholder engagement processes.

Long-Term Plan (LTP) Project Timeline



MSP Long-Term Plan Stakeholder and Public Engagement

START



MSP Noise Oversight Committee (NOC)

MAC Planning, Development & Environment Committee (PD&E)

MSP Stakeholder Advisory Panel

City of Minneapolis

Experience MSP Public Event

Metropolitan Council

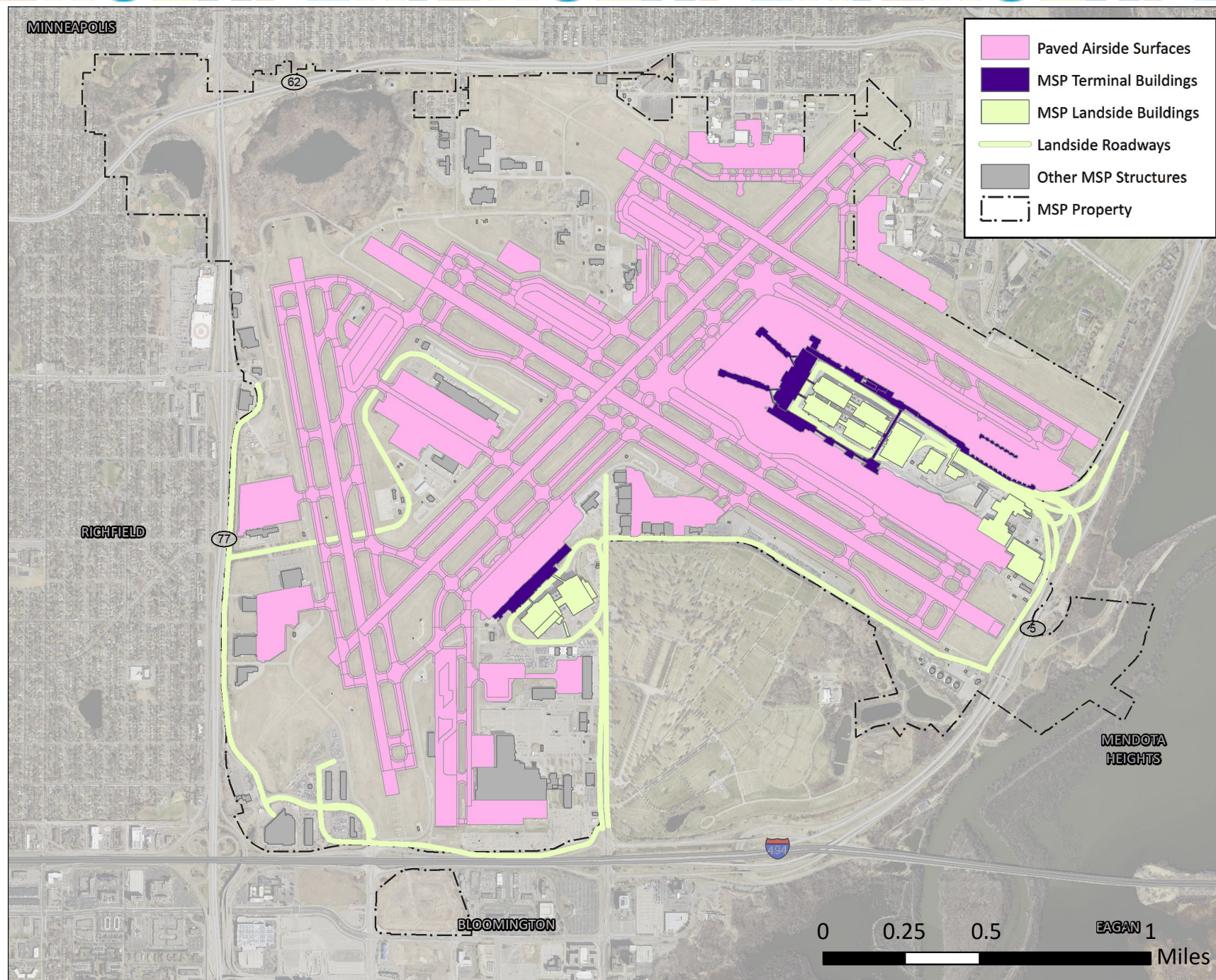
27 total public meetings to-date

Planning Process and Key Findings



Key Terminology

- **Planning Activity Level (PAL)**
 - Often fluctuate based on actual demand
 - PAL 1 = 2025
 - PAL 2 = 2030
 - PAL 3 = 2040
- **Federal Inspection Services (FIS)**
 - Secure area in Terminals 1 and 2 used for processing passengers arriving from international locations
- **Preferential Gating**
 - Only one airline uses a gate
- **Common Use Gating**
 - Multiple airlines share a gate
- **Passenger Enplanements**
 - Number of passengers originating from MSP used for forecasting



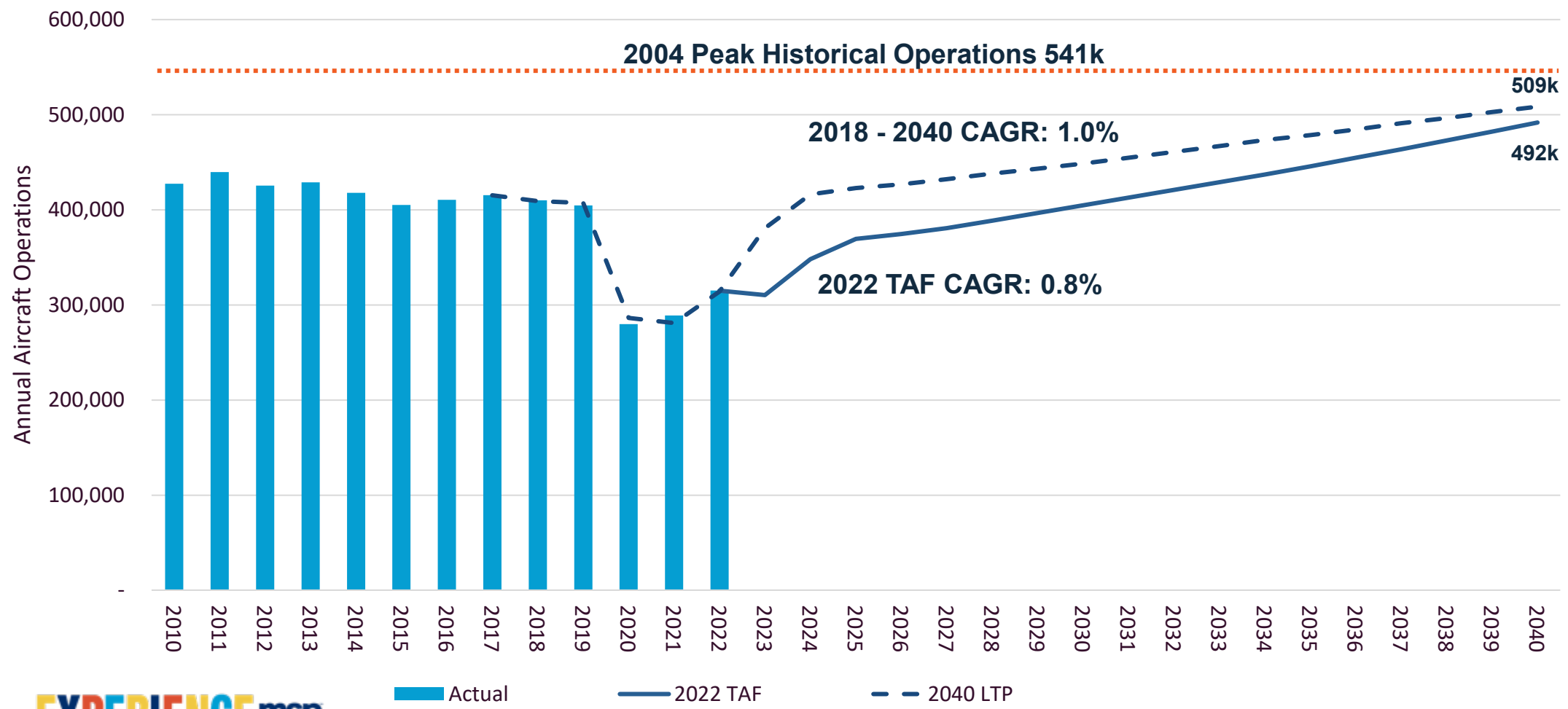
Aviation Activity Forecast



Develop Forecasts

- The 2040 LTP aviation forecast was initially completed in 2019
- In 2021, the forecast was revised to reflect pandemic impacts on:
 - Airline capacity and load factor recovery at MSP, taking into account the markets served by MSP and overall industry trends
 - Economic recovery trends in markets served by MSP

Develop Forecasts



Source: MAC Reports (actual); Ricondo (forecast)

Develop Forecasts

Total Aircraft Operations Forecast

Planning Activity Level	Value	Original Forecast	Revised Forecast
PAL 1	433k	2025	2027
PAL 2	462k	2030	2032
PAL 3	517k	2040	2042

Enplaned Passengers Forecast

Planning Activity Level	Value	Original Forecast	Revised Forecast
PAL 1	22.5m	2025	2026
PAL 2	24.4m	2030	2031
PAL 3	28.1m	2040	2040

Source: Ricondo (forecast)

Facility Requirements



Facility Requirements – Terminal

- Evaluated based on existing terminal footprint and operating conditions
- Reviewed operational standards for multiple areas of the terminal
- Gating strategies, passenger connectivity, and international arrival facilities were primary drivers in evaluating potential future terminal layouts

Facility Requirements – Terminal 1 Summary

Terminal 1			
Facility	PAL 2 (2030)	PAL 3 (2040)	Notes
Check-In	✓	✓	More kiosks for proprietary needs (PAL 3)
Security	✓	✗	Remote screening may resolve PAL 3
Bag Inspection	✓	✓	
Bag Claim	✓	✓	
Holdroom Space	✗	✗	All except Concourses C and D
International	✗	✗	Need 7 more inspection booths and 1,700 SF of queue space in PAL 2

Legend	
✓	Existing Layout Meets Future Demand
✗	Existing Layout Does Not Meet Future Demand



Facility Requirements – Terminal 2 Summary

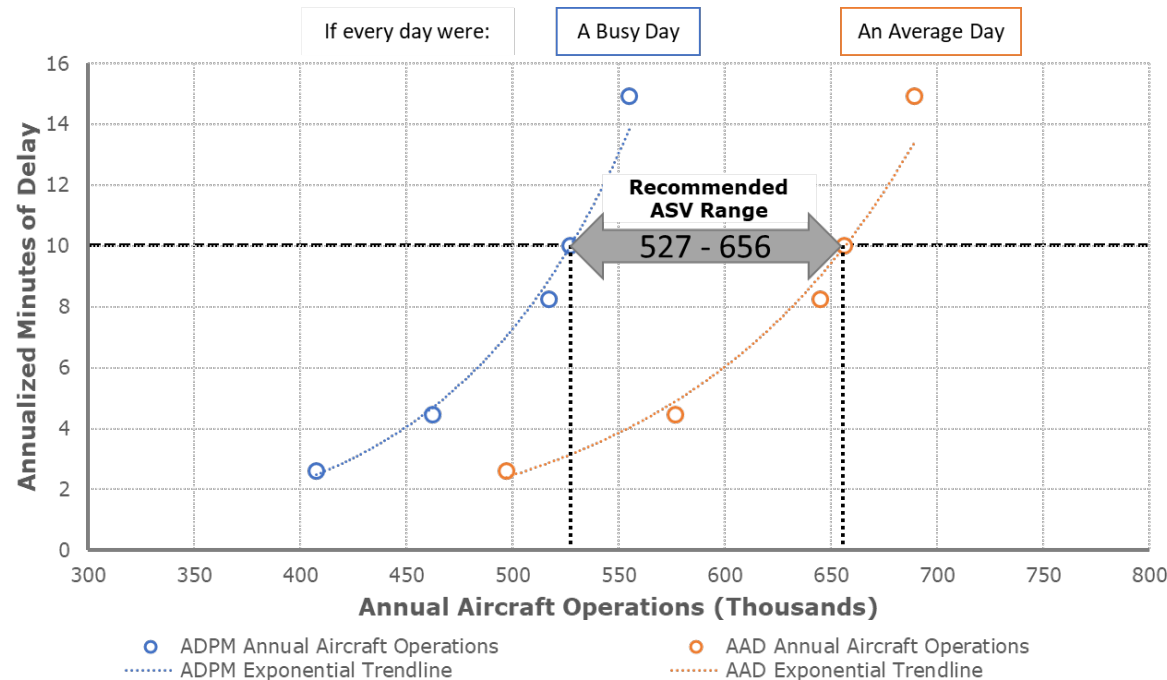
Terminal 2			
Facility	PAL 2 (2030)	PAL 3 (2040)	Notes
Check-In	✓	✓	More kiosks for proprietary needs (PAL 3)
Security	✓	✗	Remote screening may resolve PAL 3
Bag Inspection	✗	✗	One additional screening device (PAL 2/3)
Bag Claim	✓	✓	
Holdroom Space	✓	✓	
International	✓	✓	

Legend	
✓	Existing Layout Meets Future Demand
✗	Existing Layout Does Not Meet Future Demand



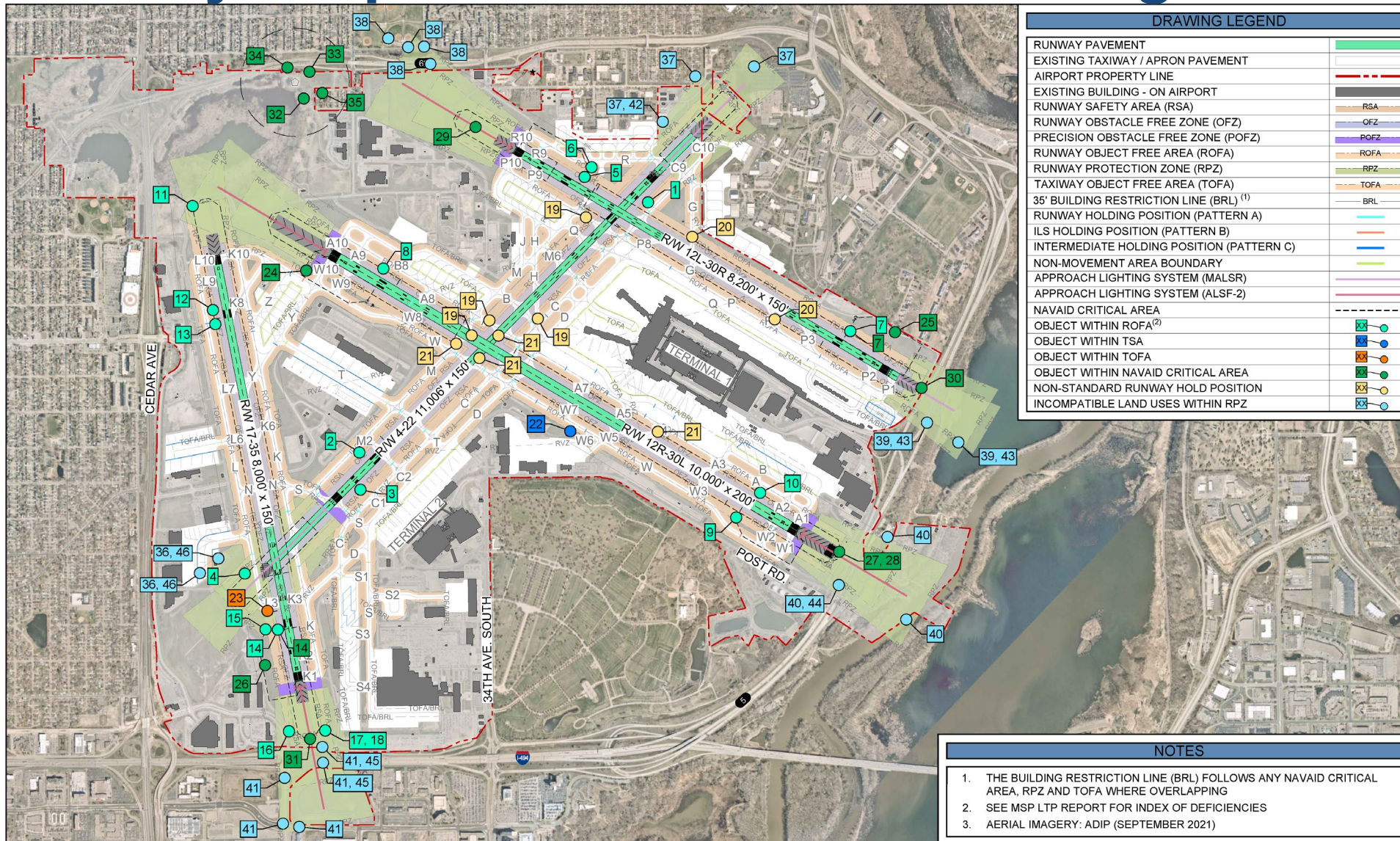
Facility Requirements – Airfield Capacity

- Fast-time simulation used to calculate airfield delay at different demand levels
- Airfield Capacity – Annual Service Volume (ASV) 527,000-656,000 operations
- Conclusion: **No need for any new runways or runway extensions**



PAL 3 forecast includes 509,700 annual operations

Facility Requirements – Airfield Design Standards



Facility Requirements – Airfield Summary

Airfield Campus			
Facility	PAL 2 (2030)	PAL 3 (2040)	Notes
# of Runways	✓	✓	
Runway Length	✓	✓	
Noise Abatement	✓	✓	Continue industry-leading noise abatement and mitigation efforts
Taxiways	✓	✓	Additional taxiways may enhance operational flexibility
NAVAIDs	✓	✓	
Aircraft Parking	✓	✗	Additional Remain Overnight (RON) PAL 3
Aircraft Deicing	✓	✓	
Air Cargo	✓	✓	

Legend	
✓	Existing Layout Meets Future Demand
✗	Existing Layout Does Not Meet Future Demand



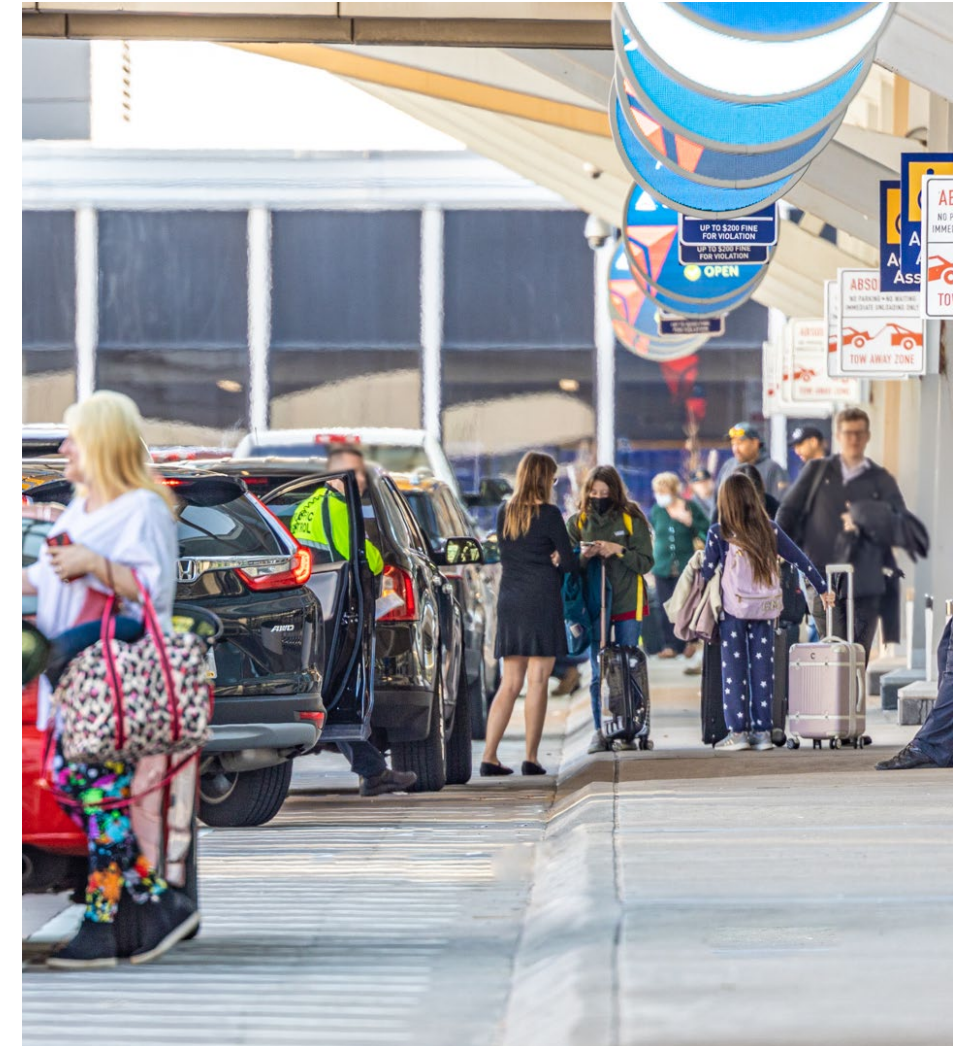
Facility Requirements – Landside Considerations

- Driven by originating and terminating passenger activity at each terminal
- Recommended airport-wide parking, rental car, and commercial vehicle facility requirements
 - Terminal-specific requirements driven by preferred terminal development alternative
- Considered potential influencers/disruptors

Facility Requirements – Landside

Terminal 1 and Terminal 2			
Facility	PAL 2 (2030)	PAL 3 (2040)	Notes
Private Parking	✓	✗	Green/Gold Ramp; off-airport providers
Curbside	✗	✗	Deficiency exists today
Rental Cars	✗	✗	Deficiency exists today
Commercial	✓	✓	

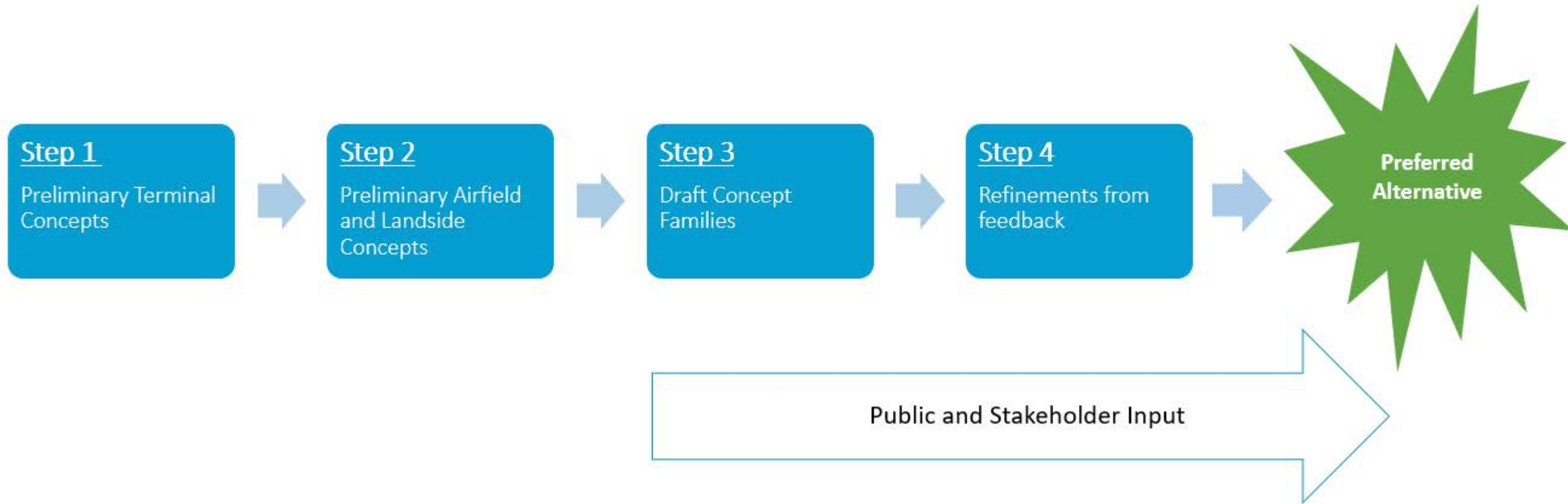
Legend	
✓	Existing Layout Meets Future Demand
✗	Existing Layout Does Not Meet Future Demand



Development Concepts and Preferred Alternative



Process to Identify the Preferred Alternative



Alternative Concept Families

- **Alternative 1A**
 - Single Federal Inspection Service (FIS) facility at Terminal 1
 - Maximize preferential gating
- **Alternative 2A**
 - Single FIS at Terminal 2
 - Emphasis on common-use gating
- **Alternative 3A**
 - Two FIS facilities (Terminal 1 and 2)
 - Maximize preferential gating
 - How the airport operates today

Preferred Alt.

Potential Project List:

1. T2 Gate Expansion
2. T1 FIS Improvements (Ex. Site)
3. Reconstruct Concourse E
4. Reconstruct Concourse F
5. Reconstruct Green/Gold Area
6. Relocate Signature FBO
7. T2 Gate Expansion (Maximize)
8. North Parallel TWY (RWY 30R)
9. Reconstruct Concourse A
10. Extend Concourse G
11. Expand Cargo Facilities
12. Construct RWY 12R EAT
13. Relocate GRE/RON Parking
14. T2 Remote Improvements
15. Construct Delta RON Expansion
16. Connect T1 to T2 (Sterile)

Legend

FUTURE TAXIWAY / APRON PAVEMENT	
FUTURE DEMO	
FUTURE BUILDING	
FUTURE VEHICLE SERVICE ROAD	
FUTURE ELEVATED LANDSIDE ROADWAY	
FUTURE LANDSIDE PAVEMENT	
FUTURE GROUND SERVICE EQUIPMENT STAGING	
RUNWAY HOLDING POSITION	
FUTURE AOA FENCE	
NON-AERONAUTICAL DEVELOPMENT	
FUTURE EXTERNAL DEVELOPMENT BOUNDARIES	
TERMINAL 1 / TERMINAL 2 CONNECTION	
REPRESENTATIVE AIRCRAFT (CRJ-200 / A321neo / B757-200W / A350-900)	

	Ex. Gates	2040 Gates	Net +/-
T1	102	95	-7
T2	16	35	+ 19
Total	118	130	+ 12

Aircraft Noise Analysis



2018 Actual Contour and 2040 Baseline Forecast Comparison

Total Operations

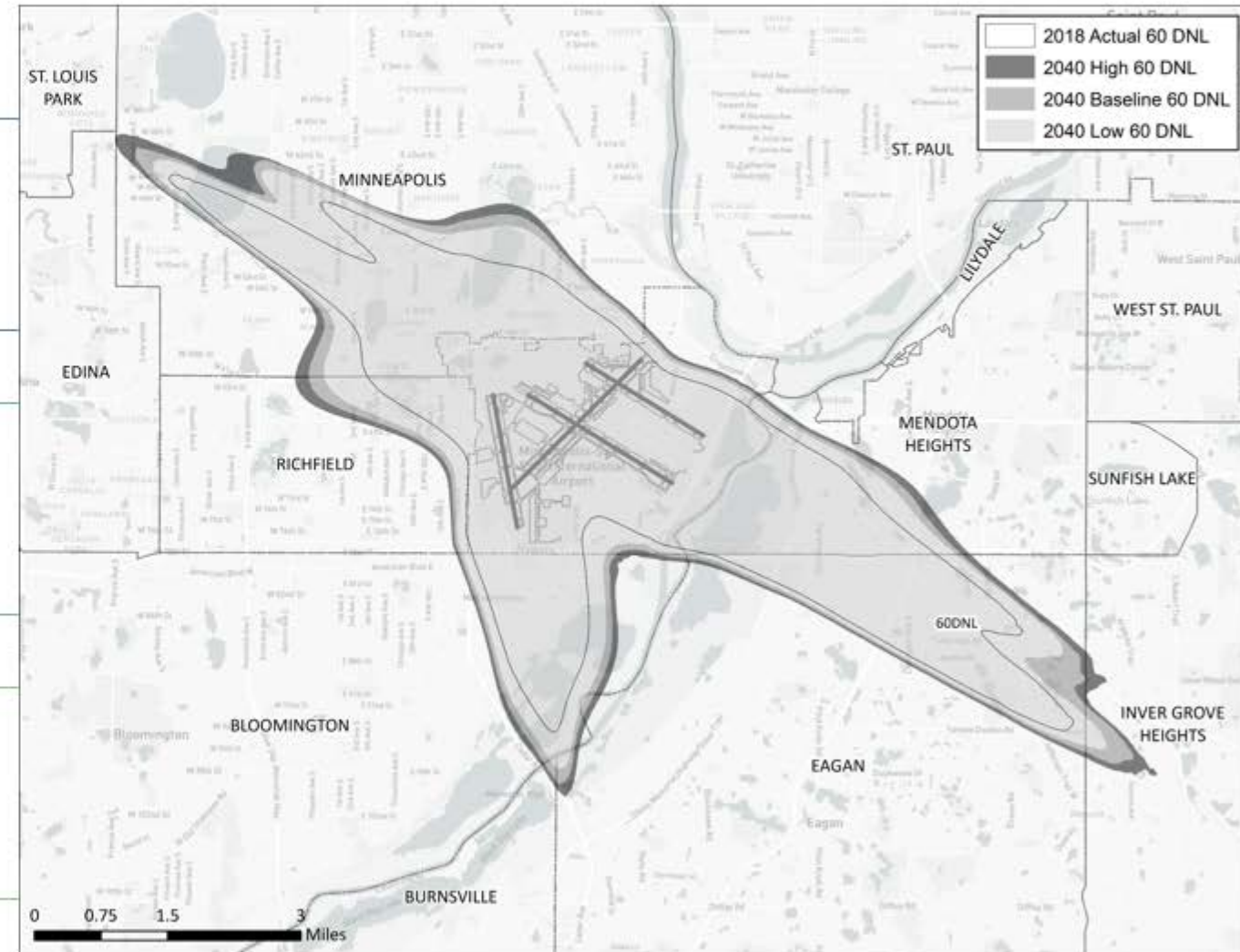
- 2018 – 406,913 Annual Operations
- 2040 – 509,700 Forecast Operations

Nighttime Operations

- 2018 – 10.8% of all operations (120 Average Daily)
- 2040 – 11.5% of all operations (161 Average Daily)

Stage 5 Operations

- 2018 – 211 Average Daily Operations
- 2040 – 874 Average Daily Operations



Updates in Aircraft Types



Airbus New Engine Option (neo)
A319, A320, A321

- 15 dB below Stage 4 noise standards
- 1.6 average daily operations in 2018
- 273 average daily operations in 2040 forecast

Source: www.airbus.com



Boeing B737 MAX
MAX 7, MAX 8, MAX 9, MAX 10*

- 40% noise reduction from B737-800
- 1.5 average daily operations in 2018
- 30 average daily operations in 2040 forecast

Source: www.boeing.com

**B737 MAX 10 does not have a noise profile in AEDT; the B737 MAX 8 was used as an FAA approved substitute.*



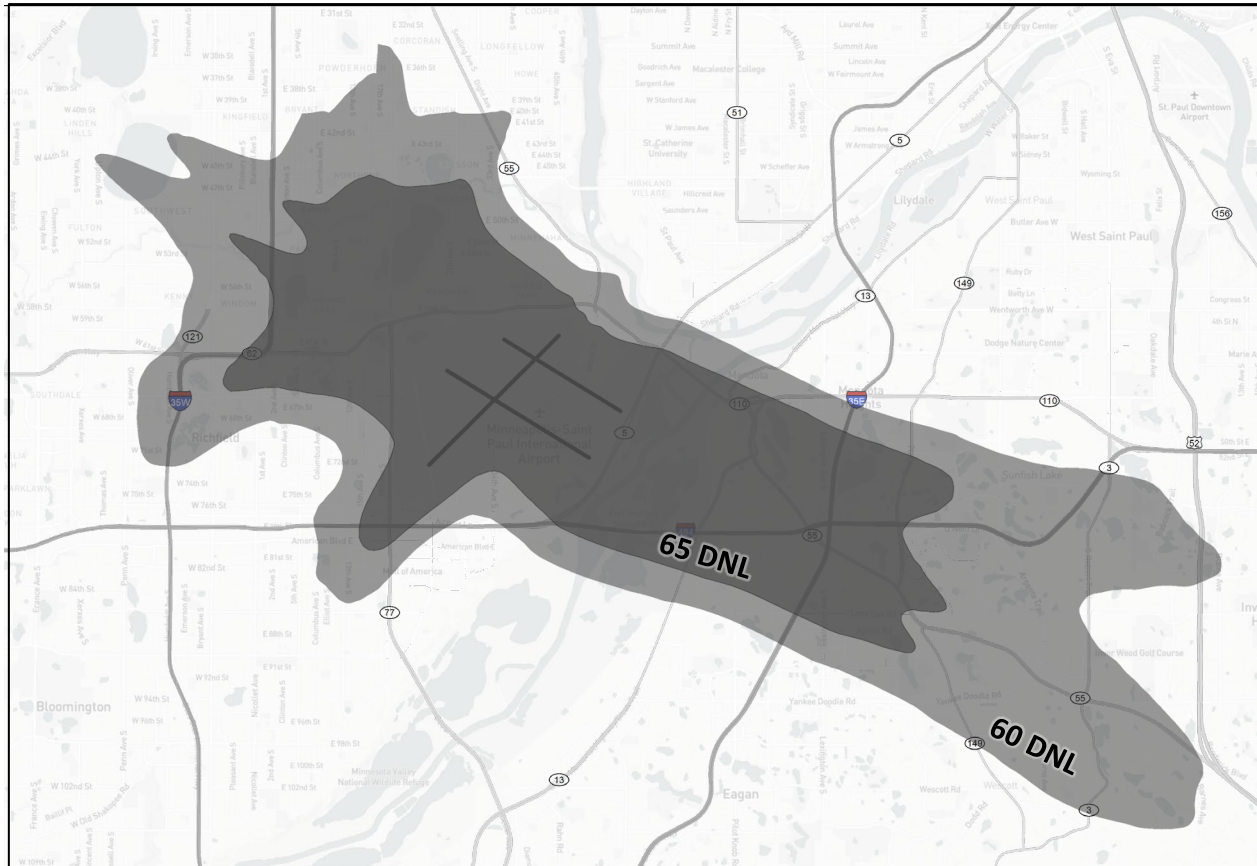
Airbus A220-100 and A220-300

- 50% noise reduction from previous generation
- 0 average daily operations in 2018
- 499 average daily operations in 2040 forecast

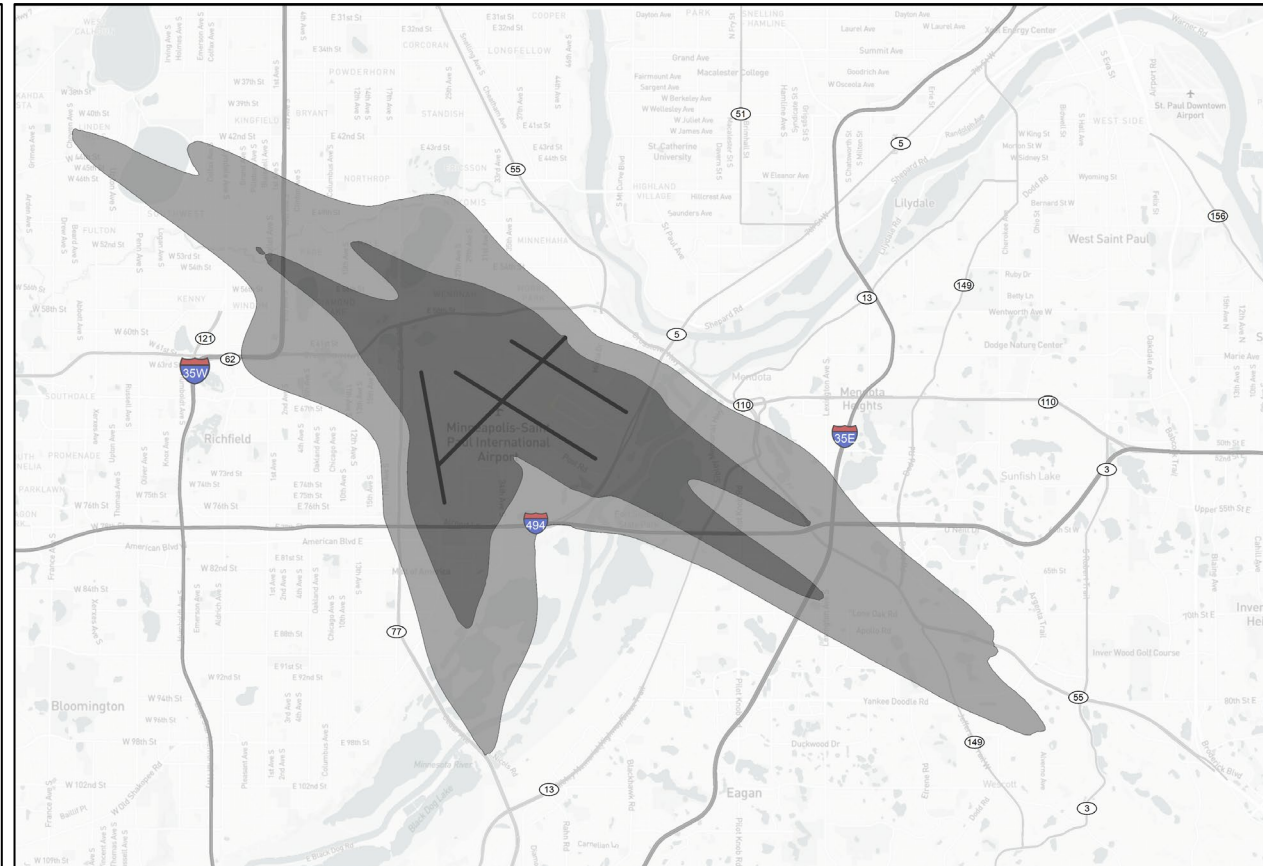
Source: www.airbus.com

Video representation of aircraft noise contours at MSP from 1977 to 2040 forecast was shown during the event.

MSP ACTUAL CONTOUR – 1996



MSP BASELINE FORECAST CONTOUR – 2040



Next Steps

- Written comments on the Draft LTP will be accepted until **August 21, 2023, at 5:00 PM**
- Visit www.mspairport.com/long-term-plan or scan the code below to view the draft document
- Written comments may be submitted:
 - By filling out a written comment form tonight
 - Online by visiting the web address above
 - Email to MSPAirportLongTermPlan@mspmac.org
 - Mail to: Metropolitan Airports Commission
Attn: Airport Planner
6040 28th Avenue South
Minneapolis, MN 55450



Questions



Guidelines for Audience Questions

- Walk up to a microphone at the front of the isle
- Please begin with your name, city and any affiliation or group you represent
- Each speaker is requested to keep their questions to 2 minutes to allow everyone the opportunity to speak
- The Plan may not incorporate all public input due to other considerations, such as:
 - Conforming to design standards
 - Federal and state policies
 - Safety
 - Maintaining a high level of service
 - Operational feasibility
 - Project costs
 - Achieving the established goals of the Plan