

**A SPECIAL MEETING
OF THE
GREATER ASHEVILLE REGIONAL AIRPORT AUTHORITY**

The Greater Asheville Regional Airport Authority will hold a special meeting at 8:30 a.m. on Wednesday, February 20, 2019, in the Conference Room at the Administrative Offices of the Asheville Regional Airport. The Administrative Offices are located at the northern end of the second floor of the Terminal Building at the Asheville Regional Airport. The address for the Administrative Offices is Suite 1, 61 Terminal Drive, Fletcher, North Carolina, and the telephone number is 828-684-2226. The purpose of this special meeting is as follows:

To discuss, consider, and possibly take action on the expansion of the terminal building.



Asheville

REGIONAL AIRPORT



Gresham Smith

February 20, 2019

Today's Agenda

Terminal Planning Review – CHA

- Project Goals
- Forecast
- Programming
- Planning Concepts
- Cost

Terminal Development – Gresham Smith

- Scope
- Elements
- Process
- Timeline





**ASHEVILLE REGIONAL AIRPORT
PLANNING REVIEW**

Project Goals

- Establish a comprehensive airport program based on the updated forecast to identify the needs for construction to keep pace with demand for five, ten and twenty years in the future.

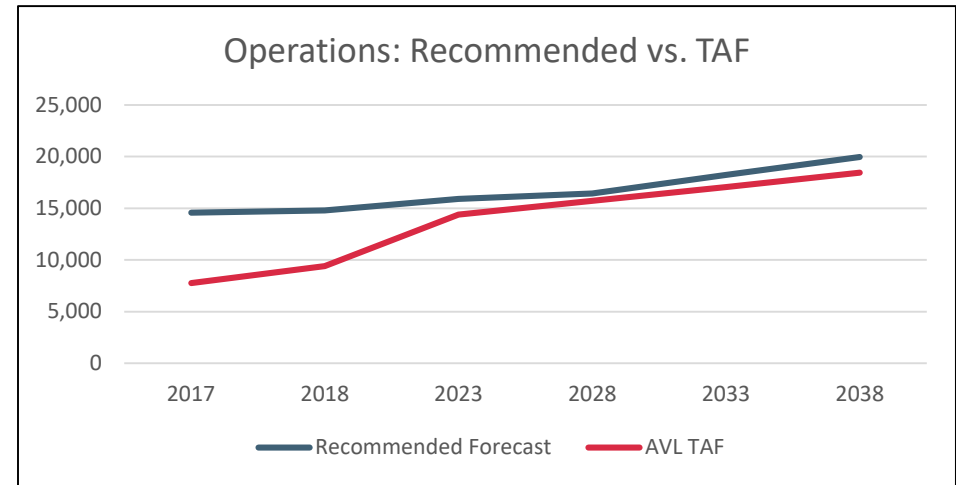
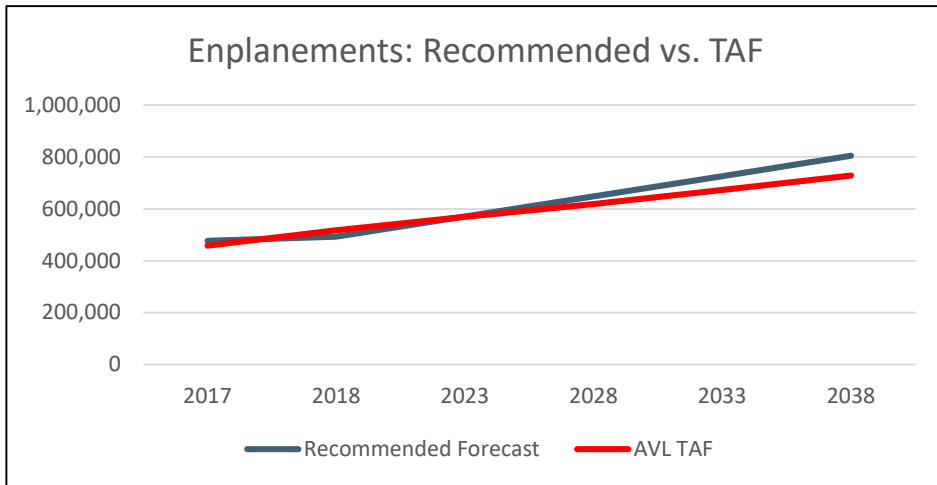
- Develop airport planning concepts that consider the following:
 - Airside operations configurations to allow for scalable future expansion
 - Right-sizing of holdrooms for increasingly larger aircraft while maintaining flexibility.
 - Cost effectiveness and value
 - Passenger experience

- Review alternatives for design and construction to enable the airport to begin the process of establishing a construction program.

- Develop concepts of façade enhancement to update and provide a cohesive, modernized appearance of the airport entry and identify Asheville as a destination.

Recommended Commercial Forecasts

| Year | Enplanements | | | Operations | | |
|-------------------------|--------------|----------------------|------------------|--------------|----------------------|------------------|
| | AVL TAF | Recommended Forecast | Forecast vs. TAF | AVL TAF | Recommended Forecast | Forecast vs. TAF |
| 2017 | 458,560 | 477,397 | 4.1% | 7,771 | 14,589 | 87.7% |
| 2018 | 517,652 | 492,955 | -4.8% | 9,413 | 14,803 | 57.3% |
| 2023 | 568,765 | 570,744 | 0.3% | 14,374 | 15,909 | 10.7% |
| 2028 | 618,793 | 648,534 | 4.8% | 15,707 | 16,434 | 4.6% |
| 2033 | 672,442 | 726,323 | 8.0% | 17,051 | 18,222 | 6.9% |
| 2038 | 728,017 | 804,113 | 10.5% | 18,443 | 19,957 | 8.2% |
| AAGR 2018-2038 | 1.7% | 2.5% | - | 3.4% | 1.5% | - |
| Growth 2018-2038 | 40.6% | 63.1% | - | 95.9% | 34.8% | - |



➤ Recommended Enplanements : Air Service Domestic Medium-High Growth Forecast

Peak Activity Forecasts

- Peak Month
 - 2017: October
 - Historically (2007-2016): July
 - Rational to choose July as Peak Month for evaluations

- Peak Hour Enplanements
 - 4:15 pm - 5:45 pm (16:15 – 17:45)
 - Approximately 21% of PMAD enplanements

- Commercial Operations
 - 4:15 pm - 5:45 pm (16:15 – 17:45)
 - Approximately 19.4% of PMAD commercial operations

| Year | Enplanements | | Total Passengers | | Commercial Operations | |
|------|--------------|-----------|------------------|-----------|-----------------------|-----------|
| | PMAD | Peak Hour | PMAD | Peak Hour | PMAD | Peak Hour |
| 2018 | 1,706 | 441 | 3,413 | 716 | 44 | 9 |
| 2023 | 1,976 | 510 | 3,951 | 829 | 47 | 10 |
| 2028 | 2,245 | 580 | 4,490 | 942 | 49 | 10 |
| 2033 | 2,514 | 649 | 5,028 | 1,055 | 54 | 11 |
| 2038 | 2,783 | 719 | 5,567 | 1,168 | 59 | 12 |

Programming – Basis for Calculations

- Projected Growth for Annual Enplanements is projected between 12-15% every 5 years (per CHA forecast).
- Total Growth by 2038 is projected to be approximately 64%.
- Peak hour aircraft operations growth from 9 gates in 2018 to 12 gates in 2038.
- Target Level of Service for program development is “Optimum” (formerly Level of Service C) per IATA ADRM guidelines.
- All space planning is based on the IATA Airport Reference Development Manual (ADRM), TSA “Recommended Security Guidelines for Airport Planning” and “Checkpoint Design Guide (CDG)”, and Airport Cooperative Research Program (ACRP).

TABLE 7 – RECOMMENDED FORECAST USED FOR FACILITY REQUIREMENTS

Asheville Regional Airport

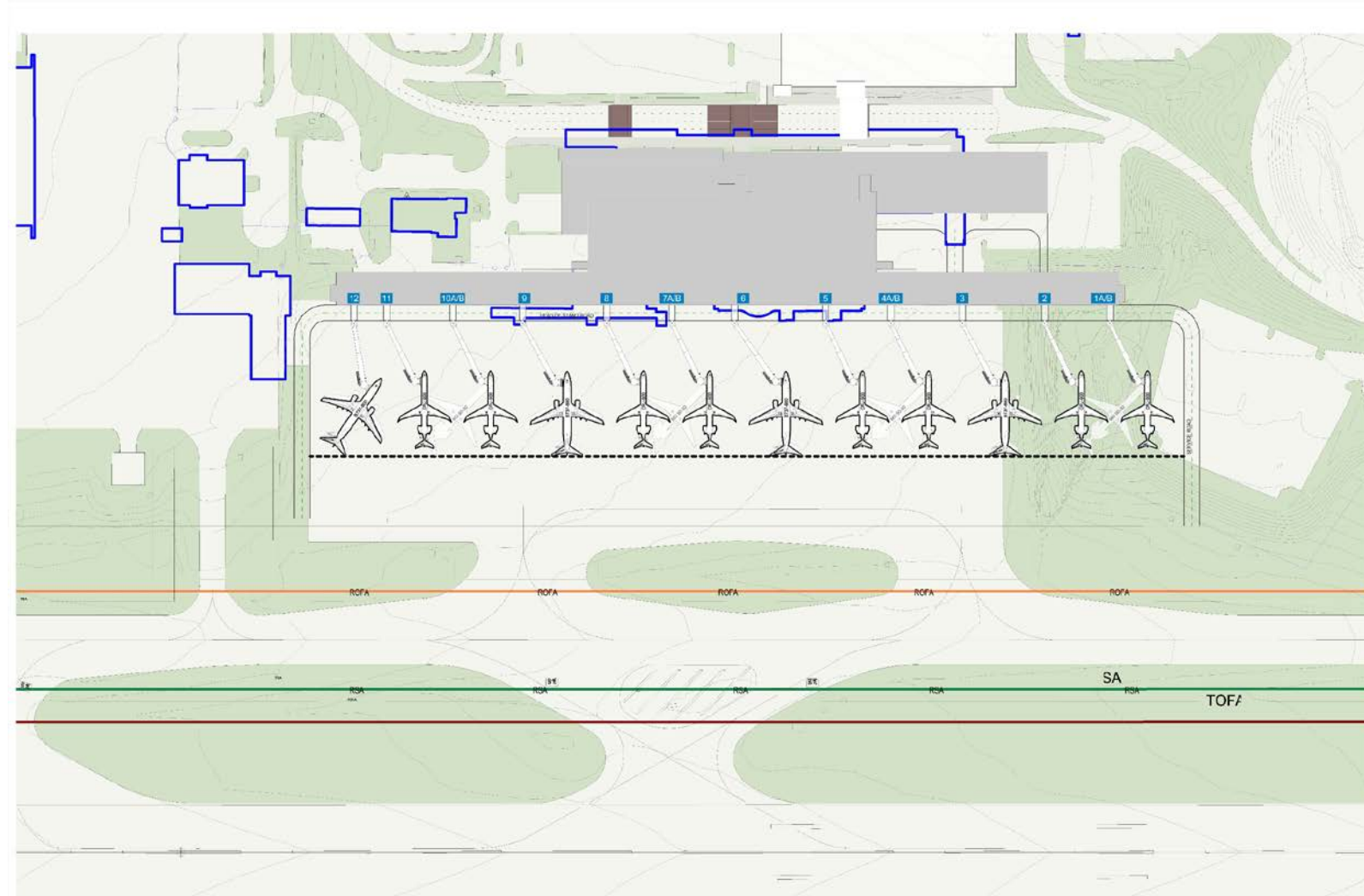
| Description | 2023 | 2028 | 2038 |
|--|---------|---------|---------|
| Annual Enplanements | 570,744 | 648,534 | 804,113 |
| Peak Hour Passengers (Total) | 829 | 942 | 1,168 |
| Peak Hour Enplaning Passengers (Departures) | 510 | 580 | 719 |
| Peak Hour Deplaning Passengers (Arrivals) | 319 | 362 | 449 |
| Peak Hour Operations (Flights) | 10 | 10 | 12 |
| Peak Hour Load Factor | 82% | 83% | 84% |

Programming- Summary of Area Tabulation

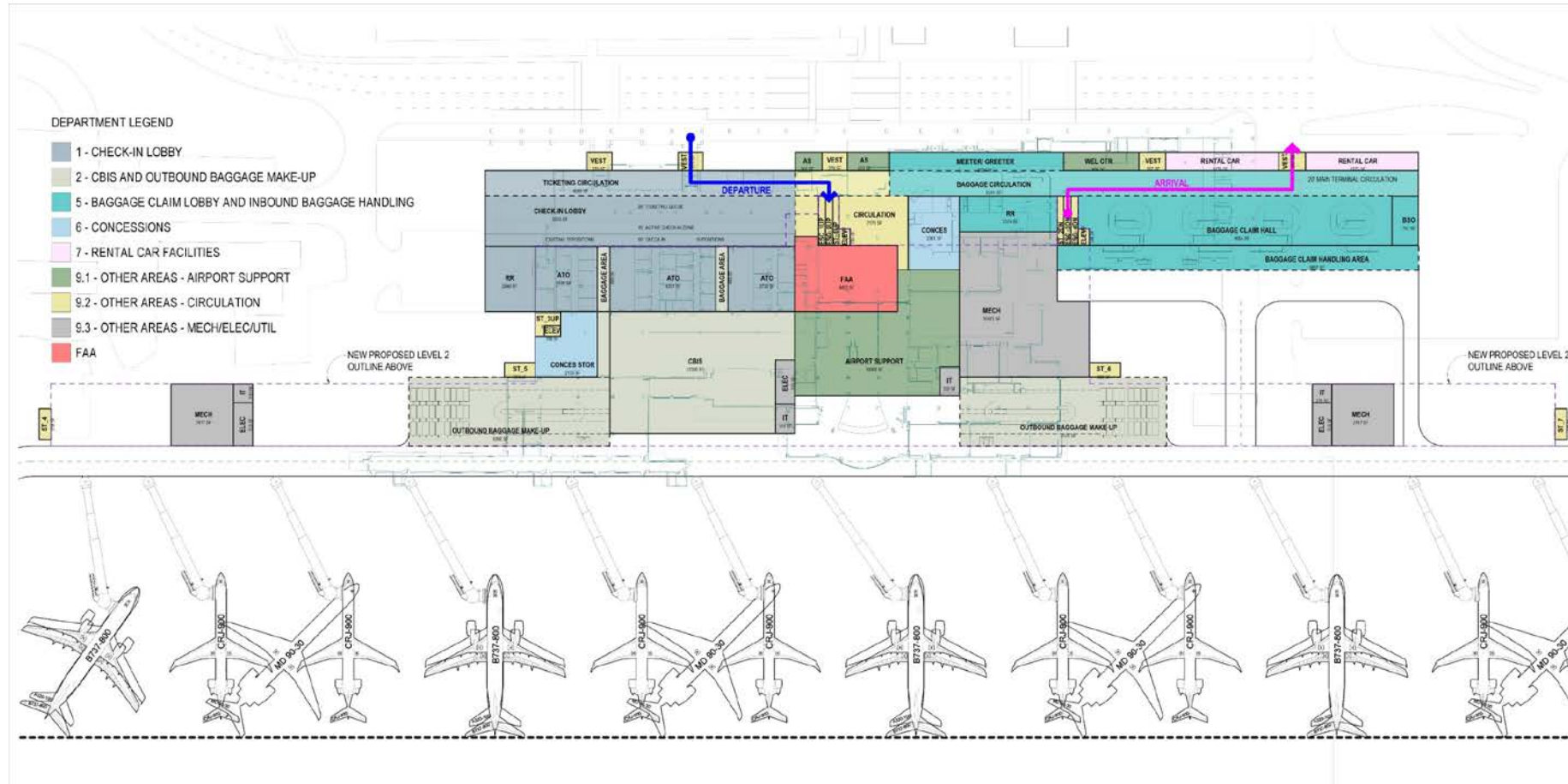
| Program Summary | | | | | | |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|--|
| | Current | 2,018 | 2023 | 2028 | 2038 | |
| CHECK-IN LOBBY | 10,687 SF | 17,248 SF | 18,069 SF | 20,195 SF | 22,545 SF | |
| CBIS AND OUTBOUND BAGGAGE MAKE-UP | 8,611 SF | 21,342 SF | 24,269 SF | 26,263 SF | 34,854 SF | |
| Screening | 3,076 SF | 8,292 SF | 8,609 SF | 10,603 SF | 16,854 SF | |
| Make-up | 5,535 SF | 13,050 SF | 15,660 SF | 15,660 SF | 18,270 SF | |
| SECURITY SCREENING CHECKPOINT | 6,975 SF | 9,503 SF | 12,529 SF | 15,332 SF | 18,270 SF | |
| HOLDROOM AREA | 22,300 SF | 46,003 SF | 50,870 SF | 52,542 SF | 59,160 SF | |
| INBOUND BAGGAGE HANDLING AND BAGGAGE CLAIM | 14,605 SF | 25,095 SF | 25,095 SF | 25,095 SF | 30,571 SF | |
| CONCESSIONS | 9,231 SF | 14,512 SF | 14,512 SF | 16,490 SF | 20,446 SF | |
| Pre-Security | SF | 1,619 SF | 1,619 SF | 1,840 SF | 2,281 SF | |
| Post-Security | SF | 9,175 SF | 9,175 SF | 10,425 SF | 12,926 SF | |
| Storage | SF | 3,719 SF | 3,719 SF | 4,226 SF | 5,239 SF | |
| RENTAL CARS | 1,897 SF | 1,916 SF | 2,180 SF | 2,427 SF | 2,523 SF | |
| OTHER AREAS | 38,729 SF | 69,528 SF | 73,954 SF | 77,393 SF | 87,447 SF | |
| Airport Support | 17,059 SF | 25,085 SF | 25,502 SF | 25,826 SF | 27,045 SF | |
| Other | 21,670 SF | 44,443 SF | 48,452 SF | 51,567 SF | 60,402 SF | |
| Total | 113,035 SF | 203,169 SF | 221,478 SF | 235,737 SF | 275,816 SF | |

Preferred Design Concept - Airside

- 12-GATE LINEAR SCHEME
- 4 NARROWBODY/8 RJ
- MAXIMUM 8 NARROWBODY AIRCRAFT SIMULTANEOUSLY
- TAXIWAY ENTRANCES UNAFFECTED
- ASSUMES INFILL SOUTH OF APRON TO ADD PAVEMENT
- HEAD OF STAND ROAD PROVIDED TO MINIMIZE TUG TRAFFIC BETWEEN AIRCRAFT.

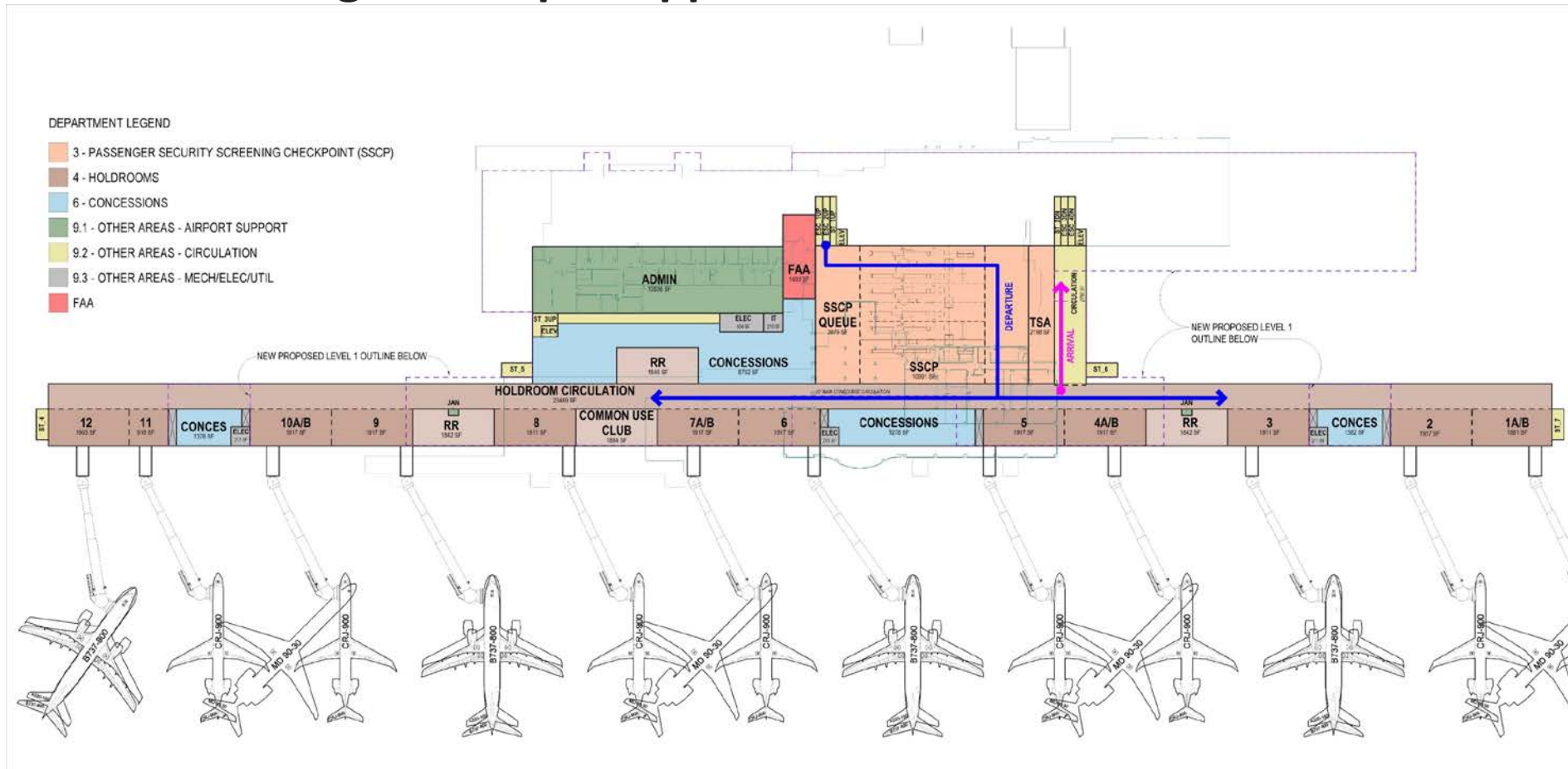


Preferred Design Concept – Ground Level



- TICKET LOBBY EXPANDED
- SECURITY CHECKPOINT IS RELOCATED TO UPPER LEVEL.
- BAGGAGE CLAIM IS EXPANDED
- NEW CENTRAL PLANT CONSTRUCTED
- OUTBOUND BAG MAKE-UP MOVED TO UNDER THE CONCOURSE AIRSIDE
- NEW CHECKED BAGGAGE INSPECTION SYSTEM (CBIS)

Preferred Design Concept - Upper Level

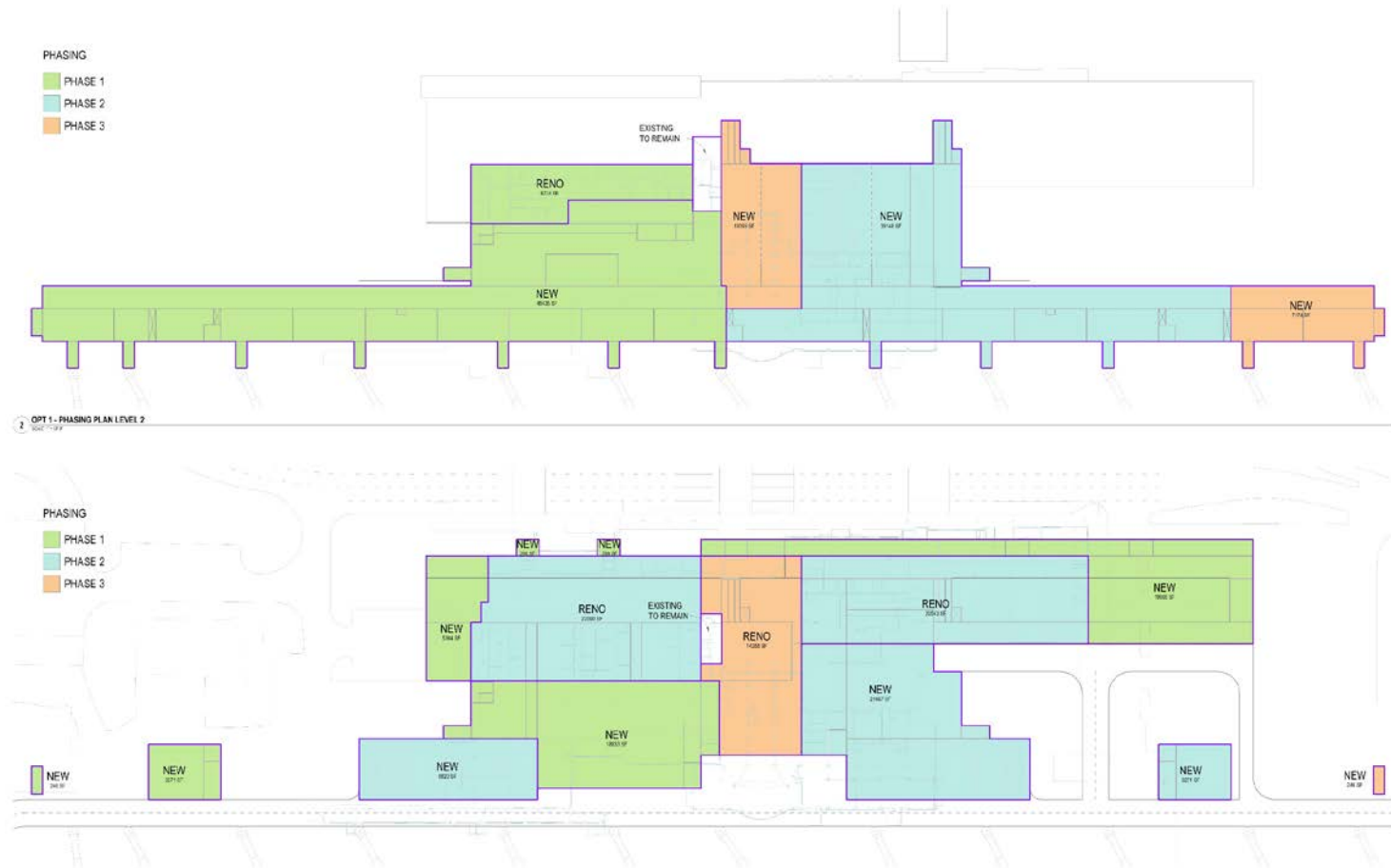


- DEPARTURES AND ARRIVALS CIRCULATION IS SEPARATED
- CONCESSIONS ACCESSIBLE TO EVERY GATE

- SSCP AND CONCOURSE EXPANDABLE BEYOND 2038
- EASY ACCESS FROM ADMIN AREA TO CONCOURSE

Preferred Design Concept - Phasing

- PHASE ONE CONSTRUCTS 7 NEW 2ND LEVEL BOARDING GATES
- SOME TEMPORARY TRAILERS MAY BE NEEDED TO FACILITATE ADMIN AREA RENOVATIONS
- TEMPORARY CONSTRUCTION TO EXTEND BOARDING GATES TO THE SOUTH
- CBIS SYSTEM EQUIPMENT MAY OR MAY NOT BE INSTALLED IN PHASE 1
- BAGGAGE CLAIM AND FAÇADE CONSTRUCTED IN PHASE 1
- PHASE 2 REPLACES SOUTH CONCOURSE TO COMPLETE 3 MORE 2ND LEVEL BOARDING GATES
- PHASE 2 COMPLETES RENOVATION OF BAGGAGE CLAIM
- PHASE 2 CONSTRUCTION OF CENTRAL PLANT
- CBIS EQUIPMENT IN PLACE BY END OF PHASE 2
- PHASE 3 BUILDS OUT REMAINING 2 2ND LEVEL BOARDING GATES
- PHASE 3 RENOVATION OF CENTER AREA OF TERMINAL



Costs

Option 1

| | Building | Civil/Demo | Equipment | Total |
|---|---------------|--------------|---------------|---------------|
| Phase 1 (North Terminal Redevelopment) | \$ 54,643,685 | \$ 4,239,433 | \$ 11,534,404 | \$ 70,417,522 |
| Phase 2 (South Terminal Redevelopment) | \$ 48,900,559 | \$ 1,742,108 | \$ 15,616,482 | \$ 66,259,150 |
| Phase 3 (Central Terminal Reno and Concourse Exp) | \$ 20,756,552 | \$ 70,868 | \$ 3,086,901 | \$ 17,204,547 |

Total Construction Cost (\$2018)

| | | | | |
|--|----------------------|--------------------|---------------------|----------------------|
| | \$118,477,015 | \$6,032,525 | \$29,371,678 | \$153,881,218 |
|--|----------------------|--------------------|---------------------|----------------------|

(254,000 SF Building Area = \$ 466/SF)

Next Steps



Project Scope:

Concept Validation / Project Definition

- Develop Evaluate Major *Project Elements* and refine options to:
 - Finalize Scope – What's in, What's out?
 - Identify Systems:
 - Communications, CCTV, Access Control, Building Management, BHS

Define Project Quality – Develop Architectural Design:

- Precedent Study / Materials / Finishes
- Validate Cost / Budget



Project Elements

12 Gate Concourse

- Fleet Mix / Phasing/ Concessions / Amenities / Detailed Programming

Checked Baggage Inspection System CBIS

- Equipment
- TSA Funding / Approvals

Central Energy Plant

- Location – CEP or REP
- Redundancy / Resilience/ Expandability

Loading Dock

- Receiving / Storage

Ticketing Expansion

- Right Sized / Technology Impacts

Baggage Claim Expansion

- Device Allocation / Fleet Alignment

New Security Checkpoint SSCP

- Automated Screening Lanes
- Expandability

Curbside / Façade

- Budget Impact
- Goals

Advertising / Art / Wayfinding



Project Highlight: REGIONAL DESIGN PROCESS



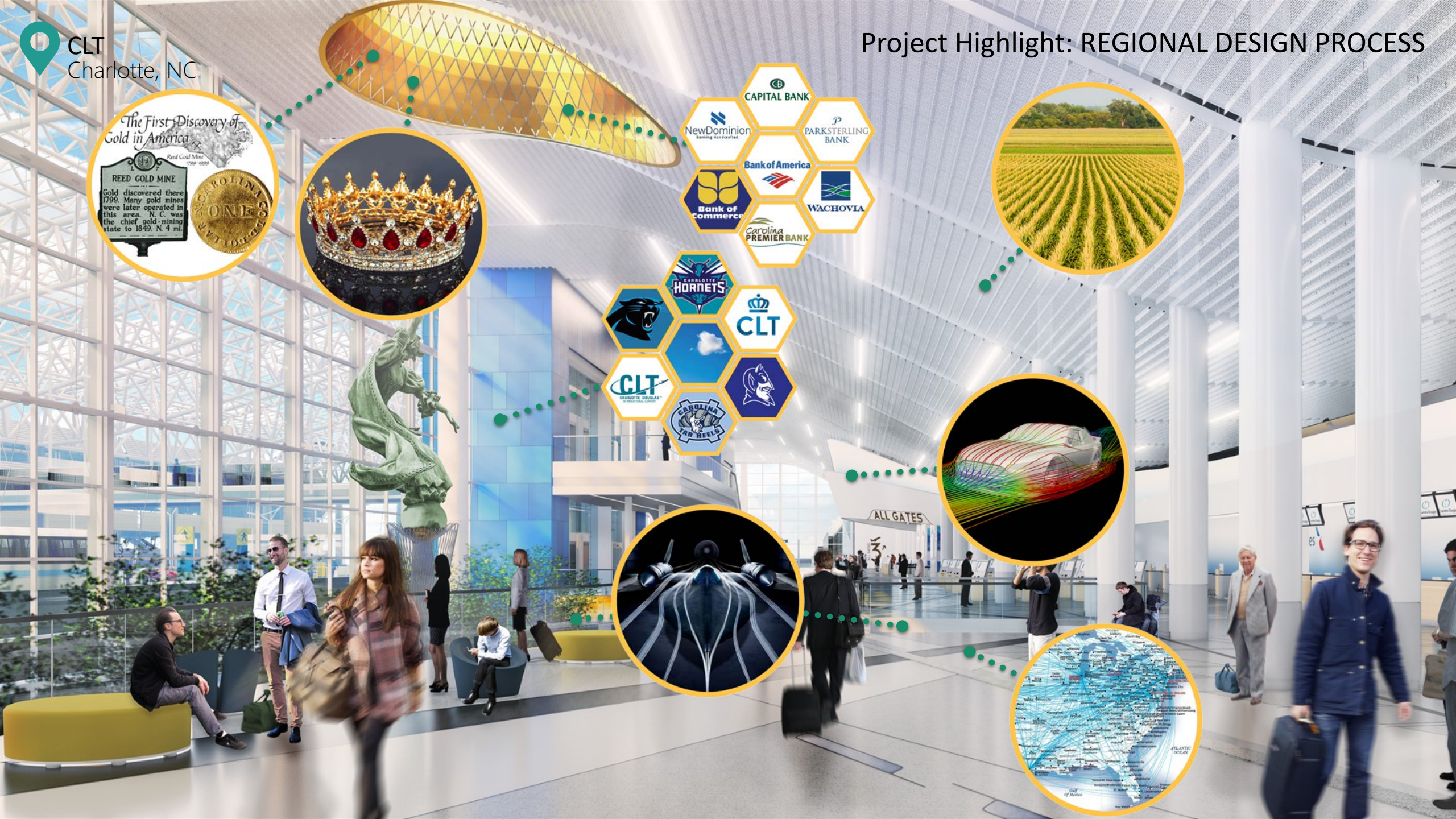
Charmingly Inventive
 Intelligent
 Entertaining
 Entrepreneurial
 Unexpected

The spirit of Charlotte and the surrounding region will infuse the passenger experience with a sense of delight while smartly accommodating users' must-haves so they may spend more time exploring and investing in fun and relaxation.

Descriptors
 Repurposed + Reimagined
 Local
 Wit + Whimsy
 Travel Savvy











Astrolabe
used by Sailors
for Celestial
Navigation

NAVY
- NAVAL STATION NORFOLK -
AD REM CLASSEM PARATUS

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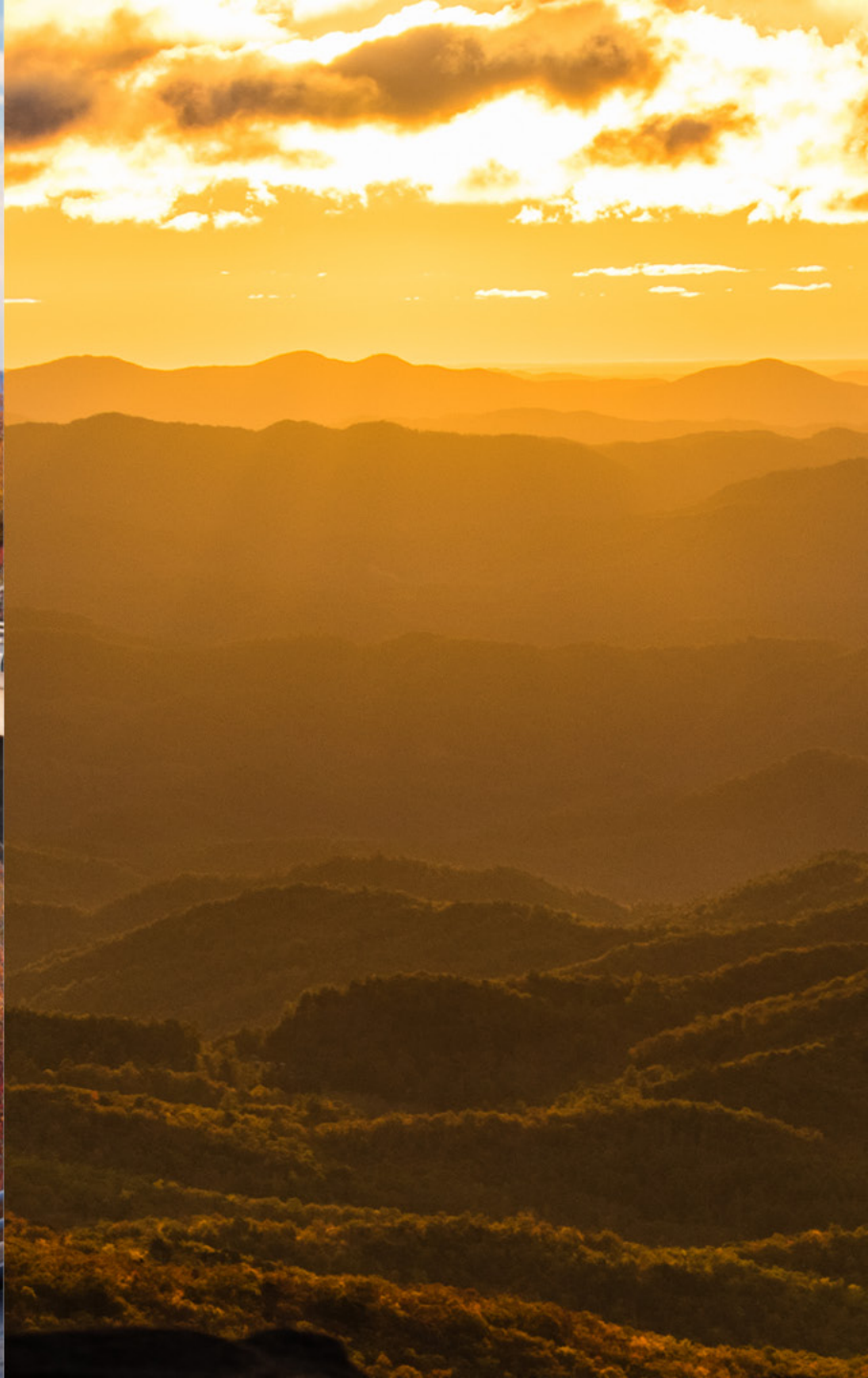


What is Asheville?









Stakeholder Engagement

- Airport Authority Board
- Airport Operations
- Users
- Airlines
- TSA
- FAA
- Concessions
- Rental Cars / Ground Transportation
- City / County / State Building Officials





Process:

Schematic

- Refine concept for detailed pricing
- Refining phasing / schedule
- Detailed program development – right-sizing
- PR Kick-off / unveiling

Design Development

- Determine procurement method
 - Construction Manager v. Public Bid
- Define Building Systems

Construction Documents

- Detailed Construction Documents
- Permitting
- Bidding

Construction Administration



Issues

- Budget / Cost Control
 - Current Estimate based on 2018 \$ + Forecasted Escalation
- Environmental Approvals
- Funding timeline / availability / sources
- TSA / FAA sign off

Construction Phasing will drive final solution, cost and Passenger Experience



Preliminary Timeline



Questions?