Attachment #2

Airport Needs Workgroup

October 2023

Background

Airports facilitate the movement of people, goods, and services throughout the state, nation, and the world, allowing the economy to operate more efficiently. South Dakota's airports provide a wide range of services and public benefits to residents and visitors. Airports support commercial air service for the traveling public, freight transportation, medical flights, aerial firefighting, disaster relief, pilot training, general recreational flying, agricultural support, and more. In doing so, airports are an important source of economic activity in the communities and regions they serve. Many people are familiar with commercial aviation, having flown for personal or business reasons. But even experienced travelers often do not fully understand the enormous range of activities that occur for airports to function, since many of these activities are performed "behind the scenes." These could be air traffic control, security, engineering, health and safety, or even food preparation. In addition, the general population may not be familiar with General Aviation (GA) and how these smaller airports serve and contribute to the economy and the public welfare.

In the realm of aviation, GA airports are unsung heroes, contributing significantly to the state's economy and public welfare. These airports facilitate essential services, ranging from medical transports and pilot training to supporting local agriculture and fostering recreational flying. Despite their vital role, GA airports often operate behind the scenes, but their impact is far-reaching.

Smaller Commercial airports provide similar services as the GAs but also provide critical regional air service to the major airport hubs. These airports provide additional service to medium sized communities, saving travelers time in not having to travel to a larger airport, especially during difficult winter weather.

Both Rapid City Regional Airport and Sioux Falls Regional Airport serve as vital gateways to South Dakota, connecting the state to the rest of the nation and facilitating economic growth. However, both airports have been grappling with funding shortages over the past few years as they look to expand their airports. These challenges have the potential to impede the operational efficiency and overall effectiveness of these airports.

The Sioux Falls Airport, being the larger of the two, faces increasing demands for upgrades to its infrastructure such as cargo apron expansions, runway expansions, and terminal improvements, to accommodate the growing number of travelers. The airport's existing facilities are straining to handle the surge in passenger traffic, particularly during peak tourism seasons.

In the case of the Rapid City Regional Airport, its pivotal role in supporting the state's tourism industry brings with it a significant influx of passengers during peak travel periods. This surge in visitors, often drawn to South Dakota's attractions such as Mount Rushmore, places additional strain on the airport's facilities, such as terminals, parking, baggage handling, and security checkpoints. Their existing funding doesn't allow for the expansion and modernization of the airport to handle the increased traffic and ensure a seamless travel experience. As a result, both airports have actively pursued state funding in the past several years to enhance their infrastructure, accommodate growing passenger numbers, and ultimately bolster the state's economy by maintaining efficient air travel connections.

For these reasons, the Airports Needs Workgroup was formed in the summer of 2023 to help better understand the infrastructure needs of all SD public airports. This group was comprised of SDDOT aeronautics staff, commercial airport managers, GA airport managers and members of the Aeronautics Commission (Commission). As a team, they assembled this document to provide decision makers with necessary data to more completely understand the funding challenges our airports are currently facing.

Assumptions and Limitations

Several assumptions were required due to a range of uncertain conditions.

Assumptions

There are numerous federal funding sources; formula, discretionary (competitive grant), entitlement (set amount allocated to each airport based on established formulas), and most recently Bipartisan Infrastructure Law (BIL) funding (additional funding for airports). All these federal dollars provide funding to our public airports typically in a 90/10 match rate. This funding is designated through congressional action, both through authorization bills and through appropriations bills. The current FAA authorization legislation is set to expire on Sept. 30, 2023. Although this 5-year legislation did provide some additional funding, minimal increases in funding has occurred since 2003. Although Congress has not passed a new FAA reauthorization bill as of Sept. 30, 2023, the House bill passed in July 2023 would raise funding from the current $3.4 billion to $4 billion annually. The BIL legislation is set to expire in 2026 and there are currently no draft bills to replace it. All these funds are divided amongst the many public airports in the United States.

With BIL, there has been additional funding opportunities provided to the airports. BIL funding came in the form of two mechanisms. The first is referred to as Airport Infrastructure Grants, which provides South Dakota airports $16.4 million per year over the next five years. Each airport receives a set amount of these funds per year. All of these funds have obligation requirements (three years from the date of award). Any unobligated funds will be put into the next year's discretionary grant. The other BIL opportunity of funding is for competitive discretionary grants. It is incumbent upon the airports to apply for these grant opportunities. The assumption is that the BIL funding would not continue into the future. With the uncertainty of the federal programs, the Workgroup agreed upon setting the federal amounts at historic federal allocations. This means the funding would remain the same as it has over the past several years.

On the state side, the assumption for funding is that the state would experience a slight increase over the next four years based on the five-year average of receipts. In addition, the state would continue to provide half of the local match, 5% of the 10% local match.

On the local side, the assumption is that if local sponsors have identified a project in their Capital Improvement Plan (CIP), the local airport sponsor would be able to fund the project.

Federal & State Limitations:

In the realm of airport development, the availability of funding is subject to stringent criteria at both the federal and state levels, with specific conditions that must be met by project sponsors. At the federal level, the Airport Improvement Program (AIP) funds are designated exclusively for airports that hold federal obligations. These funds are allocated for the enhancement of public-serving pavements and structures, rather than for the exclusive benefit of any particular business or private enterprise. The usage of AIP funds is directed toward critical areas such as the construction or rehabilitation of runways, taxiways, and aprons, installation of essential airport signage and lighting, airport planning initiatives, obstruction clearing, land acquisition, and the procurement of certain safety equipment. Within each of the federal grant programs, there are specific rules that limit eligible expenses. Therefore, all non-eligible federal aspects of the project must be funded by the local airport. This creates uncertainty for the airports as well as the need to come up with additional local funding.

It's important to note that state involvement has its own set of limitations. These limitations have been set by the Aeronautic Commission due to limited funding resources at their disposal. In particular, revenue-generating systems such as fuel facilities and hangars are not eligible for state participation. Furthermore, for airport terminals, the state's financial contribution is capped at a maximum of $200,000 for each terminal project undertaken according to current State Aeronautics Commission Policy.

Local Limitations:
The practical implications of these funding constraints are evident in the challenges faced by airport sponsors, which typically consist of cities and counties. Given their finite budgets, airport sponsors may find themselves in a position where they need to delay a project by a year or more due to a lack of available matching funds. This delay can have far-reaching consequences for needed upgrades and expansions that are necessary to accommodate growing passenger traffic, enhance safety measures, or simply to maintain operational excellence.

Pavement Conditions:
SDDOT uses an airport pavement management software system to help optimize funding for airport pavements. The software analyzes pavement life cycles and recommends certain treatments be performed at a specific time to optimize funding and maximize pavement life. Recommendations are based upon performance targets set in the State Aviation System Plan. Every three years, a Pavement Condition Index (PCI) survey is performed to assess the pavement conditions around the state. Pavement performance curves are used in the software to analyze present and past PCI information and then an appropriate pavement treatment is recommended for the next 20 years. Because funding will likely never be sufficient to fund all airport pavements at their optimized target date, it is assumed there will be project slippage. The longer the delay, the more a project will cost which could mean even longer delays since the local match could become too great for the airport sponsors to finance. In essence, the interplay between federal and state funding requirements, along with the limited resources of local airport sponsors, underscores the complexity and importance of securing adequate funding to ensure the sustained development and functionality of the public airports in South Dakota. As projects are pushed back, pavement conditions will deteriorate incrementally.

It is difficult to project the degree of backlog needs for airport pavements or whether the available funding is sufficient to maintain the pavements in an overall good condition. There have been no airports that have closed due to pavement condition, nor are there any airports that are projected to be closed for this reason. Therefore, although it is acknowledged that the PCI could be improved with additional funding, it is assumed there is not a great funding need to accelerate replacement. Thus, the information used to define the Needs section within this report is based on the projects planned within the CIP of the individual airports.

Needs

As stated earlier, Capital Improvement Plans (CIP) were obtained from all public airports in SD and used to evaluate the current overall needs for the state's airports. These projects were reviewed, and funding allocations were verified, to ensure the anticipated needs were appropriately assigned based on the current Commission policy for state match allocations. The airports were broken down into six categories including the following: Commercial Sioux Falls, Commercial Rapid City, Commercial Aberdeen, Pierre and Watertown, General Airport – Large (seven airports), General Aviation-Medium (16 Airports), and General Aviation-Small (27 Airports). The needs analysis was further broken down into four project types: pavements, terminals, revenue producing, and other.

Using the CIPs, a spreadsheet was created and populated to reflect total project costs identified in the respective CIPs. These costs were additionally broken down into the appropriate funding allocations per project by each airport category listed above. In addition, costs were also broken down into expected funding allocations per federal, state, and local funds. Finally, revenue projections using the current federal, state and local funding sources were populated into the spreadsheet. The difference between the total project cost less the anticipated revenue/funding sources resulted in the creation of Table 1, which reflects the needs for South Dakota airports over the next three years.

Table 1 identifies the amount of funding needed above and beyond the current programmed funding levels. Thus, the table demonstrates that the needs for the GA airports will be able to be met with the current anticipated funding levels.

Table 1

Need		FFY24	FFY25	FFY26
Commercial SF				
	Pavements	$ -	$ 1,000,000	$ -
	Terminals	$ 450,000	$ -	$ 31,526,764
	Revenue Producing	$ -	$ -	$ -
	Other	$ -	$ -	$ -
		$ 449,999	$ 1,000,000	$ 31,526,764
Commercial RC				
	Pavements	$ -	$ -	$ -
	Terminals	$ 1,977,496	$ 35,037,628	$ 6,301,764
	Revenue Producing	$ -	$ -	$ -
	Other	$ -	$ -	$ -
		$ 1,977,496	$ 35,037,628	$ 6,301,764
Commercial Aberdeen, Pierre, Watertown				
	Pavements	$ -	$ -	$ 3,730,481
	Terminals	$ -	$ -	$ -
	Revenue Producing	$ -	$ -	$ -
	Other	$ -	$ -	$ -
		$ -	$ -	$ 3,730,481
General Aviation - Large				
	Pavements	$ -	$ -	$ -
	Terminals	$ -	$ -	$ -
	Revenue Producing	$ -	$ -	$ -
	Other	$ -	$ -	$ -
		$ -	$ -	$ -
General Aviation - Medium				
	Pavements	$ -	$ -	$ -
	Terminals	$ -	$ -	$ -
	Revenue Producing	$ -	$ -	$ -
	Other	$ -	$ -	$ -
		$ -	$ -	$ -
General Aviation - Small				
	Pavements	$ -	$ -	$ -
	Terminals	$ -	$ -	$ -
	Revenue Producing	$ -	$ -	$ -
	Other	$ -	$ -	$ -
		$ -	$ -	$ -
	Total need by FY	$ 2,427,497	$ 36,037,627	$ 41,559,013
	GRAND TOTAL NEED	$ 80,024,137		

Conclusion

Funding eligibility and other limitations have created challenges for all classes of airports. As Table 1 reflects, the greatest funding need for airports receiving federal and state funding over the next three years is for the two major commercial airports, Rapid City Regional Airport and Sioux Falls Regional Airport, with a majority of the shortfall being for terminal expansion. The basis for the need to expand, and the funding challenges faced by these two airports, is addressed in the attachments, as provided by the two airports. Accordingly, constraints have spurred efforts on their end to secure state and federal funding through numerous federal grant programs as well as through federal and state legislation.

Federal funds are the primary funding source for airport construction projects, with a match rate of 90% federal, 10% local (5% state/5% local). If the new FAA reauthorization bill doesn't provide a significant increase in funding, especially with BIL funding expiring, airports in our state will continue to be challenged to fund airport improvement projects. Because federal funds make up the majority of the airport funding, it is impractical to assume state funds can replace any federal shortfall. But, it is reasonable to assume that the federal program will continue to be funded at current or higher funding levels. Therefore, except for terminal expansions, it is thought that most of the needs in South Dakota can be met with the current program funding over the next three years.

In regard to pavement optimization, if additional federal and state funding would be provided, the PCI value could be improved. The SDDOT will be performing a 2024 PCI study to update the optimization of our airport pavements and this study will define whether any additional funding is needed.

As shown on the operations enplanements and entitlements page, Aberdeen, Pierre, and Watertown each receive about $1 million in federal entitlement funds. Rapid City receives about $2 million, and Sioux Falls receives about $4 million. All federally obligated general aviation airports receive $150,000 regardless of enplanements, operations, or runway and apron sizes. For the GAs, this set dollar amount creates a large gap in needs between the functionality among the different types of airports. For example, airports with two runways, two full-length taxiways and 32,000 operations receive the same amount of federal funding as airports with about 1,600 operations and one paved runway. Therefore, the $150,000 per-year per-airport allocation does not fairly address the needs of the GA airports based on the vast differences of infrastructure assets they manage and/or their different operational uses.

We would like to thank the Workgroup for their collaborative work in compiling and analyzing the airport data used to develop this document. The report was not meant to provide recommendations to policy makers, but instead to provide information to decision-makers who have authority over policy and funding. Some of the key information compiled included: funding sources, revenues, pavement conditions, infrastructure needs and information on the neighboring states' programs. The assumptions and limitations stated in the report are based on the best information available at the time of the study. If any of these assumptions are determined to be flawed or inaccurate, it would change the results of the report.

The attachments to this report include the following:

Airport Funding Fact Sheet: this document offers insight into the sources of state revenue generated from aircraft fuel taxes and aircraft registrations. These funds play a crucial role in financing the state aeronautics programs and are allocated to various projects as part of the state's match commitment approved through the Aeronautics Commission. Additionally, the document includes a comparison of South Dakota's rates with neighboring states. Notably, a mere one-cent increase in jet fuel taxes results in an estimated revenue of approximately $187,427.

Economic Impact Study: as part of the 2020 South Dakota Aviation System Plan, a study known as the 2020 South Dakota Aviation Economic Impact Study was completed. This study is a vital aspect of the overall system planning process, as it offers a comprehensive analysis of the economic contributions made by system airports to South Dakota's economy. https://tinyurl.com/2vpdh829 Link to Report

Airport Operations and Entitlements Overview: this document provides the annual operations, based aircraft, annual entitlements, and pavement surfaces overview for SD airports. It's important to note the entitlement funding differences among these airports in comparison to the pavement areas each airport is responsible for.

SD Airports Map: reflects the location and classification of public airports in South Dakota.

Sioux Falls and Rapid City Infrastructure Needs: these documents were submitted by the two respective airports and provide the reader with a more in depth understanding of the infrastructure needs and justification for their projects.

Runway vs. Highway: this document explains the differences in pavement needs between runways and highways. It's important for decision-makers to understand that aircraft pavements require much more stringent and stronger specifications than vehicle pavements based on impact loading.

State Funding Summary (Neighboring States): this document offers an overview regarding how South Dakota's surrounding states provide financial assistance to their state airports.

These resources serve as a foundation for helping the readers of this report better understand the current landscape, paving the way for strategic decisions that will sustain South Dakota's airports for the future.

Airport Funding Fact Sheet

Airport Funding

COMPARISON CHART

STATE	AV GAS	JET FUEL	EXCISE TAX
South Dakota	$0.06	$0.04	4%
North Dakota	$0.08	$0.08	5%
Iowa	$0.08	$0.05	6%
Minnesota	$0.05	$0.15	6.875%
Wyoming	$0.05	$0.05	4%
Nebraska	$0.05	$0.03	5.5%

Airport Revenue

- A one-cent increase in Aviation Fuel would generate approximately: **$9,203**
- A one percent increase in Aircraft Registration Fees would generate approximately: **$554**
- A one-cent increase in Jet Fuel would generate approximately: **$184,427**
- A one percent increase in Excise Tax would generate approximately: **$11,932**

**All values are based on a 3-year quantity average of the particular revenue source*

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State Registration Information

YEARLY REGISTRATION FEES	SOUTH DAKOTA NEW NINE YEARS	SOUTH DAKOTA 10 YEARS PLUS	NORTH DAKOTA ALL YEARS
0 - 500 lbs.	$25	$12.50	$15
501 - 1,000 lbs.	$25	$12.50	$30
1,001 - 1,500 lbs.	$25	$12.50	$38
1,501 - 2,000 lbs.	$40	$20	$45
2,001 - 2,500 lbs.	$55	$27.50	$60
2,501 - 3,000 lbs.	$55	$27.50	$75
3,001 - 3,500 lbs.	$70	$35	$90
3,501 - 4,000 lbs.	$70	$35	$105
4,001 - 5000 lbs.	$85	$42.50	$120
5,001 - 6,000 lbs.	$100	$50	$150
6,001 - 7,000 lbs.	$125	$62.50	$180
7,001 - 8,000 lbs.	$125	$62.50	$210
8,001 - 9,000 lbs.	$125	$62.50	$240
9,001 - 10,000 lbs.	$125	$62.50	$270
10,001 - 12,499 lbs.	$150	$75	$300
12,500 - 15,000 lbs.	$200	$100	$300
15,001 - 20,000 lbs.	$300	$150	$450
20,001 - 30,000 lbs.	$300	$150	$600
30,001 - 40,000 lbs.	$300	$150	$900
40,001 - 50,000 lbs.	$300	$150	$1,200
50,001 - 75,000 lbs.	$300	$150	$1,500
75,001 - 100,000 lbs.	$300	$150	$2,250
100,000+ lbs.	$300	$150	$3,000

MINNESOTA

MANUFACTURER LIST PRICE	TAX
$1 - $500,000	$100
$500,001 - $1,000,000	$200
$1,000,001 - $2,500,000	$2,000
$2,500,001 - $5,000,000	$4,000
$5,000,001 - $7,500,000	$7,500
$7,500,001 - $10,000,000	$10,000
$10,000,001 - $12,500,000	$12,500
$12,500,001 - $15,000,000	$15,000
$15,000,001 - $17,500,000	$17,500
$17,500,001 - $20,000,000	$20,000
$20,000,001 - $22,500,000	$22,500
$22,500,001 - $25,000,000	$25,000
$25,000,001 - $27,500,000	$27,500
$27,500,001 - $30,000,000	$30,000
$30,000,001 - $40,000,000	$50,000
$40,000,001+	$75,000

IOWA

THE FOLLOWING SCHEDULE (ROUNDED TO THE NEAREST WHOLE DOLLAR) WILL BE USED:
Manufacturers' list price x 1% = 1st year's fee
Manufacturers' list price x .75% = 2nd year's fee
Manufacturers' list price x .50% = 3rd year's fee
Manufacturers' list price x .25% = 4th year and older
Aircraft which is 30 years or older and is for personal use only - $35

Notes

- **South Dakota** prorates annual fees. If the aircraft comes to South Dakota after June 30th half of the normal fee is due. After Sept. 30th, one-fourth of the normal fee is due. The minimum fee is $10 for all aircraft.
- **North Dakota** prorates annual fees. If the aircraft comes to ND after July 1st, one-half of the registration is due.
- In **Iowa** aircraft shall not be registered for a fee of less than $35 or more than $5,000.
- In **Minnesota**, the aircraft registration tax is "in lieu" of all other taxes on aircraft. Except the "sales and use" tax. The aircraft registration tax is on a fiscal year basis from July 1 through June 30 of the following year. Aircraft registration tax is computed on the manufactured list price of the aircraft.
- There are no state aircraft registration yearly fees in **Wyoming and Nebraska.**

Economic Impact Study:

https://tinyurl.com/2vpdh829 Link to Report

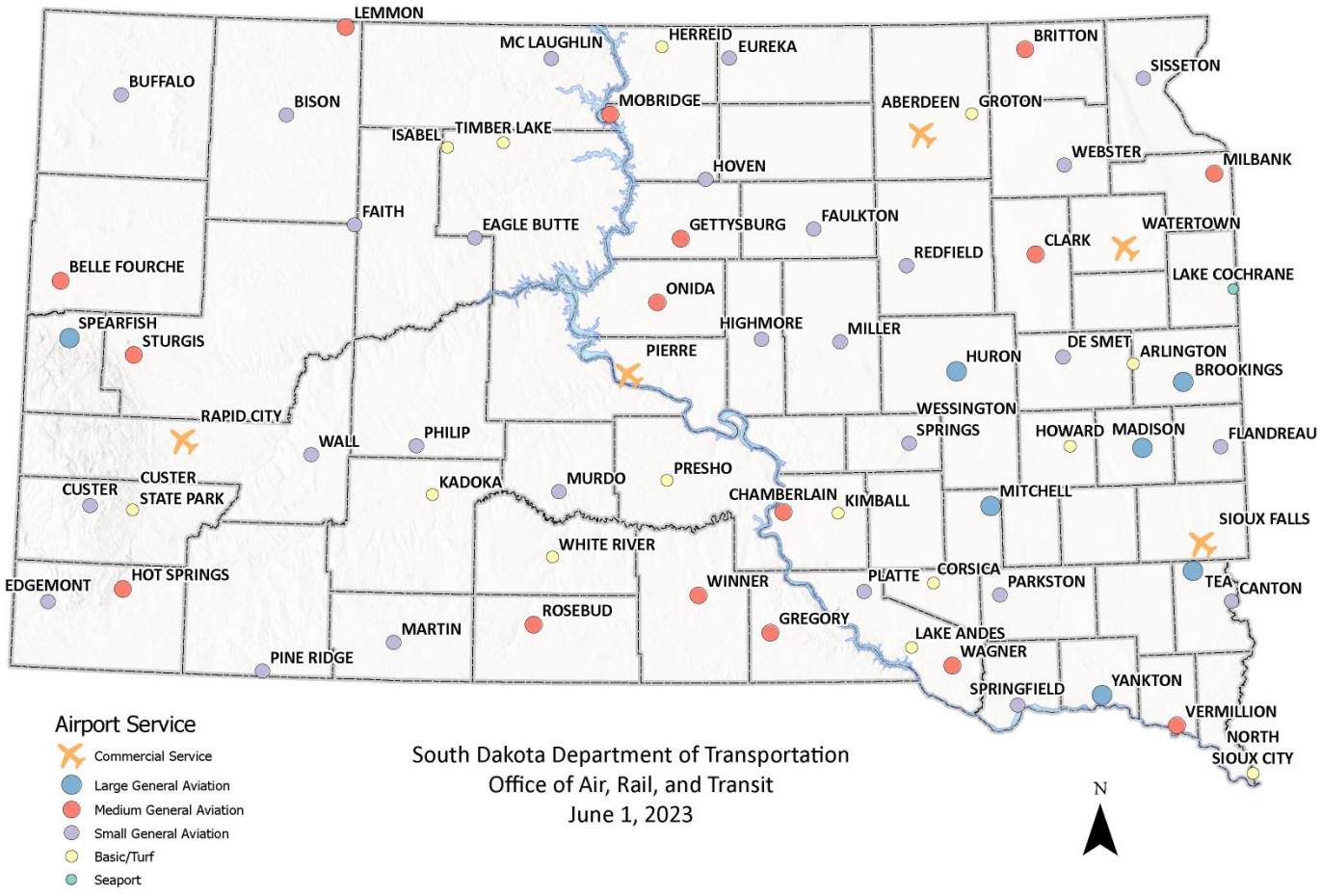
Airport Operations and Entitlements Overview:

Airport	Annual Enplanements	Operations	Based Aircraft	Annual Entitlements	Runway Length	Apron Area (ft^2)
Aberdeen	21,776	39,746	66	1,000,000	6901, 5500	701,000
Belle Fourche		4,206	14	150,000	4500	60,000
Bison		2,280	5	150,000	3500	30,200
Britton		2,240	10	150,000	4200	55,000
Brookings		32,025	61	150,000	6000, 3600	217,600
Canton		2,000	16	150,000	3600	42,300
Chamberlain		7,512	12	150,000	4300	51,300
Clark Co.		3,200	18	150,000	3700	30,700
Custer Co.		4,200	21	150,000	5500	98,000
DeSmet		1,830	9	150,000	3700	42,800
Eagle Butte		2,248	2	150,000	4200	42,500
Edgemont		208	3	150,000	3900	30,900
Eureka		580	11	150,000	3100	26,000
Faith		1,280	7	150,000	4200	50,300
Faulkton		3,560	13	150,000	3249	98,000
Flandreau		3,440	10	150,000	3100	57,500
Gettysburg		6,200	11	150,000	4400	100,000
Gregory		3,090	14	150,000	3800	78,000
Harding Co.		1,020	6	150,000	3900	65,000
Highmore		5,620	14	150,000	3700	23,000
Hot Springs		6,820	23	150,000	4500	100,000
Hoven		1,520	10	150,000	3700	30,000
Huron		12,200	21	150,000	7200, 5000	478,000
Lemmon		3,920	17	150,000	4500, 3300	44,400
Madison		37,895	55	150,000	5000	147,200
Martin		348	3	150,000	3700	51,000
McLaughlin		700	9	150,000	3800	49,000
Milbank		4,440	13	150,000	4000	70,000
Miller		7,260	7	150,000	3600	48,000
Mitchell		14,940	29	150,000	6700, 5500	408,000
Mobridge		5,542	16	150,000	4400	109,000
Murdo		400	3	150,000	4000	45,000
Onida		5,500	15	150,000	3800	28,500
Parkston		3,460	10	150,000	3600	52,000
Philip		1,641	11	150,000	4000	110,000
Pierre	16,441	31,960	63	1,000,000	6900, 6880	692,000
Pine Ridge		2,400	0	150,000	5000	93,000
Platte		696	10	150,000	3100	55,000
Rapid City	331,345	43,805	77	2,000,000	8700, 3600	1,156,000
Redfield		5,175	11	150,000	3500	60,000
Rosebud		1,200	0	150,000	4800	58,000
Sioux Falls	606,055	69,691	93	4,000,000	)000, 7983, 319(	2,131,000
Sisseton		3,320	11	150,000	3400	55,000
Spearfish		17,000	73	150,000	6400	357,000
Springfield		2,706	11	150,000	3500	46,000
Sturgis		15,024	59	150,000	5100	210,000
Tea		18,350	63	150,000	3650	105,000
Vermillion		4,098	13	150,000	4100	109,600
Wagner		3,120	11	150,000	3500	54,000
Wall		3,510	13	150,000	3500	40,000
Watertown	15,042	12,276	35	1,000,000	6900, 6900	497,000
Webster		960	4	150,000	3700	20,700
Wessington Springs		150	4	150,000	3600	32,000
Winner		16,860	14	150,000	5500	144,000
Yankton		7,832	30	150,000	6095, 3380	218,000

Annual Enplanements are the total number of revenue passengers boarding aircraft per year.
Annual Operations refer to the number of take-off and landings occur at each airport per year.
Annual Entitlements are formula funds based upon the type and number of operations that an airport supports.

SD Airports Map:

South Dakota
Approved Public Airports



Sioux Falls Regional Airport
Concourse Expansion

Introduction

This paper will review the need for additional terminal facilities at the Sioux Falls Regional Airport (FSD). As the City of Sioux Falls has grown, so has the Regional Airport. I will review the reasons behind the need for additional terminal space, options reviewed to accommodate this growth, estimated construction costs and why financial support is requested from the State.

FSD has been participating in a long-range Master Plan effort that determines future growth in passenger traffic, cargo, flight operations, air med and general aviation activity in the next 5- 10-15 years. The Plan will then ensure facility requirements are programed into our Capital Plan to meet forecasted needs. We also incorporated a Terminal Area Plan to more specifically dive into our passenger terminal to identify facility requirements for our growing passenger base. I will utilize information gathered from these planning efforts to support this paper.

Growth in Passenger Traffic

In the past twenty years passenger traffic has grown at an annual rate of 3% which mirrors the population gain in the Sioux Falls community. The chart below highlights the continued growth of just under 3% annually for the next twenty years with enplaned (departing) passengers approaching one million/year in 2041.

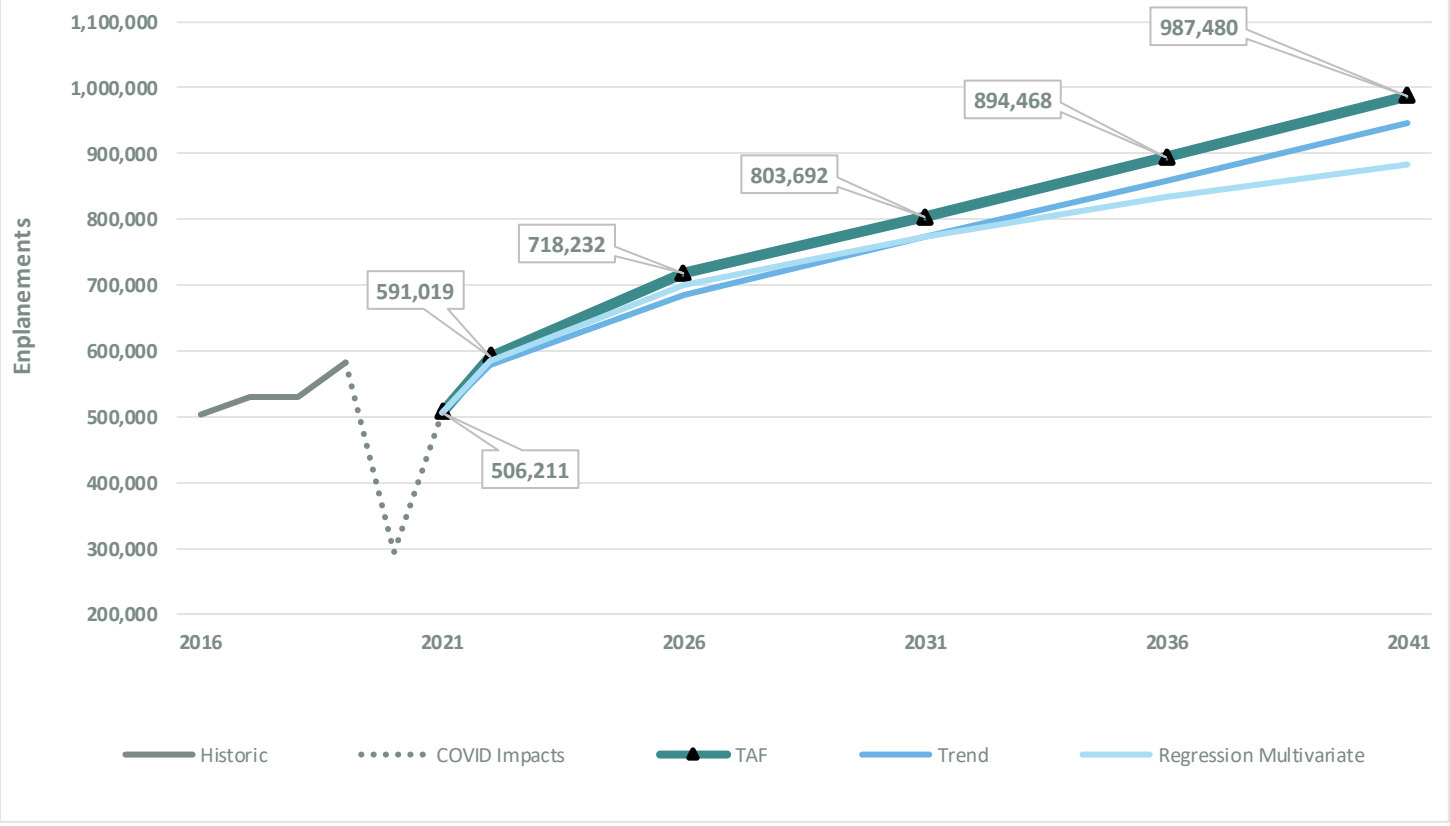


Table 1

Our Master Plan reviewed several scenarios to forecast future passenger traffic and narrowed it down to the three shown. The FAA provided the Terminal Area Forecast (TAF) which ultimately was selected as the projection used. Although while fairly conservative, offered the most appropriate projection from several of the forecasts developed.

The Terminal Area Plan utilized the annual enplanement forecast to break down a peak-hour demand for the terminal. The peak-hour will drive the facility needs for ticket counter space, baggage handling/screening, security checkpoint, baggage claim and the number of gates/hold room space necessary on the concourse. The chart below illustrates our peak terminal/gate usage is typically in the 5am – 7am time frame along with mid-morning, late afternoon and again late in the evening when all our terminating flights arrive and aircraft remain overnight. The overnight gate usage is one of our highest demand time frames, when 7 gates (10 parking positions) are full. These overnight aircraft are then utilized for all early morning launch flights driving the peak usage window.

As passenger traffic increases over time, the peak hour demand for terminal facilities also increases, identified in the chart below (table 2).

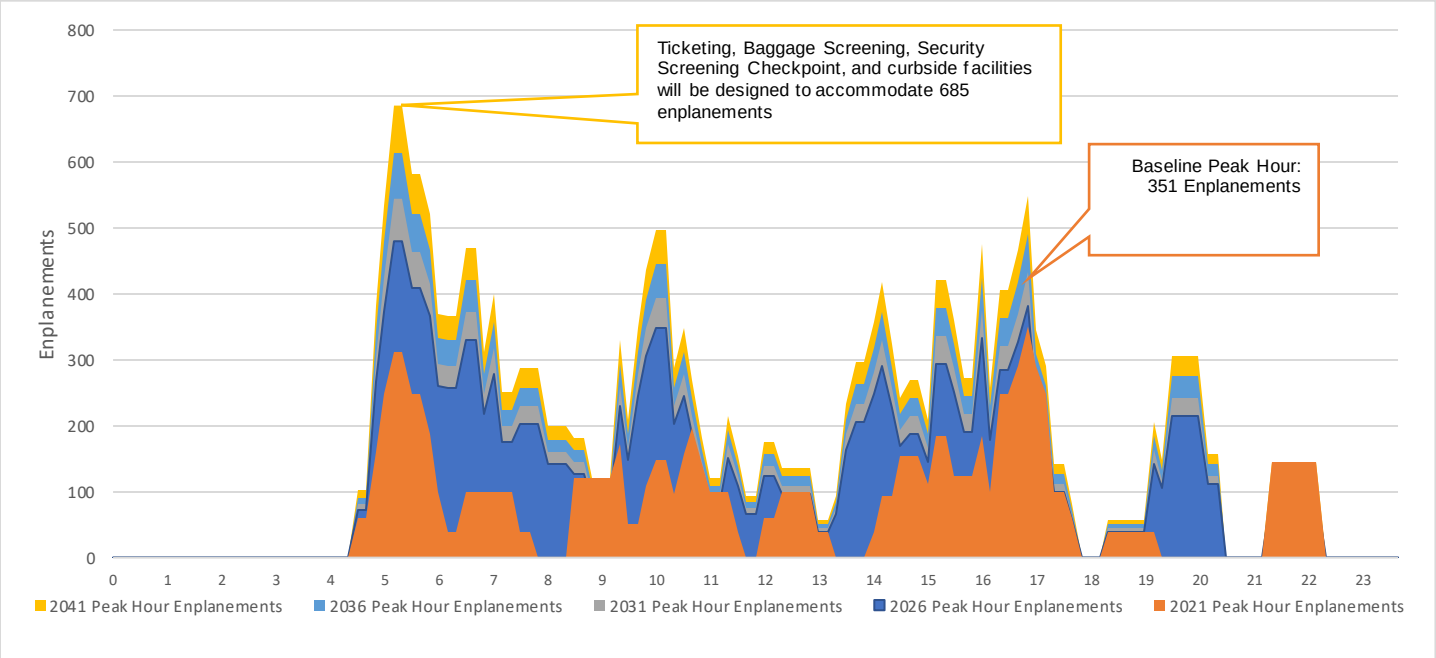


Table 2

The peak hour demands increase with additional passengers driving more space required in all areas, including ticket count space, public circulation but most significantly the number of aircraft gates and departure hold room areas. As the chart below illustrates (Table 3), our current gate allocation which consists of 7 gates, totaling 10 parking positions (3 gates accommodate 2 aircraft) will need to grow to a total of 14 gates by 2041. In addition, even though we can accommodate 10 aircraft at one time, only 6 of those can be mid-size aircraft, or those in the 125-175 seat capacity. The other positions are only available for smaller regional jets. The forecast for 14 gates would accommodate all mid-size aircraft.

The pilot supply issue has forced carriers to park small regional jet and replaced with larger Boeing 737 or Airbus A320 aircraft. These mid-size jets will make-up the bulk of flying out of FSD in the next ten years driving the need for additional gate space as well as larger seating/gate hold room areas to accommodate increased passenger levels. These large aircraft will also drive the need for additional restroom, concession space and other amenities.

FSD Terminal Demand and Capacity Analysis	2021 Existing	2021	2026	2031	2036	2041
General						
Annual Enplanements	506,211		718,232	803,692	894,468	987,480
Peak Hour Enplanements	352		498	557	620	685
Aircraft Gates	7	10	11	12	13	14
Public Space						
Circulatiton (public seating, ticketing, concourse, bag claim, general circ. (SF)	36,045	39,047	40,975	42,167	43,396	44,653
Ticket Lobby Queue (SF)	3,367	3,408	4,441	4,950	5,265	5,729
Passenger Security Screening (SF)	9,615	6,000	7,800	7,800	7,800	9,600
Departure Lounges-Gate Hold Room (SF)	10,062	29,530	32,483	35,436	38,389	41,342
Restrooms (pre/postt security) (SF)	2,779	3,179	4,079	4,219	4,569	5,059
Other (Service Animal Relief Area, Mother Nursing Stn, Janitor Closet) (SF)	5,610	4,936	6,636	7,046	7,481	7,929
Airline Space						
Ticketing (counter, office) (SF)	8,312	6,766	9,876	11,222	11,222	12,568
Outbound Baggage Screening (SF)	4,409	3,302	4,394	4,524	4,524	5,564
Outbound Baggage Makeup (SF)	15,630	16,200	16,200	16,200	16,200	18,225
Inbound Baggage Makeup (SF)	7,871	6,000	6,000	6,000	6,000	6,000
Baggage Claim Devices (SF)	8,982	6,000	6,000	9,000	9,000	9,000
Baggage Service Offices (SF)	655	655	750	750	1,000	1,000
Concessions						
Pre-Security Food/Retail (SF)	5,131	2,232	3,167	3,544	3,945	4,355
Post-Security Food/Retail (SF)	5,314	5,209	7,391	8,270	9,204	10,161
Support and Storage (SF)	4,261	1,384	1,964	2,198	2,446	2,701
Rental Car Offices and Queuing (SF)	1,760	1,980	1,980	1,980	1,980	1,980
Non-Public Space						
Airport Administratiton (SF)	5,200	6,397	7,276	7,489	8,116	8,349
TSA Offices (SF)	2,149	3,000	3,000	3,000	3,000	3,000
Modified FIS Facility (SF)	2,820	2,820	2,820	2,820	2,820	2,820
Circulation (SF)	3,751	6,365	7,082	7,379	7,538	8,154
Airport Operations (SF)	12,996	16,455	18,234	19,289	20,006	21,274
Building Systems (SF)	23,487	22,314	25,154	26,833	27,974	30,003
TOTAL GROSS (SF)	**180,206**	**193,179**	**217,701**	**232,116**	**241,876**	**259,466**

Table 3

Both planning efforts also looked at underserved markets to determine the likelihood of additional service driving the need for more gates. The current airlines serving FSD will likely add service in the next 5-10 years pending gate availability:

- American Airlines — Add non-stop to Washington D.C. Reagan National Airport
  Current service to Charlottee, Phoenix and Chicago to larger aircraft.
- Delta Airlines — Add non-stop to Salt Lake City and New York.
  Add second daily flight to Atlanta
  Upgrade aircraft size on all current regional jets.
- United Airlines — Add non-stop to Newark, NJ and Houston.
  Upgrade aircraft size on all current regional jets.
- Allegiant Airlines — More frequent service to Las Vegas, Orlando and Nashville.
  A319 aircraft upgraded to larger 737 MAX aircraft. (175-200).
- Frontier Airlines — Increased frequency to Denver and Orlando.
- New Carrier — New airline potential with service on Southwest to: Chicago, Houston St. Louis, Nashville and Las Vegas.

These additional route opportunities are realistic as our population and demand for air service grows. If we are unable to add additional gate/concourse capacity, we will have to turn away many of these future flight options.

Build Options

The Terminal Area Plan provide three alternatives for adding gates to our current facility. The ability to phase the project and minimize the loss of existing gates were two principal factors in selecting an alternative. Ultimately the attached drawing (Table 4) illustrates the alternative chosen. This option provides two phases of concourse expansion, phase 1 will provide 6 gates or a net gain of 5 gates and phase 2 will had 3 gates or a net gain of 2 for a total gate allocation of 14 matching the 20-year planning horizon requirement. Phase 1 is the primary focus as it will provide the incremental number of gates necessary for the next 15 years. Phase 2 will be programmed in over the next 8-10 years. The goal is to complete the terminal apron expansion and phase 1 gate addition in one project, however funding availability will require a design approach to break the project into multiple parts in order to complete as funding becomes available.

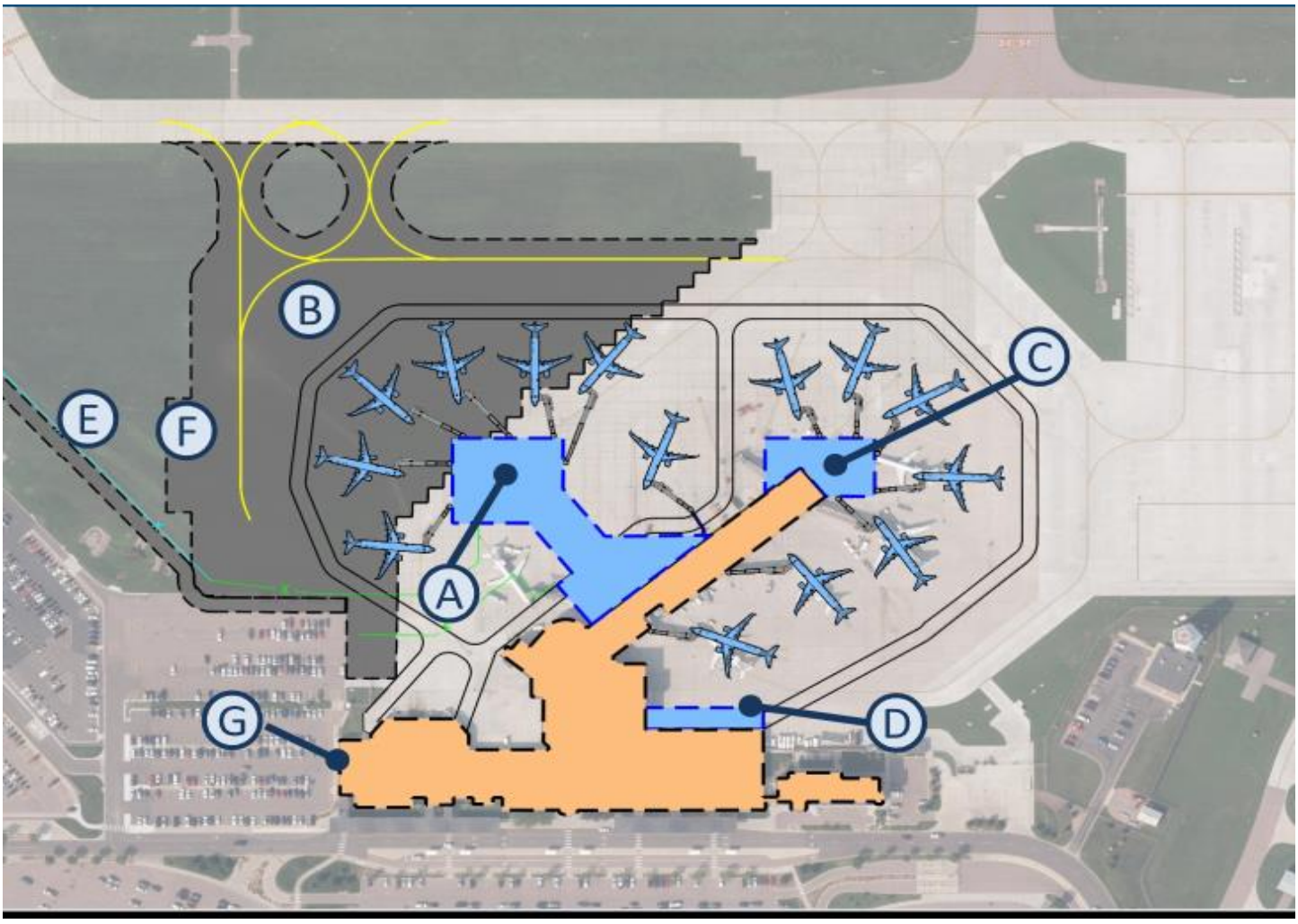


Table 4

A) Phase 1: 70k sf Expansion (net 5 gates)
B) Apron Expansion: 47k sy
C) Phase 2: 27k sf Expansion (net 2 gates)
D) Ticketing/baggage screening expansion

The third option is to forgo additional terminal facilities to despite the demand we know is coming. The option of not building will result in demand far exceeding the supply of available flights and seats driving air fares significantly higher. The higher air fares will drive many of our area travelers to other airports, primarily Omaha and Minneapolis which already have more non-stop flight destinations and lower air fares. We would return to a situation that was the norm in 2007-2010 when over 45% of our local customers drove to Omaha for lower fares and more non-stop destinations. The loss in traffic not only would have an impact financially on the area along with a loss in sales tax revenue, but limited flight options and high air fares would also be detrimental to recruiting efforts by the Development Foundation and Chamber to lure new businesses to Sioux Falls.

Cost of Construction

The cost of construction for terminal facilities across the country has skyrocketed over the past few years with terminal construction costs up 300-400% from just a few years ago. Increasing costs for materials and labor, along with a building boom in many mid-western cities has increased costs per square foot over $900. This substantial increase in cost is the primary reason we are reaching out to our State and local partners to participate in this project. *Estimates for construction of Phase 1 (5 gate expansion) are still preliminary, but break down as follows:*

- Phase 1 building construction -$90,000,000
- Terminal Apron construction- $20,000,000
- Design $10,000,000
- Contingency, inflation adj. $10,000,000 Total $130 million

Construction costs for Phase 2 (2 gate expansion)

- Phase 2 building construction -$30,000,000
- Design/Contingency/inf. Adj. $13,000,000 Total $43million

Phase 1 is the primary objective due to the additional gates provided and the longer-term capacity improvements over beginning with Phase 2. Also, Phase 1 will only take 1 gate out of service during construction. Phase 2 will add 2 additional gates, but would take 3 gates out of service during construction making that operationally more difficult.

Funding this project is a major challenge. While Federal funding will be the focus to provide over 70% of the project, much of that will depend on the successful award of competitive terminal grants as well as the ability of our Congressional delegation being able to secure additional funding. The airport will certainly absorb a significant portion through bonding, but that will be limited to $10-$15 million due to other capital needs over the next few years.

That is why the State's participation in funding this project is so important. Funding in the $25-$27 million range over the next three years is critical to completing the project in a timely and meaningful manner. Not meeting the expected demand will certainly impact all of eastern South Dakota as well as the entire State.

Importance of FSD to the State and Local Economy

Airports in South Dakota are a major economic engine for their communities. The State of South Dakota prepared an Economic Impact Study in 2020 (using date from 2018) that indicates just the Sioux Falls Regional Airport has an annual economic impact to the community in excess of $400 million/annually. ($490 million if adjusted for inflation). This number will only continue to grow as the number of passengers, freight and mail continues to grow, not to mention the increased number of visitors that are

coming to Sioux Falls and not just passing by on their way to the Black Hills. This is a number that can't be ignored and the value of a growing prosperous airport is vital to our community and a large portion of the State.

Airport Location		Airport Classification	
Associated City:	Sioux Falls	Federal:	Small Hub
County:	Minnehaha	State:	Commercial Service

Sioux Falls Regional/Joe Foss Field

FSD

Airport Activity 2018			
Commercial Operations	39,653	GA Operations	29,518
Commercial Enplanements	529,895	GA Visitors	40,074
Commercial Visitors	185,460	Military Operations	2,503

Airport Economic Impacts

	Source of Impact	Category of Impact	Jobs	Earnings	GDP	Economic Activity
On-Airport	Airport Operations	Direct	1,335	$72,818,000	$89,154,000	$145,835,000
		Subtotal Direct	1,335	$72,818,000	$89,154,000	$145,835,000
		Indirect	252	$13,532,000	$20,869,000	$37,501,000
		Induced	467	$20,871,000	$34,968,000	$62,463,000
		Subtotal Multiplier Effects	720	$34,403,000	$55,837,000	$99,964,000
		Airport Operations Subtotal	2,055	$107,221,000	$144,991,000	$245,799,000
On-Airport	Capital Improvements	Direct	94	$5,136,000	$5,763,000	$11,965,000
		Subtotal Direct	94	$5,136,000	$5,763,000	$11,965,000
		Indirect	21	$1,128,000	$1,833,000	$3,435,000
		Induced	34	$1,508,000	$2,528,000	$4,515,000
		Subtotal Multiplier Effects	55	$2,636,000	$4,361,000	$7,950,000
		Capital Improvements Subtotal	149	$7,772,000	$10,124,000	$19,915,000
Off-Airport	Visitor Spending	Direct	1,311	$32,521,000	$47,064,000	$86,388,000
		Subtotal Direct	1,311	$32,521,000	$47,064,000	$86,388,000
		Indirect	155	$7,154,000	$13,127,000	$23,958,000
		Induced	175	$7,744,000	$12,980,000	$23,176,000
		Subtotal Multiplier Effects	330	$14,898,000	$26,107,000	$47,134,000
		Visitor Spending Subtotal	1,640	$47,419,000	$73,171,000	$133,522,000
Off-Airport	Visitor Spending from Sturgis / Pheasant Hunting Only	Direct	10	$258,000	$373,000	$684,000
		Subtotal Direct	10	$258,000	$373,000	$684,000
		Indirect	1	$57,000	$104,000	$190,000
		Induced	1	$61,000	$103,000	$184,000
		Subtotal Multiplier Effects	3	$118,000	$207,000	$374,000
		Special Event Subtotal	13	$376,000	$580,000	$1,058,000
	Total	Direct	2,750	$110,733,000	$142,354,000	$244,872,000
		Subtotal Direct	2,750	$110,733,000	$142,354,000	$244,872,000
		Indirect	430	$21,871,000	$35,933,000	$65,084,000
		Induced	678	$30,184,000	$50,579,000	$90,338,000
		Subtotal Multiplier Effects	1,108	$52,055,000	$86,512,000	$155,422,000
		Grand Total	3,858	$162,788,000	$228,866,000	$400,294,000

Notes: Readers are reminded that the figures shown are estimates generated by economic models and not an exact accounting. Totals may not sum due to rounding. Where the table indicates 0 jobs but also includes estimates for earnings, GDP, and economic output, individuals worked less than half-time on airport-related activities. A "-" indicates there was no measurable economic impact activity.

In addition to jobs, capital spending and visitor spending make-up a bulk of the economic impact. The tax generated from commercial service airports in the state exceeded $29 million in 2018. ($35m today). This number can either grow with an investment by the State in our airports, or potentially regress if investment in infrastructure isn't maintained.

Airport Type	Source	Federal Taxes				State/Local Taxes			
		Personal Taxes	Other Federal Taxes/Fees	Good & Services Taxes	Total Federal	Personal Taxes	Other State & Local Taxes/Fees	Good & Services Taxes	Total State & Local
Commercial Service	Airport Operations	$15,970,000	$22,810,000	$480,000	$39,260,000	$530,000	$100,000	$11,100,000	$11,730,000
	Capital Expenditures	$1,310,000	$1,710,000	$40,000	$3,060,000	$40,000	$10,000	$850,000	$900,000
	Visitor Spending	$11,270,000	$17,260,000	$690,000	$29,220,000	$380,000	$90,000	$16,040,000	$16,510,000
	Subtotal	**$28,550,000**	**$41,780,000**	**$1,210,000**	**$71,540,000**	**$950,000**	**$200,000**	**$27,990,000**	**$29,140,000**
General Aviation	Airport Operations	$2,150,000	$2,160,000	$680,000	$5,000,000	$70,000	$290,000	$1,110,000	$1,460,000
	Capital Expenditures	$580,000	$760,000	$20,000	$1,350,000	$20,000	$3,000	$380,000	$400,000
	Visitor Spending	$860,000	$1,320,000	$50,000	$2,240,000	$30,000	$10,000	$1,230,000	$1,260,000
	Subtotal	**$3,590,000**	**$4,240,000**	**$750,000**	**$8,590,000**	**$120,000**	**$303,000**	**$2,720,000**	**$3,120,000**
All Airport Totals	Airport Operations	$18,120,000	$24,970,000	$1,160,000	$44,260,000	$600,000	$390,000	$12,210,000	$13,190,000
	Capital Expenditures	$1,890,000	$2,470,000	$60,000	$4,410,000	$60,000	$13,000	$1,230,000	$1,300,000
	Visitor Spending	$12,130,000	$18,580,000	$740,000	$31,460,000	$410,000	$100,000	$17,270,000	$17,770,000
	Total	**$32,140,000**	**$46,020,000**	**$1,960,000**	**$80,130,000**	**$1,070,000**	**$503,000**	**$30,710,000**	**$32,260,000**

Conclusion

Our community has seen significant growth over the past twenty years and FSD has grown along with it. The Airport Authority has funded over $50 million dollars in capital improvements to the terminal to keep pace with our passenger demand and most recently invested another $64 million in a state-of-the art parking structure. Investing in FSD is an investment in our community that will benefit millions of travelers over the next twenty years. Our airport is a major economic engine for eastern South Dakota and to keep it running, will take financial support from all levels of government. Your support of our funding request is important to all South Dakotans. Thank you

RAPID CITY PASSENGER TERMINAL

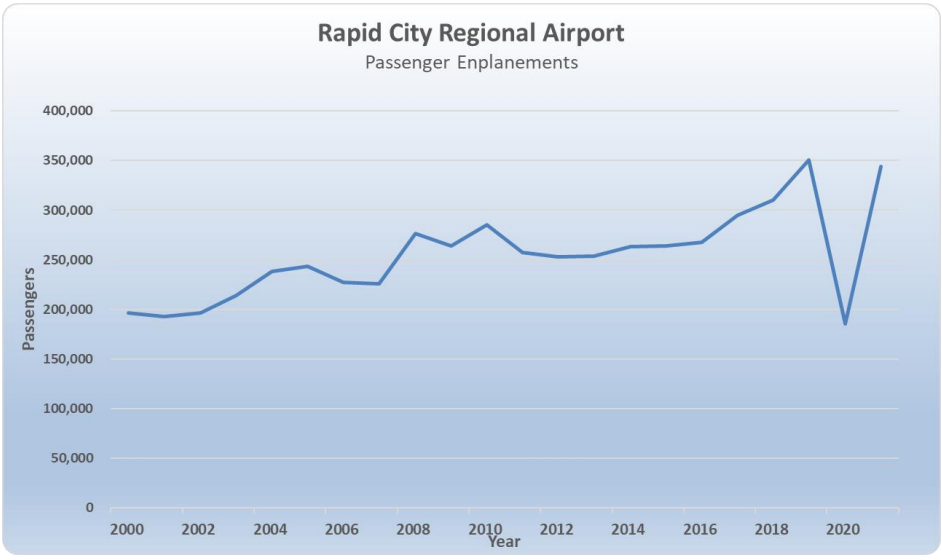
Project Justification

This document is designed to highlight and focus relevant information about the Rapid City Regional Airport (RAP) to provide justification to support local, state, and federal funding of the proposed enhancements to the RAP passenger terminal. It contains a compilation of information from Airport Leadership, Mead & Hunt, the TSA, the FAA, and the "Terminal Planning Study" completed by Alliiance Architects.

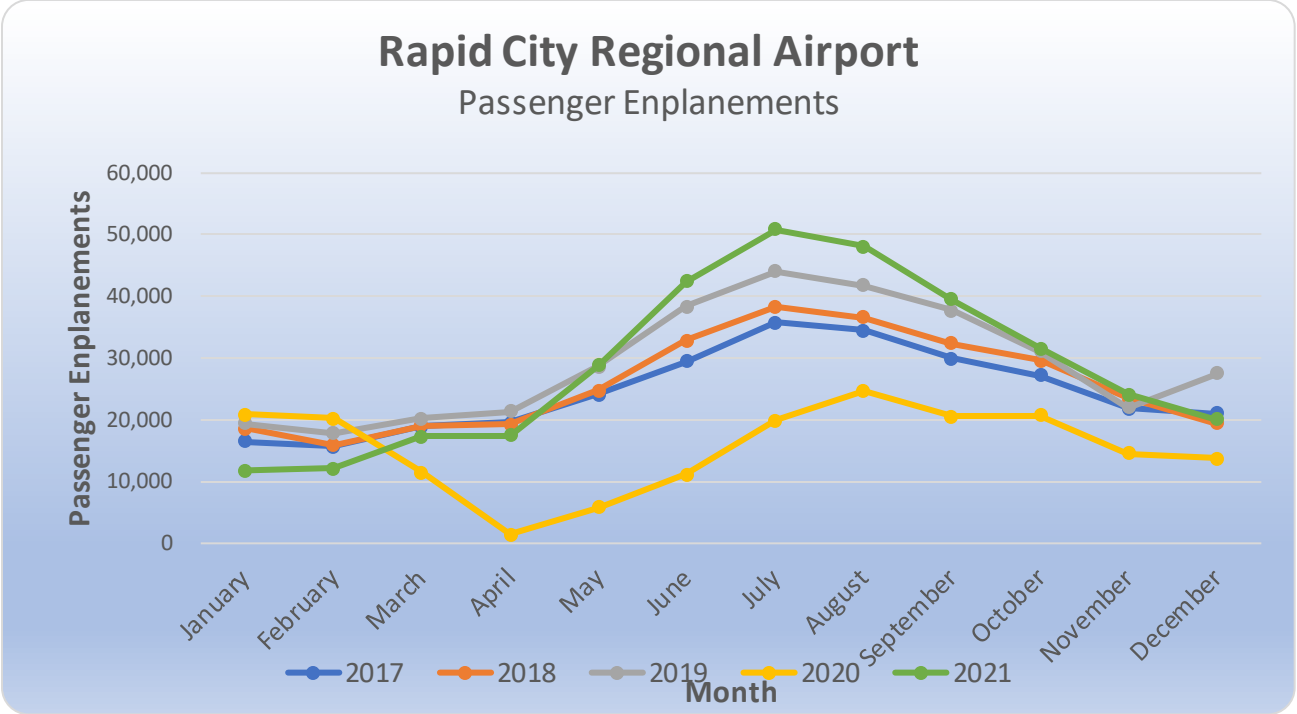
RAP is a vital gateway providing access to the Black Hills, Mount Rushmore, western South Dakota, and eastern Wyoming. The Airport serves airlines and associated passengers, cargo operators, businesses, the U.S. Forest Service Tanker Base, SD Army National Guard, and general aviation traffic. RAP is also the closest and most convenient airport providing airline service to the historically underserved population at the Pine Ridge (Oglala Sioux) Indian Reservation. The nearest commercial airport with more than 100,000 annual passengers is over 225 miles from Rapid City.

RAP also serves the commercial operations associated with Ellsworth Airforce Base. Ellsworth AFB was recently selected as the official home of the B-21 stealth bomber, which will bring an additional 3,000 personnel to the base (not counting personnel family members) plus hundreds of millions of dollars in development.

Over the past 10 years RAP has seen significant growth along with seasonal tourism visitation trends similar to Airports like Bozeman, Kalispell, Redmond, Steamboat Springs, etc., resulting in double the passengers during the summer months compared to winter months.



The Airport had seen 30% growth in enplanements from 2014 to 2019. After the pandemic, RAP passenger traffic rapidly returned to pre-COVID levels with July 2021 passenger enplanements exceeding July 2019 by 4,000 passengers.

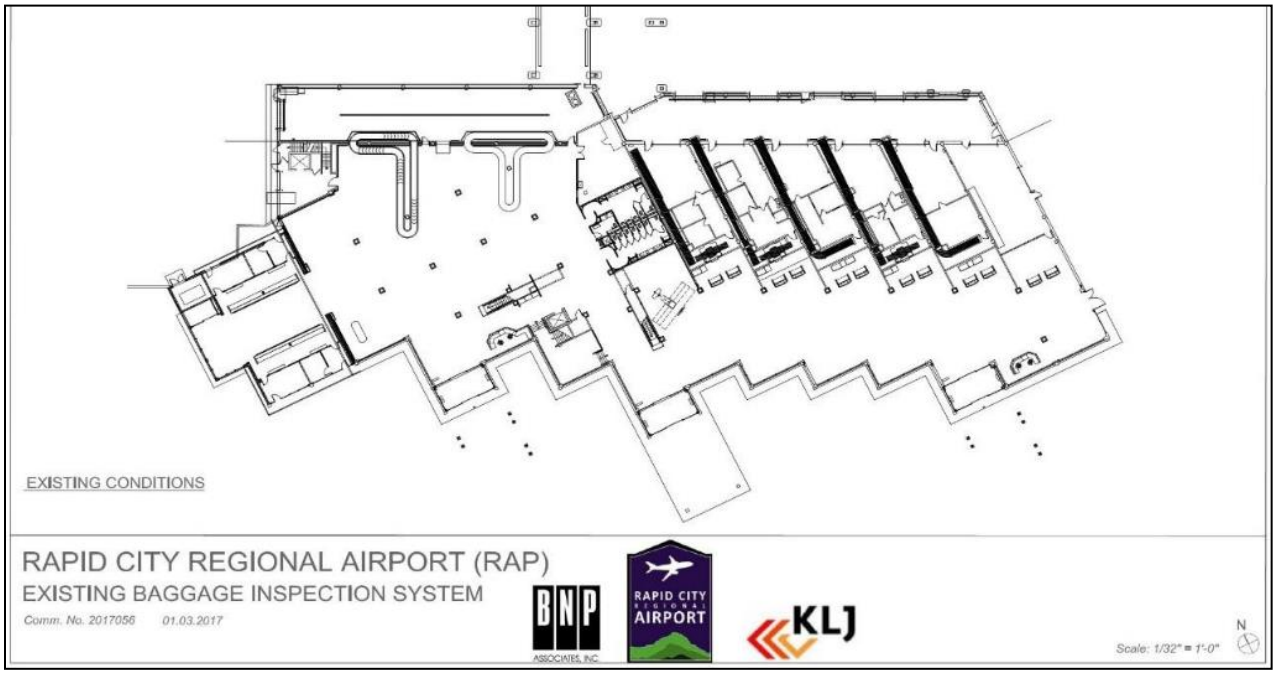


The proposed terminal projects address numerous deficiencies associated with the tremendous growth seen since the terminal's construction in 1988. The only terminal project since 1988 was a major remodel in 2012 that added two gates for regional jets, a small area for concessions, and an upgrade to finishes.

To address the terminal project in a systematic fashion, the project will be broken down into three key elements: 1) Ticketing, Baggage Makeup and Security Checkpoint, 2) Concourse expansion, and 3) Rental Car area, Baggage Return, and Administrative Offices.

Ticketing and Baggage Makeup (Checked Baggage Inspection System [CBIS])

The existing ticketing and baggage area is shown below.



The existing ticketing area is configured with a sawtooth pattern of walls and ticketing counters. Previous planning studies have identified the queuing area as deficient for existing and forecasted needs. Additionally, the sawtooth shape results in limited flexibility for airlines to expand or share check-in positions and creates sightline problems that impact passengers' ability to easily navigate the terminal.

The terminal does not have a comprehensive baggage handling system like other similarly situated airports. The existing process includes two manual load baggage screening devices positioned behind the airline ticket counters with a third placed in a centrally located area. Screened bags are handled by the airlines through the spaces immediately behind their respective ticket counters and fed on conveyor belts to the rear of the terminal building where they are loaded on tug carts that must be manually maneuvered due to narrow loading areas in the back of the terminal.

Existing Terminal Baggage Process

Most airports are served by a baggage handling system that provides a streamlined method of processing passenger baggage that is more effective and efficient. RAP has not been able to keep pace with industry standards for airport terminals with similar peak hours. This issue creates a choke point that impacts the overall speed at which the airport can effectively turn aircraft. During peak seasons, luggage is often carried to luggage carts outside the terminal due to lack of space near the baggage belts and within the small tug way.

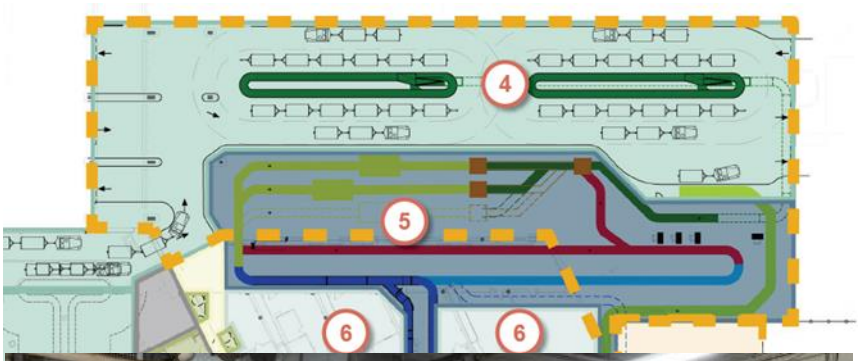
PLAN KEY NOTES

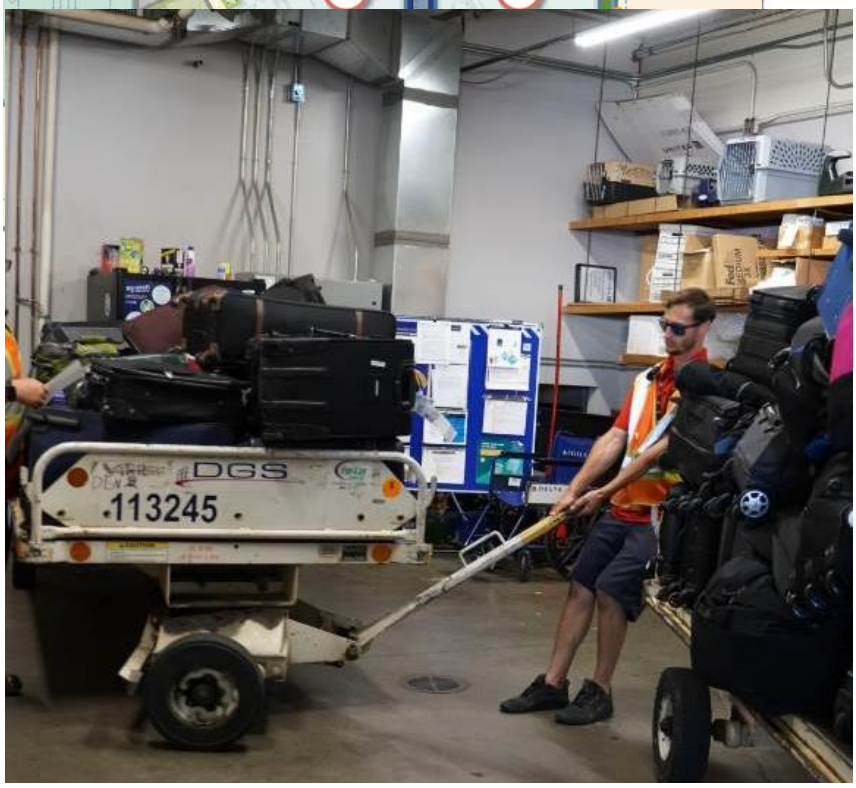
4. Baggage Makeup addition for two 160 LF Baggage Makeup flat plate carousels, 24-cart capacity (+/- 20,000 sf)
5. EDS Baggage Screening area
6. ATOs
7. New Ticket Counters & Scales: 28 positions
8. Future Ticketing Hall expansion (+/- 6,000 sf)

This has been a long-standing issue at RAP that was first identified as a problem in the 2008 Master Plan. It was also identified and planned for in the 2015 Master Plan, 2017 Terminal Study, 2020 Master Plan Update, 2021 Terminal Planning Study and finally the Design Concept Report completed earlier this year. In total, 18 different alternatives were identified and analyzed by five different consultants to fix this complex issue for RAP.

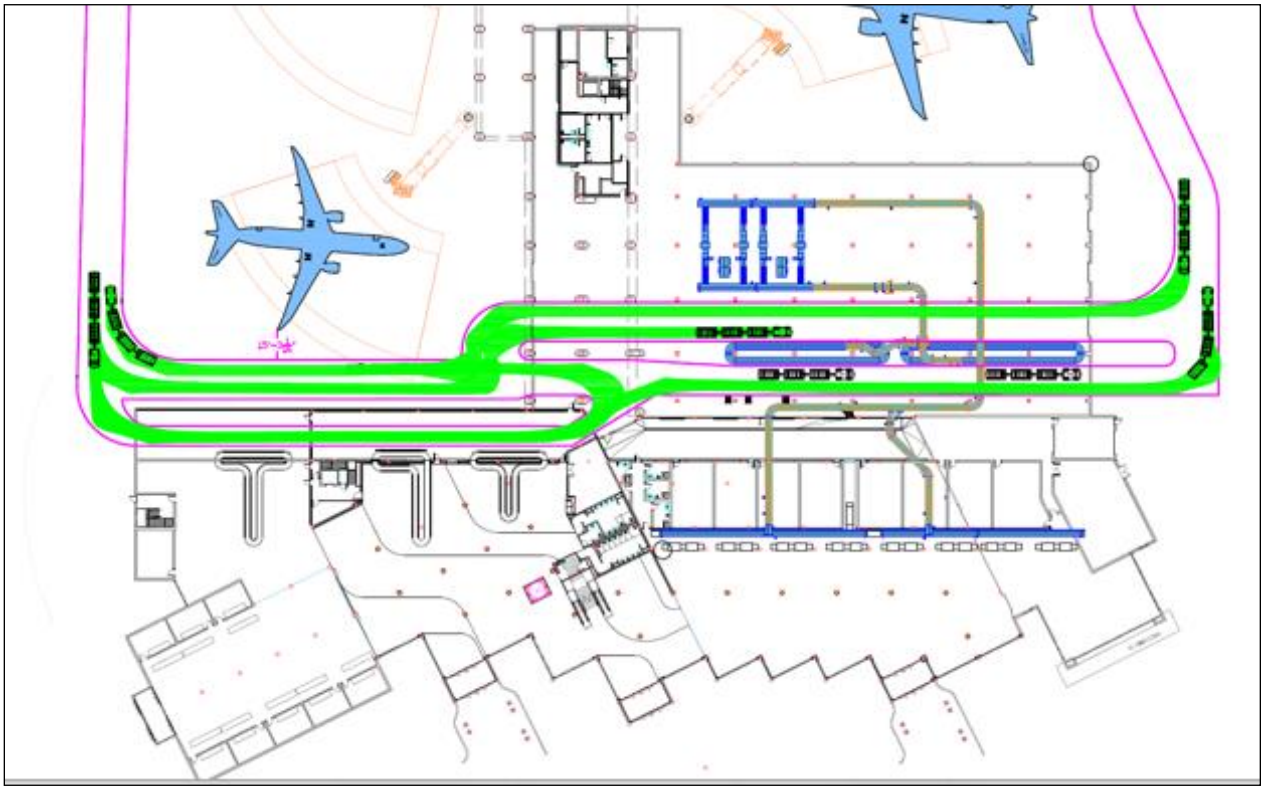
A comprehensive baggage handling system is currently recommended by Transportation Security Administration. An alternative depicting a comprehensive system is provided on the following page.

Figure: Image from Alliiance Architects planning document.





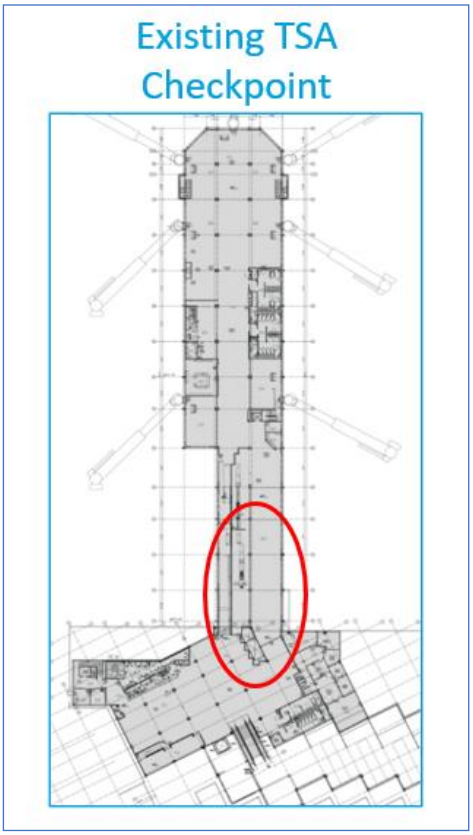
Consistent with managements pragmatic approach to the terminal, the design team is working with TSA to utilize a stand-alone system that greatly reduces complexity and ongoing maintenance costs. This intermediate sized solution will provide slightly slower throughput but has more reasonable maintenance costs while meeting the objectives of both the TSA and the Airport.



Proposed Reduced TSA Baggage Stand-Alone System

Security Checkpoint

The existing terminal security checkpoint has two lanes. The TSA has asked the airport to provide space to support a third screening lane. TSA's expansion request is consistent with planning study analysis and observations by Airport staff. However, when reviewing the existing space for the screening equipment, it was determined the new TSA screening equipment would not fit in the current checkpoint location nor could it be located on a sloped floor due to TSA's new slope requirements. As a result, a second story was added to the bag makeup area and the new checkpoint will be accessed from the current airport administrative office location.

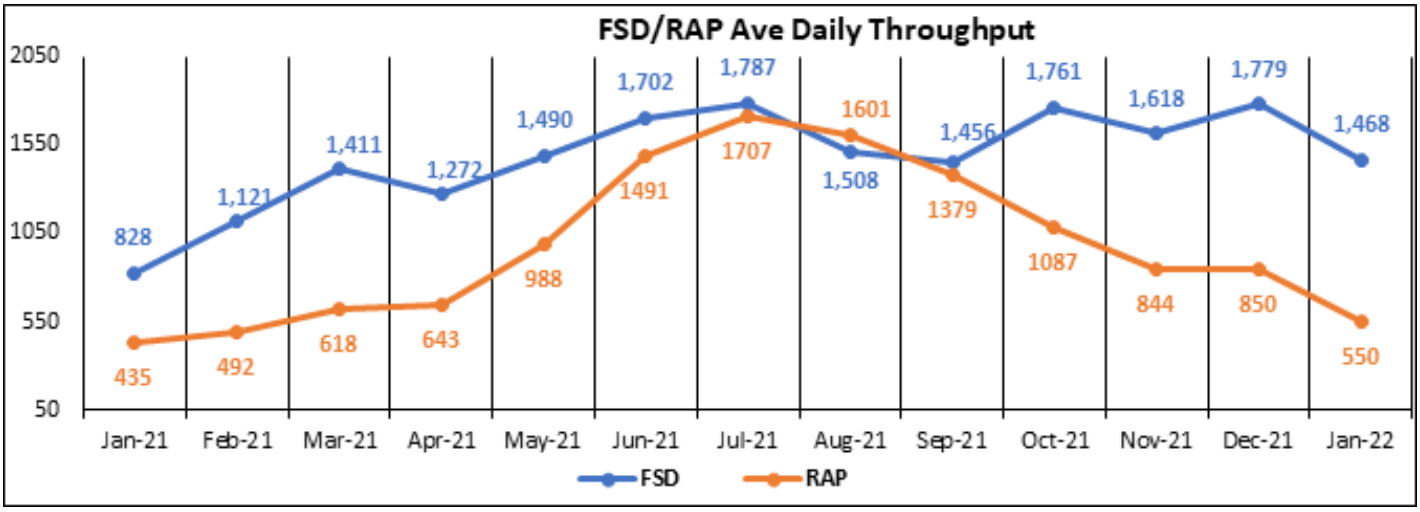


Requirements for lanes are based on the following planning guidelines and communication from local TSA:

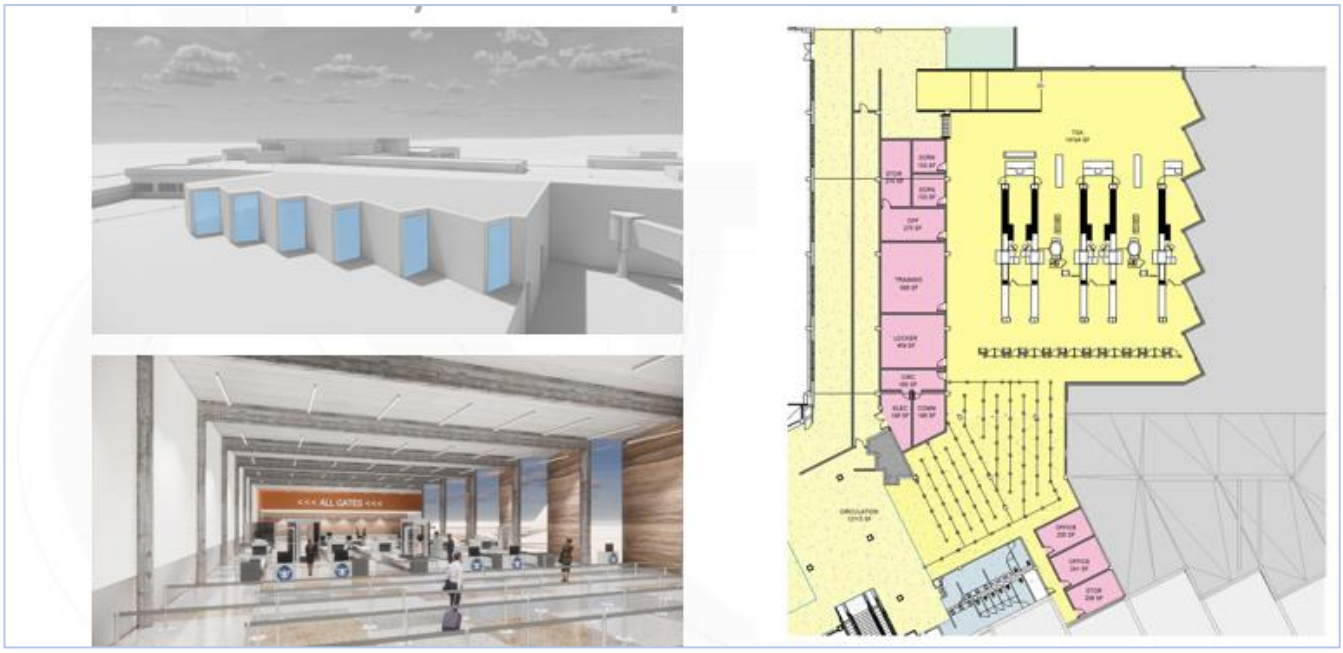
- A peak 30-minute demand period of approximately 36 percent of the departing peak hour calculated from the 2029 DDFS.
- A passenger split of approximately 30% TSA PreCheck and 70% standard passengers
- Average throughput of 225 passengers per lane per hour for PreCheck and 150 passengers per hour per lane for standard passengers.
- An additional 10% of the daily enplanement activity added for capacity for employee and crew screening
- Industry acceptable maximum waiting time of ten minutes in the queue
- TSA planning recommendation of 600 square feet of queuing area per lane

The proposed expansion would also support the implementation of Computed Tomography (CT) X-ray equipment, part of TSA's Checkpoint Property Screening Systems (CPSS) program, as well as the potential use of a variety of Automated Security Lane (ASL) systems.

In short, typical passenger throughput is about 140-150 passengers per hour per lane. With current peak hour ranging from 250-350 passengers, it is imperative the TSA checkpoint be expanded to three lanes to meet summer demands. TSA's Facility Security Director has contacted the Airport Director to make sure the Airport is aware and addressing this need. During summer months, Joe Foss Field Airport, Sioux Falls, SD, has similar TSA throughput requirements and recently went to three TSA security lanes.



In summary, the existing checkpoint does not have adequate space to accommodate the three lanes, the checkpoint is currently located in the portion of the concourse that has a slight slope preventing TSA from installing new equipment. This further drives the need to expand the terminal in a manner that can accommodate increased demand and meet facility requirements.



Proposed TSA Security Checkpoint

Concourse Expansion

The Airport's terminal planning effort showed two final alternatives for the concourse expansion, a reduced build and final build. The Airport's leadership took a pragmatic approach to balancing the need to accommodate peak traffic while not overbuilding. RAP leadership, along with the planning team, considered the following factors:

- Seasonality of operations
- Existing and future peak hours
- Increased size of airline aircraft
- The need to accommodate items such traveling mothers, service animals, and increased concessions
- Review of existing demand and projected needs based on growth in population, increased tourism, the expanded role of Ellsworth Airforce Base, and
- Direct communications with multiple airlines

The Airport determined the full twelve-gate concourse was needed to accommodate the five-month seasonal demand and prevent the concourse from being too small at the completion of the project.

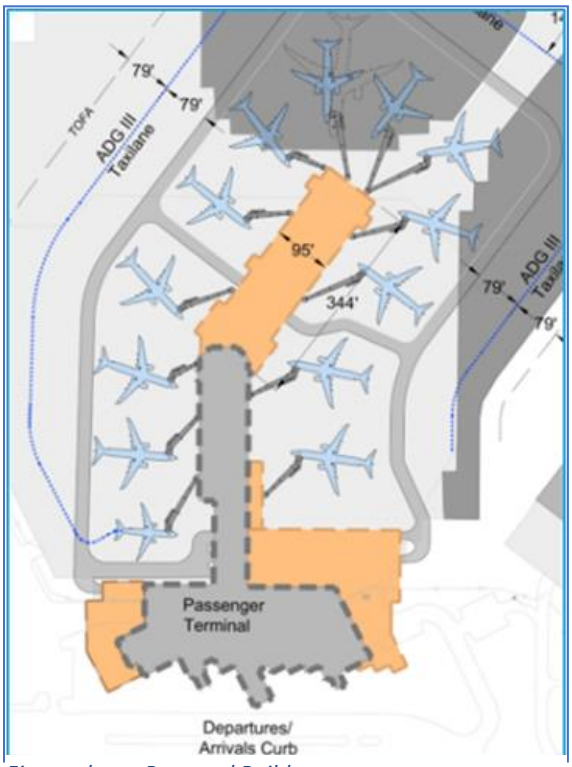


Figure above: Proposed Build

Key factors that increase the size of the concourse are detailed in the next few paragraphs. The first factor is air carriers changing to a larger aircraft fleet. This is driven by the pilot shortages in addition to other business factors such as the cost of operating specific aircraft. This change in aircraft size is based on both air carrier comments and their actions to place orders for larger aircraft. The trend toward larger aircraft creates a notable impact to airports such as RAP. Changing from small regional jets to more mainline aircraft increases the demand on existing holdrooms. The holdroom analysis shown below details the deficiencies of RAP's existing holdrooms and their ability to accommodate increased demand.

Existing Layout – Holdroom Analysis

Gate	Aircraft Served	Existing Holdroom Space (SF)	*Space Recommended (SF)	Deficit
1	B737	989	2,776	(1,787)
2	E175	973	1,360	(387)
3	B737	1,140	2,776	(1,636)
4	B737	2,025	2,776	(751)
5	B737	864	2,776	(1,912)
6	B737	867	2,776	(1,909)
7	B737	1,679	2,776	(1,097)
Total		8,537	18,016	(9,479)

* Based on largest aircraft serviced at gates.

The design approach for the interior of the expansion to twelve-gates focused on providing appropriately sized gate holdrooms. This option looked to minimize impacts to operations within the existing spaces while modernizing all areas of the existing concourse. Gate holdroom spaces within the existing portion of the concourse would be modernized and sized to work within the existing 75-foot width of the concourse, while still maintaining adequate central circulation space. The 25-foot depth of these gate holdrooms is less than the recommended 35 feet, but the overall gate holdroom areas meet the recommended size guidelines. The width for the new concourse expansion increases to 95 feet to provide the recommended 35-foot clear depth at all gate holdroom spaces.

The increase in passengers at RAP, the operational changes due to 9/11, and industry changes require the concourse to accommodate the addition of a mother's rooms and pet relief area, additional restrooms, and increased airside concessions.

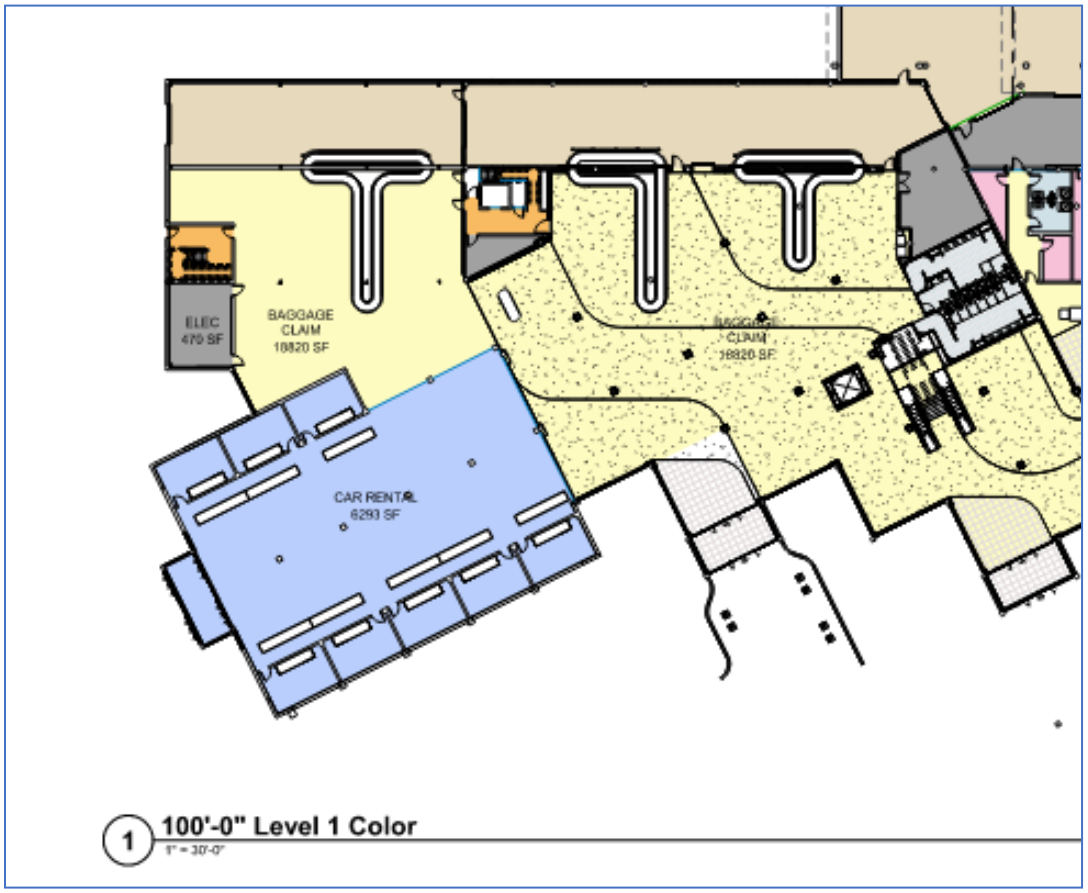
Additional support spaces (including vertical circulation, mechanical, and service spaces) are also provided within the concourse. The position of these spaces will be adjusted in the design phase based on system requirements selected as the design progresses. To provide continuity of look and feel, the existing areas will be modernized to create a consistent look and aid the airport in its effort to become more energy efficient. Terminal additions are planned to be LEED certified.

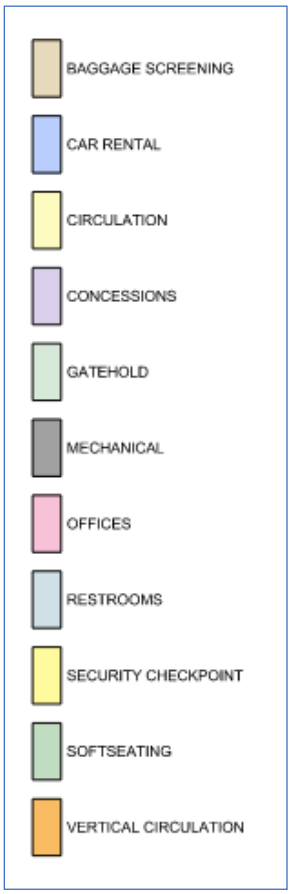
Concourse expansion is critical to accommodating the increased number of gates/aircraft parking spaces and hold room size needed now and in the near future. The planning study indicates the concourse needs to expand from the existing 7 gates to 12 gates to accommodate projected 2030 activity. Likewise, the holdroom needs to be expanded from the existing 8,537 sq. ft. to 28,445 sq. ft. Terminal concourse expansion proposed is approximately 20k sq. ft. and would provide the needed space for holdrooms, concessions, rest rooms, and public circulation. Expansion needs detailed in the Terminal Renovation and Expansion Project Concept Design Report and other similar planning studies. All Terminal studies can be found at https://rapairport.com/terminal/.

Rental Car area, Baggage Return, and Administrative Space

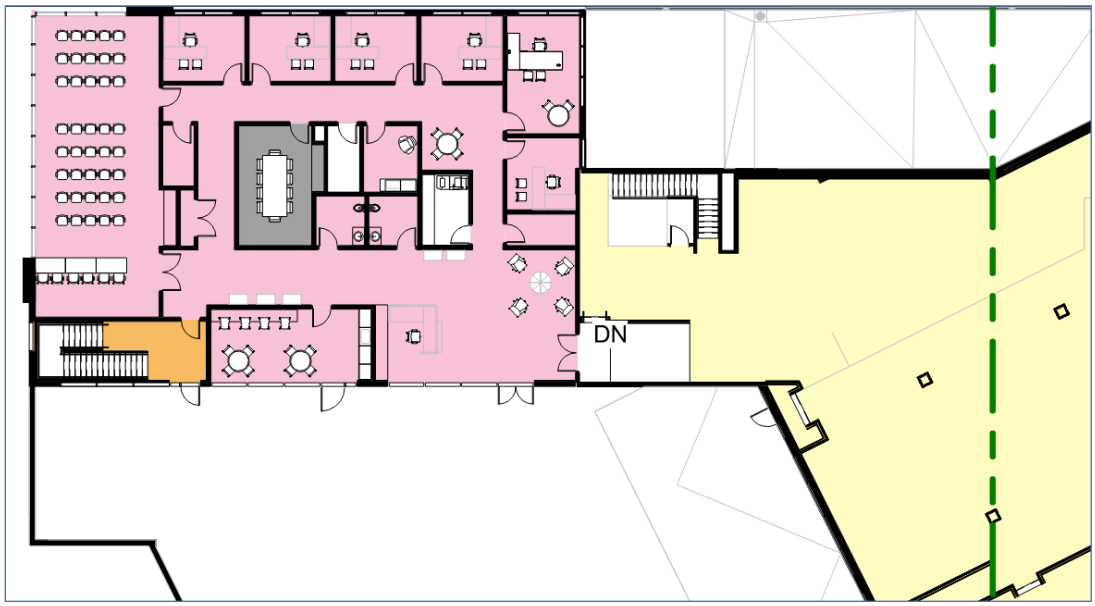
The existing baggage return and rental car areas are heavily congested after arriving flights. The space around the baggage carousels and between the rental car offices are inadequate for queuing. The planning report shows improvements to one of the existing baggage claim devices along with the addition of a third claim device is required to address projected 2030 demand levels.

The expansion options for the baggage claim and rental cars detailed in the Terminal Planning Study would accommodate A needed facilities and reduce congestion. the combination of the two would address congestion for both baggage return and rental cars.





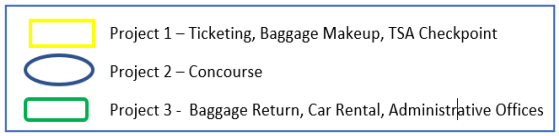
Baggage Return/Rental Car Area

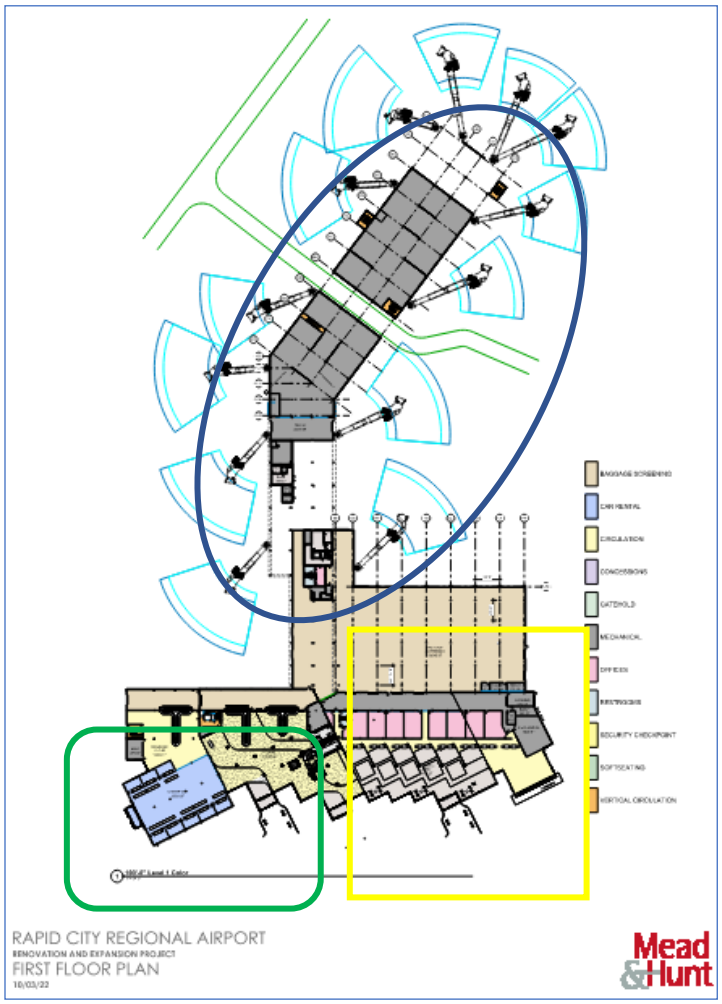


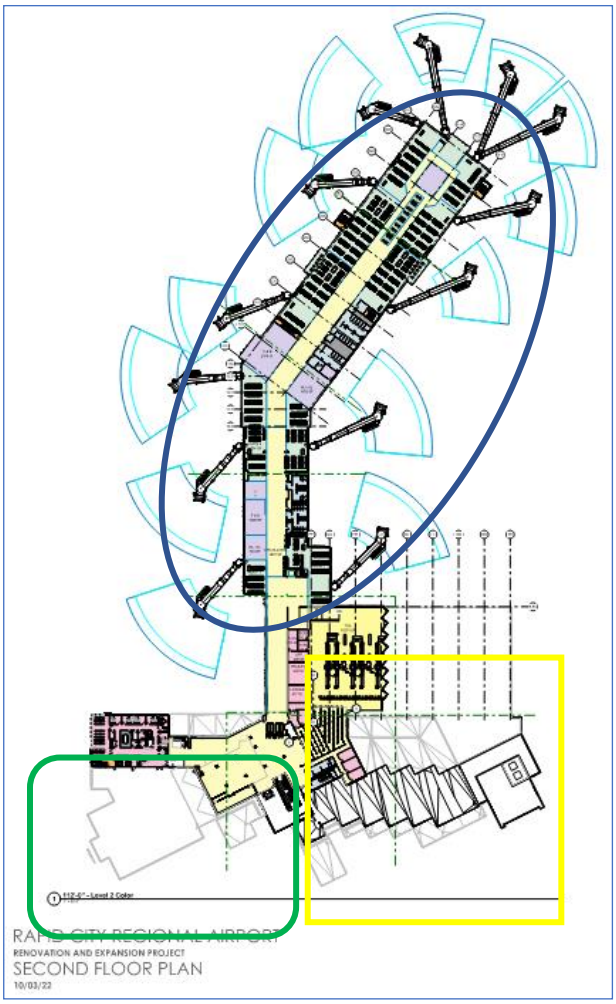
Administrative Office on Concourse Level (Level 2)

The TSA checkpoint outlined earlier in the document requires the displacement of the existing administrative offices for queuing of passengers. Therefore, administrative offices will be relocated to the concourse level above expanded rental car area and baggage return area.

Terminal - Key Points of Consideration:





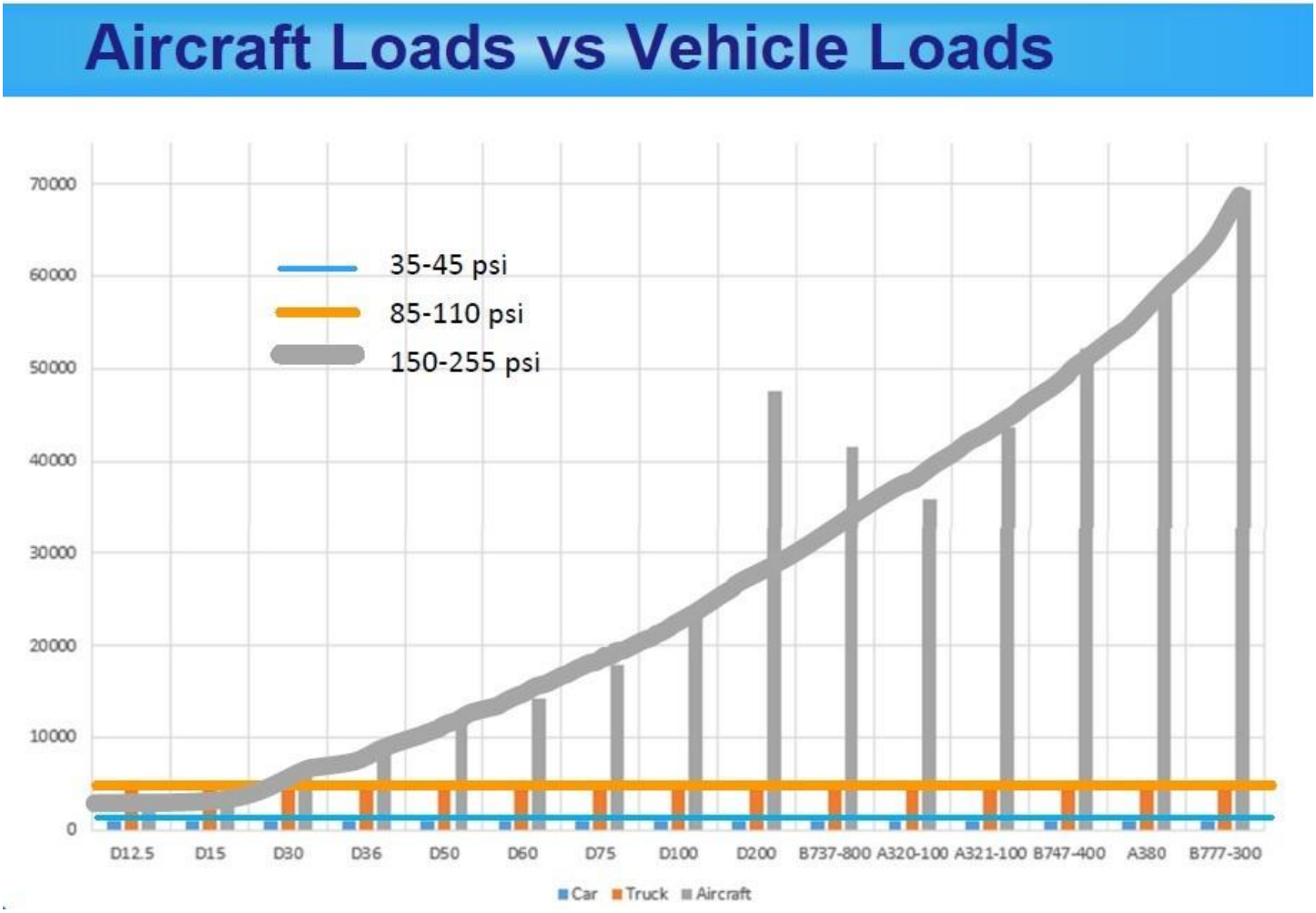


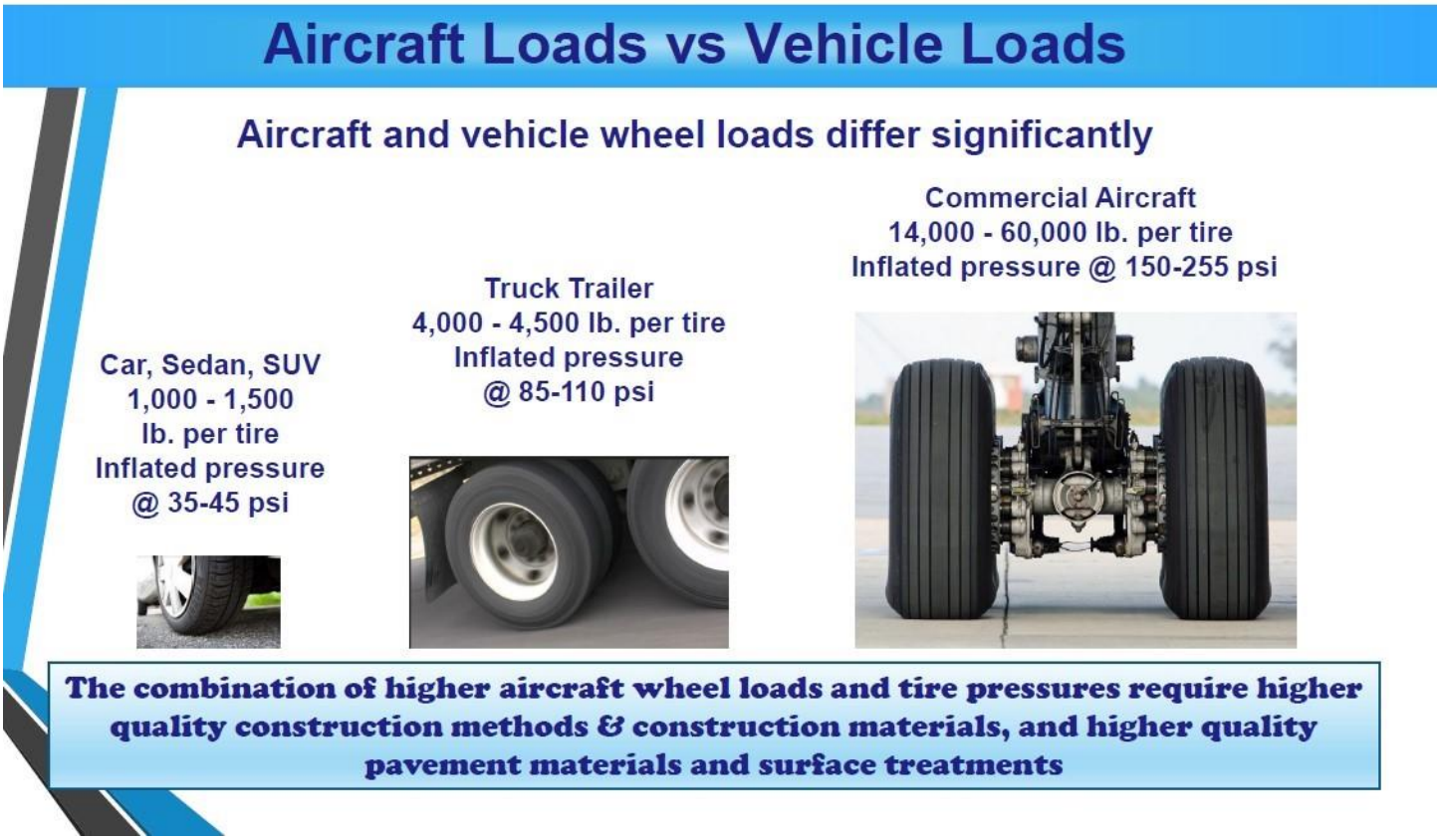
1. Project is being designed to allow systematic phasing to address all three critical areas of the terminal in a manner that can be right sized to available funding.
2. All three critical areas of the project are necessary to provide increased capacity to accommodate the airport's existing passenger numbers and passenger numbers projected in the next 5 years. As detailed above, they include:
   1) Ticketing area expansion, installation of baggage handling system, checkpoint expansion to meet standards and add screening lanes.
   2) Concourse expansion and increasing holdroom and gate space.
   3) Expand baggage return, rental car queue area, and replace airport administrative offices.
3. This project is also addressing issues with the existing terminal utility system. The system is over 30 years old and in need of an upgrade to meet passenger demand, be compliant with current building codes, and provide facilities that are more energy efficient and sustainable. Please note the terminal was built prior to the creation of the TSA and is in desperate need of comprehensive configuration changes to address increased passenger and TSA needs.

4. The existing terminal was constructed in 1988 and does not likely comply with the ADA requirements. The design includes an ADA survey that will systematically review ADA and Accessibility deficiencies and needs. Terminal design will address the deficiencies.
5. RAP's service area includes most of western SD, eastern WY, and the Black Hills/Mount Rushmore area. This includes Pine Ridge, Rosebud, and Cheyenne River Indian reservations. The Pine Ridge (Oglala Sioux) reservation is specifically listed under FAA Historically Disadvantaged Populations.
6. As stated above, the existing terminal was built in 1988. The Airport Board is pushing hard to be more sustainable. This project design seeks to take advantages of changes since the original construction by utilizing best practices from LEED and CORE to create an energy efficient building. The design will analyze the ability to utilize a geothermal HVAC system along with other systems including LED lighting, low-VOC finishes, and a super insulated envelope.
7. RAP has strived to be an example on how to operate their airfield in a safe and efficient manner. This is reflected by its stellar Part 139 record. As part of this effort, RAP recognizes the up gauging of aircraft utilizing their terminal. The existing terminal has several gates with operational limits due to aircraft safety envelopes. The proposed concourse expansion not only increases holdroom space but also allows more gates for the larger mainline aircraft. This is becoming increasingly important as airlines evaluate how to address needs and pilot shortages. Additionally, the Airport's antiquated baggage system requires airlines to manually push baggage carts in and out of the terminal due to space constraints. This also requires more manual movement of passenger luggage. The proposed terminal project will resolve this issue. All of these actions support and enhance RAP's continued efforts to maintain and enhance safety and efficiency on their airport.
8. The existing ticketing area is configured with a sawtooth pattern of walls and ticketing counters. This project will straighten and shift ticket counters to allow the airport to more effectively accommodate existing and new airlines operating at RAP by 1) creating flexibility to share and expand check-in locations during peak demand throughout the day, and 2) allowing the airport/airlines to maximize the space to its fullest potential.
9. The proposed terminal project will have broad and far-reaching positive effects on the region. The project helps facilitate and accommodate the region's economic and population growth as well as supporting the new mission at Ellsworth AFB. The project will be utilizing the required Davis Bacon Wage rates and supports the President's goal of fostering good paying jobs.
10. *All Terminal studies can be found at* https://rapairport.com/terminal/

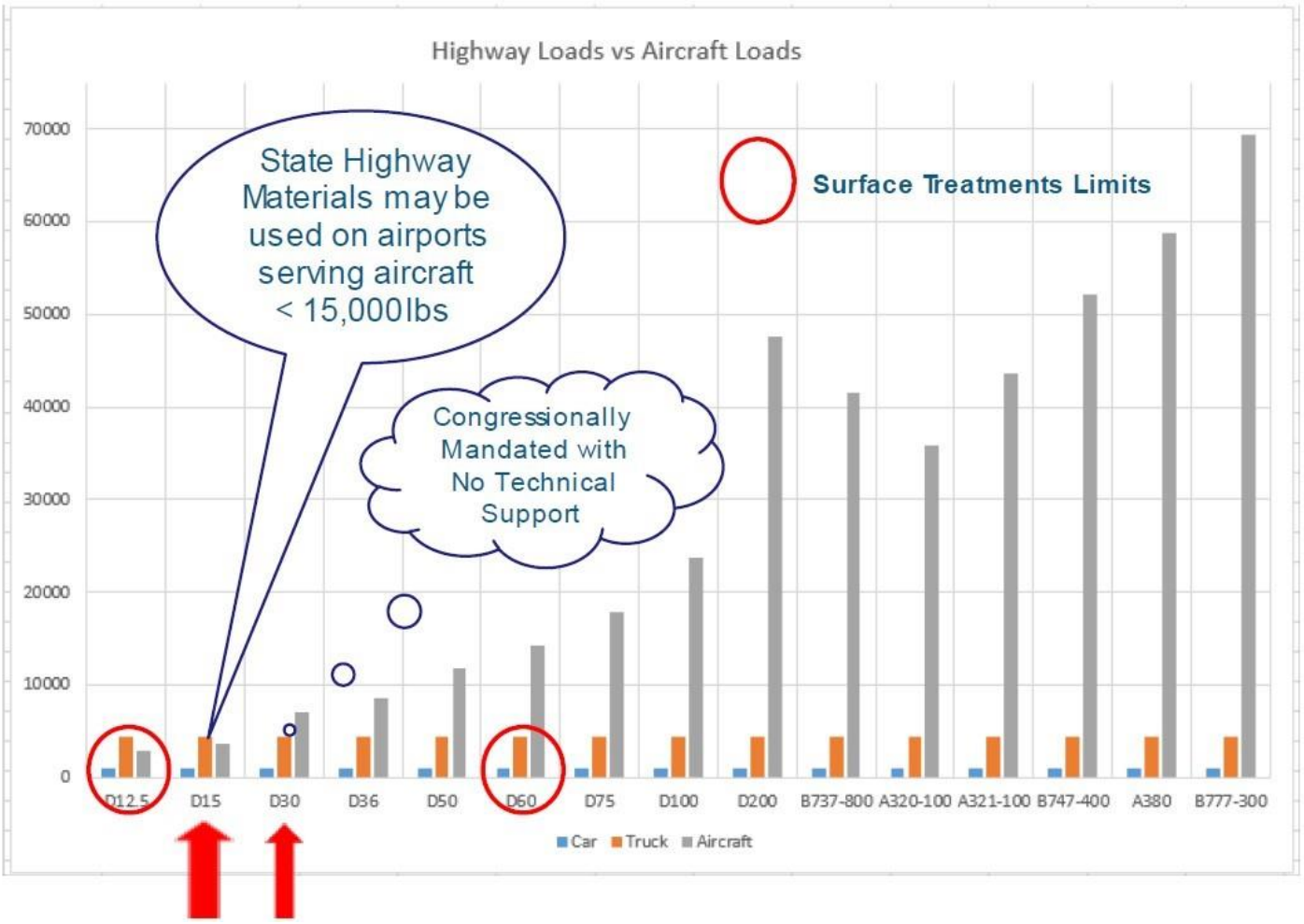
Runway vs. Highway:

Often runways are compared to highways. The fact is, there is very little similarity between the two. As shown in these charts, aircraft loads can be much larger than vehicle loads. Higher tire pressures concentrate the load on smaller areas of the runway surface.





The FAA recognizes that small GA airports serving small aircraft can benefit from using state specifications to get lower cost materials on runways serving aircraft less than 15,000 pounds. But for larger aircraft, more stringent specifications are used, and testing requirements are much higher.



There is no tolerance for pavement breakup on runways that would cause debris, or foreign object damage (FOD) that could be ingested into a jet engine or pulled into a propeller.

State Funding Summary

SD Neighboring States

State support of airports in our neighboring States: Iowa, Minnesota, Nebraska, Wyoming and North Dakota vary to some degree in comparison to South Dakota. All states have an Aeronautics Commission that has oversight responsibility to ensure all are operated safely and in compliance with FAA rules and regulations. These Commissions also provide funding assistance to capital projects that maintain airport facilities including both commercial service and general aviation airports. Funding support is generated from aeronautical activities such as aviation fuel taxes, aircraft registration fees, pilot licenses and aircraft property tax fees.

Most States provide a match between 3-5% for Federal Airport Improvement (AIP) grants which provide most airports funding up to 90% of eligible projects with the State and local authorities funding the balance. Funding for this match comes from the aviation related taxes and fees.

Summarized below is what each state provides and any special funding programs developed to assist with Capital Projects beyond the local AIP match.

Iowa

Commercial Service Airports – 8 (5 Primary)
Enplanements 2022 - 2,052,655
AIP State Match - No Match

Other Programs:

1. *State Airport Improvement Program* – Iowa does not provide a standard State match for AIP projects, but does contribute $4.4 million annually which airports can apply to cover the local/sponsor portion of AIP grants. Revenue for this fund comes from aviation taxes such as aviation fuel tax, aircraft registration fees.
2. *Commercial Service Vertical Infrastructure Program (CSVI*) - $1.9 million appropriated annually from the legislature for vertical construction projects at commercial service airports. (50% split between commercial service airports and 50% based on enplanements). An additional $1 million is allocated for GA airports. Funded is from gambling tax revenue.
3. *One-time Commercial Aviation Program* - $100 million in COVID relief funds allocated to 8 commercial service airports. ($58 million to DSM).

Minnesota

Commercial Service Airports – 9 (8 primary)
Enplanements 2022 - 15,535,691 (293,602 excluding Minneapolis)
AIP State Match - 5% State Match

Other Programs:

1. *State Airport Improvement Program* – State funding is provided to cover a 5% match of AIP Grant funding for commercial service airports.
2. *Legislature Special Appropriation for Terminal Projects*– The State legislature has appropriated one time funding to assist with larger terminal projects, the Duluth Airport Terminal expansion is a recent example. Funding utilized State general funds.
3. *State Bonding Funding*- The State has issued bonds to provide funding for terminal projects at commercial service airports on a limited basis.

Nebraska

Commercial Service Airports – 8 (6 primary)
Enplanements 2022 - 2,411,280 (206,885 excluding Omaha)
AIP State Match - No State Match

Other Programs: Airport Grant Fund (less than $1million-used for GA assistance)
Funded with aviation fuel tax, aircraft registration fee, etc.

Wyoming

Commercial Service Airports – 9 (9 primary)
Enplanements 2022 - 625,429
AIP State Match - 3.75% State Match (60/40 for GA airports)

Other Programs:

1. *State Airport Improvement Program* – The State provides $8.5 million annually to cover State Match for AIP Grants, 3.75% for commercial service airports. (Funded with Federal Mineral Royalties)
2. *Aeronautics Loan Program* – State provides a loan program for aeronautic (and other municipality) capital projects up to $175 million. Funds can be used for revenue generating projects such as hangars. Loan rate tied to Treasury Bond Yield.

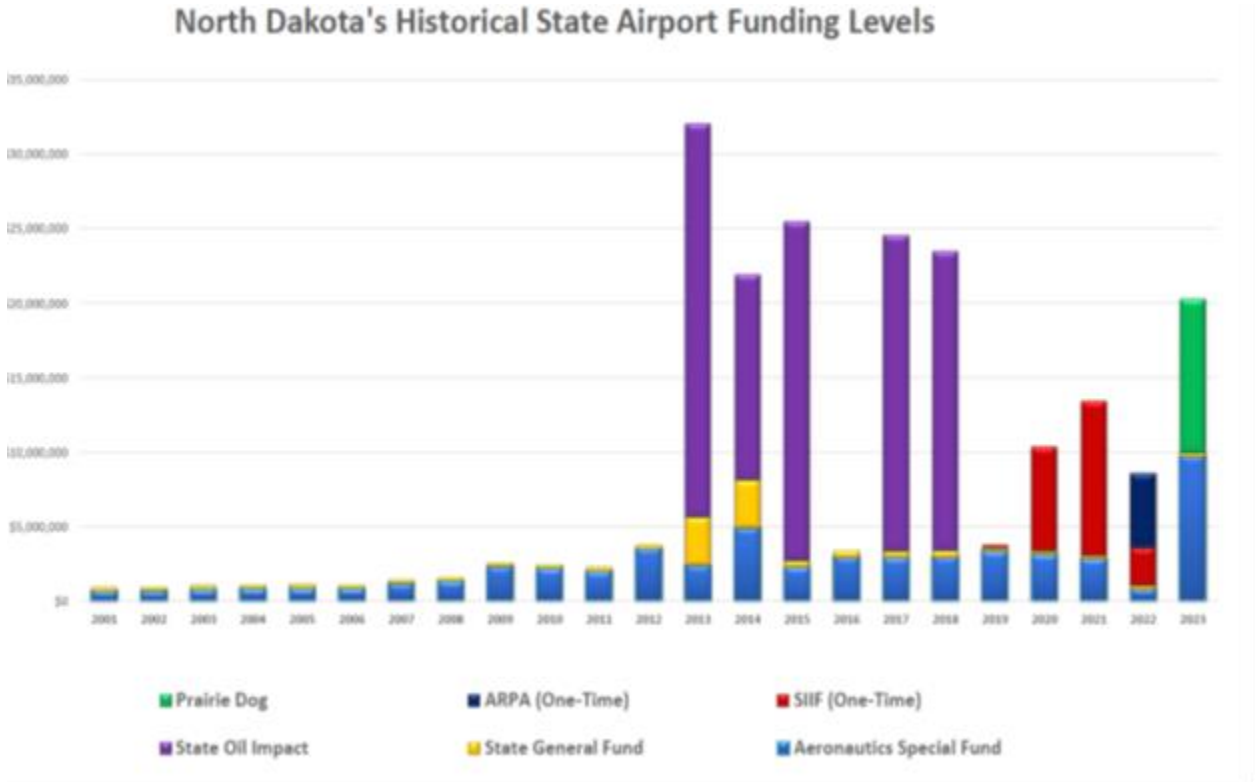
North Dakota

Commercial Service Airports – 8 (7 primary)
Enplanements 2022 - 1,034,461
AIP State Match - 5% State Match

Other Programs:

1. *State Airport Improvement Program* - The State provides an average of $5 million for the State match portion of AIP grants at 5%. Share for GA airports in the 50-90% range. Revenue received from fuel tax, aircraft registration, etc.

2. *Supplemental State Funding* - has been provided since 2013 for additional capital projects including runways and vertical construction. Annual contribution between $15-$25 million annually. Amount fluctuates based on oil revenue which provides the funding. Current program is the Airport Infrastructure Fund (Prairie Dog) that provided $15 million + $5million aviation tax funded. Funding accomplished through oil revenue taxes and is shared with other State funding objectives. Annual allocation can change from year to year.



South Dakota

Commercial Service Airports – 5 (5 primary)
Enplanements 2022 - 990,659
AIP State Match - 5% State Match

Other Programs:

1. *State Airport Improvement Program* - The State provides funding to cover 5% match to the Federal AIP grant program. Additional funding may be provided to small GA airports for additional assistance. Revenue is received from fuel tax and aircraft registrations.