6 FACILITY REQUIREMENTS

Airport Design and Federal Aviation Administration Standards 6-2
Aircraft Classes, Categories, and Groups 6-2
Critical Aircraft and Applied Airfield Design Criteria 6-6
Land Use and Airport Protection 6-6
Airport Airspace 6-7
Approach and Departure Standards 6-8
Runway Protection Zone 6-8
Airfield Facilities 6-9
Airfield Capacity 6-9
Runway Design Standards 6-12
Runway Length 6-15
Wind Coverage 6-15
Runway Designation 6-17
Runway Line of Sight 6-17
Runway Gradient 6-17
Taxiway System 6-17
Navigational Aids 6-18
Airfield Pavements 6-20
Pavement Strength 6-20
Commercial Terminal Facilities 6-22
General Aviation Facilities 6-22
Aircraft Storage 6-22
Auto Parking 6-23
Air Cargo Facilities 6-23
Support Facilities 6-23

CONTENTS

Fuel 6-24
Aircraft Rescue and Fire Fighting 6-24
Snow Removal Equipment 6-24

Airport Traffic Control Tower 6-24

Utilities 6-25

Cedar City Comprehensive Plan 6-26

Facility Requirements Summary 6-26

FIGURES

Figure 6.1: Key Aircraft Dimensions 6-2
Figure 6.2: Representative Aircraft 6-4
Figure 6.3: Taxiway Design Groups 6-5
Figure 6.4: Part 77 Surfaces 6-7
Figure 6.5: Runway Configuration 6-10
Figure 6.6: Airport Diagram 6-19
Figure 6.7: Predicted Pavement Condition Index, 2022 6-21
Figure 6.8: Operations and Airport Traffic Control Tower Comparison 6-25

TABLES

Table 6.1: Aircraft Size, Weight, and Wake Turbulence Classifications 6-3
Table 6.2: Aircraft Approach Categories 6-3
Table 6.3: Airplane Design Groups 6-4
Table 6.4: Visibility Minimums and Runway Visual Range Values 6-6
Table 6.5: Critical Aircraft and Applied Airfield Design Criteria 6-6
Table 6.6: Part 77 Surface Dimensions 6-8
Table 6.7: Assumption Criteria and CDC Status 6-10
Table 6.8: Capacity Analysis Assumptions 6-11
Table 6.9: Capacity Analysis: Helicopter and Fixed Wing Operations 6-11
Table 6.10: Capacity Analysis: Fixed Wing Operations 6-12
Table 6.11: Runway 2/20 Design Standards 6-13
Table 6.12: Runway 8/26 Design Standards 6-14
Table 6.13: Runway Length Analysis 6-15
Table 6.14: Allowable Crosswind Component by Runway Design Code 6-16
Table 6.15: Wind Coverage Percentages for Runway 2/20 6-16
Table 6.16: Wind Coverage Percentages for Both Runways 6-16
Table 6.17: Aircraft Tiedowns Objectives 6-23
Table 6.18: Airport Facilities Assessment Summary 6-27

CHAPTER SIX

REQUIREMENTS

To properly plan for the future of Cedar City Regional Airport (**CDC**), it is necessary to determine if the existing airport facilities can safely and efficiently accommodate current and forecasted levels of activity. Each of the facilities described in Chapter 4, Airside and Landside Inventory, must be analyzed to determine if any improvements are needed to meet new or updated standards developed and adopted by the Federal Aviation Administration (**FAA**) or other regulatory agencies. This analysis will also be used to help determine if any improvements are needed as a result of the sponsor's comprehensive plan or strategic vision statement.

The main goal of this analysis will be to identify if improvements are needed, when they will be needed, and the purpose and need for these improvements. Each facility will be analyzed to determine its ability to safely and efficiently accommodate the forecasted activity levels discussed in Chapter 5, Forecast of Aviation Activity. Facilities will also be examined to determine if they meet current FAA design standards, recommendations, requirements, and design considerations. Alternative methods of addressing these potential development projects will be discussed and evaluated in Chapter 7, Development Alternatives.

6.1. Airport Design and Federal Aviation Administration Standards

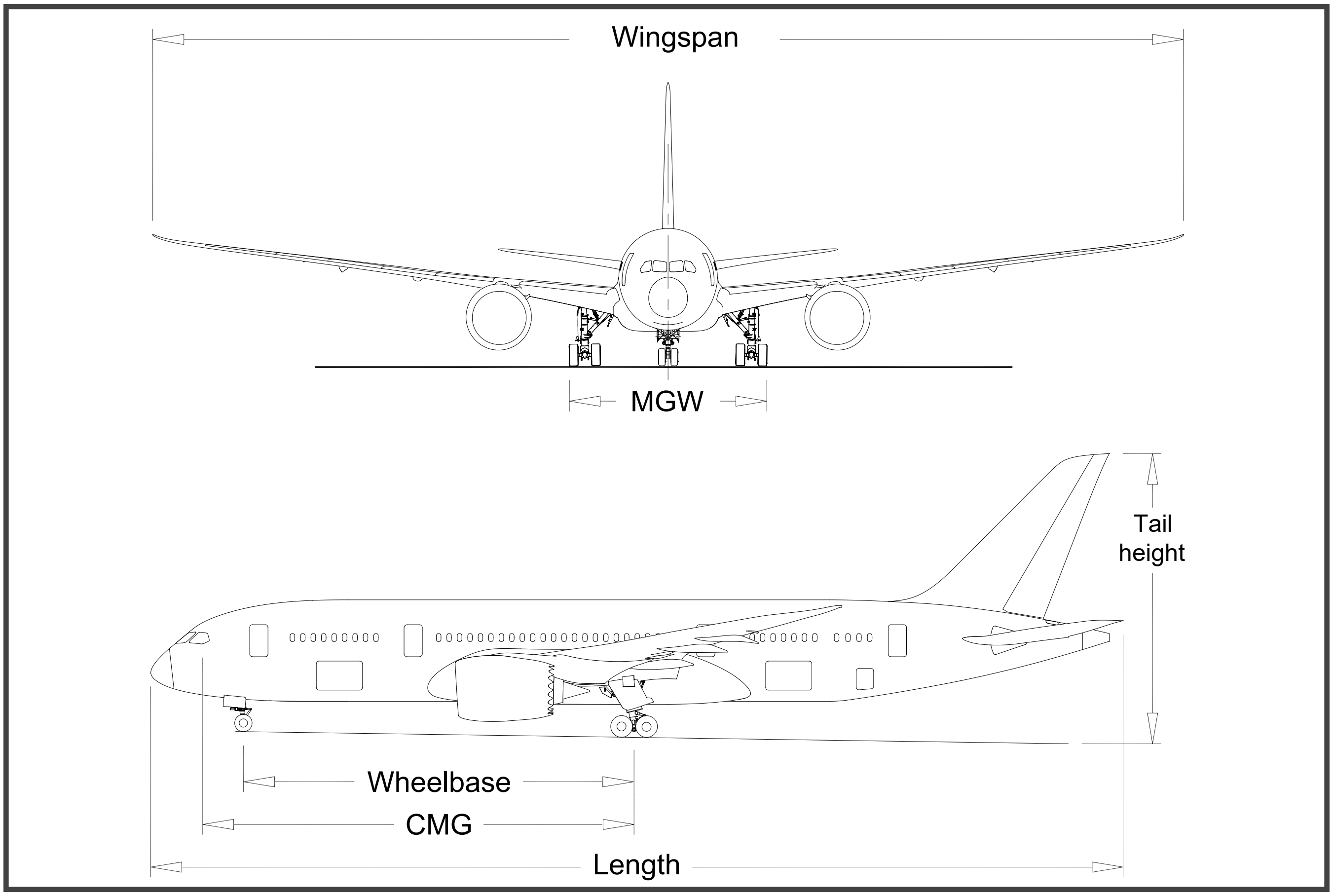
Effective airport design and planning helps to ensure airport facilities are able meet current and future aviation demand and comply with necessary environmental considerations while maintaining acceptable levels of safety, efficiency, and capacity. The airport design process involves a series of steps to identify aviation demand at an airport and then apply the corresponding FAA standards to each of the airport's facilities. This generally includes the following steps:

1. Identify the size, approach category, airplane design group, and taxiway design group of the critical aircraft.
2. Identify reasonably attainable visibility minimums.
3. Identify the applicable runway design code.
4. Apply the appropriate design standards from FAA Advisory Circular (**AC**) 150/5300-13B, *Airport Design*.[1]

6.1.1. Aircraft Classes, Categories, and Groups

The FAA has developed a coding system that allows airport planners and engineers to identify airport design criteria based on the operational and physical characteristics of the critical aircraft (Figure 6.1). As previously discussed in Section 5.2.4., Critical Aircraft, the critical aircraft is the most demanding type of aircraft, or group of aircraft with similar characteristics, that regularly use the airport. It can be a single aircraft or a composite of the most demanding characteristics from different aircraft. Incorporating these characteristics as part of the coding system in this way helps airport planners and engineers design the airport to meet both current and future needs while also ensuring the correct design standards are applied.[2]

Figure 6.1: Key Aircraft Dimensions



Source: FAA, AC 150/5300-13B, *Airport Design*, Figure A-1.

a. Size, Weight, and Wake Turbulence Classifications

The FAA has established four classifications of aircraft based on maximum certificated takeoff weight (**MTOW**), number of engines, and wake turbulence effect. These classifications, which are summarized in Table 6.1, are typically used for capacity planning.[3]

Table 6.1: Aircraft Size, Weight, and Wake Turbulence Classifications

Category	Maximum Certificated Takeoff Weight	Number of Engines	Wake Turbulence*
A	12,500 pounds or less	Single	Small
B	12,500 pounds or less	Multi	Small
C	12,500 to 300,000 pounds	Multi	Large
D	More than 300,000 pounds	Multi	Heavy

*Wake turbulence is a measure of weight and its capacity to disturb the air.

Source: FAA, AC 150/5060-5, *Airport Capacity and Delay*, Table 1-1.

b. Aircraft Approach Category

The aircraft approach category (**AAC**) is designated by a letter and is based on the speed of an aircraft as it approaches a runway when landing (Table 6.2). It is generally used to help ensure an airport's runway safety areas can safely accommodate the critical aircraft.[4] (Both the aircraft approach category and the aircraft size, weight, and wake turbulence classifications listed in Table 6.1 are designated by a letter so it is important to understand the distinction between the two.)

Table 6.2: Aircraft Approach Categories

Category	Approach Speed
A	Less than 91 knots
B	91 knots or more but less than 121 knots
C	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

Source: FAA, AC 150/5300-13B, *Airport Design*, Table 1-1.

c. Airplane Design Group

The airplane design group (**ADG**) is designated by a Roman numeral and is based on an aircraft's wingspan or tail height; depending on which is most restrictive (Table 6.3). It is typically used to establish dimensional standards needed for adequate clearances.[5]

Table 6.3: Airplane Design Groups

Group	Tail Height	Wingspan
I	<20 feet	<49 feet
II	20 feet – <30 feet	49 feet – <79 feet
III	30 feet – <45 feet	79 feet – <118 feet
IV	45 feet – <60 feet	118 feet – <171 feet
V	60 feet – <66 feet	171 feet – <214 feet
VI	66 feet – <80 feet	214 feet – <262 feet

Source: FAA, AC 150/5300-13B, *Airport Design*, Table 1-2.

d. Representative Aircraft Examples

Figure 6.2 illustrates representative aircraft for several aircraft approach category and airplane design group combinations.

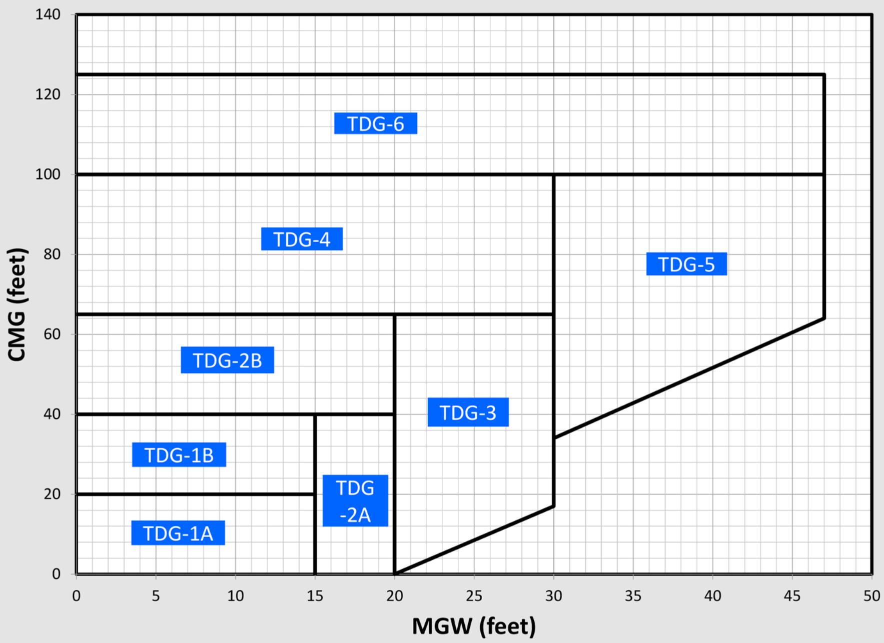
Figure 6.2: Representative Aircraft

Source: Ardurra

e. Taxiway Design Groups

The taxiway design group (**TDG**) is used to establish the correct dimensions for taxiway width. As shown in Figure 6.3, it is based on the dimensions of an aircraft's landing gear. This includes the distance from the cockpit to the main gear (**CMG**), and the main gear width (**MGW**). Each taxiway at an airport can have a different taxiway design group classification based on the size and type of aircraft expected to use that particular taxiway.[6]

Figure 6.3: Taxiway Design Groups



Note: Values in the graph are rounded to the nearest foot. 1 foot = 0.305 meters.

Source: FAA, AC 150/5300-13B, *Airport Design*, Figure 1-1.

f. Runway Design Code

The runway design code (**RDC**) is comprised of three components; AAC, ADG, and RVR, which establish the design characteristics for a particular runway. The RDC is determined by the lowest approach visibility minimums for either runway end. Because this code changes with runway capabilities, runways at an airport can have a different RDC.

A runway's lowest visibility published on an instrument approach procedure is used to determine its runway visual range (**RVR**) value. As shown in Table 6.4, a runway that does not have an instrument approach is classified as a visual runway and does not have an RVR value.[7]

Table 6.4: Visibility Minimums and Runway Visual Range Values

Runway Visual Range Value	Instrument Flight Visibility (statute miles)
VIS	Visual Approach Only
5,000 feet	Not lower than 1 mile
4,000 feet	Lower than 1 mile but not lower than 3/4 mile
2,400 feet	Lower than 3/4 mile but not lower than 1/2 mile
1,600 feet	Lower than 1/2 mile but not lower than 1/4 mile
1,200 feet	Lower than 1/4 mile

Source: FAA, AC 150/5300-13B, *Airport Design*, Table 1-3.

6.1.2. Critical Aircraft and Applied Airfield Design Criteria

As previously discussed in Chapter 5, Forecast of Aviation Demand, the FAA approved existing critical aircraft for the primary runway and taxiways is best described as having an AAC of C, an ADG of III, a TDG of 2A, and is represented by the Avro RJ87. The future critical aircraft is the Embraer E175, which is also a C-III aircraft, with an increased TDG of 3. The secondary runway and taxiways have a critical aircraft with an AAC B, ADG I, and TDG 2A, as and is represented by the Beechcraft BE99.

The lowest approach visibility for Runway 2/20 is 1/2 statute mile. This corresponds to a runway visual range of 2,400 feet which means the runway design code for Runway 2/20 is C-III-2400. Runway 8/26 is a visual runway with a runway design code of B-I-VIS.

Table 6.4, details the critical aircraft design parameters for CDC through the planning period.

Table 6.5: Critical Aircraft and Applied Airfield Design Criteria

Area	Aircraft	AAC	ADG	TDG
Primary Runway and Taxiways (Existing)	Avro RJ87	C	III	2A
Primary Runway and Taxiways (Future)	Embraer E-175	C	III	3
Secondary Runway and Taxiways (Existing and Future)	Beechcraft BE99	B	I	2A

Source:Ardurra.

6.2. Land Use and Airport Protection

Land use is the term used to describe how property is currently being used and how it can be used in the future. The existing and planned land uses near an airport can impact the local community and airport operations. Airport-compatible land uses are defined as those uses that can coexist with an airport without constraining the safe and efficient operation of the airport or exposing people living or working nearby to potential negative environmental or safety impacts.

Effective land use compatibility plans consider both height and land use restrictions and are incorporated via local zoning laws, specifically Section 26-XIV-5 Compatible Land Use Regulations, (A) Airport Compatible Land Use Overlay Zone within the Cedar City zoning code, and Iron County Ordinance, Title 17 – Zoning, Chapter 17.58, Airport Overlay Zoning. This zoning codes protect both the airport and the surrounding community. Furthermore, federal and state grant assurances require airport sponsors to operate and maintain the airport in a safe and serviceable condition, prevent and remove airport hazards, and take appropriate measures to ensure compatible land uses exist around the airport. Federal and state land use requirements will be discussed in Chapter 11, Planning for Compliance.

6.2.1. Airport Airspace

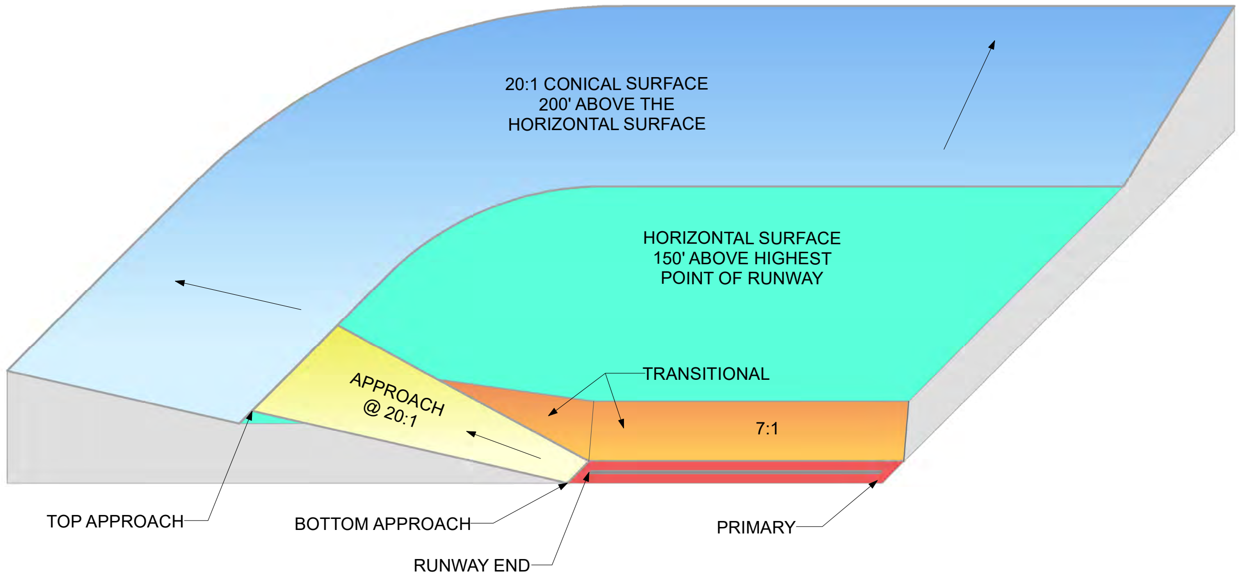
It is important to evaluate the airport's airspace in order to plan for and protect both existing and future approaches. This includes determining if any obstructions are penetrating the imaginary surfaces defined in Code of Federal Regulations (**CFR**) Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace* or the approach and departure surfaces defined in FAA AC 150/5300-13B, *Airport Design*.

Part 77: Safe, Efficient Use, and Preservation of the Navigable Airspace

Title 14 of the Code of Federal Regulations Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, establishes standards for determining obstructions to airspace. Part 77 describes imaginary surfaces surrounding airports that are to be protected from natural and man-made obstructions considered to be aeronautical hazards (Figure 6.4).

The standards for Part 77 surface dimensions are applied individually to each runway end based on its category (i.e., visual, nonprecision, or precision), and the lowest approach visibility minimums associated with that runway end. The Part 77 surface dimensions for Runway 2/20, and Runway 8/26 are listed in Table 6.6.

Figure 6.4: Part 77 Surfaces



Source: 14 CFR Part 77; Ardurra.

Recommendation

A Part 77 Analysis was completed and identified several penetrations to the Part 77 surfaces related to natural terrain and vegetation penetrations in the horizontal and conical surface. These are typical at many airports and though they penetrate the surface, they do not constitute a hazard to air navigation and thus do not impact flight operations. It is recommended that vegetation-related penetrations be mitigated as practical.

Table 6.6: Part 77 Surface Dimensions

Surface	Runway 2/20		Runway 8/26	
Primary Surface				
Width	1,000 feet		500 feet	
Length Beyond Runway End	200 feet		200 feet	
Approach Surface	**RWY 2**	**RWY 20**	**RWY 8**	**RWY 26**
Inner Width	1,000 feet	1,000 feet	500 feet	500 feet
Outer Width	3,500 feet	16,000 feet	1,500 feet	1,500 feet
Length	10,000 feet	10,000 feet	5,000 feet	5,000 feet
Slope	34:1	50:1	20:1	20:1
Extended Length	N/A	40,000 feet	N/A	N/A
Extended Slope	N/A	40:1	N/A	N/A
Transitional Surface				
Slope	7:1		7:1	
Horizontal Surface				
Height Above Airport Elevation	150 feet		150 feet	
Radius Arc	10,000 feet		5,000 feet	
Conical Surface				
Length	4,000 feet		4,000 feet	
Slope	20:1		20:1	

Source: FAA, AC 150/5300-13B, Airport Design, Table 1-2; Ardurra.

6.2.2. Approach and Departure Standards

The dimensional standards for runway approach and departure surfaces were determined in accordance with FAA AC 150/5300-13B, *Airport Design*. It is important to distinguish that the approach and departure surfaces outlined in this advisory circular (**AC**) differ from those defined in 14 CFR Part 77. Like Part 77 surfaces, these surfaces must be maintained free from natural or man-made penetrations. The approach surface depends on the lowest visibility minimums and type of procedure associated with the runway end and is independent of the approach surface for the opposite end of the runway.

Recommendation

The existing and future approach and departure surfaces are clear of penetrations. Like the Part 77 surfaces, it is recommended that development around the airport continue to be monitored and held to height restrictions identified in the City's height restrictions map.

6.2.3. Runway Protection Zone

A runway protection zone (**RPZ**) is trapezoidal in shape, centered about the extended runway centerline, and located off each runway end. According to AC 150/5190-4B *Land Use Compatibility Planning*, the purpose of an RPZ is to enhance the protection of people and property on the ground by keeping the ground clear of incompatible land uses and activities in the event an aircraft accident occurs beyond the runway end. The RPZ is not intended to protect the airspace associated with a runway. Airspace protection is based on the airspace surfaces previously detailed.

The FAA provides guidance on land use compatibility within an RPZ in both FAA AC 150/5300-13B *Airport Design* and FAA AC 150/5190-4B *Land Use Compatibility Planning*. Both ACs state that although it is ideal to clear incompatible objects from an RPZ, some land uses are permitted providing they do not attract wildlife, are outside of the ROFA, and do not interfere with navigational aids (**NAVAIDS**). Land uses which are permitted without further evaluation are:

1. Farming which meets airport design clearance standards.
2. Irrigation channels which meet FAA standards in AC 150/5200-33C *Hazardous Wildlife Attractants on or Near Airports*, and FAA/USDA manual *Wildlife Hazard Management at Airports*.
3. Airport service roads, as long as they are not public roads and are under direct control of the airport.
4. Underground facilities, as long as they meet other design criteria, such as Runway Safety Area (**RSA**) standards, as applicable.
5. NAVAIDS and aviation facilities, such as equipment for airport facilities considered fixed-by-function in regard to the RPZ.
6. Above-ground fuel tanks associated with back-up generators for unstaffed NAVAIDS.

FAA AC 150/5190-4B requires additional FAA coordination in the event the RPZ were to change (either in size or location) or when there is a change to an incompatible land use. Roadway construction, relocation, or improvement is specifically noted as an incompatible land use requiring further coordination.

There are some incompatible land uses within the RPZ for Runways 2, 20, and 26. Airport Road crosses through Runway 20 and 26 RPZs. The RPZ for Runway 2 contains a crossing by N 3100 W, a butcher shop, and a storage unit facility. Due to the now existing regulations to prevent additional incompatible land uses, no mitigation is requiring for the existing land uses.

Recommendation

To prevent further land use incompatibilities, the city and county have adopted strict land use guidance on compatible land uses within the RPZ. It is recommended that careful coordination continues between the Airport and local zoning and planning to ensure continued, proactive, land use protection. Should land within the RPZ become available for Airport acquisition, it is recommended the airport take advantage of the opportunity to secure and protect the property.

6.3. Airfield Facilities

An assessment of the airport's airfield facilities was conducted to determine their ability to safely and efficiently accommodate the activity forecasted for the 20-year planning period. This determines if the runways, taxiways, and navigational aids are compliant with FAA design and safety standards. The results of this analysis are also used to help determine if and when improvements are needed to meet specific operational demands.

6.3.1. Airfield Capacity

The purpose of an airfield capacity analysis is to assess the airport's ability to efficiently accommodate its day-to-day and long-term demands without undue delays or compromises to safety. The analysis also assists in determining when improvements would be needed to meet operational demands.

The most widely recognized and accepted method for conducting an airfield capacity analysis is found in FAA AC 150/5060-5, *Airport Capacity and Delay*. The methodology described in the AC is used to determine the annual service volume (**ASV**) and hourly capacity to provide a reasonable estimate of an airport's annual capacity. The ASV is calculated by determining the airport's mix index. This is a mathematical expression representing the percent of weight class (classes noted in Table 6.1) specifically, class C plus three times the percent of Class D aircraft.

This methodology accounts for differences in runway use, fleet mix, and weather conditions encountered during a typical year. For long range planning, pre-determined calculations in the AC may be used if certain assumptions are met. These assumptions and how they apply at CDC are outlined in Table 6.7.

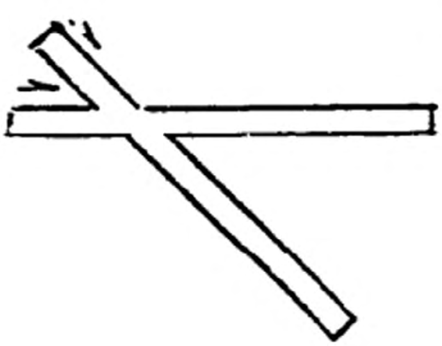
Table 6.7: Assumption Criteria and CDC Status

AC Defined Assumption	Assumption Met At CDC?
Runway Use Configuration – Any runway layout can be approximated by one of the 19 depicted runway-use configurations (in the AC).	Yes
Percent Arrivals – Arrivals equals departures.	Yes
Percent Touch and Go's – The percent of touch and go's is within the ranges in table 2-1 in the AC.	No, this assumption is exceeded.
Taxiways – A full length parallel taxiway, ample runway entrance/exit taxiways, and no taxiway crossing problems.	Yes
Airspace Limitations – There are no airspace limitations which would adversely impact flight operations or otherwise restrict aircraft which could operate at the airport.	Yes
Runway Instrumentation – The airport has at least one runway equipped with an ILS and has the necessary ATC facilities and services to carry out operations in a radar environment.	Yes, Salt Lake City Center

Source: FAA, AC 150/5060-5, Airport Capacity and Delay.

For the first assumption, the runway configuration at CDC best matches sketch number 9 in the AC (Figure 6.5) with a mix index in the 0-20 range, which gives an ASV assumption of 230,000 annual operations.

Figure 6.5: Runway Configuration



Mix Index %(C+3D)	Hourly Capacity Ops/Hr VFR	Hourly Capacity Ops/Hr IFR	Annual Service Volume Ops/Yr
0to 20	98	59	230,000
21 to 50	77	57	200,000
51 to 80	77	56	215,000
81 to 120	76	59	225,000
121 to 180	72	60	265,000

Source: FAA, AC 150/5060-5, Airport Capacity and Delay.

The capacity analysis at CDC is complex due to the number of operations from the flight school, which consist of more than half helicopter operations, in addition to regular operations by cargo, general aviation, military, and commercial service aircraft.

The flight school operations remain within the vicinity airspace and increases the number of hourly touch-and- goes beyond the assumptions outlined in the AC. Additionally, through discussions with personnel at Southern Utah University's (**SUU**) flight training program at CDC, traffic pattern constraints were identified. Due to the limited capacity of a runway pattern (typically six aircraft in the pattern at once) the airspace is frequently full and restricts the number of training flights that can be conducted. Personnel at SUU stated that this is one of the factors limiting the growth of the flight training program. The assumptions used for calculating the capacity at CDC are provided in Table 6.8.

Table 6.8: Capacity Analysis Assumptions

Criteria	2022	2042
Annual Total	120,996	153,639
Mix Index	3	3
Hourly Total	38	48
Hourly Touch and Go Operations	31	35
Percent Touch and Go Operations	81%	71%
Hourly Visual Flight Rules	37.76	47.95
Hourly Instrument Flight Rules	0.43	0.55

Source: Ardurra.

The capacity analysis is provided in Table 6.9, which uses operational data from the approved forecast with the applied method and assumptions outlined in the AC.

Table 6.9: Capacity Analysis: Helicopter and Fixed Wing Operations

	2022	2027	2032	2042
Annual Service Volume	230,000	230,000	230,000	230,000
Annual Demand	120,996	127,532	135,529	153,639
Capacity Percentage	53%	55%	59%	67%

Source: Ardurra.

Per FAA Order 5090.5, *Formulation of the NPIAS and ACIP* the activity level to begin planning for capacity improvements is 60% of ASV, with development occurring at 80% of ASV. Table 4-4 within Order 5090.5 identifies that the FAA prefers the development of a parallel runway for capacity improvements. Based on the overall operational numbers, CDC will reach the 60% planning threshold (60% of ASV) by 2032, but it is not expected the Airport will reach 80% within this planning period (before 2042).

Unique to CDC is a large number of total operations are helicopters operated by SUU for flight training. Although the majority of the operations are currently to the primary runway, there is inherent flexibility with helicopters allowing them to land in alternate locations other than the runway. This capability has significant potential to alleviate runway congestion, effectively lowering the percent of capacity otherwise being occupied by helicopter operations. Table 6.10 represents the capacity analysis as it relates to fixed wing only operations, with capacity considerably lower, forecasted at 39%.

Table 6.10: Capacity Analysis: Fixed Wing Operations

	2022	2042
Annual Service Volume	230,000	230,000
Annual Demand: Fixed Wing	70,762	88,597
Annual Demand: Helicopter	50,234	65,042
Fixed Wing Capacity Percentage	31%	39%

Source: Virtower, CDC Helicopter and Fixed Wing Operations Percentages for 2023.

Recommendation

Runway capacity should continue to be monitored at CDC. As capacity nears the 60% ASV planning threshold the Airport should consider planning for alternate landing areas for helicopter operations to extend capacity of the runway. Future planning projects should incorporate a more in-depth analysis of these alternate landing areas which can lead to more efficient airport operations and proactive management of capacity.

6.3.2. Runway Design Standards

FAA AC 150/5300-13B, *Airport Design* was used to determine the design standards, recommendations, design considerations, and requirements for runways. The AC describes features essential for safe and efficient aircraft operations based on the runway design code (**RDC**) of the critical aircraft associated with each runway. This includes dimensions for runway width, and separation distances from fixed or movable objects as well as the safety and object free areas that surround a runway. These areas act as a protective buffer around the airport's operating surfaces.

Runway 2/20

The existing RDC for Runway 2/20 is C-III-2,400 (1/2 mile) and is not forecasted to change over the 20-year planning horizon. See Table 6.11 for the design standards and compliance.

Table 6.11: Runway 2/20 Design Standards

Design Criteria	Existing Conditions	FAA Standards
	C-III-2,400	C-III-2,400
Runway Design		
Runway Width	150 feet	100 feet
Shoulder Width	20 feet (unpaved)	20 feet
Crosswind Component	16 knots	16 knots
Runway Protection		
Runway Safety Area Length Beyond Departure End	1,000 feet	1,000 feet
Runway Safety Area Length Prior to Threshold	600 feet	600 feet
Runway Safety Area Width	500 feet	500 feet
Runway Object Free Area Length Beyond Runway End	1,000 feet	1,000 feet
Runway Object Free Area Length Prior to Threshold	600 feet	600 feet
Runway Object Free Area Width	800 feet	800 feet
Runway Obstacle Free Zone Length	200 feet	200 feet
Runway Obstacle Free Zone Width	400 feet	400 feet
Runway 2 (not less than 3/4 mile)		
Runway Protection Zone Approach Length	1,700 feet	1,700 feet
Runway Protection Zone Approach Inner Width	1,000 feet	1,000 feet
Runway Protection Zone Approach Outer Width	1,510 feet	1,510 feet
Runway 20 (less than 3/4 mile)		
Runway Protection Zone Approach Length	2,500 feet	2,500 feet
Runway Protection Zone Approach Inner Width	1,000 feet	1,000 feet
Runway Protection Zone Approach Outer Width	1,750 feet	1,750 feet
Runway Separation		
Runway Centerline to Holding Position	300 feet	250 feet
Runway Centerline to Parallel Taxiway Centerline	400 feet	400 feet

Source: FAA, AC 150/5300-13B, *Airport Design*; Ardurra.

Runway 8/26

The existing RDC for Runway 8/26 is B-I-VIS and is not forecasted to change over the 20-year planning horizon. See Table 6.12 for the design standards.

Table 6.12: Runway 8/26 Design Standards

Design Criteria	Existing Conditions	FAA Standards
	B-I-VIS	B-I-VIS
Runway Design		
Runway Width	60 feet	60 feet
Shoulder Width	10 feet (unpaved)	10 feet (unpaved)
Crosswind Component	10.5 knots	10.5 knots
Runway Protection		
Runway Safety Area Length Beyond Departure End	240 feet	240 feet
Runway Safety Area Length Prior to Threshold	240 feet	240 feet
Runway Safety Area Width	120 feet	120 feet
Runway Object Free Area Length Beyond Runway End	240 feet	240 feet
Runway Object Free Area Length Prior to Threshold	240 feet	240 feet
Runway Object Free Area Width	400 feet	400 feet
Runway Obstacle Free Zone Length	200 feet	200 feet
Runway Obstacle Free Zone Width	400 feet	400 feet
Runway Protection Zone Approach Length	1,000 feet	1,700 feet
Runway Protection Zone Approach Inner Width	500 feet	1,000 feet
Runway Protection Zone Approach Outer Width	700 feet	1,510 feet
Runway Separation		
Runway Centerline to Holding Position	200 feet	200 feet
Runway Centerline to Parallel Taxiway Centerline	200 feet	200 feet

Source: FAA, AC 150/5300-13B, *Airport Design*; Ardurra.

Recommendation

Both runways meet the design requirements for the associated RDC, therefore no design criteria modifications are recommended.

Runway 8/26 is a locally funded runway used minimally by SUU and small GA users. Through conversations with stakeholders throughout the public engagement process, it was learned that SUU only uses portions of the runway for helicopter operations. Those operations don't necessitate a runway; they only require an area with pavement and are operations are conducted under strict operational guidelines aimed at minimizing disruption to the neighboring community and avoiding interference with activities on the primary runway.

Having recently been reconstructed, Runway 8/26 has a projected useful life of 20 years with proper maintenance. Nonetheless, as the pavement ages, the maintenance necessary to uphold its integrity throughout its useful life will become progressively more costly. At some point over the planning horizon, decommissioning Runway 8/26 may become more desirable than locally funding the maintenance for a runway.

Closing Runway 8/26 presents a valuable opportunity to improve operational safety and advance airport development. While some members of the flying community may have reservations about its closure, planning for a future condition where the runway is decommissioned and repurposed as a taxiway holds significant benefits. This transition would qualify the pavement for federal funding as a taxiway, providing crucial financial support. Moreover, repurposing the area will ensure strategic planning and protection for future aeronautical development, and reduce safety issues that stem from the use of the runway when the primary runway is also in use.

6.3.3. Runway Length

FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*, provides the standards and guidelines used to determine the recommended runway length, and uses the critical aircraft for calculations. For aircraft that weigh more than 60,000 pounds and regional jets, the AC guidance is to use the individual aircraft's operating handbook for the runway length analysis. The existing critical aircraft at CDC is the Avro RJ87, and the future critical aircraft is identified as the E-175, which meets the AC criteria to use the specific aircraft charts to determine the recommended runway length.

Following AC guidance, the runway length was evaluated using the maximum takeoff and landing weights, the elevation of the airport, and the mean daily maximum temperature of the hottest month of the year to obtain the takeoff and landing length. The greater of the two runway lengths is used as the FAA recommendation in accordance with this methodology.

Table 6.13: Runway Length Analysis

Aircraft	Takeoff Distance
Avro RJ87 (Existing)	6,000 feet
E-175 (Future)	10,000 feet

Source: FAA, AC 150/5325-4B, *Runway Length Requirements for Airport Design*; Embraer, *Embraer 175 Airport Planning Manual*.

Recommendation

The existing length of Runway 2/20 is adequate for the current critical aircraft; however, the recommended runway length for the future critical aircraft is 10,000 feet. This length has been shown on previous ALPs and the property is protected for a future extension. It is recommended that it continue to be protected and shown on the ALP as a future runway extension.

Prior to a runway extension implementation, it is recommended a detailed runway length study be undertaken to determine the precise needs of the critical aircraft and commercial operators based on typical range requirements for viable operations at CDC.

Crosswind Runway 8/26 is maintained by the sponsor with B-I safety areas. The runway is not eligible for federal funding. The existing length of 4,822 feet is considered adequate by the sponsor for the types of operations regularly and forecasted to use the runway, and no runway length adjustments are recommended.

6.3.4. Wind Coverage

The FAA advises that the primary runway at an airport be oriented in the direction of the prevailing wind. The most desirable runway orientation is based on the largest wind coverage with the minimum allowable crosswind. By aligning the runway with the predominant wind, there is an increase in operational safety due to the aerodynamic design of an aircraft. A crosswind is a wind that is not parallel with the runway, and wind coverage is the percentage of time a crosswind is below an acceptable speed. The allowable crosswind speeds are defined by the FAA by RDC, and provided in Table 6.14, with the conditions at CDC bolded.

Table 6.14: Allowable Crosswind Component by Runway Design Code

Runway Design Code	Allowable Crosswind Component
A-I and B-I (includes small aircraft)	10.5 knots
A-II and B-II	13.0 knots
A-III, B-III, C-I through C-III, and D-I through D-III	**16.0 knots**
A-IV, B-IV, C-IV through C-VI, and D-IV through D-VI	20.0 knots

Source: FAA, AC 150/5300-13B, *Airport Design*, Table B-1.

Runway 2/20 has an existing and future RDC of C-III, with an allowable crosswind component of 16 knots. A wind analysis was completed to verify the primary runway wind coverage, as shown in Table 6.15 The total wind coverage including both runways is depicted in Table 6.16..

Table 6.15: Wind Coverage Percentages for Runway 2/20

Crosswind Component	All Weather	Instrument Flight Rules	Visual Flight Rules
10.5 knots	97.14%	96.49%	97.19%
13.0 knots	98.48%	98.15%	98.50%
16.0 knots	**99.40%**	**99.33%**	**99.41%**
20.0 knots	99.82%	99.77%	99.82%

Source: FAA, Airport Data and Information Portal.

Table 6.16: Wind Coverage Percentages for Both Runways

Crosswind Component	All Weather	Instrument Flight Rules	Visual Flight Rules
10.5 knots	98.58%	98.59%	98.67%
13.0 knots	99.53%	99.94%	99.55%
16.0 knots	**99.87%**	**99.94%**	**99.88%**
20.0 knots	99.98%	100%	99.98%

Source: FAA, Airport Data and Information Portal.

The primary Runway 2/20 wind coverage is above the FAA minimum threshold of 95% for the critical aircraft's 16 knot requirement. Additionally, the 13 knot and 10.5 knot requirements for smaller aircraft are also above the FAA minimum threshold of 95%. Thus, Runway 2/20 can serve all aircraft types and a crosswind runway is not necessary for wind coverage at CDC.

Because a crosswind runway is not needed, Runway 8/26 is considered a secondary runway and is not eligible for FAA AIP funding based on wind. Because the orientation to the primary is for crosswind operations and it crosses Runway 2/20, Runway 8/26 cannot add any capacity to the airport system. Thus, overall, the runway is not at all eligible for FAA funding and can only be maintained at a local level.

Recommendation

Runway 8/26 is in excellent condition as it was completely reconstructed in 2019. It is recommended that the runway be maintained through locally funded annual pavement maintenance such as crack seals. Airport leadership will need to examine costs versus benefits long-term, and eventually determine if the runway will be decommissioned. This master plan's alternatives analysis examines future uses of the runway pavement and land areas and evaluates the ultimate highest and best use for the land.

6.3.5. Runway Designation

The normal shifting of the magnetic poles can result in the need to renumber, or redesignate, the runway. A review of the geodetic and magnetic headings indicates a redesignation is due for Runway 8/26, which was also identified in the 2018 MPU. Runway 2/20 does not meet the criteria for redesignation in the mid-term planning but is expected to be due for redesignation towards the end of the 20-year planning period.

Recommendation

Runway 8/26 should be redesignated to Runway 9/27, along with airport signage, and chart supplements, should it be decided to be maintained as a runway. Runway 2/20 should be planned to be redesignated to 3/21 around 2042 and should continue to be monitored with subsequent airport master plan projects.

6.3.6. Runway Line of Sight

A runway with a clear line of sight (**LOS**) allows pilots to visually verify the location and actions of other aircraft and vehicles operating along active runways. When runways meet LOS standards, it reduces the potential for accidents. At airports with intersecting runways, like CDC, a Runway Visibility Zone (**RVZ**) is established by connecting the points of each runway's LOS. When runways have a compliant RVZ, the visual field of view between runways enhances pilot situational awareness to avoid conflict with aircraft operating on an intersecting runway.

At airports without airport traffic control towers, any point five feet above the runway centerline must be mutually visible with another point five feet above the centerline of the crossing runway inside the RVZ.

Recommendation

The RVZ and LOS requirements are met for both Runways. The 2018 MPU identified that Runway 2/20 did not meet the individual runway LOS due to a crown near the middle of the runway. This was remedied with the runway reconstruction in 2020.

6.3.7. Runway Gradient

The slope of a runway can affect aircraft performance, pilot perception, and drainage. The FAA has established longitudinal gradient standards based on aircraft approach categories to regulate the percent of slope allowed for the safe operation of aircraft on a runway.

The maximum longitudinal gradient for runways with an aircraft approach category of C is +/- 1.5%, not to exceed +/- 0.80% within the first and last quarter of the runway (2,225 feet). The maximum longitudinal gradient for runways with an aircraft approach category of A or B is 2%.

Runway 2/20 has an overall gradient of 0.25%. The grade for the first quarter of Runway 2 is 0.6% and Runway 20 is 0.2%. Runway 2/20 is well within the runway design grade limitations.

Runway 8/26 overall grade is 0.89%, also well within the runway design grade limitations.

Recommendation

Both runway gradients are within standards and no recommendations are provided at this time.

6.3.8. Taxiway System

FAA AC 150/5300-13B, *Airport Design*, was used to determine the design standards, recommended practices, and design considerations for taxiways and taxilanes. This AC provides guidance to enhance safety and efficiency based on the TDG and ADG of the critical aircraft associated with each taxiway. This includes taxiway dimensions, configuration, and separation standards; taxiway turns and intersection design; and surface gradients. Taxiway design includes standards for safety and object free areas that provide a protective buffer around taxiways and other aircraft movement areas.

The parallel taxiway (Taxiway A) meets or exceeds TDG 3 design standards. Taxiway B was reconstructed as part of the transient apron reconstruction. Due to its location within the Runway 8/26 RSA, the taxiway was undesignated and is no longer a taxiway. Taxiway C south of Runway 8/26, meets TDG 3 design standards. North of Runway 8/26, Taxiway C meets TDG 5 standards to accommodate the large air tankers using the Interagency Fire Center base.

The runway/taxiway intersection of Taxiway C, C1, and Runway 26, was noted on the previous master plan as meeting the FAA recommendation for a "three-node concept." This intersections is indicated by the red circle shown in Figure 6.6. Taxiway C1 is used primarily for helicopter taxiing and provides fleet mix separation from fixed wing operations taxiing on Taxiway C. The area is well known by users and was determined to not be a point of concern for the Airport.

Recommendation
All taxiways at CDC meet or exceed the design requirements. It is recommended that the existing pavement be maintained at TDG 3 standards to accommodate the future condition at the airport.

6.3.9. Navigational Aids

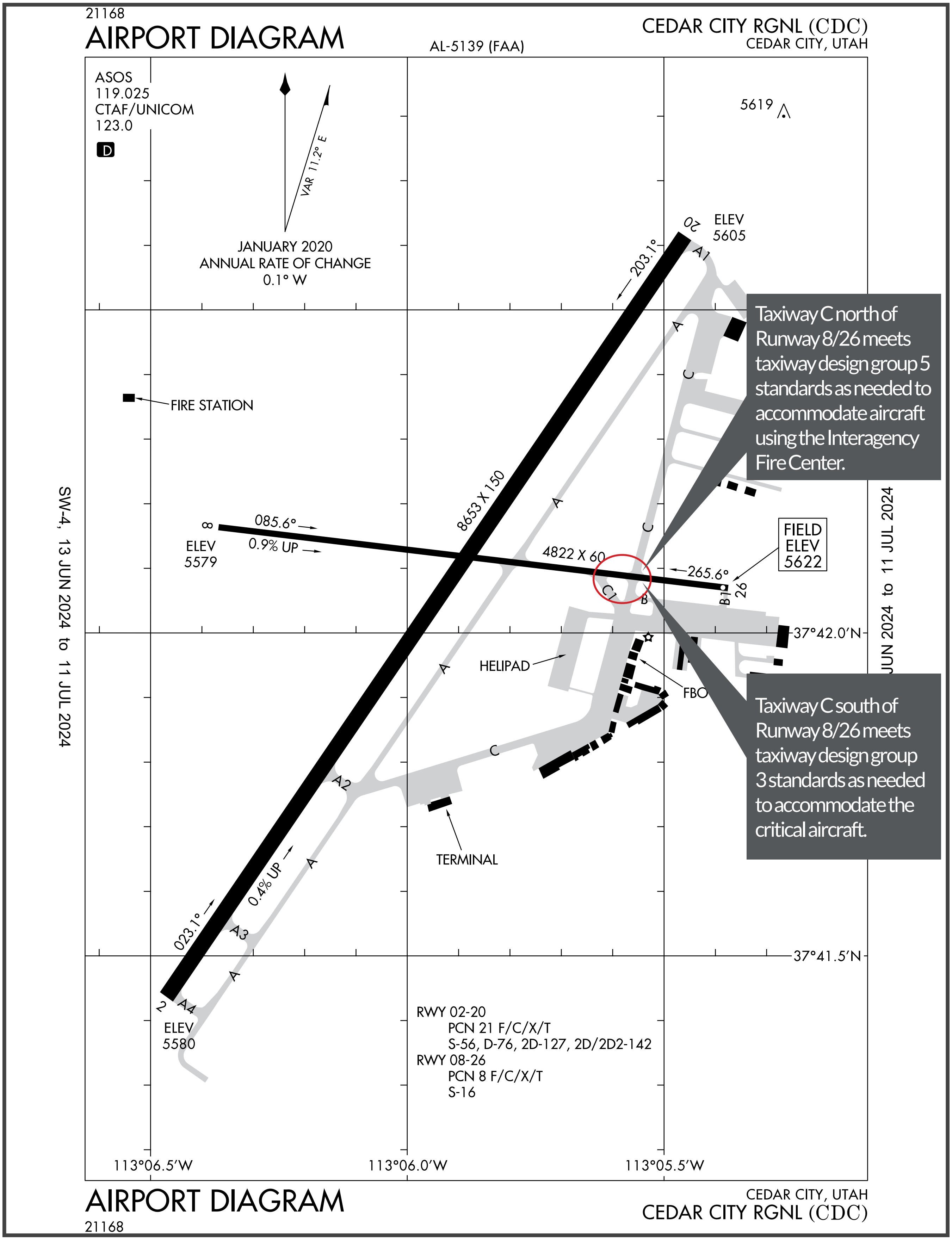
The airport is equipped with Navigational Aids (**NAVAIDS**) which include visual, electronic, and meteorological aids. These provide assistance for aircraft navigating to and maneuvering on the airport. A full list of NAVAIDS and their function is located in Chapter 4, Inventory.

The airport's NAVAIDS are in compliance with FAA standards and are sufficient for the needs of the airport. The 2020 Utah Aviation Development Strategy identifies CDC as being deficient for Runway End Identifier Lights (**REILS**) on Runway 20. However, this runway is equipped with a Medium Intensity Approach Lighting System (**MALSR**), which supersedes a REIL system, and is actually not a deficiency for lighting.

The only NAVAID found requiring enhancement is the airport beacon. It's current height and location adjacent to a large hangar creates visibility issues from the southwest portion of the airport.

Recommendation
It is recommended that the existing NAVAIDS continue to be maintained and upgraded as needed. The rotating beacon was identified as needing to be relocated or heightened to increase its visibility for incoming aircraft, with the recommendation it remains in place and is heightened to meet needs.

Figure 6.6: Airport Diagram



Source: FAA, Airport Diagram for CDC, Effective Date: Jun 13 - Jul 10, 2024.

6.3.10. Airfield Pavements

As previously discussed in Section 4.5.3., Airfield Pavements, the most recent inspection of the airport's airfield pavements was completed in 2016, with a 2022 predicted condition provided by UDOT.

The Airport's 2022 predicted pavement condition is presented in Figure 6.7. Runway 2/20 was completely reconstructed in 2020 and Runway 8/26 was completely reconstructed in 2019. The transient apron is shown on the figure as needing reconstruction but was fully reconstructed in 2023.

Several sections of the taxiways and aprons were reconstructed in 2023, with the remaining pavements scheduled for near term reconstruction, as scheduled by UDOT.

Recommendation

UDOT Aeronautics tracks the pavement conditions for Utah's airports and determines priority across the state airports for rehabilitation and maintenance. These projects are scheduled into the state's Airport Capital Improvement Program and updated annually. It is recommended that the Airport continue routine maintenance and preservation of pavement.

6.3.11. Pavement Strength

The required pavement design strength, or weight-bearing capacity, is an estimate based on average activity levels and is limited in terms of aircraft landing gear type and geometry (i.e., load distribution). The pavement design strength is not the maximum allowable weight; however, operations by aircraft which exceed the weight-bearing capacity should be limited to avoid accelerating pavement deterioration.

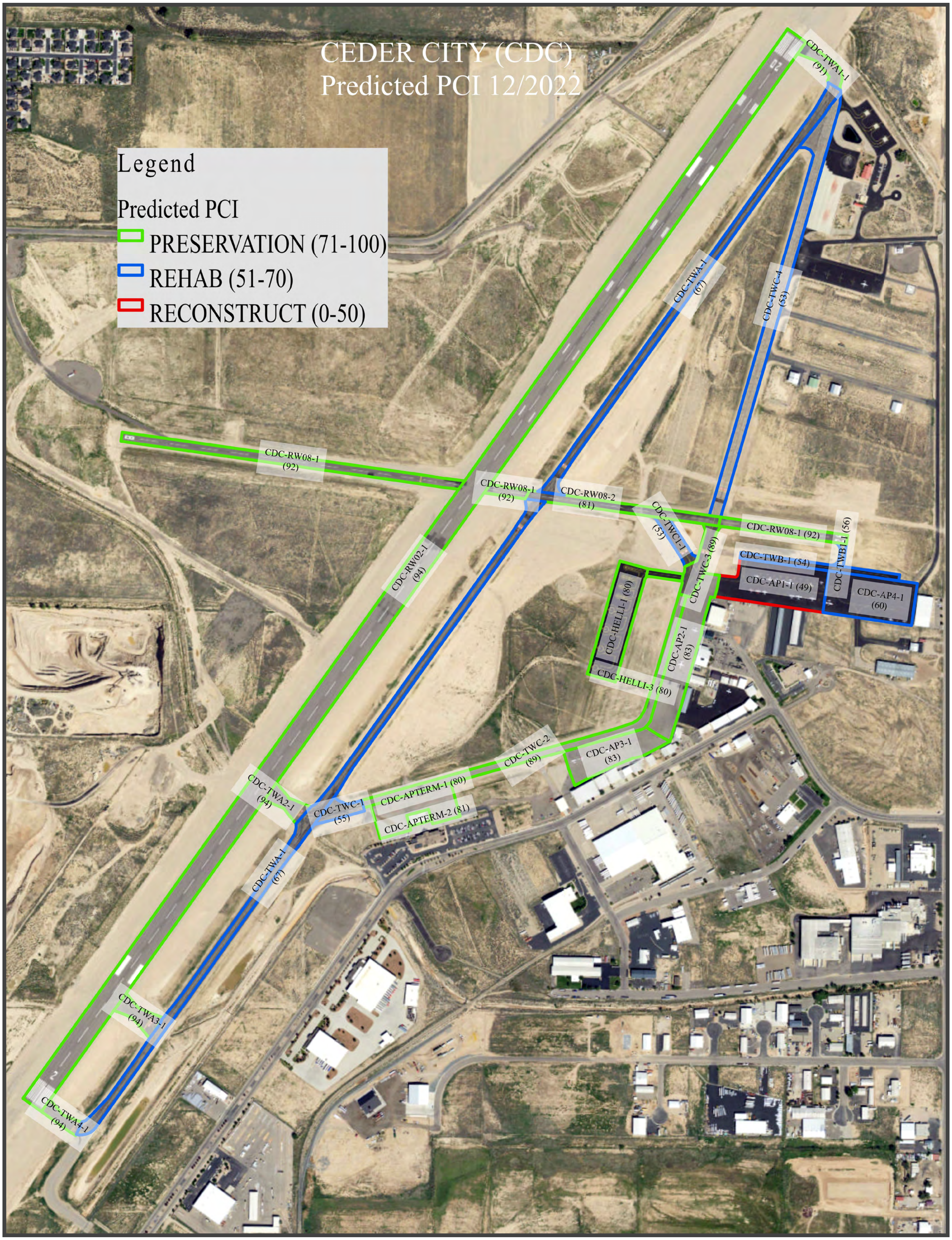
The pavement strength published for Runway 2/20 at CDC is 56,000 pounds single wheel gear, 76,000 pounds dual wheel gear, and 127,000 pounds double tandem, and 142,000 pounds dual double tandem.

The published pavement strength for the crosswind runway 8/26 is 16,000 pounds single wheel gear only.

Recommendation

The weight-bearing capacity of the runways is adequate for the aircraft currently and forecasted to use the runways. The Utah Aviation Development Strategy objective for CDC is for a single wheel gear weight bearing capacity of 60,000 pounds, or equivalent for dual wheel. Although the primary runway falls slightly short on the single wheel gear, it does meet the objective for dual wheel gear. Therefore, there are no recommended improvements for design runway strength.

Figure 6.7: Predicted Pavement Condition Index, 2022



Source: Utah Department of Transportation, Aeronautics Division.

6.4. Commercial Terminal Facilities

At the time of this writing, construction for the commercial service terminal expansion is underway. The expansion will increase the hold room to roughly 2,500 square feet, provide dedicated secure side restrooms, and a pet relief area. The expansion also includes the expansion of the baggage claim area to include a baggage carousel. It is anticipated construction will begin in 2024.

Recommendation

At the time of this writing, the terminal building is approximately 20-years of age, which is the age when buildings begin to require replacement of equipment. As part of this study, a building assessment was completed (Appendix D). That assessment details items that may be require replacement in the future. It is recommended that the Airport's budget account for those items and other maintenance expenses associated with building upkeep and maintenance.

6.5. General Aviation Facilities

The *2020 Utah Aviation Development Strategy* includes several facility and service objectives for commercial airports that were used to determine requirements for each of the general aviation (**GA**) facilities listed in this section.

6.5.1. Aircraft Storage

There are an assortment of different hangar types and sizes at CDC, which are nearly all occupied, and have been for the last several years. The airport maintains a waiting list for hangars as they become available. Given the weather at CDC, the majority of aircraft owners based at CDC prefer to store their aircraft in hangars.

a. Hangars

The Utah Aviation Development Strategy sets the Minimum objective for commercial service airports to have hangar storage for 70% of based aircraft, with the understanding that the need for hangars can increase due to the propensity for severe weather conditions including severe heat in the summer, and snowy conditions in the winter, like at CDC. The Development Strategy also identified that over 44% of airports in Utah have a hangar waiting list, which includes CDC.

The Airport currently has 32 hangar structures, of which three are t-hangars for a total of 92 hangars. The forecast identified 100 based aircraft in 2022, increasing to 136 by 2042.

Although CDC meets the minimum objective set by the State, there is a continuous need for hangars at CDC as indicated by the waitlist.

Recommendation

It is recommended that land be preserved to support hangar development needed to meet the needs of the Airport. It is further recommended that additional land be preserved to support changes in development patterns and hangar size needs and to ensure areas are preserved for potential demand beyond the planning period. Lastly, it was determined that there is need to preserve land for larger maintenance, repair, overhaul (**MRO**)/FBO type hangars.

b. Aircraft Tie-Downs

The *2020 Utah Aviation Development Strategy* set the objective for commercial service airport tie-down locations to be 30% of based aircraft plus 75% of daily transient aircraft. The number of tiedowns required to meet this objective is detailed in Table 6.17.

The forecast identified 100 based aircraft in 2022, increasing to 136 by 2042. Transient operations are on average 34 per day in 2022 and expected to increase to 69 by 2042. Table 6.17 details the breakdown of tie-down needs.

Table 6.17: Aircraft Tiedowns Objectives

Year	Based Aircraft	Demand (30%)	Daily Transient Operations	Demand (75%)	Objective
2022	100	30	34	26	56
2027	108	32	41	31	63
2032	117	35	50	38	73
2042	136	41	69	52	93

Source: Ardurra.

Recommendation

There are a total of 76 aircraft tie-downs at CDC. This meets the State's objectives in the near and mid-term planning period. Long range planning should include the preservation of land for a minimum of 17 tie-down spaces.

6.5.2. Auto Parking

The primary GA parking lot is located outside of the FBO and has 106 stalls available to the public at no charge. This lot is the only parking available for the transient apron and serves as parking for the SUU maintenance program. There are an additional two unpaved parking lots with other spots available adjacent to various buildings and hangars. Additionally, the roadside parking is at capacity with cars from the flight program on Aviation Way near the terminal. There is no excess parking near the north hangars. Auto parking is at capacity in every location around the airport.

Recommendation

It is recommended that special consideration should be given to additional parking as development occurs. Potential solutions are identified with the development alternatives analysis in Chapter 7.

6.5.3. Air Cargo Facilities

As discussed in Section 4.6.3, the airport currently has two dedicated air cargo operators, West Air (FedEx feeder) and Alpine Air (UPS feeder), that use a county owned facility for cargo sorting, loading, and unloading. The facility is not used to house the aircraft.

The Air Carrier T-100 Statistics Database shows an average of 630,000 pounds (315 tons) of freight moved per year, over the last five years, peaking in 2019 with 861,407 pounds (431 tons).

Given the local development and the presence of key industrial leaders, there is notable potential for significant growth in air cargo operations throughout the planning period. To effectively prepare for this potential, it would be advantageous for the airport to initiate strategic planning for the location of a more capable cargo apron. The apron should be capable of accommodating larger aircraft and improved handling facilities, ensuring the airport is well-equipped to meet the evolving demands of air cargo operations.

Recommendation

The existing cargo facility is approximately 5,293 square feet, which is sufficient to process the existing and peak level of movement through CDC. Planning should preserve a location of several acres, able to accommodate a larger operations for cargo processing.

6.6. Support Facilities

Support facilities at CDC include fuel storage, aircraft rescue and fire fighting (**ARFF**), and snow removal equipment (**SRE**) facilities.

6.6.1. Fuel

The fuel capacity at CDC is adequate for the existing need and future need. However, the self-service fuel station is located adjacent to the transient apron in a configuration that is not ideal. Although the capacity is sufficient, a relocation of the station would increase safety and clearance for taxiing aircraft, and free desirable land for potential leasing.

Recommendation

It is recommended a new area for the self-service fuel station be preserved. A location is evaluated and determined in the alternatives analysis.

6.6.2. Aircraft Rescue and Fire Fighting

The Airport is required to meet ARFF Index requirements as described by 14 CFR Part 139. The ARFF index was reviewed as part of the forecast in Section 5.13. The Airport qualifies as an Index A airport throughout the planning period.

Recommendation

It is recommended the Airport continue to work closely with the existing and potential air service operators to know in advance when to prepare for a shift to ARFF Index B. Should the airport exceed more than five flights per day by an Index B aircraft, the airport would need to adjust accordingly, though this is not expected within the planning period.

6.6.3. Snow Removal Equipment

CDC is required to maintain a Snow and Ice Control Plan as described by 14 CFR Part 139. Part 139. This ensures prompt removal of snow and ice from priority movement areas. The FAA recommendation for commercial airports that provide scheduled air carrier services is at least one high-speed rotary plow with at least two snowplows having equal snow removal capacity.

The *2018 Airport Master Plan* identified that the SRE building was deficient and needing to be replaced and is on the CIP as a long term project due to funding constraints.

Recommendation

The Airport has the appropriate vehicles recommended by the FAA, however, much of the equipment is aging and nearing the end of it's service life. It is recommended that the equipment be replaced as necessary to ensure the snow and ice control plan can be carried out effectively.

6.7. Airport Traffic Control Tower

Due to the complex fleet mix and operational environment at CDC, the airport would benefit from an airport traffic control tower. An ATCT would enhance safety through aircraft coordination and control.

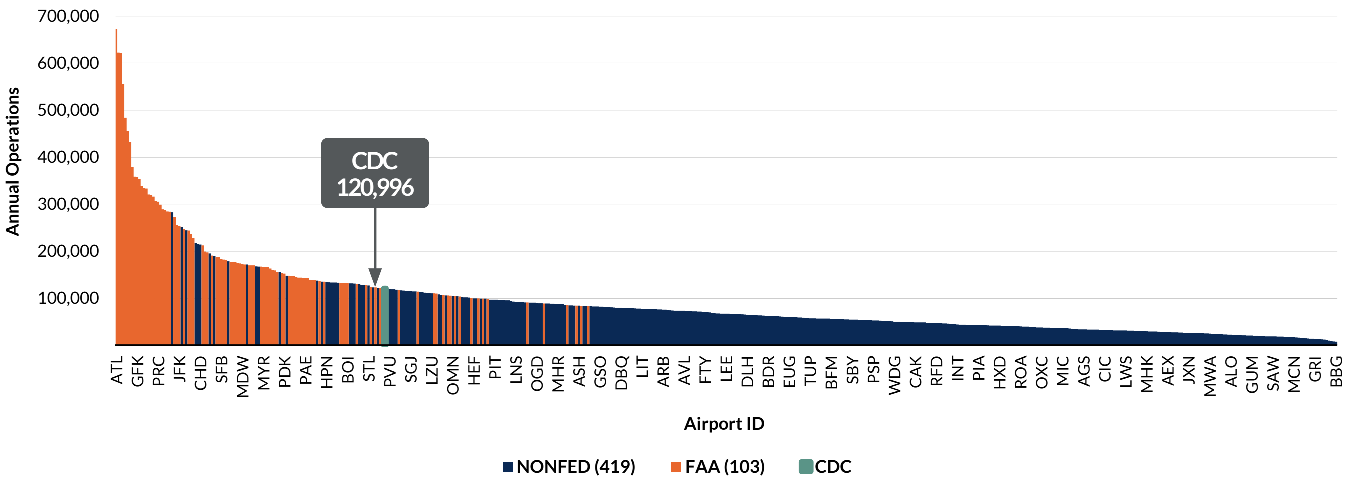
The fleet mix that regularly operates at the airport includes significant use by small and large helicopters, the full range of small, medium, and large general aviation aircraft, and commercial passenger jets. A significant number of operations are from the local flight school, which is a combination of fixed wing and helicopter, with more than half the operations being helicopter training. Additionally, the Utah Army National Guard operates at the airport with large helicopters and are in the process of developing a permanent support facility at CDC. That facility is expected to further increase helicopter activity levels.

The Airport is also a major asset for aerial firefighting through the Color County Interagency Fire Center, which is a base for large air tankers, and single engine air tankers. During fire season, these operations compound the mix of operations being conducted at CDC.

At airports without a control tower, the FAA does not regulate traffic flow, runway traffic, pattern entry, or IFR traffic in a visual condition. Although there are industry recommendations for standard operations, there is no regulatory enforcement to these particular phases of flight. Thus, the mix of users, aircraft fleet, and operating rules, has the potential to create a confusing and complex operating environment, which can lead to safety concerns.

A comparison was made using annual operations between CDC and airports with federal and contract ATCTs across the United States. There are approximately 524 airports in the U.S. with ATCTs. With a baseline of 120,996 operations in 2022, CDC ranked 117 on the list in regard to total operations, as shown in Figure 6.8.

Figure 6.8: Operations and Airport Traffic Control Tower Comparison



Source: FAA; Ardurra.

Recommendation

The operational level combined with the highly diverse fleet mix operating at CDC is indicative of eventual need of ATCT control.

It is recommended the airport apply for a federal contract control tower to regulate aircraft movement, improve coordination and efficiency, and provide safety-critical communication for the diversity of fleet and number of operations currently and forecasted to operate at the airport.

Locations for an ATCT are assessed in the alternatives chapter to ensure land is preserved for a future facility.

6.8. Utilities

Water, sewer, communications, electrical, and natural gas are all available at the Airport. There is sufficient capacity to accommodate growth. New development may require additional service connections, relocation, or extensions of these utilities.

Recommendation

There is currently no issue with utility access. It is recommended that access and capacity continue to be monitored as development occurs at the airport. Additionally, it is recommended that airport management begin working with the electric utility company to prepare for increased demand of electricity related to electric vehicles and potentially electric aircraft.

6.9. Cedar City Comprehensive Plan

A comprehensive update to Cedar City's General Plan was adopted by the city council on March 9,2022. The following statement is identified in the plan as the community's vision for the city: "Cedar City will be known for its safe, friendly atmosphere, educational and cultural opportunities, sustainable and strong neighborhoods, and economic opportunities allowing individuals, families, and businesses to prosper." In the *Cedar City 2022 General Plan*, the city identified the following objectives to support the City's goal of protecting and expanding the viability of the Cedar City Regional Airport.

- Objective 3.1: Continue to use and review the Airport Overlay Zone to regulate airport-adjacent land uses that may restrict current or future air operations due to encroachment on flight safety zones or noise.
- Objective 3.2: Coordinate with State, federal and industry leaders to secure long-term commitments for quality air service to Cedar City.
- Objective 3.3: Promote Cedar City as an air-served business and tourism destination and as a convenient facility for both general and commercial aviation.
- Objective 3.4: Continue to support improvements at the Cedar City Airport. The lengthening of the existing runway is among these improvements.

6.10. Facility Requirements Summary

The Airport meets FAA design standards for the existing and future airport conditions. Table 6.18 presents other assessment findings and recommendations that were determined from this assessment.

Table 6.18: Airport Facilities Assessment Summary

Facility	Conclusion and Recommendations
Runway 2/20	Maintain the ultimate plan for a 10,000' ultimate runway length
Runway 8/26	Land use planning if/when Runway 8/26 is decommissioned.
Runway Designation	Runway 8/26 designations need to be updated.
Airfield Design	The airfield complies overall with FAA standards. The geometry of taxiway fillets should be updated as needed when reconstructed.
Navigational Aids	Existing NAVAIDS are sufficient and meet State Development Strategy objectives. The rotating airport beacon should eventually be replaced in a location providing better visibility to pilots.
Airport Traffic Control Tower	Land should be preserved for a future ATCT facility.
Vehicle Parking	Additional parking for general aviation businesses is needed.
Fuel Storage	The self-serve fuel facility is not ideally located and should be relocated.
Aircraft Storage	Land should be preserved for additional hangars. Area to accommodate a minimum of 17 tie-downs should also be preserved.
Cargo Apron	Planning should designate a future cargo processing apron due to community development needs.

Endnotes

1 U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular 150/5300-13B, Airport Design." Page 2-3. March 31, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf.

2 Ibid.

3 U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular 150/5060-5, Airport Capacity and Delay." September 23, 1983. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5060_5.pdf.

4 U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular 150/5300-13B, Airport Design." Page 1-13. March 31, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf.

5 Ibid.

6 Ibid. Page 1-14.

7 Ibid. Page 1-13.