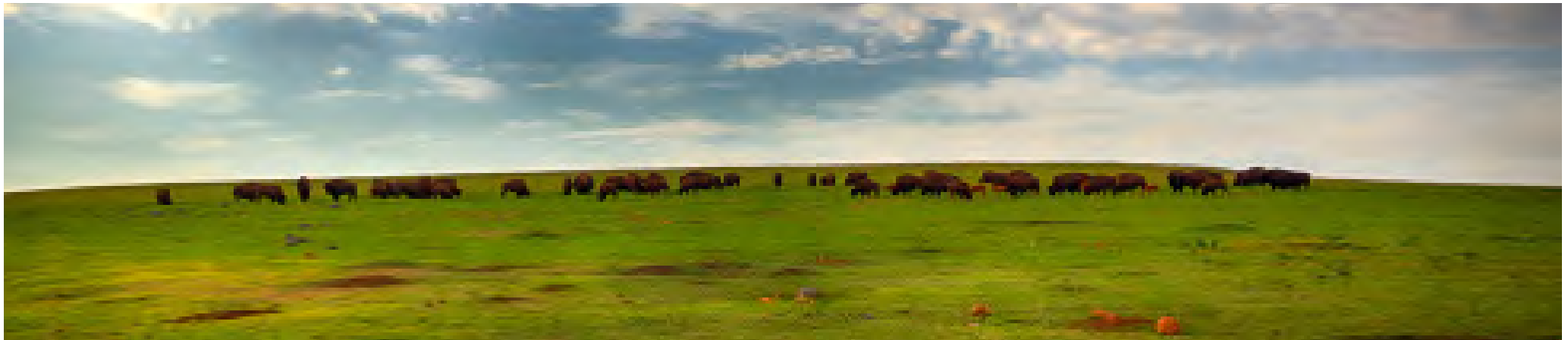


LAWTON FT-SILL REGIONAL AIRPORT  
Design Development Narrative Report

7 November 2014



LAWTON - FT. SILL REGIONAL AIRPORT  
Lawton, Oklahoma

Terminal Concept Design Report

Prepared for: Lawton - Ft. Sill Airport

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7 November 2014

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# 1.0 EXECUTIVE SUMMARY

Garver and Corgan were awarded the opportunity to progress the concept design through design development for the Lawton FT – Sill Regional Airport Terminal. This document is a companion to the previous concept design study completed in June of 2013. (see appendix A) The scope of work for design development involved further refinement of the concept design to meet the Airport's needs and goals documented to a 35% construction document level. In parallel with the design development effort Garver and Corgan were tasked to develop construction documents for the Phase 1 terminal Hold Room improvements. The design development process began in April of 2014. There were (4) Design Workshops with attendees consisting of airport management and the Lawton Ft. Sill Airport Committee. The intent of the Design Workshops were to involve the Airport in a collaborative design effort that would result in creating good design decisions and planning relationships that enhance the building aesthetics, function, and better prepare the airport for the future. The Airports willingness to engage in the design process was crucial to a successful terminal design.

Critical Milestone efforts and decisions for the project included the following:

- We modified the construction phasing for Phase 1 and subsequent phases to reduce cost and enhance constructability with the least impact to Airport operations.
- We developed an approved Hold Room layout to accommodate the addition of two jet bridges.
- We created a warm and modern material palette that is durable and within budget.
- We developed an approved design of the canopy and entry enhancement that supports a holistic design approach to the Terminal.

- We finalized programming of key areas of operations that improve function and passenger flow with TSA and stakeholder approval. ( Hold Room, toilets, SSCP, Ticketing and support spaces)
- With help from our consultants we were able to provide detailed structural and building system solutions integrated into the design that meet operational needs and overall design goals.

We have included design decisions made from the Design Workshops for various portions of the Airport throughout this document.

## 2.0 PROJECT INTRODUCTION

The Lawton – Ft. Sill Regional Airport has been serving Southwest Oklahoma since 1950. Over that time the airport facility has gone through several changes both physically and operationally. Physically the airport has more than doubled in size since opening. Operationally the airport has reduced the number of air carriers providing commercial service as well as all implementing additional security requirements by the TSA since 9/11. The original airport terminal was designed in 1949 opening in 1950. Building additions occurred in 1972, 1977, 1992, and 1995. Through this time of growth and change the facility has become increasingly inflexible and inefficient to the traveling public's needs and the time is right for improvements to be made. The focus of this project will be to renovate the Terminal Building as economically as possible while still meeting the needs of the airport, employees and the traveling public.

The existing facility currently operates commercial traffic with American Eagle as well as some charter flights with Allegiant Air. The airport also accommodates military traffic from Ft. Sill. Due to continued focus on the potential growth of Ft. Sill, the airport could sustain a high passenger activity level for many years to come.

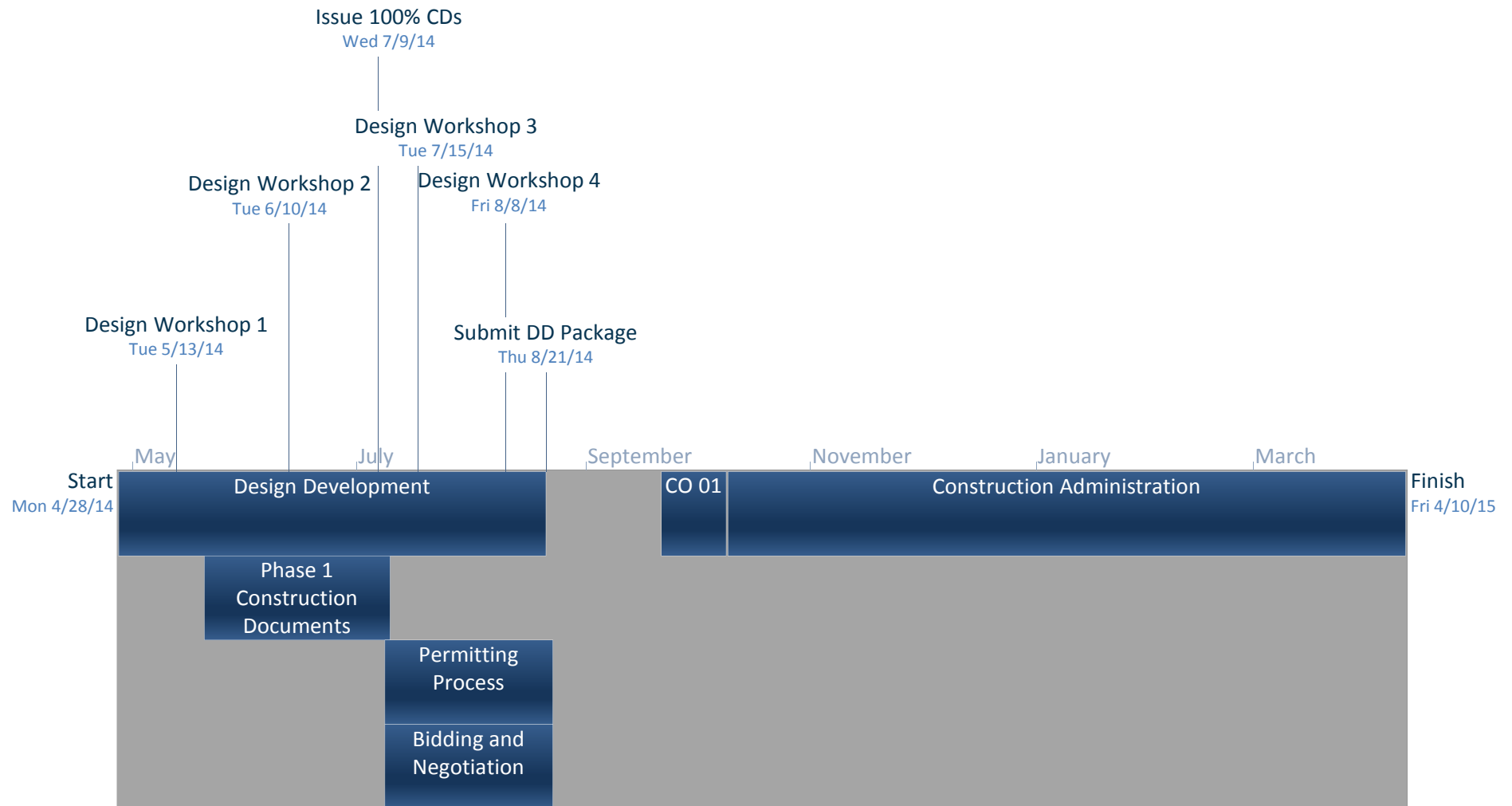
In developing the terminal plan for the interior renovation and facility addition, Corgan has worked closely with the Airport Director and committee members to meet functional and aesthetic requirements. Throughout the design development process the Airport and Airport Committee have been highly involved in the design and decision making process to create a cohesive terminal that responds to both airport and passenger needs. At the beginning of each design workshop the design team, Airport and Airport Committee reviewed the following design strategies to ensure the overall success of the new terminal design in addition to functional requirements.

- Develop an architectural response that addresses the Lawton, Oklahoma sense-of-place.
- Create a generous, naturally lit space for passenger satisfaction and intuitive wayfinding
- Maximize the passenger flow and intuitive wayfinding throughout the terminal
- Create visual hierarchy amongst the key functional elements for ease of travel
- Bring the terminal up to the latest functional requirements of TSA and baggage handling standards
- Provide a plan and process to help facilitate future expansion

The design team has presented several design options including: an updated new curbside canopy, new vestibules, a reclaimed Ticketing Hall relocating the baggage screening out of the lobby, improvements to the Meeter/Greeter Hall, an updated security screening checkpoint and a new two story Hold Room with interior restrooms and vending.

Other areas included in the design options included: a new exit corridor; an exterior courtyard for Meeter/Greeters and an expanded Baggage Claim.

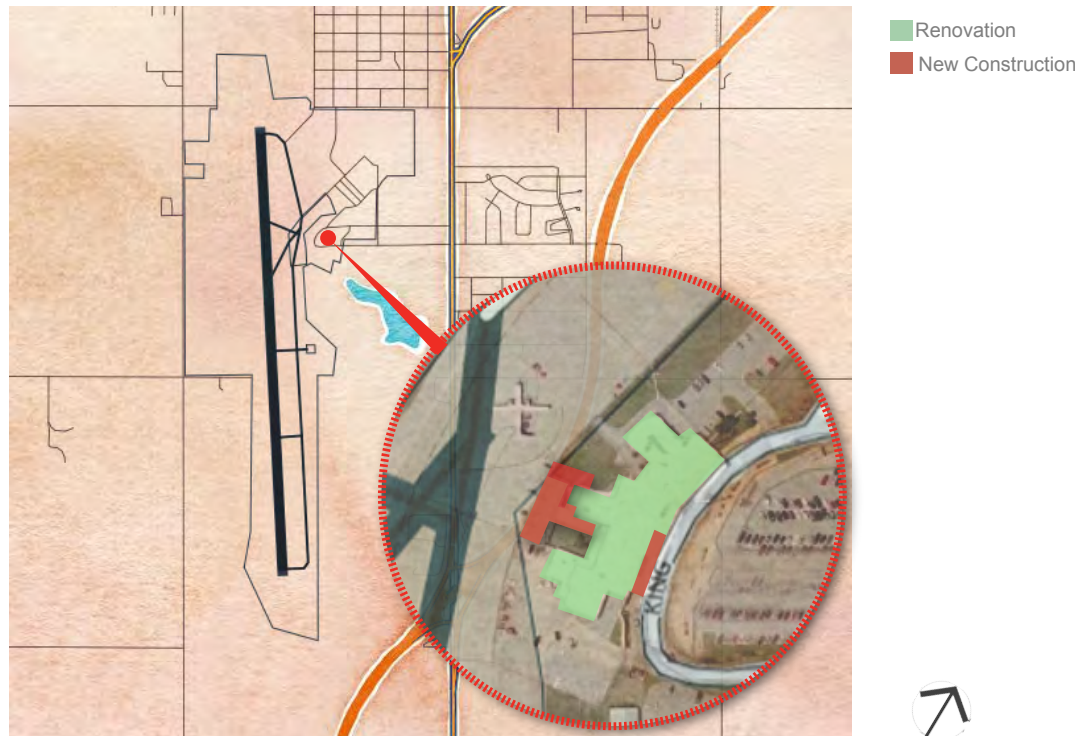
## 3.0 PROJECT SCHEDULE



## 4.0 SITE PLAN

The existing terminal will undergo a series of phased new construction building additions and renovations. The terminal modernization will be designed to maximize the use of the existing site infrastructure - roadways, apron paving, without disrupting ongoing airport operations. New construction additions will be located in areas of under-utilization as surveyed on the existing site plan.

A generous site plan offers several opportunities for construction staging



## 5.0 PASSENGER CIRCULATION

The following are outlines that describe the process for both departing and arriving passengers.

### DEPARTING

**Ticketing Entry Vestibule:** Departing passengers and well-wishers enter the building through a generously-sized entry vestibule positioned directly in front of ticketing counters and self-service kiosks.

**Ticketing Hall:** Passengers have access to a potential (8) check-in positions in an open and light-filled double volume check-in hall. A spacious queuing line will accommodate peak hour crowds and provide ample room for idle well-wishers.

**Arrivals Corridor and TSA Check Point:** A newly designed security screening checkpoint will accommodate the latest in TSA standards and equipment. The spacious and light-filled checkpoint will accommodate queuing lines, a dedicated search room, and generous collection areas. Arriving passengers will be guided into the Baggage Claim area by a glazed arrivals corridor allowing those meeting them direct visual access.

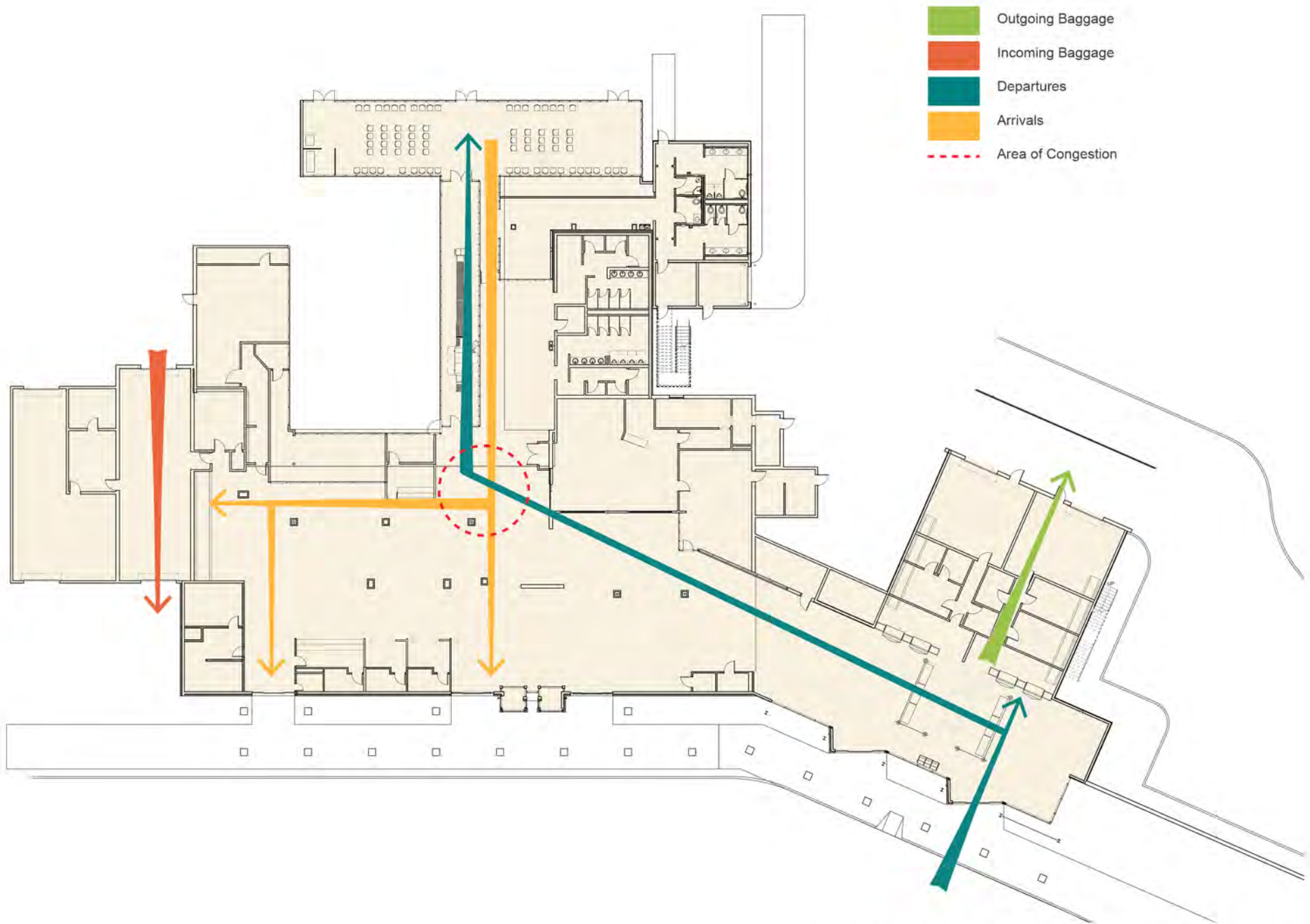
**Departures Holdroom:** Once passengers are screened, they will enter an all-new double volume Holdroom with sweeping views. New seating and walking aisles will create view corridors to the airfield and a landscaped exterior courtyard. The new Holdroom will feature air side restrooms, access to jet bridges and ample space for potential concessions.

### ARRIVING

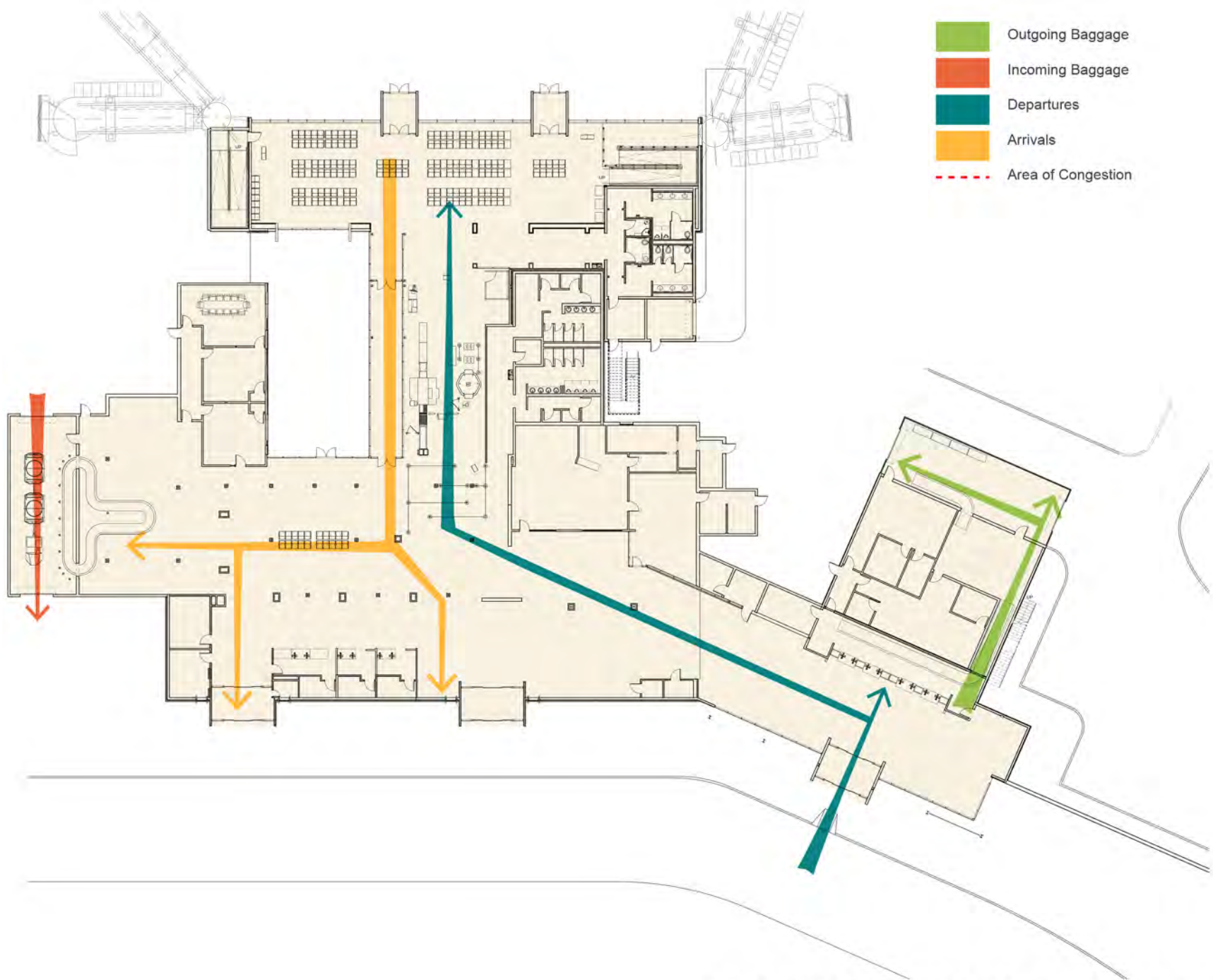
Arriving passengers deplaning into the new Holdroom will proceed to an all new arrivals corridor. Once passengers enter the arrivals corridor, family and loved ones can view them from a landscaped exterior courtyard while they proceed to the Baggage Claim.

**Meeter/Greeter:** The Meeter/Greeters experience has been greatly enhanced to allow direct line of sight from an all new exterior courtyard. Arriving passengers will be welcome to relax and engage family and friends in spacious and relaxing environments as bags are delivered to the renovated Baggage Claim.

**Baggage Claim:** Arriving passengers claim their checked baggage from an all-new automated flat plate device and then proceed to adjacent rental car counters or exit vestibules. The newly renovated Baggage Claim will provide for an extended baggage presentation area, allowing passengers a broader area to collect their bags than the existing slide condition.



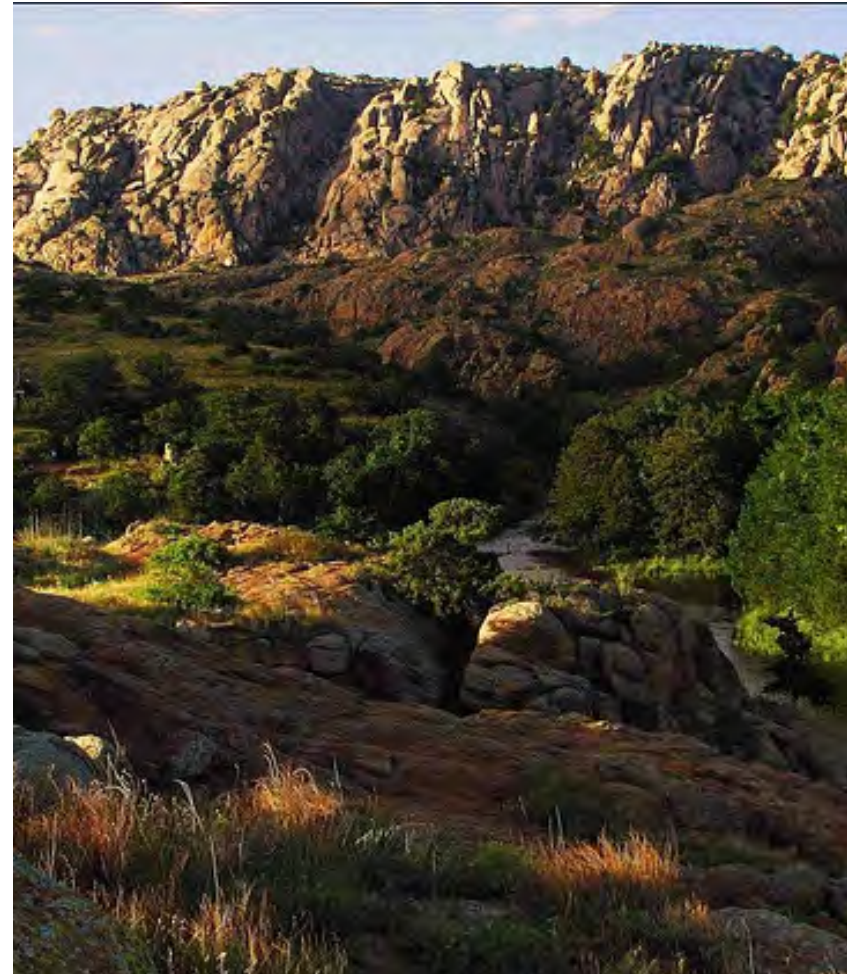
PASSENGER CIRCULATION - EXISTING



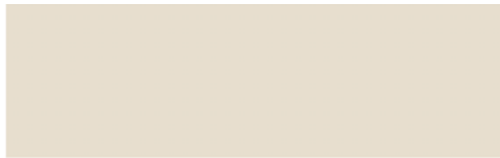
## PASSENGER CIRCULATION - PROPOSED

## 6.0 MATERIALS

During the design development process the design team focused on the regional imagery of the Airport's surrounding landscapes to develop the material pallet for the Airport's Renovation project. The Airport, Airport Development Committee and design team agreed to use a natural warm pallet to the exterior and interior of the Airport which speak to the vegetation of the nearby Wichita Mountains. Metal cladding has been juxtaposed with textured stone to emphasize a modern connection to natural elements. Wood slatted ceilings are used in the Ticketing Hall and Hold Room providing a wayfinding element directing the passenger through their departing path of travel. Curtain walls are used at the exterior to frame vistas to the airfield and interior courtyard.



## 6.0 MATERIALS - PAINT



DEVINE WHITE



VERSATILE GRAY



KEYSTONE GRAY



TOWNHALL TAN

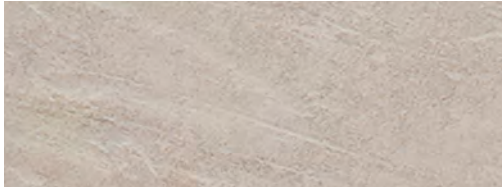


CLASSIC GOLD

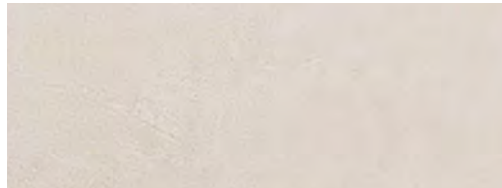


HUSKY ORANGE

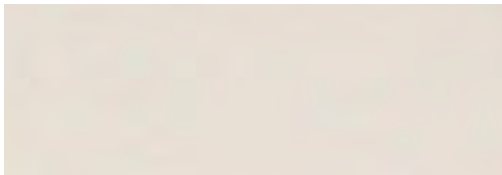
## 6.0 MATERIALS - SOLID SURFACE



LAGUNA RUSTIC  
FLOOR TILE



ECHELON MATTE  
WALL TILE



ENDURE MATTE  
WALL TILE

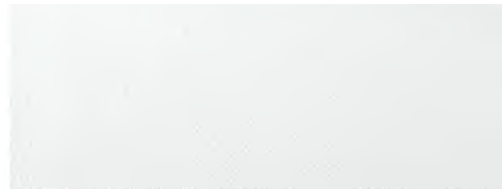


ZODIAQ SAGE  
COUNTER SURFACE

## 6.0 MATERIALS - OTHER



SHAW CONCEPT - FADE  
CARPET



ARMSTRONG - ULTRA  
CEILING



ARMSTRONG - FINE FISSURED  
CEILING



CENTRIA - COPPER METAL CLADDING  
ROOF

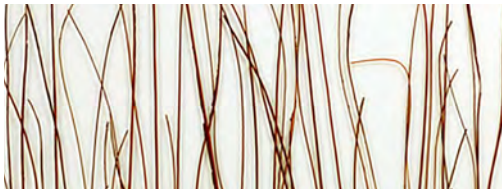


ARRISCRAFT - OLD COUNTRY - SUGARCANE/BROWN  
STONE

## 6.0 MATERIALS - OTHER



JOHNSONITE - 32 PEBBLE  
BASE



GLASPRO - TING TING  
ACCENT WALL



WILSONART - WALNUT HEIGHTS  
TOILET PARTITIONS



WILSONART - ENGLISH OAK  
TOILET PARTITIONS



RULON INTERNATIONAL - POPLAR CARAMEL  
CEILING

- AIRSIDE CIRCULATION (5,82 SF)
- LANDSIDE CIRCULATION (11,586 SF)
- BHS (0 SF)
- TICKET COUNTER/ QUEUING (1,196 SF)
- SSCP/TSA (827 SF)
- HOLDROOM (2,168 SF)
- BAGGAGE CLAIM (1,703 SF)
- BAGGAGE SCREENING (1,222 SF)
- CONCESSIONS (2,786 SF)
- PUBLIC RESTROOMS (1,605 SF)
- MECH/ ELEC / COMM (687 SF)
- EXISTING (0 SF)
- AIRPORT SUPPORT (3,246 SF)
- AIRLINE SUPPORT (1,054 SF)



## EXISTING COLOR SHAPES

- AIRSIDE CIRCULATION (351 SF)
- LANDSIDE CIRCULATION (1,593 SF)
- BHS (720 SF)
- TICKET COUNTER/ QUEUING (98 SF)
- SSCP/TSA (1,881 SF)
- HOLDROOM (4,176 SF)
- BAGGAGE CLAIM (3,482 SF)
- BAGGAGE SCREENING (548 SF)
- CONCESSIONS (669 SF)
- PUBLIC RESTROOMS (1,604 SF)
- MECH/ ELEC / COMM (486 SF)
- EXISTING (13,979 SF)
- AIRPORT SUPPORT (185 SF)
- AIRLINE SUPPORT (1,961 SF)



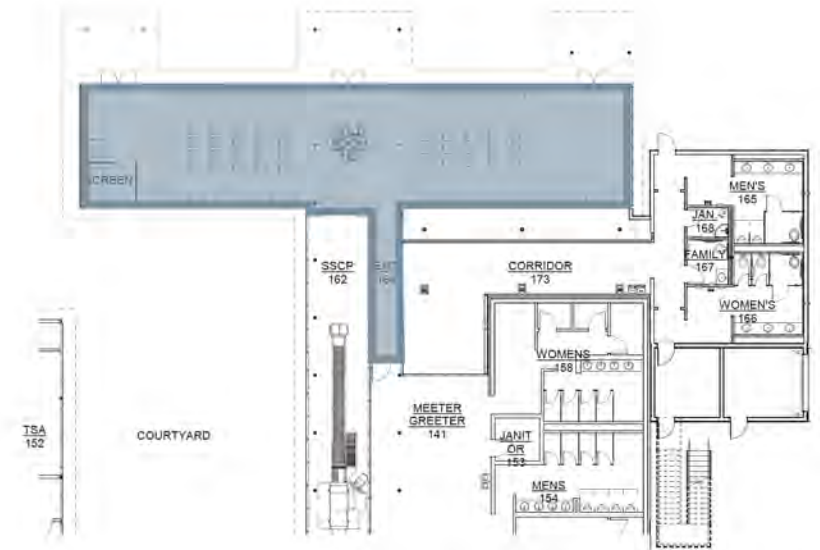
PROPOSED COLOR SHAPES

## 7.0 HOLDROOM

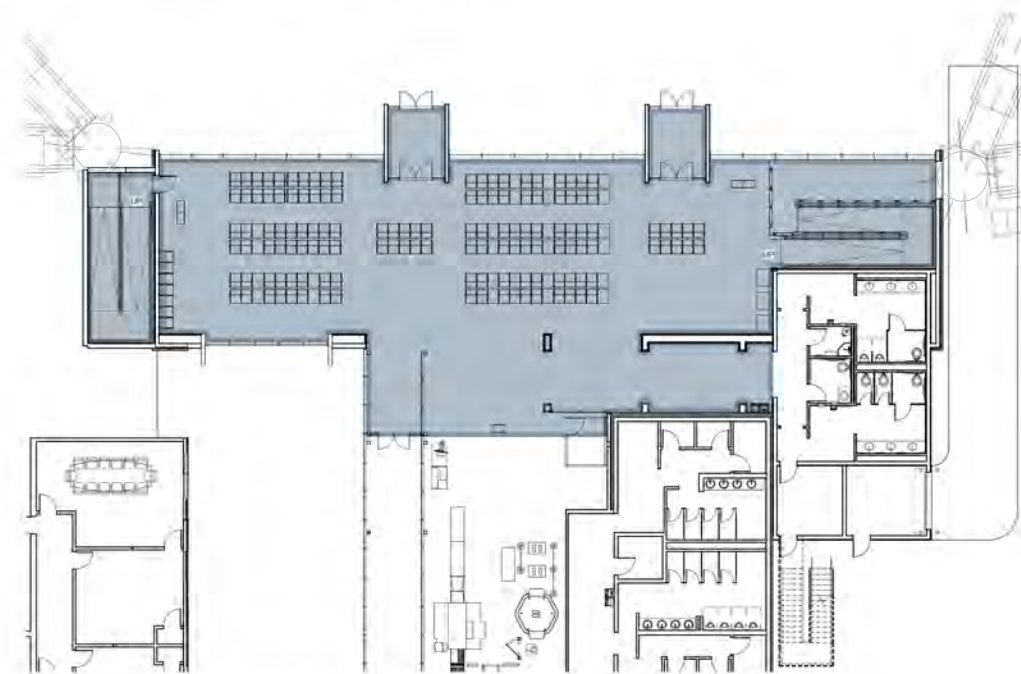
The current Holdroom space at Lawton Ft. Sill Regional Airport is not a desirable location to wait for your outbound flight. The room's linear arrangement with nothing but glazed walls and lack of amenities creates problems for maintaining a comfortable space to dwell in. With no toilets located on airside (secure side) and the inability to control temperatures during the extreme weather months, passengers prefer to wait outside of security for the plane to arrive.

In order to improve the passenger experience, new designs provide increased natural light, higher ceilings, and necessary amenities. Improvements to glazing performance will allow for more natural light while reducing solar heat gain and heat loss. Higher ceilings create a comfortable space to relax and wait for a flight while added amenities, such as toilets, reduce the need to leave the secure area.

Earlier in the design development process the design team presented several options for toilets and amenities accessible from both the existing Holdroom and the new Holdroom when constructed. The construction for the new Holdroom restrooms will proceed in 2014 and will include a men's and women's toilet as well as a family toilet and janitor closet. The restroom will be constructed with a corridor linking the existing Holdroom. The design development narrative indicates the new restrooms as existing. There will be a roof top unit installed at the roof of the corridor. Until the rest of the renovation begins after Phase 1, the roof top unit will serve the new restroom and existing public restrooms. During the design development process, the design team presented jet bridge and fixed walkway locations to the Airport. An interior fixed ramp inside of the new Holdroom and an exterior fixed walkway enclosed in a metal building were agreed upon. The interior fixed ramp will be planned along with the construction of the Holdroom in Phase 2.



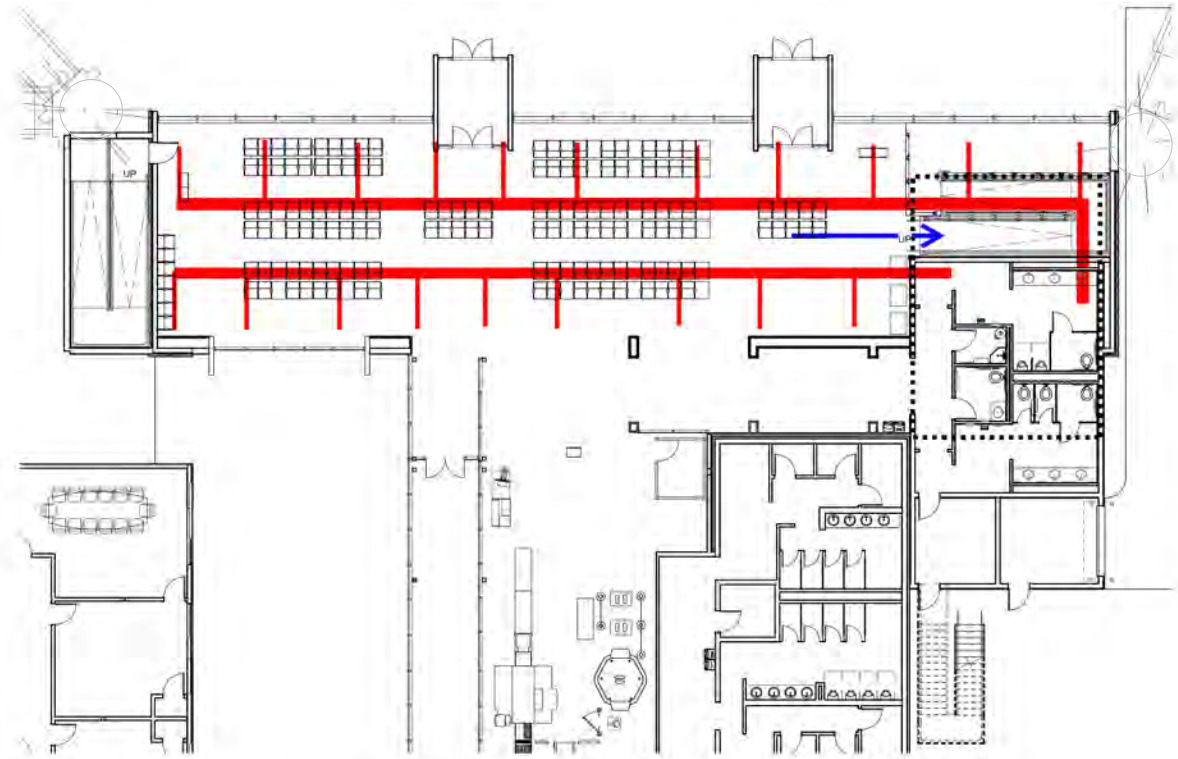
EXISTING HOLD ROOM



PROPOSED HOLD ROOM

One goal of the airport is to conceal roof top units visible from the exterior of the terminal. To eliminate the need for additional roof top units in the future, the air conditioning system for these areas will be provided by two units located in the mechanical mezzanine with one unit conditioning the north side of the Holdroom and the other unit condition the south side and the Security Screening Check Point.

During the build out of the Holdroom the mechanical mezzanine will be enlarged and the finish floor will suspend from the structure above. The Holdroom will consist of a vaulted roof / ceiling that would be built over the existing facility allowing for safe passenger traffic around the construction. The double volume holdroom will have a curved roof offering an iconic aesthetic to the airside of the Airport. The interior ceiling will be wood slats with strip lights positioned to mimic the curve of the roof. The end walls of the Holdroom will be shear walls clad in textured neutral stone bookending the holdroom. The glazing at the airside of the holdroom will be sloped with sloped columns to accentuate the tapered cantilevered edge of the curved roof above.



PROPOSED MEP HOLD ROOM



EXISTING HOLD ROOM

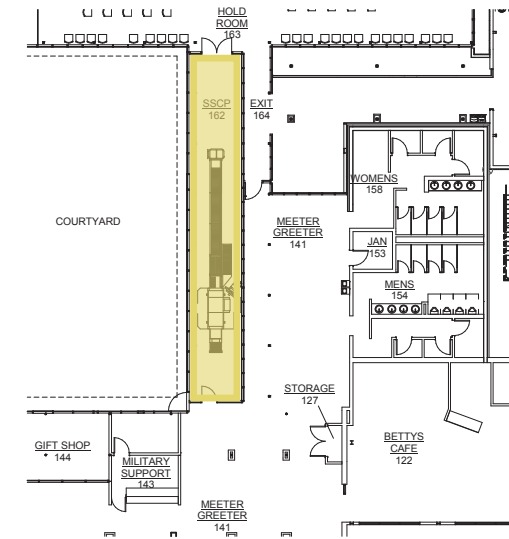




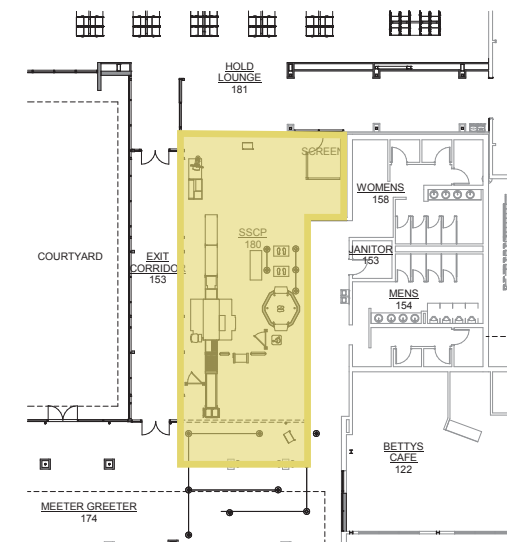
EXTERIOR ELEVATION

## 8.0 SECURITY SCREENING CHECKPOINT

The existing SSCP is positioned in the hallway leading to the Holdroom. This narrow application does not allow for adequate passenger queuing or TSA required private screening / interview abilities. The existing roof structure in this area has limited capacity, supported by many steel columns, and is too low to reinforce while providing required clearances for security equipment/mechanical systems. To allow for required ceiling heights for the TSA Screening equipment and floor plan flexibility we propose to construct a new roof structure above the existing roof similar to the construction process in the Holdroom. Once the roof is complete the existing roof framing and columns in this area will be demolished. A new exit corridor extending into the existing courtyard will be constructed simultaneously. This new layout resolves current problematic cross flow traffic. A new corridor will be built to maintain access to the existing public restrooms.



EXISTING SSCP



PROPOSED SSCP



EXISTING SSCP



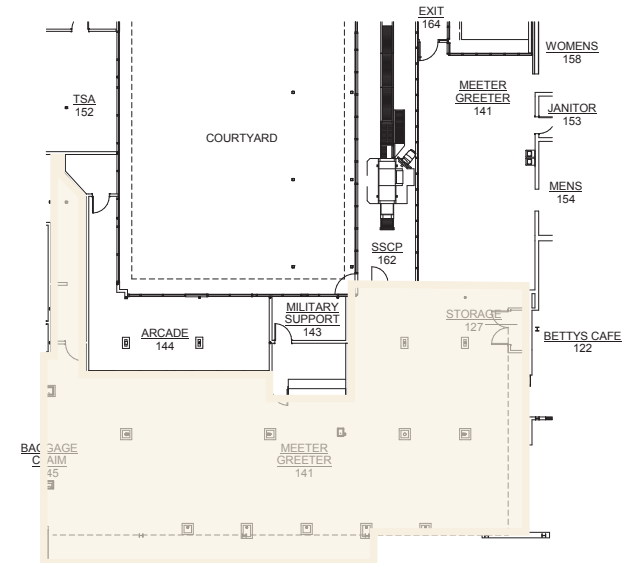
PROPOSED IMAGERY

## 9.0 MEETER/GREETER

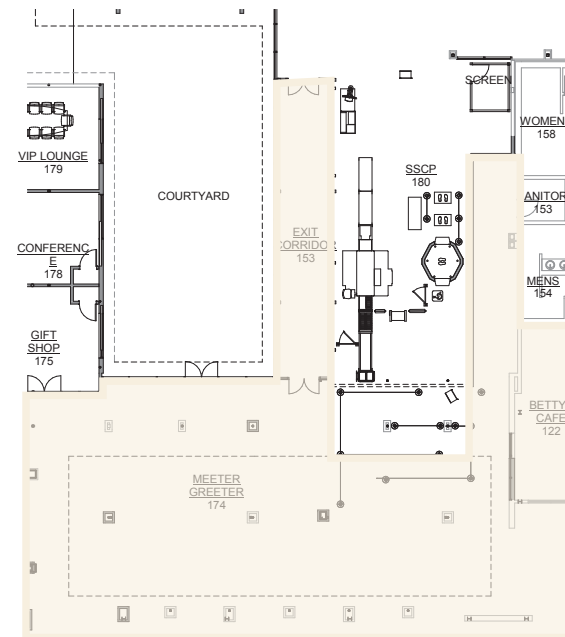
Currently the Meeter/Greeter space is shared with outbound passengers waiting on their flight and is located in front of the SSCP. The space continues to be over crowded while people congregate near the Baggage Claim 'slide' and queue up for the SSCP. By flipping the TSA checkpoint lanes with the exit corridor, we are able to allow exiting passengers to enter directly into the Meeter/Greeter space. We will also provide enhancements to the existing courtyard to serve as an extension to the Meeter/Greeter area. The courtyard will be landscaped with mow strips at the glazing to prevent the occasional rock from flying up and breaking glass in the exterior curtain walls. Also native plants will be used to reduce necessary maintenance while a small water feature will create interest. The courtyard allows for direct views into the Hold Room. Meeter/Greeters will be able to wait for loved ones in a comfortable space.

To minimize the irregular pattern of the existing columns, we propose to remove two of the existing columns which will require new support columns in adjacent areas and supplemental framing. In some cases the new columns will be supported by existing foundations but in several locations new interior footings will be required.

The existing metal ceiling will be removed and replaced with repeated linear patterns that direct traffic flow from the exit corridor through the Meeter/Greeter area and towards the Baggage Claim.



EXISTING MEETER/GREETER



PROPOSED MEETER/GREETER



EXISTING MEETER/GREETER



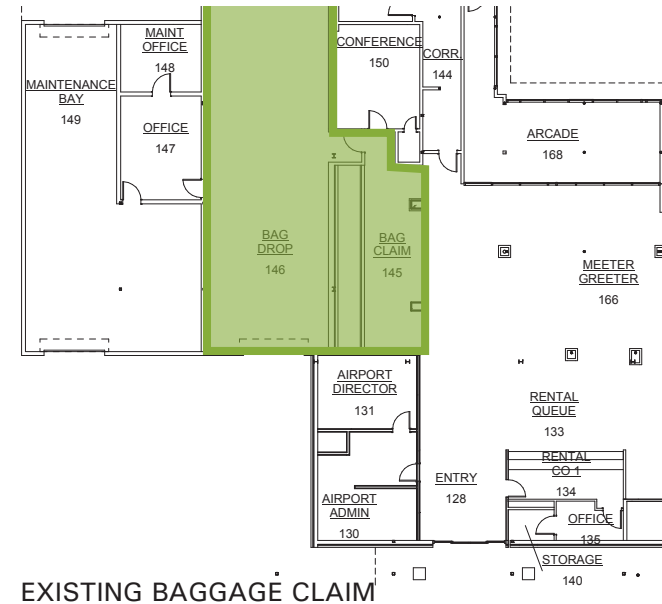
PROPOSED IMAGERY

## 10.0 BAGGAGE CLAIM

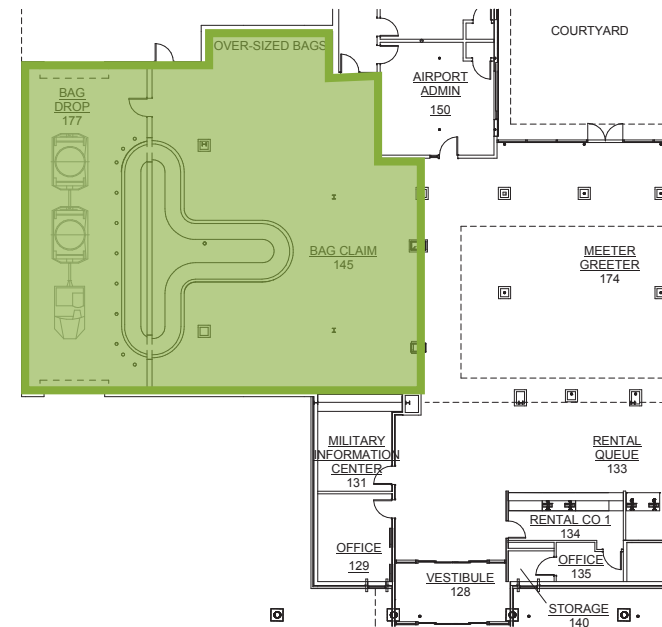
The current Baggage Claim device is a slide that airline employees provide checked luggage for passenger pickup. This operation provides passengers limited access to baggage on the slide which then slows the process of delivering bags. We propose to greatly improve this process by increasing the Baggage Claim capacity and claim device presentation length. The airline employee can drop bags on to a flat plate device, secure the device and then go onto other required tasks while passengers can collect their bags faster and easier.

The Baggage Claim expansion will include a new tug drive for baggage delivery, new flat plate claim device, and an expanded interior waiting area. The existing wall at the baggage slide will be removed to provide for the expansion. New support columns will be added to align with the existing column grid.

The airport support offices will be relocated to the existing TSA office located adjacent to the Baggage Claim area. Existing glazing will be replaced by a solid wall with slotted windows looking out onto the new courtyard. Also a new military office will be located south of the Baggage Claim.



EXISTING BAGGAGE CLAIM



PROPOSED BAGGAGE CLAIM



EXISTING COURTYARD

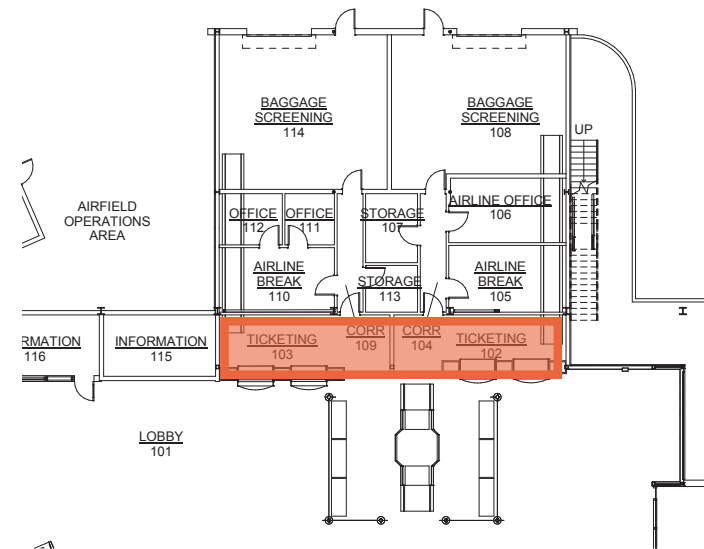


## 11.0 TICKETING

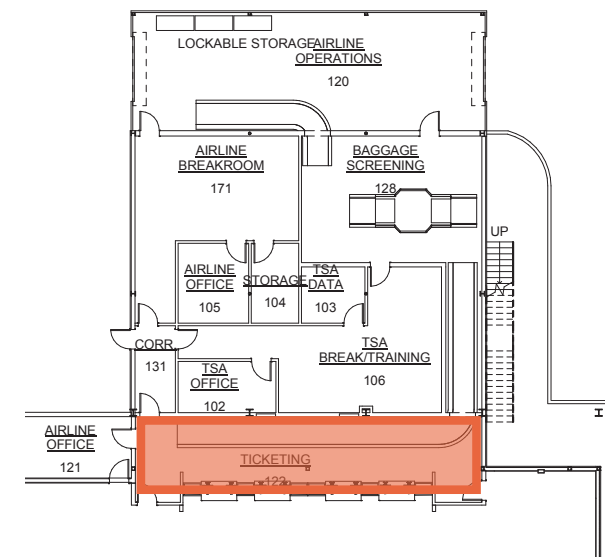
The existing TSA's baggage screening process has existed in the ticketing lobby of the Lawton Ft. Sill Regional Airport since security measures changed after 9/11. With the departure of Delta Air Lines, the airport is able to utilize the unused space to relocate the baggage screening function behind the ticketing counter. This would allow the airport to re-claim their ticketing hall while streamlining the baggage check and screening processes. The absence of a second airline also provides the ability to create TSA support spaces adjacent to the new baggage screening room

This scope of work would include adjusting airline office spaces to accommodate the TSA screening function outside of the public eye while creating an efficient baggage flow from check-in to aircraft. The airline offices will be built under the assumption of one airline. In the area behind ticketing part of the floor slab will require floor leveling compound/topping slab in order to raise the slab elevation to be flat matching adjacent existing slabs. The tug drive will be screened with a thin metal rain screen wall with overhead doors. This area will serve as a new airline operations area with lockable storage. The existing airport operations will serve as future expansion when the airport receives a second airline.

The structure located at the wall behind the existing ticket counters will require modification to remove existing rod "X" braces and change to a single tube section in order to allow new doorways and a baggage conveyor opening. The ticketing counter will expand into the existing lobby with (8) new ticket counters. New power and data will be provided at each counter. Self service devices will be located at the glazing adjacent the new entry vestibule. Motorized rolling shades will replace the manual shades and a light shelf will be provided to prevent glare into the ticket counter area. Security cameras throughout the airport will be provided by the airport.



EXISTING MEETER/GREETER



PROPOSED MEETER/GREETER



EXISTING TICKETING



## 12.0 CANOPY

Lawton Ft. Sill Regional Airport currently has the framework for a covered curbside condition. This is important when passengers are entering the building during inclement weather. The current canopies do not provide complete coverage from the curbside to the doorway as gaps exist between the canopy and the building.

A new canopy will replace the existing lower canopy and connect to the existing building structure. To provide a cohesive identity with the new Hold Room, the canopy will emulate the ceiling profile and have a curved roof. The existing steel structure will be modified to allow the new canopy to extend to the existing building. Some of the existing shallow foundations on the east half will need to be removed (approximately 14 locations). Existing structure will be reused where possible. The new structure will allow for the new curved canopy to cantilever over half of the passenger drop off lane. The canopy will be clad in metal panels and framed with tube steel columns and beams that taper at the ends. The framing members will be galvanized and painted.

The exterior will also receive a modernized aesthetic with the texture stone cladding the façade. The exterior will have intermediate breaks with the metal clad vestibules.



EXISTING CANOPY







## 13.0 PHASING

Phasing of the various portions of the work is possible due to the unique compartmentalized nature of each scope of work. It is important for the airport and the design team to plan for and accomplish a unified design look and quality of construction. Our recommendation is to approach this overall project as holistically as possible. It will be more difficult to accomplish a unified look with a fractured design process and various contractors completing elements of the scope years apart.

With this in mind, we have shown elements of each scope of work that could be constructed in phases with the same contractor. This is a conceptual phasing relationship which will require a more detailed evaluation during the construction document phase of design and ultimately with the contractor.

Phase 1 includes the following elements:

- o Toilets and mechanical mezzanine for Hold Room
- o Adjoin foundations connecting new Hold Room elements and existing building

Phase 2 includes the following elements:

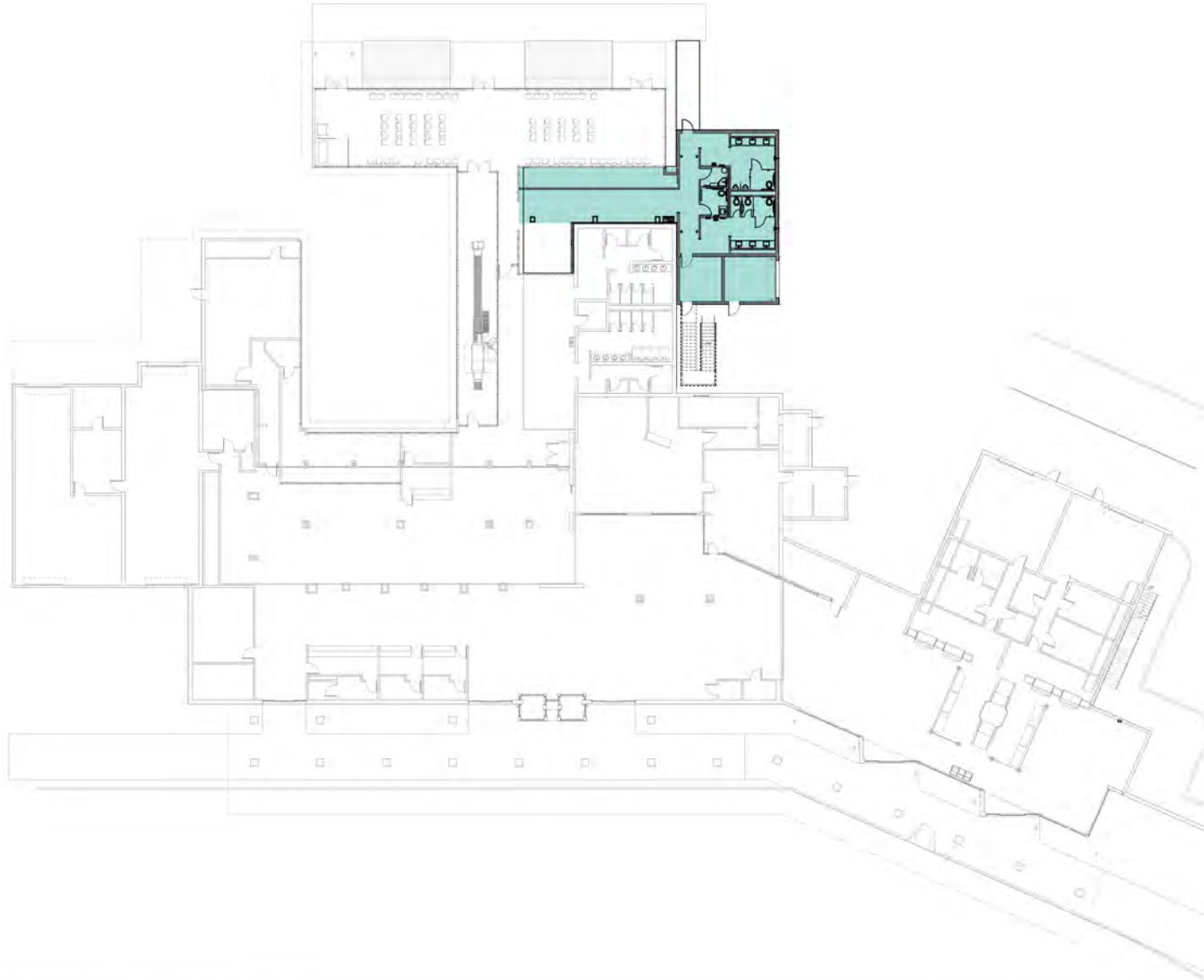
- o Construction of Hold Room and fixed ramp with door to Jet Bridge
- o Vacant half of ticketing office renovation begins
- o Exit Corridor and Temporary relocation of SSCP
- o Structural column modifications (SSCP area)
- o Center vestibule construction
- o Paving and pavement design

Phase 3 includes the following elements:

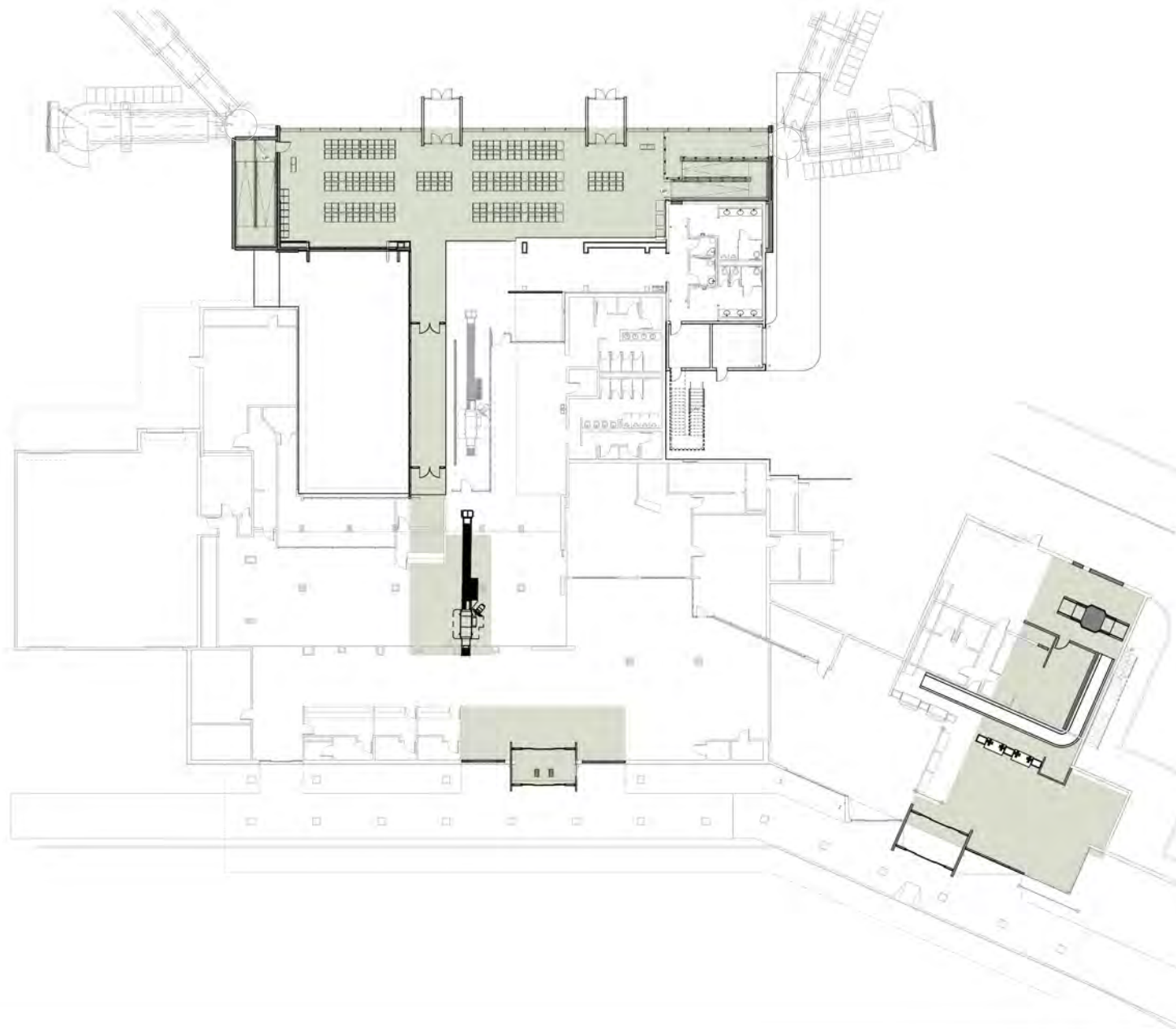
- o Relocation of Maintenance Group Vestibule construction (Ticketing)
- o SSCP Area
- o Baggage Claim Expansion
- o Structural Modifications (Baggage Claim)
- o Second half of ticketing office renovation begins
- o First half of exterior canopy
- o Paving and pavement design

Phase 4 includes the following elements:

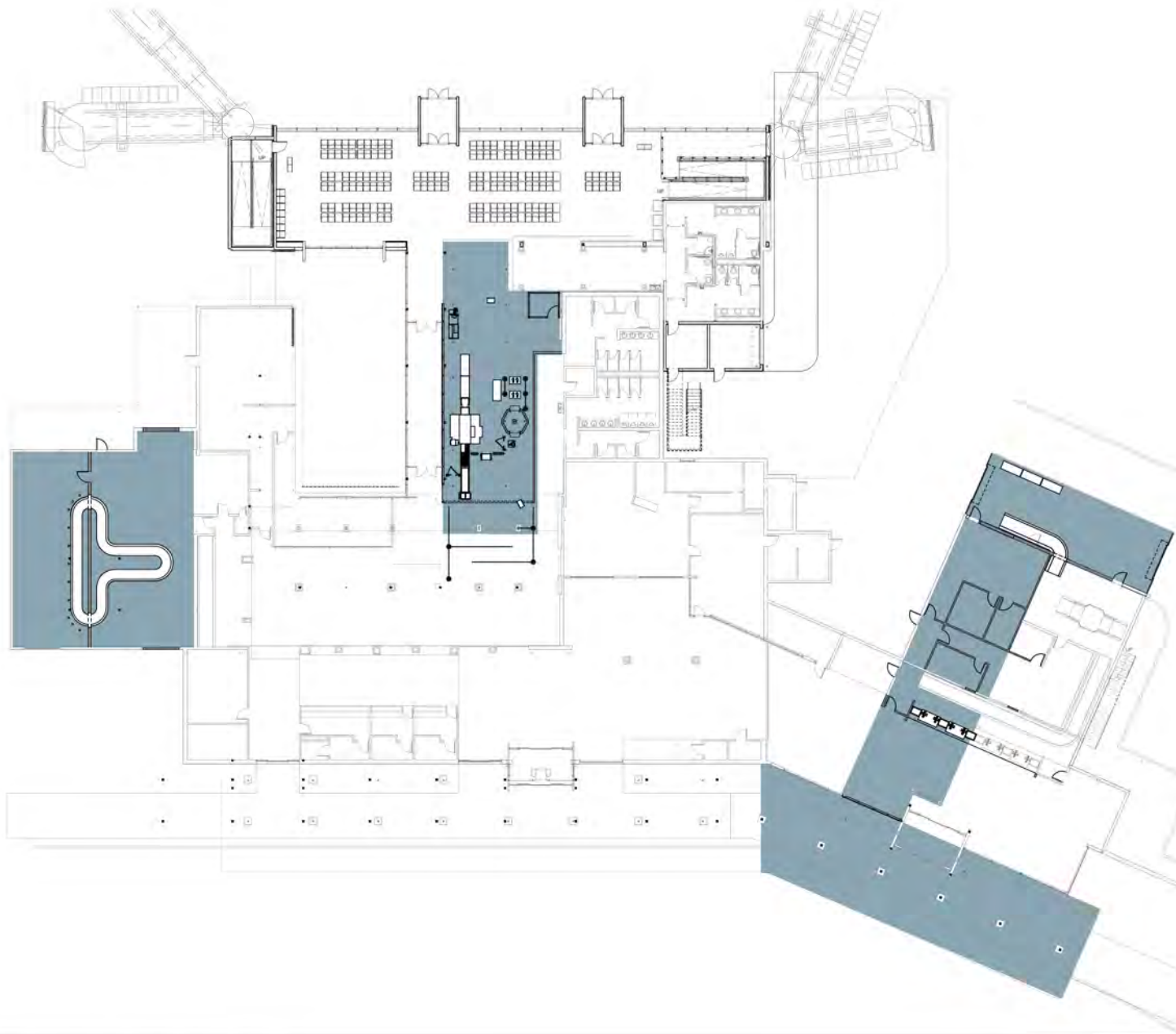
- o Meeter/Greeter area w. structural modifications
- o Courtyard
- o Airport back of house offices
- o Military Support Office
- o Airport Security
- o Rental Counters
- o Vestibule at Baggage Claim
- o Second half of Canopy



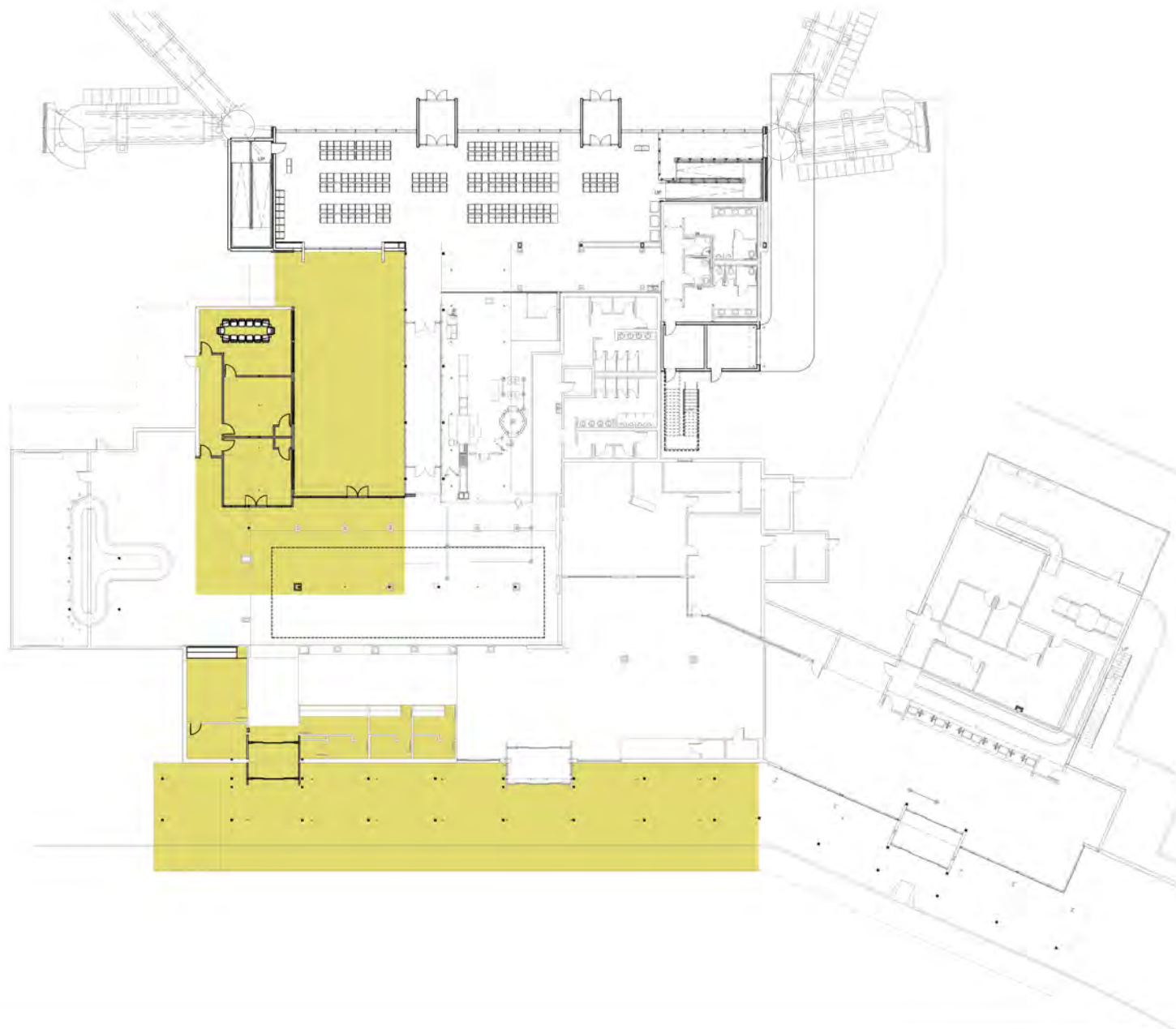
PHASE 1



PHASE 2



PHASE 3



PHASE 4



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