2022 Airport Master Plan Study
South Valley Regional Airport / U42

INVENTORY DRAFT v2.0 – March 2022

RS&H

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CHAPTER 1

INVENTORY OF EXISTING CONDITIONS

1.1 INTRODUCTION

The Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5070-6B Change 2, *Airport Master Plans*, outlines the necessary steps in the development of an airport master plan. Identifying existing conditions at South Valley Regional Airport (U42) is the initial step in the master planning process. This step involves collecting data pertinent to an airport and the region it serves. The objective of this task is to provide background information for subsequent phases of analysis.

The development of a master plan for U42 requires the collection and evaluation of data relating to the airport and the surrounding area. This information was obtained through onsite investigations at the airport, interviews with airport management and airport users/stakeholders, and collection and analysis of previous reports and studies.

1.1.1 Airport Setting and Location

U42 sits inside the municipal boundary of the City of West Jordan which is a part of Salt Lake County. The dramatic peaks of the Wasatch Mountains to the east and the rugged Oquirrh Mountain Range to the west make the geography of the area particularly unique. Salt Lake City International Airport (SLC) is approximately a 20-minute drive from U42 via Bangerter Highway. Tooele Valley Airport (TVY) is a 30-minute drive around the northern tip of the Oquirrh Mountains. The airport is located only eleven miles southwest of downtown Salt Lake City and within a few miles of Interstates 15 and 215, as shown in **Figure 1-1**. As explained later in this chapter, TVY and U42 are both owned by Salt Lake City Department of Airports (SLCDA) and serve specific roles as part of the SLCDA airport system.

FIGURE 1-1
VICINITY MAP

Source: RS&H, 2021

1.1.2 Airport Background

U42 was constructed in 1942 as an inland Army training site intended to support basic military and technical training in Kearns, Utah. Ownership was transferred to Salt Lake City shortly after World War II. The airport was named Salt Lake City Municipal Airport II until 2009, when the airport was renamed South Valley Regional Airport.

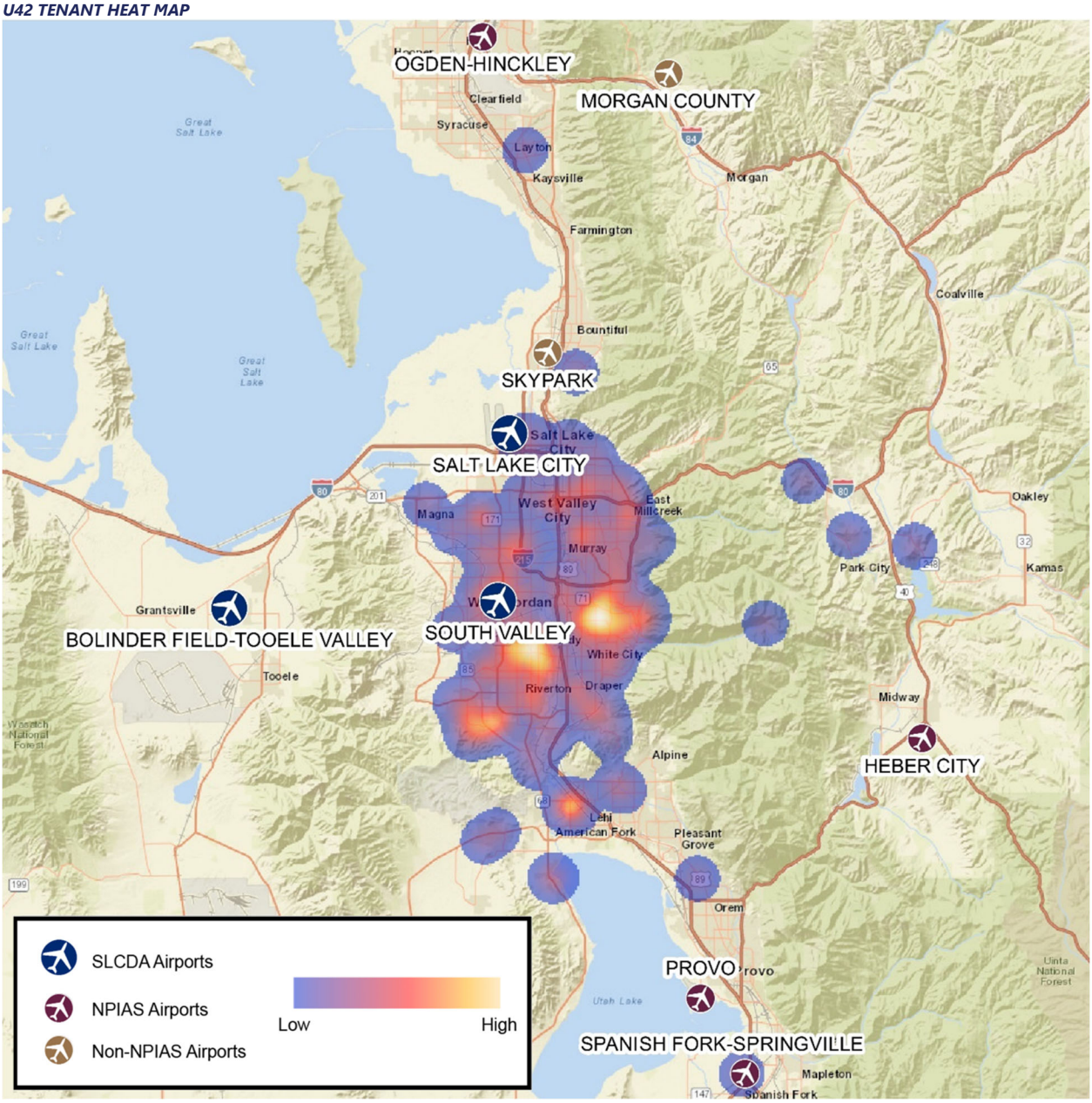
The most recent master plan for U42 was completed in 2006, which proposed several facility developments including the construction of additional hangars and apron expansions. In subsequent years, a new T-hangar row and a new box hangar were constructed. The Utah Army National Guard has also constructed an additional hangar. U42 is often viewed as the preferred alternative airport to SLC for GA users, due to its proximity to the Salt Lake City metropolitan area's population hub and services it has to offer.

1.1.2.1 Community Setting

Situated in the City of West Jordan, U42 is approximately a 20-minute drive from the SLC central business district. The airport is located within a few miles of Interstates 15 and 215. The airport can be accessed from the west by Airport Road which is located between 6200 South Street and 7800 South Street. In 2018, SLCDA engaged in a land swap with the City of West Jordan which will allow for the widening and expansion of 7800 South on the airport's south end. Users traveling along New Bingham Highway can also easily access the airport via 4455 West. Currently, aviation facilities are only located on the west side of the airport; therefore, public access to facilities from the north and east sides of the airport is unavailable.

As shown in **Figure 1-2**, the aviation tenants of U42 reside throughout the region. Overall, the tenant population is primarily centered towards the south Salt Lake Valley with Sandy and South Jordan heavily represented.

FIGURE 1-2
U42 TENANT HEAT MAP



Source: SLCDA, Prepared by RS&H, 2018

1.1.3 Sustainability

The Environmental Protection Agency (EPA) describes sustainability as the basis of one guiding principle: "Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can [co]exist in productive harmony to support present and future generations." Unfortunately, sustainability is often misinterpreted and over-simplified as an inflexible protection of the natural environment at any cost. However, sustainable development under real-world conditions requires a comprehensive approach with consideration of many factors. The complex nature of securing a

sustainable future is why government agencies across the globe, including the FAA, are supporting airport planning initiatives that incorporate sustainable approaches.

This Airport Master Plan incorporates the Airports Council International – North America (ACI-NA) EONS approach for sustainable airport development. Using the triple bottom line approach to sustainability as a starting point, ACI-NA evolved the concept into "a holistic approach to managing an airport so as to ensure the integrity of ***E***conomic viability, ***O***perational efficiency, ***N***atural resource conservation, and ***S***ocial responsibility (EONS) of the airport." To maintain consistency with the airport's plans and sustainability initiatives, the EONS approach is being integrated into the framework of this Airport Master Plan and is critical to its success.

According to FAA guidance on the Sustainable Master Plan Pilot Program and Lessons Learned, reported on December 17, 2012, "Small airports should prioritize the economic pillar of sustainability more than larger airports that have more resources to pursue sustainability initiatives." This is especially true of general aviation airports which receive limited federal funding for capital improvement projects and don't have access to all the same project funding opportunities as commercial service airports. These airports are still obligated to meet FAA Grant Assurance 24 which mandates that an airport "maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible." For these reasons, economic viability will be of substantial consideration throughout the master planning process.

1.2 ECONOMIC VIABILITY

Airports are mandated under FAA Grant Assurances to be "as self-sustaining as possible under circumstances existing at the particular airport[1]. Therefore, while providing services and facilities for the public, U42 must maintain an organizational structure that optimizes revenue generation, decreases overall costs, and provides capital suitable to, at the very minimum, cover operating costs and federal grant matches. As a reliever airport, U42 does not have access to the same levels of federal funding as an airport offering scheduled commercial airline service. Instead, self-sustaining finances at U42 are reliant on lease revenues and airport user fees, such as fuel flowage fees. The following sections develop a baseline inventory of the conditions and facilities which influence or impact the economic viability of U42.

1.2.1 Airport Ownership and Control

U42 is owned by Salt Lake City Corporation and is managed by the Salt Lake City Department of Airports (SLCDA) under the guidance of the mayor of Salt Lake City and the Salt Lake City Council. In addition to U42, the SLCDA manages and operates Salt Lake City International Airport (SLC) and Tooele Valley Airport (TVY). Staff members of the SLCDA manage operations across TVY, SLC, and U42. As an enterprise department of the Salt Lake City Corporation, the Department of Airports requires no funding from property taxes, local government funds, or special district taxes.

Additionally, the City of West Jordan has a nine-member Advisory Board that consists of citizen volunteers appointed by the mayor of West Jordan to serve a four-year term and make recommendations to the

[1] FAA Grant Assurance 24 – Fee and Rental Structure

mayor of West Jordan regarding airport rules and regulations, construction and expansion, and airport policies.

Though the airport is owned by the SLCDA, it must still adhere to federal standards set forth by the FAA to maintain compliance with safe operating practices. As an airport receiving federal funding for capital improvement projects, U42 has an obligation to adhere to federal grant assurances, as further detailed in **Section 1.5.4**. These assurances obligate the airport to adhere to applicable federal law and guidance under Code of Federal Regulations (CFR) Title 14, FAA Advisory Circulars, FAA Orders, and FAA Memos. SLCDA's compliance with FAA regulations is predominantly overseen by the FAA Denver Airports District Office (ADO), though some matters may reach the Northwest Mountain Region Airports Division office or FAA Airport Planning and Environmental Division Headquarters (APP-400) office, as necessary. State Grant Assurances also apply to funding received by the State of Utah. These require SLCDA to follow applicable laws and guidance set by the State of Utah and the Utah Division of Aeronautics, a division of the Utah Department of Transportation (UDOT).

1.2.2 Airport Classification and Role

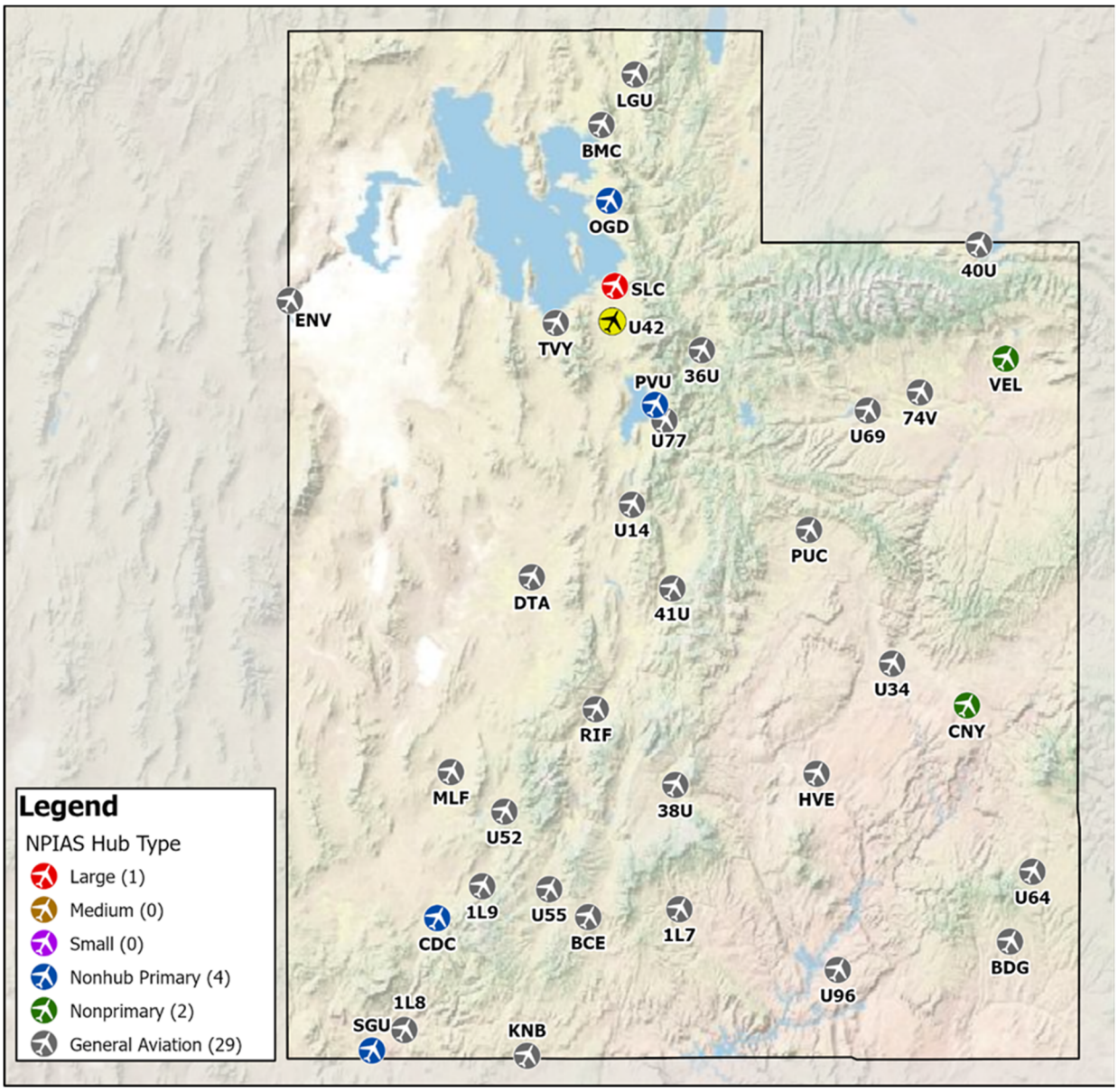
Several criteria have been established by various governing organizations to describe the role that an airport serves within the national, state, or local aviation system. The role of U42 can best be understood by how it is defined and designated by the Federal Aviation Administration, the Utah Department of Transportation and the SLCDA Airport Board.

1.2.2.1 National Plan of Integrated Airports Systems

The Federal Aviation Administration (FAA) has identified in the National Plan of Integrated Airports Systems (NPIAS) approximately 3,400 airports in the United States that are significant to national air transportation and are eligible to receive federal grants under the Airport Improvement Program (AIP). The 2021-2025 NPIAS Report classifies airports as large-hub commercial service, medium-hub commercial service, small-hub commercial service, non-hub commercial service, nonprimary commercial service, reliver, or general aviation. The NPIAS designates the role of U42 as a reliever airport. The designation in the NPIAS of U42 as a reliever airport is beneficial due to opportunities for reliever airports to be given priority in discretionary funding decisions made by the FAA. The role of reliever airports is defined as "An airport designated by the Secretary of Transportation to relieve congestion at a commercial service airport and to provide more general aviation access to the overall community." U42 is designated as a reliever airport because it relieves congestion at Salt Lake City International Airport.

Other nearby airports within the immediate area of U42 include Salt Lake City International Airport (SLC, a large hub commercial service airport), Tooele Valley Airport, (TVY, a general aviation airport), and Provo Airport (PVU, a non-hub commercial service airport). All Utah NPIAS airports are shown in **Figure 1-3**.

FIGURE 1-3
UTAH NPIAS AIRPORTS



Source: RS&H, 2021

1.2.2.2 Salt Lake City Department of Airports – U42 Role

A General Aviation Strategy was prepared by the SLCDA in May 2019. This report evaluated and refined the roles of each airport within the SLCDA airport system. The study recommended policy changes and development strategies to address the needs of the GA community and plan for appropriate facilities at each of the SLCDA-managed airports.

The role of U42 was defined by the SLCDA based on the types of aviation service the airport can provide. The 2019 General Aviation Strategy outlined the following role for (U42);

> *"It is the role of South Valley Regional Airport to serve as a general aviation reliever. U42 will be developed and managed to support the needs of the region for non-air carrier flight operations, consisting of both business and recreational activity. As a mixed-use facility, the Airport will accommodate a broad range of general aviation uses including, single-engine, twin-engine, corporate, public service flight activities, helicopters, and military operations."*

The role assigned to U42 within the SLCDA system of airports will be the lens of which this master plan focuses requirements and development alternatives.

1.2.3 Financial Review

This section provides a high-level overview of the airport's historical operating revenues and expenses, capital expenditures, rates and charges, and FAA grants received. All financial data is shown in the Airport's Fiscal Year (FY). Later sections of this Master Plan will analyze and evaluate alternative financial models of airport management and make recommendations for a financial model to support the preferred facility development plan.

1.2.3.1 Revenues and Expenses

Since FY 2017, U42 has operated with an average net loss of approximately $305,000 per year. This does not include estimated General & Administration Expenses, which when included, calculate to a greater net loss. Most of the airport's operating revenue has come from hangar fees, fuel sales and site leases while the costliest expenses include salaries and benefits, fuel, supplies, and utility payments. **Table 1-1** shows the revenues and expenses of U42 between FY 2017-2021.

TABLE 1-1
REVENUES AND EXPENSES

Revenues	Fiscal Year 2017	2018	2019	2020	2021
Operating Revenues					
General Aviation Hangars	$551,850	$612,159	$570,641	$639,759	$632,043
FBO Hangars	$15,951	$20,975	$17,960	$19,967	$20,122
Office Space	$13,299	$13,619	$12,751	$14,181	$15,219
Leased Sites	$4,545	$4,568	$4,213	$2,714	$742
Military - Army Guard Lease	$80,138	$80,138	$80,138	$83,219	$86,300
Other	$14,625	$8,272	$5,276	$7,250	$10,698
Fuel Sales	$765,408	$979,402	$1,053,134	$1,254,087	$1,312,712
Total Operating Revenues	$1,445,816	$1,719,133	$1,744,113	$2,021,177	$2,077,836
Nonoperating Revenues (Expenses)					
Salaries	$657,543	$775,894	$721,404	$772,572	$764,566
Benefits	$243,057	$259,163	$271,433	$301,114	$301,833
Operations and Maintenance Supplies	$133,294	$52,978	$61,418	$56,907	$89,202
Diesel and Gasoline Fuel	$11,309	$15,982	$21,327	$14,026	$7,148
Other Fuel	$619,200	$697,374	$838,772	$895,117	$916,756
Chemicals	$1,547	$12,971	$17,199	$22,303	$870
Safety Equipment	$2,701	$1,081	$414	$1,596	$2,319
License & Tags	$150	$150	$250	$250	$250
Small Tools & Equipment	$83,366	$18,503	$1,676	$290	$1,041
Contractual Payments and Professional Services	$66,866	$26,847	$55,513	$37,293	$69,232
Electrical Power	$44,919	$45,830	$43,359	$47,262	$42,939
Natural Gas	$26,313	$27,898	$24,948	$19,561	$21,631
Water	$36,051	$38,714	$37,897	$49,235	$61,295
Telephone	$6,069	$5,985	$3,914	$5,841	$4,602
Miscellaneous	$1,082	$444	$5,398	$3,913	$2,774
Total Nonoperating Revenues (Expenses)	$1,933,467	$1,979,814	$2,104,922	$2,227,280	$2,286,458
Total Revenues	**($487,651)**	**($260,681)**	**($360,809)**	**($206,103)**	**($208,622)**

Source: SLCDA Records, Prepared by RS&H, 2021
Note Estimated General & Administration Expenses and Estimated Depreciation not included

1.2.3.2 FAA Grant History

Since 2010, U42 has received approximately $5.2 million in AIP grants, of which $4 million was designated for pavement rehabilitation. As part of the FAA NPIAS, U42 also receives $150,000 of general aviation entitlement funding each year. **Table 1-2** summarizes the federal grant history at U42.

TABLE 1-2
FAA GRANT HISTORY

Year	Total AIP	City Description of Work
2010	$300,000	Install Airfield Guidance Signs
2012	$905,878	Improve Airport Drainage
2014	$500,000	Rehabilitate Apron
2016	$2,675,000	Construct Taxiway, Rehabilitate Runway - 16/34, Rehabilitate Runway Lighting - 16/34
2019	$789,582	Rehabilitate Taxiway

Source: Federal Aviation Administration, 2021

1.2.3.3 Capital Improvement Plan

SLCDA maintains an existing Capital Improvement Program (CIP) that identifies projects that it expects to implement in the coming years. The existing CIP will be updated as part of this master plan. In the next 10 years, SLCDA is planning for $4.3 million in capital projects. Funding for these projects is expected to be through a mix of FAA AIP grants, State grants, and local funding. **Table 1-3** shows the Capital Improvement Plan at U42 from 2021-2031.

TABLE 1-3
CAPITAL IMPROVEMENT PLAN

Year	Description	Funding Source	State Apportionment	Entitlements	State	Sponsor	Total
2025	Pavement Preservation	State Grant			$110,000	$12,222	$122,222
2025	Taxiway A & B Rehabilitation	Federal AIP	$2,100,000	$450,000	$131,819	$131,819	$2,813,638
2027	Construct Perimeter Fence	Federal AIP		$600,000	$31,016	$31,016	$662,032
2031	Rehab Apron	Federal AIP		$600,000	$31,016	$31,016	$662,032

Source: SLCDA, 2021

1.2.3.4 Rates and Charges

Based aircraft at U42 are stored on uncovered tiedowns on the apron, in shaded hangars, or in fully enclosed T-hangars. There are also several large storage hangars on the airfield that are independently leased out and three hangars that are managed by the FBO. As shown in **Table 1-4,** each storage area has an associated monthly fee for its usage.

TABLE 1-4
RATES AND CHARGES

Hangar Type	Per Month Fee
Tie Down	$50
Shade	$88
Single	$271
Single End	$271
Row G Single	$271
Twin	$361

Source: SLCDA, 2021

1.3 OPERATIONAL EFFICIENCY

Operational efficiency and the maximization of resource utility are vital to the success of U42. However, operational safety at any airport should never be compromised in favor of development which prioritizes efficiency. The FAA offers recommendations and guidance to airports for geometric layout and engineering design of airfield facilities through Advisory Circulars such as 150/5300-13A *Airport Design*. The following sections develop a baseline inventory of the conditions and facilities which influence or impact the operational efficiency of U42.

1.3.1 Meteorological Conditions

Predominant weather conditions at the airport influence the ability for operations to take place effectively. Temperature, precipitation, winds, visibility, and cloud ceiling heights are elements used to understand the local climate and the effect it has on airport operations. U42 is in a semi-arid climate located south of the Great Salt Lake and within a valley created by the Wasatch and Oquirrh mountain ranges. The following is a summary of historical weather conditions in Salt Lake County as obtained from the National Oceanic and Atmospheric Administration station.

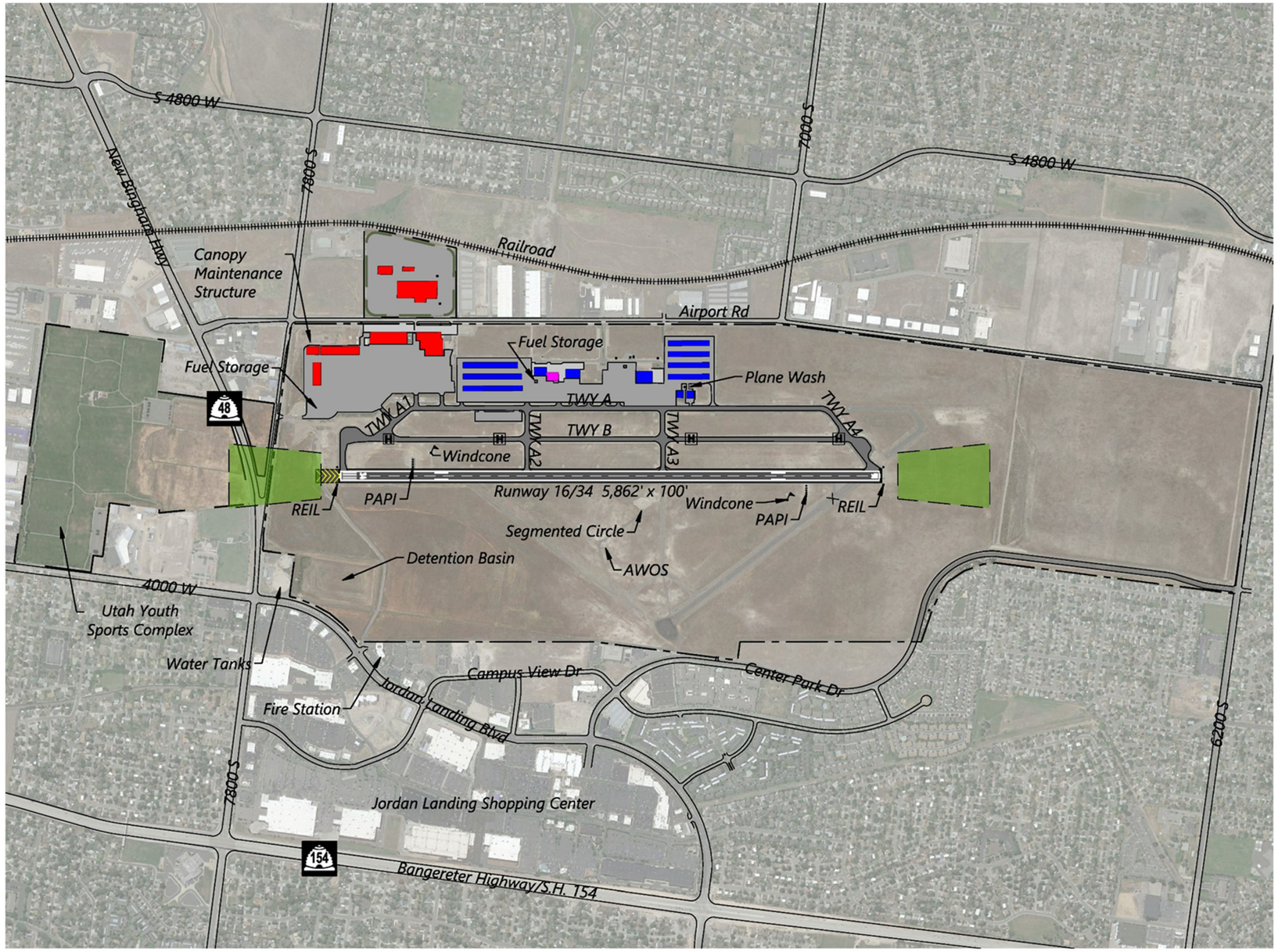
Between 1991 and 2020, July was typically the warmest month with an average high temperature of 94.0 degrees Fahrenheit and an average low temperature of 68.2 degrees Fahrenheit. The coldest month on average was January with an average high temperature of 38.6 degrees Fahrenheit and an average low temperature reaching 24.2 degrees Fahrenheit. On average, 7.6 days per year exceeded 100 degrees Fahrenheit and 20.6 days had a high temperature that did not exceed 32 degrees Fahrenheit.

Within the same time frame, the month with the highest precipitation was April, averaging 2.16 inches. Total annual average precipitation for this period was 15.52 inches. The month with the lowest average precipitation has been August with only 0.68 inches. The month with the most snowfall was January, which brought an average of 12.7 inches, with December and February close behind with 12.1 and 10.7 inches respectively. In total, 51.9 inches of snow per year were experienced between 1991 and 2020.

1.3.2 Airfield Facilities

This section provides an inventory of airport airside facilities, which includes the runway, taxiway, and apron systems as well as the condition of each. Additionally, this section inventories navigational aids, lighting, and the airspace surrounding the airport. **Figure 1-4** provides an overview of the facilities at U42.

FIGURE 1-4
AIRPORT OVERVIEW



U42 AIRPORT FACILITIES

- Helipad
- Property Boundary
- Hangars
- FBO Terminal/Hangar
- Utah Army National Guard
- Runway Protection Zone (RPZ)

1,200' 500' 0' 1,000'
Scale 1":1,000'

1.3.2.1 Runway

Runway 16-34 is the sole runway at U42. This runway has a length of 5,862 feet, a width of 100 feet, and is constructed of asphalt. **Table 1-5** summarizes the characteristics of Runway 16-34. The runway is constructed to a Runway Design Code (RDC) of B-II-4000 and has a weight bearing capacity of 30,000 pounds for single-wheel main gear aircraft and 43,000 pounds for dual-wheel main gear aircraft. The runway is equipped with pilot-controlled Medium Intensity Runway Lights (MIRL) and is marked with non-precision markings on Runway 34 and visual markings on Runway 16.

TABLE 1-5
RUNWAY CHARACTERISTICS

Runway Characteristics	RWY 16	RWY 34
Magnetic Heading	158	338
TORA/TODA/ASDA/LDA	5,862'	5,862'
Width	100'	100'
Aircraft Approach Category (AAC)	B	B
Airplane Design Group (ADG)	II	II
Pavement Surface	Asphalt	Asphalt
Single Wheel Weight Capacity	30,000 lbs.	30,000 lbs.
Dual Wheel Weight Capacity	43,000 lbs.	43,000 lbs.
Runway Markings	Visual	Non-precision
Approach Type	Visual	Non-precision
Visibility Minimums	Visual	7/8 Mile (LPV)

Source: FAA 5010 Master Record
Note: TORA = take off run available; TODA = take off distance available, ASDA = accelerate-stop distance available; LDA = landing distance available.

1.3.2.2 Helipads

Four public use helipads are located at the airport on Taxiway B near connector taxiway intersections as shown in **Figure 1-4**. The helipads are primarily utilized by student helicopter pilots and by the Utah Army National Guard. The helipads are helpful reference points for helicopter pilots and aid in communicating location to other users at the airport. Note that no helicopter-specific approach or departure procedures are in place at the airport.

1.3.2.3 Taxiway

The airfield includes two parallel taxiways for circulation to Runway 16-34, Taxiway A and Taxiway B. Taxiway A is located 700 feet west of the runway, immediately adjacent to the apron. Between Taxiway A and Runway 16-34, lies Taxiway B. Both Taxiway A and Taxiway B are equipped with a Medium Intensity Taxiway Lighting System (MITL). Taxiways A1, A2, A3, and A4 serve as connector taxiways between the runway and apron. All existing taxiways at U42 have a width of 50 feet as detailed in **Table 1-6**.

TABLE 1-6
TAXIWAY CHARACTERISTICS

Taxiway Designator	Width	Type
A	50'	Access Taxiway to Apron
A1	50'	Connection Taxiway for RWY 16-34
A2	50'	Connection Taxiway for RWY 16-34
A3	50'	Connection Taxiway for RWY 16-34
A4	50'	Connection Taxiway for RWY 16-34
B	50'	Parallel Taxiway for RWY 16-34

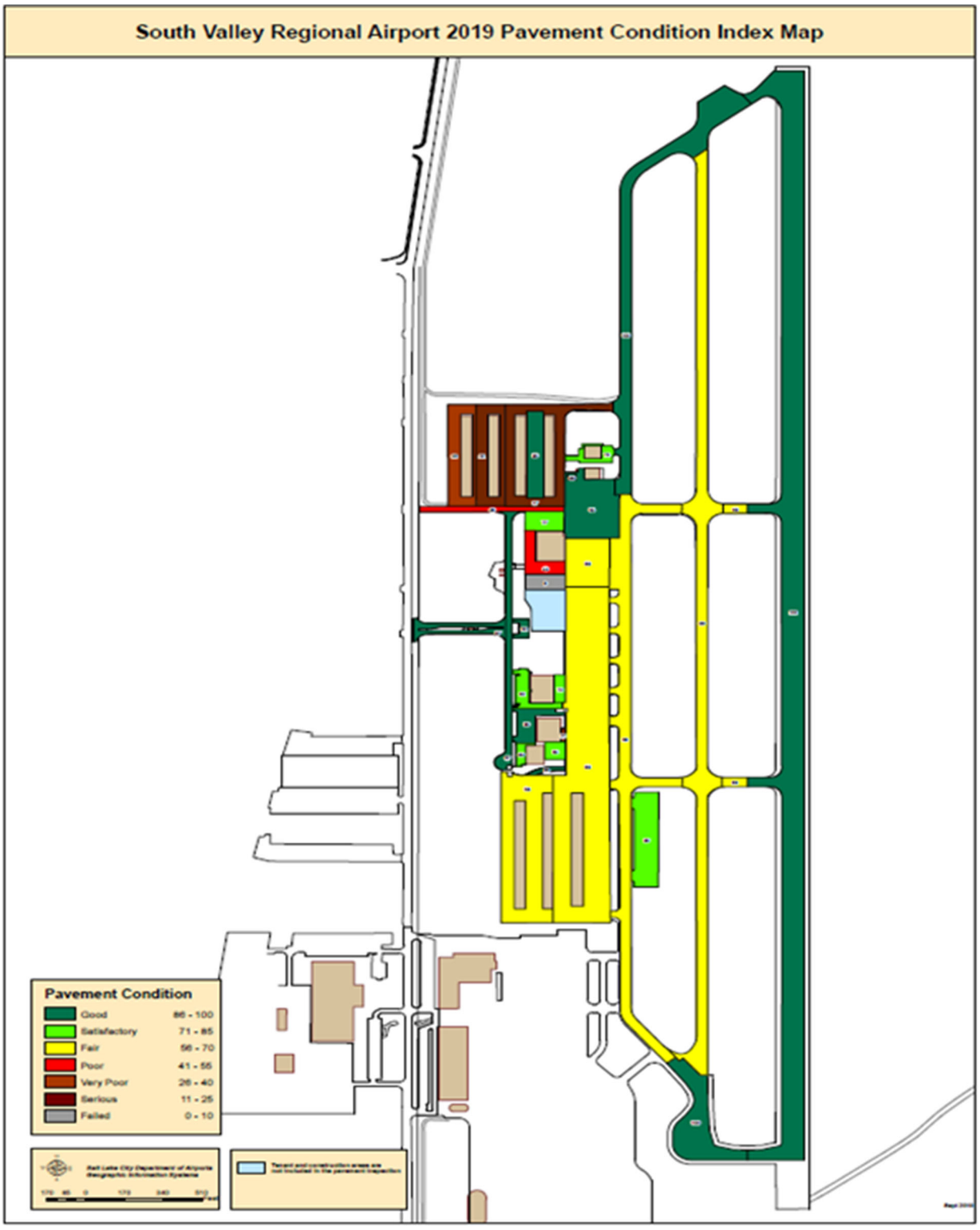
Source: SLCDA, 2021

1.3.2.4 Pavement

U42 conducts Pavement Condition Index (PCI) surveys every few years with the most recent survey having been performed in September 2019. The PCI is a visual analysis of the existing pavement surface conditions and serves as the baseline for progressive five-year PCI projections. PCI values range from 0, representing pavement that has failed and is no longer usable, to 100, which represents new pavement in perfect condition. The PCI values are further broken-down into a numeric index indicating the type of pavement repair anticipated, including reconstruction (0 to 25), major rehabilitation (25 to 55), or preventative maintenance (55 to 100).

The airport's paved airfield surfaces include pavement conditions ranging from good to failed. Runway 16-34 is made of asphalt and is in good condition. Taxiway B and the southern half of Taxiway A, which run parallel to Runway 16-34, are in fair condition. The northern half of Taxiway A, which connects the apron to the arrival end of Runway 16, is in good condition. The very small amount of pavement that has failed at the airport can be found on the apron, north of the FBO. The runway, taxiway, and apron pavement conditions resulting from the PCI inspection are illustrated in **Figure 1-5**.

FIGURE 1-5
PAVEMENT CONDITION



Source: SLCDA, 2021

1.3.2.5 Navigational Aids and Lighting

The airport has Precision Approach Path Indicator (PAPI) and Runway End Identifier Light (REIL) systems installed for navigation assistance; however, unlike both TVY and SLC nearby, no Instrument Landing System (ILS) is available, and no ILS procedures exist at the airport. While an ILS approach would likely be beneficial for future development at U42, the location of the airport in relation to arrival/departure flight paths at SLC presents a challenge. The 2006 Master Plan examined the possibility of installation of an ILS at U42 and deemed doing so unfeasible without significantly affecting the aircraft operations at SLC. As part of this master plan, the airspace is analyzed extensively with consideration to new technologies and current standards in effort to find opportunities to separate U42 instrument traffic from SLC.

Today, an Area Navigation (RNAV) (GPS) approach is available for Runway 34. U42 is equipped with a Remote Transmitter/Receiver (RTR) which allows pilots to communicate with the SLC ATCT (Air Traffic Control Tower). Radar coverage in the area almost extends to the surface of U42. A summary of the NAVAIDS available at U42 is outlined in **Table 1-7**.

TABLE 1-7
NAVIGATIONAL AIDS

Navigational Aids	Runway 16	Runway 34
Visual Aids		
Lighting System	MIRL	MIRL
Approach Lighting	REIL	REIL
Touchdown Zone Lighting	No	No
Visual Slope Indicator	PAPI	PAPI
Runway Markings	Non-Precision	Non-Precision
Runway Centerline Lights	No	No
Electronic Aids (Approaches)		
ILS or LOC DME	No	No
ILS CAT II-III	No	No
RNAV (RNP)	No	No
RNAV (GPS)	No	Yes
VOR/DME	No	No
Other Airport Aids		
AWOS	Yes	
Rotating Beacon	Yes	
RTR	Yes	
Segmented Circle with Windcone	Yes	

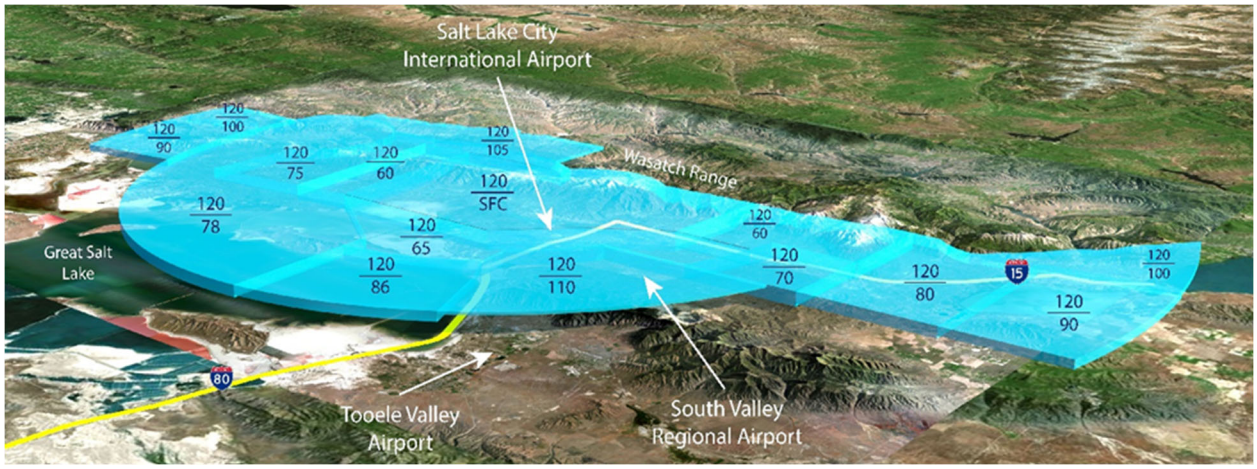
Source: FAA Chart Supplements, FAA.gov, 2021
Notes: AWOS = Automated weather observing system, MIRL = Medium intensity runway light, PAPI = Precision approach path indicator, REIL = Runway end identifier lights, RNAV = Area navigation, RTR = remote transmitter/receiver, VOR = very high frequency omni-directional range, DME = distance measuring equipment.

1.3.2.6 Airspace

U42 is a non-towered airport located within uncontrolled airspace beneath SLC Class B airspace shelf. SLC Terminal Radar Approach Control (TRACON) provides approach and departure services for the airport. Under Visual Flight Rules (VFR), this can include providing traffic advisory services to aircraft. If Instrument Flight Rules (IFR) exist, then the SLC TRACON will provide separation for aircraft at U42.

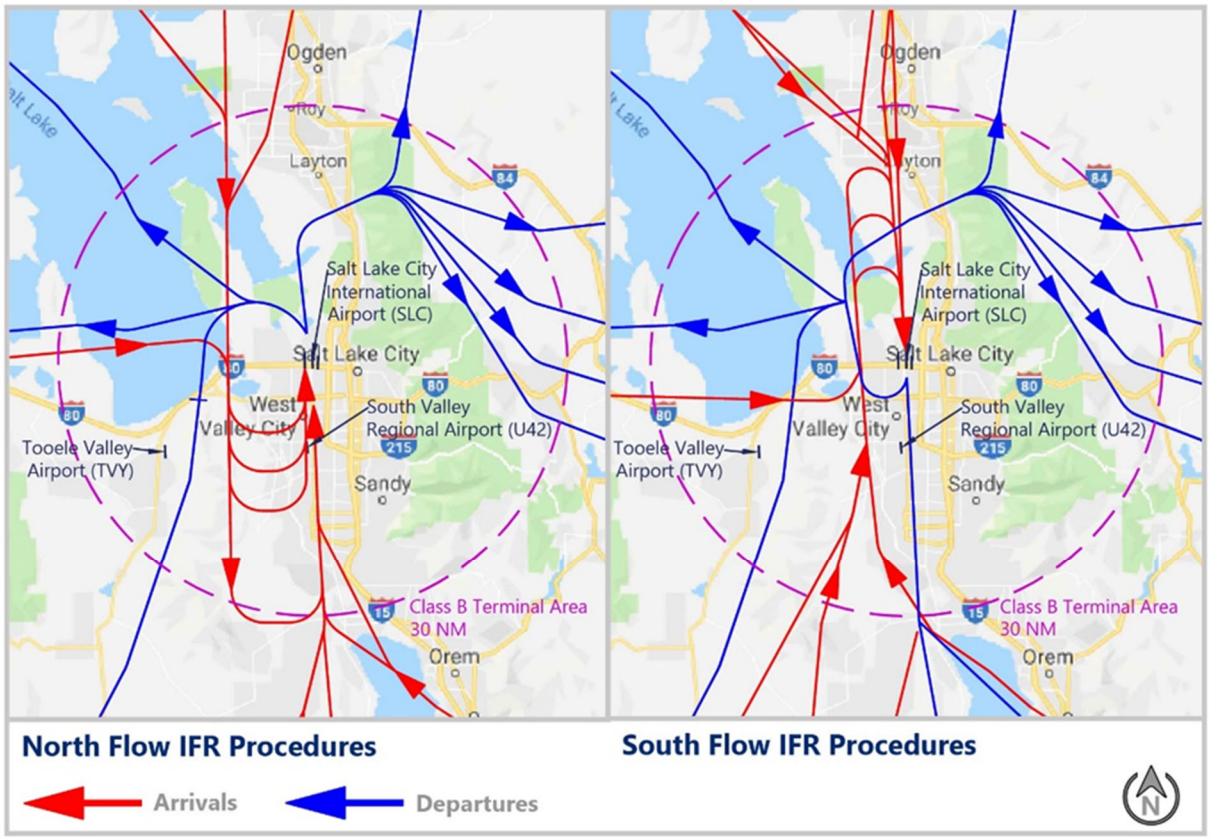
The airport is located approximately ten miles directly south of SLC, in line with the extended centerline of the approach path for several runways at SLC, but underneath SLC's Class B airspace. The airports share common airspace within the Salt Lake Valley, and as a result, instrument operations at SLC and U42 are dependent on one another. The SLC Class B airspace floor begins at 6,000 MSL, or approximately 1,400 feet above ground level (AGL) of U42. SLC arrivals from the south and southbound departures require aircraft to fly directly over U42 which prevents simultaneous independent approaches at both airports. Due to the airport's proximity to SLC, aircraft departing and landing at U42 must be equipped with Automatic Dependent Surveillance-Broadcast (ADS-B Out). **Figure 1-6** shows the Class B airspace of SLC above the Salt Lake City metropolitan area. **Figure 1-7** shows the IFR procedures for SLC in a north and south flow as well as the relation of those approaches to U42 and TVY.

FIGURE 1-6
SLC CLASS B AIRSPACE



Source: Google Earth, RS&H Analysis, 2018

FIGURE 1-7
SLC NORTH AND SOUTH FLOW IFR PROCEDURES



Source: FAA Approach and Departure Procedures, RS&H Analysis, 2019

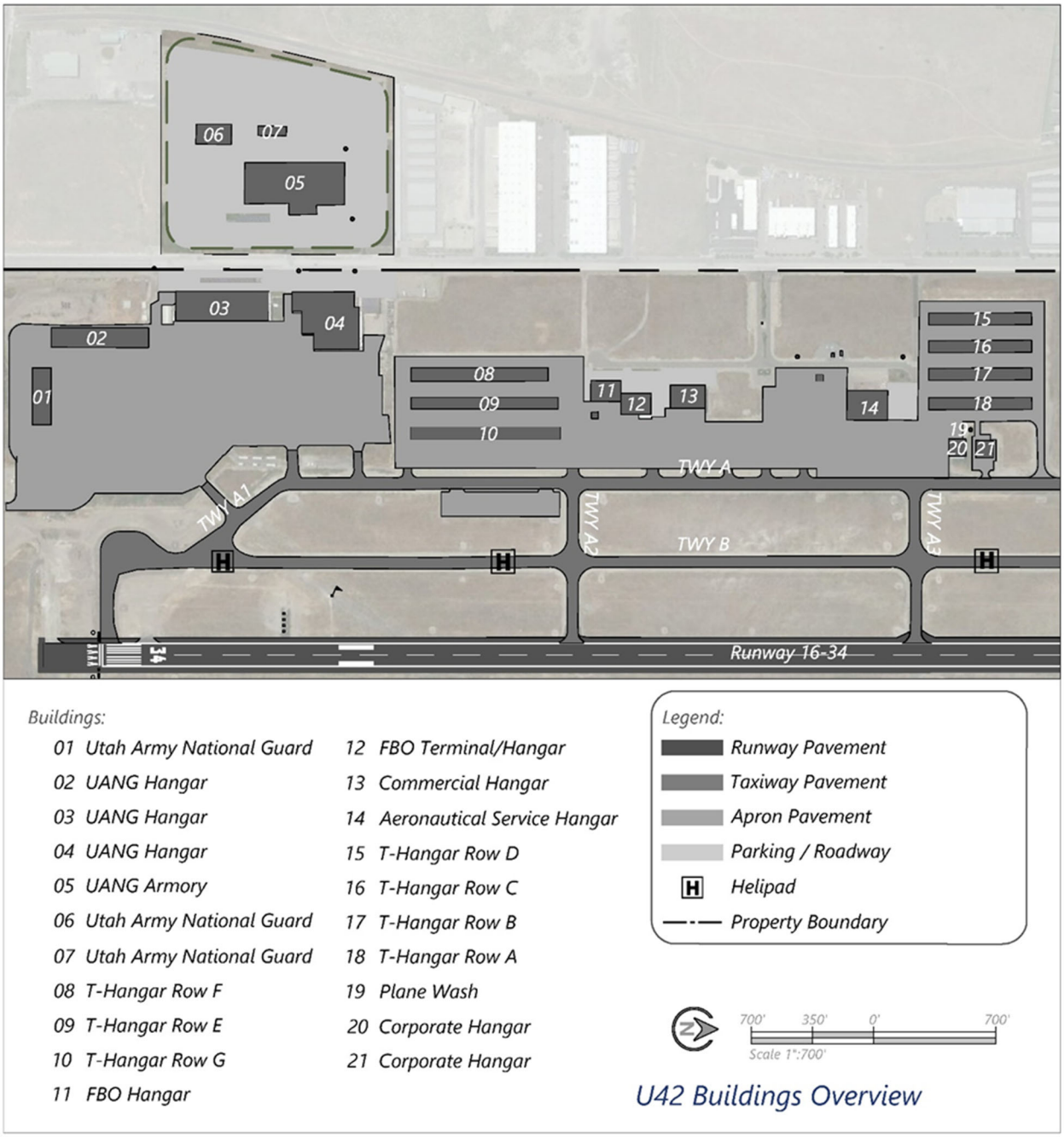
U42 has one FAA-approved departure procedure, South Valley One (RNAV), which requires a southbound climb to 9000' MSL (~4,400' AGL). This departure procedure terminates at the Fairfield VOR/DME which is outside of SLC Class B airspace. To the south, restricted airspace areas R-6412 A, B, C, and D, pose a challenge to general aviation departures from U42. 30 miles to the north is Hill Air Force Base, the Air Force's second largest base by population and geographical size.

Aircraft must maintain a vertical separation of 1,000 feet or 3 nautical miles horizontally, and only 1,400 feet exists between U42 and the bottom of SLC airspace. For operations under VFR conditions, the issue of congestion has minimal impact as FAA flight procedures allow aircraft operating at U42 to fly below those operating at SLC under visual flight rules. However, instrument operations into U42 must be operated between SLC operations due to the impact of a missed approach procedure not maintaining the required 1,000 feet of vertical separation.

1.3.3 General Aviation and Utah Army National Guard Facilities

This section describes the location and condition of various facilities important to the overall operation of the airport. These facilities include hangars, aircraft tie-downs, parking positions, fixed base operators (FBOs), aircraft rescue and firefighting (ARFF) facilities, and other airport owned facilities. **Figure 1-8** provides an overview of existing buildings at U42.

FIGURE 1-8
U42 BUILDINGS OVERVIEW



Source: RS&H, 2021

1.3.3.1 Aircraft Storage and Parking

Aircraft at U42 are parked and/or stored in one of three areas: apron tiedowns, storage hangars, or T-hangars. Tiedowns are uncovered defined locations on the apron with anchors to secure aircraft while parked at the airport. There is a total of 76 tiedown spots on the apron, 64 of which are reserved for based aircraft and the remaining 12 tiedowns for transient aircraft. The FBO, corporate, and commercial hangars at the airport are capable of housing larger aircraft or multiple smaller aircraft in an enclosed and secure

space. The T-hangars offer small areas of partially or fully enclosed space for parked aircraft. There are 42 shaded T-hangar bays, 95 single-engine T-hangar bays, and 18 twin-engine T-hangar bays at the airport. As of October 2021, the hangar waiting list has 14 interested parties. **Table 1-8** outlines the aircraft storage facilities available at U42.

TABLE 1-8
BASED AIRCRAFT STORAGE FACILITIES

Number	Building	Type	Dimensions	Condition	Units	Area (Sq ft)
8	T-Hangar Row F	Single	60 x 600	Fair	27	36000
9	T-Hangar Row E	Twin	50 x 630	Good	18	31500
10	T-Hangar Row G	Single	60 x 600	Excellent	28	36000
11	FBO Hangar	Box	80 x 100	Good	1	8000
12	FBO Terminal/Hangar	Box	90 x 130	Good	1	11700
13	Commercial Hangar	Box	100 x 150	Fair	1	15000
14	Aeronautical Service Hangar	Box	125 x 175	Good	1	21875
15	T-Hangar (Shade) Row D	Shade	50 x 440	Good	21	22000
16	T-Hangar Row C	Single	50 x 440	Good	20	22000
17	T-Hangar (Shade) Row B	Shade	50 x 440	Good	21	22000
18	T-Hangar Row A	Single	50 x 440	Fair	20	22000
20	Corporate Hangar	Box	75 x 75	Excellent	1	5625
21	Corporate Hangar	Box	75 x 75	Excellent	1	5625

Source: SLCDA, 2021

1.3.3.2 Fixed Base Operator, Fuel, and Plane Wash

SLCDA operates the sole FBO at U42, with 10 employees involved in its operations. Previously, Leading Edge Aviation operated the FBO before their lease expired in 2016. Two 10,000-gallon fuel tanks allow the FBO to offer both full-service and self-service 100LL and Jet A facilities. Fuel trucks are parked near the fuel tanks in between the FBO and nearby T-hangars. In addition, a coin-operated plane wash is available for use.

1.3.3.3 Airport Maintenance

Most of the airport maintenance equipment is stored outdoors in an area north of the FBO. A list of owned equipment along with their condition is shown in **Table 1-9**.There are two SLCDA employees dedicated to U42. These individuals provide maintenance services year-round. In the winter, they provide snow removal services between 0700 and 1700.

TABLE 1-9
EQUIPMENT LIST

Equipment	Condition
One ton pickup with plow and spreader	Good
One ton pickup with sprayer	Good
Two 7720 John Deer field tractors with field n	Good
One Backhoe	Good
One runway plow with towable broom	Good
One runway blower	Good
One road grader with push plow	Good
One ten wheel dump truck with plow and spı	Good
One street sweeper	Good
One towable pressure washer	Good
One runway lighted x	Good
One front end loader with push plow and dir	Good
Two riding turf mowers	Good

Source: SLCDA, 2021

1.3.3.4 Aircraft Rescue and Firefighting

U42 does not have ARFF facilities and operations since the airport does not serve commercial passenger aircraft and therefore FAA does not require that this service be available at U42. However, the headquarters of the West Jordan Fire Department, Station #53, happens to be located less than a ½ mile east of the threshold of Runway 34. A small, paved road on the east side of the airport connects the intersection of S Jordan Landing Boulevard and S Plaza Center Drive with the blast pad behind Runway 34. This provides the fire station with direct access to the airfield. If the SLCDA desires to become a FAA Part 139 certificated airport, dedicated ARFF services would need to be implemented.

1.3.3.5 General Aviation Services

Aircraft maintenance, charter operations, and flight training companies are available at the airport. Flight training companies, both fixed wing and helicopter, include Randon Aviation, AeroTech Aviation, and Utah Helicopter. Leading Edge Aviation, the previous FBO, managed the airport's flight training prior to 2016. When this company left U42, it caused a sharp decrease in operations. As of 2016, the airport's flight training is being filled by multiple companies. These companies, in addition to others that have expressed interest in relocating operations to U42, have requested more office and hangar space than is currently leased due to the strong demand being experienced. Advantage Aviation provides full-service maintenance at the airport.

1.3.3.6 Utah Army National Guard Aviation Support Facility

The Utah Army National Guard's Aviation Support Facility, which houses the 211th Aviation Regiment, is a 59-acre section of leased land in the southwest corner of the airport. Three large hangars, two of which are climate-controlled, provide space for military aircraft storage, ground support equipment, and maintenance operations. This section of the airfield also contains its own underground fuel storage facility that lies underneath a 650,000 sq. ft. apron area. High-security fences and gates separate the Utah National Guard facilities from the rest of the airport. There are 11 Blackhawk helicopters and 18 Apache

helicopters based at U42, which all utilize the airspace above underdeveloped areas immediately south and east of the airport for pilot training. Directly across Airport Road, the Utah Army National Guard has two buildings dedicated to the administrative side of its operations, an armory, and a vehicle storage area. In 2018, military regional pilot training was held at U42 due to lack of space at other previous training airports. **Table 1-10** lists the size of the Utah Army National Guard Facilities.

TABLE 1-10
UTAH ARMY NATIONAL GUARD FACILITIES

No.	Building	Sq ft
1	Army National Guard	19,592
2	Commercial/Maintenance/Storage Hangar	35,112
3	Maintenance/Storage Hangar	50,666
4	Maintenance/Storage Hangar	59,760
5	Army National Guard Armory	82,281
6	Army National Guard	13,119
7	Army National Guard	4,907

Source: SLCDA, 2021

1.3.4 Landside and Access Roadways

Airport landside facilities provide intermodal connections between the airport and a variety of ground transportation modes. These facilities include regional access connections, on-airport circulation roadways, as well as public and employee parking facilities. These facilities are described in the following sections.

1.3.4.1 Regional Access

The airport can be accessed from the west by Airport Road, located between 6200 South Street and 7800 South Street. Bangerter Highway, which runs north-south on the east side of the airport, intersects both 7800 and 6200 South Streets. Approximately 4 miles further east is the intersection of interstate highways 15 and 215. In 2018, SLCDA engaged in a land swap with the City of West Jordan which allowed for the widening and expansion of 7800 South on the airport's south end. Users traveling along New Bingham Highway can also easily access the airport via 4455 West. Currently, aviation facilities are only located on the west side of the airport property; therefore, public access to facilities from the north and east sides of the airport is unavailable.

1.3.4.2 Parking

Parking is located both north and west of the U42 FBO, adjacent to the building. The FBO is easily accessed east of Airport Road and is located at the end of a dead-end road. Between Randon Aviation and the FBO on the west side of the airport, there are more than 100 available parking spots. Between these two buildings, there is a small aircraft viewing area with ten parking spots.

1.3.5 Utilities

The airport is served by multiple utility companies. Natural gas pipelines, owned and maintained by Questar Gas, are located within and around airport property. Rocky Mountain Power provides the airport with electricity. Inside airport property on the west side, Rocky Mountain Power's existing 2MW power

lines extend underground to transformers located near existing airport buildings. Secondary power lines branch off from these transformers to feed power to the airport. The communication facilities at U42 include both Qwest owned telecommunication facilities and airport owned facilities. Qwest telecommunication lines extend from the telecommunication pads on Airport Road to airport facilities including the FBO and existing corporate hangars. Inside of airport property, there is an airport warning system and two CASS (Computer Access Security System) gates.

Water is serviced by an 8-inch waterline loop that is owned and maintained by SLCDA. This loop is fed by two master meters, one that is near the main entrance to the airport, on Airport Road, and the other east of the Army National Guard on 7800 South. There are several 8- and 12-inch pipes which are used to drain almost all current sewer production to the south into West Jordan's main line located in 7800 South. In 2008, new 8- and 12-inch sewer lines were installed to provide wastewater conveyance capacity for future expansion of facilities. These sewer lines connect to The City of West Jordan's existing system on the east side of the airport.

1.4 NATURAL RESOUCE CONSERVATION

When not managed and maintained responsibly, natural resources can be exhausted. As a public service facility, SLCDA understands it has a duty to promote policies which seek to protect and conserve natural resources. Acting on this duty occurs through policies and development which limit/reduce greenhouse gas emissions and discharge into water systems, provide opportunities for development of energy efficient facilities, promote environmental stewardship practices, protect wildlife by humanely discouraging its presence on the airfield, and supporting industry transitions to renewable energy sources.

1.4.1 Environmental Conditions

Environmental conditions and issues requiring consideration at U42 include the following:

- Air quality
- Biological resources
- Climate
- Farmlands
- Hazardous materials, solid waste, and pollution prevention
- Land uses
- Natural resources and energy supply
- Noise and noise compatibility
- Socioeconomics, environmental justice, children's environmental health, and safety risks
- Visual effects
- Water resources

For detailed information regarding all environmental resource categories please see **Appendix XX**.

1.5 SOCIAL RESPONSIBILITY

As a public facility in the southern Salt Lake City metropolitan area, SLCDA recognizes it has an obligation to the surrounding communities to act in a socially responsible manner. In action, this translates into the following:

» Abide by all federal, state, and local regulations and meet contractual FAA grant assurances
» Maintain competitive rate and fee structure to support operating and capital expenses
» Act ethically in all business and development decisions
» Remain transparent with community stakeholders about airport related decisions
» Make efforts to provide business and employment opportunities to the region
» Ensure equal treatment of all persons and remain intolerant of discrimination in any form
» Use the airport's standing within the community to support and advance positive community goals and values

The following sections develop a baseline inventory of the conditions which influence or impact the social responsibility held by SLCDA.

1.5.1 Noise

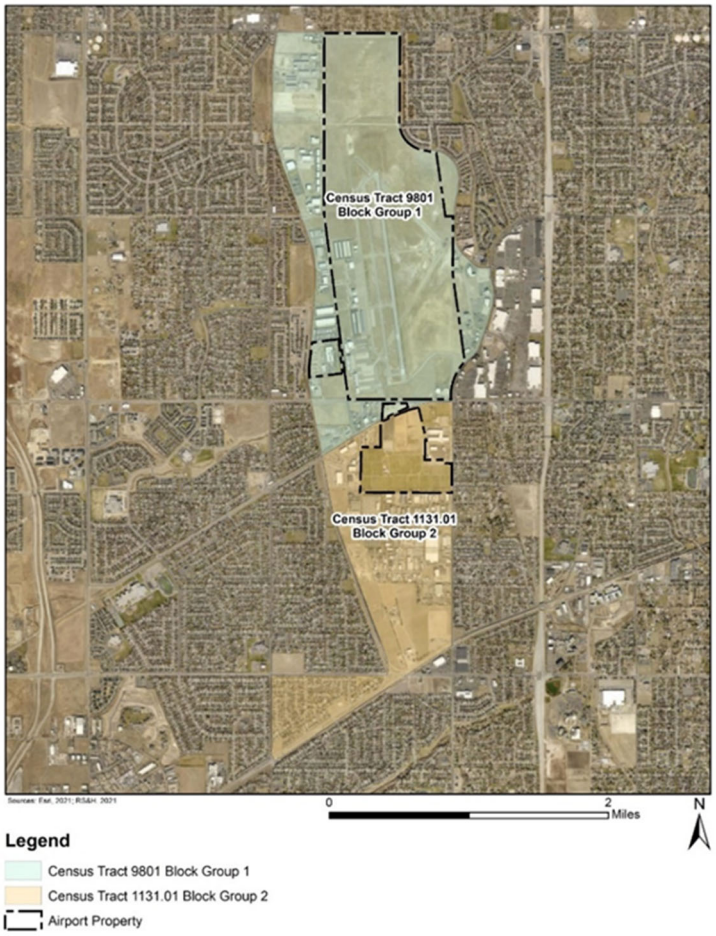
The most current noise exposure map, developed in 2006, shows the 65 dB DNL contour does not extend off airport property. That map shows the projected 65 dB DNL contour, which anticipates growth in operations for 2024 also does not extend off airport property. The 65 dB DNL level is the federal significance threshold for aircraft noise exposure and land use compatibility. Regardless of the federal policy, given the large amount of residential development near the airport, noise has historically been an important issue to the surrounding community as aircraft overflights might be interpreted by nearby residents as being a nuisance.

This master plan provides updated noise contours as described in sections after the Forecast of Aviation demand. As part of this study, flight patterns and airspace procedures are analyzed with consideration of noise impacts to surrounding neighborhoods.

1.5.2 Socioeconomic and Environmental Justice

The airport is in West Jordan, Utah which is within Salt Lake County. The airport is located within two U.S. census tracts; Census Tract 9801, Block Group 1 and Census Tract 1131.01, Block Group 2 (see **Figure 1-9**). Airport property does not include any residences. Data for the following sections was taken from the U.S. Census American Community Survey (ACS) 5-Year Estimates from 2019.

FIGURE 1-9
SOUTH VALLEY REGIONAL AIRPORT CENSUS TRACTS



Source: RS&H Analysis, 2021.

1.5.2.1 Population and Housing

Table 1-11 compares population and housing data for airport census tracts compared to West Jordan, Salt Lake County, and the state of Utah, which were included for comparison purposes. The population was the lowest in the airport census tracts and highest for the state. Housing occupancy for the airport census tracts are generally similar when compared to West Jordan, the county and state.

TABLE 1-11
POPULATION AND HOUSING CHARACTERISTICS

Characteristic	Airport Census Tracts/a/	West Jordan	Salt Lake County	Utah
Total Population	947	116,480	1,160,437	3,205,958
Total Households	320	35,366	374,820	977,313
Average Persons Per Household	N/A	3.28	2.99	3.12
Percent Housing Occupied	99.30%	96.70%	94.00%	88.70%

Note: /a/ - Airport Census Tracts include Census Tract 9801, Block Group 1 and Census Tract 1131.01, Block Group 2
Source: U.S. Census Bureau, 2019 ACS 5-Year Estimate

1.5.2.2 Employment

Table 1-12 compares employment rates for the airport census tracts compared to West Jordan, Salt Lake County, and the state of Utah. Unemployment in the airport census tracts is higher (9.17%) when compared to West Jordan (3.0%), Salt Lake County (2.5%), and Utah (3.6%).

TABLE 1-12
EMPLOYMENT CHARACTERISTICS

Characteristic	Airport Census Tracts/a/	West Jordan	Salt Lake County	Utah
Percent Unemployed	9.2%	3.0%	2.5%	3.6%

1.5.2.3 Public Services

The West Jordan Fire Department, with a total of four fire stations located in West Jordan, services the airport[2]. The West Jordan Police Department provides police services to the airport and surrounding community with the closest substation located about seven miles northeast of the airport[3]. Healthcare services are available at the Jordan Valley Medical Center, located less than one mile southeast of the airport.

A Department of Transportation Act, Section 4(f) property, the Utah Youth Sports Complex, is located on a portion of airport property south of 7800 S Street. The use of this property is an element studied extensively within this master plan.

[2] City of West Jordan, Utah, West Jordan Fire Department. Accessed: https://www.westjordan.utah.gov/fire/fire/about-us-west-jordan-fire-department/, November 2021.
[3] City of West Jordan, West Jordan Police Department. Accessed: https://www.westjordan.utah.gov/police/, November 2021.

1.5.2.4 Environmental Justice

Table 1-13 shows environmental justice characteristics of the airport census tracts compared to West Jordan, Salt Lake County, and the state of Utah. As shown, the airport census tracts have the lowest percentage of the population living below the poverty line (3.0%) compared to West Jordan (6.6%), Salt Lake County (9.0%) and Utah (8.9%). The airport census tracts have a larger minority population (22.1%) when compared to West Jordan (11.6%), Salt Lake County (12.9%) and Utah (9.4%).

TABLE 1-13
ENVIRONMENTAL JUSTICE CHARACTERISTICS

Characteristic	Airport Census Tracts[/a/]	West Jordan	Salt Lake County	Utah
Precent Minority	22.1%	11.6%	12.9%	9.4%
Percent Living Below Poverty Line	3.0%	6.6%	9.0%	8.9%

Note: /a/ - Airport Census Tracts include Census Tract 9801, Block Group 1 and Census Tract 1131.01, Block Group 2
Source: U.S. Census Bureau, 2019 ACS 5-Year Estimate

1.5.2.5 Children's Health and Safety

There are no schools, daycares, or childcare facilities on airport property. There are schools, daycares, and childcare facilities located in West Jordan in the vicinity of the airport. The closest school to the airport is Westland Elementary School, which is located over one mile east of the Airport. **Table 1-14** shows children age distribution of the airport census tracts compared to West Jordan, Salt Lake County, and the state of Utah.

TABLE 1-14
CHILDREN AGE DISTRIBUTION

Child Age Group	Airport Census Tracts [/a/]	West Jordan	Salt Lake County	Utah
Population under 3	48	5,163	50,968	148,800
Population ages 3-5	6	4,975	52,612	152,511
Population ages 6-11	39	12,377	106,153	317,151
Population ages 12-17	124	12,075	100,969	302,044
Total	217	34,590	310,702	920,506

Note: /a/ - Airport Census Tracts include Census Tract 9801, Block Group 1 and Census Tract 1131.01, Block Group 2
Source: U.S. Census Bureau, 2019 ACS 5-Year Estimate

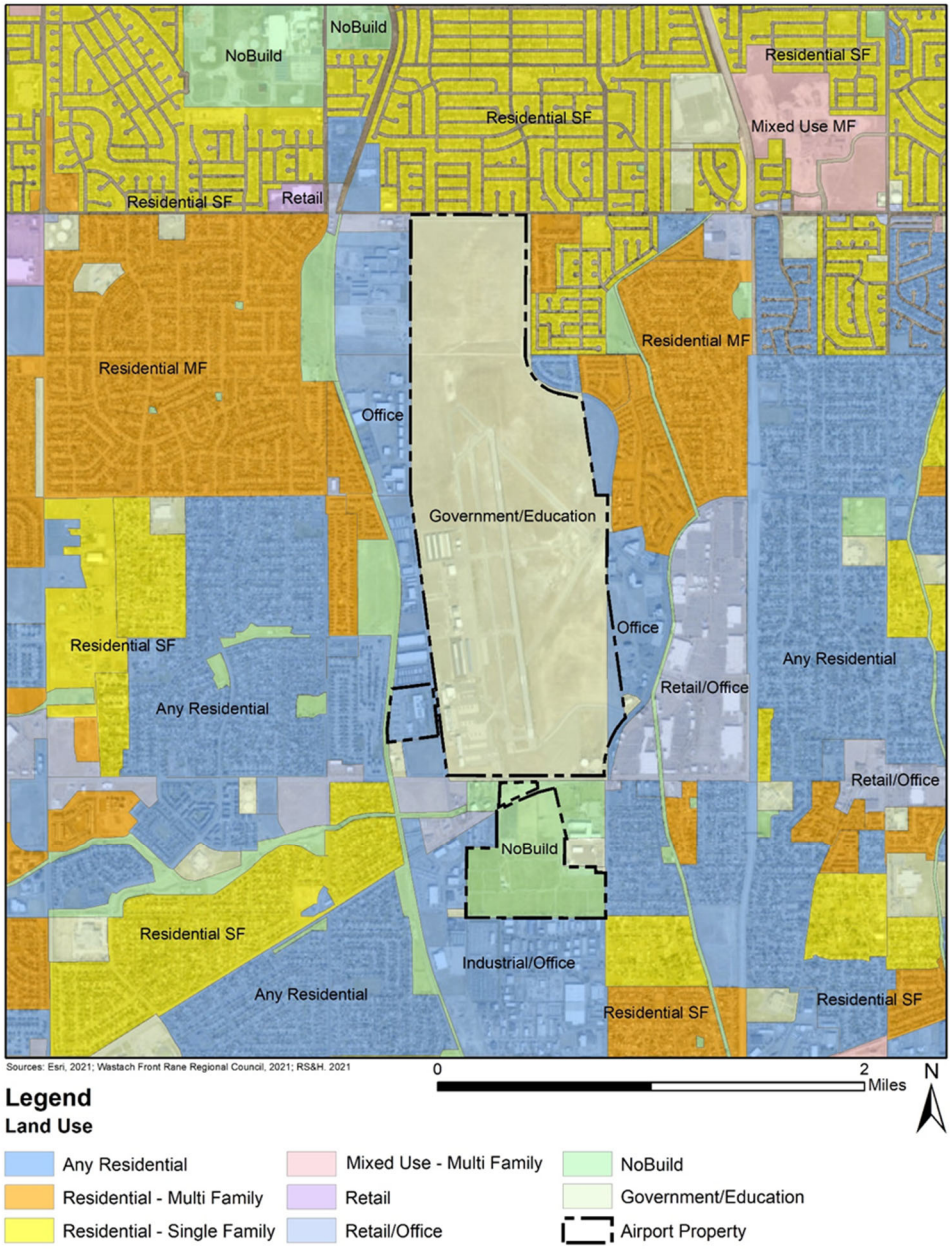
1.5.3 Land Use and Airport Overlay Zone

The property area of U42 includes a total of 860 acres, many of which are undeveloped. The Airport is bordered by residential development on the north, commercial and residential land uses on the east, commercial development on the south and commercial and residential land uses on the west. The City of West Jordan adopted an Airport Overlay Zone to allow for protection of the surrounding airspace of the

Airport and compatible land development. **Figure 1-10** displays each distinct area of land use around U42[4].

The relatively developed residential land bordering the north and north-east property line is protected from conflict by the Airport's ownership of a large tract of land past the paved runway surface. The "no build" area on the south end of the Airport property includes area outside the airport property boundary which aligns with the 2007 Airport Layout Plan's depiction of a larger future RPZ.

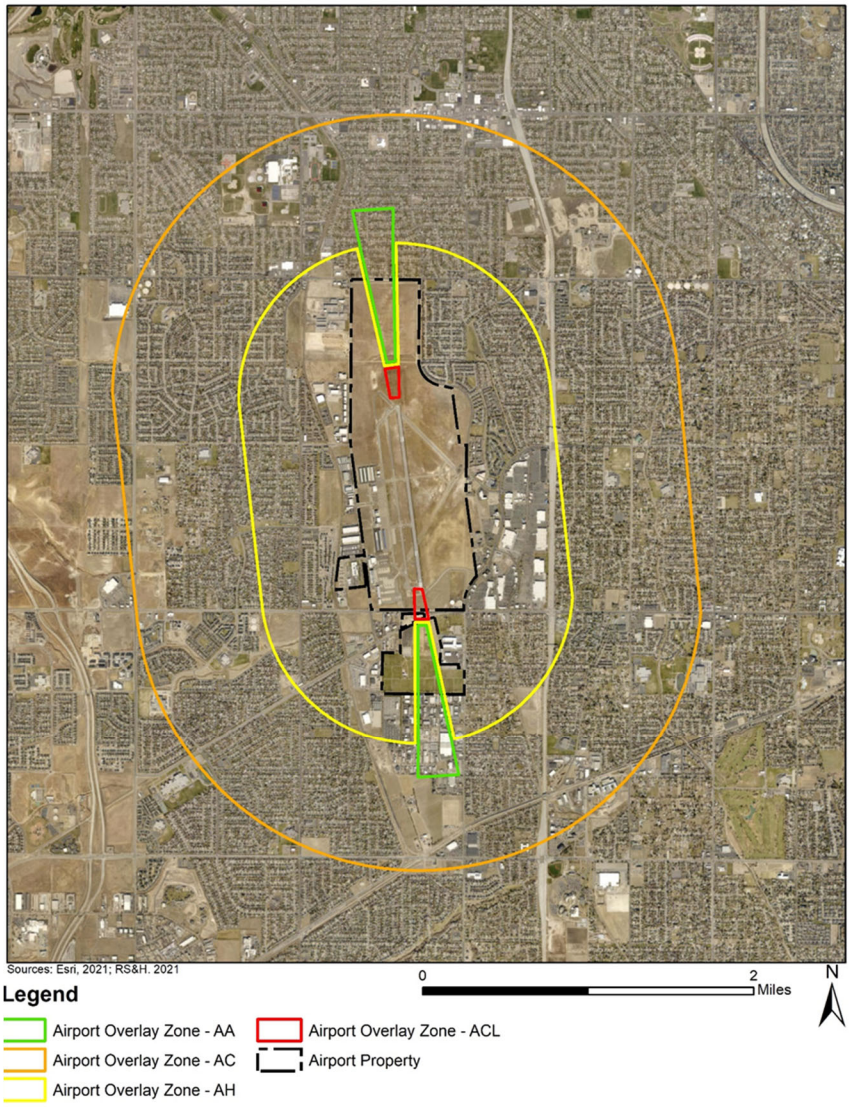
FIGURE 1-10
CITY OF WEST JORDAN LAND USE



[4] City of West Jordan, Planning and Zoning. Accessed: https://gis.wjordan.com/city-info/, November 2021.

The Airport Overlay Zone, shown in **Figure 1-11** displays each airport overlay zone. Many of these zones correlate with airport imaginary surfaces in Code of Federal Regulations (CFR) Title 14 Part 77.25, albeit with some deviations. These airport overlay zones are Clear Zone (Acl), Approach Zone (Aa), Horizontal Zone (Ah), and Conical Zone (Ac). The City of West Jordan has defined which uses can occur in different overlay zones, with some uses being indicated specifically as permitted or conditional. **Table 1-15** below describes the language related to each of the overlay zones per the City of West Jordan Code of Ordinances, *13-6A-2 Establishment of Airport Overlay Zones*[5]. Note that the overlay zone for the U42 does not include a Noise Zone (An). **Table 1-16** displays such uses. Conditional uses must be approved by the Planning Commission.

FIGURE 1-11
CITY OF WEST JORDAN AIRPORT OVERLAY ZONE



[5] City of West Jordan, Code of Ordinances, 13-6A-2. Accessed: https://codelibrary.amlegal.com/codes/westjordanut/latest/westjordan_ut/0-0-0-12251, December 2021.

TABLE 1-15
DESCRIPTION OF AIRPORT OVERLAY ZONES

Airport Overlay Zones	Abbreviation	Definition
Clear Zone	Acl	A zone containing the width of the primary surface (250'), expanding out from each end of the primary surface to a width of 450' and a length 1000' along the direction of the centerline.
Approach Zone	Aa	A zone expanding out from the outside end of the Clear Zone (450') expanding uniformly to 1,500' wide and 5,000' from the primary surface along the direction of the centerline.
Noise Zone	An	Zone which contains the area around the airport projected to have an airport activity noise of 65dB or greater.
Horizontal Zone	Ah	A zone that is 5,000' away from each side of the primary surface centerline. The boundary on each end is a half-circle arc with a 5,000' radius, centered 200' beyond the runway end.
Conical Zone	Ac	A zone that expands out from the Horizontal Zone by 4,000'

Source: City of West Jordan, 2021.

TABLE 1-16
AIRPORT OVERLAY ZONE PERMITTED AND CONDITIONAL USES

USE	Acl	Aa	Ah	Ac
Agriculture uses, except as specifically regulated elsewhere in this section		C	C	P
Animal specialties devoted to raising chickens, turkeys, or other fowl			C	P
Athletic fields and playgrounds			C	P
Building moved from another site (see section 13-8-12 of this title)			C	C
Commercial and industrial uses resulting in large concentrations of people, including, but not limited to, shopping centers, restaurants, and factories			P	P
Commercial uses, except as specifically regulated elsewhere in this section		C	P	P
Communication, transmission or reception towers, church steeples, flagpoles and other like extensions which exceed the height of buildings allowed in unrestricted zones			C	P
Electrical power generating plants			P	P
Electrical power transmission lines aboveground		C	P	P
Fairgrounds and racetracks			C	P
Gas and oil aboveground storage and pipelines		C	P	P
Hotel and motel			C	C
Industrial uses, except as specifically regulated elsewhere in this section		C	P	P
Large scale public utilities			C	C
Low power radio service facility		C	C	C
Outdoor theaters			C	P
Public and civic uses, public utilities, except as specifically regulated elsewhere in this section		C	C	P
Public and civic uses resulting in large concentrations of people, including, but not limited to, stadiums, hospitals and open air assemblies			C	P
Recreational and natural uses as allowed in unrestricted zones, except as specifically regulated elsewhere in this section		AC	AC	P
Residential development	C	P		

Legend C – Conditional P-Permitted

Source: City of West Jordan, 2021

1.5.4 Compliance with FAA Grant Assurances

The FAA-administered financial assistance that U42 receives in the form of federal grants have specific obligations, or grant assurances, that SLCDA is required to adhere to. There are 39 grant assurances, each specific to items that the Airport Sponsor must comply with. These are outlined within FAA Order 5190.6B, *Airport Compliance Manual*. **Table 1-17** details the 39 grant assurances and notes what general category each is typically associated with.

As part of this master plan, specific items will be addressed in relation to these FAA grant assurances, such as examining protections in place to protect the airport's airspace, planning for compatible land use, updating the airport layout plan, and making recommendations to help U42 ensure compliance.

TABLE 1-17
AIP GRANT ASSURANCES

Assurance Number	Title/Description	General / Miscellaneous	Airport Management	Airport Operations	Planning	Construction
1	General Federal Requirements	✓				
2	Responsibility and Authority of the Sponsor		✓			
3	Sponsor Fund Availability	✓				
4	Good Title	✓				
5	Preserving Rights and Powers		✓			
6	Consistency with Local Plans				✓	✓
7	Consideration of Local Interest				✓	✓
8	Consultation with Users				✓	✓
9	Public Hearings				✓	✓
10	Metropolitan Planning Organization				✓	✓
11	Pavement Preventive Maintenance			✓		
12	Terminal Development Prerequisites	✓				
13	Accounting System, Audit, and Record Keeping Requirements				✓	✓
14	Minimum Wage Rates					✓
15	Veteran's Preference					✓
16	Conformity to Plans and Specifications					✓
17	Construction Inspection and Approval					✓
18	Planning Projects				✓	
19	Operation and Maintenance			✓		
20	Hazard Removal and Mitigation			✓		
21	Compatible Land Use		✓			
22	Economic Nondiscrimination		✓			
23	Exclusive Rights		✓			
24	Fee and Rental Structure		✓			
25	Airport Revenues		✓			
26	Reports and Inspections		✓			
27	Use by Government Aircraft			✓		
28	Land for Federal Facilities	✓				
29	Airport Layout Plan				✓	✓
30	Civil Rights				✓	✓
31	Disposal of Land	✓				
32	Engineering and Design Services				✓	
33	Foreign Market Restrictions				✓	
34	Policies, Standards, and Specifications		✓	✓	✓	✓
35	Relocation and Real Property Acquisition	✓				
36	Access by Intercity Buses	✓				
37	Disadvantaged Business Enterprises	✓			✓	✓
38	Hangar Construction		✓			
39	Competitive Access		✓			

Source: FAA, 2021