Salina Regional
SLN Airport











Terminal Area Master Plan for

SALINA REGIONAL AIRPORT

TERMINAL AREA MASTER PLAN

For

SALINA REGIONAL AIRPORT
Salina, Kansas

Prepared for the

SALINA AIRPORT AUTHORITY

By

In Association with

The ArkStar Group
and
Hutton Corporation

Final Report

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Salina Regional
SLN Airport

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Chapter 1

INVENTORY OF EXISTING TERMINAL CONDITIONS



Chapter One
INVENTORY OF EXISTING TERMINAL CONDITIONS

The Salina Municipal Regional Airport (SLN) Terminal Area Master Plan has been undertaken to provide the Salina Airport Authority with guidance for future development of its passenger terminal facilities to satisfy current and future demand. The specific objectives of the study are:

- Inventory existing terminal area infrastructure including terminal building systems (HVAC, utilities, fire protection, communication systems, and access control.
- Inventory existing functional areas of the terminal building including ticketing, lobby areas, hold rooms, TSA, airline offices, rest rooms, and administration offices.
- Inventory the terminal aircraft apron, surface road access, and vehicle parking.
- Develop a forecast of aviation demand indicators that impact terminal area planning such as enplanements (passenger boardings), commercial operations, and commercial aircraft fleet mix. Project commercial service demand for 2025, 2030, and 2040.
- Based on the aviation demand forecasts determine future facility requirements include aircraft gates and apron area, terminal building by functional areas, landside road access, curbside needs, and vehicle parking.



- Formulate and evaluate up development alternatives including a No Action alternative.
- Present a refined development concept and project phasing plan to include project cost estimates.
- Prepare a financial feasibility analysis for implementation of the recommended terminal area development concept.

TERMINAL BUILDING

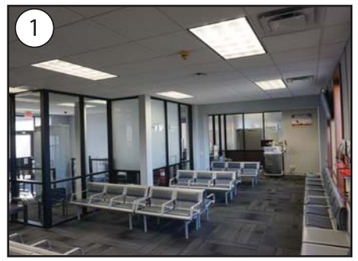
Construction of the M.J. Kennedy Air Terminal building was completed in the late 1960s. The building was named in honor and memory of the first chairman of the Salina Airport Authority. M.J. Kennedy served as chairman from 1965 to 1971. The building has been updated several times over the years, most recently in 2015 when much of the first floor was remodeled to accommodate the need for Transportation Security Administration (TSA) screening and a secure passenger hold room.

Exhibit 1A presents the current terminal building layout. The ground floor of the terminal building is functionally laid out to accommodate passenger and visitor activity. The ground floor encompasses approximately 10,100 square feet of space. The second floor is used exclusively for airport administration and is approximately 2,400 square feet. The building is set back approximately 265 feet from the aircraft apron. An enclosed corridor provides protection from the elements for passengers.

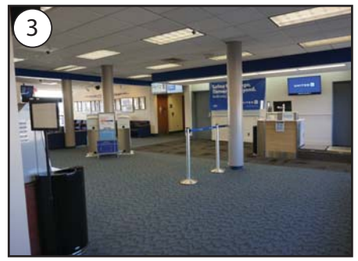
FUNCTIONAL COMPONENTS

Airport terminal buildings have defined functional areas which are each impacted by passenger and visitor activity. **Exhibit 1A** also presents the airport terminal building floor space classified by functional area. Generally, the functional areas can be classified in the following manner:

- Departure Processing: Departure processing functions include the ticket counter areas, airline offices, outbound baggage preparation, ticket lobby, security stations, circulation and queuing areas.
- Arrivals Processing: Arrival processing functions include baggage claim, inbound baggage functions, and baggage claim lobby.
- Concourse Facilities: Concourse facilities include airline gates, passenger hold rooms, and circulation.
- Public Spaces: Public spaces include restrooms, concessions, rental car counters, welcome lobby, and circulation.
- Administration Space: Administrative space is often located within terminal buildings, typically separate from the passenger functions.
- Building Systems/Support: Building systems and support areas include mechanical rooms, stairwells, and storage.







Terminal Functional Area	Sq. Ft.
Departure Processing	
Ticket Counter Area	80
Ticket Lobby Queuing Area	220
Ticket Lobby Circulation	343
Public Lobby	898
Arrival Processing	
Inbound Baggage	871
Baggage Claim Floor Area	130
Baggage Claim Circulation Area	693
Security Processing	
Queuing Area	428
Station Area	593
TSA Administration/Operations	502
Airline Operations	
Outbound Baggage	408
Airline Office	708
Concourse Facilities	
Passenger Hold Room	697
Gate Area	252
Concourse Circulation	101
Other Public Spaces	
Restrooms	792
Concessions	170
Rental Car Area and Office	476
Airport Administration	
Offices/Conference	2,691
Building Systems/Support	
Mechanical/HVAC Systems	193
General Circulation/ Stairwells/Storage	1,239
Total Square Footage	**12,485**

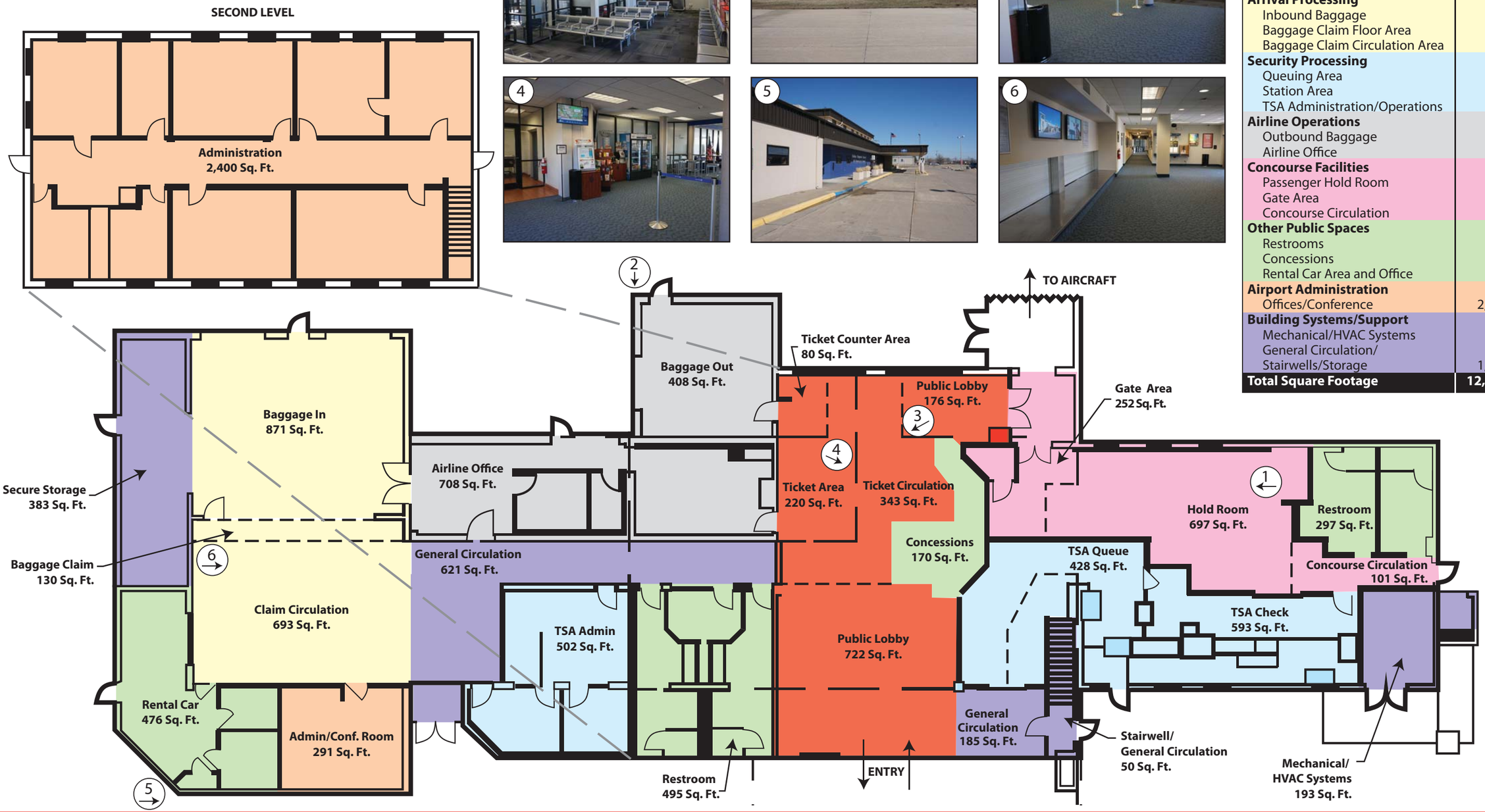


Exhibit 1A
TERMINAL FUNCTIONAL AREAS

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TERMINAL ORGANIZATION

The M.J. Air Terminal building is functionally organized to promote efficient passenger and visitor flow. Departing passengers enter from the east side near the middle of the building and proceed through a public lobby directly to the airline ticket counters or ticket kiosks in this central section of the building. The public lobby area includes seating and vending concessions. Enplaning passengers can wait with visitors in this area if they arrive ahead of the opening of the security checkpoint. Checked-in passengers then proceed through the TSA checkpoint located to the north of the public lobby. After clearing the checkpoint, departing passengers enter the secure hold room to await the boarding call for their aircraft.

When called, departing passengers proceed toward the gate, and after their ticket is scanned, are escorted down a 240 foot-long, glass-enclosed corridor that extends to the aircraft apron where their aircraft awaits. Passengers board the aircraft from the apron via a portable boarding ramp.

Arriving passengers depart the aircraft in the same manner and proceed down the secure corridor to reach the terminal building. Arriving passengers turn to the right Just prior to the holdroom to enter the terminal building. They then proceed past the airline ticket counter either through the ticket lobby to the front entrance, or to a hallway extending to the south end of the building where the baggage claim is located. The rental car facilities are also located at the south end of the building. After claiming their baggage, arriving passengers can exit the building from doors near the bag claim lobby.

From a terminal organization perspective, passenger flows are appropriately separated with departing and arriving functions being located at the north and south ends respectively. While arriving passengers departing avoid passing through the departing passenger hold room, they do have to pass though the ticketing area upon arrival.

TERMINAL BUILDING SYSTEMS

Building systems include utilities and communications systems serving the terminal building. Available utilities include electrical, gas, water, sanitary sewer, and telephone. The terminal also has two fiber optic data connections for IT infrastructure that provides wireless access (public and private) and a telephone line connection.

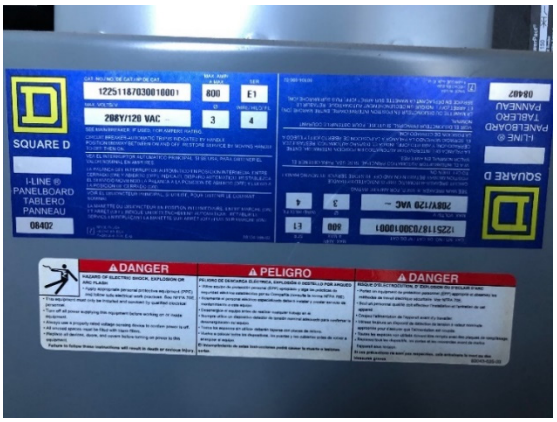
The building has three mechanical rooms; the north mechanical area, a first-floor closet and a second-floor closet. The north mechanical area consists of two rooms; one at ground level where the main electrical service connects to the building, and one below ground that also serves as an access point to the utility crawlspace that runs under the building. The utility crawlspace shown in the accompanying photo is approximately three feet high and two feet wide and runs under the outer perimeter of the building.



Utility Crawlspace

Electrical Service

Exhibit 1B depicts the electrical utility service in the vicinity of the terminal building. Evergy is the service provider. Overhead power lines extend south along Arnold Avenue to a power pole on the north side of the terminal. From there the lines run underground supplying power to the terminal main panel. The accompanying photo shows the electrical service panel where the terminal building power connects to the main line. The main electrical service enters the building at the north mechanical closet and is distributed to subpanels located throughout the building. The main panel provides 800 amp, three-phase power delivering 208-240 volt and 120-volt circuits. The higher voltage circuits are used for larger electrical loads such as the HVAC units while 120-volt circuits are standard outlets supplying power for office equipment, wall outlets and smaller load circuits.



Electrical Service Panel

Natural Gas

The terminal is heated by forced air furnaces fueled natural gas. Natural gas is supplied by Kansas Gas Service. No other natural gas appliances are currently in use in the terminal building. The line runs on the north side of the terminal in a 2-inch ductile iron pipe (DIP). The connection to the terminal is also a 2-inch DIP line. The lines connect at a gas meter located at the exterior of the northeast corner of the terminal building. From there a 2-inch line runs to the rooftop where iron pipe supplies the rooftop commercial heating units.

Water

Water is supplied to the terminal through buried lines. **Exhibit 1B** depicts the 12-inch DIP coming from the south across the west side of the terminal building. As it approaches Arnold Avenue an in-line control valve (gate valve) reduces the pipe size by two inches, to a 10-inch DIP line, which turns west for about 41 feet where it then turns north again crossing beneath Arnold Ave. The supply line to the terminal is a two-inch main tap and valve entering the terminal at the northwest corner. There are two fire hydrants,

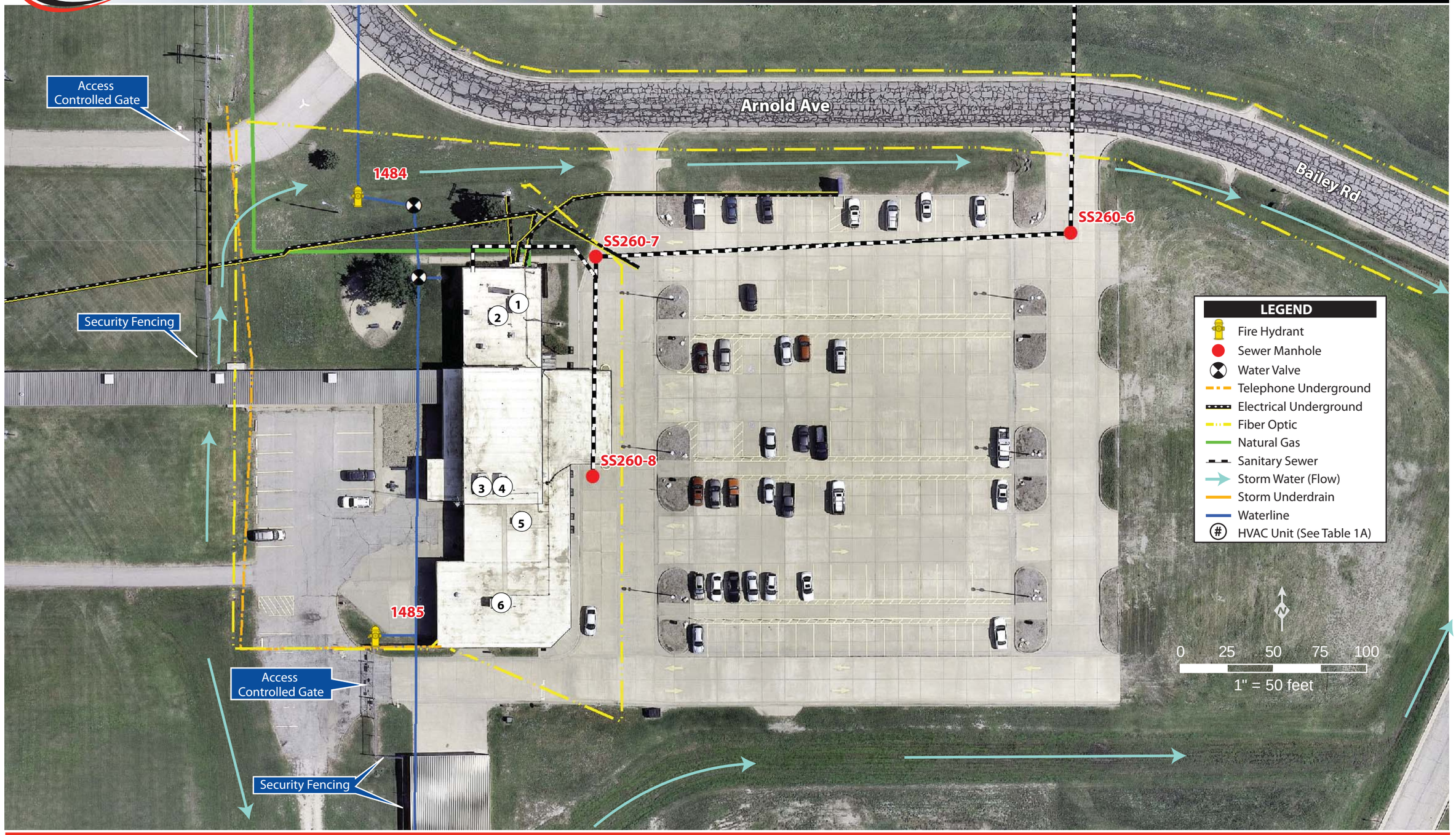


Exhibit 1B
TERMINAL UTILITY LOCATIONS

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each with 6-inch line taps; one connects into the 12-inch line on the southwest corner of the terminal and the other connects into the 10-inch line just after the junction to the west. Demand inside the terminal building primarily comes from restrooms, drinking fountains and sinks. The terminal is not equipped with a fire suppression system and does not have backflow prevention valves.

Wastewater

Wastewater lines from the terminal connects to the city sanitary sewer system in two locations; one each on the north and south ends of the building. The north end connection is a 4-inch Poly Vinyl Chloride (PVC) and was built to serve the TSA screening area and passenger holding area. The southern 4-inch vitrified clay pipe (VCP) pipe is the original connection for the terminal and is used for all other areas**.** An 8-inch gravity sewer main carries wastewater away from the terminal and into the main wastewater system. The city system's VCP line runs in a northerly direction on the east side of the terminal. The sanitary waste exits the terminal building and connects to the wastewater system at manhole SS260-8. From there it flows north to the end of terminal building at manhole SS260-7 it turns east to manhole SS260-6 where it turns north and crosses under Arnold Ave. leaving the terminal area. The manholes provide access, to the VCP lines buried under the parking lot. The gravity system and has adequate grade and flow to not require pressurization.

Stormwater Drainage

A system of ditches, culverts, detention areas and pipes carry stormwater away from the terminal area. **Exhibit 1B** depicts the routing of this gravity drainage system. Drainage culverts run around the north, south and west sides of the terminal. The ditches on the west side of the terminal flow north and cross Arnold Ave. There is a utility storm underdrain pipe between the terminal and the ramp to help prevent flooding in the terminal building in the event of heavy rainfall. There are drainage ditches, depicted in in the accompanying photo, on the west and south sides the terminal site to route water to the east toward Centennial Ave.



Drainage ditch east of terminal building

Heating Ventilation and Air Conditioning System (HVAC)

HVAC systems have four main components; heating unit (furnace), cooling unit (air conditioner), duct work to move the conditioned air, and a control system (thermostat). **Exhibit 1B** shows the location of the HVAC units on top of the terminal building.

Climate control into the terminal building is maintained by six commercial units that sit on the roof. These are package units meaning they are self-contained and supply heating and cooling. They energy to run the cooling system is electric, while the energy to the heating system is from natural gas. **Table 1A** provides details of these rooftop units.

Table 1A
HVAC UNIT DESCRIPTIONS

Label	Manufacturer	Model	Description	Area
1	Lennox	LGH036H4ES1Y	Package Unit (gas heating/electric cooling)	TSA Screening Area
2	Lennox	LGH036H4ES1Y	Package Unit (gas heating/electric cooling)	Passenger Holding Area
3	Lennox	LGH102H4BH1Y	Package Unit (gas heating/electric cooling)	First Floor Lobby
4	Lennox	LGH102H4BH1Y	Package Unit (gas heating/electric cooling)	Second Floor Offices
5	Trane	YSC048E3RZA0F97	Package Unit (gas heating/electric cooling)	TSA Offices
6	Lennox	LGH102H4BH1Y	Package Unit (gas heating/electric cooling)	South Terminal Areas

Each unit supplies a specific area as shown in **Table 1A**. Unit 1 conditions the TSA Screening Area. Unit 2 conditions the passenger holding area. Unit 3 conditions the first-floor lobby. Unit 4 conditions the administrative offices. Unit 5 conditions the TSA administration offices. Unit 6 conditions the southern terminal areas which include baggage claim, Hertz Rental car, airline offices and a conference room. There are barriers such as doors or glass separating all areas except for areas 3 and 6 which are connected through an open hallway. There is no central control system as each unit has its own thermostat located in the conditioned space.

Communications and Fiber Optic Lines

The communication systems connected to the terminal building include traditional phone lines, internet service, and radio communication in the VHF and UHF ranges. The main demarcation area is in the southwest corner of the terminal. From there it splits off to sub-demark rooms for each of the terminal's operators except Hertz Car Rental which connects directly to the demarcation panel. Phone service is used by all terminal operators.

Fiber optic internet service is provided Nex-Tech. The fiber optic trunk line is owned by AT&T. There are two fiber optic lines on the north and south sides of Arnold Ave. The southern leg feeds the terminal building and continues west as Arnold Ave turns north.

There are two feeder lines to the terminal building. The first extends from a junction box approximately 40 feet south of Arnold Ave and 40 feet west of the parking lot entrance and runs down the east side of the building the width of the parking lot then turns back at approximately a 45-degree angle to connect to the southwest corner of the terminal building at the main demark area. This line supplies internet service to the terminal building. TSA requires a separate fiber optic line. It crosses the entrance road west of the terminal, on the north side of the road, then crosses under it again going south along the back (west side) of the terminal building. It turns east at the edge of the west terminal parking lot and connects to the southwest corner of the terminal building at the main demark area.

WI-FI is provided throughout the terminal building. There is public and private Wi-Fi using the Nex-Tech router. The terminal building has a security system comprising of 22 cameras. It also has a fire prevention system of heat sensors. There are no other security or alarm systems in the terminal.

There is a communication tower located on the west side of the terminal in the center of the building. It provides communication from the terminal to the ARFF station and the maintenance building through line-of-sight antennae. The UHF and VHF radio communications also are on this tower.

The terminal is equipped with informational display screens. Some provide general guidance and visitor information, and others are part of a Flight Information Display System (FIDS) system. In total there are 13 display screens. The general circulation area has two FIDS screens and six informational screens including one for the airline ticket counter, one with flight scheduling, and one that provides local weather information. The baggage claim area has three screens, two of which provide visitor information and one is part of the FIDS system. The secure gate area has two screens, one is a FIDS screen and the other provides general information.

TERMINAL AREA SECURITY

Salina Regional Airport is certified as a Class I, Index A Airport under CFR 14 Part 139. The airport also has established security procedures in its Airport Security Program. The airfield and its aprons are secured by six-foot chain-link fence with topped with a one-foot barbed wire. There are established procedures for controlling access onto the AOA through gates. All persons inside the secure area must either be badged or escorted by badged personnel.

Exhibit 1B depicts the location of security fence and gates in the vicinity of the M. J. Kennedy Terminal. Security fencing extending from the north ties into the enclosed walkway at the terminal. There is an access-controlled gate off Arnold Avenue just north of the terminal. Security fencing from the south ties into the southwest corner of the terminal. There is another access -controlled gate in this area.



TSA Passenger Security Checkpoint

The passenger terminal is divided into sterile and non-sterile areas for passenger and baggage. Sterile areas are accessible only to staff with security clearance and ticketed passengers who have undergone screening by TSA staff. The TSA security checkpoint in the north end of the building separates the sterile area for ticket passengers from the non-sterile public areas. After their identification has been checked, passengers stage their carry-on luggage and personal items on a divest table before placing on a belt to be screened in an accessible property scanning system (APSS). While their property is being screen, passenger enter a walk-through metal detector. On the other side of the APSS, passengers gather their belongings then proceed to the hold room, unless it is determined additional inspection is necessary. In that situation, they are moved to a nearby secondary screening location for further inspection.

The other sterile area in the terminal is not accessible to the public or passengers. It is behind the ticketing area and includes airline offices, outbound baggage, and inbound baggage. The TSA is charged with screening all checked bags prior to being loaded onto an aircraft. This is currently accomplished in the outbound baggage room. After being checked at the ticket counter, bags are taken through an access-controlled door to the outbound baggage room and given to TSA personnel. Bags are then screened using explosive trace detection (ETD). Once the bag is cleared, it is placed on the outbound baggage cart and becomes the responsibility of the airline to load on the aircraft.



ETD Checked Bag Screening Equipment

TSA administrative offices are located in a separate secure area across the hallway from the airline offices.

TERMINAL AIRCRAFT APRON

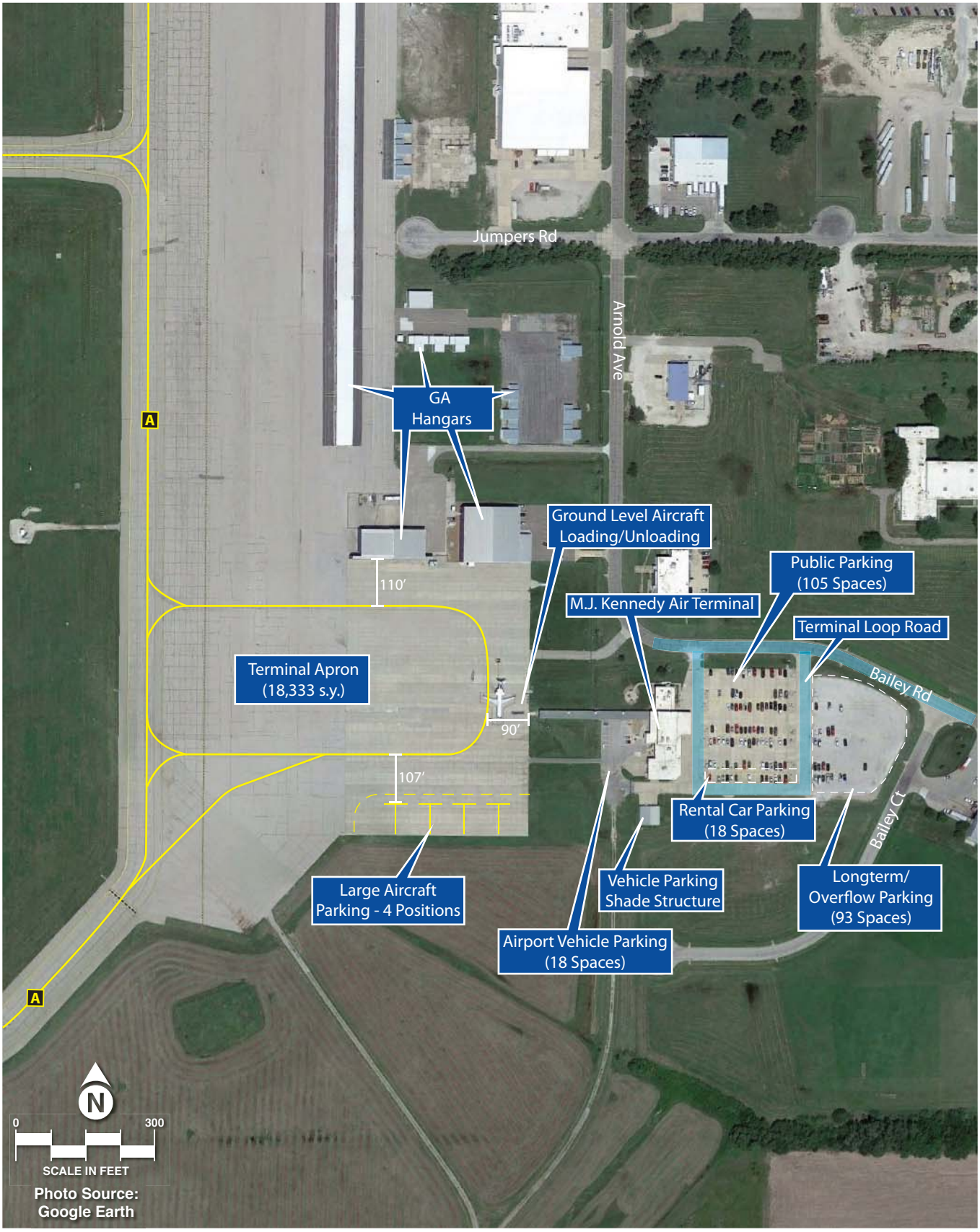
The terminal aircraft parking apron is an expanse of paved area for commercial/charter aircraft parking and circulation. Typically, the terminal apron is located near the airside entry point, such as adjacent a terminal building or FBO facility. The terminal aircraft apron at SLN is approximately 18,333 square yards, measuring 550 feet by 300 feet. The apron area includes a looping taxilane that extends from parallel Taxiway A. The terminal apron is constructed of concrete and has the strength to accommodate regular use by large commercial transport aircraft. The terminal apron is marked with a taxilane centerline, one commercial aircraft parking position and four transient parking positions for large aircraft. Fronting the north end of the terminal apron are two large conventional hangars housing airport businesses.

TERMINAL LANDSIDE ELEMENTS

There are several elements related to airport terminal functions that fall into the landside category including surface road access, terminal curb frontage, and vehicle parking. **Exhibit 1C** depicts terminal area elements outside the terminal building.

SURFACE ROAD ACCESS

Principal access to the airport terminal building is from Bailey Road which extends from Centennial Road to the east. Centennial is directly connected to three roads having interchange access with I-135 which are Magnolia Road, Schilling Road, and Water Well Road.


Jumpers Rd
Arnold Ave
GA Hangars
A
Ground Level Aircraft Loading/Unloading
Public Parking (105 Spaces)
M.J. Kennedy Air Terminal
Terminal Loop Road
110′
Terminal Apron (18,333 s.y.)
Bailey Rd
90′
107′
Rental Car Parking (18 Spaces)
Bailey Ct
Large Aircraft Parking - 4 Positions
Vehicle Parking Shade Structure
Longterm/ Overflow Parking (93 Spaces)
Airport Vehicle Parking (18 Spaces)
A
N
0
300
SCALE IN FEET
Photo Source: Google Earth

TERMINAL LOOP ROAD AND CURB FRONTAGE

Two-way access to the terminal building extends from Bailey Road. A terminal loop road passes in front of the terminal building and extends around the main terminal parking lot and terminates at Bailey Road.

The terminal curb element is the interface between the terminal building and the ground transportation system. Curb frontage is necessary for the loading and unloading of passengers and baggage. The arriving and departing curb frontage are approximately 180 feet in length. The northern half is primarily for unloading departing passengers and baggage and the southern half is for arriving passengers following baggage and/or rental car retrieval.

VEHICLE PARKING

Vehicle parking in the airline passenger terminal area of the airport includes those spaces utilized by passengers, visitors, and employees of the terminal facilities. Parking spaces are classified as public, employee, and rental car.

Public parking is available in a paved surface lot immediately east of the terminal building. This parking area contains 123 spaces, 18 of which are designated for rental cars. East of the terminal loop road is a gravel lot with 93 designated spaces for long-term/overflow vehicle parking. Immediately west of the terminal building and inside the security fence, is an 18-space parking lot for used by airport and airline vehicles and equipment. Most employees working at the terminal building park in the public parking area. Just outside the fence, immediately south of the terminal building is a three-sided shade structure used by the rental car agency for quick turn servicing of returned rental cars.

Chapter 2

COMMERCIAL SERVICE DEMAND FORECASTS



Chapter Two
COMMERCIAL SERVICE DEMAND FORECASTS

The definition of demand that may reasonably be expected to occur during the useful life of an airport's key components (e.g., runways, taxiways, terminal buildings, etc.) is an important factor in facility planning. In passenger terminal planning, this involves projecting potential commercial service airline activity over at least a 20-year timeframe. Terminal demand forecasting for Salina Regional Airport (SLN) will consider commercial arriving and departing passengers, flights, and aircraft seating capacities.

The Federal Aviation Administration (FAA) has oversight responsibility to review and approve aviation forecasts developed in conjunction with airport planning studies. In addition, aviation activity forecasts may be an important input to future environmental and benefit-cost analyses associated with airport development, and FAA reviews these analyses when federal funding requests are submitted.

The FAA will review individual airport forecasts with the objective of comparing them to its *Terminal Area Forecasts* (TAF) and the *National Plan of Integrated Airport Systems* (NPIAS). While the TAF is updated annually, it can lag in terms of significant changes in air service at a commercial service airport. Such is the case with Salina Regional Airport. In the past three years, the airport's scheduled



airline service has experienced a change first from nine-seat to 30-seat turboprops, and as of April 2018, to 50-seat regional jets. Each upgrade in aircraft has improved the level of service and resulted in both the generation of new demand and the capture of existing air travel demand that was utilizing other area airports.

This forecast effort was prepared during the third quarter of 2019. Thus, the 2018 FAA *Terminal Area Forecasts* published in February 2019 were utilized. The forecast for SLN passenger enplanements (boardings) were projected to grow from 8,459 in 2017 to 13,059 in 2040. While that long-term projection may be within reason for service by with 30-seat turboprop aircraft, enplanements in just the first half of 2019 indicate that will be exceeded by more than 20 percent during the calendar year. The current air service utilizing 50-seat regional jets for three daily flights to two large airline hub destinations is a higher level of service than has been experienced at Salina Regional Airport since at least airline deregulation 40 years ago, which was the last time SLN had scheduled commercial jet service.

The following sections of this chapter will examine the demand for air service at Salina Regional Airport moving forward. The analysis will not only examine the history of airline service at SLN, but also the air travel demand in the area currently utilizing more distant airports (leakage) that the improved air service can recapture. This will begin with an overview of trends in commercial air service on the national level, followed by an analysis of air traveler leakage from the Salina market and a review of similar regional jet markets in the Great Plains states. This will result in a forecast of passengers, flights, and aircraft fleet mix for use in evaluating the current and future passenger terminal needs at Salina Regional Airport.

NATIONAL AVIATION TRENDS

Each year, the FAA updates and publishes a national aviation forecast. Included in this publication are forecasts for the large air carriers, regional/commuter air carriers, general aviation, and FAA workload measures. The forecasts are prepared to meet the budget and planning needs of the constituent units of the FAA and to provide information that can be used by state and local authorities, the aviation industry, and the general public. The current edition when this chapter was prepared was FAA *Aerospace Forecasts – Fiscal Years 2019-2039*, published in April 2019. The FAA primarily uses the economic performance of the United States as an indicator of future aviation industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets. The following discussion is summarized from the FAA Aerospace Forecasts.

U.S. ECONOMIC OUTLOOK

Since the beginning of the century, the commercial air carrier industry has suffered several major shocks that have subsequently led to reduced demand for air travel. These shocks include the terror attacks of September 11, 2001, periods of rising fuel prices, and the most significant global economic recession since the Great Depression. To manage this period of extreme volatility, air carriers fine-tuned their business models with the aim of minimizing financial losses by lowering operating costs, eliminating

unprofitable routes and grounding older, less fuel-efficient aircraft. To increase operating revenues, carriers also initiated new services that customers are willing to purchase and unbundled other services that were typically included in the price of a ticket such as checked bags and on-board meals. The capacity discipline exhibited by carriers and their focus on additional revenue streams bolstered the industry to profitability every year since the end of the 2007-09 recession. After nearly a decade of profitability, there is confidence that the U.S. airlines have transformed from that of a capital-intensive boom-to-bust industry to one focused on solid returns on capital for more sustainable profits.

The FAA Forecast calls for passenger growth over the next 20 years to average 1.8 percent annually.

Fundamentally, demand for aviation is driven by economic activity, and a growing national and international economy provides a basis for long term growth. The FAA Forecast calls for domestic passenger growth over the next 20 years to average 1.8 percent annually.

Over the past five years, domestic passenger traffic has grown at an average of 3.6 percent annually, driven by generally positive economic conditions. The conditions appear to be easing somewhat. Factors of uncertainty in recent years related to "Brexit" and the slowdown in the Chinese economy remain. In addition, there has been a slowdown in global trade, political tensions in several countries, and economic slumps in key European nations.

With the current U.S. economic expansion about to become the longest on record, domestic growth is expected to ease back with domestic demand still supported by good financial conditions, a healthy labor market, and the effects of the tax cut in 2017. Reduced government spending is expected to provide some restraints. The U.S. economy measured in real (inflation-adjusted) gross domestic product (GDP) grew 2.8 percent in 2017 and 2.5 percent in 2018. The forecast is for an average annual rate of 1.8 percent from 2019 through 2039. The long-term stability of U.S. economic growth depends on sustained growth in the workforce and capital stock, along with improved productivity and competitiveness.

U.S. DOMESTIC AIRLINE MARKET

By year end of 2018, the U.S. commercial aviation industry consisted of 11 scheduled mainline air carriers that used large passenger jets (over 90 seats) and 54 regional carriers that used smaller piston, turboprop, and regional jet aircraft (up to 90 seats) to provide connecting passengers to the larger carriers. This is down from 15 mainline and 63 regional airlines five years earlier. Mainline and regional carriers offer domestic and international passenger service between the U.S. and foreign destinations, although regional carrier international service is confined to the border markets in Canada, Mexico, and the Caribbean.

There are four trends currently underway the airline industry will respond to: (1) selective capacity expansion; (2) steady growth of seats per aircraft, whether through up-gauging or reconfiguring existing aircraft; (3) increasing competitive pressure due to ultra-low-cost carrier expansion; and (4) increasing price discrimination through ancillary revenues and revenue management systems.

As mentioned, the 2007-09 recession triggered a significant restructuring of the U.S. airline industry, resulting in unprecedented capacity discipline focused primarily on domestic markets. From deregulation in 1978 to the turn of the century, domestic available seat miles (ASMs) grew at an average annual rate of four percent. Even though ASMs declined by 6.9 percent following the events of September 11, 2001, growth resumed with domestic ASMs 3.6 percent above the year 2000 level by 2007.

Since the recession, ASMs have increased at an average annual rate of 2.5 percent, while revenue passenger miles (RPMs) have increased at 3.1 percent annually. This has resulted in steadily increasing load factors, thus improving the bottom line.

While the ASM growth rate over the decade appears modest, the second half of the decade has experienced annual growth rates on the order of 4.6 percent. This has been driven by up-gauging, the expansion of ultra-low-cost carriers, the competitive response of the major carriers, and low fuel prices. Over the near-term, capacity restraints are likely to continue to ease as carriers have indicated planned new routes.

Regional carriers have not been able to experience the same capacity restraint as the mainline carriers. Since 2007, the mainline carriers have increased ASMs by 14.8 percent while increasing RPMs 17.8 percent. The regional airlines' capacity has increased just 0.5 percent in the same period, with passengers down 1.5 percent. The regional market has continued to shrink as they compete for fewer contracts with the remaining dominant carriers, resulting in stagnant growth and yields.

The most recent trend to take hold is that of ancillary revenues. Carriers generate ancillary revenues by selling products and services beyond that of an airplane ticket to customers. This includes the un-bundling of services previously included in the ticket price, such as checked bags and on-board meals, and by adding new services, such as boarding priority. As a result of capacity reduction and the introduction of ancillary revenue sources, U.S. passenger carriers posted net profits for the fourth consecutive year in 2013.

With fewer carriers utilizing regional feeder systems, the regionals have less leverage in contract negotiations. Many have faced pilot shortages which has resulted in reduced scheduling and increased labor costs. Turboprop aircraft in the 10- to 59-seat range are being retired with no equivalent substitutes being manufactured. Thus, the choice is either under 10-seat or 50-seat or larger aircraft.

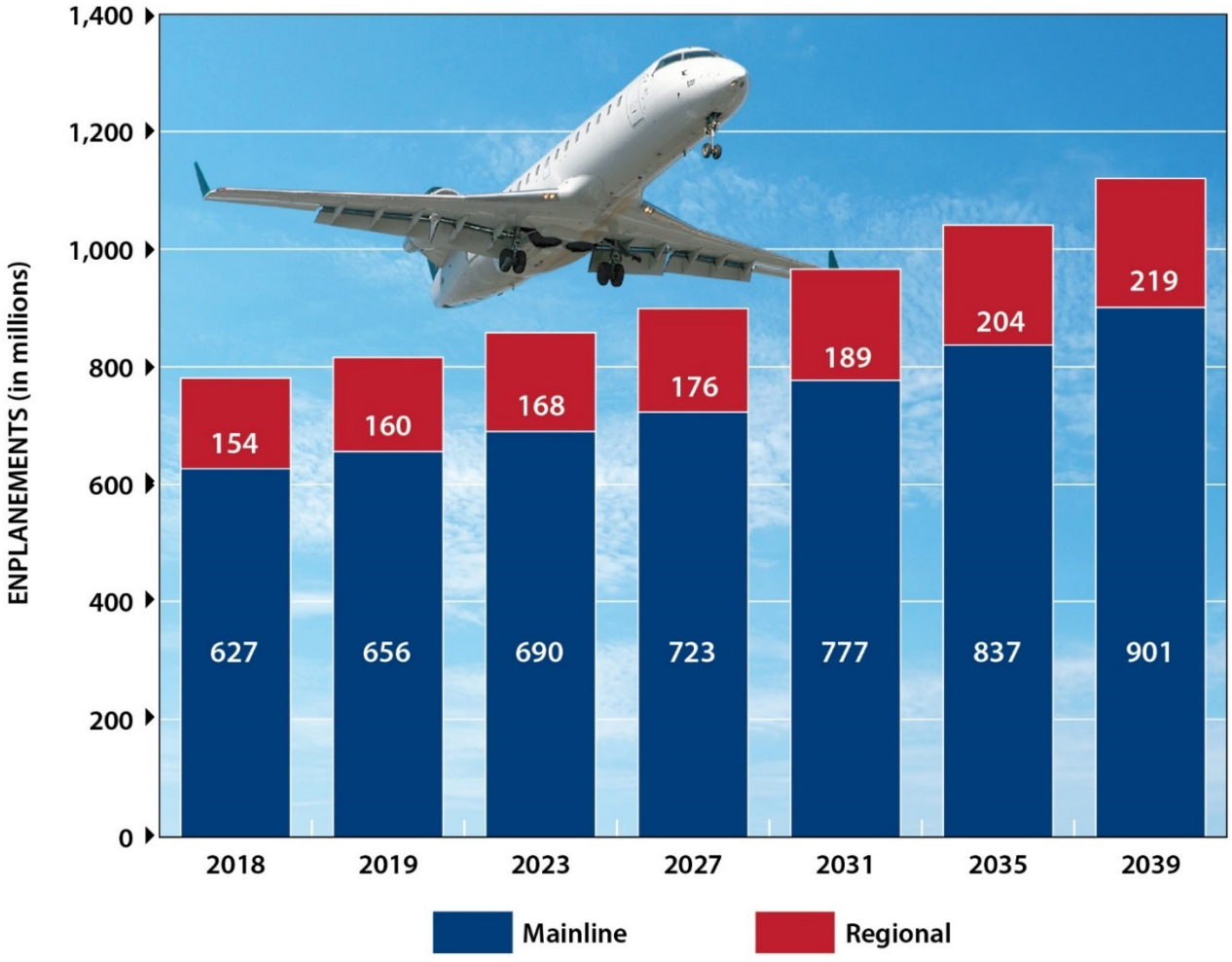
Seats per aircraft on regional airlines grew by 55 percent between 1997 and 2007 with the advent of regional jets into the system. Between 2008 and 2017, regional seats per aircraft increased by 28 percent. While regional jets are replacing some smaller turboprops, others are being replaced by the nine-seat aircraft. The average seat capacity per regional aircraft mile is projected to grow from 63.8 in 2018 to 75.4 in 2039, with the anticipation of the retiring 50-seat regional jets being replaced with regional jets of 70 seats or more.

Ancillary revenues are also an ongoing trend where airlines charge for services such as checked bags, meals, and seat selection, which were previously included in the ticket price. Other products and

services such as priority boarding and internet access also generate revenues. In addition, sophisticated revenue management systems are used by the carriers to optimally price fares by the day and time to maximize revenues. Further segmenting passenger fares based upon comfort amenities like leg room and power outlet access provides another revenue source.

Domestic load factors across the system have grown since the recession. In 2018, the domestic load factor was at its all-time high of 84.7 percent. The FAA projects the load factor to rise, but peak at approximately 86.6 percent as inherent logistical difficulties prevent growth beyond this level.

Domestic mainline enplanements are forecast to average 1.6 percent over the next twenty years. A similar growth rate is projected for regional enplanements. Thus, regional passengers are forecast to remain at approximately 20 percent of the domestic passengers over the next 20 years. **Figure 2A** charts the FAA forecast for mainline and regional passenger enplanements.



Source: FAA Aerospace Forecast - Fiscal Years 2019-2039

Figure 2A: U.S. Domestic Enplanement Forecast

HISTORIC INDUSTRY EFFECTS ON THE SALINA AIR SERVICE MARKET

The regional jet service that began in April 2018 is not actually the first time the Salina Regional Airport has been served by scheduled commercial jets. For forty years prior to the enactment of the Federal Deregulation Act of 1978, domestic interstate airline routes had been regulated as a public utility by the Civil Aeronautics Board (CAB). The CAB set fares, routes, and schedules. Less profitable routes would essentially be subsidized by more profitable routes for the good of the system. The certificated airlines were effectively guaranteed profits, but travelers were forced to pay ever-rising fares. In addition, requests for new flights were subject to bureaucratic delays that led to frustration, especially for new airline entrants into a market.

Frontier Airlines introduced the Boeing 737-200 into service at SLN in 1977. While some flights continued to be served by the 54-seat Convair 580 turboprop, jet service helped boost scheduled airline enplanements from 14,606 in 1976 to 22,318 in 1978. After deregulation, Frontier began to phase out of the Salina market, with is last flights in January 1983.

To address concerns that many of the smaller, less lucrative markets would lose service entirely, Congress added a section to the Deregulation Act that established the program that became the Essential Air Service Program (EAS). The program was designed to provide federal subsidies when needed for a minimum level of service to smaller communities. While service was maintained, most small communities, like Salina, saw a shift from 50-plus seat turboprops and 90- to 125-seat commercial jets to smaller 10- to 39-seat turboprops.

At Salina, Kansas-based Air Midwest replaced Frontier, utilizing the 19-seat Swearingen Metroliner turboprop. Scheduled enplanements in 1983 totaled 6,619.

For the next 35 years, scheduled air service at Salina Regional Airport continued to be comprised of regional/commuter airline service by turboprop aircraft, while the major airlines focused on more profitable routes and the development of a domestic hub and spoke systems. Airline mergers and bankruptcies as well as the economy, fuel costs, and a pilot shortage impacted the regional/commuter service at Salina over the years. In addition, many of the commuter turboprop aircraft stopped being produced. Scheduled air service at SLN suffered as a result.

Regional jet development was spurred in the 1990s by low fuel prices to offer better service and frequency to small-capacity long routes than the mainline commercial jet aircraft. Turboprop manufacturers developed 50-seat versions of the regional jets to fill the need, alter expanding seat capacities to fill the remaining gap, and even replace smaller mainline jet aircraft. Several regional/commuter airlines began to acquire and operate regional jets.

As turboprops began to be eliminated, the regionals and their mainline partners began to look at regional jet service into smaller markets. After initial success, the same airlines began to bid on EAS contracts using regional jets. This provided a guaranteed subsidy for operation into the market. In 2018, after Great Lakes Airlines abruptly discontinued service with 30-seat turboprops, a new EAS contract was

issued to Sky West to operate regional jets from the Salina market to Denver and Chicago, in concert with the Hays market. **Figure 2B** depicts how the changes in air service over the years has changed passenger traffic at SLN to date.

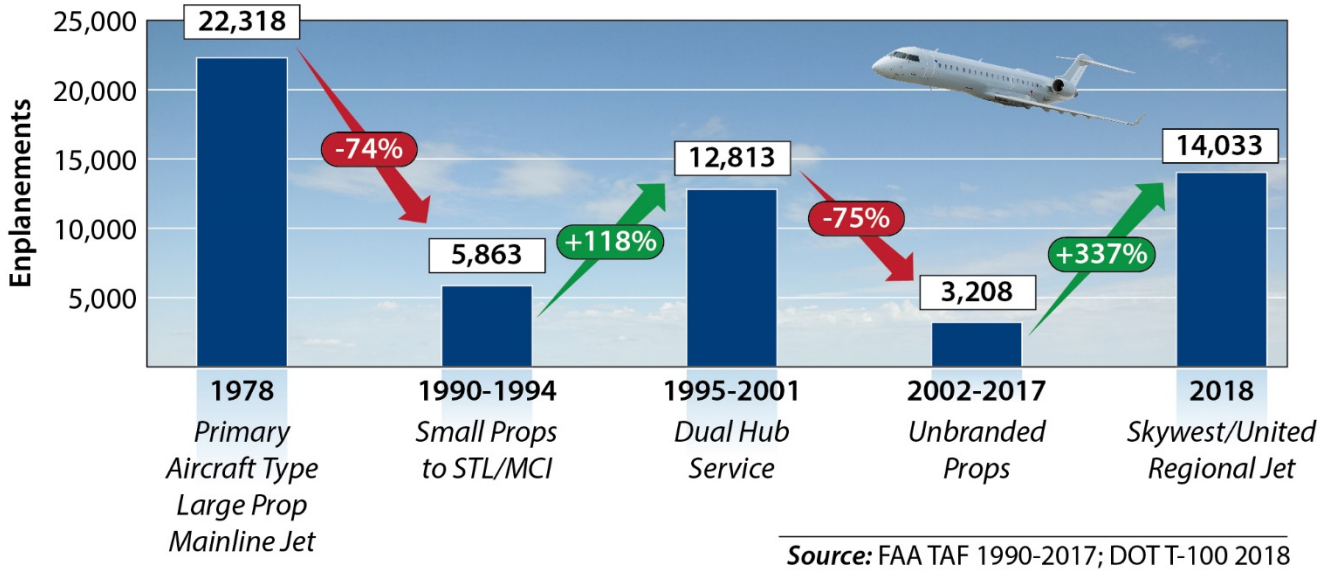


Figure 2B: Average Annual Enplanements by Era of Service at SLN

PASSENGER DEMAND AND LEAKAGE ANALYSIS

The ArkStar Group was retained to conduct a Demand and Leakage Study of the Salina Regional Airport for this forecasting effort. The firm prepared a similar study in 2017 as part of an air service analysis used to attract SkyWest Airlines (as United Express)to bid on the airport's EAS contract. This current leakage study serves as an update to the 2017 study to assist in evaluating how the transition in the quality of air service provided by regional jets has affected the capture of passengers in the Salina Regional Airport catchment area.

The 2017 study identified a catchment area (**Exhibit 2A**) of 37 zip codes in 11 counties, which skewed to the north and away from Manhattan and Wichita. This area was found to generate more than 300,000 annual origin-destination (O&D) passengers – with roughly 10,000 utilizing the service at Salina Regional Airport. This 3.4 percent capture rate represents a significant improvement over the previous study, which was conducted in 2006 and indicated roughly 1.8 percent of the area's passengers utilized SLN. **Table 2A** contains a full breakdown of the airports used by passengers in the area from the 2017 study.

With the changing dynamic of air service both at Salina and in surrounding commercial service airports, the first step of any demand and leakage analysis should include an investigation of where the passengers that utilize the airport are sourced from. A sample of 11,606 tickets purchased by credit card for travel in 2018 from central Kansas zip codes was procured from the Airline Reporting Corporation. This showed an increase of 66 percent over the approximately 7,000 tickets used in the 2017 study.

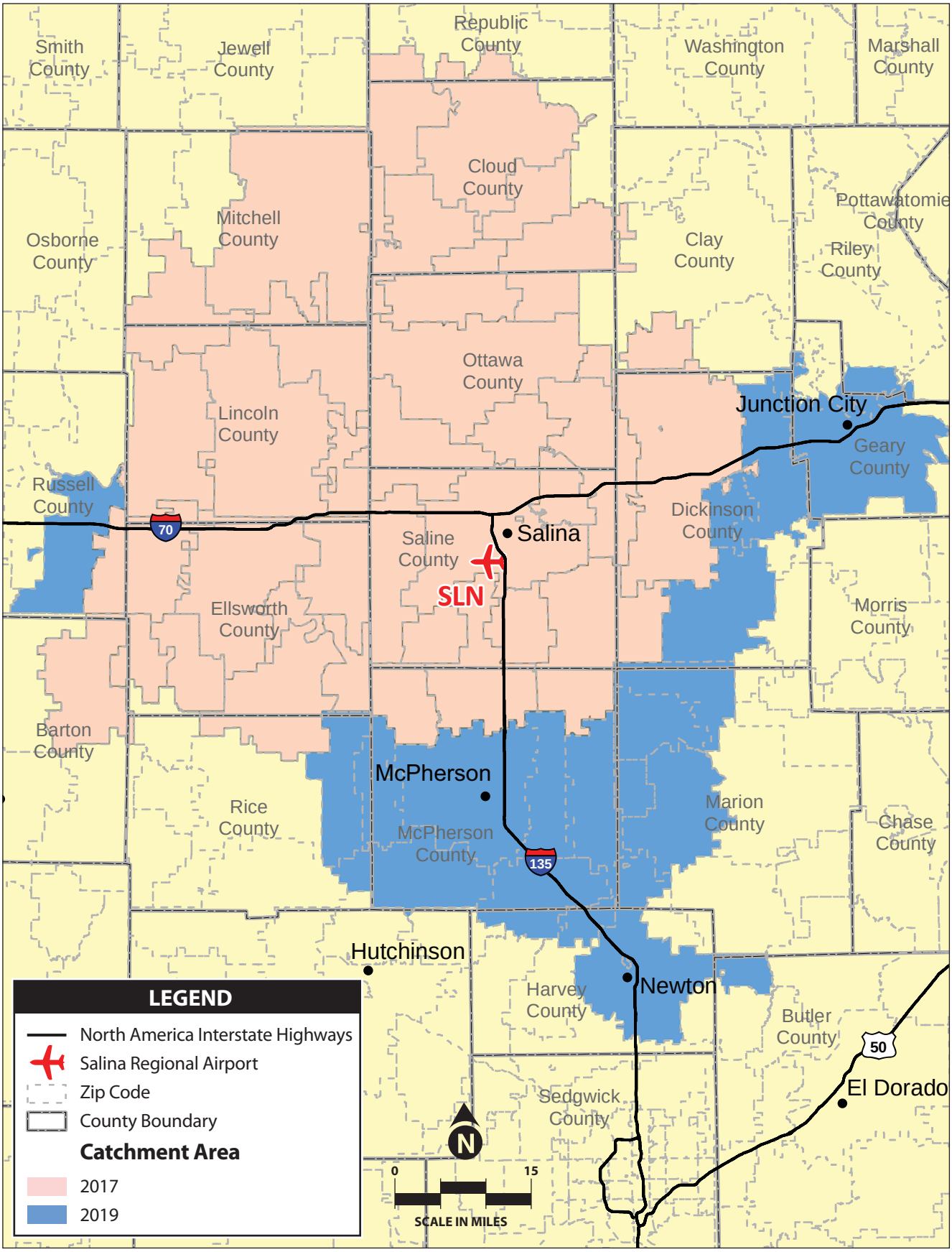


Exhibit 2A
SLN CATCHMENT AREA

TABLE 2A
SLN 2017 Catchment Area Usage by Airport*
Salina Regional Airport

Rank	Code	O&D Passengers	PDEW	Share	Fare	Rev PDEW
1	ICT	144,036	197.3	47.9%	$224	$44,197
2	MCI	120,173	164.6	39.9%	$182	$29,961
3	DEN	11,713	16.0	3.9%	$163	$26,833
4	MHK	11,510	15.8	3.8%	$281	$4,430
5	SLN	10,082	13.8	3.4%	$194	$2,679
6	OMA	2,287	3.1	0.8%	$202	$633
7	HYS	995	1.4	0.3%	$254	$346
8	LNK	43	0.1	0.0%	$273	$372
		300,839	412.1		$266	$109,452

*YE 1Q17
O&D: Origin & Destination
PDEW: Passengers daily each way
Source: *Demand Analysis, Leakage Study, and Enplanement Forecast*, ArkStar 2019

The credit card analysis indicates that Salina Regional Airport passengers originated from 67 zip codes throughout Kansas and one zip code in Nebraska. **Figure 2C** depicts the composition of SLN traffic by drive-time. While this area is broad, more than 50 percent of the traffic originated within just 24 minutes of the airport. Two-thirds of the traffic at SLN originated within a one-hour drive of the airport, and 95 percent of the traffic originated within 90 minutes.

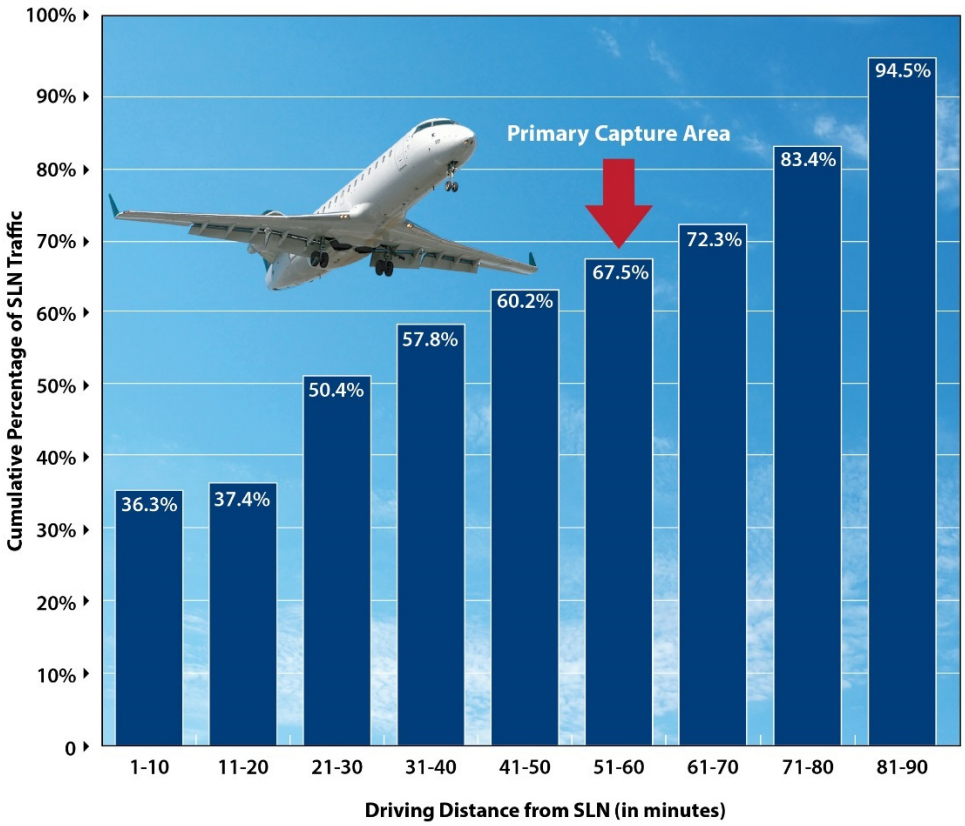


Figure 2C: Cumulative Percentage of SLN Traffic by Drive Time

The primary catchment area for SLN will be within 60 minutes of the airport.

Exhibit 2A compares the 2019 catchment area to the previous 2017 catchment area. Blue areas represent zip codes that are new to the catchment area since the previous study; these zip codes are closer to Manhattan, the oil production and refinery region of McPherson, and Wichita.

Based upon this information, this updated analysis will consider the primary catchment area to be within 60 minutes of the airport. This includes 47 zip codes in 13 counties, all located within Kansas. As indicated, the catchment area increased by ten zip codes and two counties. This reflects the increased draw due to the upgrade to regional jet service.

The analysis found that Salina Regional Airport captured 4.1 percent of passengers on a run rate basis, up from 3.4 percent in the 2017 study, even considering the increased geographic catchment area. As stated previously, Great Lakes abruptly discontinued service in 2018, resulting in a 15-day period where SLN was without commercial service. When 2018 is annualized and reflects this shutdown, the result indicates 3.0 percent of passengers that originated within 60 minutes of the airport flew from Salina Regional Airport.

With new United Airlines service introduced into central Kansas, overall regional traffic has been stimulated as well. This reflects that air service demand is growing even faster than the service (and passengers) at Salina Regional Airport, and that further opportunity exists to expand service, especially to new markets. **Table 2B** reviews the four airports - Salina Regional, Manhattan Regional, Kansas City International, and Wichita Eisenhower International - for the full year 2018.

The new updated demand and leakage analysis estimates that the overall market within 60 minutes of SLN is in excess of 919,000 annual O&D passengers, up from 301,000 in 2017.

The new updated demand and leakage analysis estimates that the overall market within 60 minutes of SLN is in excess of 919,000 annual O&D passengers, up from 301,000 in 2017. While this is a significant swing, two dynamics are at play: 1) the attractiveness of the regional jet service at SLN to two of United's largest hubs has grown the catchment area closer to the more populous Wichita and Manhattan regions; and, 2) bookings increased 28 percent in the original 37 zip codes of the 2017 SLN catchment area from 301,000 to 384,000, even with little or no growth in population.

The quality of data is considerably higher than in previous studies as United Airlines online service and related reporting provides a more credible traffic reporting base than the reporting of predecessor airlines at SLN.

The ability to travel both east and west from Salina, coupled with attractive fares as a function of aggressive pricing by United Airlines, makes SLN a newfound option for areas that are equidistant from the airports in Salina and Wichita or Manhattan. Additionally, Salina Regional Airport's westbound service to Denver International Airport offers an option different from Manhattan Regional Airport's jet service to Dallas-Fort Worth International Airport (DFW). This makes travel to western states less circuitous

from SLN. Both airports have regional jet service to Chicago O'Hare International, but on competing airlines.

TABLE 2B
SLN 2018 Catchment Area Usage by Airport*
Salina Regional Airport

Rank	Code	O&D Passengers	PDEW	Share	Fare	Rev PDEW
1	ICT	445,294	610	47.9%	$241	$146,983.96
2	MCI	393,042	538	42.3%	$188	$101,345
3	MHK	52,777	72.3	5.7%	$298	$21,516
4	SLN	27,577	37.8	4.1%	$182	$6,871
		918,690	1,258		$220	$276,716

*YE 4Q18
O&D: Origin & Destination
PDEW: Passengers daily each way
Source: *Demand and Leakage Study*, ArkStar 2019

It is evident, with substantial double-digit growth against a backdrop of 2.9 percent passenger growth amongst the four competing airports, Salina Regional Airport now captures traffic from an area that generates substantially more traffic – including areas that previously defaulted to Wichita's Eisenhower Airport.

This compares favorably, and in a confirmatory fashion, to the results found in the 2017 study. There, the same order of local airports was presented with slightly different, but directionally similar percentages, as depicted in **Table 2C**.

TABLE 2C
Run Rate Airport Share
Salina Regional Airport

	2019 Share	2017 Share
Wichita – ICT	47.9%	47.9%
Kansas City – MCI	42.3%	39.9%
Manhattan – MHK	5.7%	3.8%
Salina – SLN	4.1%	3.4%

Source: *Demand and Leakage Study*, ArkStar 2019

Wichita Eisenhower International Airport's 2019 share did not grow relative to 2017, despite the airport's enplanements growing. Traffic at Manhattan Regional Airport grew in line with capacity growth there, resulting in the two smaller airports increasing their share of the catchment area from approximately 7.0 percent to nearly 10.0 percent.

Table 2D lists the top 20 destination markets from the SLN catchment area. The Los Angeles Basin's five airports combine for the most passengers with 91.1 per day each way (PDEW). On trunk-legacy carrier routes, such as Los Angeles International Airport (LAX) and Atlanta International Airport (ATL), the abundance of service at Kansas City International Airport (MCI) acts as a magnet – this is likely due to a combination of carrier preferences, frequency options, and multiple carriers competing to drive down fares.

TABLE 2D
Top 20 Destination Metro Markets from SLN Catchment Area – Year Ended 2018
Salina Regional Airport

Rank	Airport/Multiple Airport Metro Area	Airport Codes	Passengers	Per Day Each Way
1	Los Angeles Basin	LAX/ONT/BUR/LGB/SNA	66,477	91.1
2	Las Vegas	LAS	63,520	87.0
3	Chicago	ORD/MDW	55,838	76.5
4	Phoenix / Mesa	PHX/AZA	55,523	76.1
5	Washington / Baltimore	DCA/IAD/BWI	51,064	70.0
6	Orlando	MCO/SFB	49,037	67.2
7	Denver	DEN	46,254	63.4
8	New York / Newark	LGA/EWR/JFK/HPN/ISP/SWF	45,345	62.1
9	Seattle	SEA	42,073	57.6
10	Dallas / Fort Worth	DFW/DAL	36,154	49.5
11	Atlanta	ATL	30,467	41.7
12	San Diego	SAN	28,846	39.5
13	Boston Area	BOS/MHT/PVD	25,095	34.4
14	Tampa / St. Petersburg	TPA/PIE	24,594	33.7
15	Houston	IAH/HOU	20,930	28.7
16	Portland	PDX	20,822	28.5
17	St. Louis	STL	19,300	26.4
18	Fort Lauderdale	FLL	19,281	26.4
19	Cancun	CUN	18,047	24.7
20	Nashville	BNA	17,525	24.0

Source: *Demand and Leakage Study*, ArkStar 2019

Las Vegas is next at 87.0 PDEW. The majority of these passengers are currently captured by Wichita Mid-Continent Airport (ICT), which has nonstop service provided by both Southwest and Allegiant.

A similar phenomenon exists when Wichita has a relatively unique service, such as Alaska Airlines, to Seattle International Airport (SEA). Without a substantial presence in Kansas, Alaska is likely to discount fares for point-of-sale in Kansas in order to boost loads in a market like Wichita.

Third is the Chicago market, where O'Hare and Midway Airports combine for 76.5 passengers each way. Salina has a single daily non-stop flight to O'Hare, which can capture one in five passengers. While SLN has two daily one-stop flights to Denver, the seventh ranked market in the catchment area, it captures just six percent of the passengers. This can partially be attributed to the difference in service, but the competitive dynamic at the other regional airports must also be considered. Frontier Airlines, an ultra-low-cost carrier, serves Denver from both Wichita and Kansas City. The competition spurred by their presence, especially at Kansas City with multiple daily frequencies, suggests that the one-stop service through Hays (HYS) affects SLN's potential growth in the Denver market and other westbound destinations.

The remaining top five destination markets include Phoenix (76.1 PDEW) and Washington/Baltimore (70.0 PDEW). Out of the top 20 markets, 515.8 PDEW are eastbound (O'Hare connection) and 492.7

PDEW are westbound (Denver connection). United also has a hub in Houston Bush Intercontinental Airport (IAH) that could potentially serve east Texas destinations as well as others in the southeast United States and Latin America. There are 271.9 PDEW that could readily connect through IAH, including 24.7 PDEW for Cancun, Mexico

COMPARABLE AIRPORTS ANALYSIS

The ArkStar Group's demand and leakage analysis provided the current commercial air travel demand from the Salina Regional Airport catchment area. The analysis also determined that the leakage to other airports has declined since the initiation of regional jet service in April 2018. To examine the potential for recapture of additional passengers as the service becomes more established and potentially expands in routes, flights, and seating capacity, other airports with similar air service improvements in the past were examined.

The focus was placed on airports across the Great Plains states that have upgraded from turboprop to regional jet service since 2007. **Exhibit 2B** depicts seventeen airports, plus SLN, across five Great Plains states that meet that criteria. Besides SLN, four are in Kansas, four in Nebraska, two in New Mexico, four in North Dakota, and three in South Dakota.

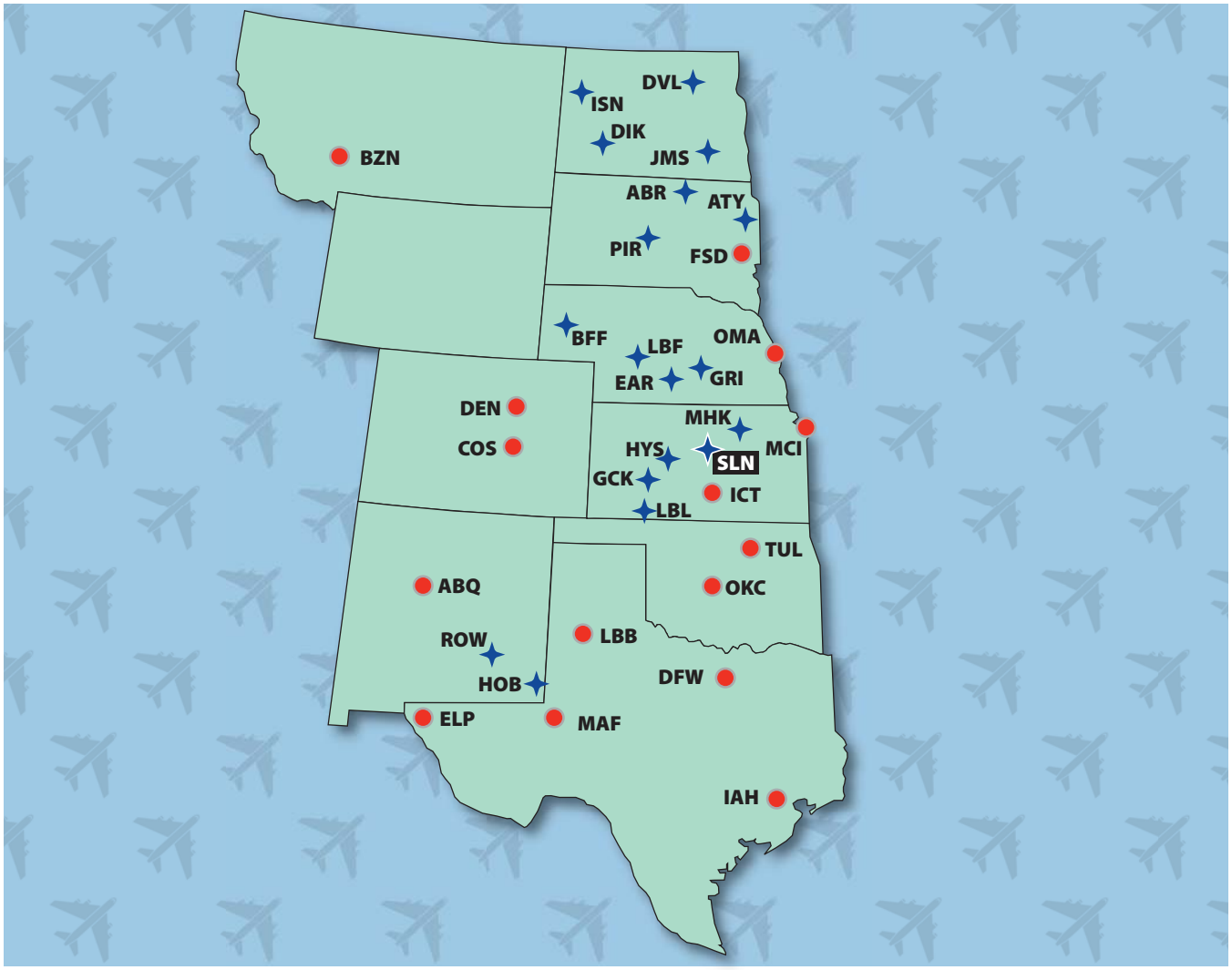
The exhibit also depicts commercial service airports classified as hubs by the FAA to relate to the distance from the small community airports to airports with a significantly greater level of air service. Hubs are defined by the FAA as airports enplaning at least 0.05 percent of the annual passenger boardings in the U.S.

Exhibit 2C lists basic comparable information about each community and its regional jet service. Salina is one of eight small community airports that have initiated regional jet service just since 2017. This includes three in Kansas, three in Nebraska, and two in South Dakota. Two others in North Dakota have had regional jet service since 2014, but their population centers are significantly smaller than Salina's.

The other eight airports have had regional jet service since at least 2013. These include two in Kansas, one in Nebraska, two in New Mexico, and one in South Dakota. Because of their longer histories with regional jet service and the comparative size of their core-based statistical areas, these eight airports were examined in-depth with regards to the growth of their passenger traffic after the initiation of regional jet service.

Data for each of these eight airport markets, along with Salina, was collected regarding scheduled passenger enplanements, departure flights, and seat capacity. For consistency, airport traffic data was derived from Schedule T-3 or Schedule T-100 databases as collected by the Department of Transportation (DOT) by the Bureau of Transportation Statistics (BTS).

In addition, key annual demographic and economic information was collected for each market's core-based statistical area. This included population, total employment, real per capita personal income



✦ REGIONAL JET AIRPORTS

ABR - Aberdeen Regional Airport
ATY - Watertown Regional Airport
BFF - Western Nebraska Regional Airport (Scottsbluff)
DIK - Theodore Roosevelt Regional Airport (Dickinson)
DVL - Devil's Lake Regional Airport
EAR - Kearney Regional Airport
GCK - Garden City Regional Airport
GRI - Central Nebraska Regional Airport (Grand Island)
HOB - Lea County Regional Airport
HYS - Hays Regional Airport
ISN - Sloulin Field International Airport (Williston)
JMS - Jamestown Regional Airport
LBF - North Platte Regional Airport
LBL - Liberal Mid-America Regional Airport
MHK - Manhattan Regional Airport
PIR - Pierre Regional Airport
ROW - Roswell International Air Center
SLN - Salina Regional Airport

● HUB AIRPORTS

ABQ - Albuquerque International Sunport
BZN - Bozeman Yellowstone International Airport
COS - Colorado Springs Municipal Airport
DEN - Denver International Airport
DFW - Dallas/Fort Worth International Airport
ELP - El Paso International Airport
FSD - Sioux Falls Regional Airport
IAH - George Bush Intercontinental Airport
ICT - Wichita Dwight D. Eisenhower National Airport
LBB - Lubbock Preston Smith International Airport
MAF - Midland International Air and Space Port
MCI - Kansas City International Airport
OKC - Will Rogers World Airport
OMA - Omaha Eppley Airfield
TUL - Tulsa International Airport

Exhibit 2B
GREAT PLAINS REGIONAL JET AIRPORTS

Airport	Core-Based Statistical Area	Counties	2018 Estimated Population	Closest NPIAS Hub Airport	Essential Air Service	Scheduled Jet Service Start-up	Current Airlines	Current Destinations/ Daily Flights	Currrent Aircraft/ Seats	2018 Enplanements
SLN	Salina, KS Micro	Saline, Ottawa	60,203	ICT-96 mi	Yes	April 2018	United Express	DEN/2, ORD/1	CRJ200/50	11,672
GCK	Garden City, KS Micro	Finney, Kearney	40,554	ICT-201 mi	Yes	2012	American Eagle	DFW/2	ERJ140/44	25,084
HYS	Hays, KS Micro	Ellis	28,710	ICT-188 mi	Yes	April 2018	United Express	DEN/2, ORD/1	CRJ200/50	11,911
LBL	Liberal, KS/Guymon, OK Combined Micro	Seward, Texas	42,235	ICT-206 mi	Yes	February 2018	United Express	DEN/2	CRJ200/50	5,169 (11 mos)
MHK	Manhattan, KS Metro	Geary, Pottawatomie, Riley	130,574	MCI-130 mi	No	2009	American Eagle	DFW/3, ORD/3	ERJ140/44; ERJ145/50; CRJ7700/65	70,459
BFF	Scottsdbluff, NE Micro	Banner, Scotts Bluff	35,989	DEN-194 mi	Yes	February 2018	United Express	DEN/2	CRJ200/50	13,234
EAR	Kearney, NE Micro	Buffalo, Kearney	56,159	OMA-188 mi	Yes	September 2018	United Express	DEN/2	CRJ200/50	4,506 (4 mos)
GRI	Grand Island, NE Metro	Hall, Howard, Merrick	76,195	OMA-151 mi	Yes	2008*/2011	Allegiant, American Eagle	LAS/1*, IWA/1*, DFW/3	A319/156, A320/177, ERJ135/37, ERJ145/50	85,088
LBF	North Platte, NE Micro	Lincoln, Logan, McPherson	35,185	DEN-257 mi	Yes	February 2018	United Express	DEN/2	CRJ200/50	13,003
HOB	Hobbs, NM Micro	Lea	69,611	MAF-91	No	2011	United Express	IAH/2; DEN/1	ERJ145/50; CRJ200/50	23,413
ROW	Roswell, NM Micro	Chaves	64,889	LBB-189 mi	No	2007	American Eagle	DFW/3; PHX/1	CRJ700/65	56,607
DVL	Devils Lake, ND County	Ramsey	11,481	FSD-402 mi	Yes	2014	United Express	DEN/2	CRJ200/50	6,628
DIK	Dickinson, ND Micro	Billings, Stark	30,997	BZN-369 mi	Yes	2013	United Express	DEN/2	ERJ145/50	22,576
JMS	Jamestown, ND Micro	Stutsman	20,917	FSD-306 mi	Yes	2014	United Express	DEN/2	CRJ200/50	11,759
ISN**	Williston, ND Micro	Williams	35,350	BZN-467 mi	No	2012	United Express, Delta Connection	DEN/3; MSP/2	ERJ145/50	73,844
ABR	Aberdeen, SD Micro	Brown, Edmunds	43,191	FSD-203	Yes	2010	Delta Connection	MSP/2	CRJ200/50	27,688
ATY	Watertown, SD Micro	Coddington, Hamlin	34,073	FSD-103	Yes	2017	United Express	DEN/2	CRJ200/50	11,485
PIR	Pierre, SD Micro	Hughes, Stanley	22,064	FSD-223 mi	Yes	2017	United Express	DEN/2	CRJ200/50	29,932

*Note: Allegiant Flights are each 2x/week

**New Williston Basin Int'l Airport to open Oct 2019

Metro - Metropolitan Area
Micro - Micropolitan Area

AIRPORT LEGEND

SLN - Salina Regional Airport
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ABR - Aberdeen Regional Airport
ATY - Watertown Regional Airport
PIR - Pierre Regional Airport
BZN - Bozeman Yellowstone International Airport
FSD - Sioux Falls Regional Airport
LBB - Lubbock Preston Smith International Airport
MCI - Kansas City International Airport
DEN - Denver International Airport
ICT - Wichita Dwight D. Eisenhower National Airport
MAF - Midland International Air and Space Port
OMA - Omaha Eppley Airfield
IAH - Houston Bush International Airport

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(PCPI in 2012$), and real gross regional product (GRP in 2012$). This information was collected from historic data available through Woods & Poole and the United States Census Bureau.

Annual data was collected from 2003 through 2018. In addition, the same data was collected for the years just prior to airline deregulation (1975-1978) as well as the fifth year after (1983). The complete database for each airport is attached as **Appendix A**.

Exhibit 2D provides a graphic depiction of enplanements at the eight airports and SLN since 2003. Prior to 2007, each airport was served exclusively by turboprop aircraft of 30 seats or less. In almost every case, it can be readily discerned when daily regional jet service was initiated. Roswell (ROW) was the earliest with regional jet service beginning in 2007. Manhattan (MHK) was next in 2010. Grand Island (GRI) initiated scheduled jet service by Allegiant Airlines using MD-80s in 2008 two days a week. Daily regional jet service at GRI, however, did not begin until 2011 under the EAS. Hobbs (HOB) and Aberdeen (ABR) started regional jet service in 2011. Garden City (GCK) and Williston (ISN) initiated scheduled daily regional jet service in 2012. Dickinson's (DIK) daily regional jet service began in 2013.

Aberdeen Regional Airport (ABR) - Aberdeen had more than double the enplanements of any of the other eight airports prior to initiation of jet service. It also had significantly more seat capacity than the others prior to jet service. Overall, ABR showed the least dramatic change in passengers after jet service was initiated. Garden City was the only other airport to not experience a significant change in seat capacity after the regional jet start-up. Still, GCK enplanements more than doubled by the first full year of regional jet service, although they have flattened out since 2015.

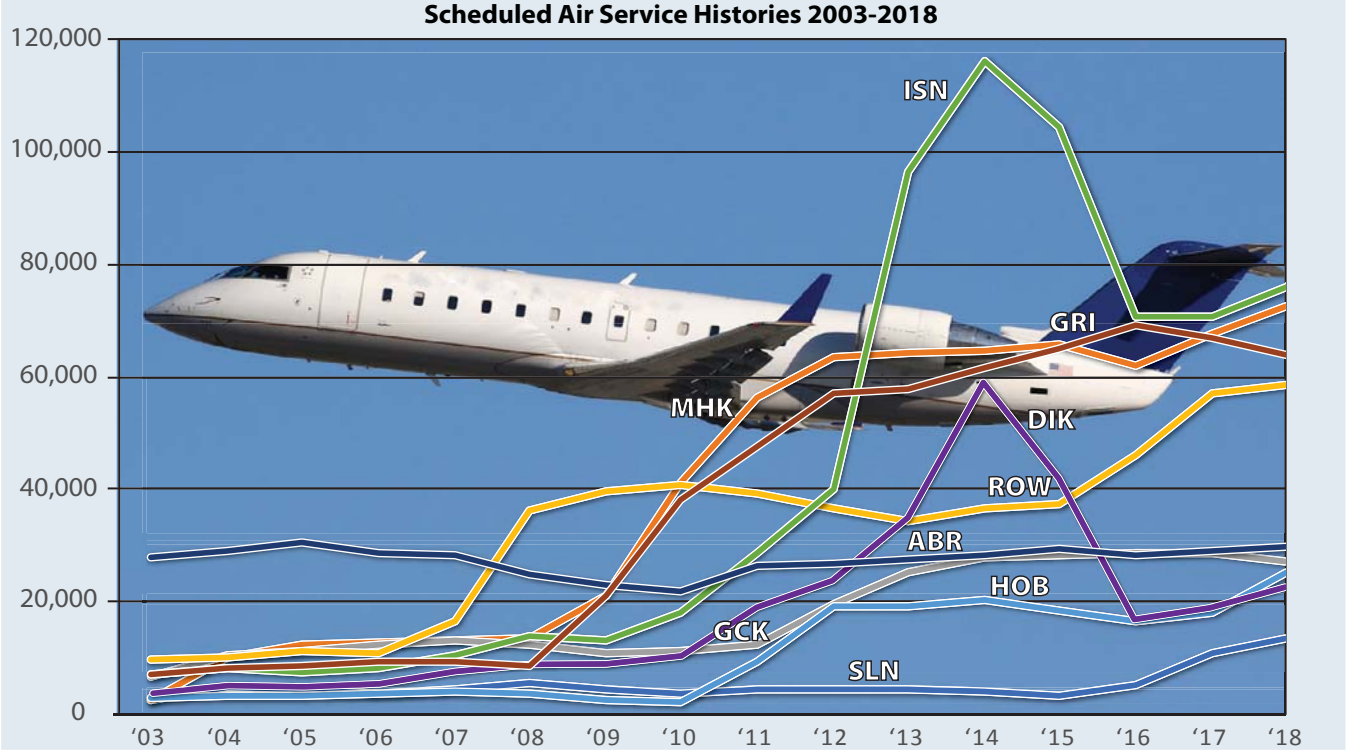
Sloulin Field International Airport (ISN) -The most dramatic change occurred at Sloulin Field in Williston. Located in the heart of the North Dakota oil boom which began in 2006, ISN's scheduled traffic was growing rapidly even with turboprop service. Regional jet service began at the peak of the boom in 2012, and enplanements jumped from 26,810 in 2011 to 114,182 in 2014. From 2005 to 2015, the population of the Williston micropolitan area grew from 19,855 to 35,301.

Employment grew from 13,881 in 2005 to 48,931 at its peak in 2014. Real PCPI nearly tripled, and real GRP grew 11-fold. As the initial boom subsided and oil prices dropped, however, so did the local economy and scheduled enplanements. The population has flattened out at around 35,000, and employment has fallen at a similar rate. Real PCPI is down 36 percent and real GRP is down 46 percent from their peaks. Enplanements are growing again, but at 73,844 in 2018, are still down 35 percent from the peak.

The runway length at ISN was constrained to 6,650, limiting the capabilities of even 50-seat regional jets. Many times, the aircraft would be forced to depart with up to 15 empty seats. A replacement airport was constructed and opened in October 2019 with a 7,500-foot primary runway and a 110,000 square-foot terminal designed for 350,000 annual passengers (enplanements and deplanements).

Theodore Roosevelt Regional Airport (DIK) - Dickinson is in the southern portion of the Williston Basin in North Dakota. When the oil boom started, the Dickinson micropolitan area had a slightly larger

Scheduled Air Service Histories 2003-2018



LEGEND

- **SLN** Salina Regional Airport, Salina, KS
- **MHK** Manhattan Regional Airport, Manhattan, KS
- **GCK** Garden City Regional Aiport, Garden City, KS
- **ROW** Roswell International Air Center, Roswell, NM
- **DIK** Theodore Roosevelt Regional Airport, Dickinson, ND
- **HOB** Lea County Regional Airport, Hoibbs, NM
- **ISN** Sloulin Field International Airport, Williston, ND
- **ABR** Aberdeen Regional Airport, Aberdeen, SD
- **GRI** Central Nebraska Regional Airport, Grand Island, NE

YEAR	SLN	MHT	GCK	ROW	HOB	ISN	ABR	GRI	DIK
2003	618	460	4,756	7,677	921	5,184	25,976	5,266	3,710
2004	2,802	8,088	8,677	8,350	1,213	6,157	27,155	6,120	5,056
2005	2,346	10,397	9,338	9,198	1,533	5,548	28,531	6,679	4,840
2006	1,854	10,860	10,431	8,850	1,843	6,443	26,546	7,426	5,386
2007	2,504	11,313	11,195	14,650	2,119	8,444	26,387	7,374	7,573
2008	3,673	11,649	10,368	34,198	1,754	11,965	22,950	6,614	8,834
2009	2,447	19,225	9,004	37,595	715	11,229	20,924	19,240	8,918
2010	1,698	39,246	9,307	38,741	333	16,140	20,087	36,295	10,347
2011	2,645	54,340	10,380	37,262	7,346	26,810	24,480	45,549	18,994
2012	2,546	61,671	17,500	34,593	17,086	38,151	24,763	55,081	23,729
2013	2,361	62,130	23,436	32,543	17,235	94,391	25,549	55,709	34,932
2014	2,149	62,737	25,816	34,565	18,233	114,182	26,388	59,778	58,954
2015	1,221	63,764	26,446	35,411	16,565	102,323	27,474	63,168	41,895
2016	3,257	60,142	26,783	44,191	14,705	68,855	26,529	67,309	16,822
2017	8,877	65,685	26,687	55,211	16,214	68,843	26,946	64,935	18,888
2018	11,672	70,459	25,084	56,607	23,413	73,844	27,688	61,739	22,576

Exhibit 2D
SCHEDULED AIR SERVICE HISTORIES 2003-2018

population (23,444) than Williston. Its population peaked slightly lower than Williston at 32,798 in 2015. Employment was also higher at 17,149 in 2005, but peaked lower at 32,729 in 2014. The real PCPI grew 150 percent at its peak in 2014, while real GRP increased five-fold. Regional jet service was initiated in 2013, and enplanements jumped from 23,729 in 2012 to 58,954 in 2014. As with Williston, that was the peak year and enplanements fell to just 16,822 in 2016, though they recovered to 22,576 by 2018. Population has flattened and employment has declined by 5,000. In 2018, real PCPI was down 32 percent from its peak, and real GRP was down 36 percent. While DIK remains in the EAS program, ISN is not.

Manhattan Regional Airport (MHK) - The most populated of the eight comparison markets are Manhattan and Grand Island. The Manhattan metropolitan area had a population of 130,574 in 2018, more than double that of Salina's micropolitan area. Similarly, its employment of 89,557 in 2018 is also more than double Salina. However, at $42,933, real PCPI is very comparable to Salina. The initiation of regional jet service in 2010 increased enplanements from 19,225 in 2009 to 54,340 in 2011. An additional daily flight added in 2012 increased available seats and passengers to 63,764 by 2015. In 2017, seating capacity was increased once again with the addition of 66-70-seat aircraft, and traffic responded with an increase to 70,459 enplanements by 2018. MHK is not in the EAS program.

Central Nebraska Regional Airport (GRI) - Grand Island is the second most populated market, with the 2018 metropolitan area population estimated at 76,195. Allegiant Airlines moving its twice-weekly service from Lincoln, Nebraska to GRI in 2008 increased enplanements from 6,614 in 2008 to 36,295 by 2010. American Eagle was awarded the airport's EAS contract in 2011 and began service with 44- and 50-seat regional jets. By 2012, annual passengers had increased to 55,081. Seat capacity was increased in 2016 and enplanements peaked at 67,309. Since then, seat capacity has reduced back to previous levels, but enplanements remained above 61,000 in 2018. While the real PCPI ($40,017) for the Grand Island metro area is lower than that of Salina's ($43,536), its real GRP is higher in general proportion to population.

Garden City Regional Airport (GCK) - As mentioned, the initiation of regional jet service at Garden City more than doubled annual enplanements between 2011 and 2013, even though flights decreased by two-thirds and seat capacity was reduced by 19 percent. American Eagle provides EAS service with 44- and 50-seat regional jets. While daily flights have remained at two to Dallas-Ft. Worth Airport, the seating capacity increased as more 50-seat aircraft were used. Since 2016, however, enplanements have declined slightly from 26,783 to 25,084 in 2018 with the airline switching back to using more 44-seat jets. It should be noted that Sky West operating as United Express began regional jet service from Liberal (LBL) to Denver (DEN) in February 2018 under an EAS contract. This may be having an impact on passengers at GCK as passengers were down eight percent in the first six months of 2019.

Garden City's micropolitan area population of 40,554 is the third smallest of the nine communities, with just Williston and Dickinson smaller. Its employment is the smallest, and its real PCPI is higher than just the two communities in New Mexico. In addition, Garden City's real GRP is the lowest of all nine communities.

Roswell International Air Center (ROW) - The two remaining air service markets in the comparison are both located in eastern New Mexico. Hobbs at 69,611 and Roswell at 64,689, respectively, are the micropolitan areas closest in population to Salina. Neither airport is in the EAS program anymore, although HOB elected to leave EAS, and county and city governments are subsidizing the current jet service to Houston by United Express. Roswell is served by American Eagle with flights currently to both DFW and Phoenix (PHX).

ROW was the earliest of the nine airports to initiate regional jet service, beginning in 2007. Between 2006 and 2008, enplanements increased nearly four-fold from 8,850 to 34,198. Despite a decrease in flights, seat capacity with the 44- and 50-seat regional jets nearly doubled. Roswell traffic leveled out around 35,000 until PHX was added as a second destination. In 2017, 70-seat regional jets added more seats to the market and traffic rose to 56,607 in 2018. Traffic in the first six months of 2019 appears to be on pace for 65,000 enplanements for the year. While Roswell's population is slightly higher than Salina's, its real PCPI is the lowest of the comparison airports and its real GRP is only slightly higher than Garden City. However, its enplanements were the fourth highest in 2018. This may be at least partially attributable to its proximity to the Sierra Blanca mountain range. Although not within the Roswell micropolitan area, Ruidoso, in the heart of this popular central New Mexico recreation and tourist attraction, is just 78 miles from ROW.

Lea County Regional Airport (HOB) - Air service at HOB had become practically non-existent in 2010. The community successfully recruited Continental Airlines to initiate regional jet service to Houston in 2012. After Continental was purchased by United Airlines, the service continued as United Express. Located on the Permian Oil Basin, the Hobbs micropolitan area of Lea County has a growing energy economy including both fossil fuels and renewable energy resources. In 2018, Lea County was the second largest oil-producing county in the nation second only to McKenzie County. (McKenzie County is located across the river from Williston but is not included in the same micropolitan area.) Houston was chosen as the destination to locally subsidize because of it is headquarters for many energy companies. IAH also has international air service connections to energy engineering firms in Europe. In the first full year of regional jet service, HOB had 17,086 enplanements. The airport experienced a slight dip when oil prices declined in 2015 and 2016, but by 2018, enplanements reached 23,413. With the local economy on the rebound, United Express started a flight to a second destination (DEN) in October 2019. With traffic already up nearly 14 percent in the first half of 2019, enplanements could readily exceed 28,000 for the year.

While the population of the Hobbs micropolitan area is about 9,000 more than Salina, its employment is approximately 3,500 less. Salina's PCPI is 16 percent higher, but its GRP is 41 percent lower than the HOB market. Both markets are just over 90 miles from the closest small hub airport.

SLN PASSENGER ENPLANEMENT FORECASTS

Fluctuating enplanement activity at SLN driven by air service inconsistencies over the years makes it very difficult to utilize traditional forecast methods such as trend line, correlation, and regression analyses. Instead, the results of the comparable airports after initiating regional jet service were examined.

A series of correlations were run comparing the relationship of enplanements at the eight airports to the socioeconomic variables of population, employment, real PCPI, and real GRP of each comparison market. Unfortunately, none of the economic variables yielded a strong enough correlation to be able reasonably predict enplanements.

Still, to forecast the potential growth of passenger enplanements that regional jet service will have at Salina Regional Airport, the history of success or lack thereof, at the eight comparison airports was further examined. This included an examination of the change in the propensity to travel after regional jet service was initiated and when seat capacity or flight destinations were increased. Future growth aligned with growth of the domestic airline industry and local economic growth will also be factored into the forecasts.

TRAVEL PROPENSITY FACTOR

There are a variety of local factors that can affect the potential for passengers within an area. A key statistic is the relationship between an airport's enplanement levels to the populace it serves. This ratio of enplanements to population is often termed the Travel Propensity Factor (TPF). **Table 2E** presents a review of the TPF for the Salina micropolitan statistical area and the core-based statistical areas of the eight comparison airports over the years dating back to before deregulation.

This ratio of enplanements to population is often termed the Travel Propensity Factor (TPF).

As the demand and leakage analysis indicates, the catchment area for passengers can extend beyond the local area. Still, the core-based statistical area typically generates 50 percent or more of the airport's passengers. The higher the TPF, the higher the draw of passengers.

In reviewing the TPF for SLN, it was at its highest in 1978, the last year before deregulation began to be implemented. The 0.403 TPF is more than double the 2018 figure of 0.194. In fact, Salina's TPF in 1978 was higher than either Garden City or Manhattan. In 2018, both were higher than SLN with GCK at 0.619 and MHK at 0.540, as both airports have had regional jet service since at least 2012.

Williston had a similar TPF at 0.399 when compared to SLN prior to deregulation, even though the airport was served only by 19-seat turboprops at the time. With the oil boom and the initiation of regional jet service, however, its TPF skyrocketed to 3.189 in 2013, but has since declined to 2.089. Dickinson, with the other comparable airport in the Williston Basin of North Dakota, reached 1.195 at its peak in the oil boom and has declined to 0.728 since.

In the Permian Oil Basin, the airport at Hobbs, New Mexico only had a 0.130 TPF even though it had commercial jet flights prior to deregulation. After the introduction of regional jets, the TPF reached 0.336 by 2019, and should reach 0.400 in 2019. The TPF is likely to go higher after a full year of service to Denver. Roswell had a 0.520 TPF with jet service before deregulation. After the first full year of regional jet service in 2008, its TPF was a similar 0.531. With the addition of a second destination in Phoenix, as well as additional capacity with 66-seat aircraft, the TPF reached 0.875 in 2018.

Table 2E
Travel Propensity History
Comparable Great Plains Airports

	Pre-Deregulation		Post-Deregulation				
	1975	1978	1983	2003	2008	2013	2018
SLN - SALINA, KS [MICRO]							
Enplanements	13,618	22,318	6,619	618	3,673	2,361	11,672
Seats	57,888	125,810	43,385	17,195	24,719	7,317	37,954
Population (000s)	55,308	55,430	55,542	60,171	60,948	61,853	60,203
TPF	0.246	0.403	0.119	0.010	0.060	0.038	0.194
GCK - GARDEN CITY, KS [MICRO]							
Enplanements	5,273	8,987	7,700	4,756	10,368	23,436	25,084
Seats	38,070	46,359	45,239	34,841	32,927	31,964	33,032
Population (000s)	24,798	26,592	32,851	41,950	39,370	40,996	40,554
TPF	0.213	0.338	0.234	0.113	0.263	0.572	0.619
MHK - MANHATTAN, KS [MSA]							
Enplanements	26,355	34,044	15,107	460	11,649	62,130	70,459
Seats	109,134	123,436	69,381	35,777	33,687	83,859	95,494
Population (000s)	107,248	108,545	114,143	109,379	120,604	136,160	130,574
TPF	0.246	0.314	0.132	0.004	0.097	0.456	0.540
GRI - GRAND ISLAND, NE [MSA]							
Enplanements	29,136	45,031	36,018	5,266	6,614	55,709	61,739
Seats	164,554	172,820	201,298	22,230	19,383	67,115	77,088
Population (000s)	61,070	62,371	64,835	68,592	70,790	74,776	76,195
TPF	0.477	0.722	0.556	0.077	0.093	0.745	0.810
HOB - HOBBS, NM [MICRO]							
Enplanements	4,827	7,111	4,298	921	1,754	17,235	23,413
Seats	29,976	48,484	29,070	11,742	7,200	28,717	33,858
Population (000s)	52,066	54,660	66,174	56,643	62,737	68,173	69,611
TPF	0.093	0.130	0.065	0.016	0.028	0.253	0.336
ROW - ROSWELL, NM [MICRO]							
Enplanements	20,988	25,204	11,882	7,677	34,198	32,543	56,607
Seats	95,762	94,230	44,620	37,791	47,299	46,702	81,822
Population (000s)	46,633	48,487	56,267	61,248	64,378	65,836	64,689
TPF	0.450	0.520	0.211	0.125	0.531	0.494	0.875
DIK - DICKINSON, ND [MICRO]							
Enplanements	*	*	*	3,710	8,834	34,932	22,576
Seats	-	-	-	35,473	53,978	74,583	31,700
Population (000s)	21,659	22,810	29,152	23,251	24,143	29,230	30,997
TPF	-	-	-	0.160	0.366	1.195	0.728
ISN - WILLISTON, ND [MICRO]							
Enplanements	4,037	8,197	*	5,184	11,965	94,391	73,844
Seats	19,893	28,405	-	29,376	34,650	126,552	86,900
Population (000s)	19,343	20,556	27,250	19,705	20,928	29,599	35,350
TPF	0.209	0.399	-	0.263	0.572	3.189	2.089
ABR - ABERDEEN, SD [MICRO]							
Enplanements	34,788	39,211	24,987	25,976	22,950	25,549	27,688
Seats	181,934	183,556	90,202	94,533	51,813	36,420	37,100
Population (000s)	43,463	42,997	41,495	39,419	39,915	42,255	43,191
TPF	0.800	0.912	0.602	0.659	0.575	0.605	0.641

*No Reported T-3 or T-100 Scheduled Air Service
TPF: Travel Propensity Factor
Sources: Enplanements/Seats - 1975-1983: Airport Activity Statistics, Schedule T- 3, Civil Aeronautics Board (CAB); 2003-2018: T-100 Database Bureau of Transportation Statistics (BTS)
Population - Intercensal Population Estimates, U.S. Census Bureau

Grand Island followed a similar track to Roswell. With jet service prior to deregulation, the Grand Island TPF was 0.722. With daily scheduled regional jet service initiated in 2011, the TPF was back to 0.745 by 2013, and reached 0.810 in 2018.

Aberdeen experienced a TPF of 0.912 with jet service in 1978. The airport actually had a higher seat capacity prior to the start of regional jet service in 2010 and fluctuated around 0.600 TPF both before and after. In 2018, the TPF was 0.641.

Overall, the average TPF of the eight airports and their core markets in 2018 was 0.735. If Williston is discounted due to its disproportionately high TPF, the average of the remaining seven is 0.631. The TPF in a market served by regional jets tends to increase as seats and/or nonstop destinations are added. Seats can be added by either larger aircraft or additional frequency. Adding frequency, however, appears to provide a greater boost to traffic.

SCHEDULED COMMERCIAL SERVICE FORECAST

The travel propensity analysis above indicates that additional destinations, available seats, and flight frequency can affect the growth in a regional jet market. Salina Regional Airport regional jet service began with two flights to Denver (with a stop in Hays) and one nonstop to Chicago. In effect, this service is shared with Hays.

During the 12 months ending June 2019, BTS T-100 market data indicates that SLN enplaned 14,516 passengers. Based upon the experience with the comparable airports, SLN should reach a level within two years where future growth will depend upon local and airline industry growth and/or further improvements in air service. With 386,000 air travelers each way located within the original catchment area, and 919,000 each way within a 60-minute drive-time, the local demographic and economic growth of the market will factor into the future growth of air travelers in the catchment area. **Table 2F** provides a summary of socioeconomic projections for the Salina micropolitan area through 2040.

Table 2F
Socioeconomic Forecasts
Salina Micropolitan Area

Year	Population	Total Employment	PCPI (2012$)	GRP (millions 2012$)
History				
2005	60,458	41,356	$36,062	$2,334.907
2010	61,911	40,164	$38,602	$2,603.833
2015	61,425	41,738	$42,396	$2,821.024
2016	60,989	41,718	$43,587	$2,933.406
2017	60,597	41,732	$44,475	$2,959.520
2018	60,203	42,152	$43,536	$2,978.972
Forecast				
2020	61,034	42,590	$44,792	$3,018.080
2025	61,633	43,529	$47,710	$3,117.030
2030	62,033	44,258	$50,484	$3,217.640
2040	62,063	44,624	$54,561	$3,423.620
Compound Annual Growth Rate (CAGR)				
2018-25	0.34%	0.46%	1.32%	0.65%
2018-40	0.14%	0.26%	1.03%	0.63%

Source: Complete Economic and Demographic Data Source (CEDDS), Woods & Poole, 2019.

Population in the Salina micropolitan area is projected to grow very slowly through 2040 at a compound annual growth rate (CAGR) of 0.14 percent. Total employment is projected to grow slightly faster at 0.26 percent, while real PCPI is projected to grow at just over 1.03 percent and GRP at 0.63 percent. This indicates that, while the demographics remain relatively constant, the economy of the area will continue to grow. This would suggest that the TPF will also grow along with the stronger economy.

As mentioned in the airline industry outlook, U.S. domestic scheduled passenger enplanements are forecast by the FAA to grow over the long term at a CAGR of 1.60 percent. Scheduled regional airline passengers are forecast to grow at the same rate. **Table 2G** includes the recent history and FAA forecast for U.S. scheduled domestic regional airline passengers.

Table 2G
Scheduled Passenger Enplanement Projections
Salina Regional Airport

Year	SLN Scheduled Enplaned	U.S. Regional Enplanements (millions)	SLN Market Share	Salina Micro Population	Travel Propensity Factor (TPF)
2010	1,698	161.7	0.000011	61,911	0.03
2011	2,645	161.7	0.000016	61,886	0.04
2012	2,546	159.0	0.000016	61,924	0.04
2013	2,361	155.5	0.000015	61,853	0.04
2014	2,149	154.1	0.000014	61,594	0.03
2015	1,221	153.0	0.000008	61,425	0.02
2016	3,257	151.6	0.000021	60,989	0.05
2017	8,877	148.7	0.000060	60,597	0.15
2018	11,672	153.8	0.000076	60,203	0.19
Scenario 1 -Maintain Basic Level of Service					
2020	22,000	163.2	0.000135	61,034	0.360
2025	23,100	171.7	0.000135	61,633	0.375
2030	25,100	185.8	0.000135	62,033	0.405
2040	30,000	222.7	0.000135	62,063	0.483
Scenario 2 - DEN Nonstop/Second ORD Flight					
2020	29,000	163.2	0.000178	61,034	0.475
2025	30,500	171.7	0.000178	61,633	0.495
2030	33,000	185.8	0.000178	62,033	0.532
2040	39,600	222.7	0.000178	62,063	0.638
Scenario 3 - Third Destination					
2020	39,700	163.2	0.000243	61,034	0.650
2025	41,800	171.7	0.000243	61,633	0.678
2030	45,200	185.8	0.000243	62,033	0.729
2040	54,200	222.7	0.000243	62,063	0.873
Planning Forecast					
2020	**22,000**	**163.2**	**0.000135**	**61,034**	**0.360**
2025	**31,000**	**171.7**	**0.000178**	**61,633**	**0.503**
2030	**33,000**	**185.8**	**0.000178**	**62,033**	**0.532**
2040	**40,000**	**222.7**	**0.000180**	**62,063**	**0.645**
High Range	**65,000**	**222.7**	**0.000292**	**62,063**	**1.047**

Table 2G also presents a review of SLN's market share of scheduled regional airline passenger enplanements since 2010, as well as the TPF. As with the comparable regional jet markets, SLN is seeing a dramatic increase in the TPF as well as its share of the nation's regional jet passenger market. SLN has strong potential to grow enplanements with further air service improvements.

Several potentials currently exist. As the market becomes established, an additional flight to Chicago could be added, and/or non-stop service to Denver. The more popular routes could be up-gauged from 50-seat aircraft to 70-seat aircraft.

Giving additional promise to opportunities such as this is the recent location of a 1 Vision Aviation FAA-certified FAR Part 145 repair station at Salina Regional Airport. The company includes SkyWest Airlines among its active overhaul and maintenance contracts. Should Sky West take advantage of using the local repair station, it could create the opportunity for additional flights, up-gauged flights, and/or another non-stop destination such as the United Airlines hub in Houston.

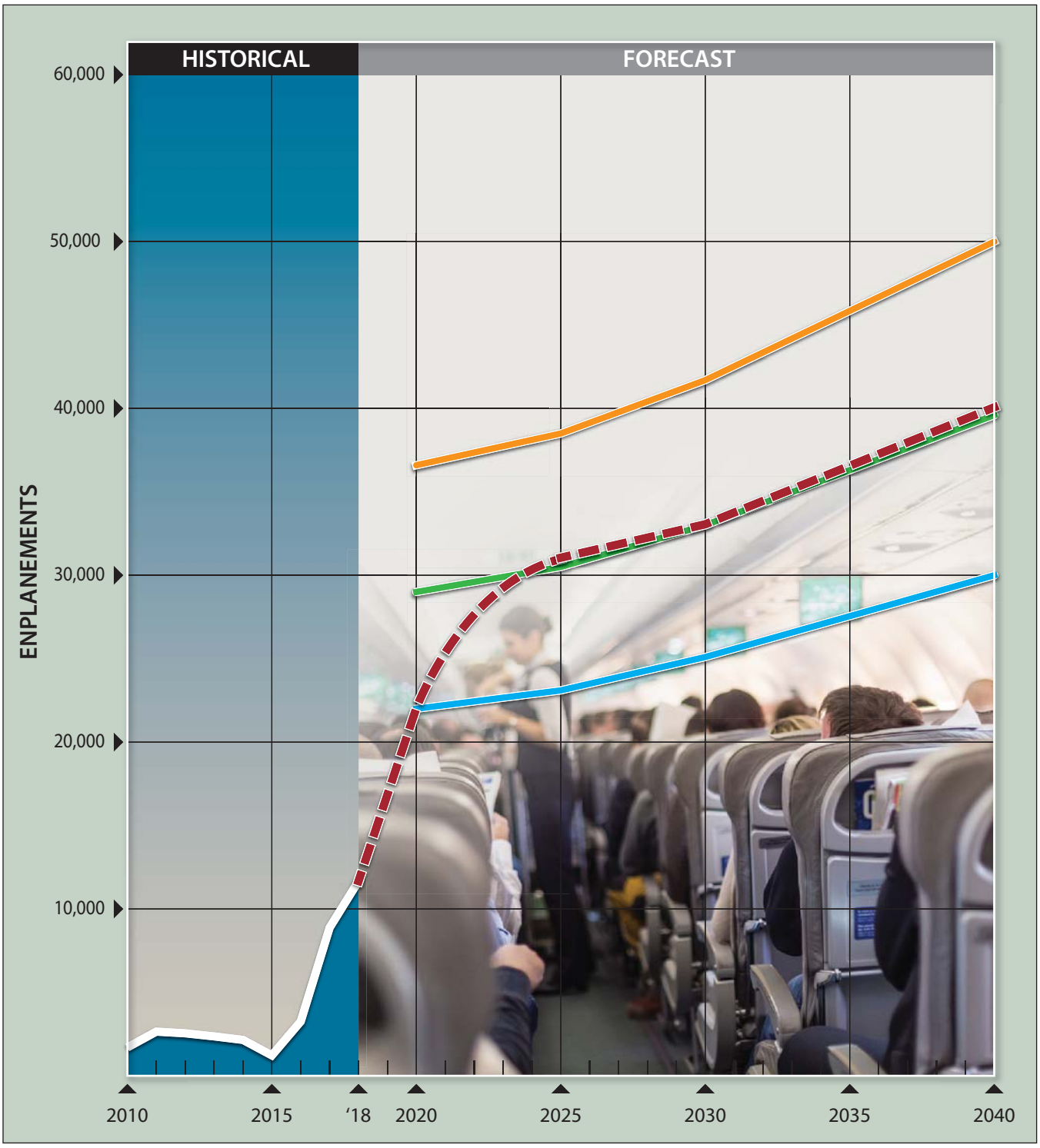
As a result, a variety of forecast scenarios have been developed for consideration of these potential opportunities. The first scenario considers that the current level of air service will be maintained, and the market will meet its initial TPF level within two to three years. This was conservatively estimated with a TPF similar to that at Hobbs, New Mexico, even though Hobbs had only had two daily flights to one destination, until October 2019. After that, passenger growth was projected to maintain the same market share of the regional airline enplanements.

Scenario Two considers the potential with an additional flight to Chicago, and at least one flight to Denver becoming a nonstop. This would raise the current TPF to 0.475, comparable to Manhattan's TPF in the years immediately after gaining regional jet service. With that service maintained in the future, passenger growth would follow a consistent share of the regional airline market.

Scenario Three considers adding a nonstop flight to a third destination such as Houston, along with the service of Scenario Two. This would likely only be possible if SLN serves as a regional airline maintenance station, allowing aircraft to carry passenger loads in before and out after scheduled maintenance and overhauls. This could raise the TPF higher than that of Manhattan, but lower than Roswell. Over the long term, the TPF could become more comparable to both Roswell and Grand Island.

Each of these scenarios is presented on **Table 2G** as well as **Exhibit 2E**. Like the comparable airports' experience with the initiation of regional jet service, SLN can expect rapid growth and capture of market share in the first few years. Beyond that, growth will become more dependent upon economic growth, additional air service improvements, or the combination thereof. The recommended planning forecast anticipates that short term growth from the current level of service for the next two to three years. There are strong signs that a second flight to Chicago can be added along with a Denver nonstop within the short term. This would result in attaining Scenario Two by 2025.

Conservatively, the recommended forecast them follows Scenario 2 through 2040. A high range of 65,000 annual enplanements, however, will be included in long range planning for the terminal. This



LEGEND

- Scenario 1 -Maintain Basic Level of Service
- Scenario 2 - Denver International (DEN) Nonstop/ Second Chicago O'Hare International (ORD) Flight
- Scenario 3 - Third Destination
- Planning Forecast

Exhibit 2E
ENPLANEMENTS FORECAST

would ensure the plan allows for future expansion should additional service expand to include two daily flights to three destinations. This is a level of service not currently available to any of the comparable Great Plains airports, although is anticipated for Roswell in the near term.

NON-SCHEDULED COMMERCIAL SERVICE FORECAST

Besides scheduled commercial service, Salina Regional Airport serves a variety of non-scheduled commercial service or charter flights. A majority are associated with Ft. Riley military transfers. While located closer to Manhattan Regional Airport, the Ft. Riley Army Base utilizes SLN because of its long runway and available military facilities located on-site. There are also occasional charter flights to vacation destinations, as well as smaller charters by business aircraft.

Table 2H depicts passenger charter activity over the last ten years at SLN. Non-scheduled enplanements have fluctuated from a low of 212 in 2011 to a high of 8,858 in 2015. While charter enplanements have averaged over 2,262 per year over the ten-year period, only three years (2015, 2017, and 2018) have been above that average. For planning purposes, future charters were projected to average around 5,000 per year, recognizing troop movements could vary this figure greatly. As with scheduled passengers, a high range projection is included that would double non-scheduled enplanements.

TABLE 2H
Non-Scheduled Passenger Enplanements
Salina Regional Airport

Year	Non-Scheduled Enplanements
2009	421
2010	1,446
2011	212
2012	980
2013	468
2014	249
2015	8,858
2016	710
2017	4,973
2018	4,305
Forecast	
2020	5,000
2025	5,000
2030	5,000
2040	5,000
High Range	10,000

While the large troop charters are typically handled at the military hangars on the airport, an improved passenger terminal building will be more attractive to vacation and casino charters. These charters will remain as occasional activity that should not drive the terminal size but can still be factored into the design.

SLN SCHEDULED FLEET MIX AND OPERATIONS FORECASTS

The type of aircraft in the commercial airline fleet serving the airport is an important component for airport planning. Not only is the fleet mix helpful in determining the number of commercial operations at the airport but is also beneficial in defining key parameters used in terminal planning, such as pavement strength, terminal apron geometry, and terminal complex sizing and layout.

A projection of the fleet mix for Salina Regional Airport has been developed by reviewing the commercial aircraft serving the airport, those aircraft in use by the airline or prospective airlines to operate at the airport, and potential new aircraft that might fit the market.

The airport is currently served by the 50-seat Canadair Regional Jet 200 (CRJ-200). The 50-seat regional jets have become the new workhorse in many small markets, including at EAS airports. This is especially true due to turboprops between 10- and 49-seats no longer being manufactured and pilot shortages.

The 50-seat regional jets have been out of production for several years. There are currently 700 50-seat jets in use on routes throughout the United States, many of them over 20 years old. Although many have already logged over 30,000 cycles, their useful life many be extended 10 to 15 years for up to 60,000 cycles. While some airlines have requested the manufacturers to develop a new aircraft to replace the 50-seat aircraft, pilot union scope clauses have made it impractical.

United Airlines, with its United Express affiliates, have committed to a replacement 50-seat regional jet, the CRJ-550. The aircraft has been developed by Bombardier from its 65-70 seat CRJ700, specifically designed to work around scope clauses. The aircraft is planned to operate with 10 first class seats, 20 economy plus, and 20 economy seats. The first aircraft are expected to be in use by late 2019.

The boarding load factor (BLF) is defined as the ratio of passengers boarding an aircraft and the seating capacity of the aircraft. The annual BLF for the last two years is presented in **Table 2J**. In 2017, the average number of departure seats was calculated to be 28.9 as the airport was served by a mix of 30-seat and 19-seat aircraft. With an average of 14.1 enplanements per departure, the BLF was 48.9 percent.

Table 2J
Scheduled Airline Fleet Mix and Operations Forecast
Salina Regional Airport

Fleet Mix			Forecast			
Seat Capacity/Typ. Aircraft	2017	2018	2025	2030	2040	High Range
71-85 /ERJ 175	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%
60-70/CRJ 700	0.0%	0.0%	0.0%	20.0%	65.0%	50.0%
50-59/CRJ 200, -550	0.0%	83.7%	100.0%	80.0%	35.0%	30.0%
40-49/ERJ 140	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20-39/EMB 120	90.3%	3.7%	0.0%	0.0%	0.0%	0.0%
10-19/B1900	9.7%	12.6%	0.0%	0.0%	0.0%	0.0%
<10/PC-12	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Seats per Departures	28.9	45.4	50.0	53.0	59.8	62.7
Boarding Load Factor	48.9%	30.7%	51.7%	51.9%	55.8%	59.2%
Enplanements per Departure	14.1	13.9	25.8	27.5	33.3	37.1
Annual Enplanements	8,877	11,672	31,000	33,000	40,000	65,000
Annual Departures	628	837	1,200	1,200	1,200	1,750
Annual Operations	1,256	1,674	2,400	2,400	2,400	3,500

With the initiation of 50-seat regional jet service in April 2018, the average seats per departure rose to 45.4, but despite more passengers, there were also more flights and seats available. As a result, the BLF declined to 30.7 percent. Over the first eight months of 2019, the BLF has averaged just over 33 percent.

The comparable Great Plains airports, for the most part, have been averaging 70 to 75 percent BLF. However, since the Salina flights have been shared with Hays, a lesser BLF can be manageable.

As passenger traffic increases, the BLF will increase. The table depicts each forecast year based upon the adding a second flight to Chicago and changing one of the Denver flights to a non-stop. The market would still be served by the CRJ-200, resulting in a 51.7 percent average load factor.

If SkyWest takes advantage of SLN's MRO (maintenance, repair, and overhaul) tenant, 1 Vision, some 70-seat aircraft could be added to the fleet mix as they are brought in for scheduled maintenance or overhaul. Again, a load factor around 50 percent would be maintained. Over the long term, there would be a greater shift to the larger regional jets as the older 50-seat aircraft are retired. The 50-seat aircraft remaining would be either the CRJ 550 discussed above, or a new 50-seat model should the scope clauses with the pilot unions be worked out in the future. The high range forecast assumes two additional daily nonstop flights adding a third destination such as Houston and/or another flight to the more successful of the original destinations.

Many of the non-scheduled charter flights will be handled at either the military hangar or at general aviation facilities, and only the civilian Part 139 flights will be handled at the terminal. Because these flights are infrequent and sporadic, and annual forecast is not included. Rather, the need to occasionally handle aircraft with up to 175 seats will be considered in the facility planning.

SLN AIRLINE PEAKING CHARACTERISTICS

Airport passenger terminal facility needs are related to levels of activity during peak periods. The periods used in developing facility requirements for this study are as follows:

- **Peak Month** – The calendar month when peak aircraft operations occur.
- **Design Day** – The average day in the peak month. At small regional airports, this is typically the average weekday as weekends often have reduced flights.
- **Design Hour** – The peak hour within the design day.

It is important to note that only the peak month is an absolute peak within a given year. All other peak periods will be exceeded at various times during the year. However, they do represent reasonable planning standards that can be applied without overbuilding or being too restrictive.

In recent years, SLN has experienced different levels of service resulting in dynamic changes in passenger levels within a year. This has skewed the peak month percentage in all but one of the last four years. In 2017, service was primarily 30-seat aircraft with a small mix of 19-seat aircraft, and the percentage of enplanements in the peak month of June was 9.6. This compares to the peak months over the last five years at Wichita (9.7 percent), Manhattan (9.6 percent) and Garden City (9.4 percent). While the peak month varied year-to-year, it was primarily May or July in each of these markets. Therefore, a peak month percentage of 9.6 will be used through the planning period.

As mentioned, the design day accounts for fluctuations in available flights during the week versus the weekend. For example, there are currently three flights daily at Salina Monday through Friday, but just one on Saturday and two on Sunday. Thus, the design day is factored to account for more enplanements during an average weekday than a day averaged over the full week. The design hour is based upon the flight schedule and percent of the seats being available during the design hour. The operations projections follow a similar analysis and are presented on **Exhibit 2F**.

SUMMARY

This chapter has outlined the various activity levels that might reasonably be expected over the 20-year planning period for the airline terminal at Salina Regional Airport. **Exhibit 2F** provides a summary of the commercial passenger airline forecast. A leakage and demand analysis considered the air travelers within the SLN catchment area, as well as the percentage currently being captured by SLN. The history of passenger growth in similar markets in the Great Plains were examined before and after regional jet service was initiated. A high range projection involving expanded air service potentially taking advantage of opportunities such as the MRO tenant, 1 Vision, to perform scheduled maintenance and overhauls has been included for long range terminal planning.

The next step in the planning process will be to assess the capability of the existing terminal facilities and determine what will be needed to accommodate the future growth. The forecasts will be used to develop a set of facility requirements that address various elements of the passenger terminal complex, including the building as well as apron and auto parking.

	2018	FORECAST 2025	2030	2040	High Range
AIRLINE ENPLANEMENTS					
Annual Enplanements					
Scheduled Airline	11,672	31,000	33,000	40,000	65,000
Unscheduled Airline	4,305	5,000	5,000	5,000	10,000
Total Annual Enplanements	***15,977***	***36,000***	***38,000***	***45,000***	***75,000***
Peak Scheduled Enplanements					
Peak Month	1,329	3,000	3,200	3,800	6,200
Design Day	51	110	120	140	230
Design Hour	30	70	80	100	140
SCHEDULED AIRLINE OPERATIONS					
Annual Scheduled Operations					
Operations *(arrivals and departures)*	1,674	2,400	2,400	2,400	3,500
Departures	837	1,200	1,200	1,200	1,750
Peak Scheduled Departures					
Peak Month	81	108	108	108	154
Design Day	3	4	4	4	6
Design Hour	1	2	2	2	2

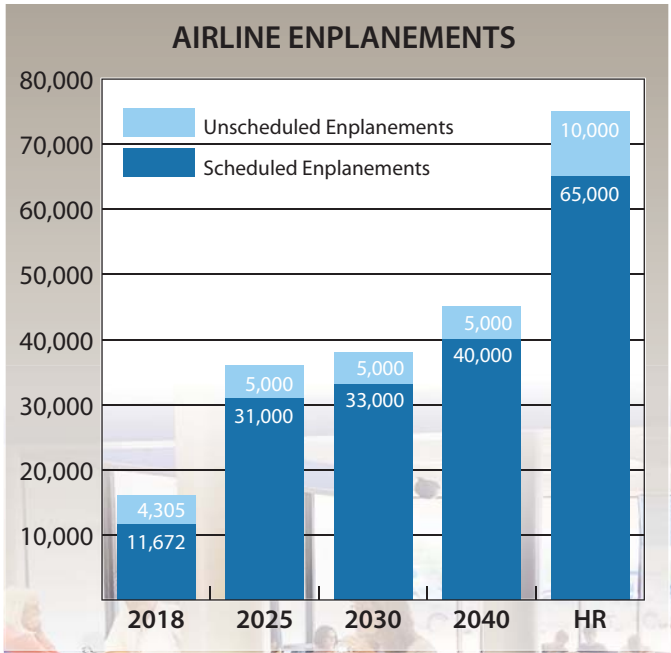






Exhibit 2F
TERMINAL FORECAST SUMMARY

December 20, 2019

Mr. Timothy Rogers
Executive Director
Salina Airport Authority
3237 Arnold Ave.
Salina, KS 67401

Dear Mr. Rogers:

Terminal Master Plan Demand Forecasts
Salina Regional (SLN), Salina, KS
AIP No. 3-20-0072-040-2019

The submitted Aviation Demand Forecasts for the 2025 to 2040 planning period is Approved.

You may proceed with developing the remainder of the report. If you have any questions regarding this project, please call me at (816) 329-2646 or via email at jason.knipp@faa.gov.

Sincerely,



Jason Knipp
Kansas Planner

CC: Steve Benson, Coffman Associates, Inc.

Chapter 3

TERMINAL AREA CAPABILITY AND FACILITY REQUIREMENTS



Chapter Three
TERMINAL AREA CAPABILITY AND FACILITY REQUIREMENTS

Components of the passenger terminal complex include aircraft gate positions, departures processing, arrivals processing, concourse facilities, as well as public spaces. This section identifies the functional components of the terminal building and examines the space requirements for each component to serve the projected passenger demand levels.

As passenger demand increases, so does space needs. Many aspects of passenger terminal design are based upon peaking periods of commercial activity as determined in **Chapter Two – Forecasts**. These are re-summarized as planning horizons in **Table 3A.** The planning horizons include Current (based upon demand anticipated for the current year of 2020); Intermediate (based upon forecast demand for 2030); Long Term (based upon the forecast for 2040); and High Range (based upon the High Range forecast).

The typical short-term horizon was not included in this analysis because typical design, financing and construction of a major terminal development can extend a full five years or beyond. Thus, to plan and design to a short-term demand level risks the facility being at capacity when it opens.



The requirements for the passenger terminal building are determined by comparing current and future demand to industry standards for terminal space needs. Resource documents utilized for guidelines and standards include:

- FAA Advisory Circular 150/5360-13A – Airport Terminal Planning
- ACRP Report 25 – Airport Passenger Terminal Planning and Design
- ACRP Report – 55 – Passenger Level of Service and Spatial Planning for Airport Terminals
- TSA Checkpoint Design Guide
- TSA Planning Guidelines for Checked Baggage Inspection Systems
- IATA Airport Development Reference Manual

ACRP Report 25 includes a spreadsheet model based on industry standards. The spreadsheet was calibrated for the SLN terminal based upon observations of passenger activities and terminal operations. The model utilizes the standard queuing theory which can be defined as: passengers arriving minus passengers processed equals passengers in queue. The evaluation of individual processing elements is based on industry standards and formulas.

TABLE 3A
Terminal Activity Planning Horizons
Salina Regional Airport

	Current (2020)	Intermediate	Long Term	High Range
Airline Enplanements				
Annual	22,000	33,000	40,000	65,000
Peak Month	2,100	3,200	3,800	6,200
Design Day	80	120	140	230
Design Hour	45	80	100	140
Total Passengers				
Design Hour	90	160	200	280
Airline Operations				
Annual	1,800	2,400	2,400	3,500
Peak Month	159	212	212	316
Design Day	6	8	8	12
Design Hour	2	4	4	6
Design Hour Departures	1	2	2	2

The model considers the level of service standards established by the International Air Transport Association (IATA). Level of service (LOS) defines the comfort and quality of the passenger experience. Some are related to crowding in queuing areas, while others define the amount of time a passenger must wait for processing. **Table 3B** outlines these basic level of service standards.

In general, LOS C is a typical design goal for most airports. LOS B would be a preferred goal if the budget allows. LOS A is generally too expensive to achieve, and thus prohibitive to implement. For purposes of this analysis, an LOS C or C+ was used to represent a median between LOS B and C.

TABLE 3B
Level of Service Standards (IATA)
Salina Regional Airport

Area Per Occupant

Level of Service Standards	A	B	C+	C	C-	D	E	F
	Ft^2	Ft^2	Ft^2	Ft^2	Ft^2	Ft^2	Ft^2	Ft^2
Check-in Queue Area	19.4	17.2	16.1	15.1	14.0	12.9	10.8	-
Wait/Circulate	29.1	24.8	22.6	20.4	18.3	16.1	12.8	-
Hold Room	15.1	13.5	12.8	12.0	11.3	10.5	8.0	-
Bag Claim Area (excl. claim device)	21.5	19.4	18.3	17.2	16.1	15.1	12.9	-
Federal Inspection Services	15.1	12.9	11.8	10.8	9.7	8.6	6.5	-

A – Excellent levels of service; conditions of free flow; excellent level of comfort.
B – High level of service; condition of stable flow; very few delays; high level of comfort.
C – Good level of service; condition of stable flow; acceptable delay; good level of comfort.
D – Adequate level of service; condition of unstable flow; acceptable delays for short periods of time; adequate level of comfort.
E – Inadequate level of service; condition of unstable flow; unacceptable delays; inadequate levels of comfort.
F – Unacceptable levels of service; conditions of cross flows, system breakdown and unacceptable delays; unacceptable levels of comfort. Applies to areas below LOS E.

AIRCRAFT GATES/APRON PARKING

An airport terminal gate designates an aircraft parking position adjacent to a terminal building for the loading and unloading of passengers and baggage. The airline schedule, size and type of aircraft served, the parking arrangement, and assignment procedures affect the required number of gates, size, and layout of the terminal gates.

Presently, there is a single terminal gate at SLN. Passengers are ground boarded. The single aircraft position is marked to accommodate the CRJ-200 currently serving the airport. Necessary parking positions can also be affected by the number of aircraft that remain overnight (RON). Currently there is only one RON.

It is anticipated by the Intermediate Term Horizon, a second flight to Chicago could be added. The current flight from and to Chicago (as of March 5, 2020) arrives and departs during the noon hour, a second flight in the future very likely could be an evening arrival with a morning departure like the second Denver flight currently. This would result in two RON aircraft and require a second RON at least overnight. Depending upon the airline operation, the evening arrivals could be within the same hour. The same for the morning departure.

Terminal apron requirements are determined by the number of gates, the size of the gates, the maneuvering area required for aircraft at gates, and the aircraft parking layout in the gate area.
Over the long term, the gates and parking positions would remain at two, but they will need to accommodate the larger regional jets in the 66 to 75 seat-category. The high range scenario considers adding two more daily flights, but it is not anticipated that schedules would put three scheduled arrival or departures in the same hour. It is possible, however, that one of the two additional flights in the high

range could include another overnight, increasing RON parking position requirements to three. The potential for charter flights utilizing the terminal would suggest that at least one additional parking position should be planned in the short term. The terminal ramp is adequately sized to accommodate at least three parking positions.

TERMINAL BUILDING REQUIREMENTS

Exhibit 3A outlines the space requirements for the planning horizons outlined earlier. The following discusses the needs for the various functional elements.

DEPARTURES PROCESSING

The first destination for most enplaning passengers in the terminal building is the ticket counters. The ticketing area includes the counters, queuing area and lobby, the ticket offices, and bag screening and processing.

Ticket Counters and Kiosks – Currently, there are two ticket counter positions and two kiosks available. The counter length is approximately 11 feet or 5.5 feet per position. The percentage of the departing passenger peak hour demand that check in at the ticket lobby is estimated at 85 percent. It was further estimated that 60 percent of those checking in at the terminal utilize the ticket counter and 40 percent utilize the two available self-serve kiosks. The remainder are assumed to check in prior to arriving at the terminal and do not have checked baggage. The spreadsheet model calculates the ticket counter requirements based on the passenger processing rate derived from observation and IATA LOS C averages.

The current counters and kiosks will generally be adequate for the intermediate planning horizon, but an additional counter position could be required in the long term, along with an additional kiosk in the high range scenario. The airline ticket office appears adequately sized through the intermediate planning horizon.

Ticket Lobby – The ticket lobby floor area consists of the active check-in and queue area as well as circulation. The ticket lobby demand includes a percentage of well-wishers in addition to the passengers. Industry standards assume that some passengers enter the queue with their friends or family for assistance. The evaluation was based on a service goal of a 2.5-minute processing time, a maximum 10-minute wait in queue, and LOS C of 14.0 square feet per person in queue with baggage.

The ticket lobby is currently undersized by LOS C standards. Arriving passengers must pass through the ticket lobby upon entering the main terminal. This can create further congestion during mid-day turnround flights.

Public Area – The public waiting lobby is located between the ticketing lobby and the security screening area. At SLN, this space is utilized both by departing and arriving passengers, meeters/greeters, and well-

FUNCTIONAL AREA	Unit	Available	PLANNING HORIZONS Current 22,000	Intermediate 33,000	Long 40,000	High 65,000
DEPARTURES PROCESSING						
Ticketing						
Agent Positions	#	2	1	2	3	3
Kiosk Positions	#	2	2	2	2	3
Counter Frontage	LF	11	11	11	17	17
Counter Area	SF	80	110	110	165	165
Kiosk Area	SF	60	110	110	110	160
Active Check-in and Queue Area	SF	140	390	390	580	580
Ticket Lobby Circulation	SF	240	510	510	675	765
ATO/Outbound Baggage						
Airline Ticket Office	SF	708	550	550	820	820
TSA Baggage Screening	SF	136	200	300	940	1,740
Outbound Baggage	SF	272	1,100	1,300	1,300	1,800
Public Area						
Waiting Lobby	SF	1,173	1,200	2,100	2,700	3,700
Security Stations						
Number	#	1	1	1	2	2
Queuing Area	SF	408	400	400	500	500
Station Area	SF	613	630	630	1,550	1,550
TSA Administration/Operations	SF	502	600	600	600	600
ARRIVALS PROCESSING						
Baggage Claim						
Claim Display Frontage	LF	34	39	43	57	78
Inbound Baggage	SF	871	620	690	910	1,250
Baggage Service Office	SF	0	80	90	110	160
Claim Lobby						
Claim Device Floor Area	SF	140	200	220	290	390
Circulation Area	SF	683	1,070	1,240	1,550	2,160
GATE FACILITIES						
Passenger Holdrooms						
Gates	#	1	1	2	2	2
Hold Room Area	SF	820	1,100	1,900	2,200	2,900
Concourse Circulation						
Circulation Area	SF	94	220	380	440	580
PUBLIC SPACES						
Restrooms						
Area	SF	792	500	880	1,100	1,540
Concessions						
Food & Beverage	SF	100	260	400	480	780
Retail/Office	SF	100	110	170	200	330
Rental Car						
Counter Frontage	LF	10	10	10	20	30
Counter and Office Area	SF	376	300	300	600	900
Counter Queuing Area	SF	100	100	100	200	300
Airport Administration						
Administration/Operations	SF	2,400	2,400	2,400	2,400	2,400
Conference Center	SF	291	300	300	300	300
FUNCTIONAL AREA TOTAL						
Total Programmed Functional Area	SF	11,099	12,950	15,960	20,610	26,210
BUILDING SYSTEMS/SUPPORT						
Mechanical/HVAC	SF	225	390	480	620	790
General Circulation/Stairwells/Storage	SF	1,158	1,170	1,440	1,850	2,360
TOTAL TERMINAL						
Gross Building Area	SF	12,482	14,510	17,880	23,080	29,360

wishers. Ideally, passengers depart the secure area away from ticketing, but at SLN they cross right through ticketing heading either for the front door or baggage claim.

LOS C sizing for the waiting lobby is 20.4 square foot per occupant. It was determined to be marginally adequate for current demand but will need to be doubled in size by the intermediate term. It would need to be more than tripled in size under the high range scenario.

Bag Screening and Processing – The Transportation Security Administration (TSA) must inspect every checked bag that is to be put on an aircraft. The current system at SLN requires an airline employee to carry bags from the counter to a TSA bag inspector in the secure outbound baggage area where each bag is screened using explosive trace detection (EDT). Once screening is complete, the bag is transferred to the airline's outbound baggage cart. An EDT has capacity to screen up to 50 bags per hour.

As the number of checked bags increase, additional EDT may be needed. As the number of inspectors increase, an explosive detection system (EDS) may become more efficient. The EDS will process up to 175 bags per hour, however, at least one EDT would still be necessary to inspect oversized baggage that will not fit through the EDS. The EDT was considered adequate for the intermediate term, but an EDS was added for the long-term planning horizon and high range scenario.

Area required for outbound bag make-up was determined by the spreadsheet model based upon departures during a two to four-hour staging period and the size of the aircraft.

Passenger Security Screening – A process rate of 125 bags per hour was used to determine the number of bag screening stations required. At that rate, a second EDS screening unit would be required by the long-range planning horizon. This would also be adequate through the high range scenario. The required queuing area for the checkpoint was determined based upon *TSA Checkpoint Guidelines* of 400 square feet per station. It should be noted that the TSA is making efforts across the country to help further streamline the screening process at airports.

Currently there is minimal circulation space between the checkpoint and the holdroom. Additional space for circulation between the two will be addressed in the holdroom discussion.

ARRIVALS PROCESSING

The passenger arrivals process consists primarily of those facilities and functions that provide means to reunite the arriving passenger with items that were checked at the airport of origin.

Baggage Claim – It is estimated that 65 percent of arriving peak hour passengers claim checked baggage. The remaining 35 percent of the passengers bypass the baggage claim areas and go directly to the curb or to other ground transportation related facilities. An industry standard of 1.3 checked bags per passenger was utilized. The baggage claim floor area is based on the depth of the bag claim device, usually four to five feet. The current bag claim is a linear bag drop that is marginally adequate. Bag claim frontage will need to be increased by 23 feet in the long term and 44 feet in the high range scenario.

The added length requirements could make a bag carousel more efficient than the current bag drop system

Claim Lobby – The lobby area adjacent to the baggage claim device includes space at the bag clam plus space for waiting and circulation. LOS C+ area of 18.3 square feet per person in the bag claim area (passengers claiming bags plus 30 percent for meters and greeters) was used. The demand for baggage claim lobby currently exceeds capacity, and the current size will need to be doubled by the long term, and nearly tripled under the high range scenario.

GATE FACILITIES

The sterile gate facilities consist primarily of secure passenger holdrooms and circulation space.

Holdrooms – The ACRP Spreadsheet Model was utilized to estimate holdroom size based upon available seats for the design aircraft for each gate and average load factor at the Airport. Podium space and queuing/exit space is also considered. The current holdroom is marginally adequate to support a 70 percent load factor on a single 50-seat aircraft and will need to be increased in size with increasing load factors, as larger regional aircraft are used, or if two flights are set to depart within the same hour.

Circulation – In multi-gate terminals, concourses between the holdrooms are necessary for circulation. The circulation requirement after the security checkpoint at a one- or two-gate facility such as SLN exists, albeit more limited. For example, additional spaced for movement between the checkpoint and holdroom is desirable. As a result, gate circulation was estimated at twenty percent of the holdroom space.

PUBLIC SPACES

Public spaces include restrooms, concessions, and rental car facilities.

Restrooms – Restrooms in the terminal are currently located on the first floor, one in the secured passenger area, and one near the public waiting lobby. Restroom capacity is calculated based on square footage per peak hour passenger and well-wishers. While ACRP 25 recommends 2.5 square feet per person, based upon observation and discussion with Airport Authority staff, a factor of 5.5 was used for SLN. The available restroom space is adequate until the intermediate term, although additional space in the sterile area may need to be considered before then.

Concessions and Retail – While planning standards and demand are an important consideration in the adequacy of concessions in a terminal, there are marketing considerations that determine the capacity and economic viability of airport food/beverage services and retail concessions. Vending concessions are currently available on both the secure and non-secure sides of the terminal.

At non-hub airports such as SLN, concessions are often concentrated on the non-sterile side of the terminal. Today a balance is more desirable as passengers are more inclined to use concession after they pass through security because they are more relaxed and certain they will not miss their flight. Still restaurants on the non-sterile side of a non-hub airport have often been popular with locals, particularly at airports with a large employment base such as SLN.

For planning purposes, food and beverage space was figured at 12 square feet per 1,000 annual enplanements and retail concessions were figured at 5 square feet per 1,000 annual enplanements. Additional space would be required to support a full restaurant option.

Rental Car – There is currently a single rental car agency (Hertz) on site at the terminal, although another agency (Enterprise) is located in Salina. Rental car space in terminals are typically comprised of a front counter with queuing space for customers in front and enclosed office space behind. The space required can be dependent upon design hour passengers, but at smaller airports, its space needs can be affected more by the number of agencies on site. Hertz is currently utilizing 600 square feet in the SLN terminal.

The requirements per agency were estimated at 10 feet of counter, with 30 feet of depth behind the counter to include office space and 10 feet in front of it for customer queuing. A single agency is assumed through the intermediate term with a second agency added in the long term and a third agency in the high range scenario.

Administrative Spaces – Often airport administrative offices are located within an airport terminal building. At the SLN, the Airport Authority's administrative staff occupies 2,400 square feet on the second floor. A 291 square-foot conference center is available on the first floor by baggage claim and the rental car space. By industry standards, the administrative offices are properly sized. The administration uses the conference room for small meetings, but Airport Authority Board meetings are held at another location on the airport.

The current administrative space should be adequate unless additional administrative personnel are added. The space needs will not be related to passenger activity levels. The current conference center is assumed adequate unless the Airport Authority should choose to include a larger space in the terminal for its open public meetings.

Net Terminal Building Requirements

The bottom of **Exhibit 3A** depicts the space requirements for the building systems and support and then sums the gross building area. This includes mechanical and heating and air conditioning (HVAC), as well as general circulation, stairwells, miscellaneous storage areas, and structural requirements. These were estimated at 12 percent of the total functional area in the terminal.

The space requirements for the gross terminal building are already marginally adequate, resulting in a less than desirable level of service. While the gross terminal area can vary depending upon the design alternative and efficiencies planned, the basic need is estimated at approximately 18,000 square feet to serve the intermediate planning horizon and 23,000 feet for the long-term horizon. In addition, the

building should be capable of future expansion to at least 29,000 square feet to accommodate the high range scenario.

TERMINAL ACCESS AND PARKING

TERMINAL CURB FRONTAGE

The terminal curb element is the direct interface between the terminal building and the ground transportation system. The length of the curb available for loading and unloading passengers and baggage is determined by the type and volume of ground vehicles anticipated during the peak period of the design day. Unloading of private and courtesy vehicles typically occurs adjacent to the ticketing area, while loading of private vehicles and taxis takes place on the curb adjacent to baggage claim. The total length of available space allotted for curbside unloading/loading, queuing, or vehicle staging is approximately 180 feet.

Table 3C presents the terminal curb capacity and requirements. Based upon projected enplanement levels and associated peaking conditions, the terminal curb should be adequate though the intermediate term but will need to be expanded for the long-term planning horizon as well as with the high range scenario.

TABLE 3C
Airline Terminal Curbfront and Auto Parking Requirements
Salina International Jetport

FUNCTIONAL ELEMENT	Existing	Current Need	Intermediate	Long Term	High Range
Terminal Curb					
Enplane Curb (ft)	90	40	70	90	1230
Deplane Curb (ft)	90	60	800	110	1450
Total Curb (ft)	**180**	**100**	**150**	**200**	**280**
Auto Parking					
Short Term Public*	-	19	29	35	56
Long Term Public	198	139	209	253	412
Total Public Parking	**198**	**158**	**238**	**288**	**468**
Employee**	-	11	17	20	33
Rental Car	18	14	21	26	42
Total All Parking	**216**	**184**	**276**	**334**	**543**

*Currently no designated short-term parking spaces
**Employee parking currently included in public parking area.

VEHICLE PARKING

Vehicle parking associated with the passenger terminal includes spaces utilized by passengers, visitors, employees and rental car companies. As noted in Chapter One, the existing public parking supply is located immediately to the east of the terminal. The number of spaces offered for each use are outlined

in **Table 3K**. There is currently no designated short-term parking, and the northernmost row of parking spaces is utilized for rental car ready/return.

Standards for parking lot space requirements can vary significantly depending on the size and location of airports. A parking survey conducted over nine months in 2011 by Manhattan Regional Airport staff, was utilized in the MHK Terminal Area Master Plan to estimate that airport's public parking requirements. The space requirement was equal to approximately 6.4 spaces per 1,000 annual enplanements.

Lacking a similar survey at SLN, Google Earth aerial imagery was surveyed for SLN, MHK, and several other non-hub commercial airports with similar enplanement levels throughout the Great Plains and the Midwest. Noting the date of each aerial, a count of vehicles in the public parking lot was conducted. If the photo was not during the peak month for enplanements, the parking count was increased by a factor to equate to the peak month. A circulation factor of 10 percent was added so that drivers are not continually searching for the last spot available during the design day. The resulting parking requirement was divided by the total number of scheduled enplanements in that year for a ratio of parking spaces per 1,000 enplanements.

Of ten airports surveyed, the ratios ranged from 5.3 per 1,000 enplanements at Pierre, ND to 9.0 at Texarkana, AR. The ratio for MHK at 6.3 was very close to the ratio derived from their nine-month parking survey. SLN's ratio of 7.2 public parking spaces per 1,000 enplanements was near mid-range of the airport's surveyed. This ratio was applied to the planning horizons to estimate future parking requirements. Demand for short term parking typically comprises 10 to 15 percent of the total parking requirements. SLN currently does not have a designated short-term parking lot. This is common at airports that do not have a paid parking system. For future reference, a 12 percent factor was applied.

The public parking requirements are presented in **Table 3C**. With the addition of the gravel lot, public parking is currently adequate, however, will need to be increased approximately 20 percent by the intermediate planning horizon, and 50 percent for the long-term horizon.

Employee parking requirements were estimated at 0.55 spaces per 1,000 annual enplanements. Ready/return requirements for rental cars was estimated at 0.65 spaces per 1,000 annual enplanements. As presented on **Table 3C**, employee parking requirements double by the long-term planning horizon. Additional rental car spaces could be required by the intermediate planning horizon.

SUMMARY

This chapter has examined the facility needs of the terminal as passenger demand increases. Industry standards and models were applied to design day and design hour aircraft and passenger activity to determine spatial needs. While recent modifications to the terminal have made it capable of accommodating the initial needs of regional jet service, continued growth in passenger traffic will require additional space and upgrades to efficiently meet the needs to at least level of service (LOS) C.

The level of service with the current terminal space will deteriorate below level C in all functional areas over the next few years. Excluding the second-floor administrative office, as much as a 50 percent increase in space will be needed for LOS C at the intermediate term annual enplanement level of 33,000. The long-term enplanement level of 40,000 could require double the current space.

A high range horizon was also considered in the analysis, should the airports activity grow beyond the FAA-approved forecast. At 65,000 annual enplanements, the terminal building may need to increase from its current 10,000 square feet to 27,000.

Chapter 4

TERMINAL AREA ALTERNATIVES ANALYSIS

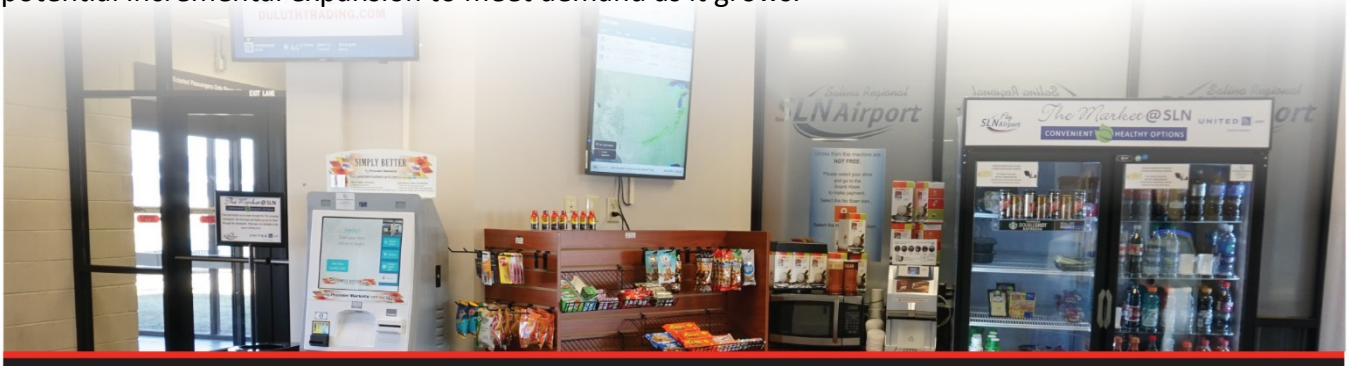


Chapter Four
TERMINAL AREA ALTERNATIVES ANALYSIS

In the previous chapter, passenger terminal facilities necessary to satisfy the projected commercial service demand through reasonably anticipated planning horizon levels were identified. The next step in the planning process is to identify and discuss potential alternatives for carrying out the mission statement of the Salina Airport Authority which in part reads, ***"Provide the citizens of the City of Salina, Saline County and North Central Kansas with safe and efficient access to the national air transportation system."***

The key elements of this planning process are: (1) identification of alternative ways to address previously identified facility requirements; (2) evaluation of the alternatives, individually and collectively, to gain an understanding of the strengths, weaknesses, and other implications of each; and (3) selection of the recommended alternative.

The alternatives discussion for the passenger terminal complex at Salina Regional Airport includes the terminal building, aircraft gates, aircraft aprons, vehicle parking, and adjacent support facilities. Strategies will be considered for future development needs. The passenger terminal has already undergone an optimization of existing terminal facilities in its transformation from serving nine-seat aircraft to 30-seat turboprops, and now 50-seat regional jets. The focus now becomes identifying potential incremental expansion to meet demand as it grows.



The evaluation in the previous chapter indicated the functional area of the existing terminal building (excluding the second-floor administration area and enclosed connector walkway) of 10,300 square feet (s.f.) can marginally accommodate demand up to a design hour of 45 enplanements. In fact, it is already at a lower level of service (LOS) than the desired LOS C. With a daily non-stop flight now available to Denver that is not paired with another airport, this level is expected to be achieved in 2020 or 2021. While certain functions will have adequate or better space, ticketing, outbound baggage, and baggage claim areas will all be above capacity.

As demand grows there is potential use of a larger aircraft with 66 to 75 seats on one or more flights. With two destinations available, there is also increased potential for two flights within the same hour. This is anticipated in the intermediate planning horizon and involves 80 enplanements during the design hour. This would require a programmed functional area of 15,500 square feet.

At the long-term planning horizon of 100 design hour enplanements the programmed space requirements grow to 20,700 square feet. To best accommodate two 70-75 seat aircraft, or a 140+ seat charter, a high range plan for 140 design hour enplanements would require 27,000 square feet of programmed space. Total space needs can vary depending upon mechanical/HVAC/ circulation and storage requirements of the final design.

This chapter begins with a review of the previous terminal planning at SLN. It then considers development alternatives ranging from the "do nothing" or No Action Alternative, service from another airport, development of the current terminal, or relocation of the passenger terminal complex.

PREVIOUS PLANNING

The Salina Regional Airport Master Plan, completed in 2012, was the previous planning document for the airport to address the passenger terminal needs. At that time, the airport was served by nine-seat aircraft which were expected to continue Essential Air Service (EAS) for the foreseeable future. The plan did indicate that if service by a Part 121 airline were to return, security screening would be required along with a passenger hold room. Recognizing this potential, the Master Plan did identify opportunities for future passenger terminal expansion or relocation. The options outlined in the master plan are depicted in **Exhibit 4A.**

Option 1 – This option was shown on the airport layout plan prepared prior to the 2012 Master Plan. The 6,500 square foot addition to the back of the terminal would provide for TSA security and bag screening as well as a secure passenger hold room.

Option 2 – This option considered a 100-foot expansion to the south end of the terminal building. The expanded portion would house bag claim and rental car facilities, opening room in the original building for TSA screening and a hold room.

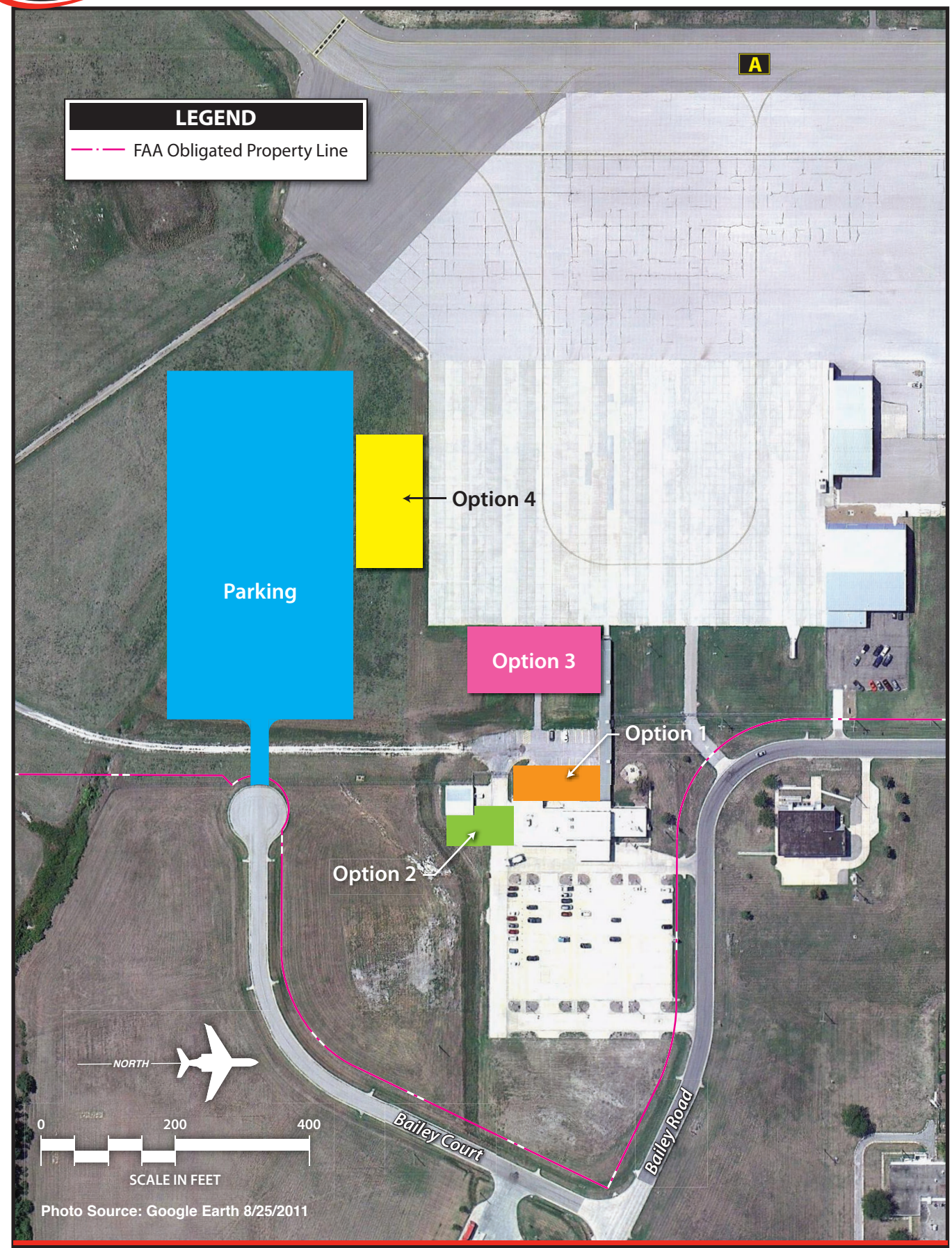


Exhibit 4A
2012 MASTER PLAN TERMINAL ALTERNATIVES

Option 3 – Building a new terminal at the ramp behind the existing terminal was the third option. A 20,000 square-foot terminal was depicted. The current building would be demolished so parking and access could be extended west to the new terminal.

Option 4 – This final option considered the construction of a new 20,000 square-foot terminal on the south end of the commercial apron. Access to the new terminal would be via Bailey Court, and parking would be constructed at the new terminal. The current terminal could either be removed or converted to other purposes.

After outlining the options, the Master Plan recommended improvements to the current terminal building, but only after a demonstrated need determines what those improvements should be.

NO ACTION ALTERNATIVE

The No Action Alternative would maintain the terminal complex as it currently is. With the growth in passenger traffic since the implementation of regional jet service in April of 2018, the terminal is already marginally operating at Level of Service (LOS) C. With nonstop flights now available to both Chicago and Denver more seats will be readily available, potentially increasing passengers on each flight.

Even foregoing two flights in the design hour, as 50-seat regional aircraft are retired from the fleet, there remains a potential for the airline to up-gage to aircraft in the 66 to 75-seat range. The increased loading this size aircraft will offer, could lower the LOS to D or F on a regular basis. The community has responded well to improved air service. Without improvements to terminal capacity to accommodate the increased passenger loads, both passengers and the airline could eventually choose other options for travel. The result would be a reduction in air service at SLN, impacting the efficiency of access to the national air transportation system for the citizens and businesses of Salina and the surrounding region.

If the passenger terminal cannot adequately accommodate demand, the demand will look to find that service elsewhere. Thus, the result of the No Action Alternative for the passenger terminal would be effectively the same as an alternative of service from another airport. Air service market that has been recaptured in recent years would be lost back to small and medium hub airports in Wichita and Kansas City, and to a lesser extent, Manhattan. Salina air travelers would once again be left with little choice but to drive to one of the other airports an hour or more away. Other travel that has been generated by the available service would likely be lost altogether, further impacting businesses in the Salina area.

EXISTING TERMINAL SITE ALTERNATIVES

Options for development of the existing terminal site were first examined. This involves alternatives to increase the efficiency and capacity of the terminal building, as well as provide for adequate vehicle parking and circulation.

TERMINAL BUILDING ALTERNATIVES

The current terminal is somewhat unique in that the building is located 265 feet from the aircraft parking apron. Passengers currently wait in the departure lounge at the terminal until their flight is called. They are then escorted through an enclosed climate-controlled connector walkway to the apron. Once gathered at the end of the walkway they are escorted onto the apron to board the awaiting aircraft.

The walkway is also used by arriving passengers to access the terminal. Arriving passengers pass by the ticket counters then either proceed out the front door or to the far end of the building to baggage claim and rental car offices.

As indicated in the 2012 Master Plan, the passenger terminal could be expanded to the west towards the aircraft apron or to the south from the baggage claim. The 70-foot maximum depth of the current building has been adequate for the small turboprop traffic; however, it will make circulation difficult as passenger traffic continues to grow with regional jet service. In addition, an extension to the south would further increase the walking distance from the aircraft to the bag claim for arriving passengers.

With adequate room for growth to the west towards the apron, the focus was placed on options that increase the depth of the terminal. This is examined in the following four alternatives.

Terminal Alternative 1

The first alternative (as depicted on **Exhibit 4B**) attempts to reorganize the functions of the terminal into a traditional layout while adding depth as discussed above. The flow is rearranged to begin with ticketing on the right, security checkpoint and departure in the middle, and baggage claim/arrival services remaining to the left. The entirety of the existing first floor structure would be converted to nonsecure space.

To accomplish this, TSA and airline functional space would be moved into additions to the back of the building that increase the maximum depth of the building by nearly 60 feet. In addition, the departure lounge would be relocated to a new arrival/departure concourse at the west end of connector walkway and abutting the edge of the airline ramp.

The largest portion of the addition would be to the north of the connector walkway. It would include the ticket counter, airline ticket office (ATO), and TSA activities, including the security checkpoint, checked bag screening, and office/operations. The TSA checkpoint would also incorporate a portion of

the current connector walkway, entering the passenger queue through the current vestibule. After processing, departing passengers would proceed to the gates at the arrivals and departures building.

Although a floor layout of the arrival/departure concourse is not shown on the exhibit, its location is included on the inset map. Alternative floor layouts for the arrival/departure building will examined at the end of the existing terminal building discussion.

Checked bags would be delivered from the ticket counter to TSA's bag screening area located directly behind it. After being cleared by TSA, the bags would be set on a belt that would transfer them under the connector walkway to the outbound baggage area.

The ticket counter queuing area would be located in the current departure lounge area next to the restrooms. This wing of the building would be opened to serve as additional public lobby area. The waiting lobby would be further expanded to include the current ticketing area. This area would also be where arriving passengers enter the lobby. The area in the northwest corner of the building currently does not have a first floor as it formerly housed the boiler system that once heated the building. A first floor can be added to this area and the space used to house communications equipment currently housed in a small closet area that would be removed.

The current ATO area would be removed, opening more space for lobby and circulation. The restrooms in this area would remain and be doubled in size with the relocation of the TSA office/operations area. The current outbound baggage/TSA bag screening space would be converted to a conference room so that the current conference room could be converted rental car counter and office space.

The bag claim area would be enlarged by removing its side and back interior walls and relocating inbound baggage into new space directly behind the current space. This also opens the area sufficiently to permit the installation of a bag claim device when demand dictates.

Advantages:

- Separates terminal functions with ticketing to the right, waiting/meet and greet in the center, and bag claim to the left;
- TSA functions consolidated in one area;
- Departures area next to ramp with room to expand as needed; and
- Maintain most of current pavement behind building for equipment, vehicles, and circulation.

Disadvantages:

- Ticket counter partially hidden from current front entrance,
- TSA bag screening space is long and narrow, and
- Outbound bag make-up is not adjacent to TSA screening.





Exhibit 4B
EXISTING TERMINAL ALTERNATIVE 1

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Terminal Alternative 2

Alternative 2 (**Exhibit 4C**) also converts the existing terminal almost entirely to nonsecure public space, while maintaining the same general flow and function of the existing terminal. The ticket counter is turned to face the front door. While the ticket queueing area remains in the existing space, the ticket counter is in new space at the windows. As with Alternative 1, the current TSA checkpoint and departure lounge is converted to additional waiting lobby with the new security checkpoint in new space west out the back wall north of the connector walkway. Upon check-in passengers would proceed to the security checkpoint. After clearance they would enter the connector walkway to proceed to a new arrival/departure concourse located next to the aircraft apron.

Arriving passengers would enter the existing building from the connector walkway as they do now. They would walk past the ticket counter queue to proceed either out the front doors of the waiting lobby or turn right to proceed to bag claim.

The hallway would be widened by removing the existing ATO space and relocating to new construction behind the ticket counters and just south of the connector walkway. Airline ticket counter agents would transfer checked luggage through an opening into the TSA bag screening room. After bags are cleared, they would be transferred into the baggage handling room to be loaded and carted to the aircraft.

Under this alternative, inbound and outbound baggage would share space. After entering and dropping off bags at the bag claim device, the carts would be moved into position to load for the next flight.

Like Alternative 1, the restrooms would be doubled in size by removing the current TSA offices/operations. The offices would be relocated into the current outbound baggage space next to both the ticket counter and bag screening. Offices would also have direct access to the public space.

The conference center would be relocated to new space on the front of the building just north of the stairwell exit. The room would have access from both the lobby as well as from the administration offices up the stairs. The current conference center would be converted to rental car counter area.

The rental car offices and the storage area on the south side of the building would be removed to open more space for bag claim and a carousel as demand dictates. The maximum building depth of Alternative 2 would be 115 feet.

As with the previous alternative, the floor layout of the arrival/departure concourse will be examined after the main terminal building alternatives, but its location is shown on the inset of the exhibit. This alternative depicts a portion of the building to either side of the connector.

Advantages:

- Ticket counter immediately visible from front entrance,
- Security checkpoint separate side of connector from other functions,
- TSA checked bag screening in direct flow between counter and outbound bag make-up,
- Outbound and inbound bag handling in adjacent space,
- Conference room adjacent to waiting lobby and administrative offices,
- TSA office/ops has direct access to public area, and
- Maintain most of pavement behind building for equipment, vehicles, and circulation.

Disadvantages:

- Arriving and departing passengers mix between ticket counter and security checkpoint and
- TSA functions not fully consolidated.

Terminal Alternative 3

The third option depicted on **Exhibit 4D** maintains the departure lounge in the main building and reorganizes functions within the existing building. This alternative would still renovate most of the main building, but it would also remove the larger central restrooms to establish the ticket counter in a location between the two entrance/exits. A similar size restroom would be included in new space near baggage claim, while more restrooms space would be added adjacent to the smaller restrooms in the current departure lounge.

From the ticket counter, passengers would proceed to the TSA security checkpoint located on the south side of the connector walkway. Upon clearance, they would proceed directly into the departure lounge. Once their flight is called passengers would be led to the connector walkaway and out to the aircraft much like they are currently.

Arriving passengers would walk down the connector from the apron and into the departure lounge, where they would pass though the center of the lounge to continue down the remainder of the connector into the waiting lobby. At that point they would either continue out the front doors or proceed around the ticketing queue to the bag claim and rental car counters. To make room for additional rental car agencies, the conference room would be relocated to the north end of the building

As with each of the other alternatives the ATO is relocated to provide additional space for circulation and queuing as well as the more centralized ticket counter. The ATO would be relocated directly behind the ticket counters including the form outbound baggage space. TSA office and operations would also be relocated out of the existing building to new space behind the ATO. This location would be between the TSA's security checkpoint and the bag screening operations.

The ticket counter agents would directly hand off checked bags to the TSA bag screening agents where bags would be screened then given back to the airline at outbound baggage. Inbound baggage would



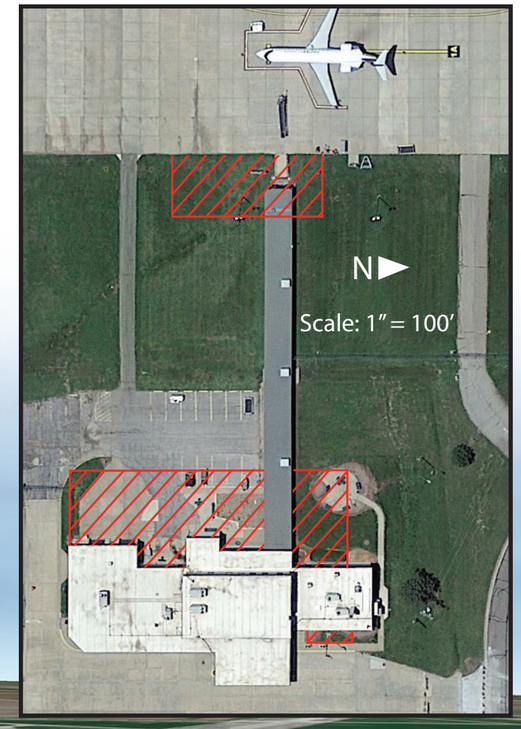


Exhibit 4C
EXISTING TERMINAL ALTERNATIVE 2

N

Scale: 1″ = 20′

Outbound Baggage

Departure Lounge

Rest Rooms

TSA Bag Screening

TSA Office/ Ops

TSA Security Checkpoint

ATO

Inbound Baggage

Bag Service Office

Rest Rooms

ATO

1A1

Bag Claim

Ticket Counter

Ticketing Queue Area

Waiting Lobby

Rest Rooms

Conference Room

Comm.

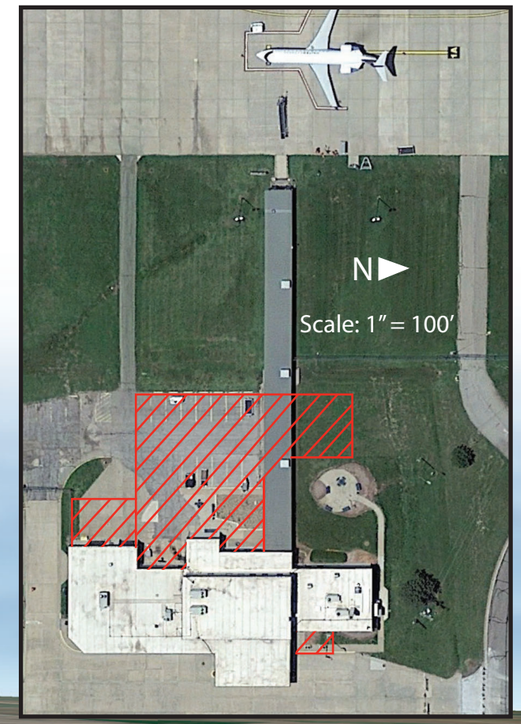
EM

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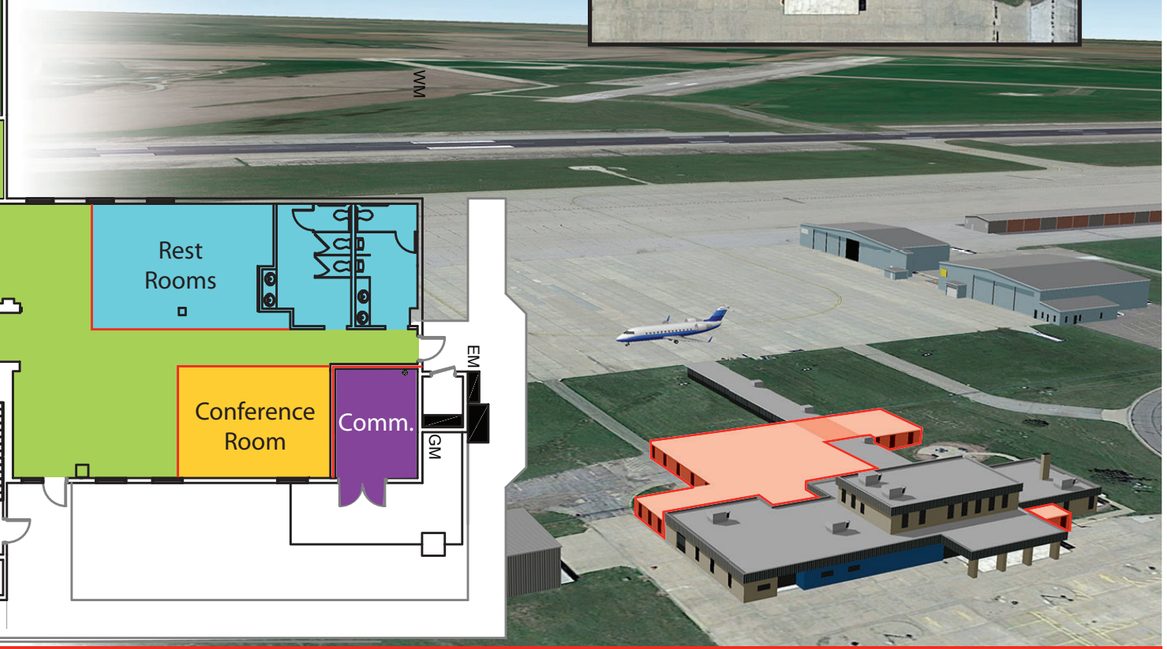


Exhibit 4D
EXISTING TERMINAL ALTERNATIVE 3

be in the same new space location behind the bag claim as the other alternatives, with a portion of space in the southwest corner walled off for a bag service office.

With the departure lounge remaining at the main building the maximum building depth would be over 160 feet.

Advantages:

- Ticketing function closer to front door,
- Security checkpoint leads directly into departure lounge,
- TSA functions consolidated in one area,
- TSA checked bag screening in direct flow between counter and outbound bag make-up, and
- Outbound and inbound bag handling in adjacent space.

Disadvantages:

- Arriving and departing passengers mix around ticketing queue,
- Entrance to checkpoint and exit for arrivals are adjacent and reversed from typical flow,
- Main restroom removed and redeveloped in another area, and
- New construction removes more significant amount of pavement behind it.

Terminal Alternative 4

The final development alternative for the existing terminal is depicted on **Exhibit 4E**. Like the first two alternatives there would be an arrival/departure concourse at the apron. A concourse building with more depth and less length is depicted on this exhibit's inset.

Unlike the previous alternatives where the ticket counter faces the front of the building, the counter would be turned 180 degrees. Both the counter and its queue area would be located within the expanded building area. Upon check-in, passengers could proceed to the TSA security checkpoint immediately to the west. Upon clearing the checkpoint, passengers would proceed down the connector walkway to the arrival/departure concourse.

The ATO would be located to new space behind the ticket counter area and incorporate the current outbound baggage area as well. Like the security checkpoint, TSA bag screening would be immediately west of the ticket counter area. Screened check bags would then be passed to the outbound baggage area south of the bag screening room. TSA office/operations would be at the back corner of the building with secure access to both bag screening and bag makeup.

Inbound baggage is attached to the outbound baggage area. Carts could remain under cover when moving from one process to the other.

As with all alternatives, arriving passengers would enter the main building from the walkway. They would proceed either to the front door or to baggage claim. The current restrooms would remain between the waiting lobby and bag claim, but the additional restrooms needed would be added next to the smaller restrooms at the north end of the building. By doing this, the conference room would remain in place, and the current TSA office/ops space would be removed and renovated as additional rental car counters.

As with the other alternatives the west interior walls are removed to provide more space in the bag claim area. The bag service office would be adjacent to both the ATO and the baggage handling areas.

Advantages:

- Ticketing function immediately adjacent to security checkpoint closer to front door,
- TSA functions consolidated in one area,
- TSA checked bag screening in direct flow between counter and outbound bag make-up, and
- Outbound and inbound bag handling in adjacent space.

Disadvantages:

- Ticket counters hidden from front entrance,
- Entrance to checkpoint and exit for arrivals are adjacent and reversed from typical flow, and
- New construction removes more significant amount of pavement behind it.

Terminal Building Alternatives Review

The four alternatives for development of the existing terminal were reviewed with the Airport Authority's Directors. The following observations were made.

- Converting the existing terminal space primarily to nonsecure public space allows for the development of secure functions in all new space to be more flexible for accommodating the most modern security design innovations.
- Locating the departures area adjacent to the aircraft apron was viewed as a positive. Not only does it reduce the loading time, but the building can also be built in stages to meet demand without significant disruption to current activity. Once completed, the departure lounge can be relocated, making the current departure lounge available for interim expansion of the security checkpoint.
- Converting the current TSA office to double the size of the current public restrooms would be more efficient and cost effective than relocating or constructing in new space away from available plumbing.
- Relocating the conference room to new space next to the front and readily accessible to the administrative offices would be the most functional location for it.

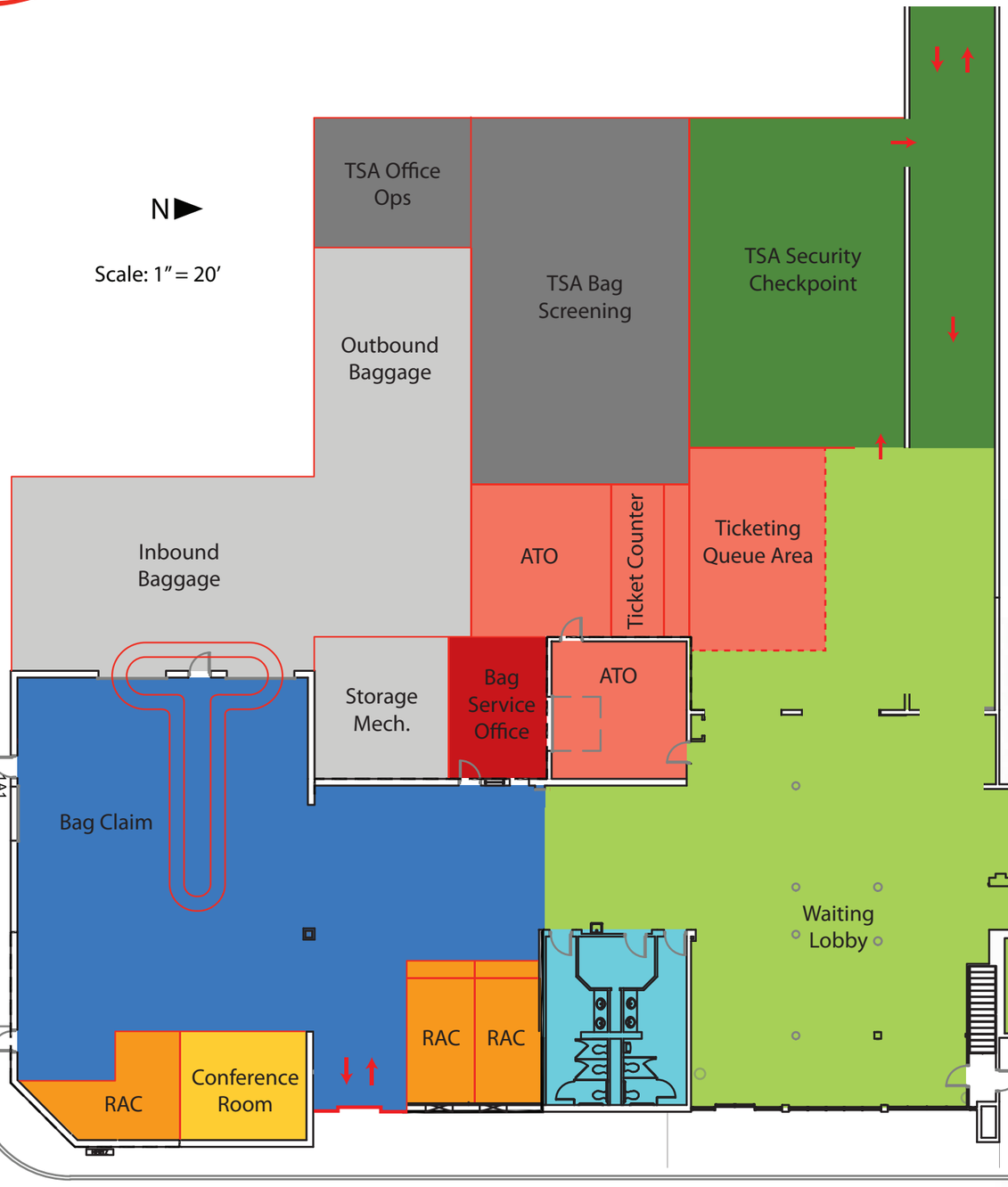




Exhibit 4E
EXISTING TERMINAL ALTERNATIVE 4

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- Alternatives that maintained existing pavement in a functional manner behind the building were preferred over those requiring more depth.
- The ticket counter turned to face the front entrance in the vicinity of its current location was favored over other locations.

Overall Alternative 2 was found to best match these observations. It would open space in the terminal while maintaining a flow and function that SLN travelers are familiar with. It was also viewed as having the most straightforward constructability while maintaining operations during construction.

As a result, Alternative 2 was selected for further consideration in comparison to alternative sites for a new terminal. The following section examines alternatives for the arrival/departure concourse.

ARRIVAL/DEPARTURE CONCOURSE ALTERNATIVES

Three of the four alternatives for development of existing terminal include relocating the passenger holdroom to a location next to the aircraft apron. After ticketed passengers clear the TSA security checkpoint, they would proceed down the connector walkway to the holdroom to await being called for their flight. This would be like the concourses found at many multi-gate passenger terminals and reduces the walking distance from the holdroom to the aircraft once the flight is called.

All three arrival/departure concourse alternatives are presented for comparison on **Exhibit 4F**. Each alternative is comprised of approximately 4,000 square feet and includes two airline gates, seating for at least 80 percent of the design hour enplanements, restrooms, and rooms for janitorial maintenance, communications and HVAC controls. Each the ties into the existing connector walkway with space at the end of the walkway incorporated into the concourse.

Concourse Alternative 1

The first alternative would be a structure 100 feet long by 40 feet deep with the connector walkway to the terminal positioned at the north end. The airline gates would be facing the apron at opposite ends of the building. Restrooms are centered in the back half of the building with a room for maintenance, communications and HVAC controls adjacent. There are 114 seats in the arrangement shown. The footprint of this alternative was depicted earlier on **Exhibit 4B**. Extending the length of the structure south from the connector places the south side of the concourse up against the service road used by airline operations to transfer bags between the terminal building and the aircraft on the apron. There is limited line-of-sight between the roadway and the passenger door at Gate 2.

Concourse Alternative 2

The second alternative would be constructed to the same dimensions as Alternative 1, however, it would be shifted north so that approximately 25 feet of the length would be north of the connector walkway as depicted earlier by the concourse footprint on **Exhibit 4C**. This provides more separation from the access road between the main terminal and the aircraft apron. There are 120 seats available in this layout. The restrooms are aligned with the plumbing all along the back wall and a janitorial maintenance closet in between. This opens space for better circulation and gate separation. The communications and HVAC are in a room in the northeast corner of the concourse.

Concourse Alternative 3

The third alternative adds depth to the concourse at the expense of length. The footprint of the concourse was depicted earlier on **Exhibit 4D**. With the concourse dimensions at 70 feet by 58 feet, the two gates are located closer together. This would extend the walking distance to the aircraft from at least one of the two gates. The layout provides for 116 passenger seats. The restrooms are in the southeast corner of the concourse away from the connector to the main building. The room for communications and HVAC system controls are in a room on the south wall adjacent to the restrooms.

Concourse Alternatives Review

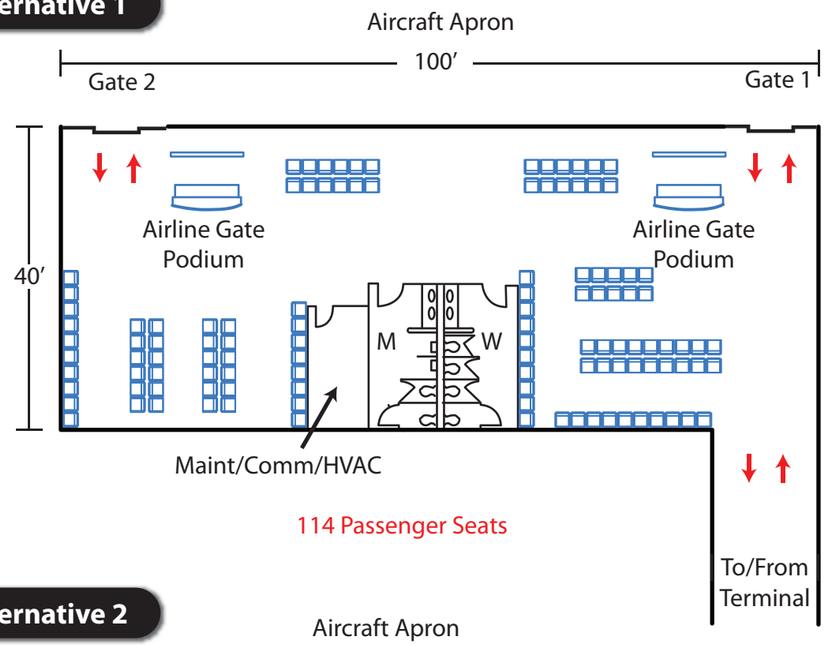
Because any one of the three concourse alternatives could be constructed along with existing terminal building Alternatives 1, 2, or 4, they were evaluated separately and reviewed by the Airport Authority's Directors. Concourse Alternative 2 was preferred over the other two.

- Alternative 3 has less apron frontage than the other two which leads to less separation between the two gates and extends the walking distance to the aircraft from at least one of the gates.
- Alternatives 1 & 2 allow for better phasing from a single gate to two if necessary.
- Alternative 1 is situated close to the service road and limits line-of-sight from passengers and airline employees entering and exiting Gate 2.
- Alternative 2 situates the two right and left of the connector walkway, provides a better circulation pattern, and a more open feeling to the concourse.

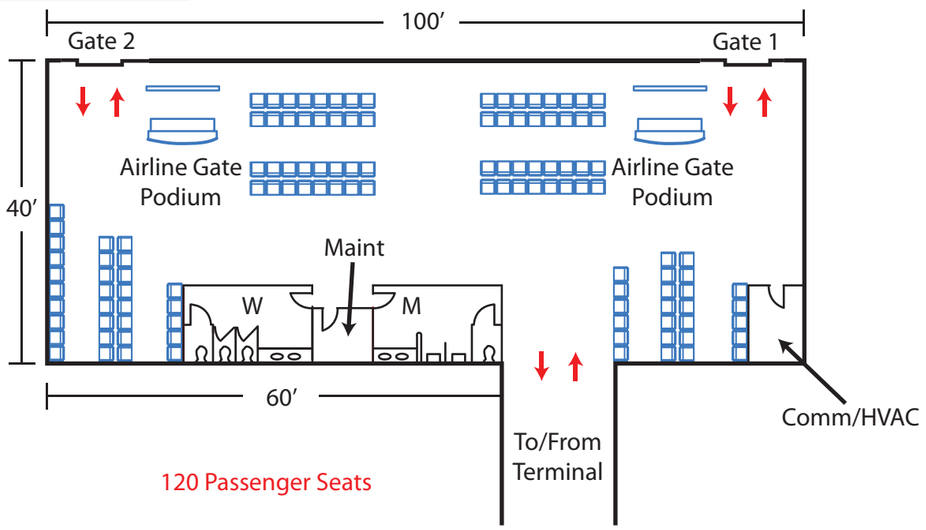
VEHICLE PARKING AND CIRCULATION ALTERNATIVES

The other consideration for development of the existing site is providing adequate circulation and parking. The current parking lot has 216 spaces. There will be a need for 276 spaces by 33,000 annual enplanements, 334 spaces by 40,000, and 543 for the high range of 65,000 enplanements. While parking can be developed on an as needed basis, any viable alternative must be capable of being developed to accommodate at least the high range.

Alternative 1



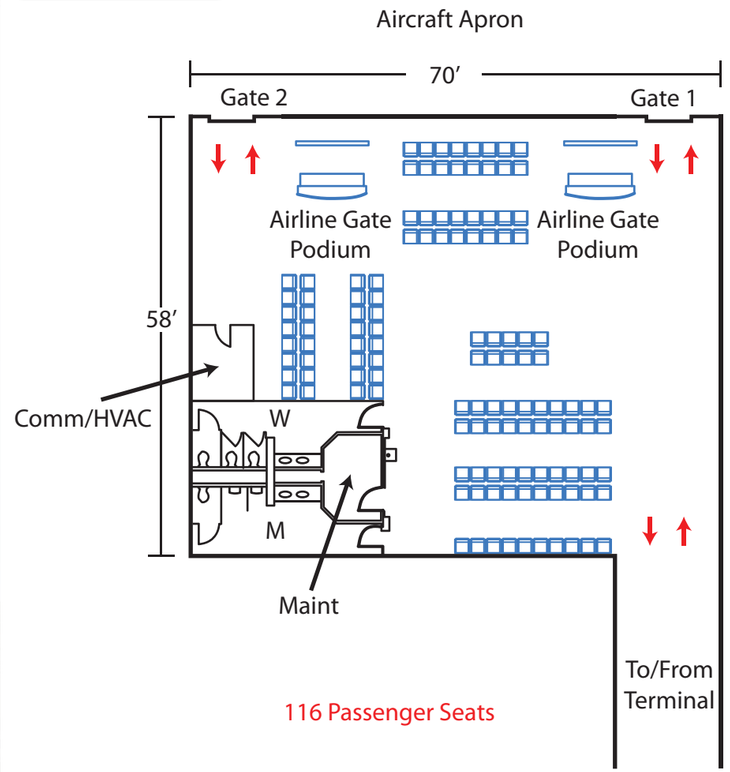
Alternative 2



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Scale: 1″ = 20′

Alternative 3





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The following three alternatives examine options to expand the current terminal parking and circulation to meet the forecast demands. Key factors to consider in parking lot expansion at the current site are the location of Arnold Avenue/Bailey Road to the north and east and Bailey Court to the south and east. The is also an industrial site southeast of the intersection of Bailey Road and Bailey Court. The most likely direction for development of additional parking is to the south into a large open space between the current terminal lot and Bailey Court to the south. A large drainage ditch immediately south of the current lot, however, would need to either be bridged or placed in subsurface drainage structures.

Parking Lot Alternative A

The existing parking lot configuration has parking rows aligned east to west, perpendicular to the front of the terminal building. There is two-way circulation on the road in front of the terminal and vehicles can enter the parking lot between any rows. In addition, there is a walkway between the head-to-head parking down each row.

This amenity results in on-centers spacing between rows of 76 feet. The typical standard spacing between rows for perpendicular parking is 60 to 64 feet. Subsequently more square feet per parking space is required in the current configuration.

Exhibit 4G depicts an option that continues the current parking configuration to the south. To accommodate adequate spaces, the diagonal portion of Bailey Court would need to be closed, and access from the circle extended directly east to Scanlan Avenue. All internal roadway circulation would be two-way. Because of the two-way circulation, access from the parking lot to Bailey Court on the south is not included. This would prevent vehicles from using the road in front of a terminal as a shortcut between Arnold Avenue and Bailey Court.

Advantages:

- Maintains current parking configuration throughout,
- Space in front of parked cars for pedestrians to walk to and from the terminal, and
- Can be expanded as need dictates to a maximum of 576 parking spaces.

Disadvantages:

- All rows circulate in and out of the terminal roadway increasing vehicle movements in front of the terminal,
- Two-way traffic on terminal roadway increases potential for conflicts as traffic increases,
- Greater than standard row spacing increases the space requirements per parked vehicle, thereby increase pavement, and property requirements,
- Relocation of Bailey Court impacts industrial lots east of terminal, and
- Use of industrial center property south of Bailey Court.

Parking Lot Alternative B

Alternative B depicted on **Exhibit 4H** leaves the existing parking in its current configuration, but in the major portion of the expansion area, the rows are rotated 180 degrees. The spacing between rows in the new development would be set at standard of 62 feet. This allows the high range parking requirements to be met without relocating Bailey Court.

Two-way circulation is maintained, and Bailey Court is incorporated into the circulation plan. While this would open the potential for using the terminal roadway as a shortcut between Bailey Court and Arnold Avenue, it is not as attractive because the diagonal section of Bailey Court remains open.

Advantages:

- Current lot remains as is except the east end is paved, lighted, and marked,
- New spaces are oriented north south with closer spacing between rows to meeting parking requirements inside Bailey Court,
- Bailey Court is accessible from lot, allowing departing vehicles to avoid circulating back through the lot, and
- Can be expanded as need dictates to a maximum of 570 parking spaces.

Disadvantages:

- Rows directly in front of terminal still circulate in and out of the terminal roadway increasing vehicle movements in front of the terminal,
- Two-way traffic on terminal roadway increases potential for conflicts as traffic increases, and
- Greater than standard row spacing increases the space requirements per parked vehicle, thereby increase pavement, and property requirements.

Parking Lot Alternative C

The third alternative is designed to establish a one-way loop circulation within the terminal area. **Exhibit 4J** maintains the primary terminal area entrance and exits off Arnold Avenue. The road in front of the terminal is converted to one from north to south in front of the terminal. The existing parking lot is reconfigured to north-south rows that matching up with rows in the south expansion area.

A median would be established that separates the one-way terminal loop from the parking lot. The first entry into the parking lot would be just past the terminal and the current parking pavement. The lot could also be entered off the south end as well as on the east side of the loop. The loop is completed on the north side of the parking lot and avoids vehicles returning to the terminal from using Arnold Avenue.

An exit is provided onto Bailey Court at the south end of the terminal loop. This would provide vehicles leaving the terminal area an early exit from the loop. In addition, the westernmost parking rows are

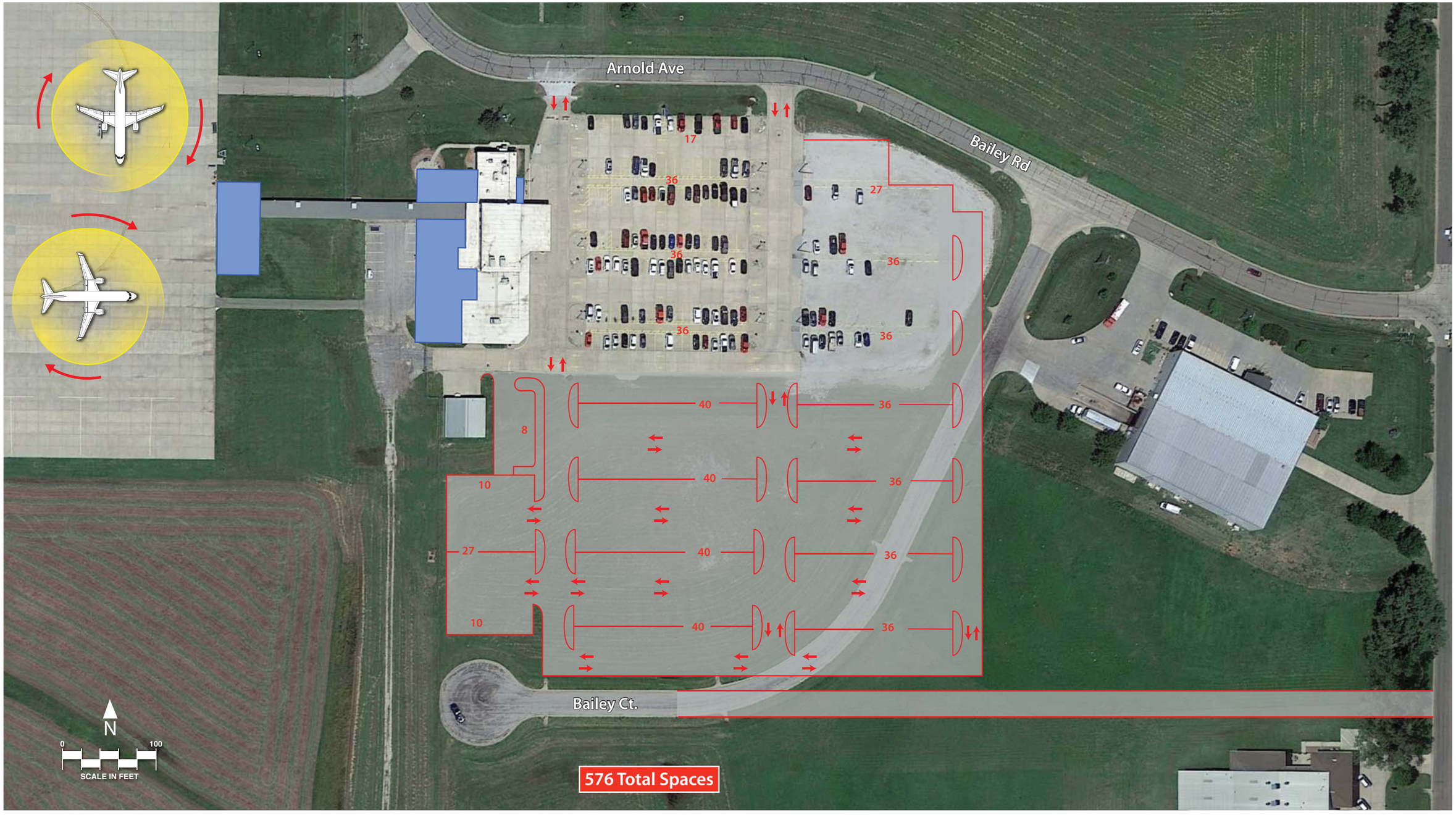


Exhibit 4G
CIRCULATION AND PARKING ALTERNATIVE A



Exhibit 4H
CIRCULATION AND PARKING ALTERNATIVE B

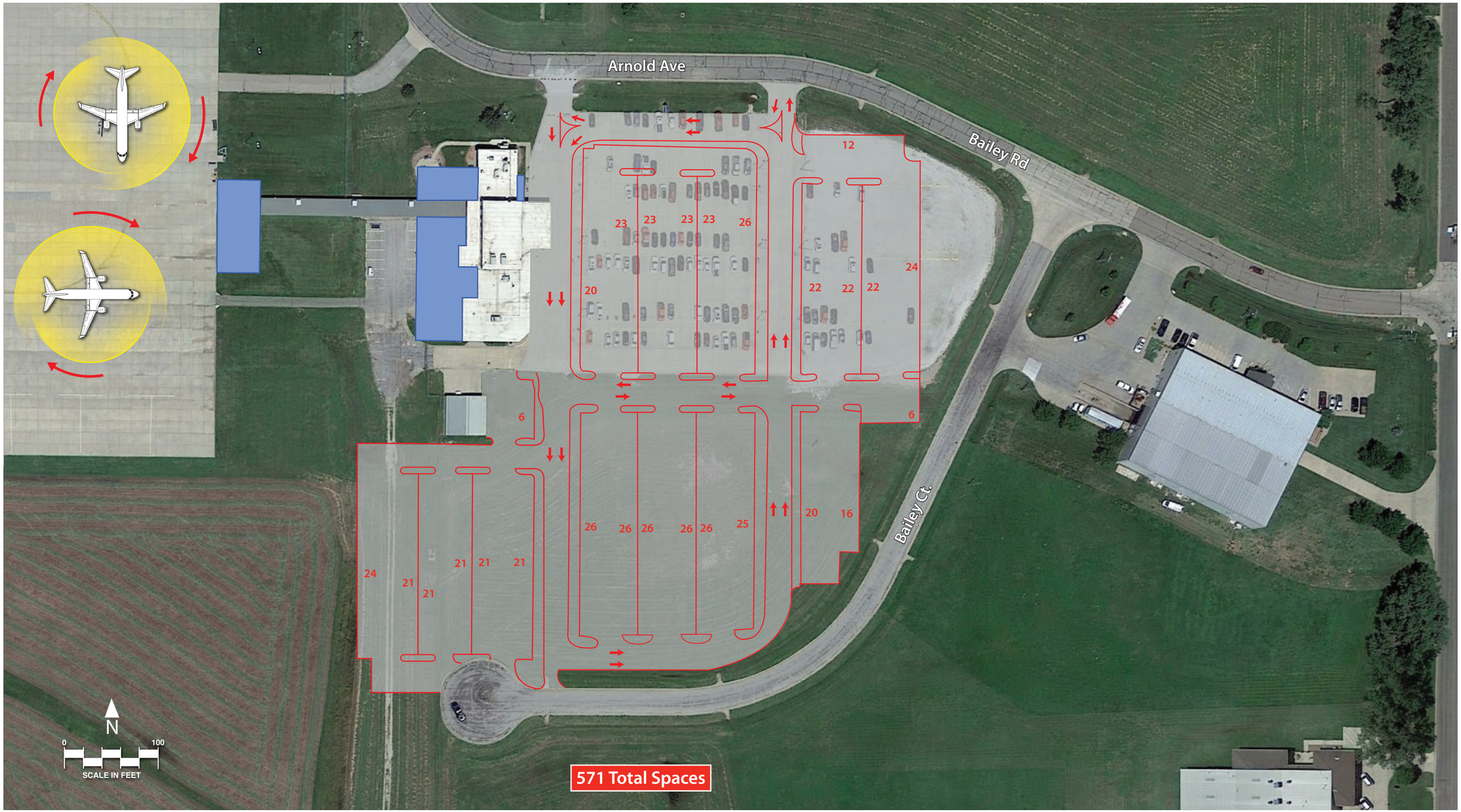


Exhibit 4J
CIRCULATION AND PARKING ALTERNATIVE C

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expected to primarily serve employee and rental car parking. They could exit onto Bailey as well. Rental car returns could be given the option to use Bailey Court.

The out-building on the south side of the terminal is currently used by the on-site rental car for quick turnaround of returned vehicles. As additional rental cars are attracted to the terminal, space on the south side of the Bailey Court circle could be leased for rental car quick turnaround cleaning or even vehicle storage.

Advantages:

- Establishes a terminal loop road for circulation around the parking lot and back to the terminal,
- Increases capacity of the terminal roadway,
- Enhances safety at the curb in front of the terminal,
- All spaces are oriented north south with closer spacing between rows to maintain parking requirements and circulation inside Bailey Court,
- Bailey Court is accessible from lot, allowing departing vehicles to avoid circulating back through the lot,
- Allows rental car vehicles to be returned via Bailey Court, avoiding the front of the terminal, and
- Can be expanded as need dictates to a maximum of 571 parking spaces.

Disadvantages:

- Loss of pedestrian walkways within rows of vehicles.

Parking Lot Alternatives Review

The parking lot alternatives were reviewed with the Airport Authority Directors. The following observations were made:

- Maintaining parking and circulation within Bailey Court and not relocating the road would be preferred at it avoids impacting the lots in the industrial center.
- A designated terminal loop with one-way flow is highly desirable.
- Separation of parking lot flow from the front of the terminal building is also preferred.
- An exit onto Bailey Court is allowable, but it should not be made part of the primary circulation route.

Based upon these observations and the overall analysis Alternative C was selected for further consideration as part of the existing terminal area development in comparison to alternative sites for a new terminal.

NEW TERMINAL SITE ALTERNATIVES

Options for relocating the passenger terminal facilities to a different location on the airport were also examined. This section examines potential sites for development of a new terminal, beginning first with a potential terminal building layout.

NEW TERMINAL BUILDING LAYOUT

A new passenger terminal building eliminates constraints that may be present in expanding an existing building to meet growing requirements. **Exhibit 4K** presents a straightforward design based upon the facility requirements from the previous chapter. As with Alternative 1 for the existing terminal, ticketing is on the right with bag screening and outbound bag makeup adjacent. The security checkpoint is middle of the terminal feeding into the departure lounge facing the apron. Baggage claim is on the right side with rental car counters, restrooms and a conference room on the front wall.

The overall building size is 250 feet long by 115 feet deep. While as deep as the expanded passenger terminal alternative, it is longer because the departure lounge is within the building that is intended to be located at the apron.

SITING CONSIDERATIONS

There are several factors to consider when searching for potential new sites for a passenger terminal:

- Access to the airfield - apron and taxiway access to the airfield is the most obvious and critical.
- Landside access - reasonable access to the community regional roadway system.
- Proximity to utilities – extensive extensions or development of utilities add to the costs.
- Support facilities – readily accessible for Airport Rescue and Firefighting response; fuel truck accessibility; apron visibility from the control tower.
- Segregation from other aviation activity – for safer and more secure operation.
- Expansion capability – a new site should have capability to expand well beyond the normal planning horizons.

The layout of Salina Regional Airport favors sites on the east side of the airfield. The east side supports most of the existing taxiway and apron infrastructure. The interstate highway and the city are to the east as well. The east side also has an existing road system and utilities in support of the landside operations and the industrial center.

The bottom half of **Exhibit 4L** presents the east side of the airfield at SLN. While there is extensive area of aircraft apron available, large portions are utilized for military and civilian aircraft. A planned new T-hangar development is shown near the north end of the ramp. Much of the ramp along the northern half of the airfield was is originally when Schilling Air Force Base was active.

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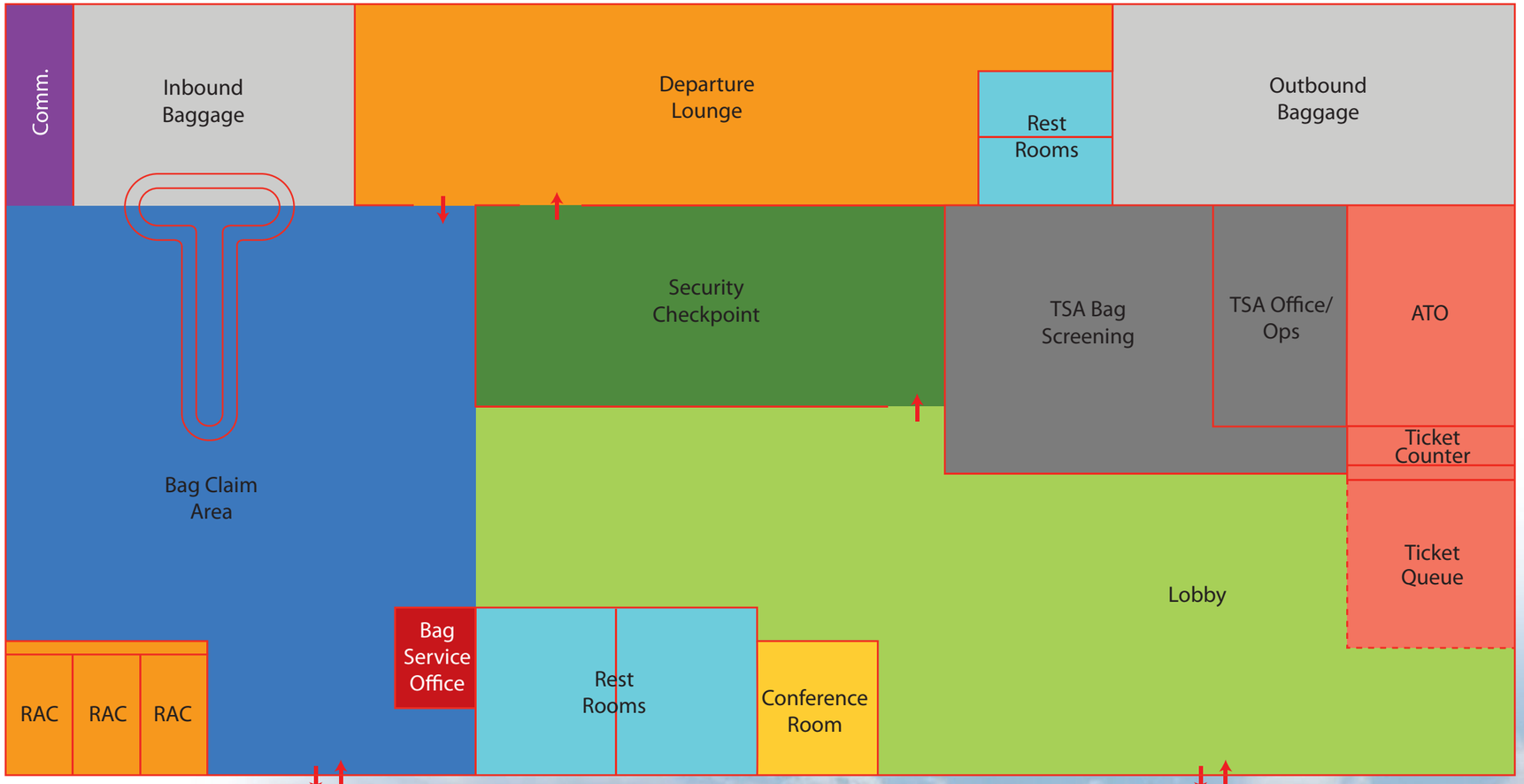
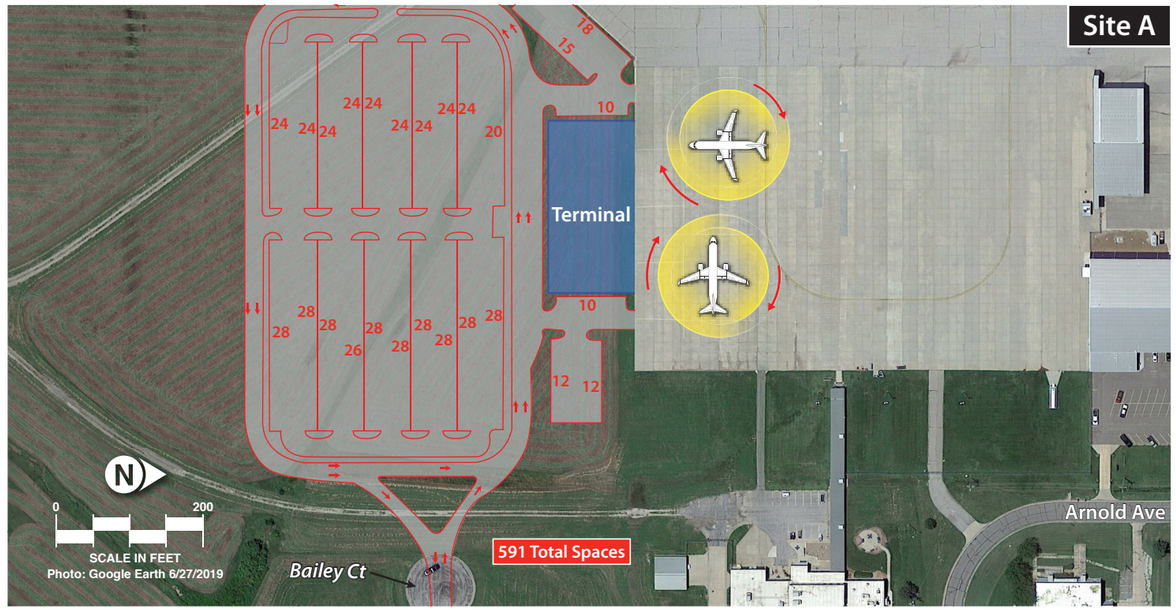
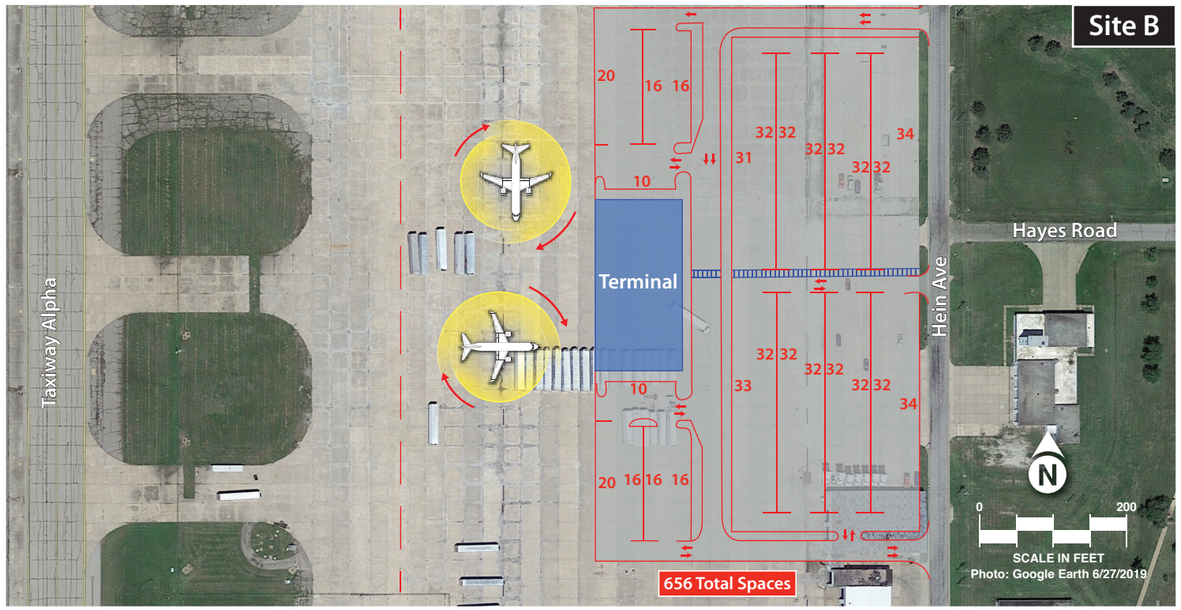




Exhibit 4K
NEW TERMINAL BUILDING ALTERNATIVE


Site A
Terminal
Arnold Ave
Bailey Ct
591 Total Spaces
N
0
200
SCALE IN FEET
Photo: Google Earth 6/27/2019


Site B
Taxiway Alpha
Terminal
Hein Ave
Hayes Road
656 Total Spaces
N
0
200
SCALE IN FEET
Photo: Google Earth 6/27/2019


Airport Road
Runway 4-22
Runway 17-35
Fairchilds Road
Site A
Site B
Taxiway A
Arnold Ave.
Sutherland Road
Jumper Road
Scanlan Ave
Beechcraft Rd
Hayes Rd
Crompton Rd
Hein Ave
Tony's Rd
Centennial Road
135
0
2,000
N
SCALE IN FEET
Google Image: 6/27/2019

Two potential new sites for the terminal are outlined on the exhibit. Site layouts are included on the upper half of the same exhibit. Each site is discussed below.

ALTERNATE SITE A

Site A is at the south end of the airfield and the current passenger terminal apron. It was identified as a potential terminal site in the 2012 Master Plan and shown earlier on **Exhibit 4A**. The aircraft parking would just be moved to new parking positions on essentially the same ramp.

Landside access would be developed from an extension of Bailey Court with a loop road and parking developed south of the new terminal building. Rental car and employee parking could be developed to either side of the terminal. Utilities would be extended from the existing terminal and/or the industrial lots along Bailey Court. This green field site would not significantly impact current airport operations or other uses in the industrial center.

Advantages:

- Green field site in proximity to landside access and utilities,
- Continue to utilize existing terminal apron, and
- Short move for equipment and operations from the existing terminal.

Disadvantages:

- Requires all new development other than apron.

ALTERNATE SITE B

Site B is located on the old military ramp that is currently utilized for maintenance operations and truck storage. It is situated between Kansas State University (KSU) flight training ramp and hangars on the south and the planned T-hangar development to the north. The KSU Polytechnic Campus is to the east of site, as are utilities. The 2012 Master Plan and the current airport layout plan (ALP) have large conventional hangars planned for the site.

The terminal complex would be adjacent to Hein Avenue which runs north-south immediately to the east of the site. Hayes Road ends at Hein Avenue immediately east of the site. Hayes runs east into the KSU campus then turns south and becomes Scanlan Avenue. Crompton Road and Tony's Road also end at Hein north of the Site B. Hein Avenue continues south to intersect Beechcraft Road; however, this section is fenced off for airfield access to hangars located east of Hein.

As previously mentioned, the entire site, including the terminal building, parking, and loop road is currently old military pavement. The portion of the apron to be used for access taxiways and parking apron would need to be rehabilitated for regular use by commercial jet aircraft. The adjacent KSU ramp was recently rehabilitated with a mill and overlay. The same could be performed to rehabilitate the airline terminal ramp. The apron under the terminal footprint would need to be removed for the building site. The pavement in the terminal loop road and parking area would be retained for parking; however, it may require raised islands or pavement removal for separation of the terminal roadway from the parking lot.

Advantages:

- Near midfield location,
- ARFF located immediately to the southwest of the site, and
- Proximity to landside access and utilities.

Disadvantages:

- Located between two general aviation activities,
- Access available from multiple directions, but indirect from main arterials in industrial center,
- A primary access route through KSU Polytechnic Campus, and
- Aged apron pavement will require rehabilitation.

DEVELOPMENT COST COMPARISONS

Preliminary development costs were prepared for the preferred existing terminal development alternative (Alternative 2), and the two new terminal sites. Estimates of probable construction costs were prepared for each option by Hutton, a Kansas-based design and construction firm with offices in Salina. While at the planning level for comparison purposes, the estimates were prepared in accordance with generally accepted cost estimating practices and standards. The costs and assumptions utilized are included in **Appendix B**.

Table 4A provides a summary comparison of costs for the three options. Besides the constructions costs prepared by Hutton, Coffman Associates prepared estimates for fixtures and fittings, communications, security controls, special systems and baggage handling systems that would not be owned by the TSA, the airlines, or other tenants of terminal. Design, survey, inspection, and project administration were estimated at 18 percent. A planning level contingency of 15 percent was added to the subtotal for the estimated total development cost of each option.

As might be expected, expansion of the existing terminal resulted in the lowest terminal building cost. Site B had the lowest parking lot and access development cost, primarily because the parking and access loop would be developed entirely on old military pavement. Site B also had the lowest cost for utility extension because of its proximity to existing utilities.

TABLE 4A
Terminal Development Cost Comparison

	Existing Terminal	New Terminal Site A	New Terminal Site B
Terminal Building Development			
Basic Construction	$ 5,264,000	$ 6,903,000	$ 6,905,000
Fixtures & Fittings	170,000	230,000	230,00
Comm/Special Systems	210,000	288,000	288,000
Baggage Handling Systems	125,000	125,000	125,000
Terminal Building Total	$ 5,769,000	$ 7,546,000	$ 7,548,000
Aircraft Apron Improvements	$ 0	$ 0	$ 2,612,000
Parking Lot and Access Development	$ 2,105,000	$ 3,297,000	$ 1,409,000
Site Utility Extensions	$ 248,000	$ 429,000	$ 130,000
Design/Inspection/ Administration (18%)	$ 1,462,000	$ 2,029,000	$ 2,106,000
Development Subtotal	$ 9,584,000	$ 13,301,000	$ 13,805,000
Planning Level Contingency (15%)	$ 1,438,000	$ 1,995,000	$ 2,071,000
Development Total	$ 11,022,000	$ 15,296,000	$ 15,876,000

The existing terminal expansion as well as Site A had no significant costs for apron improvements as both use the current terminal apron ramp which will be adequate for the planning horizons. Site B, however, will require a major mill and overlay of the old military ramp it sits on as well as the taxiways that access the ramp. These apron improvement costs result in Site B being the most expensive alternative.

As shown on the table, development of the existing terminal was found to be the lowest cost, with Site A nearly 40 percent more expensive.

SUMMARY AND CONCLUSIONS

This alternatives analysis has examined a variety of alternatives for developing the existing M.J. Kennedy Air Terminal at Salina Regional Airport to meet anticipated future airline passenger demand. Locations for a new passenger terminal were also examined and compared to the preferred development option for the existing terminal.

Development of a new terminal was estimated to be 40 percent more expensive than expanding the current terminal. Perhaps the most attractive advantage of a new terminal site is the opportunity to construct the facility with no disruption to current terminal operations. Besides the overall cost, the new facility would need to be constructed nearly in its entirety up front.

While some disruption is inevitable in expanding the existing terminal, the preferred alternative will allow the facility to be expanded in phases that can minimize disruption and spread the development costs over an extended period.

For example, the arrivals/departure concourse could be constructed initially. This can provide some immediate additional space at the TSA security checkpoint. At the same time or in the next phase the new TSA checkpoint area could be constructed. Once completed, the north wing of the existing terminal can be converted to additional waiting lobby. A complete phasing plan will be outlined with the concept refinement in the next chapter.

As a result, it is recommended that Alternative 2 be further refined as the recommended concept for passenger terminal development at Salina Regional Airport.

Chapter 5

RECOMMENDED CONCEPT/FINANCIAL FEASIBILITY



Chapter Five
RECOMMENDED CONCEPT/FINANCIAL FEASIBILITY

The previous chapter outlined the alternatives process undertaken that evolved into a recommended concept for future terminal development. This chapter further refines and defines the recommended development that is designed to meet projected passenger demands.

It should be noted that after the preparation of the passenger demand forecasts, the terminal facility requirements, and during the preparation of the alternatives, the first cases of COVID-19 were uncovered in Wuhan, China and rapidly grew into a global pandemic that has significantly impacted economies and air travel both internationally and domestically. **Appendix C** discusses the potential impacts to air travel demand and terminal development timing at Salina Regional Airport. Because of the uncertainties, specific phasing of terminal development will not be provided in this report. Overall costs and funding feasibility of the terminal project are still outlined, as are the potential priorities and triggering events.

TERMINAL DEVELOPMENT PLAN

Improvement and expansion of the existing terminal per Alternative 2 in the previous chapter is the preferred development concept with some refinements. **Exhibit 5A** reflects the refined terminal plan.



When reviewed with the Airport Authority Board, it was recommended the conference room be relocated to the back of the building rather than the front. This would incorporate the new conference room into the larger structural building system rather than as a separate add-on in the front of the building. It also leaves more space at the front of the building for curb front activities.

Another refinement involved the TSA security checkpoint. The future checkpoint was extended to the east and its width reduced to follow standards set forth in the *TSA Checkpoint Design Guide (CDG).* The TSA detection equipment layout has also been added to the refined concept as are bag conveyer's, seating, and doorways between rooms and for fire exits.

As indicated with Alternative 2 in the previous chapter, most of the existing terminal would be converted to pre-security public space. The current TSA checkpoint would be moved into its new location attached to the northwest side of the current building and the concourse connector. The secure hold room would be relocated to the new arrival/departure concourse next to the aircraft apron and at the end of the concourse connector. A floor would be installed in the northeast corner of the existing building, and the communications system would be relocated into the secured room.

The ticket counter would be rotated 90 degrees and into the current viewing window location. The airline ticket office/operations (ATO) space would be relocated into new space immediately behind the ticket counter, and the old ATO space removed to open additional public lobby and circulation area.

The current TSA office/operations space would be removed for public restroom expansion. It would be relocated into the current outbound baggage space and some new space immediately south. The TSA bag screening would be moved out of the space it shares in the current outbound baggage to new space immediately west. The ground service equipment (GSE) road running between baggage handling at the terminal and the apron is planned to be reconstructed and widened to 20 feet.

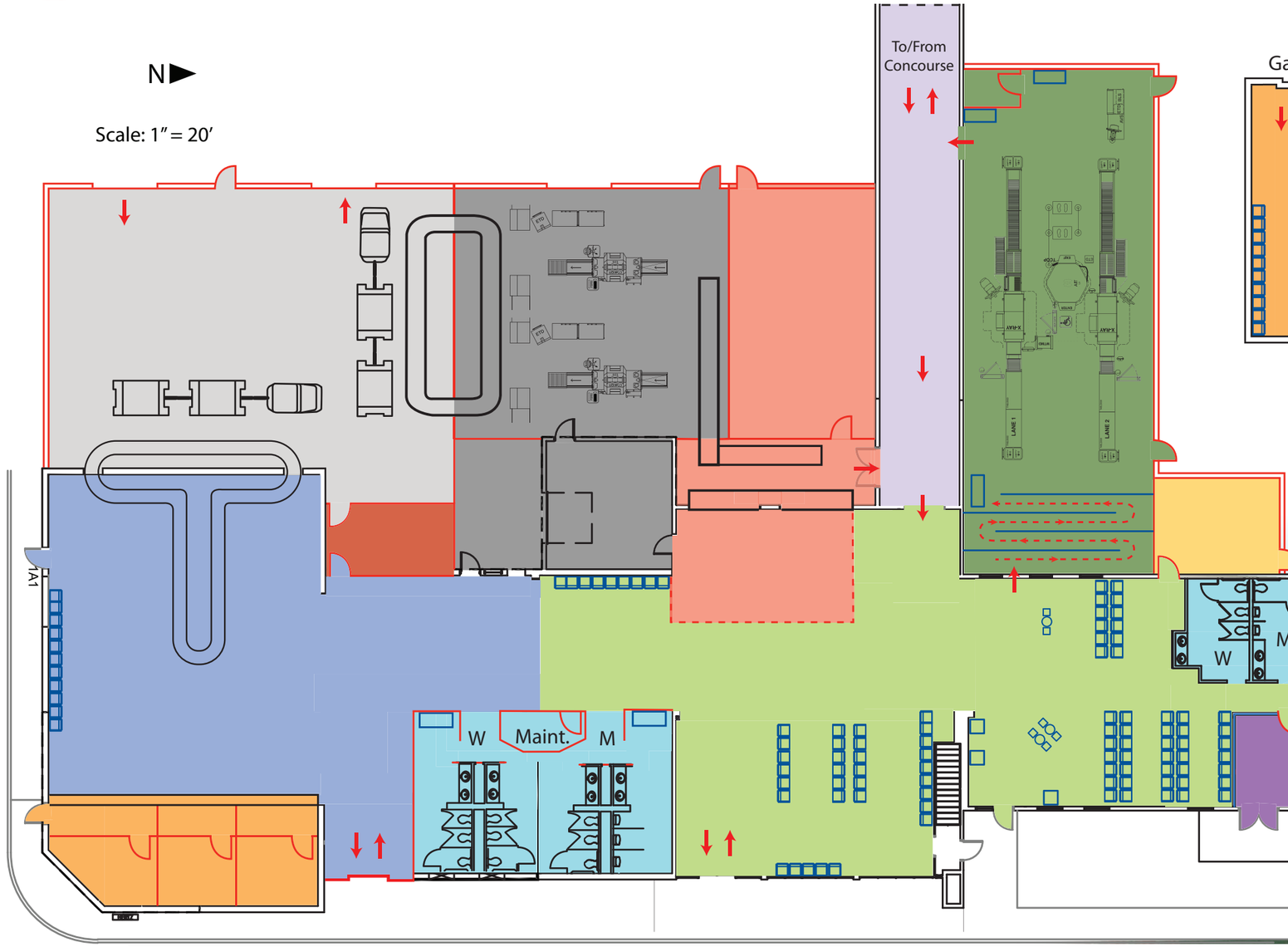
The public bag claim area would be expanded into the current inbound baggage handling space as well as the storage and rental car office space along the buildings south wall. Inbound and outbound baggage handling would share a large space immediately west of the bag claim and south of the new TSA bag screening space. A bag service office would be developed in new space accessible to both bag handling and the public bag claim. The rental car counters and offices would be along the east wall in the bag claim area.

As mentioned earlier, a new arrivals/departure concourse would be constructed at the end of the concourse connector. The 4,000 square-foot secure concourse is planned to include two gates, restrooms, and seating for design hour enplanement levels. The building is anticipated to be offset from the apron slightly to allow for inlets to collect drainage from the ramp, keeping the gate entrance/exits clear from the sheet flow.

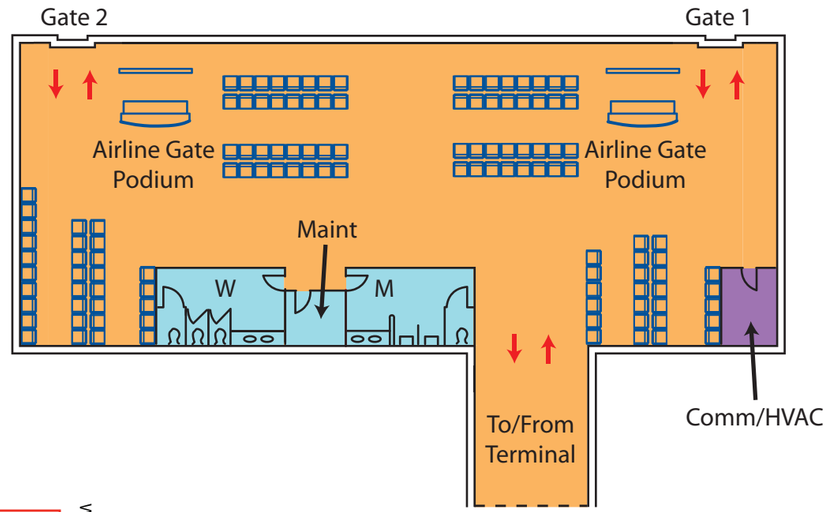
Total square footage for the terminal floor plan is estimated at approximately 26,500 square feet of new and remodeled space terminal floor space. Including the existing second-floor airport administration and stairwell access would bring the total building space to approximately 29,000 square feet. While no outdoor terminal space has been included at this time, the final terminal design should take into account the value of outdoor space, particularly considering the COVD-19 and potential future pandemics.

N

Scale: 1" = 20'



Arrival/Departure Concourse





LEGEND

- Inbound/Outbound Baggage & Storage/Mech
- Bag Claim Area
- RAC/Departure Lounge
- Restrooms
- ATO/Ticket Counter/ Ticket Queue Area
- Comm
- Bag Service Office
- Waiting Lobby
- Conference Room
- TSA Security Checkpoint
- TSA Bag Screening/Office

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PARKING AND ACCESS PLAN

Alternative C is the recommended parking and access plan for the passenger terminal. As presented on **Exhibit 5B**, the plan maintains the terminal's primary entrance and exit off Arnold Avenue. The plan would reorient parking 90 degrees to run north-south. A loop road would be created around the main core of parking. A secondary exit would be available to Bailey Court. At build-out, the number of spaces is estimated at 571.

The parking lot can be developed based upon need. As the current paved lot begins to operate at capacity on a regular basis during the busy summer months, the new spaces shown in Phase I on **Exhibit 5B** could be constructed. This could be immediately followed by the reorientation of the existing paved lot and implementation of the loop road around this core lot. The gravel lot on the west could remain as an overflow lot.

As additional space is needed, the parking to the west could be developed to remove rental car and employee parking from the core lot. The outer sections to the east and west would be developed over the long term as traffic grows. The east end of the parking lot would likely be developed last, maintaining the current gravel lot for overflow parking until the last development phase.

TERMINAL DEVELOPMENT FUNDING SOURCES

With the terminal concept in place, an estimate of the development plan's eligibility for funding can be determined. A key to the terminal development will be funding assistance from programs administered by the Federal Aviation Administration (FAA). The following discusses the federal program and the eligibility of the SLN terminal improvements.

FAA AIRPORT IMPROVEMENT PROGRAM (AIP)

Grants authorized by Congress and administered by the FAA through the AIP are a critical capital funding source to implement airport development projects. The most recent legislation authorizing federal funding was enacted in late 2018, when Congress passed H.R. 302, the FAA Reauthorization Act of 2018.

The law authorizes $3.35 billion annually for AIP through federal fiscal year (FY) 2023. Unlike in previous airport funding legislation, it also authorized more than $1.0 billion annually in supplemental funding for airports smaller than large hubs. The supplemental funds would need to come from the general fund, and like the regular AIP, would need to be appropriated by Congress each year. In late December 2019, Congress passed appropriations bills for FY 2020 that included the full $3.35 billion as well as $400 million in supplemental discretionary grants.

As a non-hub primary commercial service airport, Salina Regional Airport, is apportioned $1.0 million annually in AIP entitlement funds. Under the current entitlement formula, this amount would only increase when annual calendar year enplanements exceed approximately 70,000 annual enplanements.

For projects in excess of the annual entitlements, the airport may apply for discretionary funds from FAA. The priorities are established by the FAA utilizing a priority coding system. Under this system priorities are ranked by purpose with ensuring airport safety and security the highest. After that comes preserving current infrastructure, mitigating noise and environmental impacts, meeting standards, and increasing system capacity.

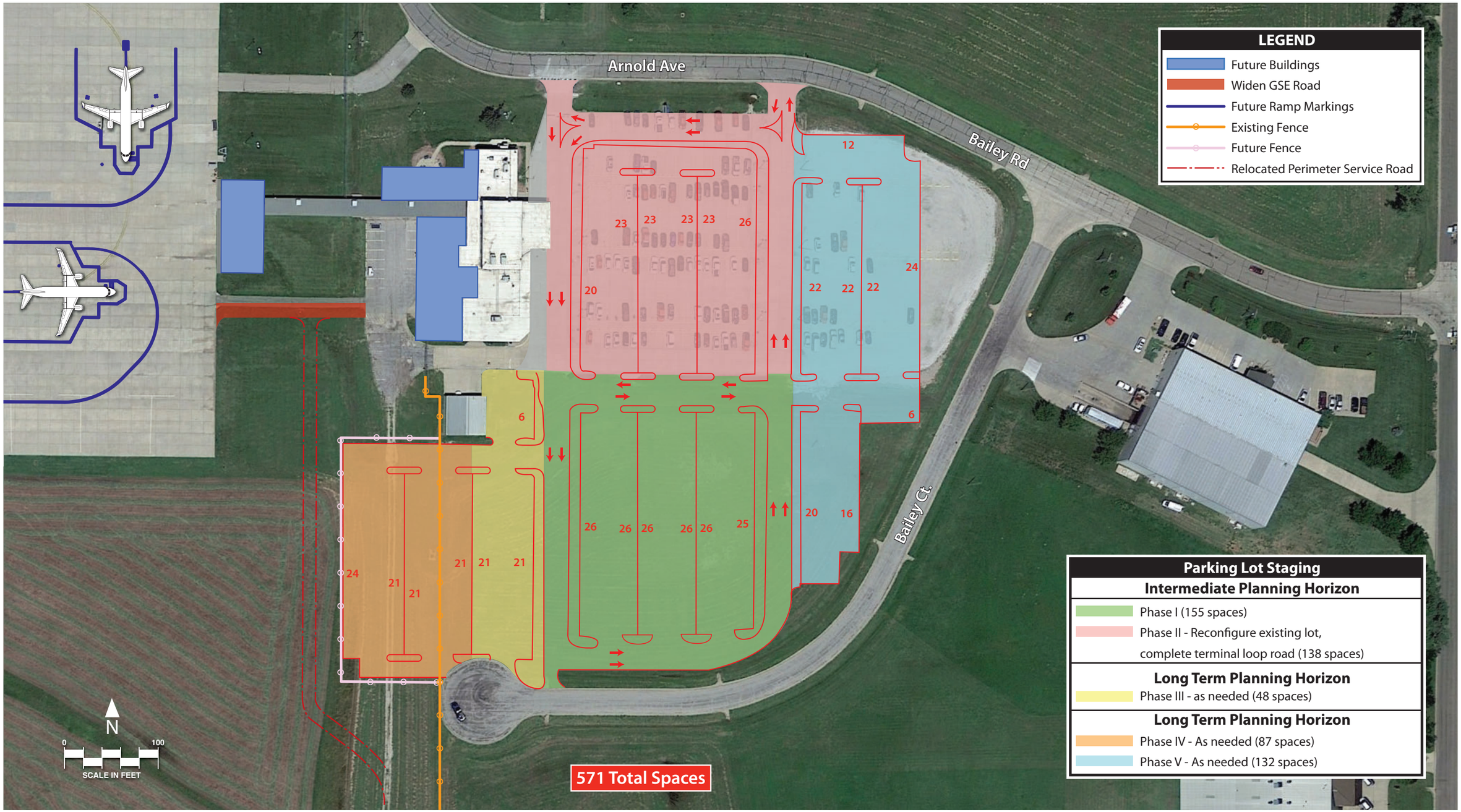
Under the current reauthorization act, nonprimary commercial airports are can receive 90 percent funding on eligible projects including portions of passenger terminal development. The United States Code 49 USC 47119 defines eligible space within terminal development projects as "public-use areas that are directly related to the movement of passengers and baggage in terminal facilities within the boundaries of the airport".

FAA Order 5100.38D, Change 1 – Airport Improvement Program Handbook more specifically outlines the FAA's policies and procedures for AIP projects including the eligibility of terminal components. Components fully eligible include:

- All public areas including:
  - Waiting lobby and public circulation between public areas
  - Ticketing queue
  - TSA security checkpoint and queuing (construction of bare space and appropriate utilities)
  - Connector walkway for passengers between terminal and gate holding areas
  - Gate holding areas
  - Loading bridges
  - Public Restrooms
  - Public portion of concession areas
  - Baggage claim area
- Bag claim device and other bag conveyors (e.g. ticket counter to TSA to outbound bag make-up)
- Ticket and rental car counters (not the area behind)
- Baggage service office (not the area behind the counter)
- Wayfinding signs, and non-exclusive FIDS in public areas
- Public address system
- Security fencing
- Parking and access roads (non-paid parking only)
- Exterior building shell/structure/roof/foundation

In general, revenue-producing and non-passenger areas of the terminal are not eligible. Ineligible areas include:

- TSA checked bag screening area
- TSA Offices
- TSA equipment
- Inbound/outbound baggage handling areas
- Airline ticket office/operations areas


Arnold Ave
Bailey Rd
Bailey Ct.
LEGEND
Future Buildings
Widen GSE Road
Future Ramp Markings
Existing Fence
Future Fence
Relocated Perimeter Service Road
12
23 23 23 23 26
24
20
22 22 22
6
6
26 26 26 26 26 25
20
16
24
21 21
21 21 21
N
0
100
SCALE IN FEET
571 Total Spaces
Parking Lot Staging
Intermediate Planning Horizon
Phase I (155 spaces)
Phase II - Reconfigure existing lot, complete terminal loop road (138 spaces)
Long Term Planning Horizon
Phase III - as needed (48 spaces)
Long Term Planning Horizon
Phase IV - As needed (87 spaces)
Phase V - As needed (132 spaces)

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- Rental car offices
- Administrative offices
- Conference room (even if available for public use)
- Janitorial rooms and other storage (except wheelchair storage)

Because systems such as electrical, mechanical, utilities, and HVAC may be shared by both eligible and ineligible areas in the terminal, their costs are prorated. The typical method of proration is to the use of the ratio of eligible and ineligible areas.

Exhibit 5C Illustrates the eligible and ineligible areas of the plan for the M.J. Kennedy Terminal development. **Table 5A** presents an estimate of the breakdown of the terminal building space and grant eligibility. Approximately 71 percent of the space is AIP-eligible. That percentage is then utilized to calculate the eligibility of shared costs.

TABLE 5A
Terminal Building Space and Grant Eligibility Status
Salina Regional Airport

Description	Proposed Total SF	Eligibility Rate	Eligible SF	Ineligible SF
Ticket Counter Area	350	50%	175	175
Ticketing Queue	580	100%	580	0
Waiting Lobby	4,355	100%	4,355	0
Checkpoint Queuing	500	100%	500	0
TSA Security Checkpoint	1,900	97%	1,845	55
TSA Baggage Screening	1,760	0%	0	1,760
TSA Ops/Office	715	0%	0	715
Airline Ticket Office (ATO)	880	0%	0	880
Inbound/Outbound Baggage	3,070	0%	0	3,070
Baggage Service Office	180	50%	90	90
Baggage Claim	2,925	100%	2,925	0
Rental Car Counters	301	50%	151	151
Rental Car Offices	424	0%	0	424
Conference Room	300	0%	0	300
Concourse Connector	2,800	100%	2,800	0
Concourse Holdroom	3,535	100%	3,535	0
Public Restrooms	1,595	100%	1,595	0
Janitorial/Maintenance*	130	71%	92	38
Mech/Elect/Comm*	225	71%	160	65
Bag conveyors	NA	100%	NA	NA
Water/Sanitary Sewer	NA	100%	NA	NA
HVAC*	NA	71%	NA	NA
Building Shell**	NA	100%	NA	NA
Totals	**26,525**	**71%**	**18,803**	**7,722**

*Eligibility prorated based upon ratio of eligible space to total space.
** Comprised of building foundation/ floor slab/structure/roof/and exterior.

PASSENGER FACILITY CHARGE (PFC)

The Aviation Safety and Capacity Expansion Act of 1990 included a provision allowing commercial service airports with at least 2,500 annual enplanements the option to levy a passenger facility charge (PFC) for much the same purposes as outline in AIP. 14 CFR, Part 158 established the regulations that must be followed by airports choosing to levy PFCs. The maximum levy allowed by current legislation is $4.50 per enplaned passenger.

Prior approval from the FAA is required before an airport's authorized agency airport may levy a PFC. The FAA must find the projected revenues are needed for specific, approved projects. Although FAA approves PFC use, the airport agency collects the PFC locally through the airlines operating at the airport. Before submitting a PFC application, the airport sponsor must give notice and an opportunity for consultation to the airlines operating at the airport.

While PFCs can only be used on approved projects, they provide the airport sponsors more flexibility than AIP funds. PFCs can be used to fund 100 percent of an eligible project, as matching funds for AIP grants, or to augment an AIP-funded project. PFC's may be used on a "pay-as-you-go basis" or leveraged to pay debt service on bonds or other debt used to pay for PFC-eligible projects.

Administered by the FAA, PFCs are treated more like other AIP grants rather than as airport revenues. Airlines can retain up to 11 cents per passenger for collecting the PFCs. It should be noted that only revenue passengers pay PFCs.

Of the 16 airports comparable to SLN examined in **Chapter Two**, five do not currently charge a PFC. Those five include:

- Lea County Regional Airport - Hobbs, NM
- Williston Basin International Airport - Williston, ND
- Liberal Mid-America Regional Airport - Liberal, KS
- Devils Lake Regional Airport - Devils Lake, ND
- North Platte Regional Airport – North Platte, NE

In Kansas, the commercial service airports at Wichita, Manhattan, Garden City, and Hays each charge a PFC of $4.50.

To date, the Salina Airport Authority has not charged a PFC. Effectively a user fee, PFCs are an added cost to the price of a ticket. For Essential Air Service airports, such as SLN, where maintaining competitive pricing is a factor, the potential impact to maintaining and growing air service should first be considered.

N

Scale: 1" = 20'

To/From Concourse

TA1

W Maint. M

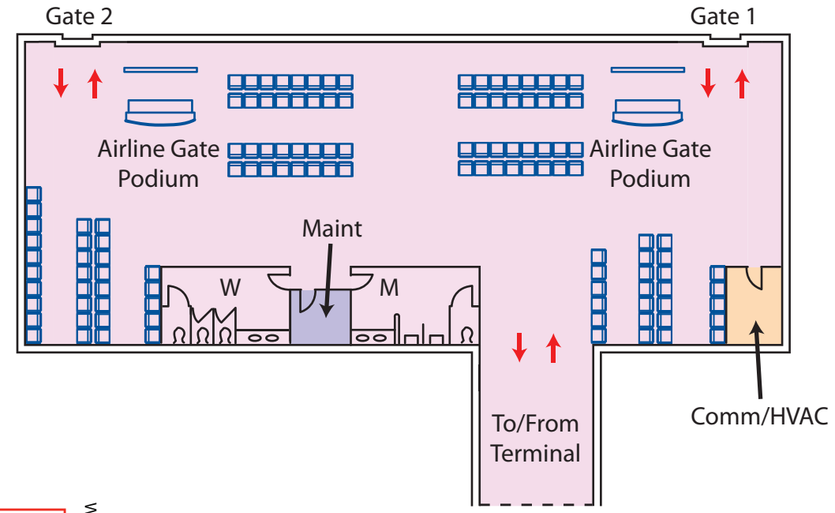
W M

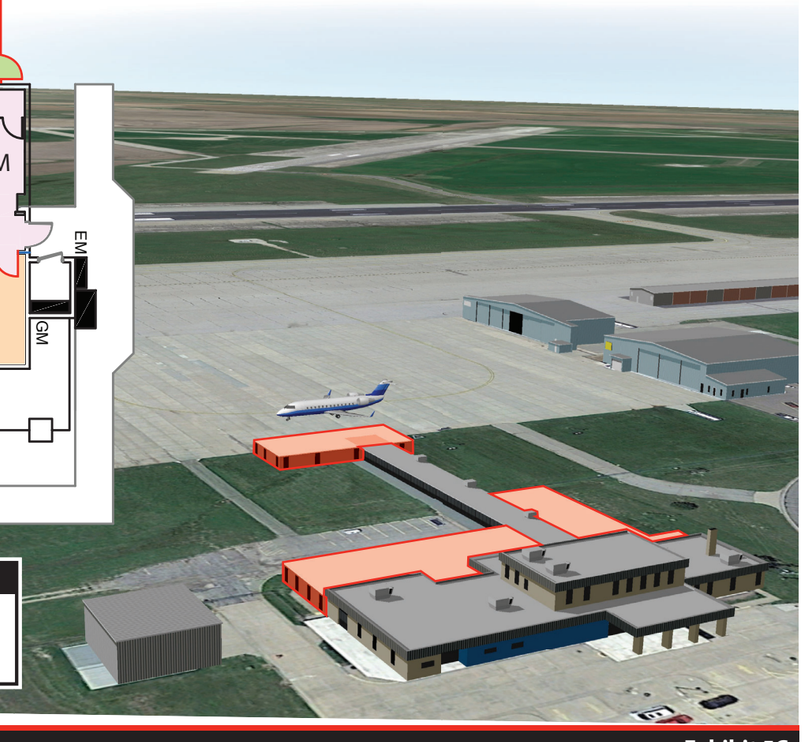
EM

GM

WM

Arrival/Departure Concourse





LEGEND

Eligible Space	Prorated Space	Prorated Shell Only
Eligible Equipment	Prorated Finishes Only	Ineligible Space

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TERMINAL DEVELOPMENT COST SUMMARY

Cost estimates were updated for the refined terminal concept. Due to the uncertainties for development staging outlined in **Appendix C**, the cost estimates for the terminal building improvements were maintained as full development of the building without staging. At such time when the plan moves forward into design, a more accurate development staging plan can be prepared based upon the updated growth trends and standards.

Table 5B provides the cost estimates and funding breakdown for the terminal building. The total development costs include construction costs plus an additional 18 percent allowance for design, inspection, and administration. Another 15 percent was applied to this subtotal for unforeseen contingencies beyond this planning level estimate. All costs are estimated in 2021 dollars.

TABLE 5B
Terminal Building Development Cost and Funding
Salina Regional Airport

	Construction Cost	Eligible Percentage	Total Eligible	Maximum FAA Participation @90%	Minimum Authority Cost
Terminal Building Development					
Building Shell	$2,240,000	100%	$2,240,000	$2,016,000	$224,000
HVAC/Electrical/Fire Sprinklers	$1,743,000	71%	$1,237,530	$1,113,777	$629,223
Interior Eligible Spaces	$1,460,000	100%	$1,460,000	$1,314,000	$146,000
Prorated Space	$49,000	50%	$24,500	$22,050	$26,950
Shell Space	$48,000	25%	$12,000	$10,800	$37,200
Interior Ineligible Spaces	$73,000	0%	$-	$-	$73,000
Comm/Special Systems	$210,000	100%	$210,000	$189,000	$21,000
Baggage Handling Systems	$300,000	100%	$300,000	$270,000	$30,000
Water & Sanitary Sewer	$85,000	100%	$85,000	$76,500	$8,500
Ramp Edge Drainage	$42,000	100%	$42,000	$37,800	$4,200
Widen/Reconstruct GSE Rodway	$58,000	100%	$58,000	$52,200	$5,800
Terminal Construction Total	**$6,308,000**	**90%**	**$5,669,030**	**$5,102,127**	**$1,205,873**
Design/Inspection/ Administration (18%)	$1,135,000	90%	$1,020,425	$918,383	$216,617
Terminal Building Development Subtotal	**$7,443,000**	**90%**	**$6,689,455**	**$6,020,510**	**$1,422,490**
Planning Level Contingency (15%)	$1,116,000	90%	$1,003,418	$903,076	$212,924
Total Terminal Building Development Cost	**$8,559,000**	**90%**	**$7,692,873**	**$6,923,586**	**$1,635,414**

The total cost for implementing the terminal building plan is estimated at $8.56 million. As shown on the table approximately 90 percent ($7.69 million) of the development cost is estimated to be eligible for FAA participation. With that participation on a 90-10 percentage split, the maximum FAA

participation is estimated at $6.92 million, leaving the minimum cost to the Airport Authority estimated at $1.64 million. It should be emphasized that this is the minimum amount the Airport Authority can expect to need to fund.

As mentioned earlier, the parking lot and loop road should be developed as the need presents itself. Regular need for the current gravel lot during the peak month, should trigger the Phase I development. Similarly Phases II and III would follow when needed. **Table 5C** presents the estimates for development of the parking lot and loop road by phase. Assuming the parking will remain as a non-revenue lot, the FAA will participate at 90 percent. With similar percentages estimated for design, inspection, administration, and contingencies, total costs for the parking lot/loop road are estimated at $3.19 million with the Airport Authority matching share at $319,000.

The terminal development buildout cost, in 2021 dollars, totals $11.75 million, with a minimum Airport Authority share of $1.95 million.

TABLE 5C
Terminal Parking and Loop Road Development
Salina Regional Airport

	Construction Cost	Eligible Percentage	Total Eligible	Maximum FAA Participation @90%	Minimum Authority Cost
PHASE I					
Reconfigure/Extend Paved Lot for 293 Total Spaces	$976,000	100%	$976,000	$878,400	$97,600
Stormwater Drainage	$162,000	100%	$162,000	$145,800	$16,200
Phase I Construction Total	*$1,138,000*	*100%*	*$1,138,000*	*$1,024,200*	*$113,800*
Design/inspection/Administration (18%)	$205,000	100%	$205,000	$184,500	$20,500
Phase I Development Subtotal	*$1,343,000*	*100%*	*$1,343,000*	*$1,208,700*	*$134,300*
Planning Level Contingency (15%)	$201,000	100%	$201,000	$180,900	$20,100
Phase I Development Total	***$1,544,000***	***100%***	***$1,544,000***	***$1,389,600***	***$154,400***
PHASE II					
Construct 48 Paved Parking Spaces	$265,000	100%	$265,000	$238,500	$26,500
Design/inspection/Administration (18%)	$48,000	100%	$48,000	$43,200	$4,800
Phase II Development Subtotal	*$313,000*	*100%*	*$313,000*	*$281,700*	*$31,300*
Planning Level Contingency (15%)	$47,000	100%	$47,000	$42,300	$4,700
Phase II Development Total	***$360,000***	***100%***	***$360,000***	***$324,000***	***$36,000***
PHASE III					
Add 203 Paved Parking Spaces	$887,000	100%	$887,000	$798,300	$88,700
Relocate Perimeter Service Road	$46,000	100%	$46,000	$41,400	$4,600
Relocate Perimeter Security Fencing	$24,000	100%	$24,000	$21,600	$2,400
Design/inspection/Administration (18%)	$160,000	100%	$160,000	$144,000	$16,000
Phase II Development Subtotal	*$1,117,000*	*100%*	*$1,117,000*	*$1,005,300*	*$111,700*
Planning Level Contingency (15%)	$168,000	100%	$168,000	$151,200	$16,800
Phase III Development Total	***$1,285,000***	***100%***	***$1,285,000***	***$1,156,500***	***$128,500***
Total Parking and Loop Road Development Costs	**$3,189,000**	**100%**	**$3,189,000**	**$2,870,100**	**$318,900**

FINANCING THE AIRPORT AUTHORITY SHARE

The Salina Airport Authority (the Authority) is a legally constituted public airport authority duly created, organized and existing under the Constitution and laws of the State of Kansas, including specifically K.S.A. 27-315 et seq. (the Enabling Statute). The Authority is authorized by K.S.A. 27-326 to issue general obligation bonds of the Authority to pay for the cost of constructing improvements at the Salina Regional Airport.

The local share of the cost to expand and renovate the M.J. Kennedy Air Terminal Building at the Salina Regional Airport will be funded by Authority general obligation bonds issued to meet its obligation to provide local matching funds for FAA Airport Improvement Program grant awards. The Authority's capacity to issue general obligation bond debt exceeds $20 million.

SUMMARY AND CONCLUSIONS

A recommended development concept for the M.J. Kennedy Terminal at Salina Regional Airport has been outlined based upon potential demand and facility needs per industry standards. The concept remodels and expands the current terminal and places a secure arrivals/departures concourse at the end of the enclosed connector walkway at the edge of the aircraft apron. At full development total building space, including the existing second level airport administrative offices, would be 29,000 square feet. Parking and circulation can also be expanded to 571 spaces without affecting other development on the airport or in the industrial park.

Total cost for the terminal area is estimated $11.75 million in 2021 dollars. Approximately $9.79 million would be eligible for FAA funding under the current Airport Improvement Program. At a minimum, the Salina Airport Authority would be responsible for remaining $1.95 million.

The Authority is authorized by K.S.A. 27-326 to issue general obligation bonds of the Authority to pay for the cost of constructing improvements at the Salina Regional Airport. The Authority's capacity to issue general obligation bond debt exceeds $20 million. The local share of the cost to expand and renovate terminal will be funded by Authority general obligation bonds issued to provide local matching funds for FAA Airport Improvement Program grant awards.

It is recognized that the COVID-19 pandemic has and will an impact on airline passenger demand for at least the short term and could impact terminal planning and design standards long term. It will be important to monitor how traffic rebounds before moving forward, as well as any COVID-19 related design trends during the design phase of terminal development.

Appendix A

AIR SERVICE AND SOCIOECONOMIC HISTORY
COMPARABLE GREAT PLAINS AIR SERVICE MARKETS

SALINA, KS [MICRO, 41460]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	13,618	14,606	20,395	22,318	6,619	618	2,802	2,346	1,854	2,504	3,673	2,447	1,698	2,645	2,546	2,361	2,149	1,221	3,257	8,877	11,672
Flights	1,072	1,083	1,842	1,854	2,210	905	909	909	922	734	1,301	1,369	932	914	929	813	952	509	364	628	837
Seats	57,888	58,482	105,442	125,810	43,385	17,195	17,271	17,271	17,518	13,946	24,719	26,011	10,144	8,226	8,361	7,317	8,568	4,581	10,668	18,169	37,954
Seats per departure	54	54	57	68	20	19	19	19	19	19	19	19	11	9	9	9	9	9	29	29	45
Boarding Load Factor (BLF)	24%	25%	19%	18%	15%	4%	16%	14%	11%	18%	15%	9%	17%	32%	30%	32%	25%	27%	31%	49%	31%
Population (000s)	55.308	55.990	55.875	55.430	55.542	60.171	60.29	60.458	60.586	60.824	60.948	61.278	61.911	61.886	61.924	61.853	61.594	61.425	60.989	60.597	60.203
Employment (000s jobs)	28.891	30.312	30.634	31.086	31.910	41.078	41.305	41.356	41.656	42.089	42.154	41.119	40.164	40.015	40.057	41.341	41.463	41.738	41.718	41.732	42.152
PCPI (2012$)	22,150	22,923	22,690	23,365	25,284	35119	35680	36062	38530	38769	39988	38443	38602	39729	40099	40534	40665	42396	43587	44475	43536
GRP (millions 2012$)	1392.381	1509.043	1470.796	1483.371	1538.530	2289.163	2173.101	2334.907	2511.865	2643.805	2755.281	2744.072	2603.383	2686.245	2647.599	2736.198	2743.534	2821.024	2933.406	2959.52	2978.972
Travel Propensity Factor (TPF)	0.246	0.261	0.365	0.403	0.119	0.010	0.046	0.039	0.031	0.041	0.060	0.040	0.027	0.043	0.041	0.038	0.035	0.020	0.053	0.146	0.194

GARDEN CITY, KS [MICRO, 23780]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	5,273	6,687	9,268	8,987	7,700	4,756	8,677	9,338	10,431	11,195	10,368	9,004	9,307	10,380	17,500	23,436	25,816	26,446	26,783	26,687	25,084
Flights	705	978	2,582	2,441	2,381	1,832	1,895	1,673	1,580	1,675	1,733	1,863	1,950	2,075	1,087	708	715	705	723	716	713
Seats	38,070	40,932	50,978	46,359	45,239	34,841	36,027	31,787	30,042	31,825	32,927	35,397	37,050	39,425	34,234	31,964	34,102	33,337	36,150	35,800	33,032
Seats per departure	54	42	20	19	19	19	19	19	19	19	19	19	19	19	31	45	48	47	50	50	46
Boarding Load Factor (BLF)	14%	16%	18%	19%	17%	14%	24%	29%	35%	35%	31%	25%	25%	26%	51%	73%	76%	79%	74%	75%	76%
Population (000s)	24.798	25.536	26.307	26.592	32.851	41.95	41.693	40.901	40.311	39.591	39.37	40.241	40.953	41.08	41.116	40.996	41.076	41.125	40.898	40793	40.554
Employment (000s jobs)	13.500	14.345	14.918	14.992	20.068	24.31	24.212	23.891	23.866	24.477	25.044	24.918	25.144	26.074	25.421	25.666	26.254	26.284	26.803	26.908	27.201
PCPI (2012$)	21917	23605	22643	20872	23156	27920	28001	29254	30045	32040	35326	34855	37493	39353	39543	40566	39298	38336	39806	39181	39094
GRP (millions 2012$)	679.173	744.343	737.364	722.072	1019.717	1337.066	1292.355	1319.398	1427.852	1531.955	1666.668	1646.912	1635.959	1786.663	1752.646	1778.84	1838.173	1812.266	1927.974	1976.332	2002.713
Travel Propensity Factor (TPF)	0.213	0.262	0.352	0.338	0.234	0.113	0.208	0.228	0.259	0.283	0.263	0.224	0.227	0.253	0.426	0.572	0.628	0.643	0.655	0.654	0.619

MANHATTAN, KS [MSA, 31740]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	26,355	32,772	34,200	34,044	15,107	460	8,088	10,397	10,860	11,313	11,649	19,225	39,246	54,340	61,671	62,130	62,737	63,764	60,142	65,685	70,459
Flights	2,021	2,086	2,288	2,285	3,588	1,883	1,788	1,805	1,831	1,307	1,773	2,249	1,335	1,463	1,737	1,745	1,734	1,726	1,725	1,680	1,792
Seats	109,134	112,644	123,598	123,436	69,381	35,777	33,972	34,295	34,789	24,833	33,687	50,989	53,193	71,392	82,414	83,859	82,894	84,813	82,750	93,178	95,494
Seats per departure	54	54	54	54	19	19	19	19	19	19	19	23	40	49	47	48	48	49	48	55	53
Boarding Load Factor (BLF)	24%	29%	28%	28%	22%	1%	24%	30%	31%	46%	35%	38%	74%	76%	75%	74%	76%	75%	73%	70%	74%
Population (000s)	107.248	108.984	107.019	108.545	114.143	109.379	110.56	111.294	114.356	115.675	120.604	122.738	128.54	130.653	137.626	136.16	135.498	136.462	133.349	131.935	130.574
Employment (000s jobs)	55.567	56.206	58.637	59.172	61.990	71.515	73.405	73.635	77.823	83.398	86.712	87.487	89.284	88.982	89.098	88.197	88.923	89.193	88.036	88.586	89.557
PCPI (2012$)	21993	21618	22372	22449	22,864	33075	33592	33655	35680	38491	39787	40373	41135	42204	40428	39648	40372	41117	41638	41846	42393
GRP (millions 2012$)	2954.247	3012.081	3052.181	3026.011	3255.269	4364.555	4614.669	4768.273	5320.985	6069.16	6648.611	7002.536	7269.594	7776.485	7481.248	7071.545	7128.643	7342.798	7367.602	7416.071	7501.34
Travel Propensity Factor (TPF)	0.246	0.301	0.320	0.314	0.132	0.004	0.073	0.093	0.095	0.098	0.097	0.157	0.305	0.416	0.448	0.456	0.463	0.467	0.451	0.498	0.540

GRAND ISLAND, NE [MSA, 24260]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	29,136	32,379	40,047	45,031	36,018	5,266	6,120	6,679	7,426	7,374	6,614	19,240	36,295	45,549	55,081	55,709	59,778	63,168	67,309	64,935	61,739
Flights	2,724	2,712	2,538	2,441	2,122	1,170	1,126	977	1,058	1,496	717	845	1,112	976	892	884	900	921	968	909	981
Seats	164,554	171,620	176,666	172,820	201,298	22,230	21,394	18,563	20,102	28,424	19,383	34,914	53,328	62,075	68,077	67,115	71,746	74,542	98,291	81,110	77,088
Seats per departure	60	63	70	71	95	19	19	19	19	19	27	41	48	64	76	76	80	81	102	89	79
Boarding Load Factor (BLF)	18%	19%	23%	26%	18%	24%	29%	36%	37%	26%	34%	55%	68%	73%	81%	83%	83%	85%	68%	80%	80%
Population (000s)	61.07	61.094	62.107	62.371	64.835	68.592	68.896	68.871	69.36	69.784	70.79	72.056	72.935	73.599	74.325	74.776	75.339	75.484	75.798	75.838	76.195
Employment (000s jobs)	31.077	32.202	33.266	34.529	34.857	44.908	45.229	46.164	47.288	48.149	48.903	48.929	48.644	49.681	50.684	51.318	51.61	51.159	51.398	51.844	52.606
PCPI (2012$)	21208	20783	20302	22628	21866	34860	33901	34271	34621	36530	37260	35933	35917	38008	38267	37960	38494	39822	39067	39678	40017
GRP (millions 2012$)	1489.246	1549.112	1567.883	1663.227	1564.368	2675.006	2648.111	2745.29	2861.115	3001.197	2977.565	3099.801	3194.298	3409.77	3548.681	3599.541	3562.4	3648.876	3682.59	3750.687	3823.028
Travel Propensity Factor (TPF)	0.477	0.530	0.645	0.722	0.556	0.077	0.089	0.097	0.107	0.106	0.093	0.267	0.498	0.619	0.741	0.745	0.793	0.837	0.888	0.856	0.810

Salina Regional SLN Airport

HOBBS, NM [MICRO, 26020]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	4,827	6,679	7,904	7,111	4,298	921	1,213	1,533	1,843	2,119	1,754	715	333	7,346	17,086	17,235	18,233	16,565	14,705	16,214	23,413
Flights	746	1,335	917	706	1,530	618	621	668	622	653	800	550	386	402	593	582	600	607	618	617	678
Seats	29,976	53,400	55,322	48,484	29,070	11,742	11,799	12,692	18,660	5,877	7,200	4,950	3,474	16,000	29,602	28,717	29,677	29,607	30,763	30,706	33,858
Seats per departure	40	40	60	69	19	19	19	19	30	9	9	9	9	40	50	49	49	49	50	49.77	50
Boarding Load Factor (BLF)	16%	13%	14%	15%	15%	8%	10%	12%	10%	36%	24%	14%	10%	46%	58%	60%	61%	56%	48%	53%	69%
Population (000s)	52.066	53.629	53.518	54.66	66.174	56.643	57.471	58.331	59.541	61.058	62.737	64.483	64.594	64.99	66.156	68.173	69.757	70.985	69.85	68.759	69.611
Employment (000s jobs)	24.29	24.256	25.464	26.576	31.865	29.65	30.199	31.58	33.069	34.609	36.55	34.02	34.225	36.08	38.327	40.11	41.724	40.434	36.74	37.787	38.611
PCPI (2012$)	20272	20123	21332	22257	23523	27923	28775	30576	33127	34740	38931	33983	34696	37995	40455	39755	39816	40178	33092	35276	37435
GRP (millions 2012$)	2388.62	2487.894	2542.125	2706.841	3938.794	3195.09	3548.373	4399.011	4959.091	5597.815	6238.31	4835.067	5058.771	5362.639	5604.487	6110.102	6822.735	5388.904	4249.391	4850.841	4916.406
Travel Propensity Factor (TPF)	0.093	0.125	0.148	0.130	0.065	0.016	0.021	0.026	0.031	0.035	0.028	0.011	0.005	0.113	0.258	0.253	0.261	0.233	0.211	0.236	0.336

ROSWELL, NM [MICRO, 40740]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	20,988	28,394	27,557	25,204	11,882	7,677	8,350	9,198	8,850	14,650	34,198	37,595	38,741	37,262	34,593	32,543	34,565	35,411	44,191	55,211	56,607
Flights	1,587	1,710	1,505	1,201	2,342	1,989	1,977	2,014	1,275	1,139	952	1,096	1,161	1,256	1,048	1,040	1,066	1,064	1,340	1,487	1,388
Seats	95,762	108,596	108,578	94,230	44,620	37,791	37,563	38,266	24,225	29,712	47,299	53,554	54,585	60,246	47,256	46,702	48,976	52,614	66,196	83,379	81,822
Seats per departure	60	64	72	78	19	19	19	19	19	26	50	49	47	48	45	45	46	49	49	56.07	59
Boarding Load Factor (BLF)	22%	26%	25%	27%	27%	20%	22%	24%	37%	49%	72%	70%	71%	62%	73%	70%	71%	67%	67%	66%	69%
Population (000s)	46.633	47.412	48.328	48.487	56.267	61.248	61.478	62.172	62.486	63.587	64.378	65.11	65.729	65.667	65.688	65.836	65.642	65.554	65.371	64.866	64.689
Employment (000s jobs)	20.019	20.44	20.918	21.513	25.310	27.134	27.201	27.771	28.887	30.337	30.255	29.578	28.881	28.816	28.76	29.031	29.267	29.857	30.011	29.525	29.921
PCPI (2012$)	18531	18998	19331	19544	21707	27033	28403	29188	29895	31269	33433	30254	33087	35421	35298	34276	36917	35557	35177	38217	36321
GRP (millions 2012$)	1041.405	1101.862	1086.234	1148.732	1556.07	1766.915	1852.526	1945.515	2054.02	2179.981	2197.128	2129.979	2177.714	2118.924	2102.681	2198.566	2266.154	2103.342	2071.089	2096.693	2097.489
Travel Propensity Factor (TPF)	0.450	0.599	0.570	0.520	0.211	0.125	0.136	0.148	0.142	0.230	0.531	0.577	0.589	0.567	0.527	0.494	0.527	0.540	0.676	0.851	0.875

DICKINSON, ND [MICRO, 19860]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	-	-	-	-	-	3,710	5,056	4,840	5,386	7,573	8,834	8,918	10,347	18,994	23,729	34,932	58,954	41,895	16,822	18,888	22,576
Flights	-	-	-	-	-	1,197	1,571	1,211	1,195	1,721	1,820	1,836	1,615	1,318	1,488	1,969	1,770	1,336	585	622	634
Seats	-	-	-	-	-	35,473	46,192	35,438	35,602	50,365	53,978	54,765	47,303	38,232	43,076	74,583	85,857	66,800	29,250	31,100	31,700
Seats per departure	-	-	-	-	-	30	29	29	30	29	30	30	29	29	29	38	49	50	50	50	50
Boarding Load Factor (BLF)	-	-	-	-	-	10%	11%	14%	15%	15%	16%	16%	22%	50%	55%	47%	69%	63%	58%	61%	71%
Population (000s)	21.659	22.04	22.252	22.81	29.152	23.251	23.331	23.444	23.511	23.938	24.143	24.582	25.128	25.995	27.808	29.23	31.252	32.798	31.809	31.149	30.997
Employment (000s jobs)	9.595	10.327	11.042	12.387	15.495	16.255	16.517	17.149	17.682	18.137	18.888	19.196	20.881	23.437	27.62	29.783	32.729	30.603	26.871	27.029	27.588
PCPI (2012$)	18424	18411	18979	21327	21359	31772	32352	34466	36451	38079	42611	43173	53361	64406	76044	77270	84017	69659	58051	55954	57040
GRP (millions 2012$)	443.444	452.763	479.337	611.642	885.094	872.84	866.876	913.793	1020.157	1133.482	1329.502	1396.8	1822.56	2437.924	3485.045	3953.72	4543.532	3575.811	2632.641	2829.673	2895.112
Travel Propensity Factor (TPF)						0.160	0.217	0.206	0.229	0.316	0.366	0.363	0.412	0.731	0.853	1.195	1.886	1.277	0.529	0.606	0.728

WILLISTON, ND [MICRO, 48780]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	4,037	6,453	7,688	8,197	-	5,184	6,157	5,548	6,443	8,444	11,965	11,229	16,140	26,810	38,151	94,391	114,182	102,323	68,855	68,843	73,844
Flights	1,047	1,266	1,471	1,495	-	1,203	1,360	697	600	877	1,155	1,067	1,222	1,497	1,937	2,785	2,835	2,946	1,820	1,740	1,738
Seats	19,893	23,864	27,949	28,405	-	29,376	33,906	19,899	18,000	26,310	34,650	32,010	36,660	44,910	63,151	126,552	141,750	147,300	91,000	87,000	86,900
Seats per departure	19	19	19	19	-	24	25	29	30	30	30	30	30	30	33	45	50	50	50	50	50
Boarding Load Factor (BLF)	20%	27%	28%	29%	-	18%	18%	28%	36%	32%	35%	35%	44%	60%	60%	75%	81%	69%	76%	79%	85%
Population (000s)	19.343	19.792	20.111	20.556	27.250	19.705	19.724	19.855	20.122	20.547	20.928	21.82	22.586	24.395	26.733	29.599	32.13	35.301	34.195	33.349	35.35
Employment (000s jobs)	9.625	10.160	10.613	11.570	15.516	12.928	13.148	13.881	14.752	15.323	17.29	17.428	20.875	29.106	40.446	44.2	48.931	43.184	33.164	33.896	34.879
PCPI (2012$)	23,039	22,357	22,136	24,350	25,981	33430	33754	36028	40872	44192	55629	53160	61510	78164	100969	93422	99692	77702	61454	62596	64510
GRP (millions 2012$)	549.564	584.138	609.885	762.984	1630.428	803.674	848.298	984.379	1295.298	1487.242	2044.912	2017.016	3041.782	5260.081	8392.549	8980.357	10108.818	7363.358	4817.207	5333.117	5508.25
Travel Propensity Factor (TPF)	0.209	0.326	0.382	0.399	-	0.263	0.312	0.279	0.320	0.411	0.572	0.515	0.715	1.099	1.427	3.189	3.554	2.899	2.014	2.064	2.089

ABERDEEN, SD [MICRO, 10100]	1975	1976	1977	1978	1983	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enplanements	34,788	35,914	37,990	39,211	24,987	25,976	27,155	28,531	26,546	26,387	22,950	20,924	20,087	24,480	24,763	25,549	26,388	27,474	26,529	26,946	27,688
Flights	2,749	2,815	2,754	2,760	1,380	2,778	3,065	2,708	1,879	2,235	1,513	1,239	953	915	708	728	739	744	742	723	742
Seats	181,934	195,944	181,606	183,556	90,202	94,533	104,566	93,146	64,360	71,592	51,813	42,727	33,869	41,283	35,400	36,420	36,950	37,253	37,100	36,150	37,100
Seats per departure	66	70	66	67	65	34	34	34	34	32	34	34	36	45	50	50	50	50	50	50	50
Boarding Load Factor (BLF)	19%	18%	21%	21%	28%	27%	26%	31%	41%	37%	44%	49%	59%	59%	70%	70%	71%	74%	72%	75%	75%
Population (000s)	43.463	43.046	42.973	42.997	41.495	39.419	39.44	39.569	39.604	39.847	39.915	40.219	40.719	41.007	41.576	42.255	42.326	42.502	42.856	43.097	43.191
Employment (000s jobs)	21.486	22.051	22.116	23.049	22.496	27.569	28.148	28.618	29.18	29.626	30.118	29.983	30.168	30.462	30.901	31.272	31.698	31.67	31.711	31.587	32.033
PCPI (2012$)	20854	19482	20298	21714	22783	38480	41232	42226	42635	45377	46723	43011	42847	48232	48279	46315	46852	48420	47832	46186	47403
GRP (millions 2012$)	914.27	924.264	933.363	1016.532	943.561	1600.931	1679.124	1730.968	1762.262	1815.284	1905.987	1945.285	2049.974	2198.409	2278.889	2351.361	2357.623	2435.931	2356.954	2348.019	2385.775
Travel Propensity Factor (TPF)	0.800	0.834	0.884	0.912	0.602	0.659	0.689	0.721	0.670	0.662	0.575	0.520	0.493	0.597	0.596	0.605	0.623	0.646	0.619	0.625	0.641

Appendix B

COST COMPARISONS OF TERMINAL DEVELOPMENT OPTIONS

HUTTON

June 5, 2020

Mr. Steve Benson, P.E./Senior Consultant
Coffman Associates, Inc.
237 NW Blue Parkway, Suite 100
Lee's Summit, MO 64063

Re: Salina Regional Airport
Airport Terminal Planning Budgets

Dear Steve,

As requested, we are pleased to provide you with preliminary planning level budgets for comparison of three alternatives for the Salina Regional Airport Terminal. These budgets are high level and are based upon documents provided by email dated May 7, 2020. Pricing reflects probable construction costs which can be obtained in the Salina KS market for comparable type and use. Hutton has prepared these estimates in accordance with generally accepted cost estimating practices and standards.

As requested, we have provided budgets for three options as follows:

Option 1 – Expansion to and remodel of the existing terminal complex

Option 2 – A new terminal complex to be constructed at Site A (directly west and south of the existing terminal)

Option 3 – A new terminal complex to be constructed at Site B (directly west of the intersection of Haynes Road and Hein Avenue)

In the formulation of this proposal, a number of assumptions have been made. We offer the following assumptions and clarifications to this Planning Budget for your information:

Project Information:

Owner: Salina Airport Authority
Designer/Consultant: Coffman Associates, Inc.
Project Location: Salina Regional Airport, Salina KS
Building Codes: 2012 IBC, 2012 UMC, 2012 UPC, 2011 NEC, 2012 IFC, 2009 IEC, 2010 ADA Standards
Start of Construction: First quarter 2021
Building Utilization: Airport terminal
Art in Architecture: Not included
Sales and Use Tax: Excluded

Basis of Proposal:

- SLN Estimating Notes, 3 pages.
- Alternative 2 – Terminal Area Layout Plan (Option 1)
- Parking Lot Alternative C (used with Option 1)
- Exhibit 1B Terminal Utility Locations (Existing Utility Plan)
- Alternative 5 New Terminal (Option 2 & 3)
- Alternative Terminal Site A (Option 2)
- Alternative Terminal Site B (Option 3)
- Base 120 Sheets 1950-11-14, 1615-10-12, 2423-03-18 (Existing terminal plans)
- Take off sheets are attached as reference for clarification of assumptions and quantities included in the budgets.

Scope of Work Option 1:

- Option 1 entails a large addition to the back (west) side of the existing terminal, a small conference room addition to the front (east), a new departures building to the end of the covered walkway, renovations to the first floor only of the existing terminal building and site improvements.

Terminal Building Development

Demolition:

- Demolition of the existing covered walkway as required for construction of the new addition and departures building.
- Selective interior demolition of the existing terminal building for remodel.
- Temporary protection of existing building to facilitate operations during new and remodel construction.
- Demolition of existing paving and site features.
- Demolition of existing interior and exterior walls and partitions for additions and remodel.
- Demolition of existing storefronts, glass and glazing for new additions.
- Excludes removal, relocation and/or salvage of furniture, fixtures, equipment, artwork, office items or any other existing non-building items.

Sitework:

- A Geotechnical Report for this project has not been provided. Cost for the investigation and report is not included.
- We have excluded the formulation and submission of a storm water pollution prevention plan (SWPPP). Cost of the NOI Permit and annual fee is not included. Submission and initial fee should be included in the civil engineer's fee. Annual fee by Owner.
- Includes best management practices for storm water pollution and maintenance throughout the project including silt fencing around the perimeter of disturbed areas and control of storm water runoff.

- For the sake of this proposal we have assumed that building subgrade prep and foundations can be constructed in a manner consistent with normal construction practices for this region.
- Layout and surveying as required for construction only.
- Soils testing including moisture contents, compaction and bearing pressures by a reputable testing agency is included.
- Temporary fencing.
- New chain-link/security fencing.

Concrete:

- Layout and surveying as required for construction only.
- Standard earth formed grade beam foundations around the perimeter with interior spread footings at tube column locations.
- Exterior and interior column footings of standard size and reinforcing for the region.
- A recessed loading dock is not included.
- 4” concrete slab on grade over 15 mil vapor barrier reinforced with 6 x 6 W2.9 x 2.9 welded wire fabric.
- Floor slab tolerance is ± 1/4” in 10’-0’.
- Foundation and interior slab on grade concrete rated to 4,000 psi.
- We have included testing of ready mixed concrete for specified compressive strength by a reputable testing lab.

Superstructure:

- The building will be steel frame with metal roof deck over steel bar joists.
- Exterior walls will be non-load bearing steel stud curtain wall.
- We have assumed a weight of 10.5 lbs. /SF for structural steel materials.
- Includes infill of the floor in the existing communications rooms.

Exterior Closure:

- Exterior walls are light gauge metal stud framing with Dens glass (or equal) sheathing and exterior insulation finish system (EIFS) finish.
- We have assumed top of parapet height of 16’ +/- around the majority of the building.
- Includes a liquid membrane vapor permeable moisture and air barrier on all exterior walls similar to W.R. Meadows Air-Shield LMP, STO Guard Gold Coat or approved equal. All openings and penetrations to be treated appropriately per manufacturers recommended procedures.
- Exterior walls are insulated with R-19 batt with foil faced interior membrane, taped and sealed.
- Operable windows are not included.
- Aluminum Color to be clear anodized or bronze. Special colors. Including light or medium bronze, are not included.
- 1” insulated glazing units with Low E coating.

- We have allowed for 2,300 square foot of aluminum storefront and 1,400 SF of aluminum curtain wall with 2 each single aluminum entry doors and 8 each automatic sliding doors approximately 10' x 8' (4 at the terminal building and 4 at the departures building).
- New roofing will be fully adhered 60 mil TPO system with cover board, insulation and Densdeck. Color is assumed to be white.
- Metal copings in color to be selected.

Interior Construction:

- Rough carpentry as required for door and window opening blocking and at millwork, casework, accessories and specialties.
- Fire stopping at heads of walls and penetrations in rated partitions.
- Interior partitions consist of 5/8" fire-code sheetrock walls on 25-gauge metal studs. Double 20 gauge studs at doorframes. Wall heights and construction as required for building code compliance.
- Interior door frames will be fully welded 18-gauge hollow metal construction.
- Prefinished solid core wood doors, factory machined and prepared for hardware.

Finishes:

- Millwork materials to be plastic laminate construction at casework and countertops using manufacturer's standard colors. Budget should cover the cost of solid surface tops for transaction tops.
- Budgets will allow for a conservative level of finishes to include predominately acoustical lay in ceilings, painted walls and durable floor finishes.
- We have included painting the existing exterior walls.
- Ceramic wall and floor tile in restrooms. Epoxy grout for floor tile and wet walls only.
- Walk off carpeting in vestibules.
- The budget allows for 14,000 square foot of terrazzo floors. Budget assumes a solid color terrazzo without intricate designs or patterns.
- Wall finishes are assumed to be painted throughout, wall coverings are not included.
- Painting of hollow metal frames, gyp board walls and drywall ceilings and soffits. Epoxy paint of walls and ceilings in wet areas or rooms requiring a scrubable surface.
- Toilet/batch accessories including toilet partitions typical for this construction.
- Fire extinguishers and cabinets.
- We have included an allowance of $35,000 for interior room signage only. Exterior signage, monument signs, building letters, plaques or other signage is not included.

Fire Protection:

- Includes wet fire sprinkler system for new and remodeled construction.

Mechanical and Plumbing System:

- Plumbing fixtures for restrooms.
- Includes lift station for restrooms in the departure building.
- Roof Drainage system.
- HVAC system to include single zone roof top units with DX cooling and gas heat.

- We have allowed for minimal heating and ventilation in the inbound/outbound bag handling area.
- Includes gas distribution piping for heating units.
- Includes ventilation requirements per code.
- Includes extension of existing fire sprinkler system into the new addition. We have assumed that the existing service is sized adequately and can provide required volume and pressure required for the addition.

Electrical System:

- Electrical power and lighting.
- Excludes generator.
- Phone and data rough in and cabling.
- Fire alarm system.

Parking Lot and Access Development

- Includes site preparation and earthwork for new parking and drives.
- 6,000 lineal foot of curbs and gutters. Reference take off sheets for extent.
- Includes 8" lime or fly ash stabilization below paving.
- 6" concrete paving.
- 3,000 square foot of site walks.
- 16 each new light poles and bases.
- Seeding only of 30,000 square foot of area. Includes an allowance of $12,000.

Site Utility Extensions

- New 1" water line to departure building.
- Relocate 400 lineal foot of existing water main around the new addition.
- New 6" service lead in to building.
- Relocation of 1 each existing fire hydrant.
- Includes boring water line under the existing covered walkway.
- Install new storm water sewer to replace existing flume under the new parking lot with 5 each new inlets.
- Force main sanitary sewer from departure building.

Option 1 Budget:

Terminal Building Development	$5,264,000
Parking Lot and Access Development	$2,105,000
Site Utility Extensions	$ 248,000
Option 1 Total	**$7,617,000**

Scope of Work Option 2:

- Option 2 entails a new terminal building built at Site A, directly west and south of the existing terminal, new access, parking, circulation and site improvements.

Terminal Building Development

Demolition:
- No building demolition included with this option.

Sitework:
- Please reference Option 1 – Sitework for general scope clarifications.

Concrete:
- Please reference Option 1 – Concrete for general scope clarifications.

Superstructure:
- Please reference Option 1 – Superstructure for general scope clarifications.
- We included an allowance for 4,500 square foot of canopies on the entrance and departure sides of the building. Reference attached takeoff sheets.

Exterior Closure:
- Exterior walls are light gauge metal stud framing with Dens glass (or equal) sheathing and exterior insulation finish system (EIFS) finish.
- We have assumed top of parapet height of 16’ +/- around the majority of the building.
- Includes a liquid membrane vapor permeable moisture and air barrier on all exterior walls similar to W.R. Meadows Air-Shield LMP, STO Guard Gold Coat or approved equal. All openings and penetrations to be treated appropriately per manufacturers recommended procedures.
- Exterior walls are insulated with R-19 batt with foil faced interior membrane, taped and sealed.
- Operable windows are not included.
- Aluminum Color to be clear anodized or bronze. Special colors. Including light or medium bronze, are not included.
- 1” insulated glazing units with Low E coating.
- We have allowed for 1,000 square foot of aluminum storefront and 3,750 SF of aluminum curtain wall with 4 each single aluminum entry doors and 8 each automatic sliding doors approximately 10’ x 8’.
- New roofing will be fully adhered 60 mil TPO system with cover board, insulation and Densdeck. Color is assumed to be white.
- Metal copings in color to be selected.
- We assumed the canopies would have metal wall and soffit panels with TPO roofing system.

Interior Construction:

- Rough carpentry as required for door and window opening blocking and at millwork, casework, accessories and specialties.
- Fire stopping at heads of walls and penetrations in rated partitions.
- Interior partitions consist of 5/8" fire-code sheetrock walls on 25-gauge metal studs. Double 20 gauge studs at doorframes. Wall heights and construction as required for building code compliance.
- Interior door frames will be fully welded 18-gauge hollow metal construction.
- Prefinished solid core wood doors, factory machined and prepared for hardware.

Finishes:

- Millwork materials to be plastic laminate construction at casework and countertops using manufacturer's standard colors. Budget should cover the cost of solid surface tops for transaction tops.
- Budgets will allow for a conservative level of finishes to include predominately acoustical lay in ceilings, painted walls and durable floor finishes.
- Ceramic wall and floor tile in restrooms. Epoxy grout for floor tile and wet walls only.
- The budget allows for 20,600 square foot of terrazzo floors. Budget assumes a solid color terrazzo without intricate designs or patterns.
- Walk off carpeting in vestibules.
- Wall finishes are assumed to be painted throughout, wall coverings are not included.
- Painting of hollow metal frames, gyp board walls and drywall ceilings and soffits. Epoxy paint of walls and ceilings in wet areas or rooms requiring a scrubable surface.
- Toilet/batch accessories including toilet partitions typical for this construction.
- Fire extinguishers and cabinets.
- We have allowed an allowance of $35,000 for interior room signage only. Exterior signage, monument signs, building letters, plaques or other signage is not included.

Fire Protection:

- Includes wet fire sprinkler system for the terminal building and a dry pipe system for the canopies.

Mechanical and Plumbing System:

- Plumbing fixtures for restrooms.
- Roof Drainage system.
- HVAC system to include single zone roof top units with DX cooling and gas heat.
- We have allowed for minimal heating and ventilation in the inbound/outbound bag handling area.
- Includes gas distribution piping for heating units.
- Includes ventilation requirements per code.

Electrical System:

- Electrical power and lighting.
- Includes a 100 Kw generator with single transfer switch.

- Phone and data rough in and cabling.
- Fire alarm system.

Parking Lot and Access Development

- Includes site preparation and earthwork for new parking and drives.
- Includes relocation/redirection of existing drainage to the south and east of the new parking lot.
- Curbs and gutters.
- Includes 8" lime or fly ash stabilization below paving.
- 6" concrete paving.
- 3,500 square foot of site walks.
- 32 each new light poles and bases.
- Landscape and irrigation budget of $175,000.
- We have included an allowance of $50,000 for apron lighting.

Site Utility Extensions

- Extend 700 lineal foot of new 6" water main from the existing line east of the new terminal.
- 2 each new fire hydrants.
- New 1" domestic water line lead in to the terminal building.
- We have allowed for a new 6" sanitary sewer service from the building to a new lift station approximately 60 lineal foot to the east of the terminal building. Because of the location of the building relative to the existing sewer system, we assume that sewer will need to be pumped/forced to the east. We have allowed for 1,956 lineal foot of 4" force main.
- Excludes storm sewer.

Option 2 Budget:

Terminal Building Development	$ 6,903,000
Parking Lot and Access Development	$ 3,297,000
Site Utility Extensions	$ 429,000
Option 2 Total	**$10,629,000**

Scope of work Option 3:

General:

- Option 3 entails a new terminal building built at Site B, directly west of the intersection of Hayes Road and Hein Ave., on the existing ramp, new access, parking, circulation and site improvements. Option 3 also includes reconstruction of 40,000 square yard of concrete ramp.

Terminal Building Development

- Please reference Option 2 for descriptions related to terminal building development.
- Option 3 includes the removal of existing apron paving for construction of the new terminal building.

Parking Lot and Access Development

- Includes milling of the top 4” of existing concrete paving for new parking and drives.
- 2 each new concrete approaches off of Hein Ave.
- We have included 4,000 lineal foot of new curbs for delineation of drives. Reference takeoff sheets.
- 4” asphalt overlay where existing paving has been milled.
- We have included 3,500 square foot of site walks.
- 9 each new light poles and bases. We have included core drilling the existing concrete paving for new bases.
- Landscape and irrigation is not included for this option.

Aircraft Apron Improvements

- Includes the repair of 40,000 square yards of existing concrete apron.
- Repair includes milling the top 4” to 6” of existing concrete paving from the area and overlaying with concrete paving.
- Includes an allowance of $50,000 for apron lighting.

Site Utility Extensions

- Extend 719 lineal foot of new 6” water main from the existing line east of Hein Ave.
- 2 each new fire hydrants.
- New 1” domestic water line lead in to the terminal building.
- 164 lineal foot of new 6” sanitary sewer connected to existing service to the east of the new terminal.
- We have included an allowance of $50,000 for storm water drainage.
- Includes removal and replacement and/or boring for new utilities under existing paving.

Option 3 Budget:

• Terminal Building Development	$ 6,905,000
• Parking Lot and Access Development	$ 1,409,000
• Aircraft Apron Improvements	$ 2,612,000
• Site Utility Extensions	$ 130,000
• **Option 3 Total**	**$11,056,000**

General Inclusions for All 3 Options:

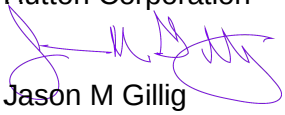
- Project management and jobsite supervision.
- Temporary utilities.
- Sanitary facilities for construction personnel.
- Project clean up.
- Project offices and office expenses.
- General liability insurance.
- Builders risk insurance
- Salina building permit cost.
- Performance and payment bonds.
- We have included an escalation factor of 2% for a first quarter 2021 start.

General Exclusions for All 3 Options:

- Design and/or engineering.
- Furniture, fixtures or equipment.
- Excludes demolition of the existing terminal building.
- Artwork.
- Sales and use tax.
- Legal, physical and utility surveys.
- Hazardous materials identification, remediation and/or removal costs.
- Provision for Davis Bacon or any other prevailing wage program.
- Window treatments.
- Grey water plumbing recycling systems.
- Access controls and security including security cameras.
- Major equipment including but not limited to baggage handling equipment, body scanners, baggage scanners, conveyors, scales, kiosks, vending, lockers, monitors/TV's, phone systems, computers, radio/communications towers or equipment.
- Moving or relocating of owner's equipment.

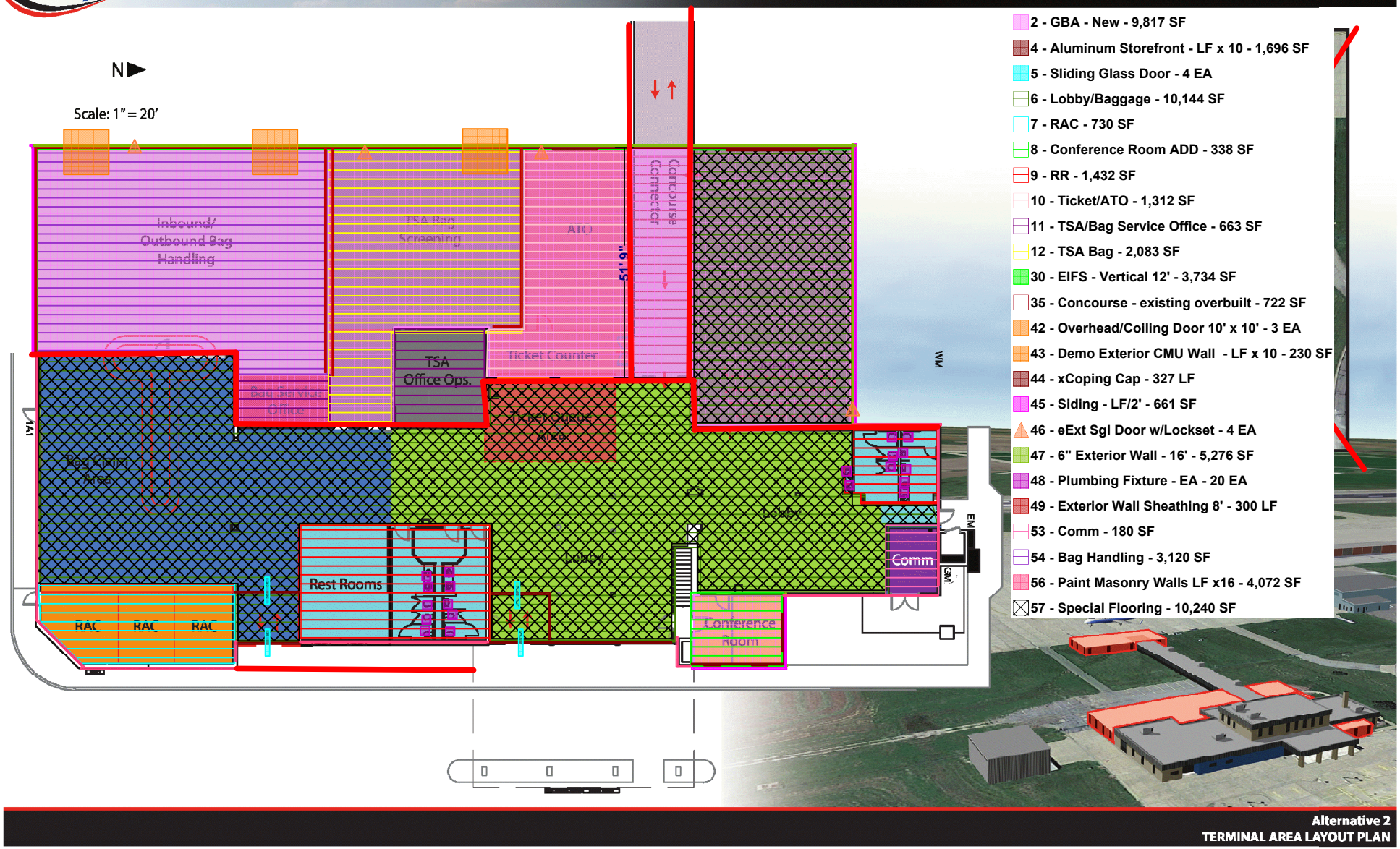
We thank you for the opportunity to assist you in this project. Should you have any questions, comments or require any additional information please let us know.

Sincerely,
Hutton Corporation

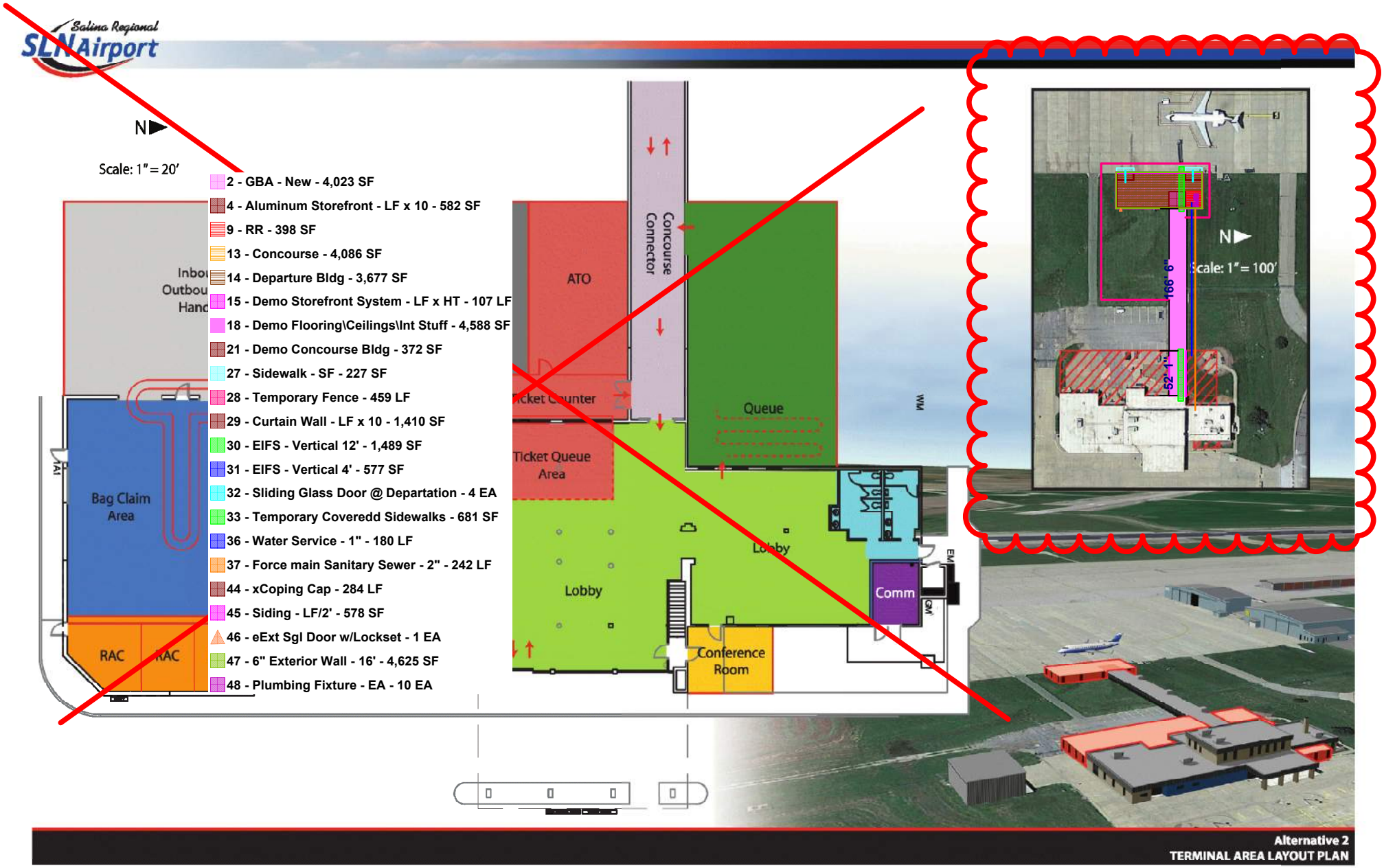


Jason M Gillig
Team Leader/Estimator

Salina Regional SLNAirport



Alternative 2
TERMINAL AREA LAYOUT PLAN



OPTION 1 - Departure Building

SALINA AIRPORT AUTHORITY
(3237 Arnold Avenue) Spec Sheet Building 120

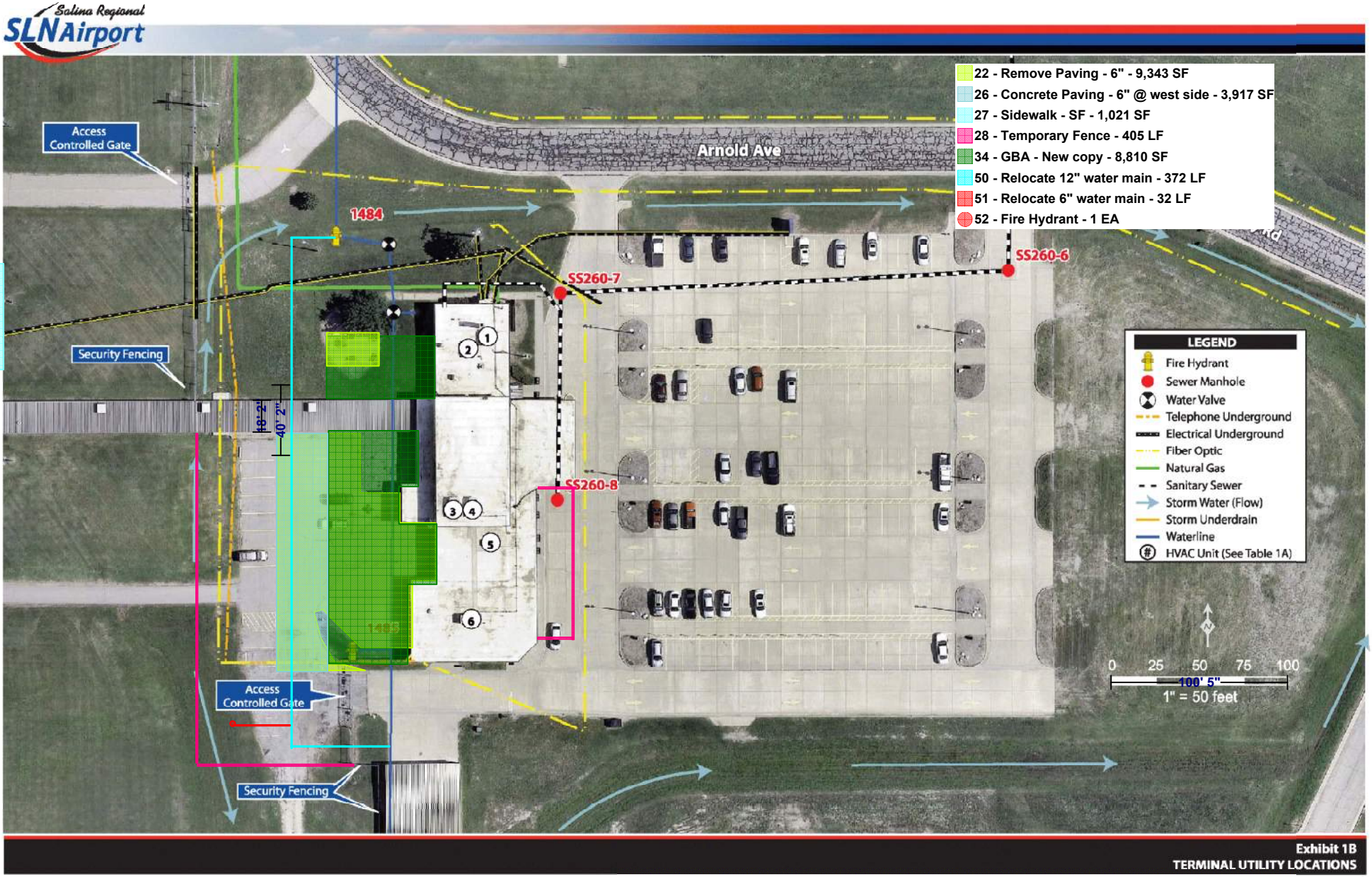
Drawing Number 1950-11-14

SALINA Airport Authority
3237 ARNOLD, SALINA, KS 67401
(785-827-3914 FAX 785-827-2220)

None :REVISIONS
KRB :DESIGNED BY
KRB :DRAWN BY
1" = 30' :SCALE
12/13/18 12:35 :DATE

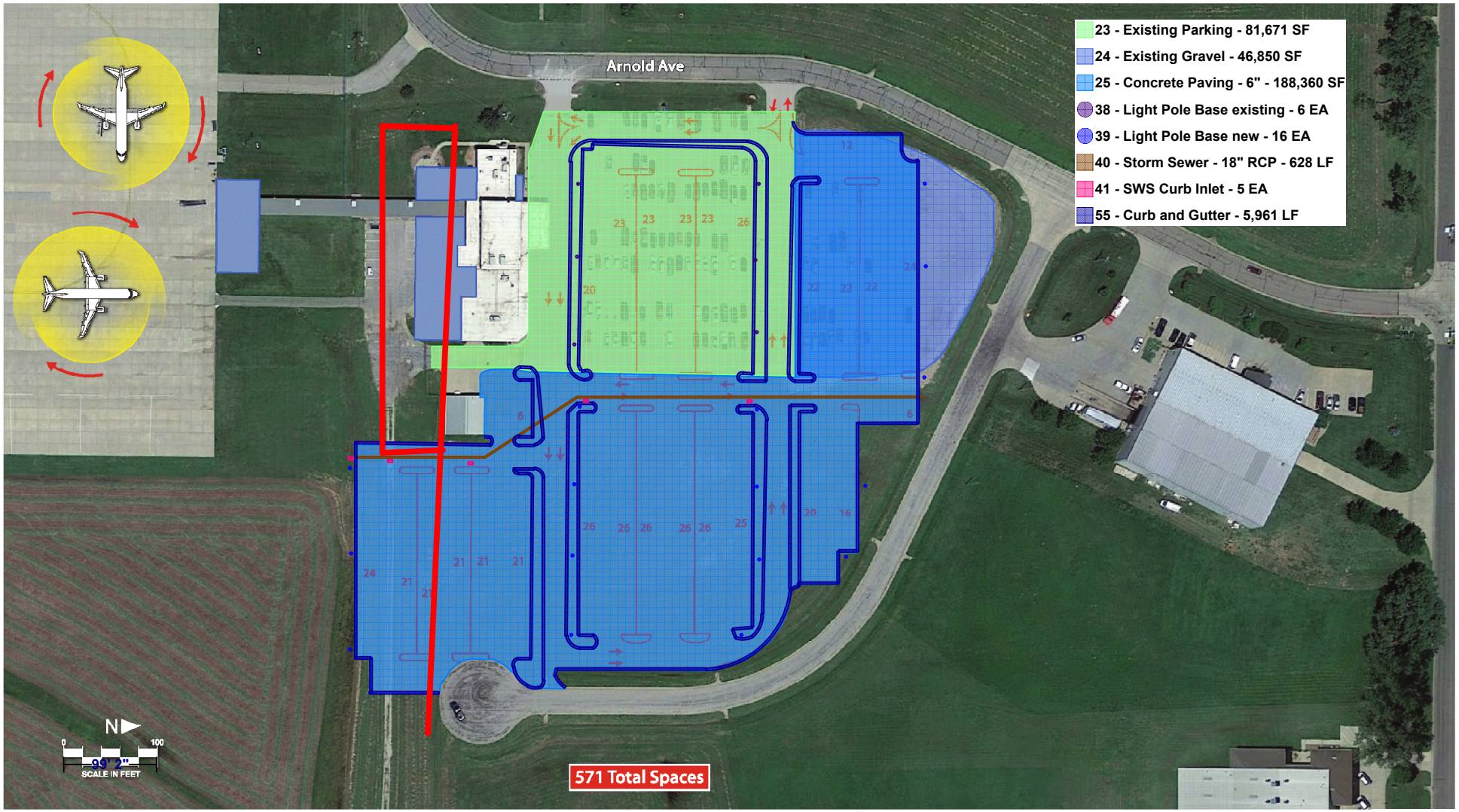
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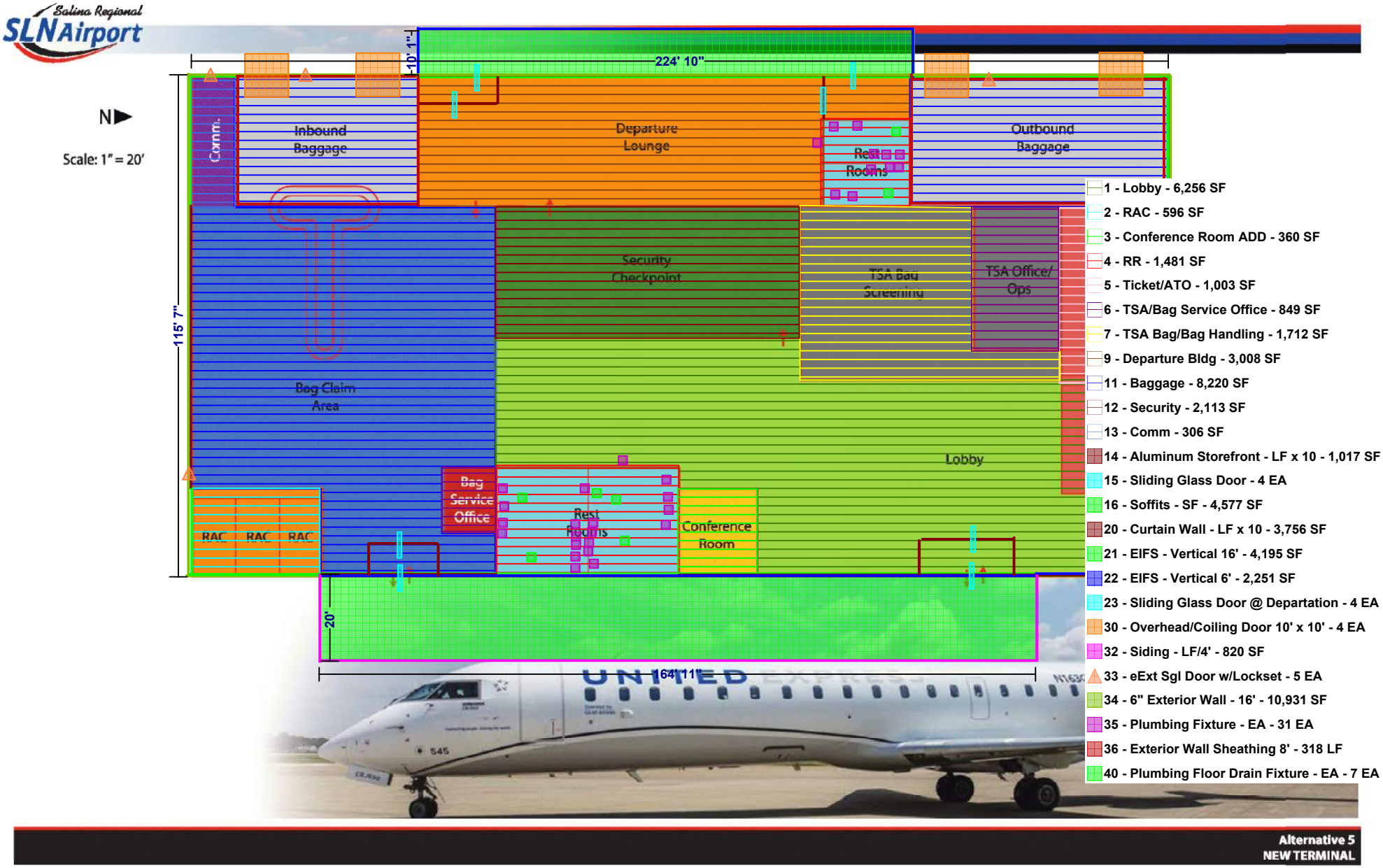


OPTION 1 - Site Development and Utilities

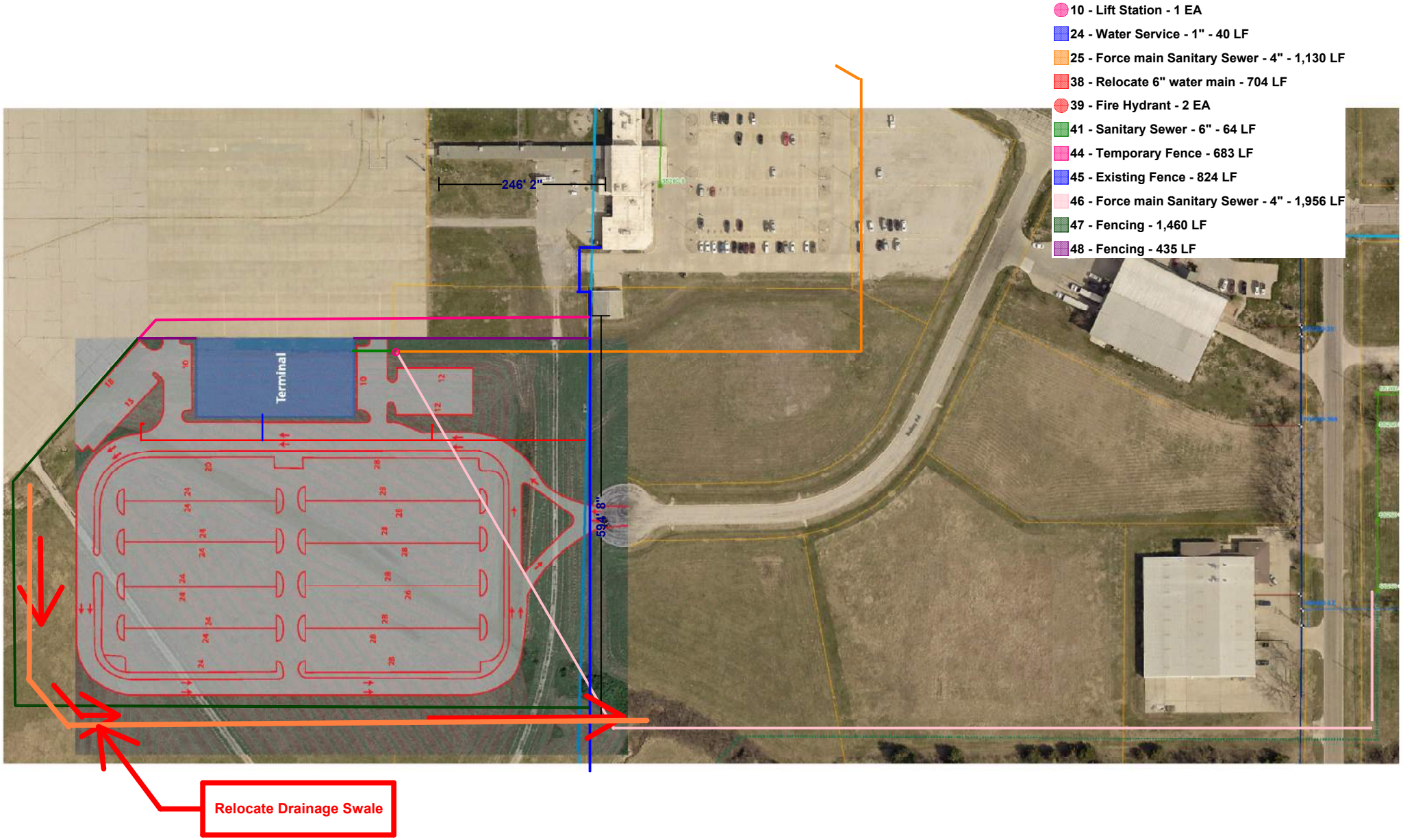
Salina Regional SLNAirport



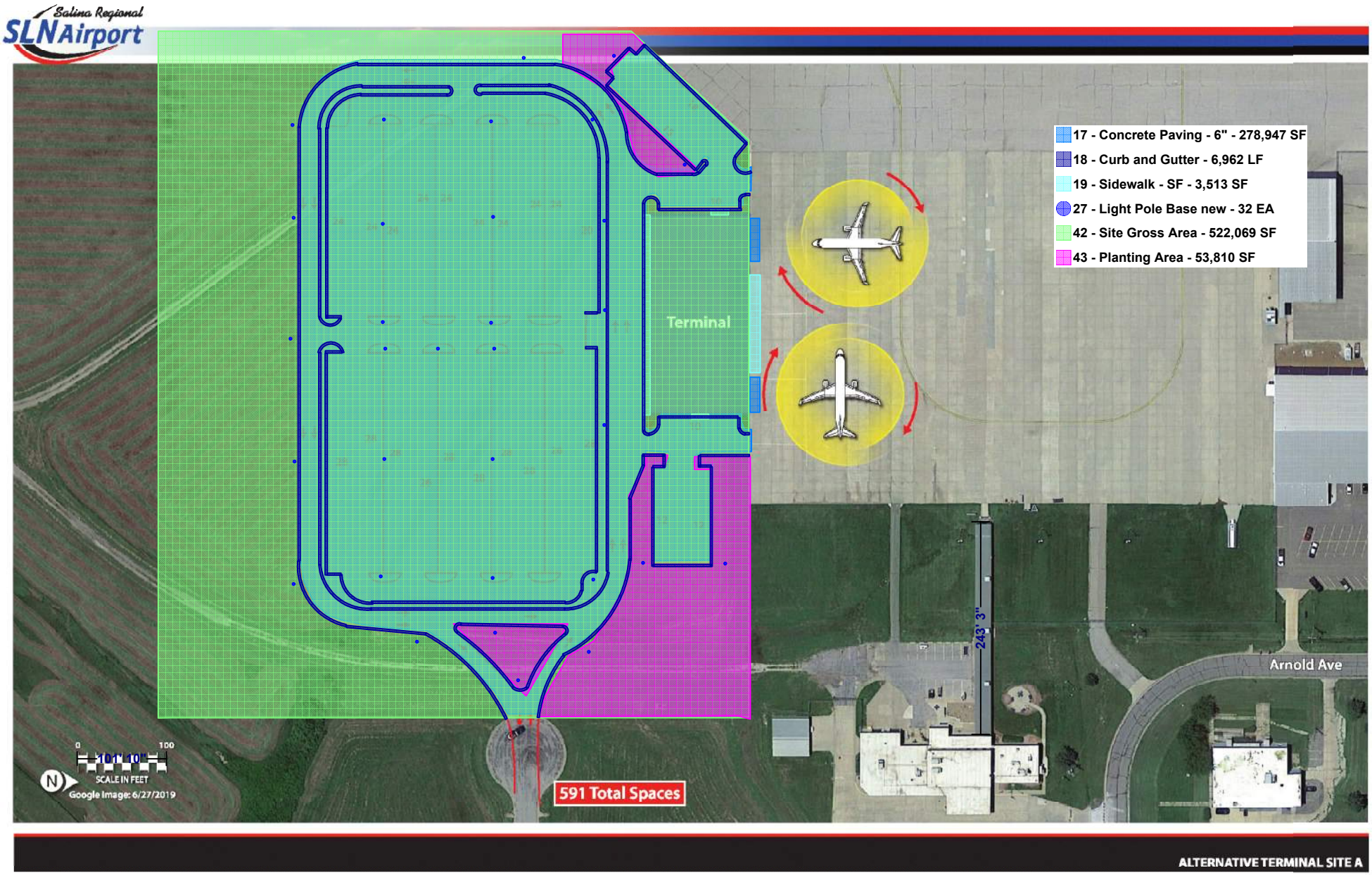
PARKING LOT ALTERNATIVE C



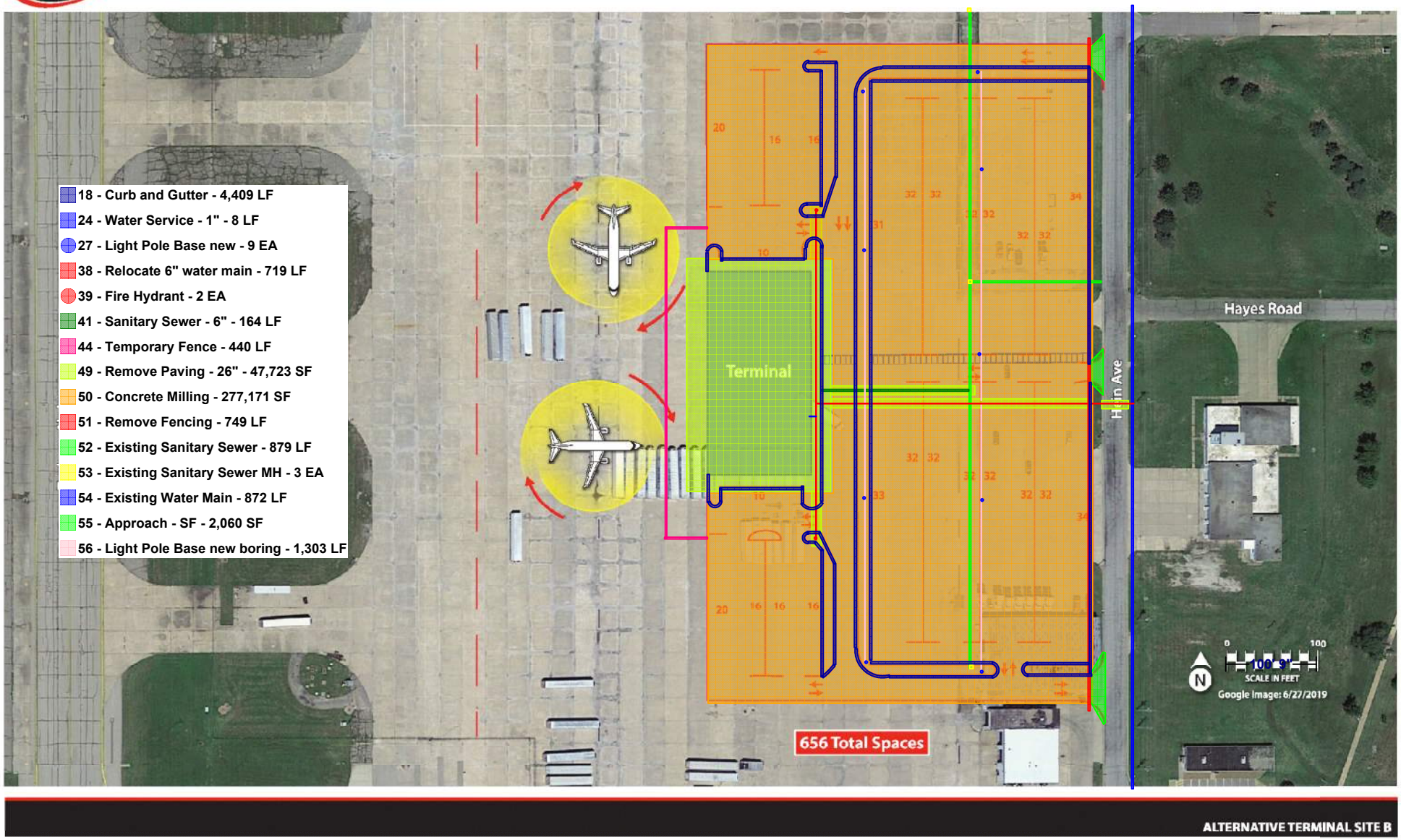
OPTION 2 & 3 - Terminal Building



OPTION 2 - Sitework and Utilities



OPTION 2 - Sitework and Utilities



OPTION 3 - Sitework and Utilities

Appendix C

IMPACT OF COVID-19 ON AIR PASSENGER DEMAND

Appendix C
IMPACT OF COVID-19 ON AIR PASSENGER DEMAND

The airline passenger forecasts for this study were prepared in the fall of 2019 and approved by the Federal Aviation Administration (FAA) that December. On December 31, the Chinese government alerted the World Health Organization (WHO) to "pneumonia-like" cases in Wuhan. From that point, a quickly moving timeline developed that has had a major impact on air travel and the airlines and airports that serve it:

- **January 9** – WHO announced the cases as "mysterious coronavirus-related pneumonia";
- **January 20** – The U.S. Centers for Disease Control and Prevention (CDC) announced that three U.S. airports with flights from Wuhan would begin screening for coronavirus;
- **January 21** – CDC confirmed the first U.S. case, and the person had flown back from Wuhan six days earlier; the WHO confirmed that the novel coronavirus can be transmitted by human-to-human contact;
- **January 23** – Wuhan was placed under quarantine by the Chinese government;
- **January 30** – WHO issued a global health emergency;
- **January 31** – U.S. President announced a temporary ban on all flights from China beginning February 2;
- **February 11** – WHO officially assigned the novel coronavirus the name COVID-19;
- **March 11** – WHO declared the global outbreak of COVID-19 a worldwide pandemic;
- **March 13** – U.S. President declared the outbreak a national emergency; a travel ban on non-U.S. coming from Europe went into effect;
- **March 19** – States and local governments began to issue "stay-at-home" orders; and
- **March 27** – After House and Senate passage, the CARES Act was signed into law.

The travel bans, stay-at-home orders, and related closings of non-essential businesses began to have an immediate impact on the economy as well as air travel. Unemployment, which had been at record lows, increased rapidly to record highs during the stay-at-home period. The U.S. Commerce Department reported that over the second quarter of 2020 (April-June), the country's gross domestic product (GDP) declined by 32.9 percent. With many orders and restrictions being relaxed in the last half of the quarter, the decline in late March and April was likely even more precipitous.

The Transportation Security Administration (TSA) regularly tracks persons passing through their security checkpoints at the nation's airports. As **Figure C1** shows, the TSA reported traffic down 95 percent, with many of those being airline flight crews and health workers traveling to assist at COVID-19 hot spots.

Table C1 depicts scheduled passenger enplanements at U.S. airports for 2017-2019, and the first four months of 2020. Over the previous three years, U.S. enplanements had grown at an average annual rate around four percent. In the first two months of 2020, domestic enplanements were showing even stronger growth compared to the same period in 2019. Meanwhile, international enplanements were flat in January and down 4.9 percent in February from 2019. The January figures perhaps reflected some initial uncertainty about the virus. The February decline that followed, however, was in reaction to the WHO global health emergency declaration and the administration's initial restrictions of international flights to and from virus hot spots.

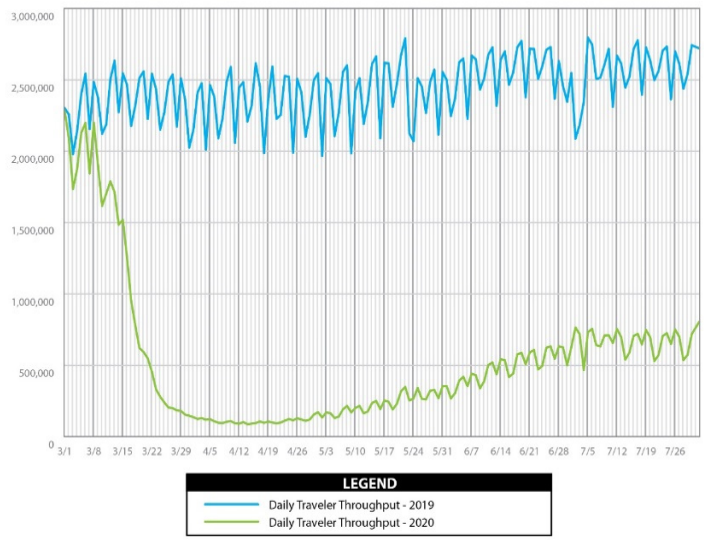


Figure C1. TSA Checkpoint Throughput at U.S. Airports

Passenger traffic in March declined over 50 percent from the previous year, especially after the WHO declared COVID-19 a worldwide pandemic, along with the U.S. declaring a national emergency and increasing its travel bans. Stay at-home orders and business restrictions also followed that virtually brought scheduled airline travel to a standstill. As **Table C1** shows, airline travel was down 97.3 percent from the previous April. Domestic travel was down 95.7 percent, while international travel was down 98.1 percent.

Figure C2 compares the monthly scheduled airline enplanement traffic at Salina Regional Airport in the first half of 2020 to each of the last two years. While traffic in 2020 started out tracking similarly to the previous year, it dropped precipitously to just 58 enplanements in April, a 95 percent decrease from April 2019. Traffic began to improve over the next two months but was still down 74 percent in June.

COVID-19 is the fifth pandemic of the 21st century. By July 2020, it had already resulted in triple the deaths of the other four combined. Each of the earlier pandemics also had an impact on air travel. An earlier coronavirus (SARS) had its biggest impact in the Asia-Pacific region. The outbreak occurred during 2002-03, shortly after the events of September 11, 2001 (9-11), which had already impacted air travel. Passenger traffic took three years to recover after 9-11. The global financial crisis that began in 2008 was further exasperated by the Swine Flu pandemic in 2009-2010. Passenger traffic took seven years to recover from the financial crisis.

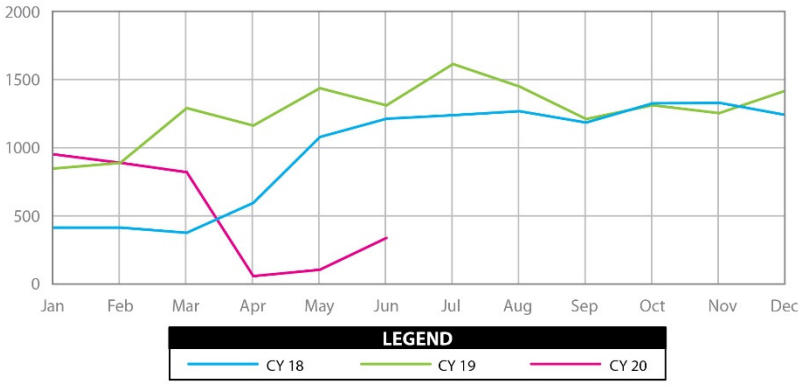


Figure C2. SLN Monthly Scheduled Enplanements

TABLE C1
United States Scheduled Passenger Enplanements

	U.S. Enplanements					
	Domestic		International		Total	
	In Millions	% Change	In Millions	% Change	In Millions	% Change
Annual History (2016-19)						
2016	720.00	N/A	211.99	N/A	931.99	N/A
2017	741.74	3.0%	223.03	5.2%	964.80	3.5%
2018	777.97	4.9%	235.24	5.5%	1,013.26	5.0%
2019	811.55	4.3%	241.16	2.5%	1,052.75	3.9%
Month-by-Month Comparison, 2019 vs. 2020						
January						
2019	58.03	N/A	18.69	N/A	76.72	N/A
2020	61.63	6.2%	18.72	0.1%	80.41	4.8%
February						
2019	55.68	N/A	16.28	N/A	71.96	N/A
2020	59.85	7.5%	15.49	-4.9%	75.42	4.8%
March						
2019	70.23	N/A	20.30	N/A	90.53	N/A
2020	34.42	-51.0%	8.83	-56.5%	42.74	-52.8%
April						
2019	66.94	N/A	20.02	N/A	86.96	N/A
2020	2.88	-95.7%	0.39	-98.1%	2.31	-97.3%
YTD Total						
2019	250.89	N/A	75.29	N/A	326.17	N/A
2020	158.77	-36.7%	43.43	-42.3%	200.88	-38.4%

At the end of June 2020, Goldman Sachs forecast that the U.S. passenger volumes would not recover to 2019 levels until 2023. A month later, in response to a surge in COVID-19 cases, the International Air Transport Association (IATA) revised its similar forecast of recovery to 2024.

There is a consensus, however, that consumer confidence is the key to that recovery. After 9-11, the air travel market required assurance of no weapons on board their aircraft. Until a vaccine is available, airlines and airports will need to rely on stringent hygiene, sanitation practices, masks, and social distancing to make air travel as safe as possible. Still, airline executives anticipate no better than 50 to 60 percent passenger traffic until widespread distribution of an effective vaccine. While recent reports are promising, most do not anticipate that to occur until mid-to-late 2021 at the earliest.

At the end of July 2020, United Airlines announced that in September it would resume 40 percent of its domestic schedule and 30 percent of its international schedule, for a combined 37 percent. Salina's Essential Air Service (EAS) contract with SkyWest Airlines is performed under a codesharing arrangement with United. SkyWest posted a $26 million dollar loss in the second quarter of 2020 with operating revenues down over 50 percent for the same quarter in 2019.

SkyWest indicated that it would normally have flown 2,600 daily departures in the second quarter but flew just 800 in May; 900 in June; and 1,300 in July. The airline indicated that, with the coronavirus, it has sped up its plan to add 70-seat Embraer E175 aircraft to its fleet. While it decreased its total fleet from 484 to 471 in the second quarter of 2020, it added 24 used and two new E175s. It expects to have 213 E175s in service by mid-2022, compared to 156 at the end of 2019.

As with the rest of SkyWest, system flights at SLN were reduced during the same period. Before March 2020, SLN flights had been paired with Hays Regional Airport. In early March, SkyWest moved to nonstops to and from SLN with both Chicago and Denver. This was maintained through April when SkyWest was approved to temporarily suspend the Chicago service and relink the Denver service through Hays. Service to Chicago was reinstated in early July, and the non-stop service to Denver in September.

With non-stop flights to both its major hubs beginning in March, SLN was positioned to continue to see passenger growth in 2020. As estimated above, it could be three to five years for passenger traffic to simply recover to 2019 levels. Even this depends upon the length of the pandemic and the extended impact to the economy.

As the threat of the pandemic declines, personal and leisure passengers are anticipated to grow back first, particularly due to pent-up demand. Business travelers who must travel are already returning, but the extensive use of video conferencing during the pandemic may result in less need for face-to-face meetings. This combine with an increased reluctance to travel for business unless absolutely necessary, can be expected to slow growth of business travel.

The passenger forecast prepared in **Chapter Two** was based upon SLN gradually recapturing service demand, with service growing in response to the demand. Although the general forecast depicts annual enplanements, terminal building planning needs are not based as much on annual passenger levels as they are aircraft size and number of flights during peak periods of the day.

In 2019, Salina shared three daily flights on 50-seat aircraft with Hays. Thus, 150 daily seats were shared between the two markets. With round-trip non-stops to both Denver and Chicago as of September 2020, SLN has 100 seats exclusive to its market. In effect, the Salina market gained 25 daily seats, even though it lost frequency of service. Even a 90 percent full 50-seat aircraft will crowd the existing holdroom, the ticket counter area, as well as the baggage claim area.

At such time as one of the flights is regularly carrying 40 to 45 passengers, it will be time to move forward with terminal improvements. Particularly when a second flight is considered to one of the two destinations, or should a flight be up-gauged to a 70-seat aircraft to meet demand.

While some airlines have been operating flights with middle seats open to promote social distancing, most have commented that the resultant lower load factors will not be sustainable long term. With 50-seat aircraft no longer being manufactured, United's program for converting 70-seat aircraft CRJ-700 models to 50-seat versions (CRJ-550) may gain popularity. The CRJ-550 offers first class and economy plus seating not found in the 50-seat CRJ-200 that may be especially attractive to business travelers.

Another consideration in the aftermath of COVID-19 could be terminal sizing requirements. The terminal requirements for this study were based primarily upon Level of Service (LOS) C standards. If some form

of social distancing in public areas of the terminal becomes the desired standard, so might LOS B or B+ in the short term. This could push forward the timing of public space needs.

In summary, the COVID-19 pandemic is likely to slow down the need for terminal improvements, especially in the short term. There could be conditions, such as higher LOS standards, that hasten space needs, particularly in public areas. The Airport Authority will need to continue to track air travel trends into the post-pandemic era. In doing so, final design can be in position to time and incorporate those changes into the construction schedule.



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