

# Hector International Airport

## Fargo



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**TERMINAL AREA STUDY  
PUBLIC INVOLVEMENT MEETING  
SEPTEMBER 27, 2022**

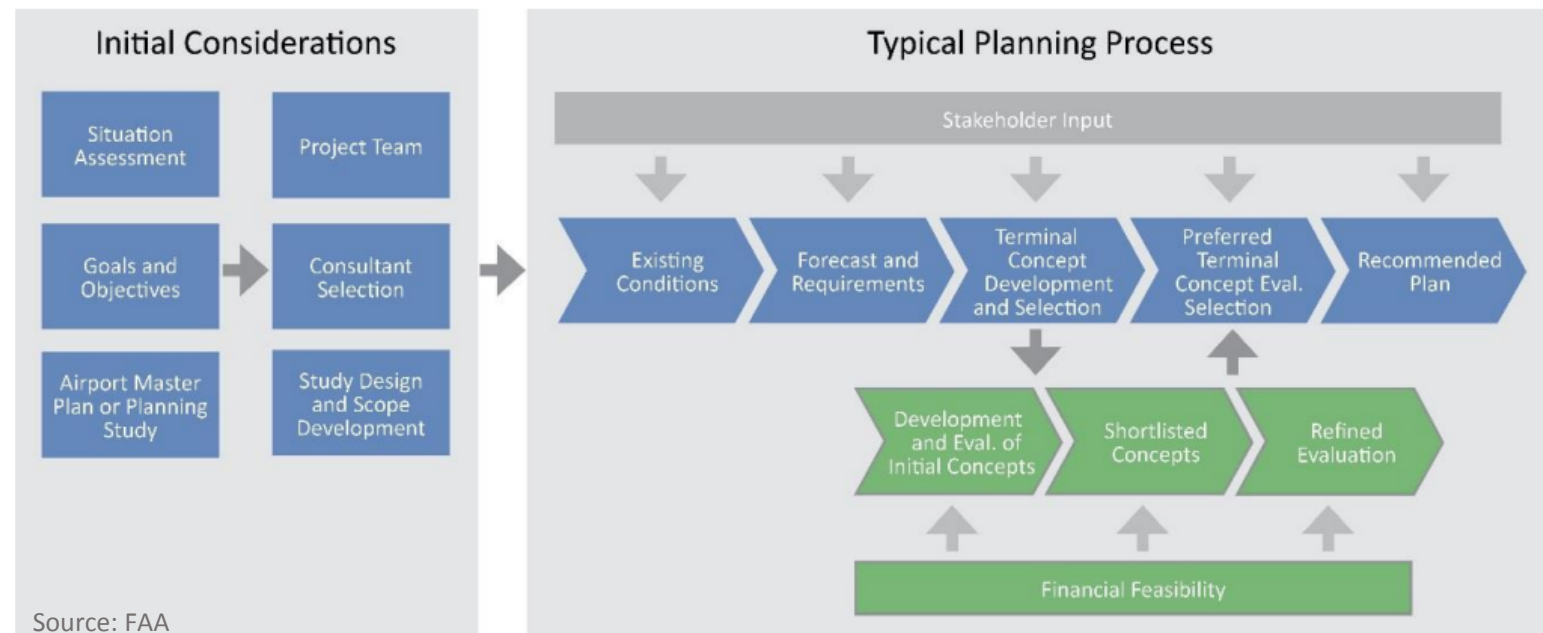
# Agenda

- What is a Terminal Planning Study
- Schedule
- Existing Conditions
- Passenger Forecasts
  - Peak Hour Forecasts
- Facility Requirements
- Preferred Concept of Development
- Next Steps

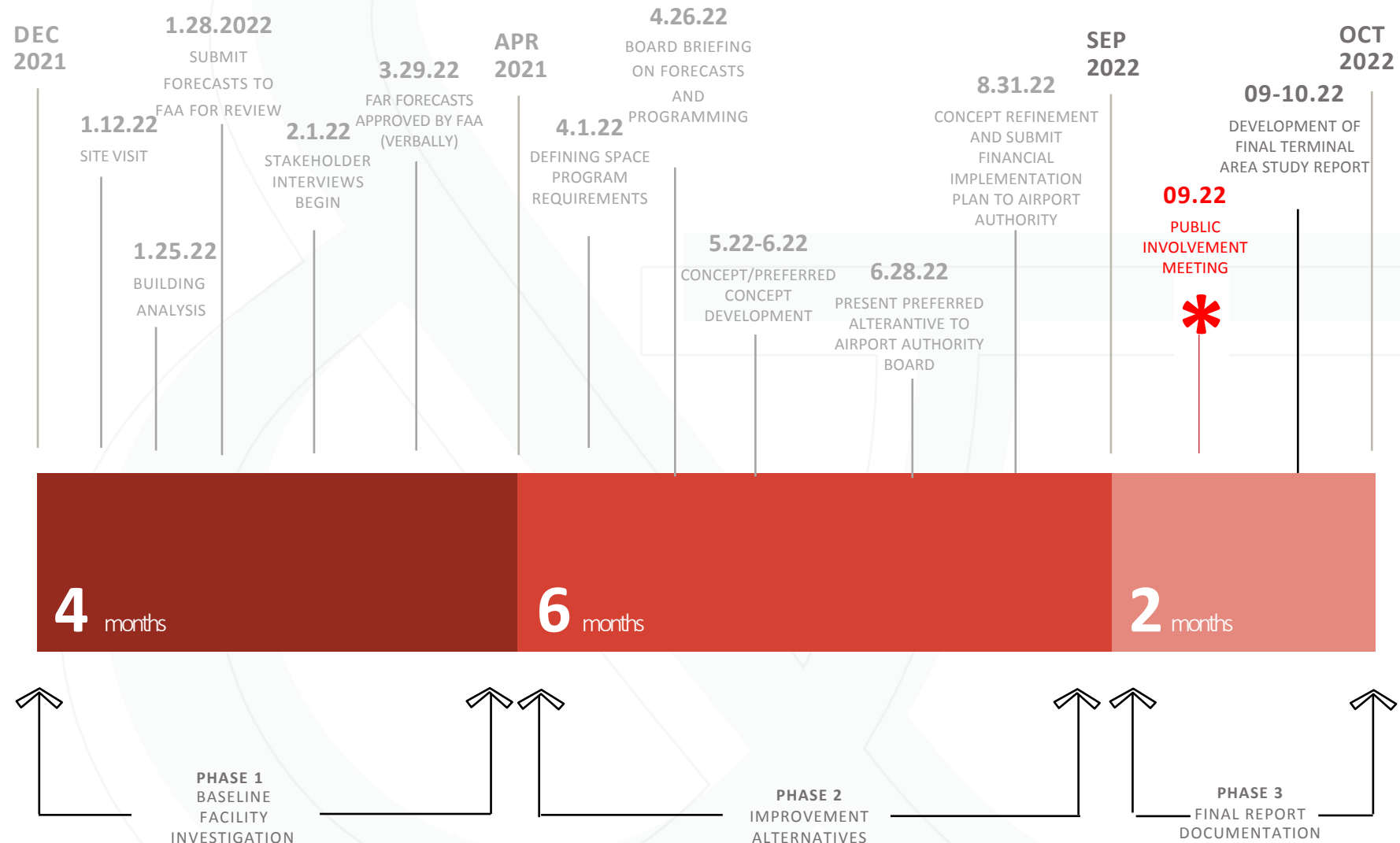
# What is a Terminal Planning Study?

- ➔ A Terminal Planning Study identifies a sustainable and financially feasible alternative for future terminal development that can accommodate existing and future demand.

**Figure 3-1 Conceptual Terminal Planning Process**



# SCHEDULE | FAR TERMINAL AREA STUDY



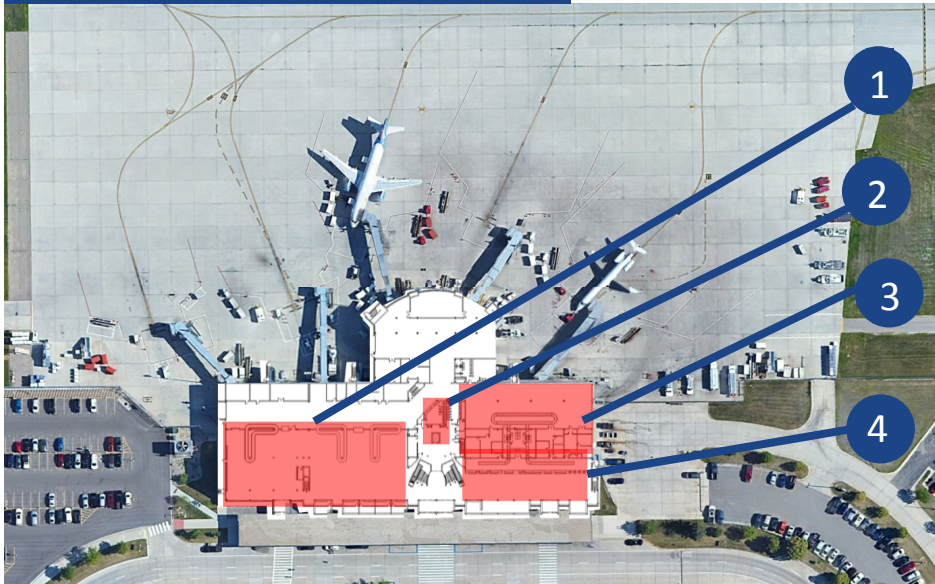
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# Existing Conditions

## Lower-Level Plan



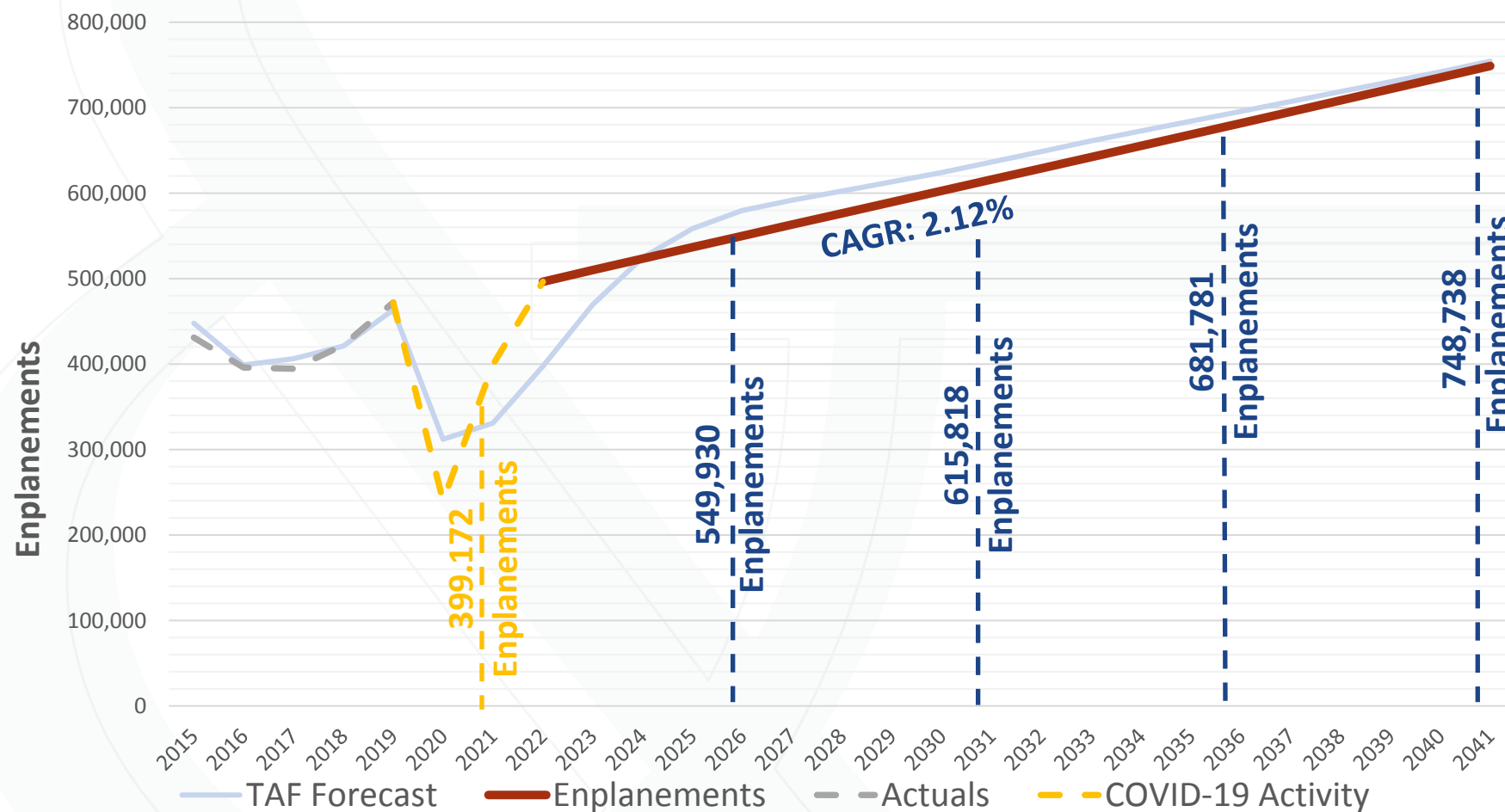
## Upper-Level Plan



## Planning Considerations

- 1 Baggage claim and rental car counter circulation undersized
- 2 Pre-security restroom locations are not visible to passengers.
- 3 Baggage screening and outbound baggage requires expansion to meet demand
- 4 Ticket queuing area and ticket counter space stressed during peak times
- 5 Security screening location and size present safety and operational inefficiencies
- 6 Departure lounges undersized
- 7 Concession locations and size impact airport revenue
- 8 Post-security restrooms size and location require evaluation due to over crowdedness.

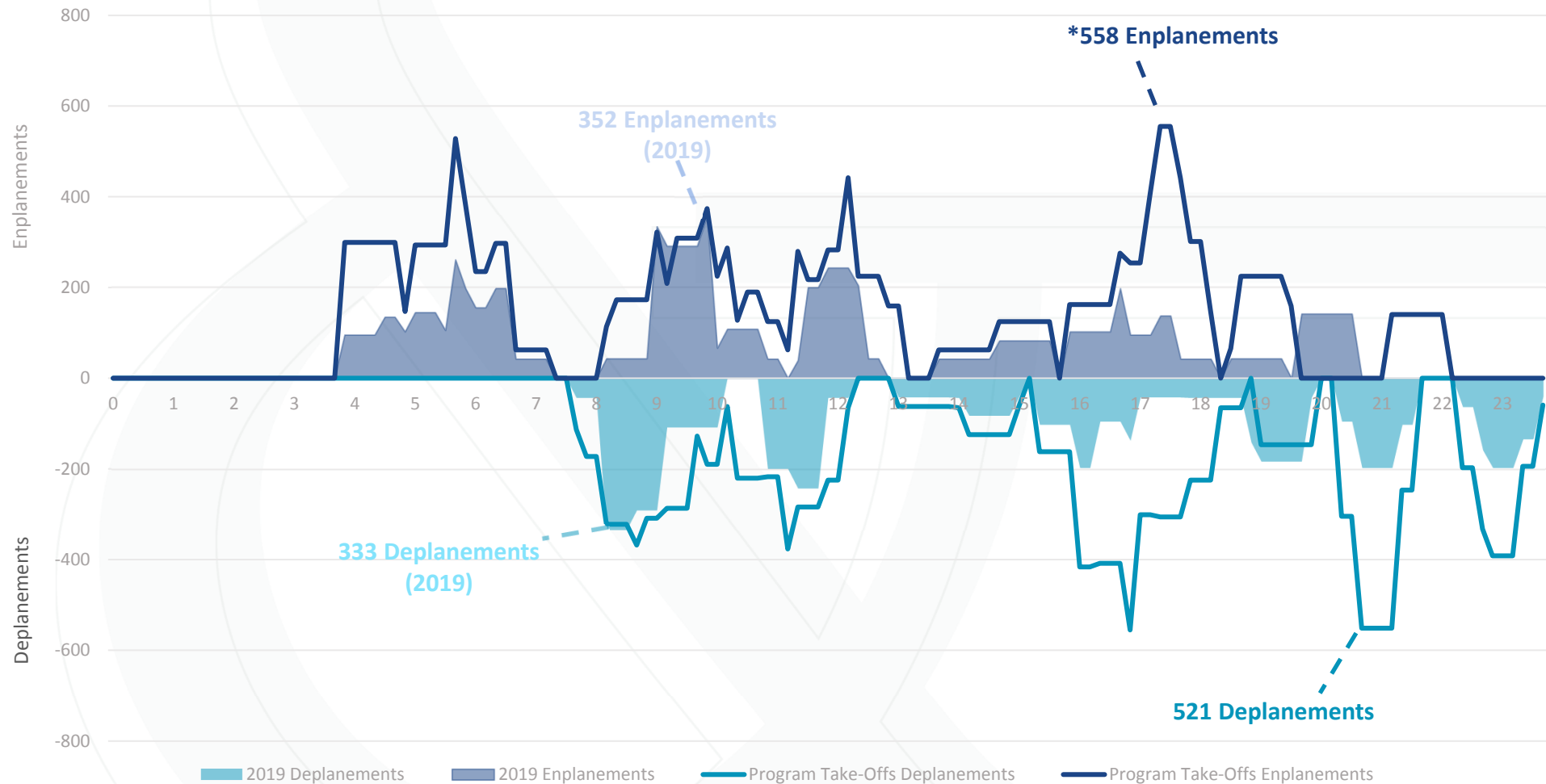
# Enplanement Forecasts



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# Peak Hour Forecasts



\* The time of day which peaking occurs at FAR vary throughout the year. The time of day of the peak hour in the spring may vary from the time of day of the peak hour in the summer, however, the number of enplanements/deplanements should be around the same.

# The Terminal Facility Program Process...

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## DEPARTURE



As featured  
in the  
IATA ADM.  
[iata.org/adrm](http://iata.org/adrm)

## Is Your Airport Terminal Operating At An Optimum Level?

IATA's Level of Service (LoS) Concept is the industry benchmark for optimum passenger terminal facilities.



### CHECK-IN

Proper arrangement of self-service options such as self-tagging and bag drop stations are cutting down wait times, improving passengers' travel experience and resulting in increased efficiency in terms of space utilization and operations.



#### Self-Service

Boarding Pass  
and Tagging

#### Check-in Desk



Bag Drop  
Desk/Station



### SECURITY

The introduction of risk-based security concepts, advanced screening technologies and process innovations will enable passengers to proceed with minimal inconvenience while optimizing security resources and airport facilities.



### PASSPORT CONTROL

Improved border control solutions in the areas of passenger data / document verification and other regulatory requirements makes emigration hassle-free and comfortable for passengers and for border officers.

#### Automatic Border Control



#### Staffed Emigration Desk



### BOARDING GATES

Having adequate space while passengers wait for boarding is also a vital component of the passenger travel experience.



**50 - 70%  
to be seated**

Standing: 13-16 SF  
Seated: 19-23 SF

**More optimum  
departures mean more  
future arrivals!**



**OPTIMUM  
Waiting Times**

**ECONOMY  
CLASS**

1 - 2 min

1 - 5 min

10 - 20 min

5 - 10 min

1 - 5 min

5 - 10 min



**OPTIMUM Space  
per passenger**

14-19 SF

10-13 SF

10-13 SF



### CUSTOMS CONTROL

These waiting times refer to a procedure when 100% of the passengers are being checked by Customs.



Do you  
know your  
Level of  
Service?

1 - 5 min

14-19 SF



### BAGGAGE CLAIM

No matter the size of your terminal, passengers expect to claim their baggage in a timely manner. After all, it's often the last touch-point you have with passengers. Why not end it on a high note?



#### WIDE BODY



#### NARROW BODY



First passenger to first bag / Last bag on belt (from first delivery)

0 / 25 min

0 / 15 min

16-18 SF



### PASSPORT CONTROL

The right mix of self-service technologies with border officers provides a seamless and pleasant welcome for passengers at your airport.



Staffed Immigration  
Desk

5 - 10 min

Automatic Border  
Control

1 - 5 min

10-13 SF



## ARRIVAL

**ECONOMY  
CLASS**

**OPTIMUM  
Waiting Times**



**OPTIMUM Space  
per passenger**





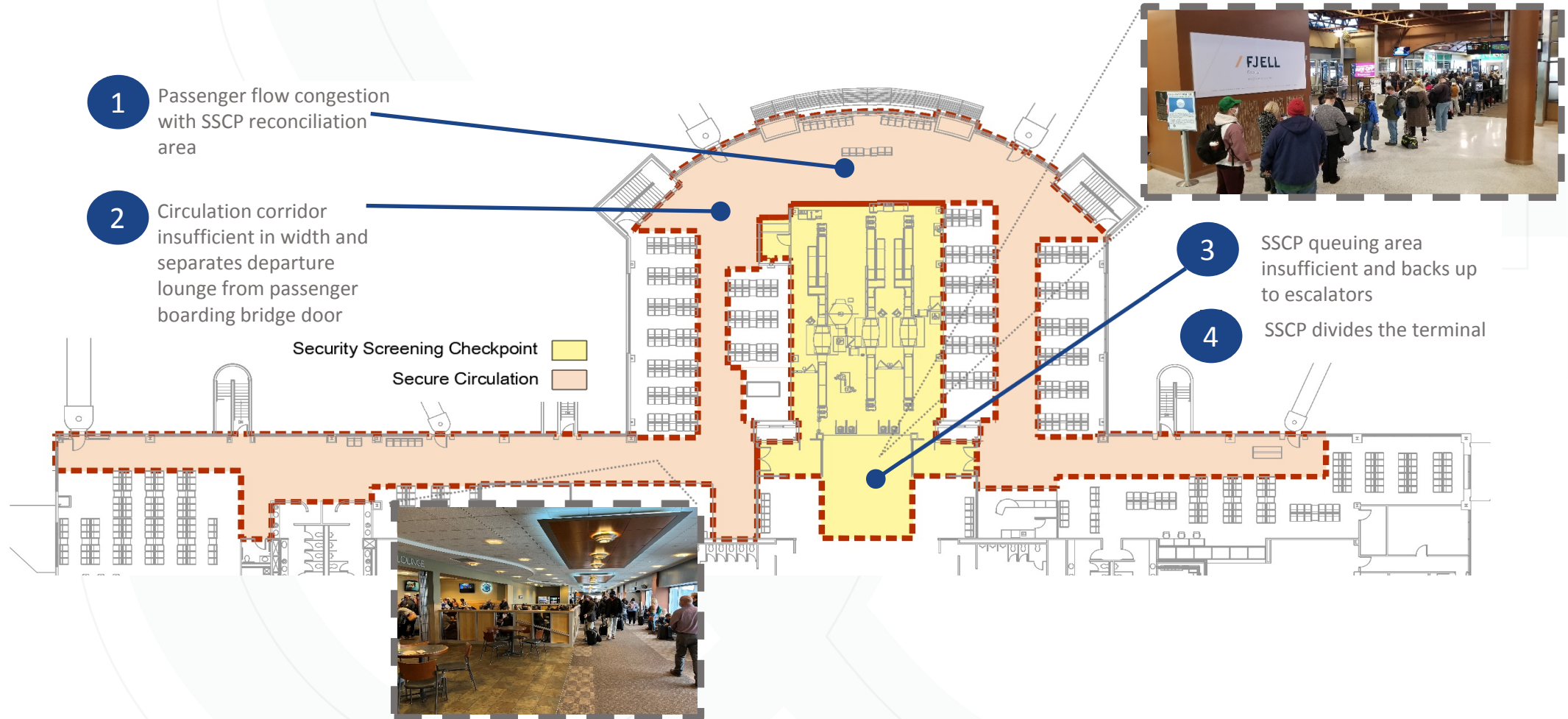
# FAR Project Need

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| FAR Demand Comparison   | Program Take-Off Requirements |                |                    |                |                    |
|---|-------------------------------|----------------|--------------------|----------------|--------------------|
|   | Existing                      | Recommended    | Capacity Threshold |                | Capacity Threshold |
| <b>General</b>  |                               |                |                    |                |                    |
| Annual Enplanements   | 472,157                       |                |                    | 748,738        |                    |
| Peak Hour Enplanements  | 352                           |                |                    | 558            |                    |
| Aircraft Gates/PBB (# of Gates)   | 5                             | 8              | ✗                  | 8+1 RON        | ✗                  |
| <b>Public Space</b>   |                               |                |                    |                |                    |
| Circulation (public seating, ticketing, concourse, bag claim, general circ.) (SF) | 26,138                        | 27,679         | ✗                  | 34,364         | ✗                  |
| Ticket Lobby Queue (SF)   | 2,469                         | 3,108          | ✗                  | 5,740          | ✗                  |
| Passenger Security Screening (SF)   | 4,163                         | 6,200          | ✗                  | 8,000          | ✗                  |
| Departure Lounges (SF)  | 8,564                         | 28,207         | ✗                  | 28,207         | ✗                  |
| Restrooms (pre/post security) (SF)  | 2,876                         | 3,150          | ✗                  | 4,200          | ✗                  |
| Other (Service Animal Relief Area, Mother Nursing Station, Janitor Closet) (SF)   | 340                           | 515            | ✗                  | 760            | ✗                  |
| <b>Airline Space</b>  |                               |                |                    |                |                    |
| Ticketing (counter, ATO) (SF)   | 4,978                         | 5,302          | ✗                  | 6,050          | ✗                  |
| Outbound Baggage Screening (SF)   | 1,088                         | 2,175          | ✗                  | 3,225          | ✗                  |
| Outbound Baggage Makeup (SF)  | 4,251                         | 11,880         | ✗                  | 17,820         | ✗                  |
| Inbound Baggage Makeup (SF)   | 2,398                         | 3,700          | ✗                  | 5,600          | ✗                  |
| Baggage Claim Devices (SF)  | 7,521                         | 4,600          | ✓                  | 6,900          | ✓                  |
| Baggage Service Offices (SF)  | 0                             | 400            | ✗                  | 560            | ✗                  |
| <b>Concessions</b>  |                               |                |                    |                |                    |
| Pre-Security Food/Retail (SF)   | 5,318                         | 1,075          | ✓                  | 2,350          | ✓                  |
| Post-Security Food/Retail (SF)  | 2,305                         | 3,225          | ✗                  | 7,050          | ✗                  |
| Support and Storage (SF)  | 2,099                         | 1,005          | ✓                  | 1,300          | ✓                  |
| Rental Car Offices and Queuing (SF)   | 1,395                         | 2,300          | ✗                  | 3,182          | ✗                  |
| <b>Non-Public Space</b>   |                               |                |                    |                |                    |
| Airport Administration (SF)   | 3,288                         | 6,514          | ✗                  | 6,970          | ✗                  |
| TSA Offices (SF)  | 2,284                         | 2,801          | ✗                  | 2,801          | ✗                  |
| Circulation (SF)  | 2,170                         | 2,147          | ✗                  | 2,743          | ✗                  |
| Airport Operations (SF)   | 3,447                         | 4,809          | ✗                  | 6,348          | ✗                  |
| Building Systems (SF)   | 28,703                        | 31,765         | ✗                  | 48,040         | ✗                  |
| <b>TOTAL GROSS (SF)</b>   | <b>115,795</b>                | <b>152,558</b> |                    | <b>202,211</b> |                    |

# Constraints in the Concourse

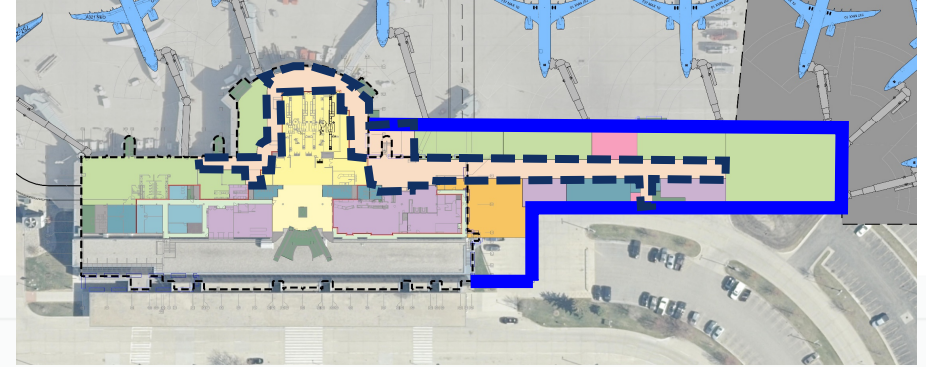




# Alternatives Evaluated

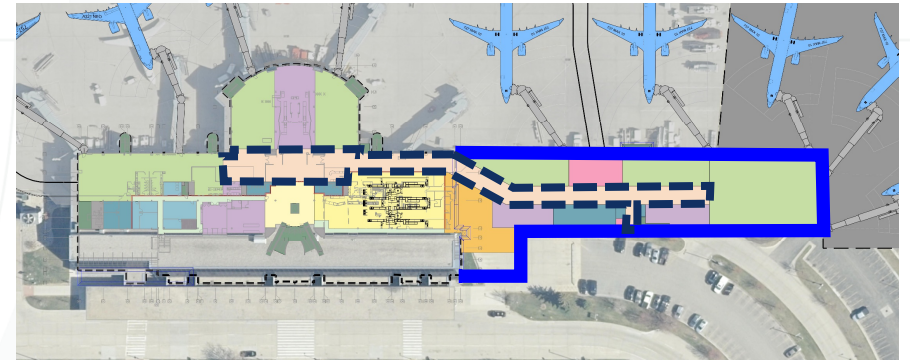
1

- Security Screening Checkpoint (SSCP) remains
- Existing pre-secure concessions become post-secure
- Circulation corridor moves behind all existing gates
- Gate 1 and 2 relocates to new expansion



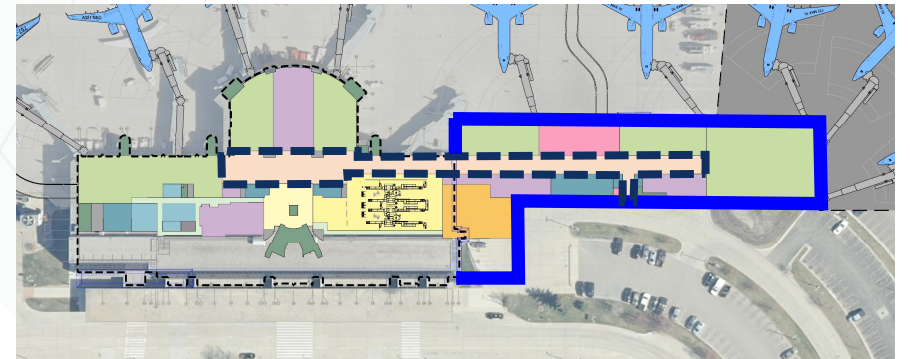
2

- SSCP relocates to existing pre-secure concessions space
- Existing SSCP space becomes concessions and departure lounge space
- Circulation corridor moves behind all existing gates
- Proposed expansion remains in alignment with north face of existing terminal
- Gate 1 relocates to new expansion

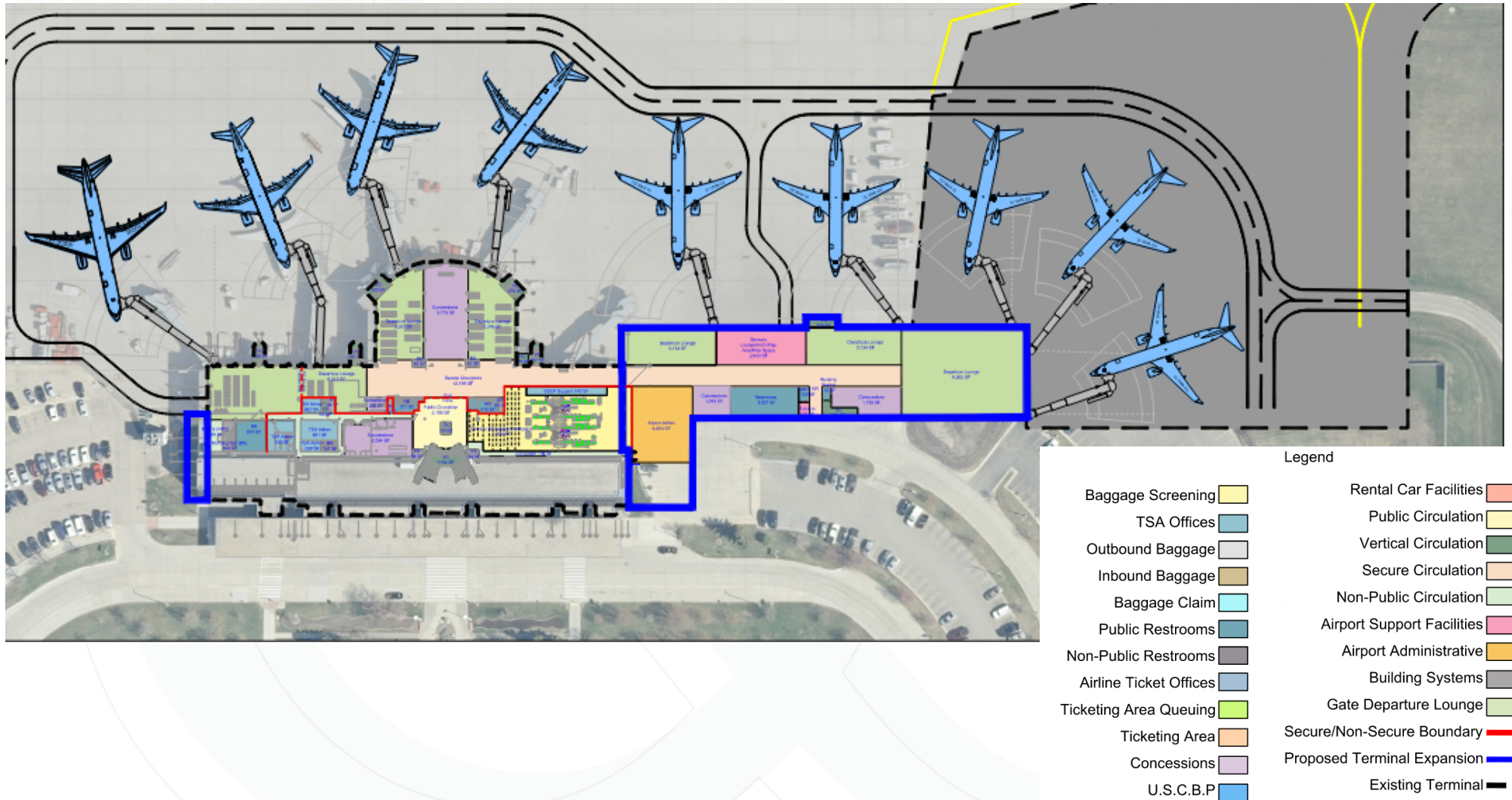


3

- SSCP relocates to existing pre-secure concessions space
- Existing SSCP space becomes concessions and departure lounge space
- Circulation corridor moves behind all existing gates and in a straight alignment throughout existing and new concourse
- Gate 1 relocates to new expansion



# Preferred Alternative – Upper-Level Floorplan

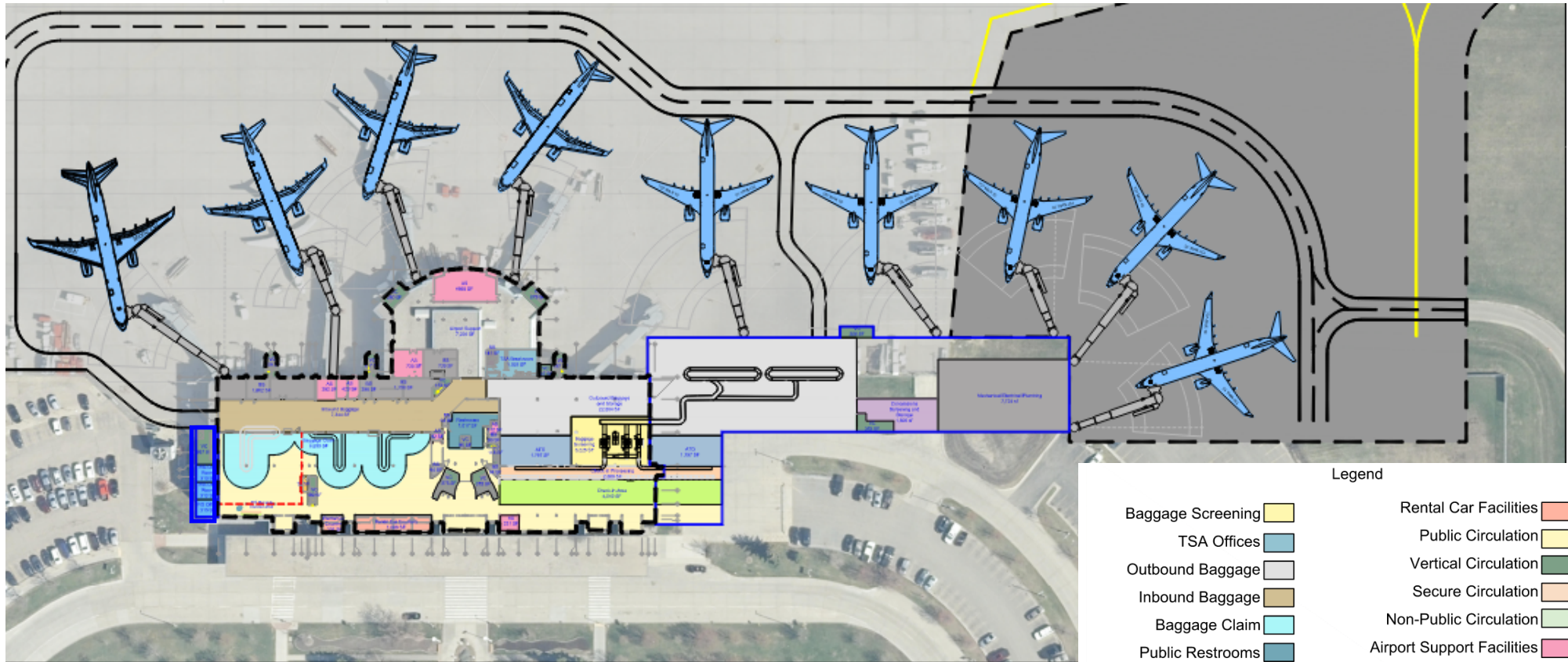


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# Preferred Alternative – Lower-Level Floorplan



Legend

|                        |  |                             |  |
|------------------------|--|-----------------------------|--|
| Baggage Screening      |  | Rental Car Facilities       |  |
| TSA Offices            |  | Public Circulation          |  |
| Outbound Baggage       |  | Vertical Circulation        |  |
| Inbound Baggage        |  | Secure Circulation          |  |
| Baggage Claim          |  | Non-Public Circulation      |  |
| Public Restrooms       |  | Airport Support Facilities  |  |
| Non-Public Restrooms   |  | Airport Administrative      |  |
| Airline Ticket Offices |  | Building Systems            |  |
| Ticketing Area Queuing |  | Gate Departure Lounge       |  |
| Ticketing Area         |  | Secure/Non-Secure Boundary  |  |
| Concessions            |  | Proposed Terminal Expansion |  |
| U.S.C.B.P.             |  | Existing Terminal           |  |

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# Preferred Alternative – Alternative 3



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# Preferred Alternative – Alternative 3



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# Next Steps

- Coordination with FAA
- Finalize Terminal Area Study Report
- Proceed with selecting an Architect/Engineer for Schematic Design



# Back-Up Slides

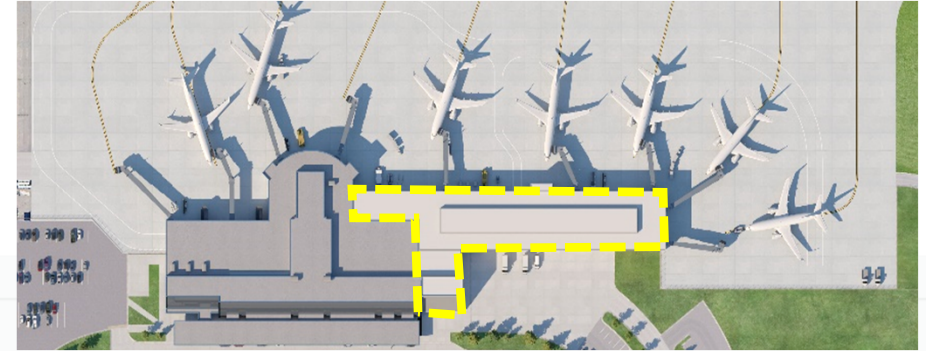
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# Alternatives Evaluated

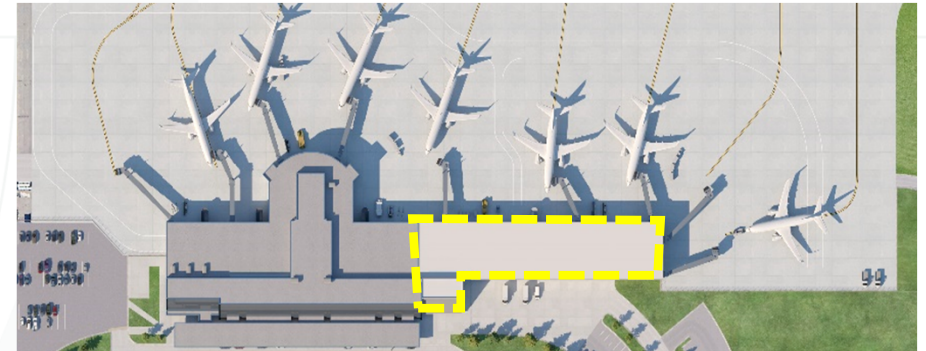
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- Security Screening Checkpoint (SSCP) remains
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- Gate 1 relocates to new expansion



3

- SSCP relocates to existing pre-secure concessions space
- Existing SSCP space becomes concessions and departure lounge space
- Circulation corridor moves behind all existing gates and in a straight alignment throughout existing and new concourse
- Gate 1 relocates to new expansion

