

SECTION 3

PROJECT

IMPLEMENTATION

#### 3.1 CONCEPTUAL DESIGN

The conceptual design process begins by using stakeholder feedback to finalize the preferred development concept. Having an overall preferred concept for terminal and landside development allows for the creation of a cost and phasing schedule as well as an implementation plan. Key to project implementation, discussion below will also consist of conceptual program elements which begin to define spaces in the terminal building, the incorporation of architectural themes for these spaces, and the programming of how passenger experiences will integrate into defined movements through the Airport environment.

#### 3.1.1 LANDSIDE

The final preferred landside concept includes the core concepts embodied in Projects A, D, E, F, G, and H. Based on the input and feedback from airport staff and the TRC, and subsequent analyses by the RS&H Team, the essential elements of these projects were developed into a holistic concept that can be phased to resolve identified deficiencies and meet the longer term needs of the airport, its passengers, and its tenants.

#### 3.1.1.1 **DESCRIPTION**

The elements of the landside concept are based around changing the basic flow of traffic to, within, and from the airport. By doing so, three objectives are achieved:

- Traffic that does not need to drive on the terminal curb roadway to serve passengers will follow other simpler routes to and from terminal-area destinations. This will decrease traffic on the curb by 36 percent.
- A large core area, the "infield" of the terminal's landside area, will be defined by an expanded loop roadway. Most of the major public destinations on the airport will be located within this loop, including short-term parking and rental car return. The loop will continue to serve traffic to and from the terminal curbside, but only that traffic will need to pass by the terminal.
- The creation of the large infield area will enable the expansion of the curb roadway capacity at Departures, with a widened sidewalk and an extra lane, for a total of four continuous lanes past the Departure end of the terminal curb. Due to the lack of curb expansion along Arrivals, five lanes are created thereby continuing the curbside roadway in a uniform manner and providing space for potential future widening of the arrival curbside. Additionally, the infield area will enable all rental car areas to be adjacent to each other, for shorter customer walking distances, lowered risk resulting from the removal of rental car shuttling on public roads, and greater operating efficiencies for the rental car companies.

The revamping of basic traffic patterns is achieved through the designation of the existing western portal of the airport as the public entrance and exit. All signing will lead passengers to this portal, either to enter from Cooley Mesa Road, or to exit the terminal area. Access control gates just east of the relocated intersection of the loop roadway and Eldon Wilson Road on the airport (near the western limits of the VVJC parking area) will permit private vehicles, especially rental cars, to exit the eastern portal, yet prohibit all except authorized vehicles from entering the terminal loop roadway there. This CV entrance is intended for CVs dropping off passengers. Through regulation, the Airport is encouraged to require empty CVs entering the airport headed to the pick-up lot to use the main public entrance (the western portal) and the CV-only lane that is to be constructed across the short-term parking lot.

The short-term lot receives some critical changes to eliminate the need for traffic to or from the lot to drive past the terminal on the curb roadway unless they are dropping off or picking up passengers. One entrance on the south side of the lot will be preserved, and the existing exit near the northwest corner of the lot will become the only exit. To enable this to work well from a customer perspective, new spaces will be created on the periphery of the lot where entrances/exits used to be, and the peripheral two-way circulation aisle will be extended around the entire lot.

#### 3.1.1.2 ASSESSMENT

The preferred landside concept scores well on all criteria. It resolves the existing deficiencies, and meets the long-term needs for capacity and quality of service through the planning activity level of this study. The curb capacity and level of service will remain fully satisfactory for a significant increase in peak-hour passenger activity beyond that of the eight loaded gates, as it has the ability to handle an additional 30 percent growth before the critical link, the POV arrivals curb, reaches the maximum preferred ratio of volume to capacity (V/C), a measure of level of service<sup>6</sup>.

The space allocated to rental cars will increase with the preferred concept, safety will be improved, risk will be lowered, and significant flexibility will be introduced to the arrangement of the infield area for smooth rental car operations. Without defining how this area should be revised for most efficient operation<sup>7</sup>, it is not possible to define the best locations for entry and exit points for the rental car area. However, from a traffic operations and safety perspective, it is noted that the entrance is best located along the south side of the rental car area, and the exit is best located at the eastern end, as the fourth leg of the intersection of the loop road and Eldon Wilson Road.

The number of short-term parking spaces will slightly increase, however, it is premature to assess how long this short-term parking area will suffice given that paid parking has just recently been introduced and its impact, along with the effect of having on-airport free parking provided, has not been fully studied. As demand increases for walkable parking, the principal management tool used to keep customers happy in peak times is pricing, as long as there are reasonable alternatives to the lot where higher prices are introduced. Both the long-term lot and the nearest free parking lot are just within the national norm of 1,000 feet walking distance to "walkable" parking. Thus the airport and its parking operator have the opportunity, within this preferred concept, to pro-actively manage price and amenities to keep parking patrons happy.

The commercial vehicle pick-up lot under the preferred concept would lose a handful of spaces to terminal bag claim expansion. Its internal circulation would be revised to be served by an entrance and exit essentially where the current exit is. To keep the lot available for the needs of drivers and to serve passengers well, the Airport and the ground transportation providers can consider several options to reduce waiting times within the lot:

- Minimally, the Airport could define the purpose of the lot and the targeted maximum time that is allowed. This time should include the ability of drivers to park and go inside the bag claim area to greet their customers as they leave the secure area and enter bag claim. As well, it needs to include the time for bags to become available and for the entire party to gather to be led to the waiting vehicle.
- The Airport could charge additional fees for waiting beyond some defined target maximum time. This is common practice at many airports which also have constrained ground transportation pick-up facilities.
- The Airport could create a new CV hold or staging area very close to the CV pick-up lot. This could be located in a number of places:
  - Within the short-term parking lot along the direct CV access lane.
  - Within the employee lot that serves the Administration building and the Snow Equipment Building.
  - Within the Long-Term Lot.
  - As new construction over the ravine that separates the employee and Long-Term lots.

Such a relocated holding area would enable drivers to leave their vehicles and readily go to the terminal for information, food, and/or relief. These locations would also enable quick movement into the pick-up lot when it was time to place the vehicle to serve passenger pick-up.

All of these ideas are compatible with the preferred landside concept, and will help reduce the long 48 minutes average time in the pick-up lot.

#### 3.1.1.3 **SUMMARY**

The preferred landside concept remedies what is problematic today at EGE, and establishes landside facilities that can flexibly serve the airport well for many years to come. It is also fully compatible with the preferred terminal concept, and can be phased in with it so that sound functionality is maintained during construction, and in each interim period, until the total set of landside concepts are implemented.





The higher the V/C, the lower is the level of service. V/C>0.70 is where service levels start to rapidly deteriorate.

<sup>7</sup> Such detail is not within the scope of this planning study.

#### 3.1.2 TERMINAL

The final preferred terminal concept builds off and refines Option 3 by incorporating stakeholder feedback and identifying the efficient and appropriate use of space. Additionally, a natural and seamless transition is created between the landside/roadway and the terminal entryways through intuitive design that will be immediately familiar to enplaning and deplaning passengers.

#### 3.1.2.1 **DESCRIPTION**

The critical terminal elements addressed in the conceptual planning process are the curbside check-in, departure lounges, baggage claim, and TSA security screening checkpoint. All design elements for the critical areas studied also sought to optimize use of other ancillary and adjacent areas and incorporate stakeholder advice in balancing operational efficiencies and opportunities to achieve superior aesthetic design.

The transition from the landside/roadway system into the terminal begins at the curbfront. Passengers walking in from the parking areas enter through a new mountain resort-style porte cochére that stretches from the main terminal entrance, across the roadway and over to the central north-south oriented walkway. This design element identifies the primary terminal access point and provides protection to passengers during inclement weather. It also serves as a physical expansion and visual representation of the terminal's entrance, encouraging drivers to slow down and obey posted speed limits. The porte cochére acts as the beginning element for re-centering the inner terminal program areas. Another pedestrian oriented component implemented in the curbfront design is an expanded curbless sidewalk on the departure side of the terminal which is covered by a new canopy. The widened and lengthened curbfront acts to provide adequate queuing space for the high percentage of passengers using curbside check-in facilities. The curbless nature of the sidewalk provides equitable access for all users and is clearly delineated from the roadway with texture and markings that fit the architectural design themes discussed later. Additionally, bollards are strategically placed to further differentiate the roadway from the expanded pedestrian movement. Bollards also provide security from potential vehicular threats to the terminal building.

The space for curbside check-in facilities at EGE are already available and only need minor adjustments to provide an improved passenger ticketing experience. By adding a leg to the outgoing baggage conveyors that reaches the existing curbside check-in bays, the bays can be leased to airlines thereby providing ticketing efficiencies, relieving curbside and lobby area congestion, and improving overall passenger level of service.

Entering the terminal lobby leads to a central TSA security screening checkpoint which has been pushed back toward the airside into newly expanded areas creating improvements in the non-secure lobby circulation space. Space for potential future TSA lane expansions is preserved on the east wall behind the airline ticketing offices. Leaving security and moving into the TSA recomposure area, passengers find themselves in a new central core below the grand hall. Newly created space and design elements allow for an open and well-lit area as passengers decompress once passing through security.

A central, open set of stairs and escalators transition passengers from the recomposure area into a new upstairs secure-side grand hall where central concession areas are located leading into properly sized concourse corridors. Adequate space for level of service "B" is provided in departure lounges. Additionally, small nook lounge spaces are located in two areas, one in each concourse wing, creating an area of enhanced comfort where passengers can find refuge from the busy concourse area. The new upstairs concourse also provides necessary restrooms pace at both the eastern and western wings as well as a flexible shell space in the western wing that can be programmed appropriately according to market demand. The new upstairs concourse design puts emphasis on harnessing ample natural light, creating visual corridors that provide sightlines to all gates from a distance, enhancing passenger experience through comfort and appropriately programmed amenities, and producing an intuitive wayfinding experience that guides passenger flow by way of signage and subtle architectural queues which fulfill the desired reflection of community and sense of place.

Deplaning passengers also pass through the new upstairs terminal and have opportunities to take advantage of the concessions, flexible shell space, and restrooms. Most passengers will go to the baggage claim area and many of these people will meet commercial vehicle operators. Bag claim belt reconfigurations are recommended to enhance existing and planned spatial needs. An additional bag claim belt will need to be added in a new west-end building expansion. Oversize bag drops are relocated from outside to inside the terminal building and are proposed to be placed between bag claim belts. This relocation offers an improved airline operational efficiency for inbound baggage tugs and increases the passenger level of service. Because commercial vehicle operators play such a key ground transportation role at EGE, an efficient operational flow is programmed into the new landside baggage claim area. Specifically defined commercial vehicle greeter space is positioned near the bag claim belts in a clearly visible location to increase passenger arrival experiences and ease the transition from bag pickup to commercial vehicles. The commercial vehicle pick-up lot remains intact but will need to be reconfigured at the time of any bag claim area building expansions. The landside preferred concept accounts for this eventual expansions by creating a single point of access and egress for the commercial vehicle pickup lot.

#### 3.1.2.2 ASSESSMENT

The proposed terminal building expansions and renovations target specific deficiencies, while maintaining a holistic vision. The porte cochére brings the resort level experience to travelers and the expanded departure side curb sidewalk eases the high level of congestion that is currently experienced at curbside check-in. Additional curbside check-in stations provide operational efficiencies for airlines as well as easing check-in congestion inside the terminal building. Moving TSA security screening checkpoint (SSCP) operations further into an expanded building area provides additional circulation space near the baggage claim area and enables passengers to reach existing landside restrooms more easily. The relocated TSA SSCP is also planned in a way to allow for warranted future lane expansions.

Once passengers are clear of security screening, new escalators, elevators, and stairs lead them up into a centrally located grand hall concessions area. This new concession area allows the Airport to capitalize on newly created space and provide passengers with goods and services at levels that are currently unattainable. Centrally located food, beverage, retail, gifts, and other concessions create opportunities for passengers to prolong the vacation experience in a setting that eases the anxiety of missing flights as departure areas and aircraft parking positions are visible from many areas within the central hall.

Departure lounge and concourse corridor improvements are another critical element in the plan that ease secure-side congestions at EGE and improve the level of service from "D" to "B". In addition to increasing the necessary space requirements in the new departure lounges, design elements will provide ample lighting, visibility to outside scenery, views of arriving and parked aircraft, and architecture that reinforces the unique sense of place that is offered throughout the Eagle-Vail Valley. Arriving passengers will experience all the same benefits of the new upstairs concourse level as they make their way to baggage claim and other landside facilities. Newly expanded baggage claim facilities provide an improved level of service for vacationers, business travelers, and community members alike as they arrive to meet greeters, commercial vehicle operators, or obtain rental cars.

Beyond passenger experiences, operational improvements have been incorporated into the terminal expansion plan. By moving secure side activities to an upstairs level, outbound baggage facility expansions are enabled and airline ground service equipment (GSE) is able to operate and be stored underneath areas programmed for passengers. Keeping GSE out of inclement weather also prolongs service life while reducing maintenance costs. Relocation of deicing operations from positions slotted for future aircraft parking is already a consideration in the 2014 Master Plan.

#### **3.1.2.3 SUMMARY**

Each element of the final refined terminal concept addresses a specific problem area outlined in the study. Critical improvements in the plan include curbside arrival enhancements, TSA SSCP renovations, new upstairs concourses, a central concessions hall, and an expanded baggage claim area. These recommended improvements all provide a passenger level of service "B" and align with the primarily resort-oriented market served at this unique Rocky Mountain airport. **Figure 3.1**, **Figure 3.2**, and **Figure 3.3** on the following pages show the final preferred terminal and landside/roadway concepts.





FIGURE 3.1 TERMINAL CONCEPT (FIRST FLOOR)



Source: RS&H, 2015

FIGURE 3.2 TERMINAL CONCEPT (SECOND FLOOR)



Source: RS&H, 2015

FIGURE 3.3

LANDSIDE AND TERMINAL CONCEPT OVERVIEW



Source: RS&H with Curtis Transportation Consulting, 2015



#### 3.1.3 ADDITIONAL CONSIDERATIONS

In order to properly develop the terminal and landside preferred concepts, impact on adjacent areas had to be considered. Landside impacted areas include short-term parking, long-term parking, employee parking, permit parking, and the commercial vehicle pickup lot. Impacts from the terminal preferred concept include Part 77 protected surfaces, commercial deicing operations, and GSE operations. The following section discusses these impacts.

#### 3.1.3.1 LANDSIDE

There are a few landside areas that were beyond the scope of this project but were impacted by the preferred landside and terminal concepts. These are described here, with some ideas for their future resolution.

- Short-term Parking: Ongoing changes to the payment structure of the short-term area make it difficult to access the true overall impact of the preferred landside concept on demand and pricing. Experience shows that at most airports, when parking rates increase, demand returns to normal within six weeks to six months, but with the seasonal demand demonstrated at EGE, impacts may not be clear until the next season is completed.
- Long-term Parking: Bringing long-term parking closer to the airport is a consideration that could be studied when determined appropriate by the Airport. The short distance between the terminal and Cooley Mesa Road does present a constraint on available space and the cost of relocating long-term parking presents less benefit-to-cost relative to the selected landside projects. Long-term parking demand, supply, and pricing could use further study as deemed appropriate by the Airport.
- Employee Parking: No current issues were raised during this study relative to employee parking, other than the desire by airport staff to maintain some of the Permit Lot spaces for certain tenants who have greater need of vehicles during the day, and thus for whom a longer walk can present a burden or operational impact. The norm within the airport industry is to utilize available land for public parking first, and for employee parking second, even if that creates relatively long walks for employees. Given the relatively small, human- scale<sup>8</sup> at EGE, the preferred location is within a reasonable walking distance. Nothing in the preferred landside concept appears to threaten the current location of employee parking.
- The relocated Permit Lot: Stakeholder feedback suggested that the Airport views this location as a temporary location for Permit Parking. Adjacent to the terminal, and with airfield frontage, ultimately this parcel has a better and higher use than for parking. When that time comes, there are several options:
  - Move Permit Parking further from the terminal, e.g., where the nearest free parking area is located.
  - Merge permit holders into the short-term or long-term lots.
  - Do away with permit parking entirely.
- Commercial Vehicle Pickup Lot: The lot for CV pickup will need to be considered during any baggage claim area renovation/expansion as parking spaces would be lost. Opportunities exist to revise traffic flow patterns and parking alignments or even the potential utilization of grade differences to create a tiered deck parking structure that can optimize the usable space of this area.
- Landside/Roadway Phasing: The goal of all proposed landside/roadway projects is to improve safety, efficiency, and capacity. Therefore, it is paramount that consideration is taken into the effect which all terminal facility improvements have on adjacent road systems. Projects of particular importance include the curbside/ check-in, porte cochére, and baggage claim expansion. Overlapping construction opportunities exist during these phases for "micro-phasing" portions of impacted roadway projects. Taking advantage of these phasing opportunities can reduce overall costs while avoiding any associated temporary issues or construction redundancies. More detailed discussion will follow in specific project phases.

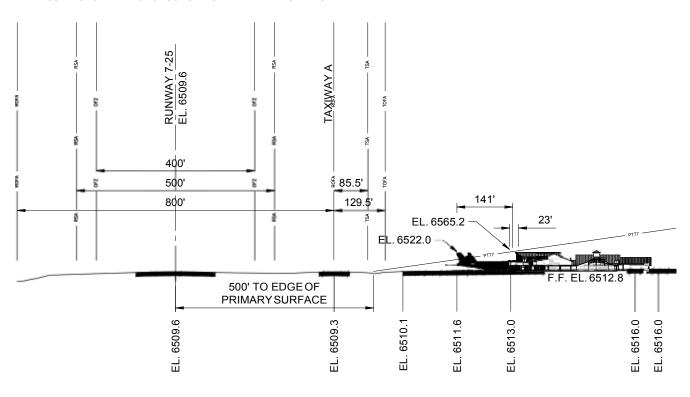
#### 3.1.3.2 TERMINAL

By expanding the terminal to meet current and future needs, additional operational impacts need to be considered. Areas impacted by the final revised terminal concept include deicing systems/operations and Part 77 surface penetrations. Additionally, terminal expansions impact ground service equipment (GSE) movement on the apron. The effects of terminal expansions upon these operations were taken into consideration during the alternative creation, evaluation, and final revised concept selection process.

Commercial deicing operations presently occur in the two designated deicing positions (D1 and D2) located at the far west end of the apron. Airline staff use airline-owned equipment to spray glycol onto aircraft. Glycol runoff is collected in a trench drain system leading to a recovery tank located immediately west of the apron. By "re-centering" the terminal building through the final revised concept and using positions D1 and D2 for parked aircraft, deicing operations need to be considered and addressed in the final design process or during any potential phasing approaches. The present deicing relocation plan positions new deicing facilities at the takeoff end of Runway 25 which integrates well into this terminal expansion plan.

In considering Part 77 protected airspace surfaces, analysis was performed to ensure new building design would not penetrate EGE transitional surfaces, which extend at a 7:1 ratio beginning 500 feet from the centerline of Runway 07-25. **Figure 3.4** below shows the preferred terminal concept profile and the associated clearances to meet Part 77 requirements. The figure shows how aircraft tails currently penetrate the surfaces but the proposed terminal expansion will not.

FIGURE 3.4
PART77 SURFACE CLEARANCE OF CONCEPTUAL TERMINAL BUILDING



Source: RS&H, 2015

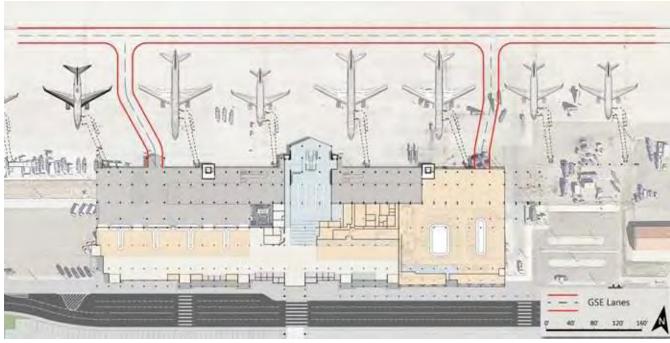




<sup>8</sup> An environment which is pedestrian-oriented and comfortably walkable from all locations for most people.

During the technical review process it became clear that impacts to ground service equipment and vehicles were of primary concern to airlines operating at EGE. Different building design elements were taken into account not only to negate adverse impacts to these operations, but improve them over the lifetime of the project. The final refined terminal concept creates covered space for the storing of GSE immediately adjacent to aircraft parking positions where this equipment will be used. By raising airline boarding operations to a new second level and demolishing appropriate areas of existing building at ground level, a more efficient flow is created for vehicles delivering outgoing baggage to aircraft. Operationally, it is important to provide lanes for these vehicles that enable them to reach the rear of aircraft without having to go around all parked aircraft during peak times. For this reason, aircraft parking positions were evaluated to ensure adequate space for GSE service lanes was provided. **Figure 3.5** demonstrates proposed locations for these movement lanes.

FIGURE 3.5
POTENTIAL GSEAPRONLANES



Source: RS&H, 2015

### 3.2 DELIVERY METHODS, PROJECT PHASING, AND CONSTRUCTION COSTS

It is not only important to determine the most appropriate projects to address the challenges faced by EGE, but also the proper timing and course of implementing those projects. Most projects target improvements to the passenger experience in the terminal building. All project phases were considered by urgency of need, potential for efficient construction sequencing, and construction impacts to seasonal peak passenger activity. For these reasons, the following section addresses the recommended project phasing schedule in the context of EGE short-, mid-, and long-term needs. Each short-term project phase includes construction level cost estimates<sup>9</sup>. The mid- and long-term phases include planning level rough order of magnitude (ROM) costs. All costs are described in further detail in **Appendix B**. Another key element requiring consideration is the proper delivery method for bringing the terminal conceptual plans into design and construction.

#### 3.2.1 DELIVERY METHODS

One reputable source for better understanding the different types of delivery methods available for design and construction projects is the Construction Management Association of America 2012 report *An Owner's Guide to Project Delivery Methods*. This report identifies the three most common forms of project delivery as Design-Bid-Build (DBB), Construction Management At Risk (CMAR), and Design-Build (DB). Each method structures itself in a way that can have benefits or

draw-backs dependent upon owner preference to certain levels of risk and control. The goal is to select a delivery method that best suits the Airport and completes projects in the most effective and efficient manner possible. Some of the key considerations for determining what method is appropriate for EGE are dependent upon the budget, design, schedule, level of risk aversion, and EGE experience.

Different compensation methods are available dependent upon EGE preference including Lump-Sum (LS), Guaranteed Maximum Price (GMP), or Reimbursable. The Lump-Sum option contracts a specific price for a specific scope of work. Guaranteed Maximum Price contracts a fixed scope of work for a price not-to-exceed a specifically set maximum price. Reimbursable contracts define a scope of work that can allow more flexibility with payments varying based on an agreed upon calculation which can be formulated based on different variables including material costs, time, and incentive and performance bonuses. Some different options for calculating reimbursable contracts include<sup>10</sup>:

- Unit Price Payment based on actual quantities at set unit prices.
- Cost Plus Fixed Fee Payment based on actual cost plus a fixed fee.
- Cost Plus Incentive Fee Payment based on actual cost plus an incentive based fee.
- Cost Plus Award Fee Payment based on actual cost plus a performance based fee.
- Time Spent Payment based on actual hours spend at set billing rate.
- Time and Materials Payment based on actual costs with a fixed markup on costs.

Many options also exist in contractor selection. Selections can include single or multiple contractors for single or multiple projects. Awarding these projects takes many contract forms including some of the following  $^{10}$ :

- Indefinite Delivery/Indefinite Quantity (IDIQ) This contract provides for an indefinite quantity of services for a fixed time. The owner awards a contract to one or more firms in which billing rates are pre-established and proposals are made for subsequent work as tasks are identified, per the prices set forth in the master agreement.
- Multiple Award Task Order Contract (MATOC) This is a variation of the IDIQ contract which always involves multiple firms and is common in government contracting.
- Single Award Task Order Contract (SATOC) This is a variation of the IDIQ contract which always involves a single firm.
- Job Order Contracts (JOC) This is a variation of the IDIQ contract which is typically used to complete large numbers of smaller projects. A single contractor is selected and work is executed based on a pricing index. As tasks are assigned, pricing proposals are generated based on the rates in the pricing guide multiplied by a fixed pricing factor, which is established in the contract.

The first delivery method option is Design-Bid-Build (DBB). This is the traditional delivery method in the U.S., involving three distinct sequential phases: design, procurement, and construction. The design phase develops architectural construction documents capable of guiding how each phase of construction will be completed. The procurement phase involves the project bidding process and contractor selection. Finally, the construction phase builds the project according to construction plans. DBB involves moderated levels of owner/contractor risk and control. This method commonly involves a negotiated lump-sum payment for a specific scope of work. Contractors are selected according to owner preference between lowest cost and highest qualification and are responsible for constructing the building according to contractual obligations. One owner benefit of a DBB contract is the reliability of cost information prior to commencing construction. Once bids are received, costs remain relatively predictable throughout the life of the project. This enables the owner to retain a moderate level of control over the project and the associated costs. The main challenge with the DBB method is a longer execution time. Construction cannot begin until design and procurement are complete and the lack of contractual agreements between contractors and designers may create challenges resulting in schedule delays. Additionally, a lack of collaboration on the part of designers and contractors may result in design inefficiencies, implementation complications, and unanticipated cost decisions. Involving a construction manager to oversee the process may help alleviate some of these issues.





Cost estimates are construction level costs and absent of any additional design fees.

Source: Construction Management Association of America. (2012). An Owner's Guide to Project Delivery Methods.

Another delivery method option is Design-Build (DB). This process enables owners to contract with a team which includes a designer and contractor, in some form, which performs the complete facility design, usually based on an owner-provided scope. At an early point in the process, a pricing structure is established to complete design and construction. Since collaboration is programmed into the process from the start, significant financial and time savings can be realized. DB projects are completed more quickly than traditional methods and provide a single point of accountability for design and construction. The disadvantage of this delivery method is the relative loss of control on the part of the owner. The DB team can help offset this worry through a transparent process that ensures an owner is receiving the best value for its investment but the speed of a DB project also requires a highly responsive owner, meaning that multiple layers of decision making have the potential to create problems throughout the process.

The final delivery method option is Construction Management At Risk (CMAR). This method is similar to the DBB method in that the contractor must perform and guarantee project completion in accordance with a negotiated price and scope, but must also provide assistance to the owner prior to construction by way of scheduling, budget development, and constructibility advice during the planning and design phases. One advantage to the CMAR approach is the flexibility to begin construction prior to the completion of design documents and thereby shorten project timelines. This often involves the negotiation of a GMP based on a partially completed design. The CMAR approach also aids in streamlining the process by reducing specifications in early agreements on materials and equipment. The primary disadvantage to this delivery method is the potential for adversarial relationships to arise between the owner and contractors when design elements are not included in the original design. These types of issues can be mitigated through process transparency and contractual agreements on addressing design errors discovered during construction.

FIGURE 3.6
ALTERNATIVE DELIVERY METHODS

Design-Bid-Build Design-Build Construction Manager (DBB) (DB) at Risk (CMAR) Contractual Structure The Owner holds the contract with the . The Owner holds the contract with the general The Owner contracts with both the general Overview and designer and the peneral contractor. contractor. contractor and the electerior Relationships + Hard bid general contractor selection is . The general contractor holds the contract with + The general contractor can advise the Owner based on the provided design. and designer only on scheduling and cost. the designer. The Owner provides performance-based. prescriptive project requirements . The general contractor provides alternatives. . The general contractor can negotiate deliverables and level of design required. Schedule charts attach attach attach Specie Owner's Risk  $\triangle \triangle \triangle \triangle$  $\triangle \triangle \triangle$ Owner's Control 

Source: Hensel Phelps and RS&H, 2015

**Figure 3.6** shows a summary breakdown of each delivery method with contract structures, relationship overviews, length of schedule, and the associated levels of owner risk versus control. When considering the implementation and cost needs of EGE, the Construction Management At Risk delivery method seems to be most appropriate. This is primarily due to the aggressive schedule resulting from the peak event limitations placed on the Airport during the winter ski season. Additionally, EGE would retain higher levels of control over the design and construction process with moderated levels of risk.

#### 3.2.2 PROJECT IMPLEMENTATION

The project implementation schedule for EGE is broken into three periods: short-term, mid-term, and long-term. Determining project phasing was largely influenced by the winter peak event period and the desire to avoid unnecessary conflict with ski-season passenger traffic. While this peak season does present challenges and limitations to project implementation, the off-season period presents an excellent opportunity for construction that is much less disturbing to airport operations and passenger traffic. The sequence of phased projects was also highly influenced by the degree of improvements that would be provided to passenger level of service. Additionally, one of the primary goals of this study is to prepare EGE for construction in the 2017 off-season.

Short-term projects include five phases with the potential for a sixth phase subject to financial feasibility. Short-term projects begin by addressing much needed airside improvements in departure lounge space, concourse movement space, and incorporated concessions space by building a new second level concourse from the buildings center core to the east. Further short-term sequential improvements address TSA checkpoint space, curbside check-in facilities, curbside pedestrian sidewalk space, early stage terminal loop roadway enhancements in the curb area, and the potential for additional expansion of new airside concourse space.

Mid-term projects continue the expansion of the second floor airside concourse from the central building core to the west. Additionally, a new porte cochére is built at the central terminal building entrance.

Long-term projects target baggage claim deficiencies by expanding the bag claim area west and rectify roadway, parking, and rental car operational challenges by constructing an expanded terminal loop roadway which provides a commercial vehicle bypass and a widened four lane curbside roadway.

While the proposed sequencing is meant to provide the most effective and efficient phasing plan under the circumstances at the time of this writing, they are not reliant on this sequencing to be successful. As conditions change, some mid- or long-term project phases become a higher priority. The sequencing of this plan is flexible enough to allow for project changes as new information becomes available.

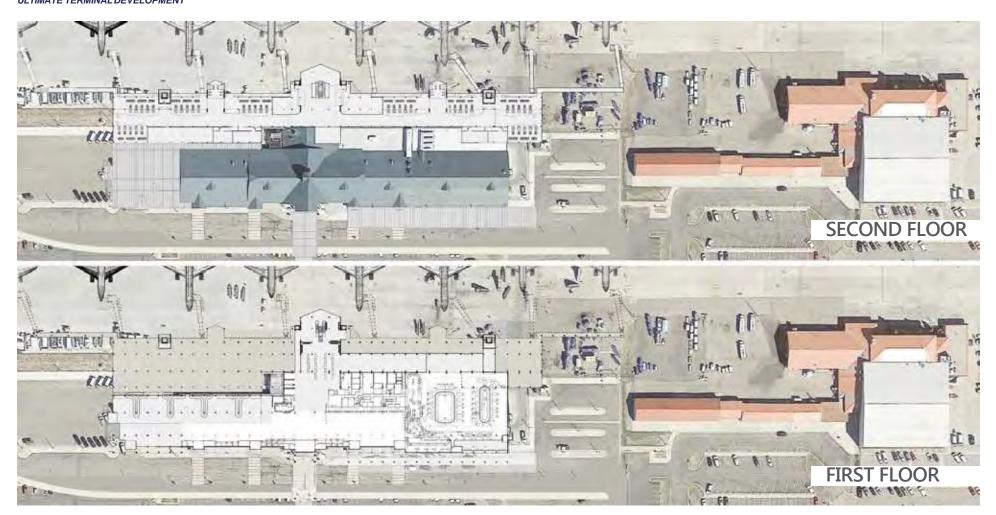
#### 3.2.3 CONSTRUCTION COSTS

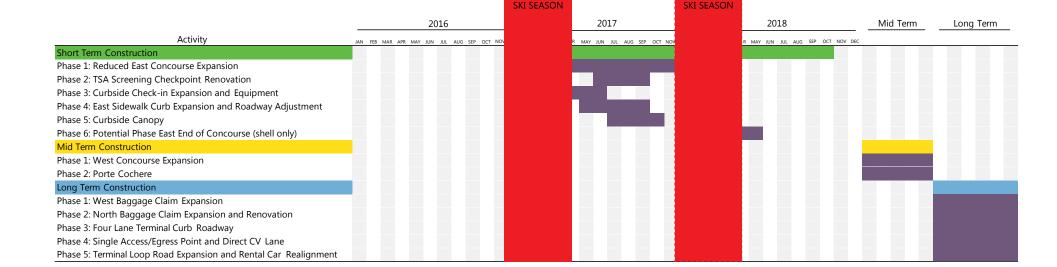
Cost estimation is an important element of the advanced terminal area planning process. For the purposes of this advanced terminal area planning study, only construction costs were accounted for in project cost estimates. These estimates can be found in detail in **Appendix B**. Phased project construction costs are included in the following sections with each associated individual phase. As a quality check, these costs where compared to those established in the 2014 Master Plan and found to be within a reasonable range of original project expenses and, in many cases, lower. As EGE moves into defining a delivery method, and contracting for design and construction, more precise costs will be developed and negotiated. The following figures describe short-, mid-, and long-term projects. Each project includes a brief description, phasing schedule, and associated cost.





FIGURE 3.7
ULTIMATE TERMINAL DEVELOPMENT





### **ULTIMATE TERMINAL DEVELOPMENT**

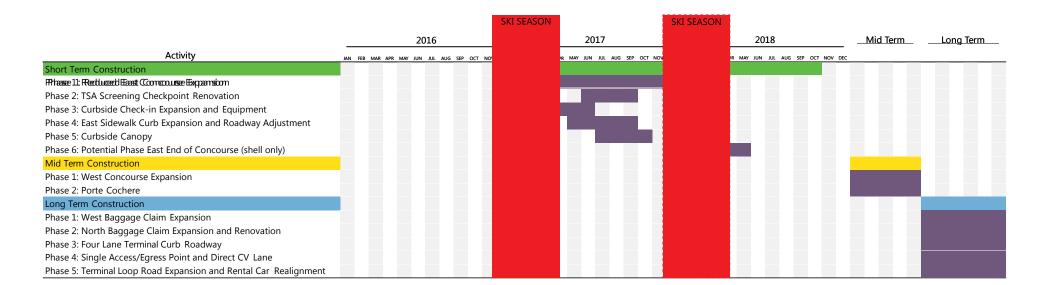
With a target to begin construction by 2017, the short-term improvements address challenges in the airside concourse and departure lounge areas. Furthermore, short-term plans improve passenger experience at curbside check-in and pedestrian movement areas by providing a canopy which covers a widened curbless curb. Additional short-term improvements address TSA security screening checkpoint challenges and the landside roadway system which brings vehicular traffic from the terminal loop road into the curbside roadway zone. Mid-term plans then finalize the airside concourse and departure lounge expansion while also providing a resort style porte cochére entrance to the terminal building. Finally, long-term developments expand the baggage claim area, improve capacity along the curbside roadway, and enlarge the terminal loop road to enable the incorporation of all rental car facilities.





FIGURE 3.8 SHORT TERM PHASE 1: REDUCED EAST CONCOURSE EXPANSION





### **SHORT TERM PHASE 1**

Central, two-story addition north of the existing TSA passenger screening checkpoint. The first floor of this addition includes space for an expanded passenger screening checkpoint and exit lane, with a large re-composure area at the north end. This re-composure area is flanked by two elevators, and includes an open stair and pair of escalators at its center, which lead to the second floor central hall. The second floor central hall is the center core of the new airside concourse with elevated ceilings, a centrally located fireplace, and a set of restrooms at its south end. To the east, the central hall is connected to a departure lounge concourse, which provides space for concessions, holdrooms and a seating lounge area, ending in a new stair and elevator core. The second level concourse also provides five (5) gates with passenger boarding bridge capability.

### **ASSESSMENT**

- Benefit: Allows all airside passenger activity to move to second level
- Challenge: Construction continues into ski season (November April)
- Opportunity: Allows airport to experience east concourse, before building west concourse provides opportunity to modify west concourse design if needed

# CONSTRUCTION PHASING CONSIDERATIONS

- Portion of apron will be shut down during construction
- Alternate passenger travel paths required between screening checkpoint and existing west gates during construction
- In order to minimize impact to ski season operations, additional phasing and/or temporary holdroom facilities will be considered

# SHORT TERM PHASE 1 CONSTRUCTION COST

\$19.606.000





FIGURE 3.9 SHORT TERM PHASE 2: TSA SCREENING CHECKPOINT RENOVATION



#### 2016 2017 2018 Mid Term Long Term Activity MAY JUN JUL AUG SEP OCT NOV DE Phase 1: Reduced East Concourse Expansion Phase 2: TSA Screening Checkpoint Renovation Phase 3: Curbside Check-in Expansion and Equipment Phase 4: East Sidewalk Curb Expansion and Roadway Adjustment Phase 5: Curbside Canopy Phase 6: Potential Phase East End of Concourse (shell only) Mid Term Construction Phase 1: West Concourse Expansion Phase 2: Porte Cochere Long Term Construction Phase 1: West Baggage Claim Expansion Phase 2: North Baggage Claim Expansion and Renovation Phase 3: Four Lane Terminal Curb Roadway Phase 4: Single Access/Egress Point and Direct CV Lane Phase 5: Terminal Loop Road Expansion and Rental Car Realignment

### **SHORT TERM PHASE 2**

The existing TSA passenger screening checkpoint is relocated and expanded north into the new first floor of the previously mentioned addition. This new space will allow for four (4) screening lanes. The space currently occupied by the checkpoint will be remodeled and converted to dedicated checkpoint queue space.

### **ASSESSMENT**

- Benefit: Previously completed phase 1 provides ample space to phase renovations with minimal impact to passengers
- Challenge: Checkpoint must remain open throughout renovations
- Opportunity: Potential to creatively emphasize the transition point between the existing landside central axis to the new airside central axis

### **CONSTRUCTION PHASING CONSIDERATIONS**

- Renovation of existing checkpoint will occur in phases, allowing at least one screening lane to remain open at all times
- Transition of TSA screening equipment can occur overnight or during inactive times in the summer season
- Alternate passenger travel paths may be need to be established during portions of the renovations

### **SHORT TERM PHASE 2 CONSTRUCTION COST**

\$716.000

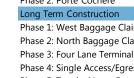




FIGURE 3.10
SHORT TERM PHASE 3: CURBSIDE CHECK-IN EXPANSION AND EQUIPMENT



#### SKI SEASON Mid Term Long Term 2016 2017 2018 Activity AY JUN JUL AUG SEP OCT NOV DE Phase 1: Reduced East Concourse Expansion Phase 2: TSA Screening Checkpoint Renovation Phase 3: Curbside Check-in Expansion and Equipment Phase 4: East Sidewalk Curb Expansion and Roadway Adjustment Phase 5: Curbside Canopy Phase 6: Potential Phase East End of Concourse (shell only) Mid Term Construction Phase 1: West Concourse Expansion Phase 2: Porte Cochere Long Term Construction Phase 1: West Baggage Claim Expansion Phase 2: North Baggage Claim Expansion and Renovation Phase 3: Four Lane Terminal Curb Roadway Phase 4: Single Access/Egress Point and Direct CV Lane Phase 5: Terminal Loop Road Expansion and Rental Car Realignment

### **SHORT TERM PHASE 3**

Interior renovation of the storage spaces east of the existing curbside check-in, converting them into additional curbside check-in positions. A new baggage belt is installed along the back (north) wall of this space, connecting to the existing baggage screening belts to the west. The most significant expense in this phase is new equipment.

#### **ASSESSMENT**

- Benefit: Requires minimal interior renovation
- Challenge: Existing storage spaces must be relocated
- Opportunity: Relocation of concessions storage to a location with more direct access to new second level concessions

# CONSTRUCTION PHASING CONSIDERATIONS

- Existing curbside check-in remains operational throughout renovation
- Displaced storage spaces relocated to ground floor of previously completed Phase 1
- May require modifications to existing check-in bag belt system at connection to new belt

### SHORT TERM PHASE 3 CONSTRUCTION COST

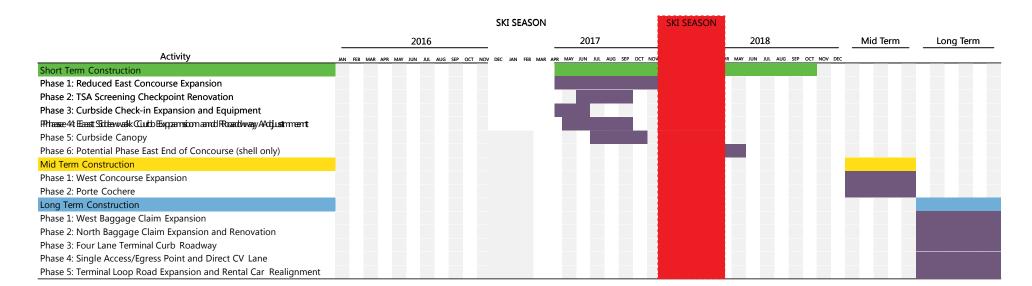
\$925,000





FIGURE 3.11
SHORT TERM PHASE 4: EAST SIDEWALK CURB EXPANSION AND ROADWAY ADJUSTMENT





#### SHORT TERM PHASE 4

Expansion of the sidewalk to the east of the terminal's central entry vestibule. The expansion extends from the existing curb edge out to align with the edge of the existing expanded sidewalk in front of the central entry vestibule. This widened sidewalk will extend east to the existing curb edge at the adjacent commercial ground transportation parking lot. The new sidewalk will terminate in a "curbless curb" condition along the roadway. Concurrently, the existing roadway entry curve just south of curbside checkin is removed. The access road to the east of the existing permit parking lot is widened and reconfigure to serve as the new entry curve to the terminal curbside. The existing terminal loop road is reduced with striping to a single lane at Eldon Wilson Road, allowing cars to continue right (east) on to Eldon Wilson Road, then merging left (north) onto the new entry curve. Temporary solutions (barricades, markings, signage) can be enacted to direct otherwise bypassing vehicular traffic toward a single point of exit for the parking lots.

#### **ASSESSMENT**

- Benefit: Provides much needed sidewalk space for departure curb activities
- Challenge: Modifications to roadway create awkward roadway loop
- Opportunity: Curbless curb provides opportunity to introduce creative sculptural or seating elements as bollards

# CONSTRUCTION PHASING CONSIDERATIONS

- Existing roadway entry curve remains operational while new entry curve to the east is constructed
- Opportunity for efficiency by micro-phasing in departure curb portion of Long Term Phase 3: Four Lane Terminal Curb Roadway
- Alternate passenger drop-off location will need to be designated during sidewalk expansion
- Curbside check-in temporarily closed during sidewalk expansion

# SHORT TERM PHASE 4 CONSTRUCTION COST

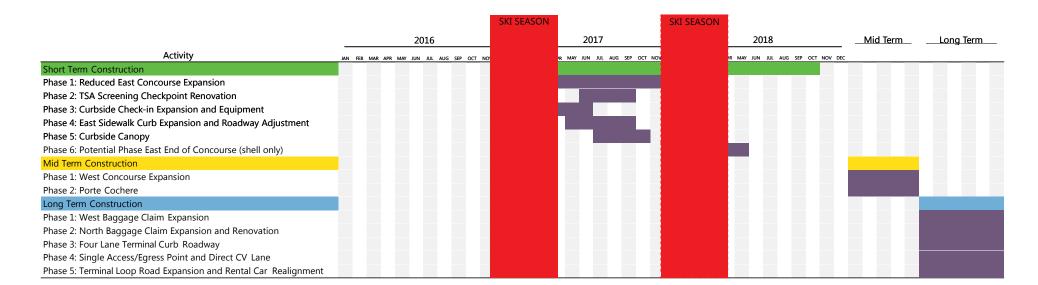
\$1,153,000





FIGURE 3.12 SHORT TERM PHASE 5: CURBSIDE CANOPY





### **SHORT TERM PHASE 5**

Addition of a new canopy that runs continuously from the entry vestibules east of the terminal's central entrance to the edge of the existing commercial ground transportation parking lot. The canopy coverage extends from the existing terminal roof edge over the first drop-off lane of the terminal roadway.

### **ASSESSMENT**

- Benefit: Protects departing passengers from the elements both at drop off and in the curbside check-in queue, increasing LOS & passenger experience
- Challenge: Only covers departures curb, may be seen as negative by arriving passengers
- Opportunity: Potential to provide a new, updated appearance to the terminal's curbfront

# CONSTRUCTION PHASING CONSIDERATIONS

- Foundations or canopy piers will need to be incorporated with sidewalk expansion
- Construction can be phased, allowing a portion of the curbside to remain operational at all times
- Alternate pedestrian routes will need to be established during construction
- Alternate drop-off areas will need to be designated during construction

# SHORT TERM PHASE 5 CONSTRUCTION COST

\$1,190,000





FIGURE 3.13
SHORT TERM POTENTIAL PHASE 6: POTENTIAL PHASE EAST END OF CONCOURSE (SHELL ONLY)



#### 2016 2017 2018 Mid Term Long Term Activity MAY JUN JUL AUG SEP OCT NOV DE Phase 1: Reduced East Concourse Expansion Phase 2: TSA Screening Checkpoint Renovation Phase 3: Curbside Check-in Expansion and Equipment Phase 4: East Sidewalk Curb Expansion and Roadway Adjustment Phase 5: Curbside Canopy Pithassae 66: Prooteernified Pithassae Eassit Einricht oof Coomcooursee ((strihedi corniy)) Mid Term Construction Phase 1: West Concourse Expansion Phase 2: Porte Cochere Long Term Construction Phase 1: West Baggage Claim Expansion Phase 2: North Baggage Claim Expansion and Renovation Phase 3: Four Lane Terminal Curb Roadway Phase 4: Single Access/Egress Point and Direct CV Lane Phase 5: Terminal Loop Road Expansion and Rental Car Realignment

### **SHORT TERM PHASE 6**

Single story, second level addition completing the eastern end of the new airside concourse. This shell space includes an additional set of airside restrooms and space for two additional departure lounge holdrooms. A new fixed jetbridge extends from the east end of the shell, providing an additional passenger boarding bridge capable gate. This phase is dependent upon capital funding.

### **ASSESSMENT**

- Benefit: Provides additional gate and space for departure lounges and restrooms
- Challenge: Extends duration of construction
- Opportunity: Space can be constructed as a shell at a lower cost, and finished as needed

# CONSTRUCTION PHASING CONSIDERATIONS

- Previously completed east concourse expansion is fully operational during construction
- Alternate outbound baggage routes and access to outbound baggage area required during construction

# SHORT TERM PHASE 6 CONSTRUCTION COST

\$3,673,000

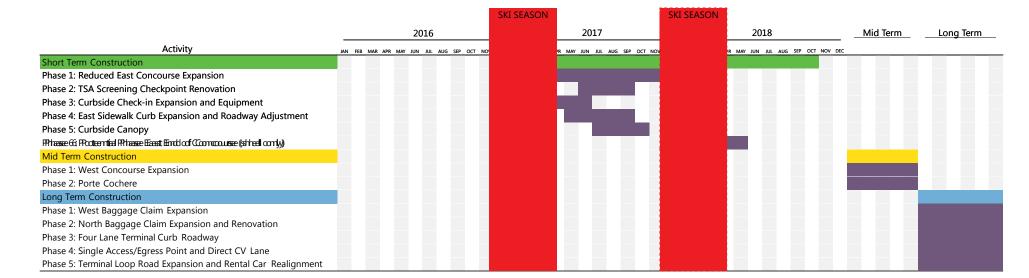


FIGURE 3.14 SHORT TERM COMPLETED



### SHORT TERM COMPLETED

Upon completion of the short term development all airside passenger activity moves to the second level, improving the LOS for both departing and arriving passengers. The existing, west ground floor holdrooms are preserved for use as needed. The expanded TSA screening checkpoint, departure curbside improvements, and curbside check-in expansion are complete, greatly improving the LOS for departing passengers.



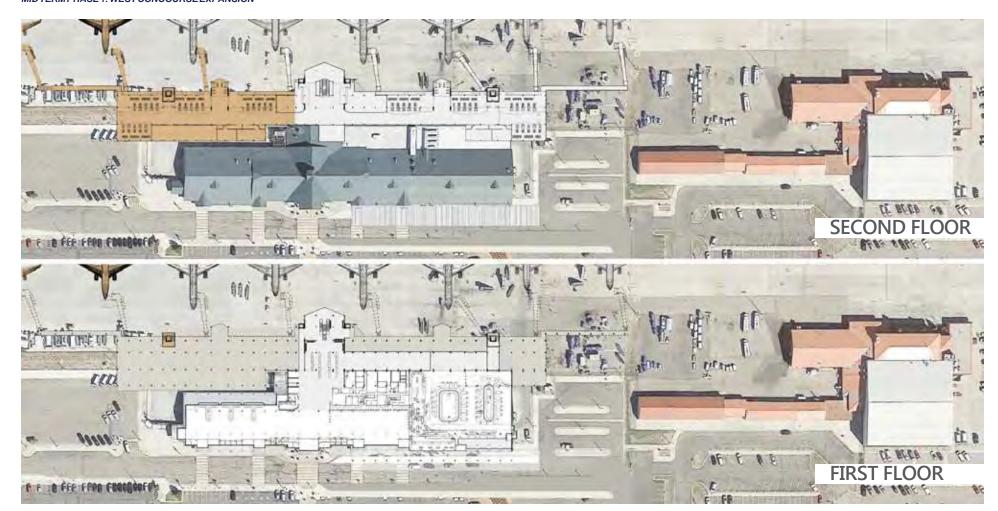
# SHORT TERM TOTAL CONSTRUCTION COST

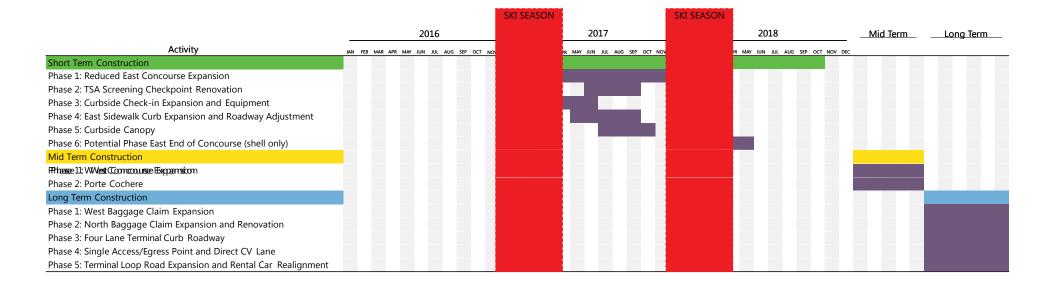
\$27,263,000





FIGURE 3.15
MIDTERM PHASE 1: WEST CONCOURSE EXPANSION





### **MID TERM PHASE 1**

Addition to the terminal's second floor airside concourse. This concourse wing extends west from the central hall, mirroring the previously constructed east concourse. The addition includes four (4) departure lounges, an additional seating lounge, additional set of restrooms, a stair & elevator core, and a flexible shell space for future expansion. The two gates just west of the central hall are reconfigured, allowing them to be served by new dedicated departure lounges and providing space for an additional concessions area on the west side of the central hall. Two (2) additional gates with passenger boarding bridge capability are provided at the end of the new concourse for a total of eight (8) gates. This addition will also provide cover for apron level activities such as GSE storage & staging as well as the inbound baggage area.

### **ASSESSMENT**

- Benefit: Completes airside concourse, greatly improves passenger experience and LOS
- Challenge: Phasing construction to allow apron activities to continue
- Opportunity: Added benefit of covering inbound baggage, protecting it from the elements

# CONSTRUCTION PHASING CONSIDERATIONS

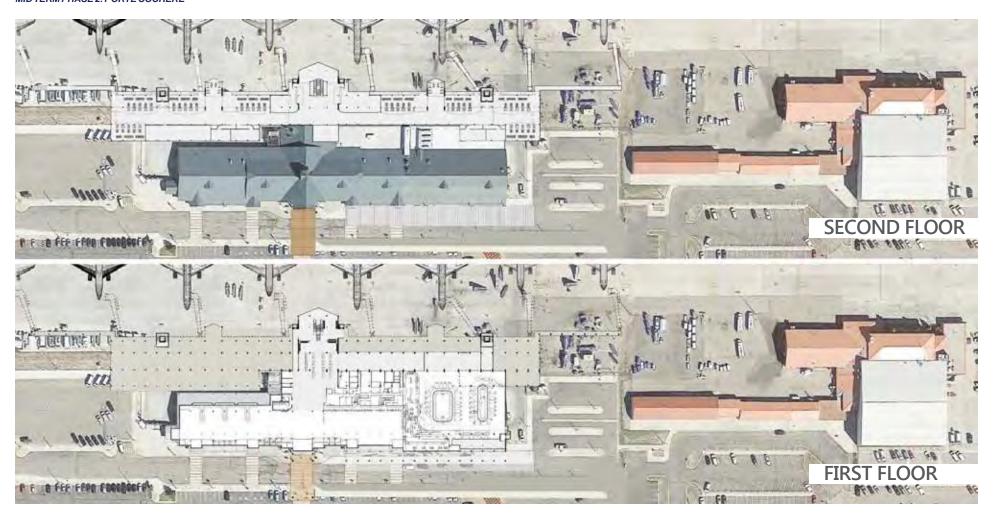
- Previously completed central hall and east concourse remain operational during construction
- Alternate inbound baggage tug routes required during construction of new structure
- Alternate access route to inbound baggage area required during construction

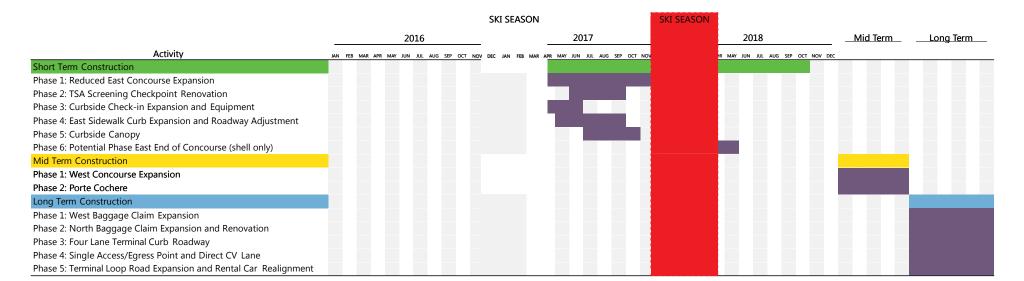
### MID TERM PHASE 1 ROM PLANNING COST

\$8,500,000



FIGURE 3.16
MID TERM PHASE 2: PORTE COCHÉRE





### **MID TERM PHASE 2**

Addition of a large porte cochére extending from the terminal's main entrance, over the roadway, to the landside parking lots. This large, elevated roof will be supported by columns on each side of the roadway, leaving the space between open for traffic and a pedestrian crossing.

#### **ASSESSMENT**

- Benefit: Provides cover for pedestrians crossing the roadway
- Challenge: Construction requires demolition of existing areas of sidewalk
- Opportunity: A more resort-like experience for passengers

# CONSTRUCTION PHASING CONSIDERATIONS

- Future roadway expansions must be considered when determining placement of porte cochére foundations & columns
- Foundations will require demolition of portions of existing sidewalks and parking lots
- Areas of the terminal curb and roadway adjacent to the porte cochére will need to be shut down during portions of construction, which can occur overnight or during inactive times inthesummerseason

## MID TERM PHASE 2 ROM PLANNING COST

\$800.000



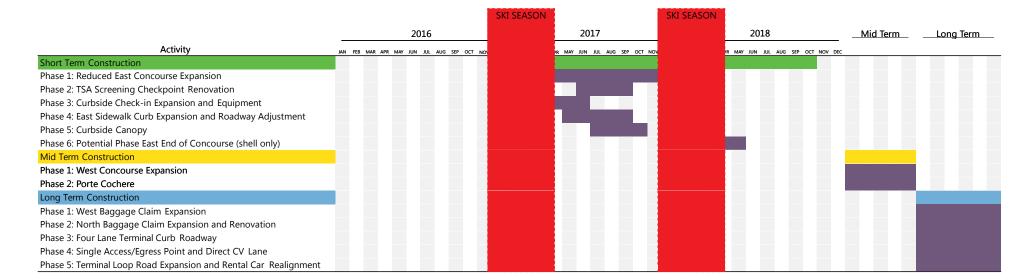


### FIGURE 3.17 MID TERM COMPLETED



### MID TERM COMPLETED

At the conclusion of the mid-term development, the west concourse and centralized concessions are complete, finalizing the terminal's new airside, significantly improving passenger experience and level of service. In addition, the porte cochére is completed, concluding the exterior improvements along the terminal's curbfront.



# MID TERM TOTAL ROM PLANNING COST

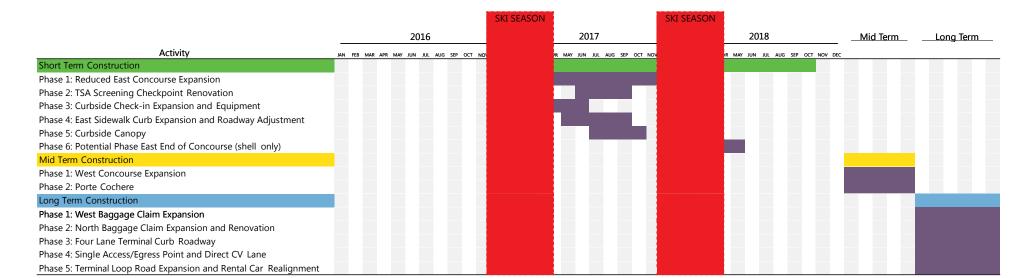
\$9,300,000





FIGURE 3.18
LONG TERM PHASE 1: WEST BAGGAGE CLAIM EXPANSION





Single story addition, expanding the existing architecture of the existing baggage claim lobby. This addition includes two (2) entry / exit vestibules and two (2) additional baggage carousels, each with an adjacent oversized bag shelf.

### **ASSESSMENT**

- Benefit: Provides two (2) additional baggage carousels and a much needed CV driver staging area
- Challenge: Existing CV parking lot is reduced
- Opportunity: CV lot can be reconfigured to operate more efficiently

# CONSTRUCTION PHASING CONSIDERATIONS

- CV lot reconfigured to accommodate addition
  - Parking lot is reduced, requiring entrance to be relocated and parking spaces to be reorganized
- Existing baggage claim hall and carousels remain operational throughout construction
- Baggage tug route adjusted to maintain access to existing inbound baggage area
- Alternate drop-off point for oversized baggage established during construction
- Opportunity for efficiency by micro-phasing in arrivals curb and CV lot portions of Long Term Phase 3: Four Lane Terminal Curb Roadway

# LONG TERM PHASE 1 ROM PLANNING COST

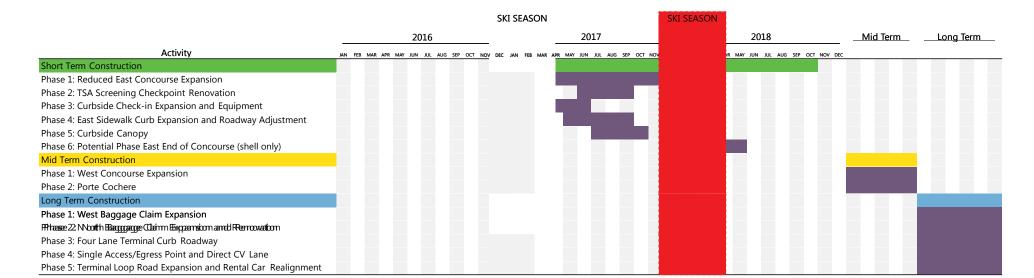
\$4,800,000





FIGURE 3.19
LONG TERM PHASE 2: NORTH BAGGAGE CLAIM EXPANSION AND RENOVATION





Renovation and expansion of existing baggage claim area. This renovation completes the new baggage claim hall adding two (2) new baggage carousels with adjacent oversized baggage shelf. The expansion shifts the new carousels north, allowing the landside lobby to recapture needed circulation space.

### **ASSESSMENT**

- Benefit: Largely interior renovation work, smaller impact to existing operations
- Challenge: Expanding between existing terminal and previously completed phases
- Opportunity: Allows for alignment of all baggage drop off, simplifying the inbound tug route

# CONSTRUCTION PHASING CONSIDERATIONS

- Previously completed phase 1 is fully operational during renovation
- Inbound baggage area temporarily shifted west behind phase 1 addition, baggage tug route adjusted accordingly

# LONG TERM PHASE 2 ROM PLANNING COST

\$2,400,000





FIGURE 3.20
LONG TERM PHASE 3: FOUR LANE TERMINAL CURB ROADWAY



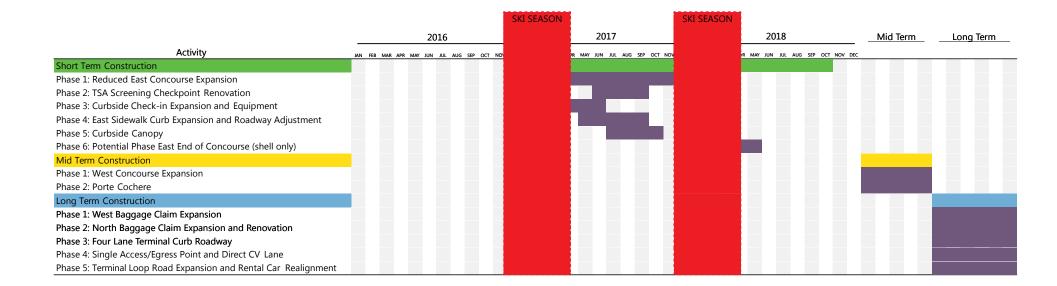
Expansion along the terminal loop roadway section adjacent to the terminal building creates four (4) traffic lanes; two (2) for stopping arrival and departure traffic and two (2) for vehicles passing that stopped traffic. Pedestrian crosswalks are reduced from five (5) to three (3) at critical locations. Access/egress for the commercial vehicle pickup lot is consolidated to a single location. Access/egress for the permit parking lot is also consolidated to a single location.

### **ASSESSMENT**

- Benefit: Reduces curbside congestion during peak events and provides space for pedestrian movements in front of the terminal building
- Challenge: Cuts into existing parking area and requires parking area reconfigurations
- Opportunity: Analysis of parking area configurations under proposed plans shows more parking spaces can be created through reconfiguration of parking spaces and vehicle traffic flows

# CONSTRUCTION PHASING CONSIDERATIONS

- Loop road transition into four (4) lane curb roadway needs consideration depending on phasing choices
- Parking areas will require at least minor realignments for this project



# LONG TERM PHASE 3 ROM PLANNING COST

\$350,000





FIGURE 3.21
LONG TERM PHASE 4: SINGLE ACCESS/EGRESS POINT AND DIRECT COMMERCIAL VEHICLE BYPASS LANE



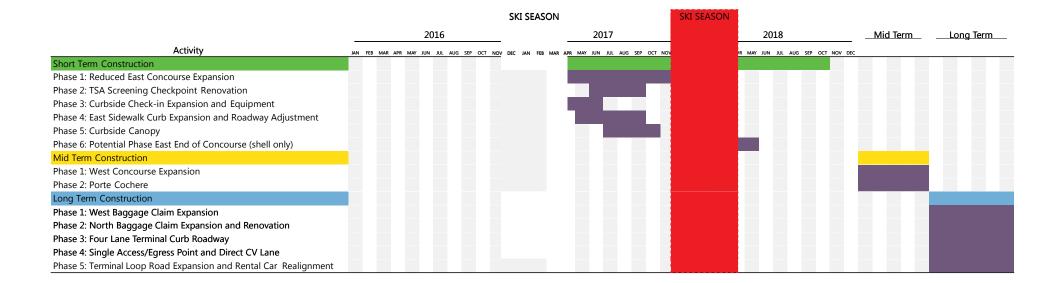
A commercial vehicle bypass lane is created through the existing short-term parking lot with direct access to the commercial vehicle pickup lot. Entry and exit locations for parking are reduced to one (1) each, both positioned to prevent parking vehicles from passing the terminal building along the loop road.

### **ASSESSMENT**

- Benefit: Improves commercial vehicle operator efficiency and reduces bypass traffic along terminal curb area
- Challenge: Requires parking lot reconfiguration and potential additional infrastructure investments (i.e. water, sewer, electrical)
- Opportunity: Preserves future opportunities to make improvements to the commercial vehicle lot

## CONSTRUCTION PHASING CONSIDERATIONS

- CV pickup lot entrance must be completed and align with location of commercial vehicle bypass lane
- Parking areas will require realignments for this project



# LONG TERM PHASE 4 ROM PLANNING COST

\$900,000





FIGURE 3.22
LONG TERM PHASE 5: TERMINAL LOOP ROAD EXPANSION AND RENTAL CAR REALIGNMENT



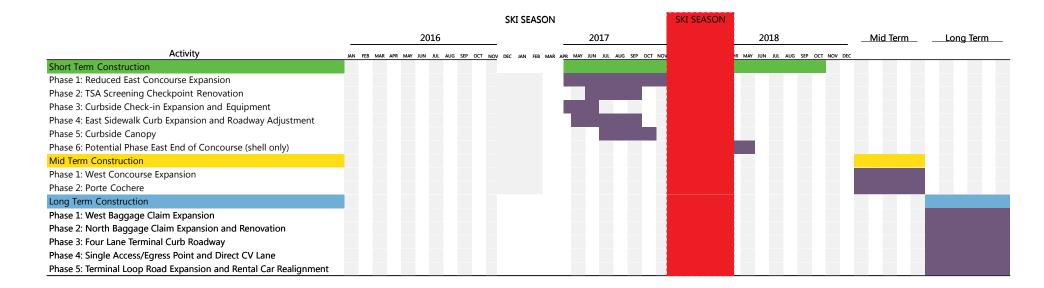
The existing terminal loop roadway is extended to the east allowing rental car facilities to be consolidated within the new loop road. This requires the creation of a retaining wall on the south side of the new road and a relocation of the existing bike path. An ACI gate is created on Eldon Wilson Road just east of the new terminal loop roadway.

### **ASSESSMENT**

- Benefit: Rental car facilities are consolidated with the new higher capacity loop road
- Challenge: Requires collaborative approach between Airport and rental car agencies to reconfigure rental car facilities within the new loop road
- Opportunity: The full terminal loop road can be phased using some existing roadway infrastructure if necessary

# CONSTRUCTION PHASING CONSIDERATIONS

- Loop road phasing options using current roadways exist but transitions into curb roadway need to be considered
- Preliminary loop road phases add cost to the ultimate loop road build out



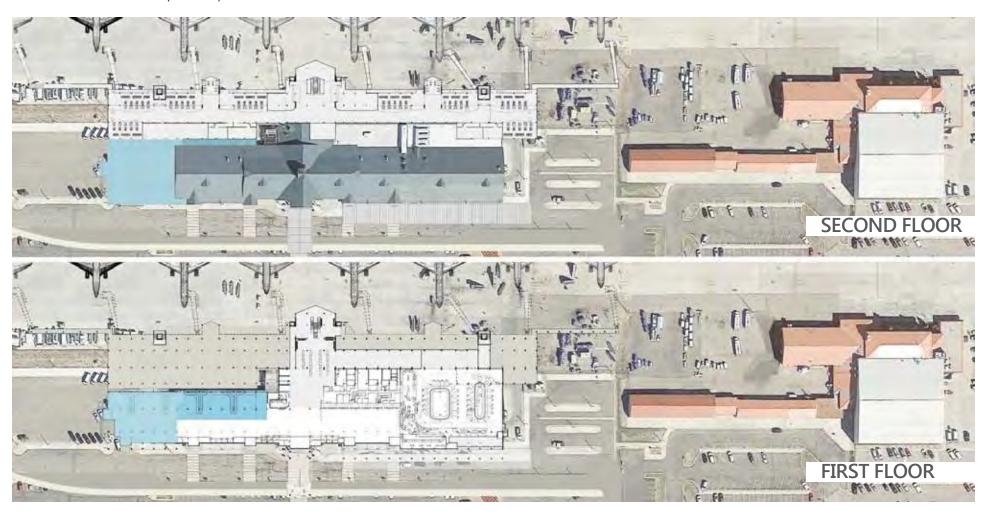
# LONG TERM PHASE 5 ROM PLANNING COST

\$1,000,000



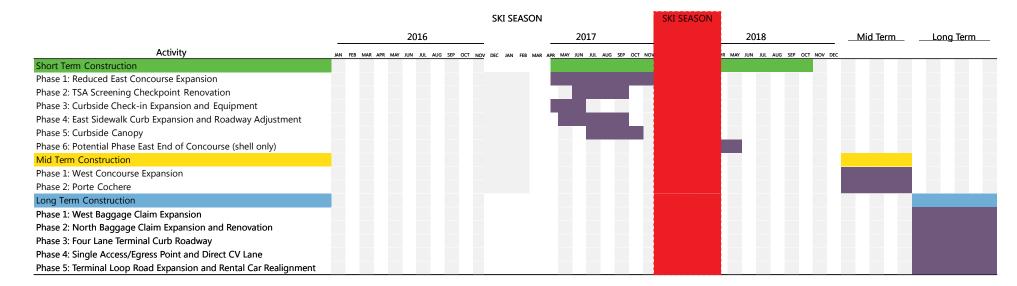


FIGURE 3.23
LONG TERM FULL DEVELOPMENT (TERMINAL)



# LONG TERM COMPLETED DEVELOPMENT

At the conclusion of the long-term development, the baggage claim area is expanded to include space for four (4) bag claim carousels with additional circulation space and reconfigured facilities for operational improvements. The terminal loop roadway is enlarged to allow room for all rental car facilities within the loop, access points through the landside/roadway system is simplified to improve safety, efficiency, and wayfinding, and the curbside roadway increases capacity along the front of the terminal building.



# LONG TERM TOTAL ROM PLANNING COST

\$9,450,000





### **SHORT TERM CONSTRUCTION COST (2017-2018)**

\$27,263,000

### MID TERM ROM PLANNING COST

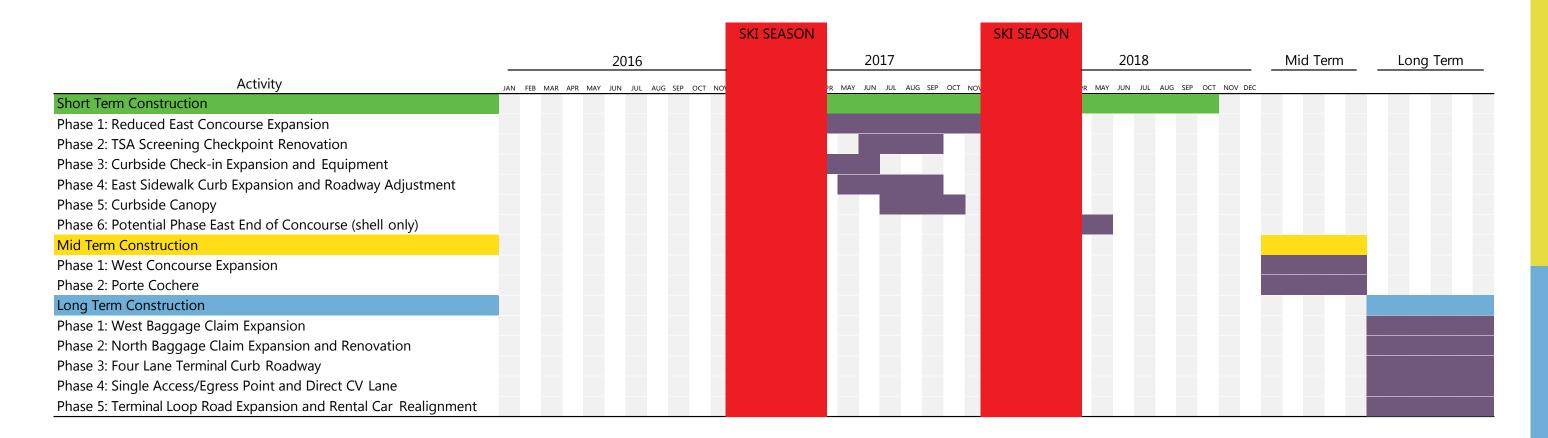
\$9,300,000

### **LONG TERM ROM PLANNING COST**

\$9,450,000

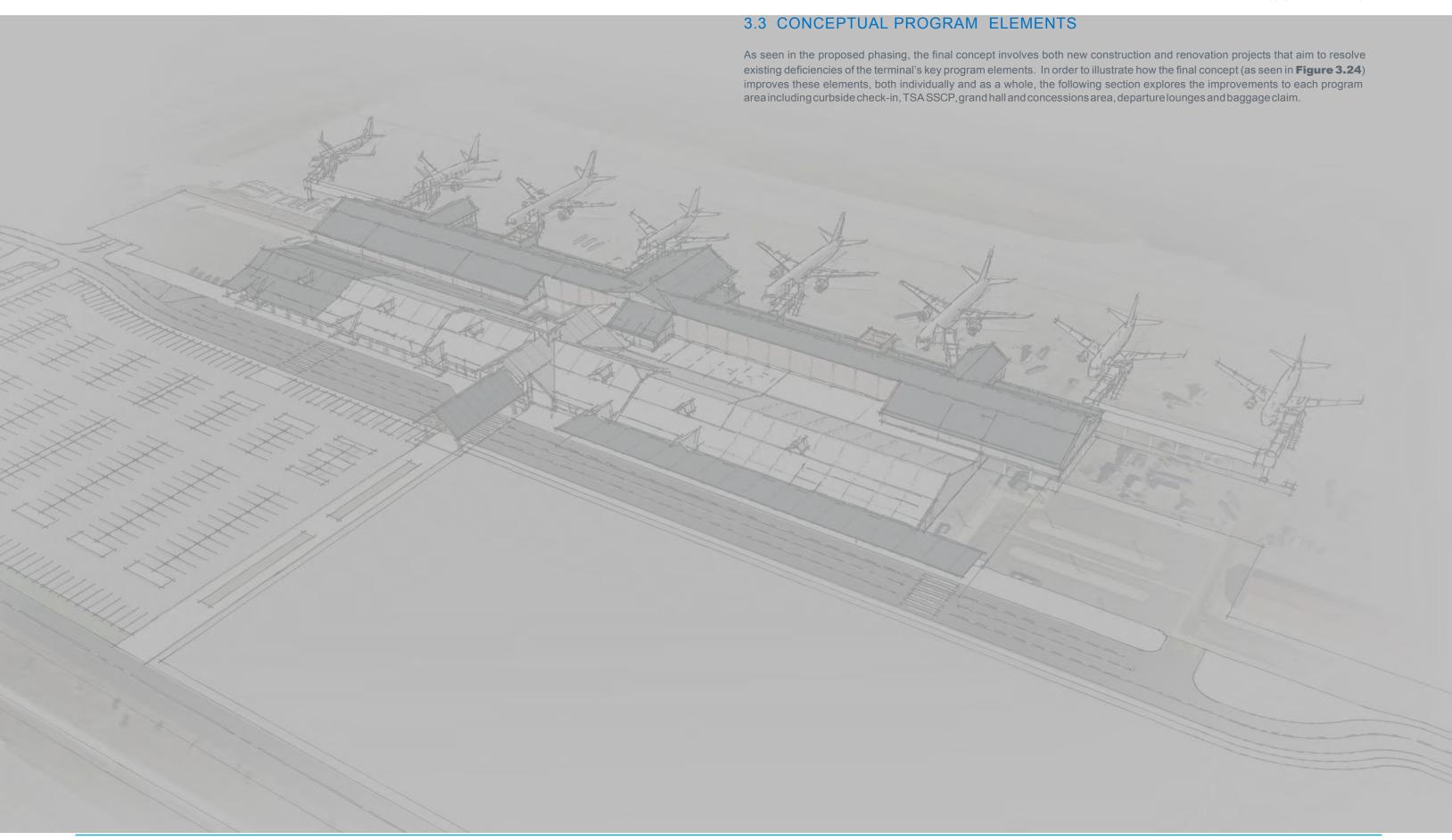
### TOTAL CONSTRUCTION/ROM PLANNING COST

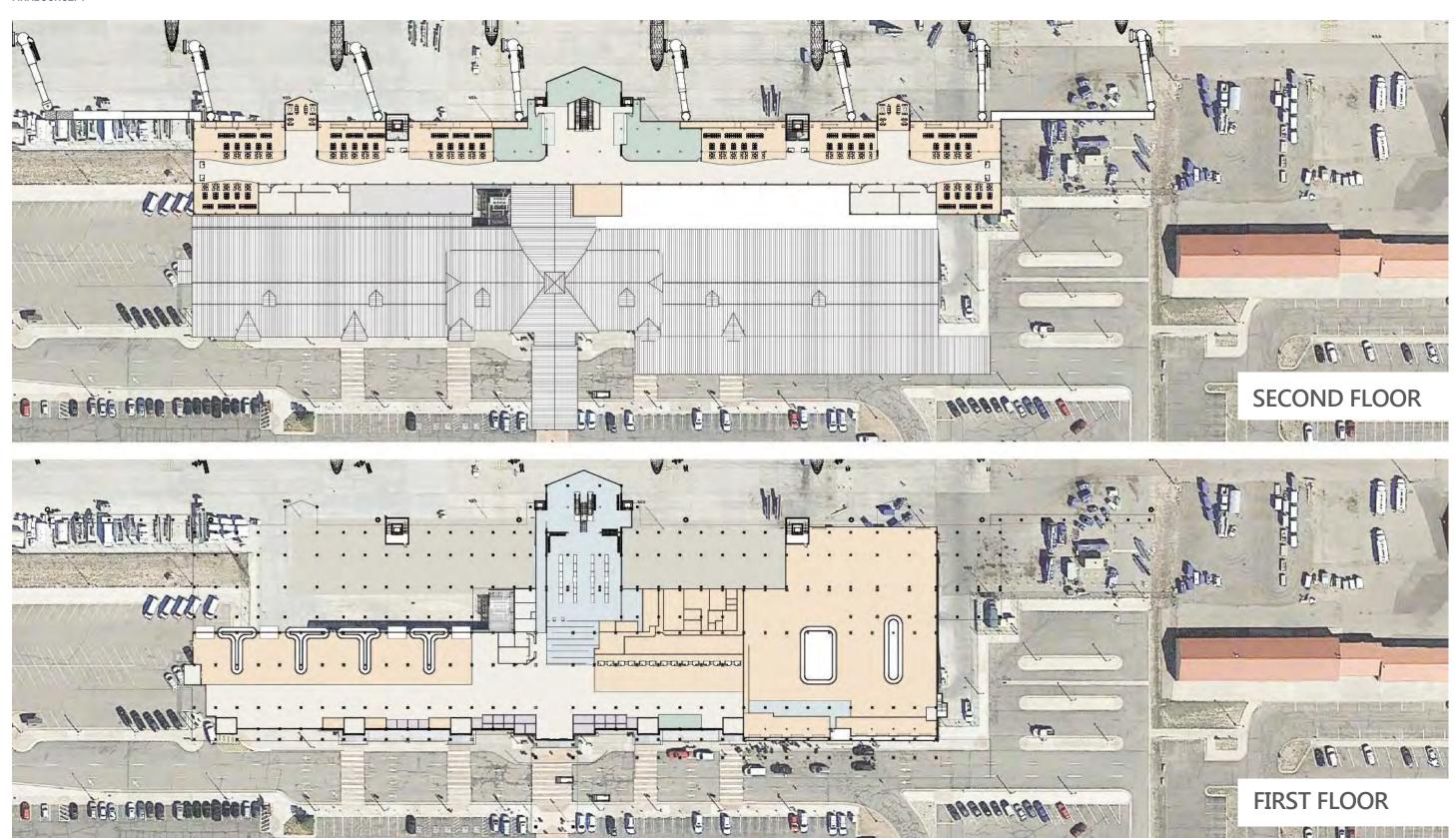
\$46,013,000







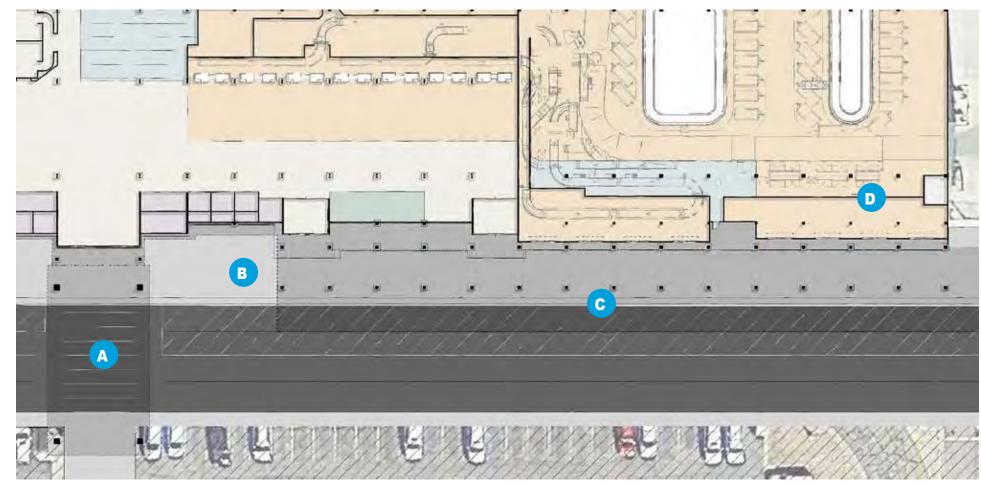








#### 3.3.1 CURBSIDE CHECK-IN CONCEPTUAL PROGRAMMING







Source: RS&H, 2015

### **CURBSIDE CHECK-IN**

On the terminal's landside, passengers are greeted by a new mountain resort-style porte cochére that stretches from the main terminal entrance, across the roadway, to the central pedestrian walkway. This design element reinforces the primary terminal access point while providing protection to passengers during inclement weather.

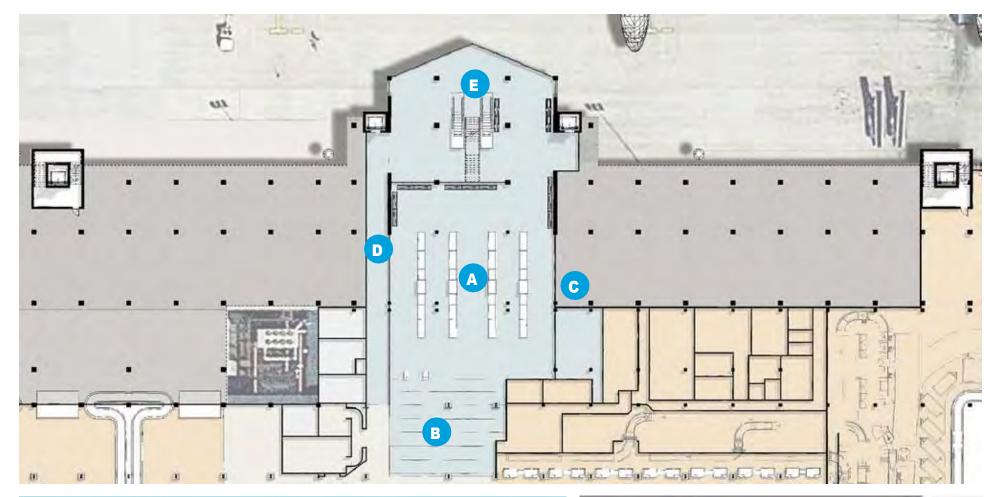
East of this main entrance, the departure curbfront is expanded with a curbless sidewalk, covered by a new canopy. The widened and lengthened curbfront acts to provide both queuing and circulation space for the high percentage of passengers using curbside check-in. The curbless nature of the sidewalk provides continuous access for all users and is clearly delineated from the roadway with texture and markings that fit the architectural design themes discussed later. Additionally, bollards are strategically placed to further differentiate the roadway from sidewalk and provide security from potential vehicular threats to the terminal building.

Curbside check-in is expanded east, into the existing storage areas, doubling check-in capability at the curb.

- A. New porte cochére at main entrance
- B. Expanded curbless curbfront
- C. New curbside canopy
- D. Expanded curbside check-in



#### 3.3.2 TSA SSCP CONCEPTUAL PROGRAMMING







Source: RS&H, 2015

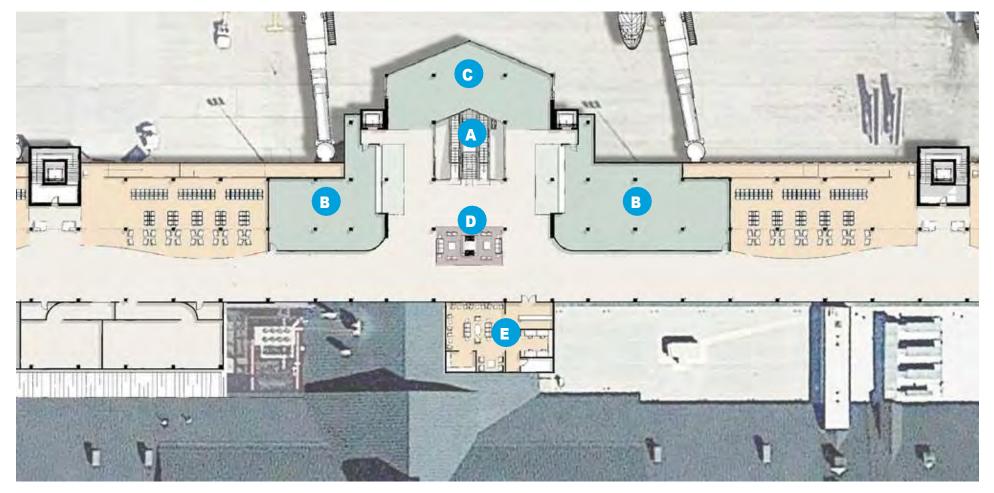
### TSA SECURITY SCREENING CHECKPOINT

Moving inside to the terminal's landside lobby leads to the new central TSA security screening checkpoint, which has been shifted north, toward the airside into a newly expanded space with the ability to accommodate four screening lanes. Today's screening checkpoint area becomes dedicated queue space, moving it out of the landside lobby. Additionally, the space to the east of the new checkpoint is preserved for potential future screening lanes. The exit corridor remains to the west of the checkpoint, but is expanded to accommodate all arriving passengers. Just north of the checkpoint is a generous re-composure area with views to the apron and a central set of stairs and escalators providing an open, inviting connection to the second level grand hall.

- A. New, expanded screening checkpoint
- B. Dedicated queue space
- C. Preserved space for future screening lanes
- D. Expanded exit corridor
- . Re-composure area



#### 3.3.3 GRAND HALL CONCESSION AREA CONCEPTUAL PROGRAMMING







Source: RS&H, 2015

### **GRAND HALL CONCESSION AREA**

The second floor grand hall is the core and center of activity for the new airside concourse. The hall serves as the entry and exit point for the airside, and is flanked by centralized concessions spaces to the east and west. The north end of the hall accommodates a large, open coffee bar and concessions seating area with expansive views of both the apron and mountains beyond. The elevated ceilings and exposed structure of the hall are anchored by a large, central fireplace and seating area, surrounded by ample circulation space. A V.I.P. lounge south of the hall provides a private lounge, workspace, kitchenette and restroom.

- A. Open stair & escalators
- B. Centralized concessions spaces
- C. Open coffee bar and concessions seating
- D. Central fireplace and seating
- E. V.I.P. lounge



#### 3.3.3.1 TERMINAL CONCESSIONS

As part of the terminal planning process a study was performed to determine the current available concession space, analyze required space by forecast passenger loads, and program appropriately sized and located spaces within the new proposed terminal area. The full study report is available as **Appendix A** of this study.

In examining the EGE existing concessions environment, it was found that the majority of concessions are post-security, but with one important pre-security facility. The landside (pre-security) terminal area is served by a combination of retail/food service offering a limited selection of reading material and sundries, as well as coffee service and other "grab 'n go" food items. Secure-side facilities include a counter-service restaurant and bar which offers a limited menu of prepared-to-order and pre-packaged items. Additionally, there is limited retail and coffee services available to secure-side passengers. In total there is currently 1,200 sf of concessions available pre-security including 400 sf of seating and 2,316 sf of space available post-security with an associated 66 total seats. This equates to a total of 3,516 sf of terminal concessions space, exclusive of storage and support space.

In order to evaluate EGE's performance relative to other airports, comparative leisure and resort-oriented airports were reviewed along with a few very small non-hub airports. Seasonal traffic peaks are a large contributing factor in determining sales and space at these types of airports as they experience dramatic swings of passenger volumes dependent upon the time of season. This seasonality factor was taken into account during planning requirements for the landside and terminal as a whole, and will fittingly be considered throughout the concessions study. Sales were analyzed by square footage and enplaned passenger counts. Sales per square foot measures concession program productivity but is less pertinent to smaller airports due to the fact that restaurants and stores require a minimum size to operate. Sales per enplaned passenger reflects the extent to which passengers take advantage of concession opportunities. High sales levels are indicative of concession performance and can be analyzed in conjunction with sales per square foot to assess performance and program efficiency. Relative area is another statistic used to determine the adequacy of existing concessions and represents square foot of concessions per 1,000 enplaned passengers.

EGE performs well compared to similar airports in food and beverage sales dollars per enplaned passenger and relative area per 1,000 enplanements. When seasonality is considered, the food and beverage program at EGE is considered to be undersized for the seasonal enplanement level. Overall, this comparison suggests that the food and beverage program at EGE is among the best-performing; it has high sales per enplanement generated in a relatively small area.

The retail concessions program at EGE found both sales dollars per enplaned passenger and relative area per 1,000 enplanements to be among the lowest for comparable airports. This means that for retail concessions, EGE is generating well below average sales for each enplaning passenger, which is a direct reflection of the relatively small amount of space programmed for retail. This analysis suggests that additional retail space might be effective in better serving passengers. However, relatively small passenger volumes is an important consideration and programs need to be sized to meet peak-period passenger demand and remain financially feasible for concessionaires.

Analyzing space requirements for the EGE concessions program is done by determining a space utilization factor (SUF) and represents the number of square feet of concession space required per 1,000 annual enplaned passengers. This space is driven by passenger characteristics, facility characteristics, and concession characteristics. A seasonality factor was incorporated into this calculation to determine what passenger demand would exist if EGE peak-period passenger loads were consistent throughout the year in order to appropriately size spaces during this time.

A high SUF score indicates a high need for concession space. EGE received high SUF scores (3.3 out of a possible 3.6) for passenger characteristics. These factors are as follows:

- Connecting/O&D High origin/destination traffic with no connective traffic supports longer dwell times.
- Travel Purpose High percent of leisure travelers versus business travelers.
- Resident v. Visitor High percent of visitor traffic versus resident traffic.
- Household Income Above average passenger household income.
- Flight Duration Moderate mix of short– versus long-haul traffic.
- Passenger Peaking EGE airport is defined by high peaking passenger counts.

EGE also received high scores (2.1 out of 3.0) for facility characteristics. These factors are as follows:

- Accessibility and Visibility Concessions are visible and immediately accessible.
- Clustered of Scattered Current program clusters concession facilities.
- Pre/Post Security Screening Concessions are mostly airside which supports passengers spending time there.
- Terminal Configuration Walking distances are short to moderate in a generally compact terminal design.

The food and beverage concessions provided at EGE prominently include "walk-away" options that people purchase and take with them resulting in a moderate SUF score. Food and beverage facilities are non-branded and likely to remain non-branded, creating less familiarity with offering leading to a lower SUF score. Specialty merchandise and store concepts are difficult to justify for smaller airports like EGE creating a lower score for the offerings in this area. Brand recognition for EGE retail opportunities are limited due to concessionaire financial feasibility. This results in an average score for EGE. Overall food and beverage/retail options scored a 0.5 out of a possible 1.2 at EGE.

Passenger, facility, and concessions characteristics were used to define the space needed to meet future enplanement demands, resulting in **Table 3.1** below. Specific SUF scores can be seen in detail in **Appendix A**.

TABLE 3.1

CONCESSIONS SPACE PROGRAMMING REQUIREMENTS

Source: Unison Consulting, Inc., 2015

RETAIL CATEGORY	DEVELOPED SUF <sup>1</sup>	CURRENT PROGRAM	CONCESSION SPACE REQUIREMENTS (SF)			
			2014	2018	2020	2025
Food and Beverage <sup>2</sup>	6.0	2,356	3,400	4,300	4,400	4,800
News, Gift, and Specialty <sup>2</sup>	3.2	1,160	1,400	1,900	2,000	2,100
Subtotal Store and Food Service Space		3,516	4,800	6,200	6,400	6,900
Storage/Support Space <sup>3</sup>		710	1,200	1,600	1,600	1,700
TotalConcessions SpaceRequirement			6,000	7,800	8,000	8,600
Actual/Projected Enplanements <sup>4</sup>			168,217	228,900	236,500	256,800
Seasonality Factor⁵			2.6	2.6	2.6	2.6
Pro Forma Planning Enplanements <sup>6</sup>			432,600	588,600	608,100	660,300

Notes

- 2. Space requirements equals the developed SUF multiplied by total annual pro forma planning enplanements in thousands (SUF X Projected Enplanements/1000, rounded to nearest 100). For food and beverage, an additional 800 sf is added for kitchen and food preparation space to the calculation SUF-based area.
- 3. Projected space requirements for storage and support space is estimated to be 25% of food and beverage and retail space (rounded to nearest 100), subject to a minimum of 1,000 sf.
- 4. CY14 actual enplanements reported by Eagle County Airport. For 2018 and later, projected enplanements from Airport Master Plan prepared by Jviation, issued in draft February 2014.
- 5. Eagle County Airport has significant seasonality to its passenger activity. In order to correctly assess concession space requirements to meet peak-season demand, a Seasonality Factor is applied to actual annual enplanements to estimate a proforma planning enplanement to which Developed SUF is applied. The Seasonality Factor is a value estimated by Unison to annualize (on a straight-line basis) peak season enplanements.
- 6. Pro Forma Planning Enplanements equals Actual/Projected Enplanements multiplied by the Seasonality Factor.





 $<sup>1. \, \, \</sup>text{Developed SUF} is the amount of food and beverage and retail square footage required per 1,000 enplaned passengers. \\ \text{Estimated by Unison Consulting.}$ 

Using passenger, facility, and concession design preferences, a final concessions space plan was created. This plan has the objective of locating approximately 90 percent of concession post-security to aid in passenger comfort and improve sales. Passenger behavior and flow is one of the most vital factors in concession placement and was taken into heavy consideration in terminal design. Visibility and accessibility was maximized by way of location and further design phases will need to consider signage, lighting, and other elements that increase visibility and accessibility. Concessions were purposely clustered to expose passengers to a variety of options, increase concession area impacts, and improve passenger convenience.

The final recommended concession program space retains the existing 1,200 sf on the landside and grows the existing airside total from 2,316 sf to 7,700 sf. The breakout of this space is shown in **Table 3.2** and program locations are presented in **Figure 3.25**. The central core feature demonstrated in **Figure 3.25** includes a coffee bar and counterservice restaurant with ample seating. The restaurant would include a full service bar. Retail zones are substantially increased with potential areas for a range of merchandise and small snack offerings. Additional opportunities exist along expanded concourses for grab 'n go style kiosks. Further details regarding programming specifications can be found in **Appendix A**.

TABLE 3.2
FINAL EGE CONCESSIONS PROGRAM SPACES

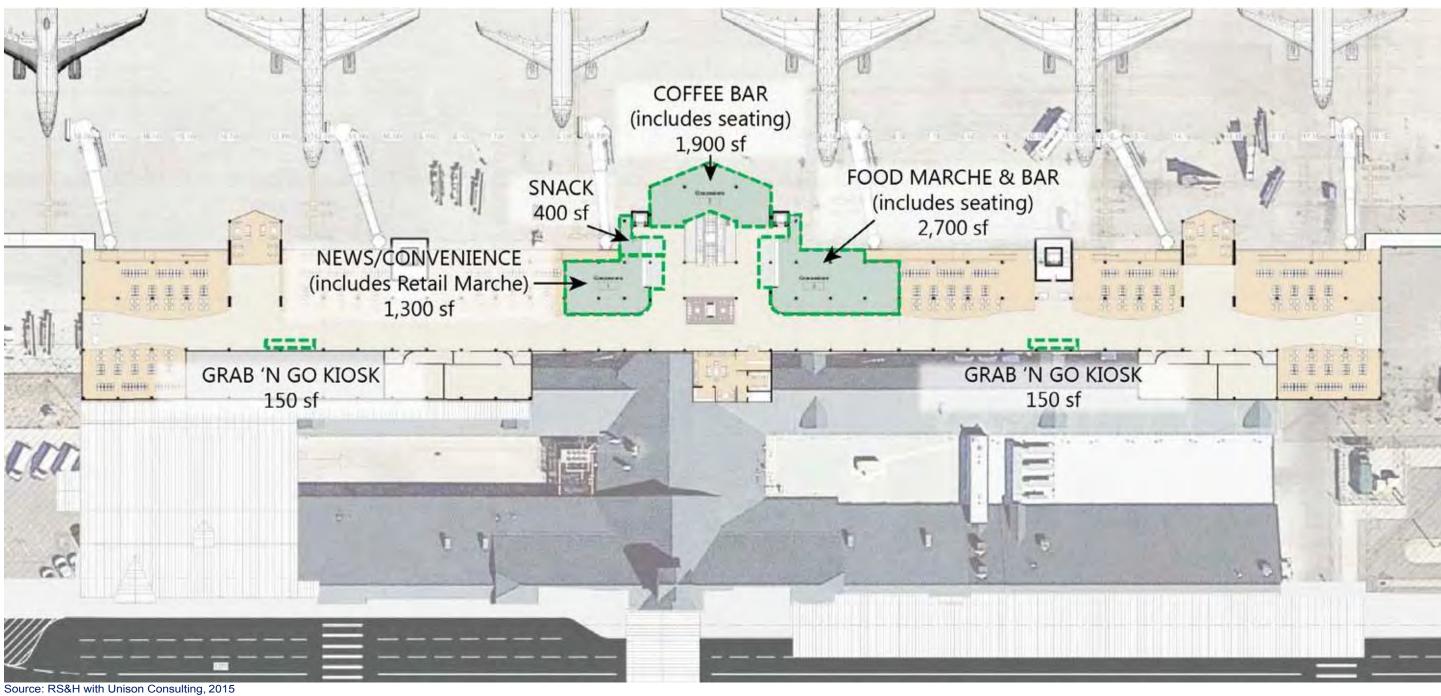
STORE/RESTAURANT	LANDSIDE (SF)	AIRSIDE (SF)	TOTAL (SF)	
Concept	Location			
Food & Beverage:				
Coffee/Snack	1st Floor	600		600
Seating	1st Floor	400		400
Snack	2nd Floor		300	300
Coffee Bar (With Pastries and Snacks)	2nd Floor		800	800
Common Seating/Circulation	2nd Floor		1,100	1,100
Food Marche and Bar	2nd Floor		1,600	1,600
Common Seating/Circulation	2nd Floor		1,100	1,100
Grab 'n Go Kiosk (west concourse)	2nd Floor		150	150
Grab 'n Go Kiosk (east concourse)	2nd Floor		150	150
Subtotal		1,000	5,200	6,200
Retail:				
News/Convenience	1st Floor	200		200
News/Convenience	2ndFloor		1,300	1,300
Retail Marche	2nd Floor		Included	
Subtotal		200	1,300	1,500
Total Concessions - Store and Restaurant Space		1,200	6,500	7,700

Source: Unison Consulting, Inc, 2015

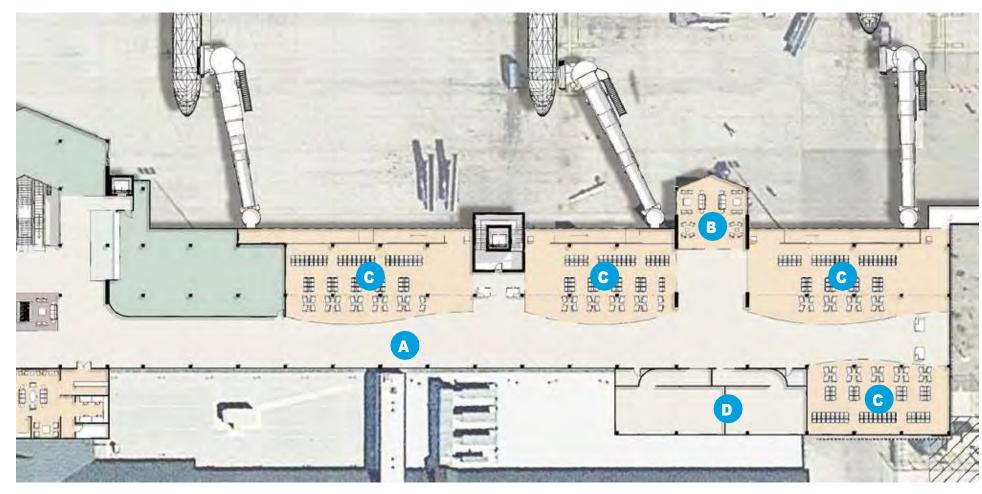




FIGURE 3.25 NEW CONCESSIONS PROGRAM LOCATIONS AND SPACEALLOCATIONS



#### 3.3.4 DEPARTURE LOUNGES







Source: RS&H, 2015

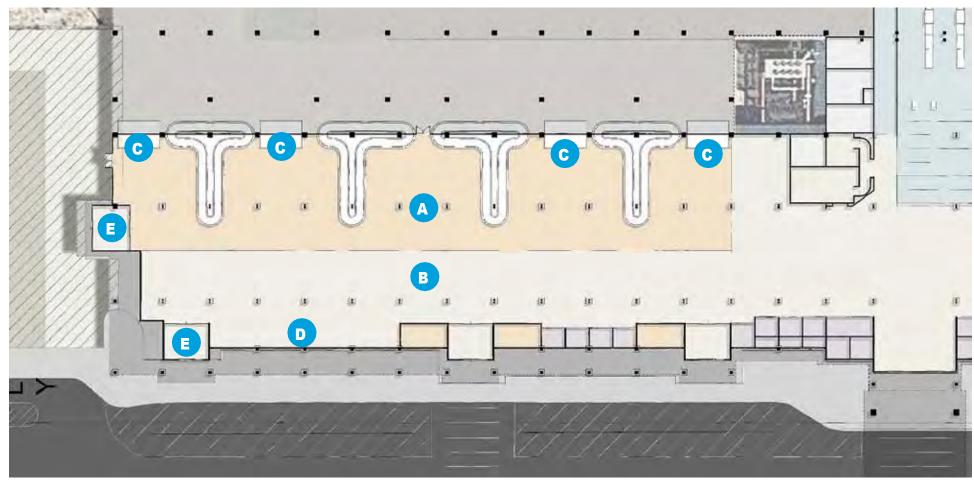
### **DEPARTURE LOUNGES**

Extending east and west of the grand hall are the departure lounge concourses. A passenger circulation zone along the south of the concourse provides ample space for both arriving and departing passengers. Elevated ceilings, exposed structure, and a north facing clerestory bring in natural light, while providing clear sightlines to all of the gates. At the heart of the concourses, this circulation zone turns, pushing into a seating lounge that extends out over the apron. This lounge serves as a space for additional, comfortable seating and smaller concessions opportunities. Similar to the grand hall, the elevated ceilings and glazing provide expansive views of the terminal, apron and mountains beyond. Along the north side of the concourse are the departure lounges. Lower ceilings and full height glazing along the apron provide for a more intimate seating space while maintaining a clear view of the aircraft. At each end of the concourse is a large set of restrooms to accommodate both arriving and departing passengers. The concourse accommodates eight (8) gates (four to the east of the grand hall, and four to the west) with passenger boarding bridge capability.

- A. Passenger circulation
- B. Seating lounge
- C. Departure lounge
- D. Restrooms



## 3.3.5 BAGGAGE CLAIM



Source: RS&H, 2015

# **BAGGAGE CLAIM**

The baggage claim hall is expanded west and north, providing space for four (4) baggage carousels. When compared to the existing baggage claim hall, these carousels are pushed north and spaced further apart. Pushing the carousels north moves them out of the landside lobby and provides a more generous circulation space between the baggage claim area and rental car queueing to the south. Spacing the carousels further apart provides space for an oversized bag shelf at each carousel. This allows arriving passengers to pick up both their oversized and standard luggage in one, interior location, while spreading out the oversized baggage queuing over four locations, rather than a single drop. From an operational standpoint, this aligns both oversized and standard baggage drops in the inbound baggage area, simplifying the baggage tug route. The expansion also allows for an open, flexible space along the south wall of the bag claim hall, which can be used for CV driver staging.

# **ELEMENTS**

- A. Expanded bag claim area
- B. Increased landside lobby circulation space
- . Oversized bag shelf
- D. CV driver staging area
- E. Additional entry/exit vestibule





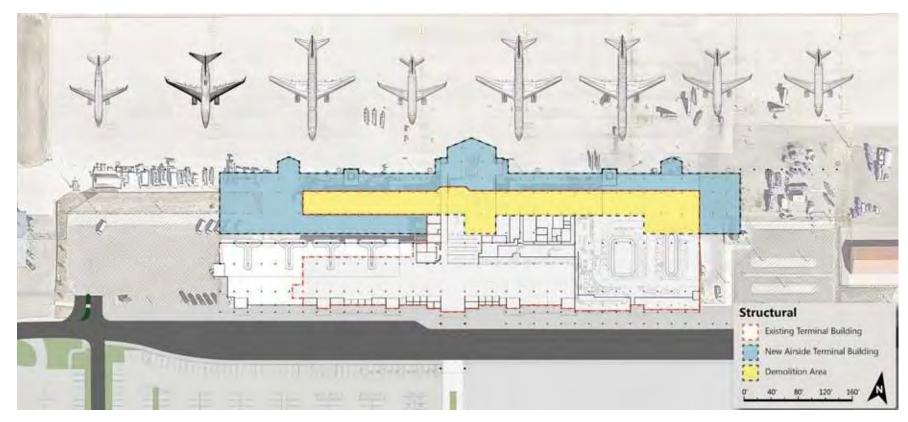
# 3.3.6 BUILDING SYSTEMS

As the terminal expands architecturally, the facility's building systems must expand in kind. The extent to which the existing systems can be expanded, what is new, and how the systems function as a whole are all important considerations. The following section investigates the terminal's structural, mechanical, plumbing, fire protection, and electrical systems to identify the challenges and opportunities of expansion.





## FIGURE 3.26 STRUCTURAL



Source: RS&H, 2015

# **STRUCTURAL**

Expansion of the structural system will be in conformance with the selected architectural elements and minimum design loads as required by the building code. From a structural perspective the major issue will be the likely demolition of the existing single-story holdrooms to permit the two-story expansion. Existing concrete spread footings will require strengthening or total replacement to support additional loading with new columns, floor, and roof framing. Also, expansion joints will need to be located to adapt with the integration of new and existing construction and be coordinated with lateral resisting systems.

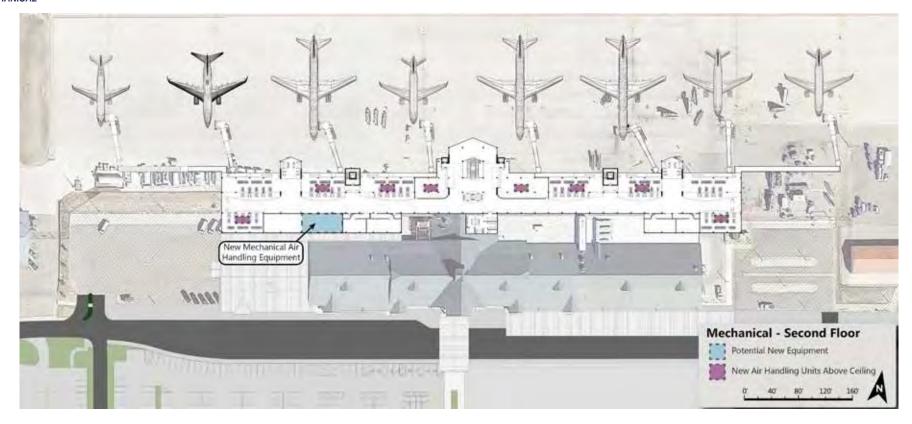
# **ASSESSMENT**

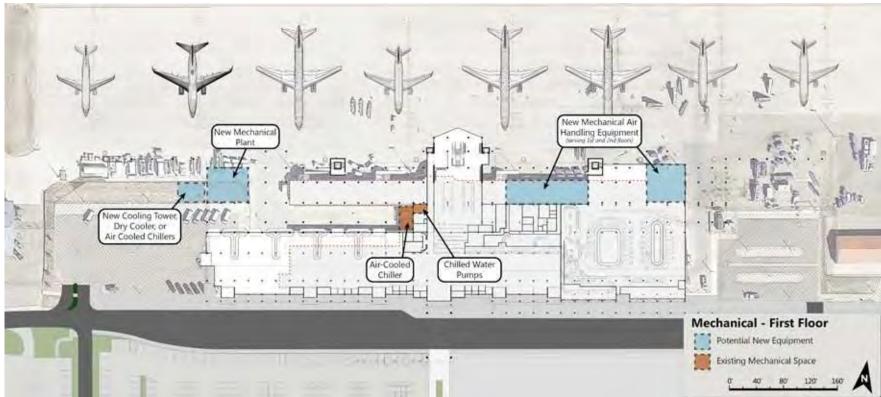
- Demolish existing single-story holdrooms to permit the two-story expansion
- Strengthen or replace existing foundations supporting the two-story expansion
- Locate expansion joints to adapt with the integration of new and existing construction
- Coordinate and provide new and modified lateral resisting systems





## FIGURE 3.27 MECHANICAL





Source: RS&H, 2015

# **MECHANICAL**

The first phase of the Mechanical system expansion will include the replacement of the existing air cooled chiller, with a new chiller(s) of sufficient capacity for the existing terminal and proposed short-term east building expansions through Phase 6. Additional heating capacity for the short-term construction may be available in the existing boiler system; this can be determined by detailed design calculations. Alternatively, if additional boilers are necessary, the mechanical room could be expanded into the space made available by the demolished chiller, or the boilers could be placed in the proposed new central plant room. Additional airflow capacity for the expanded short-term phased areas can be provided by new air handling units with increased capacity. This would address the capacity requirements as well as concerns about aging equipment.

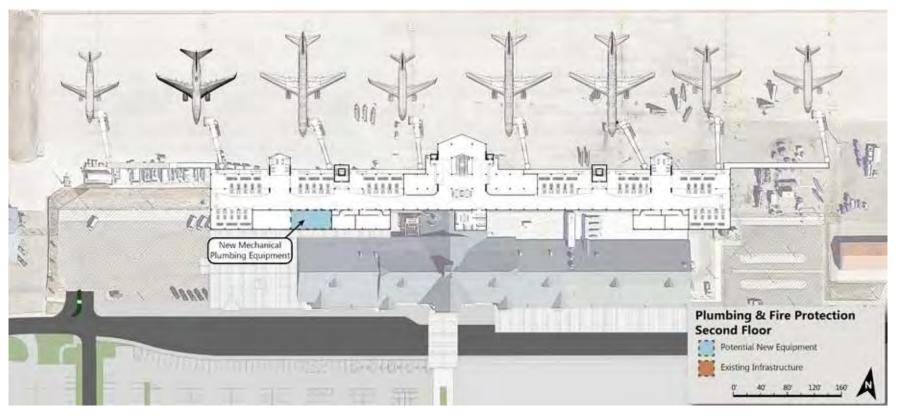
# **ASSESSMENT**

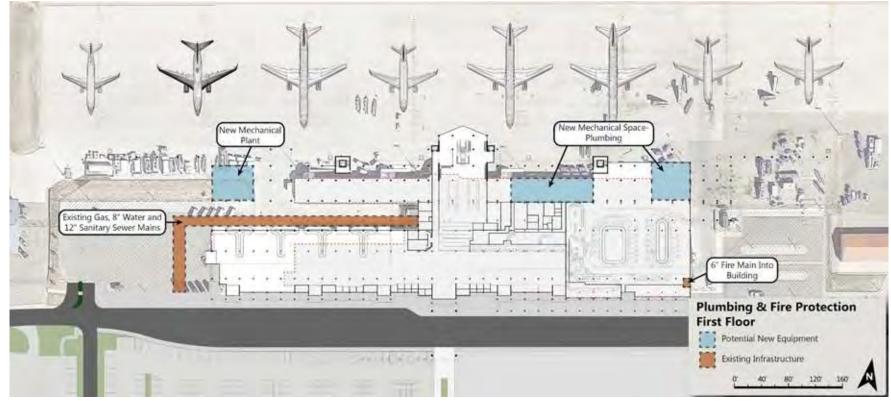
- Type and location of new chiller and boilers presents the greatest phasing challenge
- Long-term efficiency requires larger capital expense during short-term phases
- May require new central mechanical building or a room that can be incorporated into the mid and long-term expansion plans
- Lowest capital cost solution for short-term construction is the least efficient approach for the mid and long-term phases
- Requires chillers, cooling towers, and boiler expansion throughout phasing that adds capacity and addresses building redundancy needs





FIGURE 3.28
PLUMBING AND FIRE PROTECTION





Source: RS&H, 2015



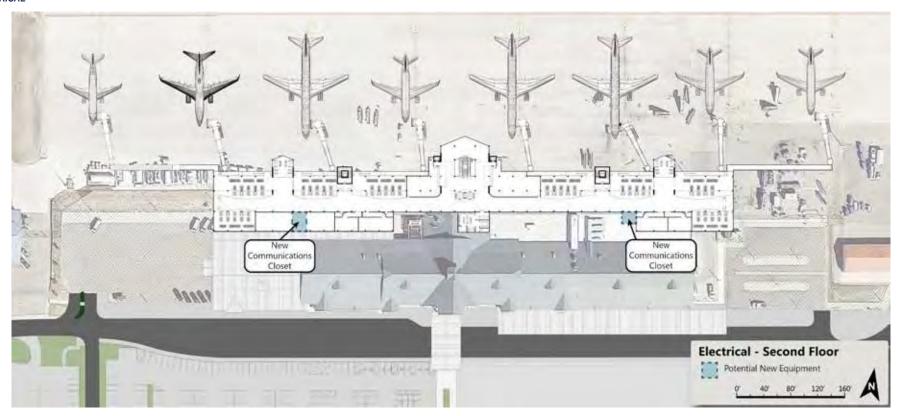
The short term improvements to the terminal can be supported by the extensions and modifications of the existing plumbing and fire protection systems inside the building. This may require some demolition and size increases to nearby interior mains in order to accommodate minor demand increases for plumbing domestic water and sanitary needs, but these are detailed items that can be determined during design.

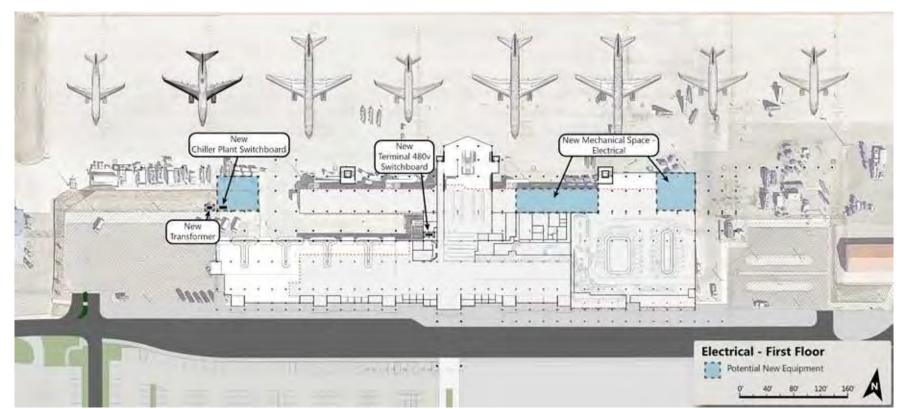
Likewise, the mid-term and long-term proposed expansions do not indicate a significant need for expansion of the capacity of the existing plumbing and fire protection services to the building. The proposed expansions and modifications should be able to be supported by extensions and modifications to existing interior system infrastructure. In the event that detailed design indicates a need for overall system capacity increase, there are adequately sized services very close to the terminal building that can be easily tapped into to provide the additional capacity.





## FIGURE 3.29 ELECTRICAL





Source: RS&H, 2015

# **ELECTRICAL**

## **Electrical Infrastructure**

Expanding the terminal provides the airport an opportunity to greatly improve the efficiency of their building. However, this expansion will require targeted renovations to the existing electrical infrastructure in order to support both new and existing facilities. The existing building equipment and service operates at 120/208 volt, which is a lower voltage that is hard to distribute and less efficient due to voltage drop losses. Therefore, a higher, more efficient 480/277 volt system is recommended. Implementing this higher voltage system requires several alterations to the existing infrastructure. A new 480/277 volt distribution is recommended to feed the building chiller plant and new boarding bridges. A 277 volt distribution for the lighting is also recommended, which requires changing the fixture ballast. Any existing motors above 1Hp should be replaced with high efficiency 480 volt motors in order to reduce energy loss. Additionally, it is recommended that a centralized transformer be provided to help feed the existing distribution.

Expanding the terminal also affords opportunities to improve passenger experience and ensure their safety. In the new departure lounge areas, dedicated charging stations, in addition to standard outlets, will greatly improve the passengers' ability to charge cell phones, laptops and tablets. A new emergency generator near the chiller plant will ensure continued operation of boarding bridges and critical systems in the event of power loss.

## **Lighting Controls**

A new lighting control system is recommended to help unify the existing and expanded lighting controls and to meet the current energy code. Occupancy sensors in rest rooms and support spaces will help reduce energy costs for interior spaces, while areas with natural light such as the central hall and departure lounges will utilize dimming fixtures with continuous photocell control to maximize daylight harvesting. Common areas may be controlled with time clock settings to reduce energy usage during the terminal's off-hours. Night lighting will be provided for security as required.

#### Light Fixtures

LED light fixtures are recommended for both accent and field lighting as well as exit signs in the newly constructed areas of the terminal. In the existing terminal, incandescent down light fixtures and illuminated exist signs will be replaced with an LED equivalent for greater efficiency. Similarly, for any large pendant lighting, a dimmable 875 watt pulse start metal halide lamp or new LED fixture is recommended, especially in areas such as the central hall and airside circulation spaces where there are daylight harvesting opportunities near the clearstory windows and curtain walls. Using universal voltage or multi-tap will allow changing fixtures to 227v to reduce voltage drop losses.

#### Communication & Security

With the expansion of the existing terminal's communication and security systems, dedicated communication closets will be provided to facilitate security, CCTV intercom, network, phone, WIFI and FIDS distribution throughout the terminal. Expansion of the terminal's existing access and security controls will be coordinated with airport management to ensure a cohesive, easily implementable system.





#### 3.3.6.1 OPERATIONAL EXPENSES

With the increase in size of the terminal envelope, operating and maintenance expenses are anticipated to increase. The actual percentage increase will be dependent on the ultimate design of the new facility. For the purpose of this study, an analysis of future annual operations and maintenance expenses was completed, as shown in **Table 3.3**. The analysis was based on projections from the 2014 Airport Master Plan, which suggested that expenses would grow at approximately three percent per year. Using data from the ECAT 2014 financial statement and the 2014 Master Plan, a ratio between annual expenses and the terminal building's envelope was determined. That ratio (expenses/square foot) was used to determine the increase in expenses associated with the new terminal envelope after the expansion is completed. The expenses that were increased per the ratio include Building Maintenance and Utilities. It was estimated that the other expenses listed in the table will not see a significant increase associated with the expansion of the terminal envelope.

Using this methodology, it was determined that after construction is completed in 2018, annual terminal related operations and maintenance expenses will increase by approximately \$372,000. The analysis represents utility and maintenance costs based on the age and condition of existing systems and building design. It is anticipated that the terminal expansion could include new HVAC systems and architectural and mechanical enhancements that will reduce the amount spent on utilities per square foot of terminal space. Additionally, new building components will require less maintenance and upkeep during the first phase of their life span. These factors may keep costs lower than projected in this study. However, it can be expected that as components age, cost per square foot will rise as components require more maintenance.

TABLE 3.3

OPERATIONS AND MAINTENANCE EXPENSES

OPERATIONS AND MAINTENANCE EXPENSES	2014*	2018**
Supplies	\$ 3,090	\$ 3,478
Professional Services	\$ 452,797	\$ 509,628
Security Expenses	\$ 3,605	\$ 4,057
Building Maintenance	\$ 140,809	\$ 221,000
Utilities	\$ 226,958	\$ 360,000
Grounds Maintenance	\$ 50,470	\$ 56,805
Janitorial Services	\$ 277,222	\$ 312,016
Other Services and Expenses	\$ 92,185	\$ 103,755
Customer Service	\$ 20,600	\$ 23,185
County Ground Lease	\$ 229,323	\$ 258,106
Revenue Sharing Rebate	\$ 300,000	\$ 300,000
Other Expenses	\$ 139,050	\$ 156,502
Total	\$ 1,936,109	\$ 2,309,000

Source: RS&H Analysis, 2015



<sup>\*2014</sup> Building Maintenance and Utilities expenses are actual from ECAT Financial Statements. All other numbers are projections from Table 7- 4 in Airport Master Plan Appendix E. Financial Implementation

<sup>\*\*</sup> Building Maintenance and Utilities account for increase in terminal envelope with 5 gates

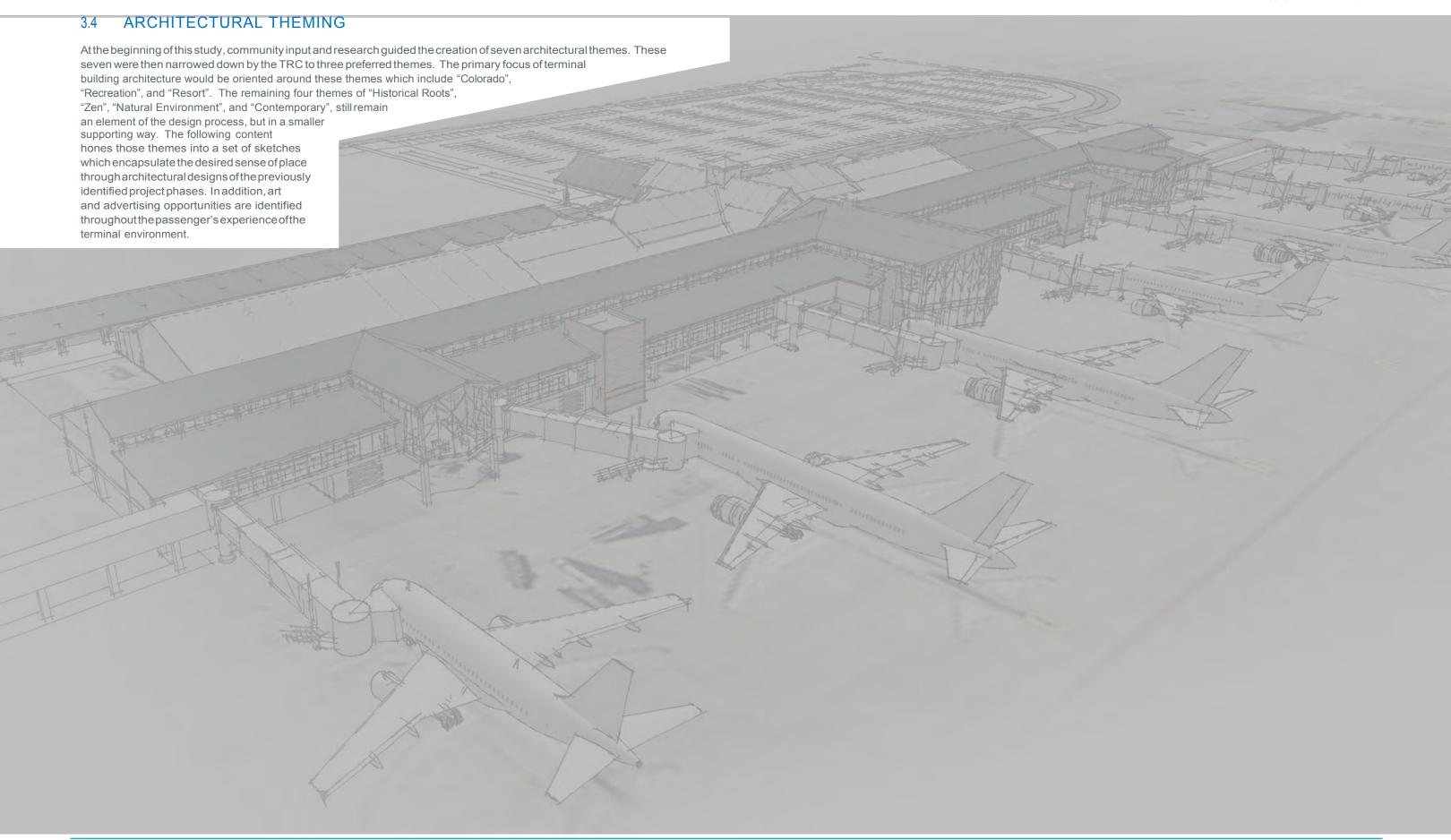
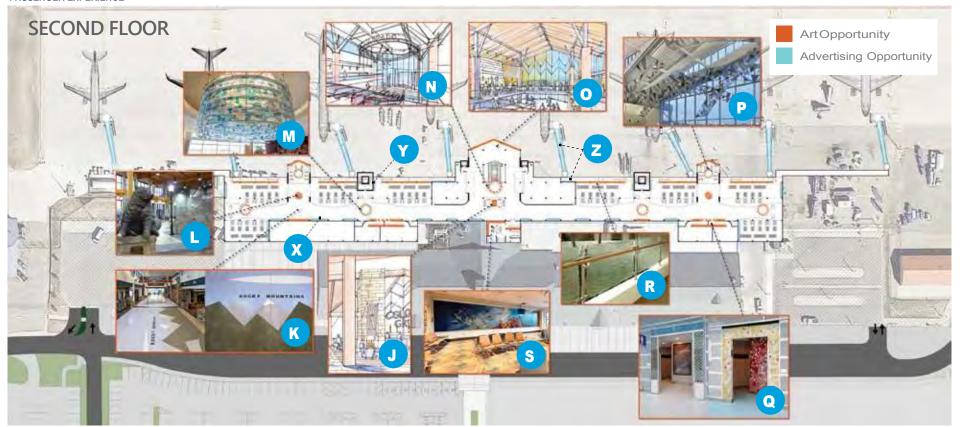
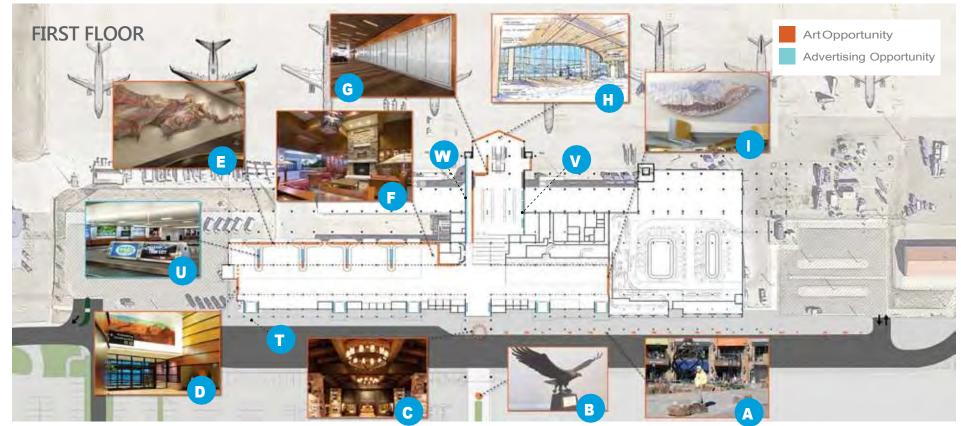


FIGURE 3.30
PASSENGER EXPERIENCE





Source: RS&H, 2015

# **ART & ADVERTISING OPPORTUNITIES**

## ART

- A. Natural stone and/or sculptural elements as bollards
- B. Exterior sculpture on central pedestrian walkway
- C. Hanging art / light fixture under porte cochére
- D. Large art/mural above vestibule
- E. Continuous mural / art piece along back wall of bag claim
- F. Seating area infused with art / local materials
- Decorative, translucent glazing between SSCP & exit corridor
- H. Re-composure area infused with art
  - · Wood incorporated into floor & ceiling
  - Addition of local, natural elements such as Aspens and stone
  - Integration of artistic details such as ski-inspired light fixtures
- I. Large art/mural athigh, end wall of ticket lobby
- J. Fireplace infused with local art
- K. Flooring inlayed with designs containing local references
- L. Sculpture / displays adjacent to seating lounges
- M. Hanging art/light fixture above circulation area at each set of gates
  - Wayfinding element
  - Potential incorporation of gate identification or signage
- N. Large hanging art / sign element in central hall
- O. Art integrated into glazing and mullions of central hall curtain wall
- P. Hanging art in high ceiling of seating lounges
- Q. Art incorporated into restroom entrance walls
- R. Decorative glazing along railing between departure lounges & boarding ramp
- S. Wall mounted art piece / mural in V.I.P. lounge

#### **ADVERTISING**

- T. Advertisements inset into vestibule walls
- U. Low-profile, back-lit advertisements on baggage carousels
- V. Outbound passenger focused advertisements mounted on surface of wall
- W. Inbound passenger focused advertisements incorporated into exit corridor wall
- X. Surface mounted advertisement between columns along circulation path and in end departure lounges
- Y. Advertisement inset into walls of stair cores at queuing area of departure lounges
  - Airline advertisement / branding incorporated into wall at entrance to passenger boarding bridge & decals on walls inside bridge





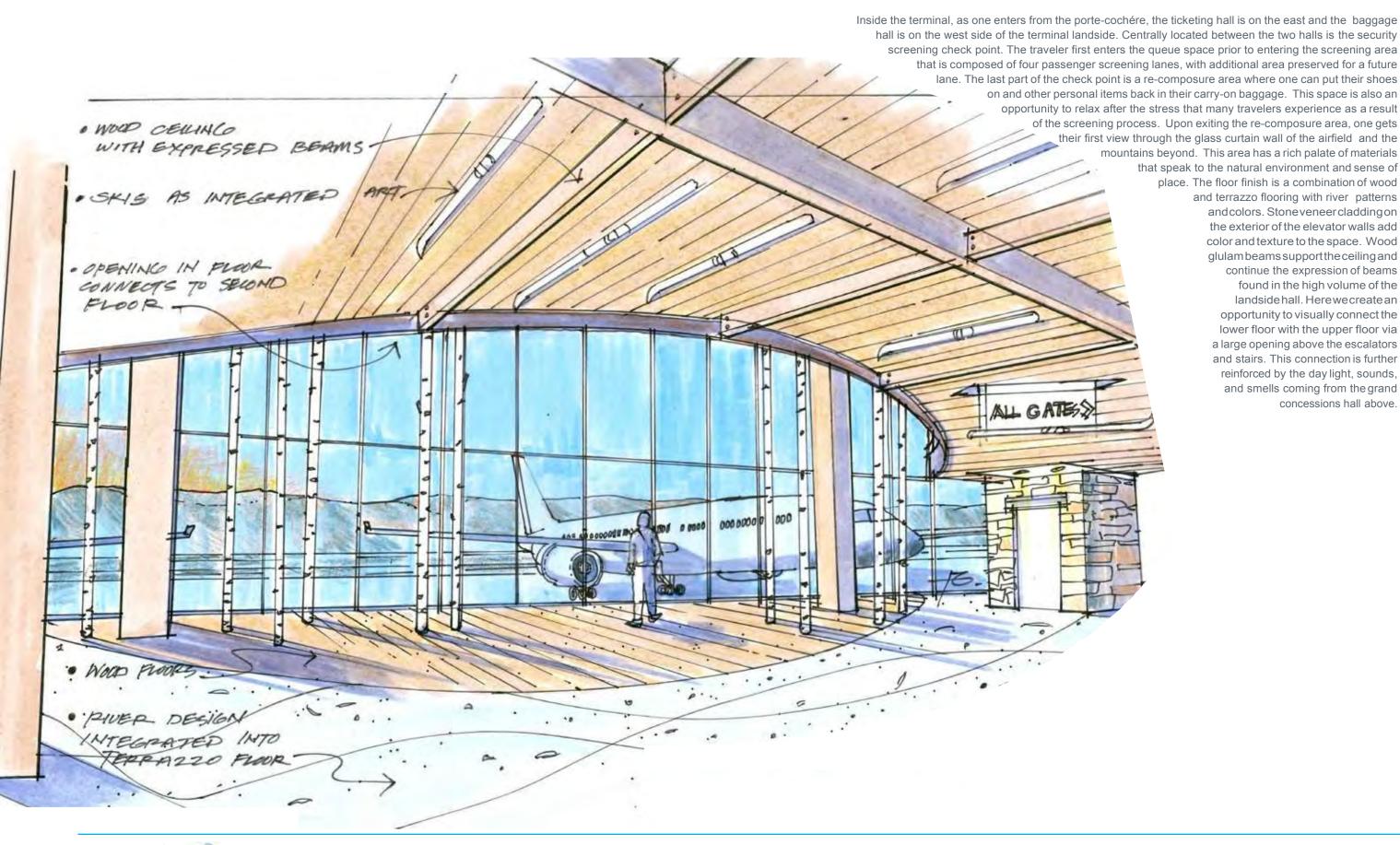
## 3.4.1 CURBSIDE CHECK-IN

Currently there exists no weather protection at the curbside pedestrian walkway. It is recommended that a curbside canopy be added to cover the curb and one lane of cars that are dropping off passengers at the east side of the terminal in front of ticketing. This will also enhance the curbside check-in and baggage drop process. For passenger comfort it is also recommended that a porte-cochére be located at the center of the terminal and aligned with the central vestibule. It will span the roadway and provide weather protection as pedestrians cross to access the parking lots and offer weather protection at the main center entry of the terminal. Vehicles slow down as they approach the porte-cochére and thus contribute to an added level of pedestrian safety. It serves as an intuitive wayfinding element to reinforce the main entry and provide clues as to the location of the ticketing and baggage spaces within the terminal landside. The porte-cochére is found at many local resort hotels and connect the local resort experience to that of the airport. The design of the porte-cochére is resort inspired and will be compatible with the terminal by using a kit of parts and details derived from the existing terminal architecture.



continue the expression of beams found in the high volume of the landsidehall. Herewecreatean opportunity to visually connect the lower floor with the upper floor via a large opening above the escalators and stairs. This connection is further reinforced by the day light, sounds, and smells coming from the grand

concessions hall above.



## **GRAND HALL CONCESSIONS AREA**

Escalators and stairs take you up into the heart of the terminal, the grand concessions hall. Arriving at the second floor is a sensory experience of natural light and from the ambient concession signage and lighting. The sounds of restaurant and bar co mingle with the conversation of the resort vacation experience. Culinary smells and aromas from a variety of food and beverage offerings compete for the traveler's attention. A large glass curtain wall connects one visually to the sky and natural environment. At the base of this glass wall is a long coffee bar and communal family seating area. The mullions supporting the glass wall are inspired tree branches and mountain motifs. The hall is flanked by concessions that offer branding and menus inspired by local community culture. Above the concessions, clerestory windows allow additional natural light to bathe the tall space. Table seating surrounding the concession floor allow the traveler to become part of the vibrant experience at the heart of the terminal. Comfortable resort style seating with rugs, compliment a two sided stone fireplace that rises through the tall space. Stone veneer on the walls, vaulted wood ceiling beams supported by tall columns, and wood plank floors that recall the bridges of Eagle County, all contribute to the unique Colorado experience.



## 3.4.4 DEPARTURE LOUNGES

Passenger hold rooms are located to the east and west of the grand concessions hall and are adjacent to their respective boarding gates. The hold rooms are located along the airside wall overlooking the airfield and mountains beyond. The circulation spine is located in-board of the hold rooms and is oriented east west. Clerestory windows above the circulation bring natural light back into this space. The circulation and hold rooms feature a material palate and kit of parts that is consistent with the grand hall. These include expressing wood beams in the ceilings, celebrating the structural connections, cladding major accent walls in stone veneer, integration of art and advertising, use of natural light, and featuring natural materials to add color and texture especially at the human scale level. The east and west airside concourses also offer opportunities to locate additional resort style seating configurations with prominent views of the airside and mountains. The floor finishes that distinguish between concessions, hold rooms and circulation areas, are design opportunities to reinforce intuitive way finding as well as continue to create a journey that features metaphors from the natural environment. Instead of a straight edge, undulating lines inspired from the river's edge now define and separate spaces.





# **RS&H**

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