# IDA
# IDAHO FALLS
## REGIONAL AIRPORT
## 2025 AIRPORT MASTER PLAN

# AIRPORT MASTER PLAN UPDATE

**FOR**

**IDAHO FALLS REGIONAL AIRPORT (IDA)**
**CITY OF IDAHO FALLS**
**Idaho Falls, Idaho**

**SUBMITTED TO**

**FEDERAL AVIATION ADMINISTRATION**
**HELENA AIRPORTS DISTRICT OFFICE**

**AND**

**IDAHO TRANSPORTATION DEPARTMENT**
**DIVISION OF AERONAUTICS**

**PREPARED BY**

**2025**

The preparation of this document may have been partially paid for through an Airport Improvement Program (AIP) planning grant from the Federal Aviation Administration as provided under Title 49 U.S.C., § 47104 (AIP Project No. 3-16-0018-050-2021). The contents do not necessarily reflect the official views or policies of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States government to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws.

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Photo: Aerial view of the Snake River as it rushes past Runway 17.

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# 1 EXECUTIVE SUMMARY

CHAPTER ONE

# SUMMARY

The Federal Aviation Administration (FAA) recommends that public-use airports prepare a new airport master plan every five to ten years or as often as necessary to address significant changes in local aviation conditions. The previous airport master plan for Idaho Falls Regional Airport (IDA), was completed in April 2010 by Armstrong Consultants, Inc., and had a base year of 2008. The purpose of this 2025 Airport Master Plan is to evaluate the airport's current capabilities and role, forecast future aviation demand, and plan for the timely development of new or improved facilities that may be required. The ultimate goal of this planning document is to provide guidance for the airport's overall maintenance, development, and operation. This airport master plan is intended to provide a strategy to accommodate future aviation demand in a safe, cost-effective, operationally efficient, and flexible manner.

This airport master plan was completed by Ardurra in 2025 on behalf of the airport sponsor, the City of Idaho Falls. The baseline year for this master plan is 2021, which was the first full year of activity following the 2020 impacts related to COVID-19. The planning horizon for the master plan is 2041. This document was prepared in accordance with FAA requirements outlined in FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*, Advisory Circular 150/5070-6B, *Airport Master Plans*, and all other applicable rules, standards, and regulations.

## 1.1. Overview and Findings

The following are the main findings of this planning effort. These findings are based on the planning process and public involvement:

- For the planning period of 2021 to 2041, the FAA-approved forecast indicates total enplanements are expected to increase from 223,741 to 326,041, and total operations are expected to increase from 33,656 to 40,119.
- Based aircraft are expected to increase from 125 in 2021 to 165 in 2041.
- The commercial service critical aircraft was determined to be the Airbus A320, a category C-III aircraft.
- The air cargo critical aircraft was determined to be the ATR-72, a category B-III aircraft.
- The general aviation critical aircraft was determined to be the Bombardier Challenger 300, a category C-II aircraft.
- An additional 41 aircraft hangars are needed.
- Additional terminal, air cargo, rental car, and vehicle parking spaces are needed.
- The airport traffic control tower (ATCT) should be relocated to make space in the terminal building.
- The very high frequency omnidirectional range with distance measuring equipment (VOR-DME) should be relocated to reduce or eliminate signal interference.
- The airport rescue and fire fighting (ARFF) building should be relocated to make space for terminal area development.
- FedEx should be relocated and expanded.
- The snow removal equipment (SRE) building should be expanded.

## 1.2. Public Involvement

Both traditional in-person public involvement meetings and virtual public meetings were conducted to allow as much community involvement as possible. As shown in Table 1.1, public involvement components included a technical advisory committee (TAC) and a series of public presentations. A project website was also created to inform the public and allow access to view draft documents and provide comments.

Table 1.1: **Public Involvement**

| Type of Meeting | Meeting Date |
|---|---|
| Public Meeting – Kickoff | August 31, 2021 |
| Technical Advisory Committee #1 | October 20, 2021 |
| Technical Advisory Committee #2 | September 15, 2022 |
| Public Meeting – Forecast and Facility Requirements | October 20, 2022 |
| Technical Advisory Committee #3 | May 3, 2023 |
| Public Meeting – Draft Alternatives | February 7, 2024 |
| Technical Advisory Committee #4 | January 29, 2025 |
| Public Meeting – Draft Documents | February 20, 2025 |

## 1.3. Proposed Development Summary

Major developmental projects are listed below. Total improvements for the 20-year planning period are estimated to be more than $390 million.

### 1.3.1. Terminal Area

- Relocate airport rescue and fire fighting and FedEx
- Relocate rental car facilities
- Expand the terminal building
- Expand passenger parking lots
- Realign and widen Skyline Drive
- Add a transit station near the terminal
- Relocate and expand employee parking
- Add a cell phone waiting lot
- Add a parking garage
- Add additional retention basins for storm drainage
- Expand the snow removal equipment building and airport maintenance yard
- Relocate the airport traffic control tower

### 1.3.2. East Side General Aviation

- Maintain Runway 17/35
- Add hangars
- Enhance the retention basin for storm drainage

### 1.3.3. South Quad General Aviation

- Add hangars
- Add taxilanes for circulation
- Expand the apron for more aircraft parking
- Maintain the retention basin for storm drainage

### 1.3.4. West Side Development

- Add space for two air cargo operators (FedEx plus one additional operator)
- Add a parallel taxiway
- Acquire land for future aviation development
- Maintain the soccer fields and existing road access until needed for future aviation use
- Designate the soccer fields as future aviation development

**RESOLUTION NO. 2025-___**

A RESOLUTION OF THE CITY OF IDAHO FALLS, IDAHO, A MUNICIPAL CORPORATION OF THE STATE OF IDAHO, ADOPTING THE 2025 AIRPORT MASTER PLAN FOR THE IDAHO FALLS REGIONAL AIRPORT.

WHEREAS, the City of Idaho Falls, through its Airport Department, recognized the need to update the Idaho Falls Regional Airport Master Plan; and,

WHEREAS, the plan was initiated in accordance with the guidance of the Federal Aviation Administration in July of 2021; and,

WHEREAS, the plan was entirely funded by a Federal Aviation Administration Airport Improvement Program Grant, No. 3-16-0018-050-2021, and,

WHEREAS, public engagement was sought and received from airport users, airport tenants, members of the public, and subject matter experts; and,

WHEREAS, the 2025 Idaho Falls Regional Airport Master Plan has been reviewed by the Federal Aviation Administration and all required input has been included in the plan; and,

WHEREAS, the Mayor and City Council of Idaho Falls has received routine briefings and updates on the progress of the 2025 Idaho Falls Regional Airport Master Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF IDAHO FALLS, AS FOLLOWS:



1. The 2025 Idaho Falls Regional Airport Master Plan is, hereby, approved and adopted.

2. The Airport Layout Plan, contained within the 2025 Idaho Falls Regional Airport Master Plan, is approved. The Airport Director is directed to sign the necessary documents and forms to complete the Airport Layout Plan and submit the Airport Layout Plan to the Federal Aviation Administration.

3. In accordance with the requirements of the Federal Aviation Administration, the Airport Director is hereby directed to keep the Airport Layout Plan current. The Airport Director is hereby authorized to sign all necessary documents and forms for periodic adjustments to the Airport Layout Plan required to keep the Airport Layout Plan current. Such periodic layout adjustments may include, but not limited to, changes required to accommodate increased passenger traffic, new aircraft types, facility upgrades or expansions, safety concerns, airport design standards, or aircraft traffic optimization.

ADOPTED and effective this 10th day of April, 2025.

ATTEST:

CITY OF IDAHO FALLS, IDAHO:

______________________________

______________________________

Emily Geisler, City Clerk

Rebecca L. Noah Casper, Phd., Mayor

# INTRODUCTION TO AIRPORT MASTER PLANS

2

# FIGURES

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CHAPTER TWO

# INTRODUCTION

An airport master plan is the process of establishing an airport's blueprint for long-term development. It is a comprehensive study of the airport to determine an effective plan for future airport development. It helps to ensure the airport will be able to continue to meet the needs of its customers and that development is consistent with local, state, and national planning goals. This includes identifying potential environmental and socioeconomic impacts of airport development projects. An airport master plan is an important step in helping the airport be financially and socially responsible and operate as efficiently as possible.

Airports should update their long-term planning documents every five to ten years in order to identify and respond to emerging national, statewide, and local trends expected to affect the airport. The last master plan for Idaho Falls Regional Airport (IDA) was completed in 2010 and had a base year of 2008. This airport master plan is being undertaken to evaluate and document the airport's current capabilities and facilities, identify its role in both the national and state aviation systems, and develop a forecast of aviation demand in order to plan for the timely development of improved or new facilities that may be required to meet that demand. This airport master plan is intended to be a proactive document that also provides guidance for funding future development projects.

IDA
IDAHO FALLS
REGIONAL AIRPORT

## 2.1. Federal Aviation Administration Role in Airport Master Plans

Federal Aviation Administration (FAA) Advisory Circular 150/5070-6B, *Airport Master Plans*, provides guidance for the preparation of airport master plans. The intent of this guidance is to provide planning requirements for airports ranging in size and function from small general aviation to large commercial service facilities. This guidance also allows for each master plan to be customized to meet the specific needs of the airport and the surrounding community.

While the FAA does review all elements of an airport master plan to ensure that sound planning techniques have been applied, it only approves the forecast and the airport layout plan. FAA approval is required for these elements because the agency uses them to help determine the airport's eligibility for grant funding of proposed development. Additionally, the FAA Helena Airports District Office (ADO) project manager will interact with the planning team throughout the master planning process and will provide the planning team with additional direction and guidance as needed.[1]

### 2.1.1. National Plan of Integrated Airport Systems

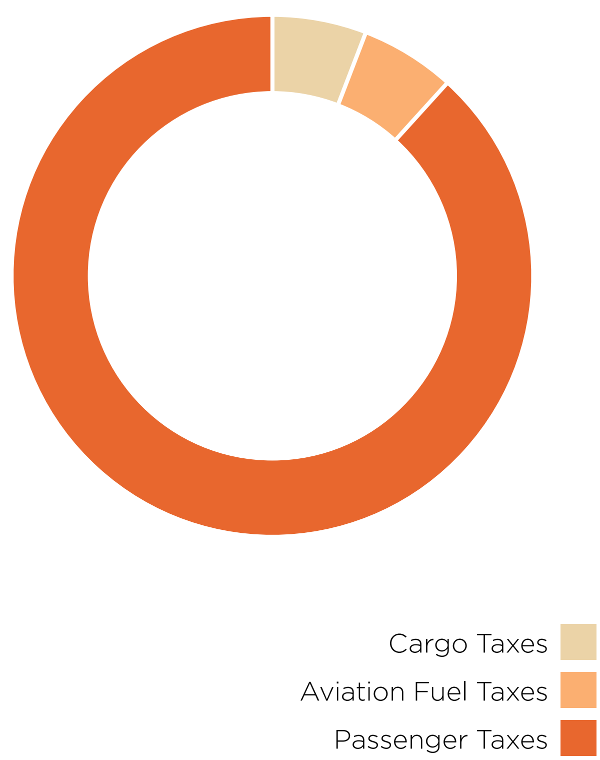
The National Plan of Integrated Airport Systems (NPIAS) identifies the nearly 3,300 public-use airports included in the national airport system, the roles they currently serve, and the amounts and types of airport development eligible for federal funding under the Airport Improvement Program.[2] The National Plan of Integrated Airport Systems and the airport's role in the national aviation system are discussed in more detail in Chapter 3.

### 2.1.2. Airport Improvement Program

The Airport Improvement Program (AIP) is administered by the FAA to provide grants to public agencies for the planning and development of public-use airports included in the NPIAS. For nonhub primary airports, like IDA, these grants typically cover between 90-95% of eligible costs for planning and development projects. To be eligible, projects must be related to enhancing airport safety, capacity, security, or environmental concerns. These typically include airfield construction and rehabilitation, airfield lighting and signage, navigational aids, and land acquisition as well as planning and environmental studies. Certain professional services that are necessary for eligible projects, such as planning, surveying, and design, can also be eligible.[3]

The Airport Improvement Program is funded by the Airport and Airway Trust Fund (AATF). As shown in Figure 2.1, the AATF is supported by taxes on ticket sales, taxes on air cargo and airmail, and taxes on aircraft fuel.[4] The preparation of the 2025 Airport Master Plan has been paid for through an Airport Improvement Program grant.

Figure 2.1: Airport and Airway Trust Fund




Source: FAA, Airport & Airway Trust Fund (AATF).

#### a. Grant Assurances and Obligations

Airport sponsors that accept Airport Improvement Program funds must also agree to certain obligations and conditions referred to as grant assurances. These assurances require the airport to maintain and operate its facilities safely and efficiently. This includes having an up-to-date and approved airport layout plan on file with the FAA.[5] These obligations and grant assurances are discussed in more detail in Chapter 11, Planning For Compliance.

### 2.1.3. FAA Design Standards

The FAA uses the advisory circular (AC) system to provide guidance for the aviation community regarding acceptable methods, procedures, and practices for complying with airport design standards, recommendations, and requirements as well as any other FAA rules and regulations. This system allows airport planners and engineers to identify design criteria for nearly every aspect of an airport.[6] Several advisory circulars are used and referenced throughout this airport master plan. However, AC 150/5070-6B, *Airport Master Plans,* and AC 150/5300-13B, *Airport Design,* are two of the most relevant. FAA design standards are discussed in more detail in Chapter 6, Requirements.

#### a. Critical Aircraft

A key determination of any airport master plan is the identification of the critical aircraft. The critical aircraft is the most demanding aircraft, or a family grouping of aircraft, with at least 500 annual operations. Identification of the critical aircraft is important because it is used to establish the FAA design standards that will be used for airfield facilities. These standards are based on the physical requirements of the critical aircraft and are used to determine several aspects of airport design such as runway and taxiway dimensions. For airports such as IDA where the infrastructure must support a wide range of aircraft and operations, it is wise to identify separate critical aircraft for the different areas of operations.[7] The critical aircraft is discussed in Chapter 5, Forecast of Aviation Demand.

## 2.2. Purpose of Airport Master Plans

The purpose of an airport master plan is to provide airport personnel with a long-term strategy for maintaining its important role within the national, state, and regional transportation systems. To serve as an effective planning guide, it should determine future aviation demand, identify and prioritize future development needed to maintain the safe and efficient operation of the airport, and provide justification for these projects. It should also include a realistic schedule for project implementation as well as a capital improvement program (CIP) that identifies potential federal, state, and local sources for funding.[8]

## 2.3. Objectives of Airport Master Plans

In general, an airport master plan should meet the following objectives:

- Understand the issues, opportunities, and constraints of the airport.
- Consider the impact of aviation trends.
- Identify the capacity of existing airport infrastructure.
- Determine the need for airport improvements.
- Obtain stakeholder and public input.
- Estimate project costs and funding sources.
- Develop a schedule for project implementation.[9]

## 2.4. Elements of Airport Master Plans

While the elements of an airport master plan are guided by the FAA, they vary in detail and complexity depending on the size, function, and issues of each airport. As shown in Figure 2.2, these elements build upon each other throughout the planning process.

Figure 2.2: Airport Master Plan Process

**Research**
- Develop Scope of Work
- Inventory
- Aviation Forecast
- Identify Critical Aircraft
- Forecast Approval

**Requirements**
- Facility Requirements
- Develop Alternatives
- Airport Layout Plans

**Implementation**
- Cost Estimates
- Capital Improvement Plan
- Implementation Plan
- Financial Analysis
- Final Documents

Source: Ardurra.

### 2.4.1. 2025 Airport Master Plan Elements

The 2025 Airport Master Plan includes the following elements:

**Airport Overview**
Provides an overview of the airport's location and history as well as the economy and demographics of the surrounding area.

**Inventory**
Identifies the airspace surrounding the airport as well as the existing instrument approach procedures. It also documents the condition of all airport facilities and pavements.

**Forecast**
Identifies existing aviation activity and provides a forecast of the anticipated aviation demand at the airport for the next two decades.

**Facility Requirements**
Describes design and safety standards relating to runways, taxiways, and other facilities.

**Development Alternatives**
Identifies and evaluates potential alternatives for meeting the needs of the airport and its users.

**Environmental Overview**
Presents environmental factors the airport will need to take into consideration as part of proposed projects.

**Airport Layout Plan**
Describes and explains the technical drawings of airport facilities and planned improvements.

**Implementation Plan and Financial Feasibility Analysis**
Provides a proposed schedule for each of the projects recommended in the master plan and includes a capital improvement plan that identifies potential sources of funding.

**Planning For Compliance**
Discusses the obligations and grant assurances the airport must comply with when accepting FAA-administered grant assistance.

**Sustainability and Recycling**
Identifies sustainability requirements and provides recommendations for recycling and solid waste management.

### 2.4.2. Public Involvement
Every airport master plan includes a public involvement program. The level of public involvement typically corresponds to the complexity of the airport and the project as well as community interest. Effective public involvement connects numerous stakeholders such as aircraft owners, hangar tenants, and local business owners with public officials, airport planners, and government agencies. Public input is highly encouraged throughout the planning process. However, public involvement has its greatest impact during the early stages of the planning process when planners are better able to respond to concerns and incorporate feedback received from the community. A public involvement program typically includes several methods for the planning team to keep the community informed as well as receive comments and suggestions throughout the master planning process. Details regarding the public involvement program are provided in **Appendix A: Community Engagement Summary**.

**Committees**
These typically include forming a technical advisory committee (TAC) and a community advisory committee (CAC). Committee members typically have a high level of technical competency associated with some aspect of aviation or airport operations and are stakeholders in the airport's operation. The community advisory committee provides the aviation planning team with valuable feedback and insight into the needs of the local aviation community and keeps the team informed of local issues.

**Public Information Meetings**
Public meetings or open houses with information stations staffed by members of the planning team can be a very effective method of engaging the public and soliciting community feedback. The formality of these meetings can vary depending on the complexity of the topics presented as well as the needs of the community. Due to the COVID-19 pandemic, public meetings evolved from traditional, in-person meetings to virtual or hybrid formats.

**Public Awareness Campaign**
An effective public awareness campaign is an essential part of an effective public involvement program. It helps keep the community informed, generate stakeholder involvement, and maintain stakeholder interest throughout the planning process. In addition to public information meetings, aspects of a public awareness campaign can include fliers, fact sheets, press releases, newspaper ads, and general information packets. Additionally, websites with interactive or self-guided presentations as well as electronic copies of the airport master plan are becoming an increasingly popular part of public awareness campaigns. An extensive public involvement program was developed and implemented for this 2025 Airport Master Plan.

# Endnotes


1 U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular 50/5070-6B, Airport Master Plans." January 27, 2015. https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_150_5070-6B_with_chg_1&2.pdf.

2 U.S. Department of Transportation. Federal Aviation Administration. "National Plan of Integrated Airport Systems (NPIAS)." December 7, 2022. https://www.faa.gov/airports/planning_capacity/npias.

3 U.S. Department of Transportation. Federal Aviation Administration. "Overview: What is AIP & What is Eligible?" August 2, 2022. https://www.faa.gov/airports/aip/overview.

4 U.S. Department of Transportation. Federal Aviation Administration. "Airport & Airway Trust Fund (AATF)" Accessed January 10, 2023. https://www.faa.gov/about/budget/aatf.

5 U.S. Department of Transportation. Federal Aviation Administration. "Assurances, Airport Sponsors." May 2022. https://www.faa.gov/sites/faa.gov/files/airports/new_england/airport_compliance/assurances-airport-sponsors-2022-05.pdf.

6 U.S. Department of Transportation. Federal Aviation Administration. "Order 1320.46D, FAA Advisory Circular System." April 7, 2015. https://www.faa.gov/documentLibrary/media/Order/FAA_Order_1320.46D.pdf.

7 U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular150/5000-17, Critical Aircraft and Regular Use Determination."June 20, 2017. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5000-17-Critical-Aircraft.pdf.

8 U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular 50/5070-6B, Airport Master Plans." January 27, 2015. https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_150_5070-6B_with_chg_1&2.pdf.

9 Ibid.

# AIRPORT OVERVIEW AND AREA SOCIOECONOMICS

3

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CHAPTER THREE

# AIRPORT OVERVIEW

This chapter provides a general description of Idaho Falls Regional Airport (IDA) and the surrounding area. This is accompanied by a brief history of the airport, area demographics, and its economic impact on the surrounding area. This overview helps to illustrate the nature of the community and the market the airport serves as well as its role in the community, region, and state. Additionally, the area's socioeconomic data, including population, employment, and income activity, is used when developing the forecast because it helps identify trends that could affect commercial and general aviation activity at the airport.

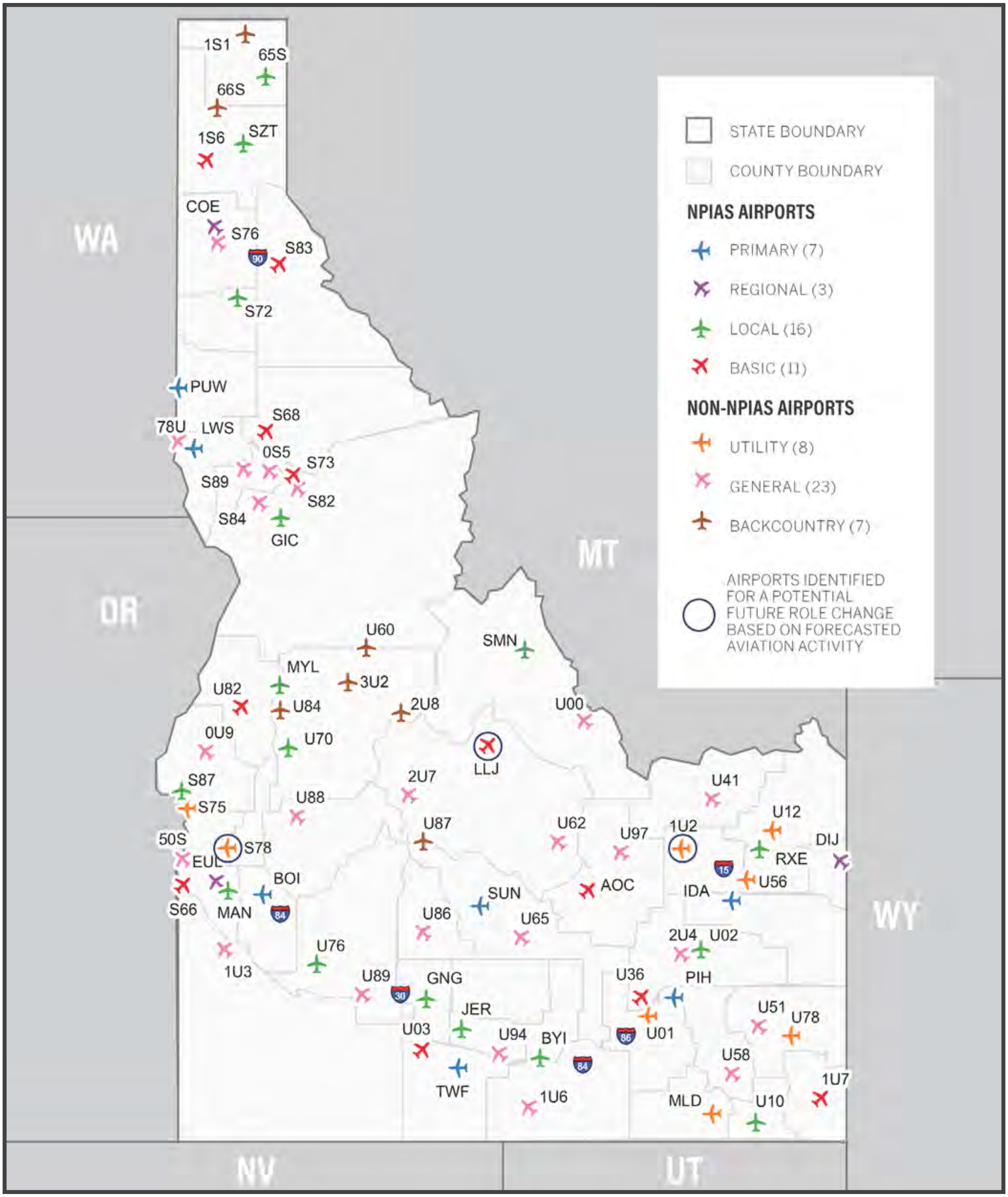
## 3.1. Area and Airport Overview

### 3.1.1. Idaho Airports

According to the 2021–2025 National Plan of Integrated Airport Systems (NPIAS), there are 301 aviation facilities in Idaho. Of these 301 facilities, 175 are private, and the remaining 126 are public. Thirty-six Idaho airports are included in the National Plan of Integrated Airport Systems. Six of these facilities are classified as commercial airports, three are classified as regional airports, 16 are classified as local airports, 10 are classified as basic airports, and one is an unclassified airport.[1] (The National Plan of Integrated Airport Systems describes basic airports as those with moderate activity that fulfill the principal role of a community airport while unclassified airports tend to have limited activity.)

The Idaho Transportation Department Division of Aeronautics recently completed the 2020 Idaho Airport System Plan (IASP). The 75 publicly owned, public-use airports included in this plan are shown in Figure 3.1.

**Figure 3.1: 2020 Map of Idaho Airport System**




Source: Idaho Airport System Plan Update

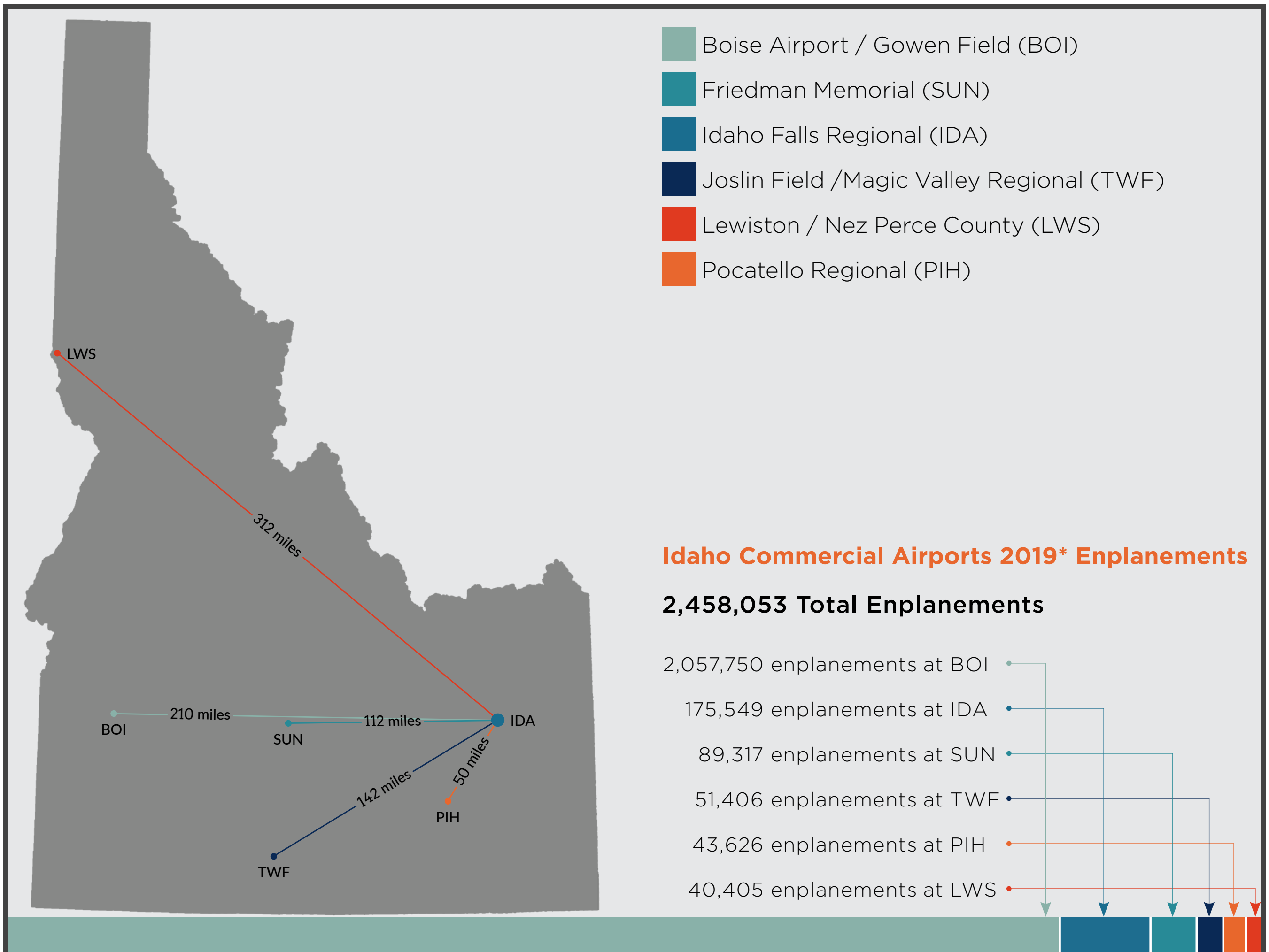
There are six primary commercial service airports in Idaho (Figure 3.2). Boise Air Terminal/ Gowen Field (BOI) is the only medium hub airport, and there are five nonhub airports. In addition to Idaho Falls Regional Airport, these include Friedman Memorial (SUN) in Hailey, Joslin Field/Magic Valley Regional (TWF) in Twin Falls, Lewiston/Nez Perce County (LWS) in Lewiston, and Pocatello Regional (PIH) in Pocatello. There are no small or large hub airports.

NPIAS airports are categorized as either primary or nonprimary. Primary airports are defined as having scheduled air carrier service with a minimum of 10,000 annual enplanements (i.e., revenue-paying passengers boarding commercial flights) while nonprimary airports mostly support general aviation. Primary airports fall into one of the following four subcategories based on the percentage of total U.S. enplanements occurring at a facility.[2]

- **Large Hub:** 1% or more
- **Medium Hub:** At least 0.25% but less than 1%
- **Small Hub:** At least 0.05% but less than 0.25%
- **Nonhub:** Less than 0.05% but more than 10,000

In terms of enplanements, BOI is the busiest commercial airport in Idaho, and IDA is the second busiest.[3] The commercial airport located the closest to IDA is Pocatello Regional Airport, which is located approximately 50 miles to the southwest, and Salt Lake International (SLC), which is located approximately 190 miles to the south, is the closest large hub airport.

**Figure 3.2: Commercial Airports in Idaho**




*2019 data was used to represent normal operations prior to the COVID-19 pandemic.

Source: FAA and Google Earth

### 3.1.2. Bonneville County

Bonneville County, which is located in southeast Idaho, is bordered by Bingham, Caribou, Jefferson, Madison, and Teton counties in Idaho along with Lincoln and Teton counties in Wyoming. According to the county website, it encompasses approximately 1,216,000 acres (1,900 square miles) which makes it the 15th largest county in Idaho by area.[4] Idaho Falls is the county seat, and the other cities include Ammon, Iona, Irwin, Ririe (partially), Swan Valley, and Ucon. Major roads in Bonneville County include Interstate Highway 15, U.S. Highway 20, U.S. Highway 26, state highway 31, and state highway 43. The terrain ranges from mountainous in the east to farmland and ancient lava fields in the west.

### 3.1.3. City of Idaho Falls

Present day Idaho Falls can trace its origin as a key river crossing and stagecoach stop on a transportation route during the gold rush to Bannack and Virginia City in southwestern Montana in the early 1860s. In 1863, Harry Rickard and William Hickman began construction of a ferry across the Snake River at a site called Eagle Rock with hopes of attracting gold miners and freight traffic headed to the Montana gold fields. James Taylor purchased the Eagle Rock Ferry from Rickard and Hickman the following year. He also constructed a toll bridge located nine miles south of Eagle Rock. This bridge was named Eagle Rock Bridge and the site was referred to as Taylor's Crossing until 1872 when it was changed to Eagle Rock. In 1879, the Utah Northern Railroad reached Eagle Rock on a rail line that extended from Brigham City, Utah. The Oregon Short Line Railroad started serving Eagle Rock in 1881 and built its shops there. However, the town's population began to decline after 1887 when the railroad shops were relocated to Pocatello. Between 1880 and 1910, irrigation projects and canal systems were developed around the Upper Snake River Valley which caused the area's population to increase again. In 1891, the name of the town was changed from Eagle Rock to Idaho Falls in reference to the rapids below the bridge.[5] In 1900, Idaho Falls developed a canal to harness the energy of the Snake River. This was used to generate electricity for the city which made it the first city in Idaho with its own power plant.[6] Idaho Falls Power continues to provide electricity to the city by way of five hydropower plants located along the Snake River.

### 3.1.4. Idaho National Laboratory

The Idaho National Laboratory (INL) was founded in 1949 and is a science-based, applied engineering laboratory dedicated to supporting the mission of the U.S. Department of Energy (DOE) with energy research, nuclear science, and national defense.[7] Its headquarters, which is located just across the Snake River from the airport, is where much of the research and development occurs. The Center for Advanced Energy Studies (CAES) is also located here at its Research and Education Campus. This research, education, and innovation consortium between the Idaho National Laboratory, Boise State University, Idaho State University, the University of Idaho, and the University of Wyoming is host to approximately 7,200 researchers and 50,000 students.[8] University Place, which is located just south of this location, is where the local University of Idaho and Idaho State University campuses are located.

In addition, the Advanced Test Reactor (ATR) facility is located approximately 47 miles west of Idaho Falls. This site, which is 890 square miles in size, is where the first usable amount of energy was generated using nuclear power in 1951. The Idaho National Laboratory, which employs more than 5,200 people, is the largest employer in Idaho Falls and generates nearly $3 billion in economic impact for the state of Idaho.[9]

## 3.2. Airport Overview

Idaho Falls Regional Airport began in 1929 when state aeronautics inspector Arthur Blomgren and U.S. Department of Commerce officials visited Idaho Falls in search of a location for an airport. After acquiring the site for the airport, the city soon completed construction of a 1,500-foot gravel landing strip and beacon tower in 1930.[10] The first passenger flight to land at the airport took place September 1, 1934, when National Parks Airways began offering flights to Yellowstone National Park (Figure 3.3).

**Figure 3.3: First Airline Flight to Idaho Falls Regional Airport**

Source: Delta Flight Museum

The airport soon began to expand as a result of the Works Progress Administration (WPA); an ambitious employment and infrastructure program created by President Franklin D. Roosevelt. The city partnered with the Works Progress Administration to build the Red Baron hangar, administration building, administrator's cabin, and beacon tower at the airport in 1936. Additional improvements, which included extending the runways and installing fuel tanks, were completed by 1937, and the airport was given its first operating permit June 8, 1938.[11] The Red Baron hangar, airport beacon, and caretaker's cabin remain intact and make up the Idaho Falls Airport Historic District. Together, they serve as examples of the important role the Works Progress Administration had in the early development of aviation. No other Works Progress Administration aviation structures in the state are known to retain this level of integrity.[12]

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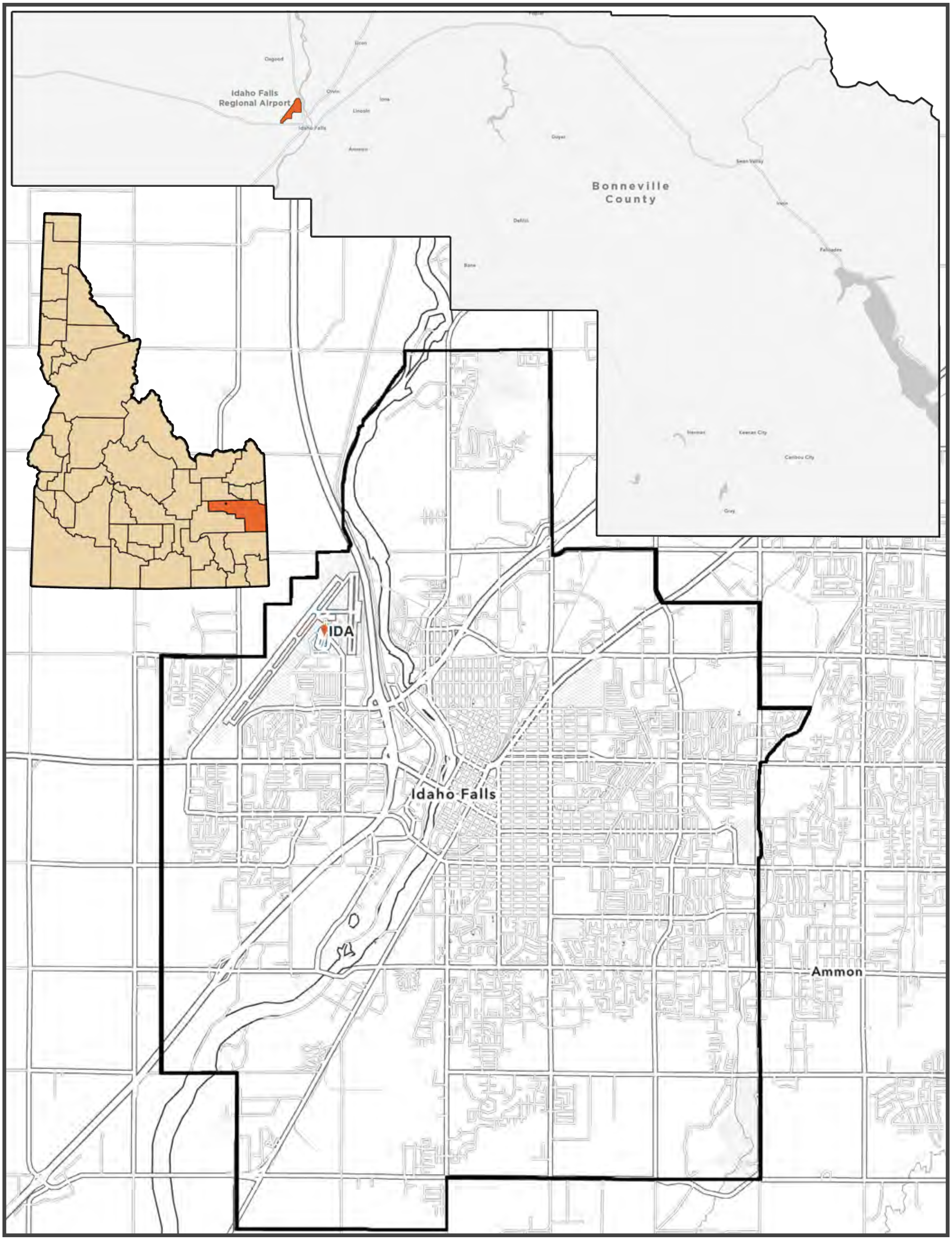
Today, the airport continues to support commercial and general aviation with two runways, a passenger terminal, control tower, air cargo facility, navigational aids, hangars, rental cars, parking aprons, and other aeronautical and non-aeronautical services. It is served by five airlines, including Alaska, Allegiant, American, Delta, and United, that offer nonstop flights to 11 destinations. The airport encompasses 866 acres, and the published airport elevation is 4,743.7 feet above mean sea level (MSL). Federal regulatory oversight is fulfilled by the FAA's Northwest Mountain Region through the Helena Airports District Office (ADO).

Figure 3.4: Airport Location and Vicinity Map




Source: Ardurra.

### 3.2.1. Airport Administration and Governance

Idaho Falls Regional Airport is owned by the city of Idaho Falls which is governed by a mayor and six city council members.[13] The airport director heads up the airport department and manages the airport. The director is appointed by the mayor and confirmed by city council.[14]

### 3.2.2. Airport Location and Access

As shown in Figure 3.4, the airport is located approximately two miles northwest of downtown Idaho Falls. The main airport facilities are accessed via public roadways (Figure 3.5). North Skyline Drive provides access to the passenger terminal via Grandview Drive and West Broadway Street; both of which can be accessed from Interstate 15. West Broadway also provides direct access from downtown Idaho Falls east of the Snake River, and, as U.S. Highway 20, provides access from the Idaho National Laboratory site to the west.

International Way and Borah Avenue provide access to many of the airport facilities via North Skyline including the main Aero Mark fixed base operator (FBO) apron, the airport snow removal equipment (SRE) building, the maintenance and operations building, and the employee parking lot. The FedEx air cargo facility and the aircraft rescue and fire fighting (ARFF) station are both located on Federal Way which is accessed via North Skyline. Flightline Drive provides access to the south general aviation area via Grandview, and Foote Drive provides access to the west general aviation area.

Figure 3.5: Street Access Map


Source: Google Earth; Ardurra.

### 3.2.3. Area Airports

As shown in Table 3.1, there are seven airports within 30 nautical miles of Idaho Falls Regional Airport.[1] Two of these are private airports, and the other five are public facilities. Two of the public airports, McCarley Field and Rexburg-Madison County Airport, are NPIAS airports and have published instrument approach procedures.

**Table 3.1: Airports Within 30 Nautical Miles of Idaho Falls Regional Airport**

| Airport and FAA Identifier | Distance From IDA | Location | Runway Dimensions | Instrument Approach Procedures |
|---|---|---|---|---|
| Idaho Falls Regional<br>IDA | — | Idaho Falls | •RWY 3/21 (asphalt) 9,002 feet x 150 feet<br>•RWY 17/35 (asphalt) 4,050 feet x 75 feet | •ILS or LOC RWY 21<br>•RNAV (RNP) Z RWY 03<br>•RNAV (RNP) Z RWY 21<br>•RNAV (GPS) Y RWY 03<br>•RNAV (GPS) Y RWY 21<br>•LOC BC RWY 03<br>•VOR RWY 03<br>•VOR RWY 21 |
| Rainbow Ranch<br>(private) | 7 Nautical Miles<br>(southeast) | E. Idaho Falls | •RWY 7/25 (turf) 2,400 feet x 60 feet | None, Visual Only |
| Rigby<br>U56 | 9 Nautical Miles<br>(northeast) | Rigby | •RWY 1/19 (asphalt) 3,727 feet x 50 feet | None, Visual Only |
| Rexburg-Madison County<br>RXE | 22 Nautical Miles<br>(northeast) | Rexburg | •RWY 17/35 (asphalt) 4,204 feet x 75 feet | •RNAV (GPS) RWY 35<br>•VOR RWY 35 |
| McCarley Field<br>U02 | 22 Nautical Miles<br>(southwest) | Blackfoot | •RWY 1/19 (asphalt) 4,314 feet x 75 feet | •RNAV (GPS)-A<br>•RNAV (GPS)-B<br>•VOR/DME-C |
| Riverside Anderson<br>(private) | 26 Nautical Miles<br>(southwest) | Riverside | •RWY 3/21 (turf) 2,700 feet x 80 feet | None, Visual Only |
| Rockford Municipal<br>2U4 | 28 Nautical Miles<br>(southwest) | Rockford | •RWY 16/34 (asphalt) 2,800 feet x 50 feet | None, Visual Only |
| Mud Lake/West Jefferson County<br>1U2 | 28 Nautical Miles<br>(northwest) | Mud Lake | •RWY 2/20 (asphalt) 3,300 feet x 40 feet | None, Visual Only |

Source: FAA Airport Data and Information Portal, SkyVector, ITD Aeronautics, Google Earth

1 A nautical mile is slightly longer than a land-measured mile, which is also known as a statute mile, and is equal to 1.1508 statute miles.

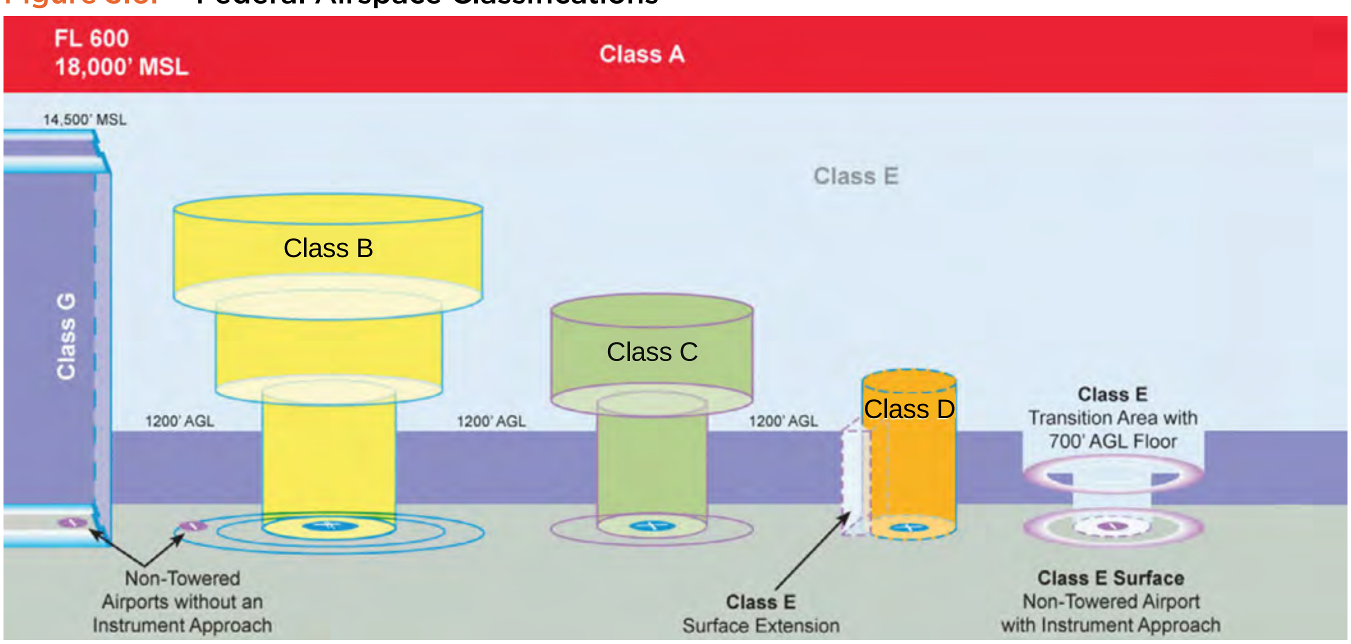
## 3.3. Airspace and Approaches

The two categories of airspace in the United States are regulatory and nonregulatory. The four types of airspace that make up these two categories are controlled, uncontrolled, special use, and other. The categories and types of airspace are dictated by the complexity or density of aircraft movements, the nature of the operations conducted within the airspace, the level of safety required, and national and public interest.

As shown in Figure 3.6, controlled airspace consists of five different classifications within which air traffic control (ATC) service is provided. When overlapping airspace designations apply to the same volume of airspace, the operating rules associated with the more restrictive airspace designation apply.[15]

- Class A: Airspace from 18,000 feet mean sea level (MSL) up to 60,000 feet mean sea level. This class of airspace is primarily used for aircraft during the cruise and transitioning phases.
- Class B: Airspace surrounding the nation's busiest airports from the surface up to 10,000 feet mean sea level. As such, it has more restrictive operating rules than subsequent classes.
- Class C: Airspace surrounding smaller types of airports from the surface up to 4,000 feet mean sea level above the surface elevation. These airports have an operational control tower, are serviced by a radar approach control, and meet a minimum number of operations or passenger enplanements.
- Class D: Airspace surrounding smaller types of airports from the surface up to 2,500 feet mean sea level above the surface elevation. These airports have an operational control tower but are not serviced by a radar approach control. They do not have to meet a minimum number of operations or passenger enplanements.
- Class E: Controlled airspace not classified as Class A, B, C, or D. In most areas, this airspace begins at 1,200 feet above ground level (AGL) and extends up to 18,000 feet mean sea level.

Figure 3.6: **Federal Airspace Classifications**




Source: FAA, Pilot's Handbook of Aeronautical Knowledge

Uncontrolled airspace, or Class G airspace, is the portion of the airspace that has not been designated as Class A, B, C, D, or E. In general, Class G airspace extends from the surface to the base of Class E airspace. Even though air traffic control has no authority or responsibility to control air traffic in Class G airspace, visual flight rules (VFR) still apply. Nonregulatory airspace includes several types of special use areas. Typically, these areas are used for military operations, restricted due to national security, or reserved for similar uses.[16]

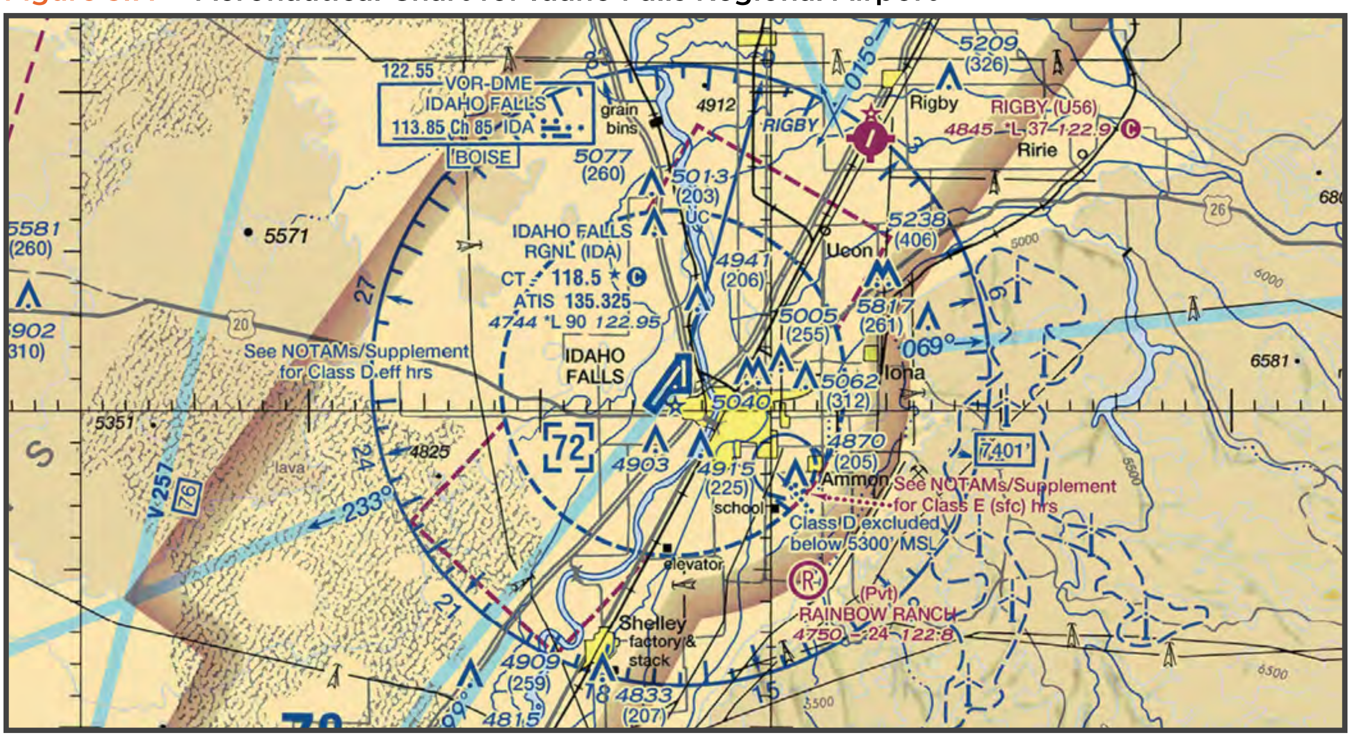
### 3.3.1. Airspace at Idaho Falls Regional Airport

The airport has an airport traffic control tower (ATCT) with published daily operating hours of 7 a.m. to 8 p.m. Between those hours, Class D airspace is in effect. When the control tower is closed, the Class D airspace becomes Class E airspace.

As shown in Figure 3.7, the Class D airspace is centered over the airport with a radius that extends five nautical miles. It begins at the surface and extends up to 7,200 feet mean sea level or 2,500 above ground level. The small circle shown at the southeast edge of the Class D airspace indicates where it drops below 5,300 feet mean sea level to accommodate the helicopter landing area at Eastern Idaho Regional Medical Center.

It is important to note that the Class E airspace extends beyond the Class D airspace to the northeast and southwest to protect the Runway 3/21 instrument approaches. These Class E extensions begin at ground level, are seven nautical miles wide, and vary in length between two to four nautical miles. Outside of the Class D airspace and Class E extensions, there is a larger Class E surface that begins at 700 feet above ground level and extends northeast for approximately 30 miles to Sugar City and southwest for approximately 60 miles to American Falls. Additionally, there is a national security area that begins approximately 26 nautical miles west of IDA and surrounds the Idaho National Laboratory site. The aeronautical chart indicates pilots should remain above 6,000 feet mean sea level in this area.

**Figure 3.7: Aeronautical Chart for Idaho Falls Regional Airport**




Source: Sky Vector

### 3.3.2. Instrument Approach Procedures for Idaho Falls Regional Airport

As shown in Table 3.2, there are eight published instrument approach procedures (IAP) for Idaho Falls Regional Airport. These multiple approaches incorporate a wide range of navigational aids and equipment to provide pilots with several options for landing at the airport during inclement weather.

**Table 3.2: Instrument Approach Procedures**

<table>
<tr><th colspan="6">Minimum Altitude* and Minimum Visibility** by Aircraft Approach Category</th></tr>
<tr><th>Category</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr>
<tr><td colspan="6">Runway 3</td></tr>
<tr><td colspan="6">Runway 3: LOC BC</td></tr>
<tr><td>S-LOC 3</td><td colspan="5">336 ft & 1 mile</td></tr>
<tr><td>CIRCLING</td><td>456 ft & 1 mile</td><td>556 ft & 1 mile</td><td>656 ft & 1.75 miles</td><td>676 ft & 2.25 miles</td><td>676 ft & 2.5 miles</td></tr>
<tr><td colspan="6">Runway 3: RNAV (RNP) Z</td></tr>
<tr><td>RNP 0.11 DA</td><td colspan="4">306 ft & 0.875 mile</td><td></td></tr>
<tr><td>RNP 0.30 DA</td><td colspan="4">402 ft & 1.125 mile</td><td></td></tr>
<tr><td colspan="6">Runway 3: RNAV (GPS) Y</td></tr>
<tr><td>LPV DA</td><td colspan="4">200 ft & 0.75 mile</td><td></td></tr>
<tr><td>LNAV/VNAV DA</td><td colspan="4">258 ft & 0.75 mile</td><td></td></tr>
<tr><td>LNAV MDA</td><td colspan="4">356 ft & 1 mile</td><td></td></tr>
<tr><td>CIRCLING</td><td>456 ft & 1 mile</td><td>556 ft & 1 mile</td><td>656 ft & 1.75 miles</td><td>676 ft & 2.25 miles</td><td></td></tr>
<tr><td colspan="6">Runway 3: VOR</td></tr>
<tr><td>S-3</td><td colspan="2">556 & 1 mile</td><td colspan="2">556 & 1.625 miles</td><td></td></tr>
<tr><td>CIRCLING</td><td colspan="2">556 & 1 mile</td><td>656 & 1.75 miles</td><td>676 & 2.25 miles</td><td></td></tr>
<tr><td colspan="6">Runway 21</td></tr>
<tr><td colspan="6">Runway 21: ILS or LOC</td></tr>
<tr><td>S-ILS 21</td><td colspan="5">250 ft & 0.5 mile</td></tr>
<tr><td>S-LOC 21</td><td colspan="2">385 ft & 0.5 mile</td><td colspan="3">385 ft & 0.625 mile</td></tr>
<tr><td>CIRCLING</td><td>456 ft & 1 mile</td><td>556 ft & 1 mile</td><td>656 ft & 1.75 miles</td><td>676 ft & 2.25 miles</td><td>676 ft & 2.5 miles</td></tr>
<tr><td colspan="6">Runway 21: RNAV (RNP) Z</td></tr>
<tr><td>RNP 0.11 DA</td><td colspan="4">276 ft & 0.5 mile</td><td></td></tr>
<tr><td>RNP 0.30 DA</td><td colspan="4">385 ft & 0.625 mile</td><td></td></tr>
<tr><td colspan="6">Runway 21: RNAV (GPS) Y</td></tr>
<tr><td>LPV DA</td><td colspan="4">250 ft & 0.5 mile</td><td></td></tr>
<tr><td>LNAV/VNAV DA</td><td colspan="4">281 ft & 0.5 mile</td><td></td></tr>
<tr><td>LNAV MDA</td><td colspan="2">365 ft & 0.5 mile</td><td colspan="2">365 ft & 0.625 mile</td><td></td></tr>
<tr><td>CIRCLING</td><td>456 ft & 1 mile</td><td>556 ft & 1 mile</td><td>656 ft & 1.75 miles</td><td>676 ft & 2.25 miles</td><td></td></tr>
<tr><td colspan="6">Runway 21: VOR</td></tr>
<tr><td>S-21</td><td colspan="2">665 ft & 0.5 mile</td><td colspan="2">665 ft & 1.5 miles</td><td></td></tr>
<tr><td>CIRCLING</td><td colspan="2">656 ft & 1 mile</td><td>656 ft & 1.875 miles</td><td>676 ft & 2.25 miles</td><td></td></tr>
</table>

*Altitude shown in feet above ground level
**Visibility shown in statute miles (One statute mile is equal to 5, 280 feet)

Source: FAA Airport Data and Information Portal (approach plates valid July 14 to August 11, 2022)

## 3.4. Aircraft Accident History

The National Transportation Safety Board (NTSB) is an independent federal agency that investigates civil aviation accidents and incidents in the United States. The agency maintains the Aviation Accident Database & Synopses which includes records dating as far back as January 1, 1983. This information, which is publicly available at the NTSB Case Analysis and Reporting Online (CAROL) database, lists a total of 29 reports associated with IDA. As shown in Table 3.3, the most recent incident took place September 21, 2015.

**Table 3.3: Accident Report Summary (1983–2021)**

| Date | NTSB # | Purpose | Injuries | Fatalities | Conditions | Phase of Flight |
|---|---|---|---|---|---|---|
| 9/21/2015 | WPR15IA263 | Aerial Survey | 2 | 0 | Dawn/Visual | Takeoff |
| 6/28/2015 | GAA15CA145 | Personal | 0 | 0 | Day/Visual | Taxiing |
| 8/11/2014 | WPR14LA341 | Personal | 0 | 0 | Day/Visual | Takeoff |
| 9/19/2013 | WPR13LA416 | Business | 3 | 0 | Day/Visual | Landing/Approach |
| 6/22/2013 | WPR13FA281 | Personal | 1 | 2 | Day/Visual | Takeoff |
| 7/11/2012 | WPR12CA311 | Personal | 0 | 0 | Dusk/Visual | Landing/Touchdown |
| 5/12/2012 | WPR12CA202 | Personal | 0 | 0 | Day/Visual | Landing Roll |
| 6/10/2011 | WPR11CA262 | Instructional | 0 | 0 | Day/Visual | Landing Roll |
| 9/28/2010 | WPR10IA482 | Personal | 0 | 0 | Dusk/Visual | Landing Roll, Go Around |
| 7/5/2009 | WPR09LA336 | Personal | 1 | 0 | Day/Visual | Takeoff |
| 12/21/2008 | WPR09CA066 | Personal | 0 | 0 | Night/Visual | Landing Roll |
| 9/30/2008 | SEA08LA216 | Personal | 0 | 0 | Day/Visual | Taxiing |
| 5/20/2008 | LAX08CA091 | Personal | 0 | 0 | Night/Visual | Landing Roll |
| 2/3/2005 | SEA05CA043 | Instructional | 0 | 0 | Day/Visual | Landing Roll |
| 7/17/2003 | SEA03CA162 | Personal | 0 | 0 | Day/Visual | Taxiing |
| 3/17/2003 | SEA03LA047 | Instructional | 0 | 0 | Day/Visual | Go Around |
| 8/5/2002 | SEA02FA146 | Instructional | 0 | 3 | Day/Visual | Traffic Pattern |
| 6/23/2002 | SEA02LA105 | Aerial Photo | 0 | 0 | Day/Visual | Landing Roll |
| 3/23/2002 | SEA02LA057 | Personal | 0 | 0 | Day/Visual | Landing Roll |
| 11/10/2000 | SEA01FA017 | Maintenance Check | 0 | 2 | Day/Visual | Orbiting |
| 10/16/1999 | SEA00LA002 | Personal | 0 | 0 | Day/Visual | Landing Roll |
| 7/22/1997 | SEA97LA174 | Agricultural | 0 | 0 | Day/Visual | Takeoff |
| 11/17/1993 | SEA94LA033 | Personal | 0 | 0 | Day/Visual | Landing Roll |
| 9/3/1993 | SEA93LA190 | Personal | 0 | 0 | Day/Visual | Landing Roll |
| 5/9/1987 | SEA87IA093 | Personal | 0 | 0 | Day/Visual | Go Around, Landing Roll |
| 12/7/1985 | SEA86LA029 | Positioning | 0 | 0 | Day/Inst. | Landing Approach |
| 11/6/1985 | SEA86LA024 | Corporate | 0 | 0 | Day/Inst. | Landing Approach |
| 5/20/1983 | SEA83LA102 | Personal | 1 | 0 | Day/Visual | Takeoff |
| 3/16/1982 | SEA82DA038 | Personal | 0 | 0 | Day/Inst. | Landing Approach |

Source: NTSB Case Analysis and Reporting Online (CAROL) Database

## 3.5. Grant History

The FAA provides grants to airports through the Airport Improvement Program (AIP) to assist with funding capital improvement and planning projects. As summarized in Table 3.4, the airport has received a total of $90.6 million in AIP funding from 1984 to 2021.

Many airports have also recently received funding to provide economic relief in response to the COVID-19 pandemic. Sources of this funding have included the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020; the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) of 2020; and the American Rescue Plan Act (ARPA) of 2021. In addition, the Infrastructure Investment and Jobs Act (IIJA) was signed into law November 15, 2021, which resulted in $25 billion in new funding becoming available for airport infrastructure, terminals, and air traffic facilities. Table 3.5 lists the federal grants IDA has received as a result of these laws.

**Table 3.4: Airport Improvement Program Grant History (1984–2021)**

| Sequence No. & Fiscal Year | Brief Project Description | Amount |
|---|---|---|
| 001-1984 | SRE; apron; improve building and drainage; acquire land for approaches | $564,005 |
| 002-1985 | ARFF vehicle; groove runway; extend runway; improve airport drainage | $998,983 |
| 003-1986 | Noise mitigation; rehab runway; improve drainage; acquire land | $472,607 |
| 004-1986 | Airport master plan study | $80,000 |
| 005-1987 | SRE; improve access road; noise mitigation; acquire land for development | $504,092 |
| 006-1988 | Acquire land for approaches; improve access road | $397,749 |
| 007-1989 | Improve access road; acquire ARFF safety equipment | $557,045 |
| 008-1990 | Improve ARFF building | $762,134 |
| 009-1991 | Construct apron; install signs; acquire security equipment and land | $1,755,674 |
| 010-1992 | Improve runway safety area | $2,468,701 |
| 011-1992 | Improve runway safety area | $1,500,000 |
| 012-1993 | Improve runway safety area | $2,859,720 |
| 013-1994 | Acquire snow removal equipment | $366,105 |
| 014-1995 | Rehab apron; rehab runway lighting | $2,424,775 |
| 015-1997 | Airport master plan study, conduct miscellaneous study | $298,545 |
| 016-1997 | Rehab runway | $2,079,487 |
| 017-1998 | Rehab runway | $867,912 |
| 018-1999 | Improve safety area and service road; acquire land; ARFF vehicle | $530,249 |
| 019-2000 | Improve terminal building | $156,128 |
| 020-2000 | Rehabilitate taxiway; acquire security equipment; expand apron | $678,059 |
| 021-2001 | Improve terminal building | $2,828,469 |
| 022-2001 | Install runway vertical guidance system; acquire snow removal equipment | $373,385 |
| 023-2003 | Modify access road; rehab apron | $1,423,213 |

Source: FAA and 2010 Idaho Falls Regional Airport Master Plan

| Sequence No. & Fiscal Year | Brief Project Description | Amount |
|---|---|---|
| 024-2004 | Rehab taxiway, runway, and apron; conduct study; remove obstructions; acquire wheelchair lift; install vertical visual guidance system | $5,461,921 |
| 025-2005 | Rehab apron and taxiway; remove obstructions; expand apron | $3,239,040 |
| 026-2005 | Expand apron | $848,486 |
| 027-2006 | Expand apron; install runway vertical visual guidance system 17/35 | $5,391,619 |
| 028-2007 | Acquire SRE; construct SRE building; rehab runway 2/20 | $600,000 |
| 029-2008 | Rehab runway 2/20; runway incursion markings | $8,066,071 |
| 030-2008 | Rehab runway 2/20 | $633,961 |
| 031-2009 | Construct SRE building | $534,266 |
| 032-2009 | Update airport master plan study | $318,250 |
| 033-2009 | Construct SRE building | $793,300 |
| 034-2010 | Construct SRE building | $625,000 |
| 035-2010 | Acquire ARFF vehicle | $663,689 |
| 036-2011 | Improve runway 2/20 safety area; install fencing; rehabilitate apron | $1,766,524 |
| 037-2012 | Acquire SRE; construct apron; expand terminal building | $753,507 |
| 038-2013 | Expand terminal building | $2,316,501 |
| 039-2014 | Construct access road; construct apron; construct taxiway | $1,888,760 |
| 040-2015 | Expand apron | $2,070,282 |
| 041-2016 | Expand terminal building; rehabilitate runway 2/20; rehabilitate taxiway | $1,064,269 |
| 042-2016 | Acquire land for approaches | $583,424 |
| 043-2017 | Install guidance signs; rehabilitate Taxiway A, connectors, and Taxiway C | $7,813,597 |
| 044-2018 | Expand Terminal Building | $3,455,367 |
| 045-2019 | Acquire SRE | $700,000 |
| 045-2019 | Modify Terminal Building | $848,191 |
| 046-2019 | Reconstruct Runway | $500,000 |
| 046-2019 | Construct Taxiway | $1,438,822 |
| 047-2020 | Modify Terminal Building | $12,185,559 |
| 050-2021 | Update Airport Master Plan Study | $701,987 |
| 051-2021 | Seal Runway Pavement Surface and Pavement Joints | $361,271 |
| 052-2021 | Acquire ARFF Vehicle and Safety Equipment | $742,453 |
| | **Total** | **$90,611,167** |

Source: FAA and 2010 Idaho Falls Regional Airport Master Plan

Table 3.5: COVID-19 Response Grant History (2020–2021)

| Sequence No. & Fiscal Year | Federal Response Act | Amount |
|---|---|---|
| 48-2020 | Coronavirus Aid, Relief, and Economic Security Act | $2,279,821 |
| 49/54-2020 | Coronavirus Response and Relief Supplemental Appropriations Act | $1,790,343 |
| 55-2021 | American Rescue Plan Act | $2,558,077 |
| 2022 | Infrastructure Investment and Jobs Act | $1,806,687 |
| | **Total** | **$8,434,928** |

Source: FAA

### 3.5.1. Idaho Airport Aid Program Grants

The State's Aeronautics Fund distributes grants to Idaho airports via the Idaho Airport Aid Program (IAAP). It is a trustee and benefit program that provides matching funds to municipal governments for public airport improvements.

The Idaho Airport Aid Program is administered according to Idaho Administrative Code IDAPA 39.04.04, and funding requests are submitted to the Idaho Transportation Department (ITD) Division of Aeronautics and the Idaho Transportation Board (ITB) for approval. Only public entities, such as a city, county, airport authority, political subdivision, or public corporation, that own or lease and operate a public-use landing facility are eligible for Idaho Airport Aid Program funds. Additionally, an airport owner must have a state approved airport plan (section 200.01) and protective zoning (section 200.04) in place to participate in the Idaho Airport Aid Program. However, the Idaho Airport Aid Program can provide funding for those items if an airport needs to develop or update these items.

Grants are mainly awarded for scheduled projects or purchases of maintenance and safety supplies. However, small project awards are also distributed for unscheduled or emergency projects. All allocations must meet high priority needs and achieve maximum benefit and use of available funds. Airport projects funded with state and local dollars are prioritized by the following rating system:

1. Aircraft Operations Safety
2. Protects Prior Public Investments
3. Assures Maximum Use and Benefit of Federal Funds
4. Aircraft Landing Projects
5. Preservation of Existing Aircraft Landing Facilities
6. Development of Aircraft Landing Facilities
   - Large geographical area with no air accessibility.
   - Additional new sites in urban areas where landing sites are rapidly becoming non-existent.
   - Recreational area development where land availability is becoming difficult to obtain.

The State Aeronautics Fund is mainly funded by Idaho's aviation fuel tax.[17] However, aircraft and pilot registrations, the sale of aeronautical charts and directories, federal reimbursements, and other miscellaneous items also provide additional sources of revenue for the fund. Table 3.6 lists the Idaho Airport Aid Program grants IDA has received dating back to 1946.

**Table 3.6:** Idaho Airport Aid Program Grant History (1946–2019)

| Fiscal Year | Brief Project Description | Amount |
|---|---|---|
| 1946-1966 | Airport development projects | $21,745 |
| 1973 | Land acquisition; rehab and strengthen runways, taxiways, and aprons; entrance road improvement; obstruction removal | $30,000 |
| 1973 | Airspace easements; mark runways and taxiways | $8,000 |
| 1973 | Airport master plan study | $1,000 |
| 1975 | Land acquisition; rehab and strengthen runways; construct aprons | $20,000 |
| 1977 | Acquire land; terminal expansion; SRE; fencing | $80,000 |
| 1980 | Acquire land; passenger loading bridges | $8,436 |
| 1984 | Acquire land; construct light apron tie downs and T-hangar taxilanes; markings; fencing; SRE; terminal building water line | $12,081 |
| 1993 | Soil remediation from crop dusting residue | $22,500 |
| 1996 | Nonprimary Entitlement (NPE) match | $22,500 |
| 1996 | Signs; security; SRE; land acquisition | $38,000 |
| 1998 | Airport master plan study; initial pavement study | $30,400 |
| 1999 | Air carrier apron repair; snowplow blade; historic hangar repair | $25,000 |
| 2000 | Security light upgrade; parking lot; security fence | $15,000 |
| 2001 | Rehab TW C; expand cargo apron; fencing; relocate segmented circle | $45,000 |
| 2001 | Improve airport terminal; acquire SRE; install Runway 20 PAPI | $45,000 |
| 2004 | Acquire wheelchair lift; conduct misc. study; install RW vertical/visual guidance system; rehab apron; rehab RW and TW; remove obstructions | $45,000 |
| 2005 | Expand general aviation apron | $25,500 |
| 2007 | Acquire SRE; construct SRE building phase 1; rehab RW 2/20 design | $25,500 |
| 2008 | Rehab RW 2/20; RW incursion markings | $25,000 |
| 2009 | Construct SRE building; update airport master plan study | $20,000 |
| 2010 | Construct SRE building | $20,000 |
| 2011 | Improve RSA RW 2/20; install perimeter fencing; rehab apron | $20,000 |
| 2012 | Acquire SRE, construct apron; expand terminal building | $25,000 |
| 2017 | Install guidance signs; rehab TW A and connectors; rehab TW C | $25,000 |
| 2018 | Expand terminal building | $15,000 |
| 2019 | Modify terminal building, acquire SRE, construct TW | $15,000 |
| | **Total** | **$679,662** |

Source: 2010 IDA Airport Master Plan and ITD-Aeronautics

## 3.6. Economic Impact

An airport's economic impact is essentially a measure of the financial effect it has on the state and local economy. As part of the update to the Idaho Airport System Plan, ITD Aeronautics also updated the Idaho Airport Economic Impact Analysis (AEIA) which discusses the economic impact of Idaho airports—both on a statewide basis as well as for individual airports. It is important to note that this report was completed as of July 2020, but the data is from 2018 prior to COVID-19 impacts.

There are three types of economic impacts discussed in this report: direct, indirect, and induced. Direct impacts are attributed to on-airport activity such as car rentals, concessions, and fuel sales as well as capital improvements and off-airport visitor spending. Indirect impacts are typically the result of interactions between businesses and suppliers of goods and services (e.g., purchases from suppliers) while induced impacts are associated with respending income earned within a community. (Both indirect and induced impacts are considered to be multiplier effects.) An airport's total impact is the sum of the direct, indirect, and induced impacts which are expressed in the following four ways:

1. Jobs or Employment: The number of people employed at businesses associated with the airport.
2. Earnings or Labor Income: Wages, salaries, and benefits received by those employees.
3. Gross Domestic Product (GDP): The dollar value of final goods and services. It does not include the value of intermediate goods and services used to produce the final product.
4. Output: The economic activity generated by the operation of the airport and all related activities including the dollar value of intermediate goods and services.

### 3.6.1. Economic Impact of Idaho Airports

Figure 3.8 shows the economic impact of the 75 airports in the Idaho Airport System. For 2018, the total economic output of these airports exceeded $4.8 billion. They also contributed nearly $2.4 billion to Idaho's GDP and supported more than 33,460 jobs with a resulting $1.3 billion in earnings.[18]

**Figure 3.8: Economic Impact of Idaho Airports, 2018**

| Jobs | Earnings | GDP | Output |
|---|---|---|---|
| **33,460 Jobs** | **$1.3 Billion** | **$2.3 Billion** | **$4.8 Billion** |

| Jobs | Earnings | GDP | Output |
|---|---|---|---|
| 18,320 on-airport activity | $823M on-airport activity | $1.54B on-airport activity | $3.50B on-airport activity |
| 740 capital improvement | $38.4M capital improvement | $57M capital improvement | $107M capital improvement |
| 14,400 visitor spending | $428M visitor spending | $792M visitor spending | $1.24B visitor spending |

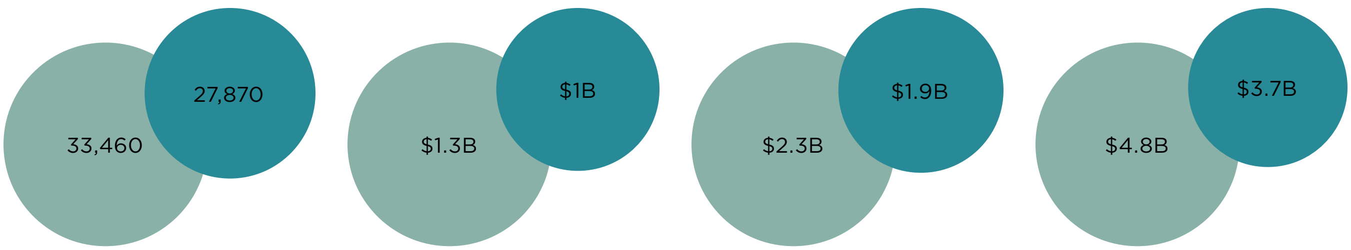
Direct Indirect Induced

Source: 2020 Idaho Airport Economic Impact Analysis Update

According to the 2020 Idaho Airport Economic Impact Analysis, the total economic output of the six commercial airports was $3.7 billion for 2018. It also states these airports contributed $1.9 billion to Idaho's GDP and supported 27,870 jobs with a resulting $1 billion in earnings. Figure 3.9 shows the economic impact of Idaho's commercial service airports.[19]

**Figure 3.9: Economic Impact of Commercial Airports in Idaho, 2018**

| Jobs | Earnings | GDP | Output |
|---|---|---|---|
| **27,870** | **$1B** | **$1.9B** | **$3.7B** |




Total impact of Idaho's commercial airports
Total impact of Idaho airports

Source: 2020 Idaho Airport Economic Impact Analysis Update

### 3.6.2. Economic Impact of Idaho Falls Regional Airport

The 2020 Idaho Airport Economic Impact Analysis included airport-specific impacts for each airport in the Idaho system. This analysis shows the economic output for Idaho Falls Regional Airport was $145.6 million for 2018. It also shows the airport contributed $80.2 million to Idaho's GDP and supported 1,240 jobs with a resulting $42.5 million in earnings (Figure 3.10).

**Figure 3.10: Economic Impact of Idaho Falls Regional Airport, 2018**

| Jobs | Earnings | GDP | Output |
|---|---|---|---|
| **1,240** | **$42.5M** | **$80.2M** | **$145.6M** |

● = 10 jobs ● = $1,000,000 ● = $1,000,000 ● = $1,000,000

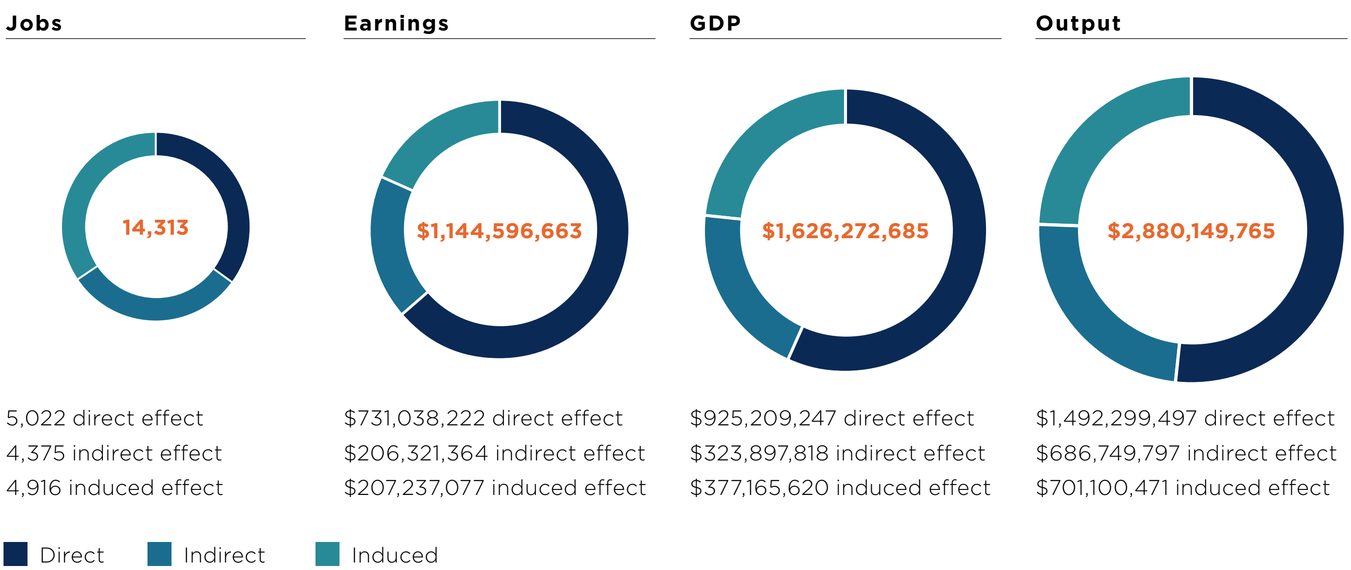
Source: 2020 Idaho Airport Economic Impact Analysis Update

### 3.6.3. Economic Impact of Idaho National Laboratory

As previously mentioned, Idaho National Laboratory (INL) employs approximately 5,022 people which makes it the largest employer in Idaho Falls, and one of Idaho's largest employers. For fiscal year 2020, it was Idaho's seventh largest private employer. When compared to both public and private businesses, it was Idaho's tenth largest employer. This is in addition to the nearly $240 million the company subcontracted to Idaho businesses. Idaho National Laboratory's total economic output for fiscal year 2020 was $2.88 billion, representing more than 3.44% of Idaho's total output, while its impact on Idaho's total labor income was more than $1.14 billion, representing 1.4% of Idaho's total personal income (Figure 3.11).[20]

The company's impact within eastern Idaho includes approximately $157.3 million spent in the region with $135.7 million spent specifically at small businesses. In addition, the company awarded $127,900 in community grants and $75,700 in economic development grants for fiscal year 2021.[21]

**Figure 3.11: Statewide Economic Impact of Idaho National Laboratory, Fiscal Year 2020**




Source: Idaho National Laboratory Economic Impact Summary, FY 2020

## 3.7. Socioeconomic and Demographic Review

The socioeconomic characteristics of a community may influence the demand for air travel within an airport's geographic region. This data can help identify trends that may impact current and future aviation operations; especially in the preparation of aviation demand forecasts. It is also helpful in making sure the community's long-term needs are taken into consideration as part of the airport planning process.

The Idaho Falls Metropolitan Statistical Area (MSA), which consists of Bonneville, Jefferson, and Butte Counties, is the geographic focus of this socioeconomic overview.[22] Much of the data was obtained from Woods and Poole Economics, Inc.; an independent firm that specializes in long-term economic and demographic projections.

### 3.7.1. Population Rates

According to Woods and Poole, the population within the Idaho Falls Metropolitan Statistical Area was 153,107 for 2020 with a compound annual growth rate (CAGR) of 1.9% between 2000–2020. The population is projected to have a compound annual growth rate of 1.1% through 2040. As shown in Figure 3.12, the majority of the population within the Idaho Falls Metropolitan Statistical Area is 34 years of age or younger.

**Figure 3.12: Age Distribution, 2020**


Source: Woods and Poole Economics, Inc.

### 3.7.2. Household Income

According to Woods and Poole, the average (i.e., mean) household income for the Idaho Falls Metropolitan Statistical Area was estimated to be $141,957 for 2020 while total per capita income was $50,331. Figure 3.13 shows the average incomes for the Idaho Falls Metropolitan Statistical Area in comparison to the average household and per capita incomes for Idaho.

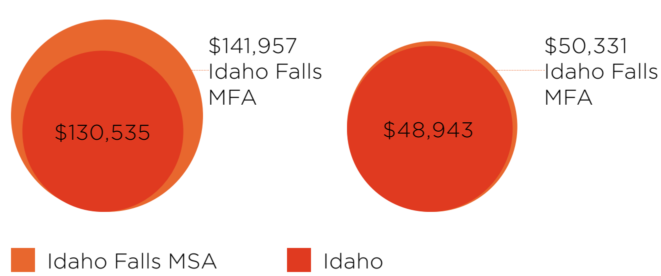
### 3.7.3. Top Employers and Industries

According to Woods and Poole, the top five industries within the MSA for 2020 were health care and social assistance; professional and technical services; retail; state and local government; and construction. Figure 3.14 shows the top industries in which people are employed within the Idaho Falls MSA.

The Woods and Poole data also lists industries in terms of earnings for the MSA. The top five for 2020 were professional and technical services; retail; health care and social assistance; administrative and waste services; and state and local government. Figure 3.15 shows the top industries in terms of earnings for the MSA.

**Figure 3.13: Average Incomes, 2020**

| Household Income | Per Capita Income |
|---|---|
| **$141,957** Idaho Falls MSA | **$50,331** Idaho Falls MSA |
| **$130,535** Idaho | **$48,943** Idaho |




Source: Woods and Poole Economics, Inc.

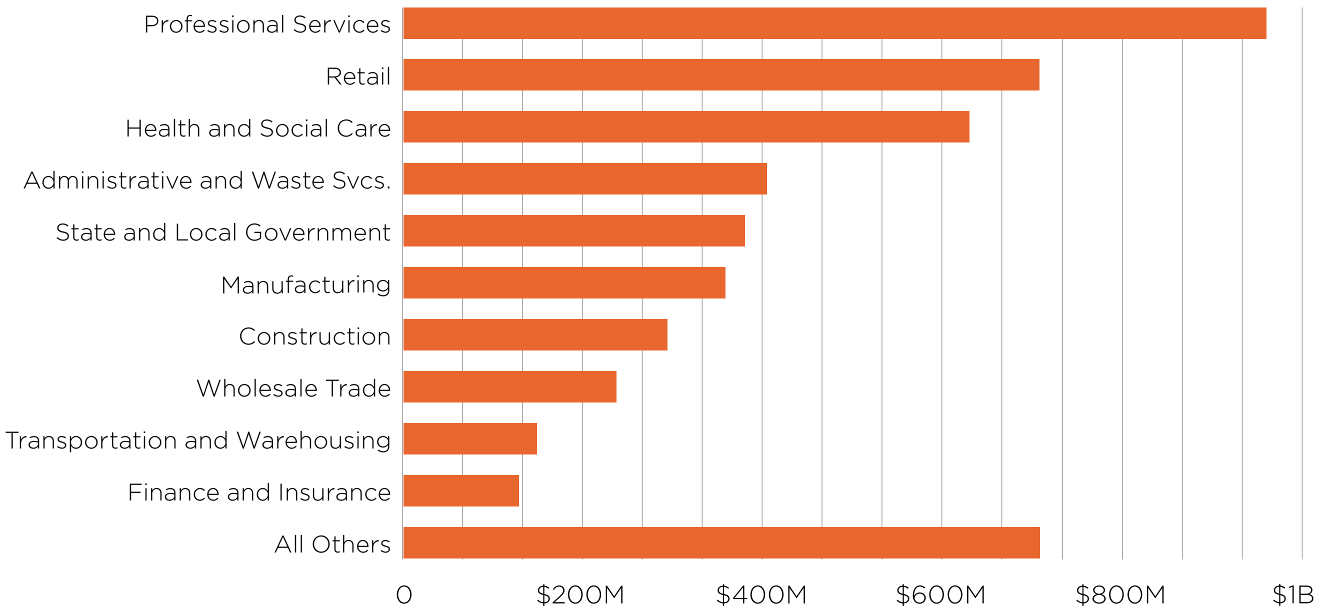
## Figure 3.14: Top Industries by Employment, 2020

### Idaho Falls Metropolitan Statistical Area Employment by Industry

| | | | |
|---|---|---|---|
| 1 | Health and Social Care | 13% | 12,578 jobs |
| 2 | Professional Services | 12% | 11,969 jobs |
| 3 | Retail Trade | 11% | 11,270 jobs |
| 4 | State and Local Government | 8% | 7,858 jobs |
| 5 | Construction | 7% | 6,807 jobs |
| 6 | Manufacturing | 6% | 5,879 jobs |
| 7 | Administrative and Waste Svcs | 6% | 5,745 jobs |
| 8 | Food and Accommodations | 6% | 5,739 jobs |
| 9 | Real Estate and Rentals | 5% | 5,149 jobs |
| 10 | Other Services | 5% | 4,531 jobs |
| 11 | Finance and Insurance | 4% | 3,881 jobs |
| 12 | All Other | 17% | 16,660 jobs |

Source: Woods and Poole Economics, Inc.

**Figure 3.15: Top Industries by Earnings, 2020**

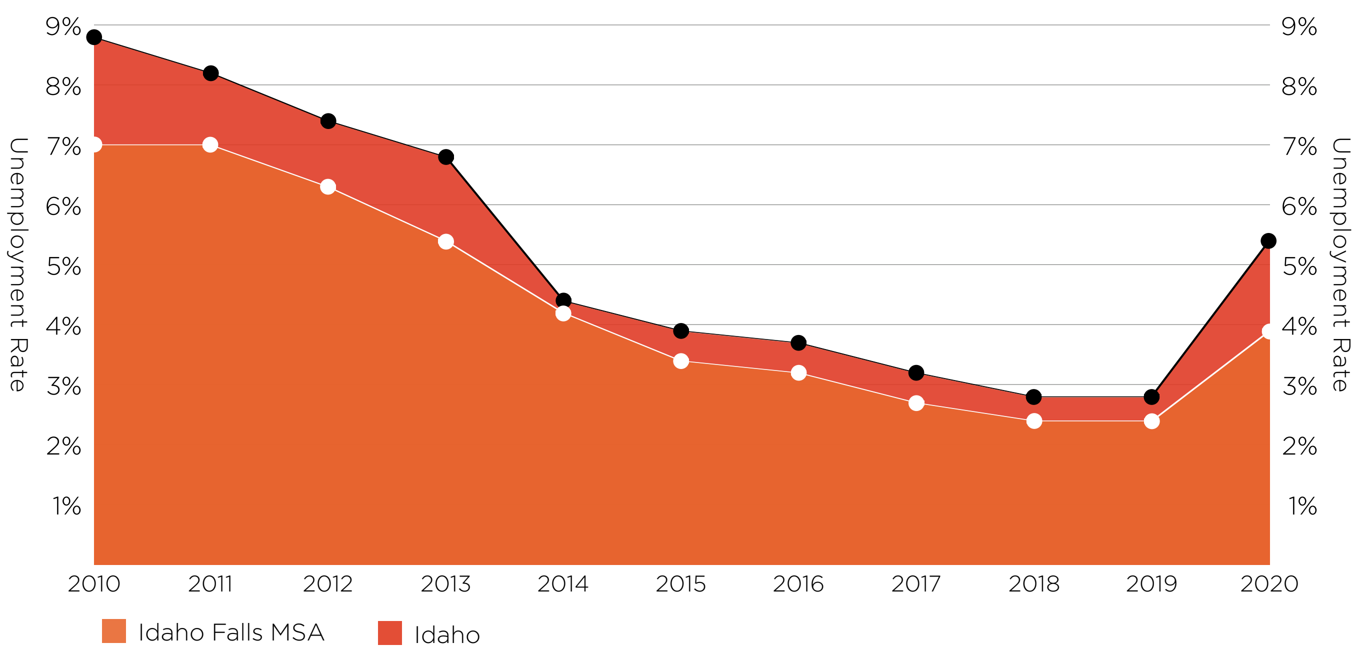



Source: Woods and Poole Economics, Inc.

### 3.7.4. Unemployment Rates

Unemployment within the Idaho Falls MSA was declining at a steady pace until 2019. However, the COVID-19 pandemic caused rates to increase for 2020. As shown in Figure 3.16, while the unemployment rates for the MSA have followed a similar trend to those for the whole state, they have remained lower than the statewide unemployment rates.[23]

**Figure 3.16: Unemployment Rates, 2010–2020**




Source: U.S. Bureau of Labor Statistics

### 3.7.5. Looking Ahead

Idaho Falls was named the Best-Performing Small City for 2021 by the Milken Institute. According to the organization's report, *Best-Performing Cities 2021: Foundations for Growth and Recovery*, Idaho Falls experienced significant short-term job growth of 4.7% from October 2019 to October 2020. This was largely due to the high-profile employers in the region.[24]

> **"Idaho Falls is also considered one of the best places to live in Idaho due to its natural amenities, safety, and low cost of living, as well as access to high-quality jobs."**
>
> —Milken Institute

Several new projects and recent announcements indicate Idaho Falls will continue to experience economic growth despite the impacts and uncertainties related to the COVID-19 pandemic. These include national and regional chains expanding to Idaho Falls such as the new 180,000 square-foot Costco store that opened in August 2020 as well as the 187,000 square-foot RC Willey store that is expected to open in late 2022. Other notable construction projects include a new 19,000-square-foot Summit Orthopaedics building that opened in January 2022, and a new 48,000-square-foot event center at Snake River Landing that is expected to be completed by October 2022. In addition, the College of Eastern Idaho will soon begin construction of an 88,000-square-foot, two-story Future Tech facility with an estimated cost of $40 million. The building, which will house its cybersecurity, solar power, battery technology, agriculture technology, and radiation safety programs, should be completed by early 2024.

Growth and expansion are also evident at the Idaho Falls Regional Airport. This includes a recent renovation and remodel of the terminal building that increased the number of gates from three to six. The airlines have also added new nonstop routes including an Allegiant Air route to Portland as of May 2021, American Airlines routes to Phoenix and Dallas-Fort Worth as of June 2021, and an Alaska Airlines route to Seattle as of June 2021.

Additionally, several recent announcements from the Idaho National Laboratory (INL) show the company is continuing to grow—as will its role as a major employer and contributor to the local economy. These include a partnership with PNW Hydrogen to combat climate change and bring the nation closer to a carbon-free future that comes with $20 million in funding from the U.S. Department of Energy as well as a partnership with the city of Idaho Falls to potentially turn the fields near MK Simpson Boulevard into a hub for research institutions in hopes of spurring a focused expansion of businesses and amenities in the area.

Another notable high-tech project involves a partnership between UAMPS and Portland-based reactor producer NuScale. The companies plan to build a first-of-its-kind nuclear reactor at the Idaho National Laboratory desert site west of Idaho Falls. The project, which was announced in 2020, involves building six module reactors that could produce a total of 462 megawatts. The project received $1.4 billion in funding from the U.S. Department of Energy, and the plant is expected to be running by 2029. These examples, and more, have city officials expecting a major population boom with the number of residents potentially doubling within a decade.[25]

# Endnotes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# AIRSIDE AND LANDSIDE INVENTORY

4

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CHAPTER FOUR

# INVENTORY

This chapter details the physical environment of Idaho Falls Regional Airport (IDA). All major airport components, structures, and pavements are documented. It also includes a detailed wind analysis using data recorded at the airport.

## 4.1. Natural and Physical Environment

### 4.1.1. Geology, Topography, and Soils

Idaho Falls Regional Airport is located within the city of Idaho Falls and is situated less than 1,000 feet from the western bank of the upper Snake River. It is also within the eastern section of the Snake River Plain which is a large and wide depression that extends east to west across southern Idaho. The elevation within the eastern Snake River Plain ranges from approximately 2,900 feet to over 6,000 above sea level.[1] The Upper Snake River Plain is nearly level and contains pastureland, cities, suburbs, industries, and cropland where extensive surface irrigation occurs.[2] Beneath the eastern Snake River Plain is a sole source, basalt aquifer that provides drinking water for approximately 200,000 people in southeastern and south-central Idaho. It is the largest basalt aquifer in Idaho, and it discharges nearly 2.6 trillion gallons of water into the Snake River annually which makes it one of the most productive aquifers in the United States.[3] The geology of the airport is primarily basalt, or lava rock, with the eastern and northern edges of the airport property

consisting of alluvium, or sediment from the Snake River.[4] Airport field elevation is reported by the Federal Aviation Administration (FAA) as 4,743.7 feet above mean sea level. As shown in Figure 4.1, a topographic survey of the airport shows the elevation at the airport varies between 4,720 and 4,750 feet above sea level.

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) provides an online web soil survey tool to research soil types and attribute data for a selected area of interest.[5] Table 4.1 lists the soil types shown in the web soil survey for the airport (Figure 4.2).

**Table 4.1: Soil Types Located at Idaho Falls Regional Airport**

| Map Unit | Soil Type | Acres | Percent of Area |
|---|---|---|---|
| 7 | Bock loam | 0.3 | 0% |
| 20 | Packham gravelly loam | 21.4 | 3% |
| 22 | Pancheri silt loam, 0–2% slopes | 406.5 | 57.1% |
| 23 | Pancheri silt loam, 2–4% slopes | 242.5 | 34.1% |
| 24 | Pancheri silt loam, 4–8% slopes | 30 | 4.2% |
| 33 | Polatis-rock outcrop complex, 2–25% slopes | 3.8 | 0.5% |
| 47 | Stan sandy loam | 6.9 | 1% |

Source: USDA NRCS

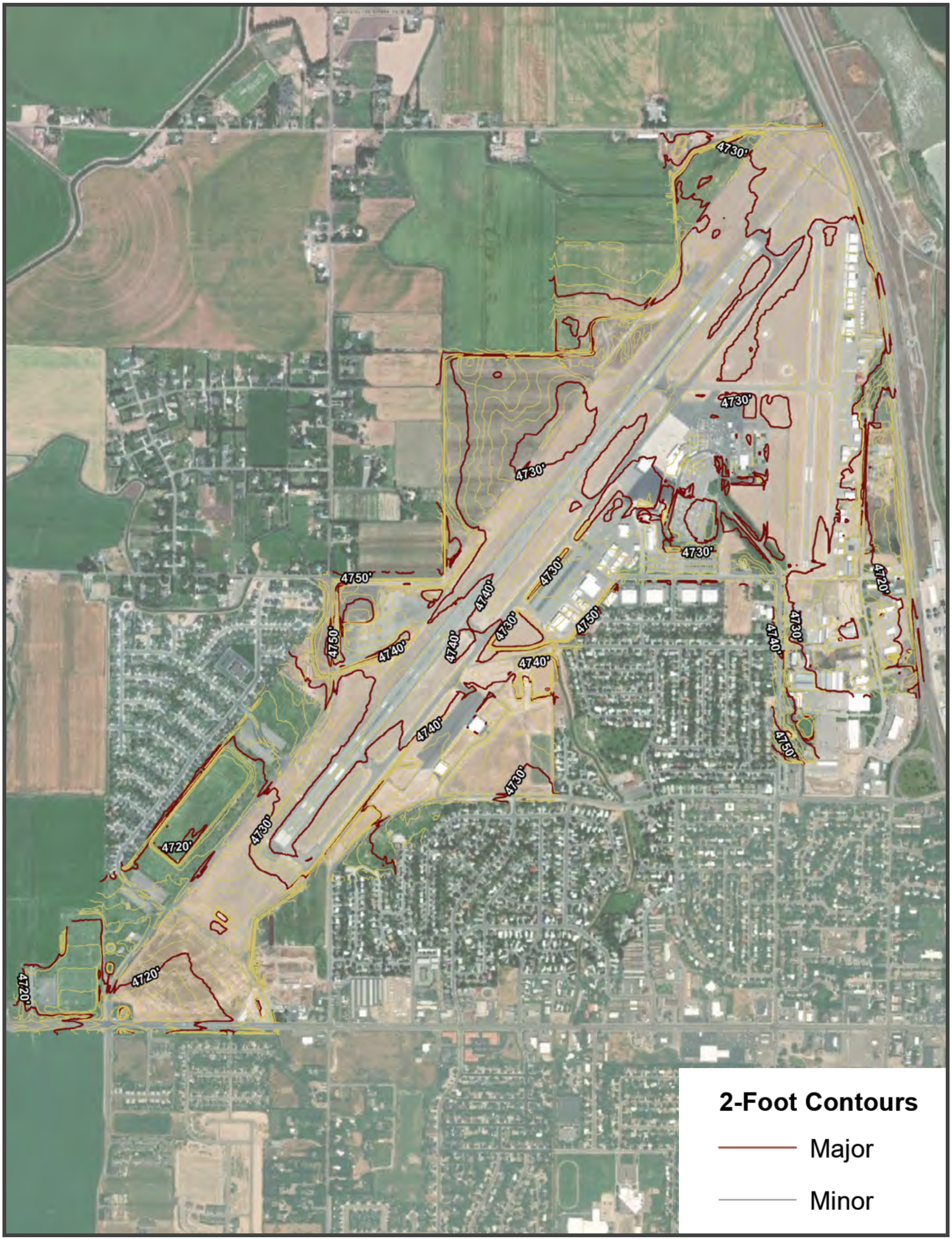
Approximately 95% of the soil type at IDA is the Pancheri silt loam variety. This soil type has a hydrologic soil group rating of B which means it has a moderate infiltration rate when thoroughly wet. It is considered well drained with a moderate rate of water transmission. Soil texture ranges from moderately fine to moderately coarse. Pancheri silt loam, with a slope of zero to two percent and two to four percent, is considered prime farmland if irrigated and reclaimed of excess salts and sodium. However, Pancheri silt loam with a slope of four to eight percent is not considered to be prime farmland.

### 4.1.2. Vegetation

The eastern Snake River Plain contains thousands of square miles of sagebrush desert and farmland irrigated with water withdrawn from the Eastern Snake Plain Aquifer. Vegetation in the Snake River Plain consists of Wyoming big sagebrush (*Artemisia tridentata* subsp. *wyomingensis*), basin big sagebrush (*Artemisia tridentata*), mountain sagebrush (*Artemisia tridentata* subsp. *vaseyana*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), Indian ricegrass (*Achnatherum hymenoides*), rabbitbrush (*Ericameria nauseosa*), and fourwing saltbush (*Atriplex canescens*).[6]

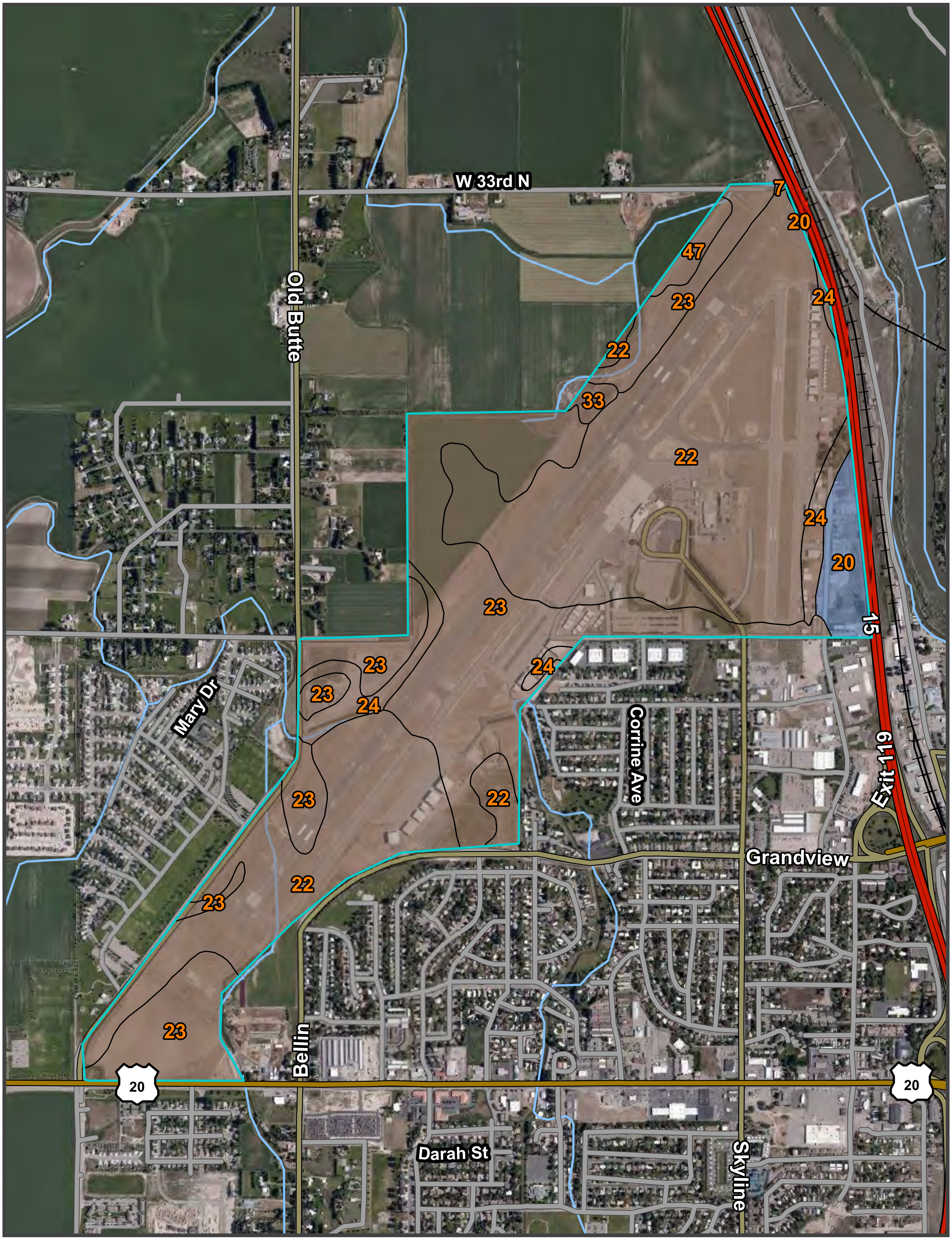
The USDA Plant Hardiness Zone Map is the standard by which gardeners and growers can determine which plants are most likely to thrive at a given location. The USDA has given Idaho Falls a growing zone designation of 5a. This designation means the average annual extreme minimum temperature ranges between minus 20 to minus 15 degrees Fahrenheit.[7]

**Figure 4.1:** Topography of Idaho Falls Regional Airport




Source: Ardurra.

**Figure 4.2: Soil Types at Idaho Falls Regional Airport**




Source: USDA NRCS

### 4.1.3. Climate

The Snake River Plain ecoregion has a dry, mid-latitude steppe (i.e., grassland plain) climate which is marked by warm summers and cold winters. According to the National Oceanic and Atmospheric Administration's (NOAA) 1981–2010 Climate Normals, the average high temperature at the airport is 57.3 F, and the average low temperature is 31 F. As shown in Figure 4.3, July is the hottest month with an average high temperature of 86.2 F, and January is the coldest month with an average low temperature of 11.7 F. On average, the airport receives an annual total of 10.39 inches of precipitation. As shown in Figure 4.4, May receives the most precipitation with an average of 1.5 inches, and July receives the least precipitation with an average of 0.5 inches.

**Figure 4.3: Average Temperatures**

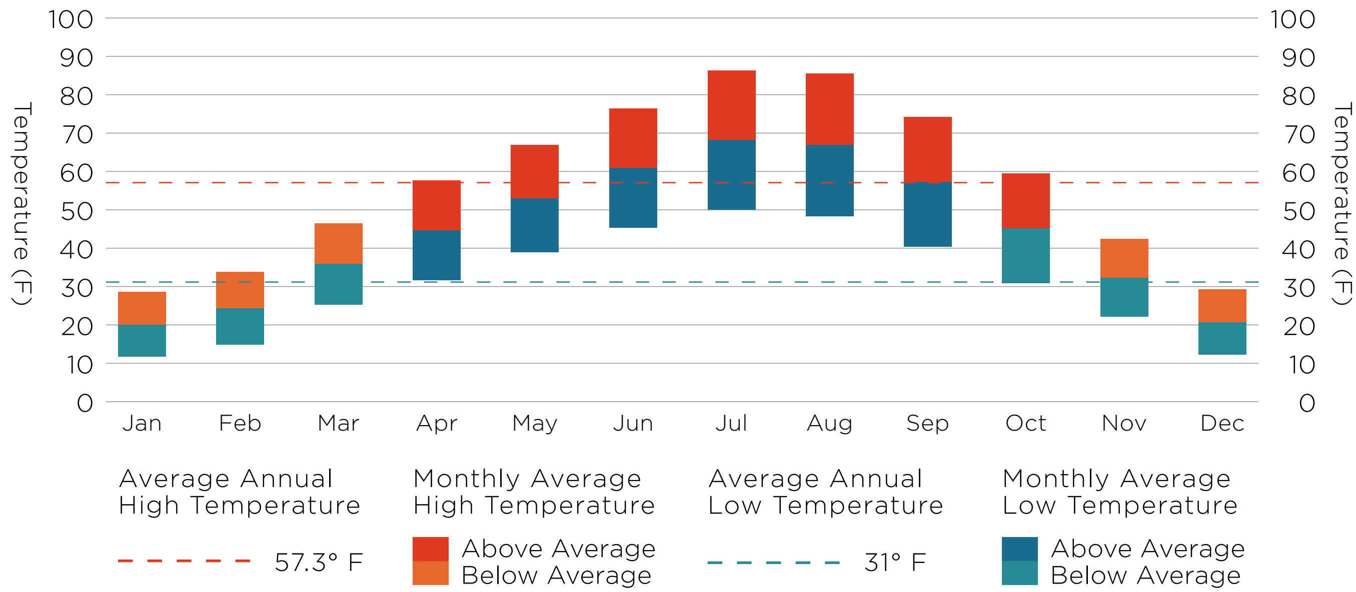
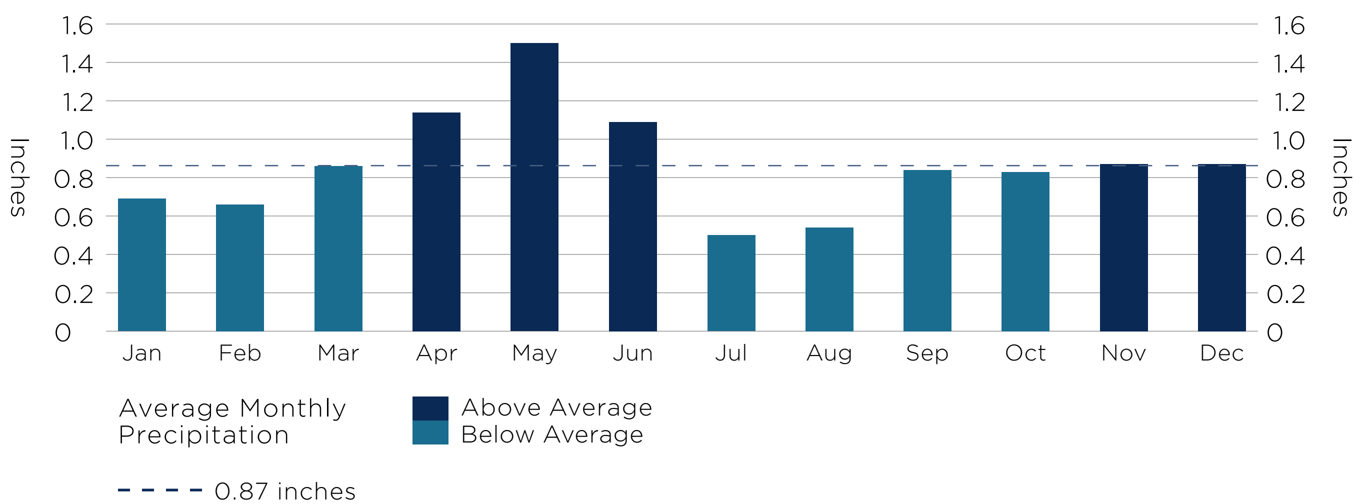



**Figure 4.4: Average Precipitation**




Source: NOAA 1981-2010 Climate Normals for Idaho Falls Regional Airport

### 4.1.4. Wind Coverage

Both wind speed and direction can significantly impact a runway's safe usability. While aircraft are capable of safely taking off and landing with a crosswind, smaller aircraft are typically more affected by them. Other factors must also be taken into consideration such as crosswind speed, type of aircraft, and the skill of the pilot.

When determining a runway's ideal orientation, FAA guidance states that an airport's primary runway should be aligned with the prevailing wind. It also states that wind coverage for a runway should be a minimum of 95%. In other words, a runway's orientation should be the direction that results in the least amount of crosswind (i.e., wind blowing at a right angle to the runway). Typically, this is based on an analysis of wind data that includes the last ten consecutive years of wind observations.

The aircraft approach category (AAC) and airplane design group (ADG), as defined in Chapter 1, are combined with the runway approach and visibility minimums to form the runway design code (RDC). As shown in Table 4.2, the RDC is then used to determine the allowable crosswind component. Essentially, this means the runway should be aligned so that crosswinds don't exceed allowable speeds 95% of the time in order to provide conditions that are safe for the type of aircraft that typically use the runway.

**Table 4.2: Allowable Crosswind Component by Runway Design Code**

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

Source: FAA AC 150/5300-13B, Table B-1

When conducting wind analysis, it is important the data reflects all conditions to ensure adequate runway coverage. The data used to conduct wind analysis for this report was obtained from the FAA's Airport Data and Information Portal (ADIP) for 2011–2020 which includes wind direction, speed, and visibility conditions. The resulting wind coverage percentages are listed in Table 4.3.

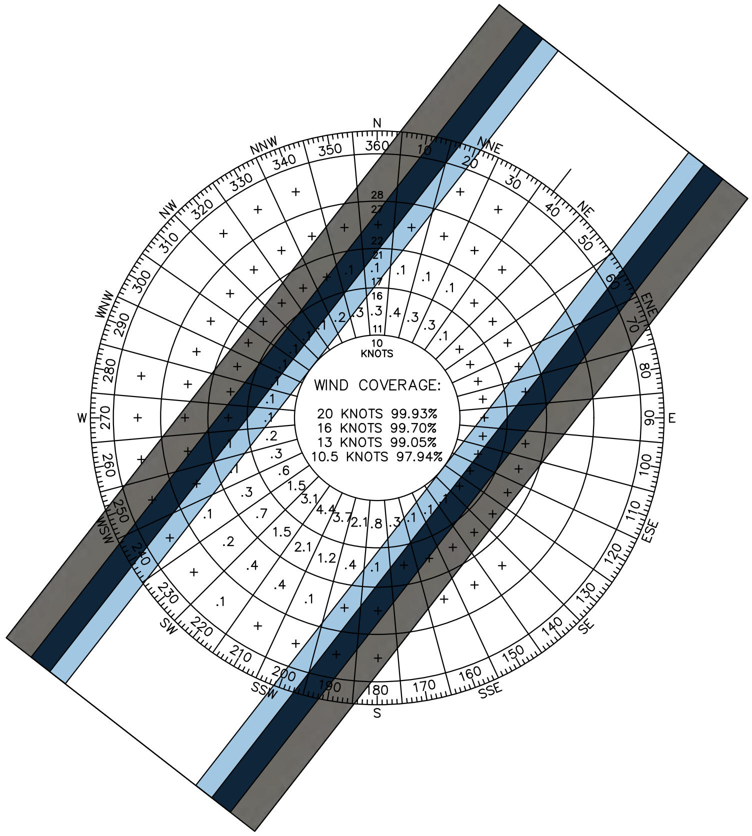
The following wind roses and wind overlays incorporate data from 92,858 observations for the all-weather wind roses and wind overlay, 13,962 for the instrument flight rules (IFR) wind rose and wind overlay, and 79,540 for the visual flight rules (VFR) wind overlay.

**Table 4.3: Wind Coverage Percentages**

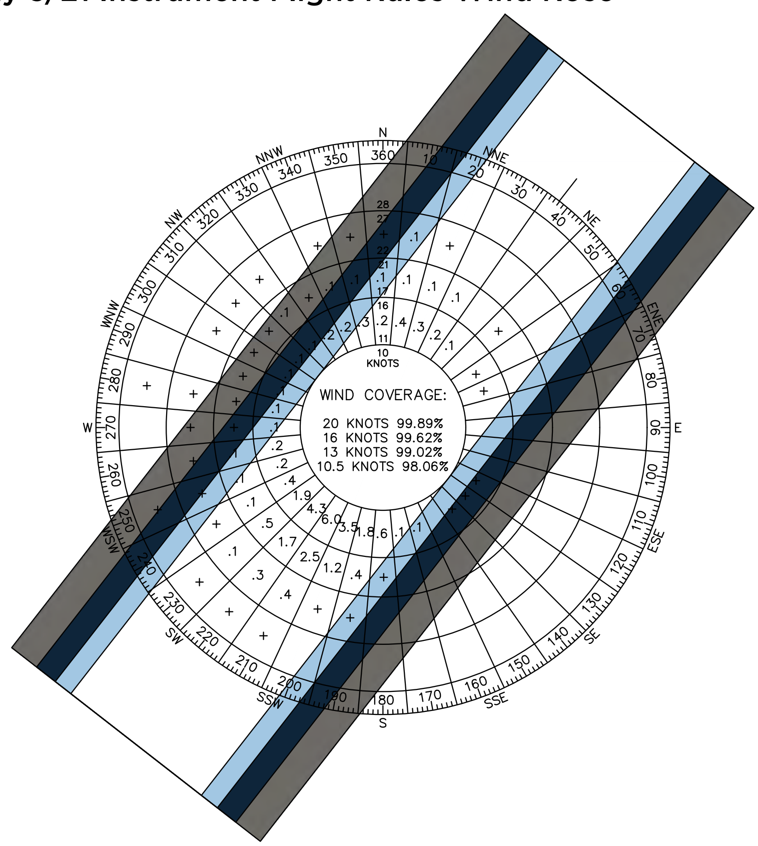
| Crosswind | Runway 3/21 | | | Runway 17/35 | | Combined Runways | |
|---|---|---|---|---|---|---|---|
| | All Weather | IFR | VFR | All Weather | VFR | All Weather | VFR |
| 10.5 Knots | 97.94% | 98.06% | 97.93% | 93.78% | 93.62% | 99.24% | 99.24% |
| 13 Knots | 97.05% | 99.02% | 99.06% | 97.03% | 96.87% | 99.65% | 99.66% |
| 16 Knots | 99.70% | 99.62% | 99.71% | 98.91% | 98.83% | 99.89% | 99.89% |
| 20 Knots | 99.93% | 99.89% | 99.93% | 99.72% | 99.70% | 99.98% | 99.98% |

Source: FAA Airport Data and Information Portal

## Figure 4.5: Runway 3/21 All Weather Wind Rose

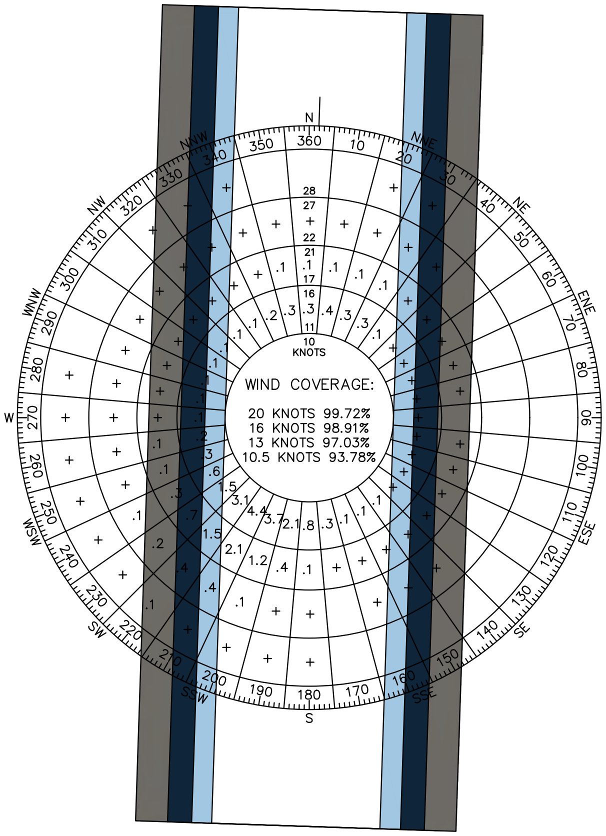



## Figure 4.6: Runway 3/21 Instrument Flight Rules Wind Rose

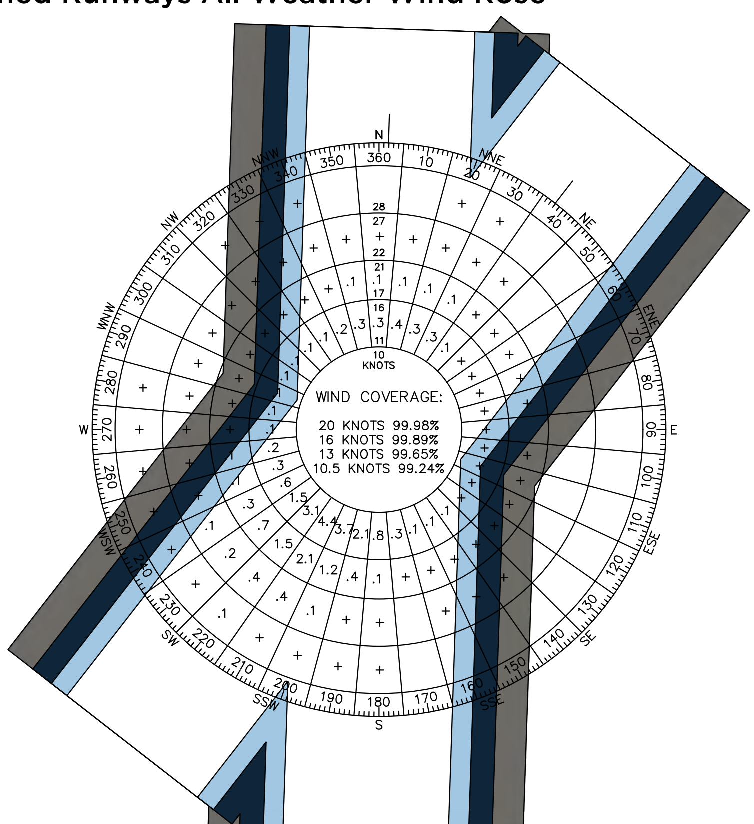



Source: FAA Airport Data and Information Portal

## Figure 4.7: Runway 17/35 All Weather Wind Rose




## Figure 4.8: Combined Runways All Weather Wind Rose




Source: FAA Airport Data and Information Portal

## Combined Runways Wind Overlays

**Figure 4.9: All Weather Wind Overlay**

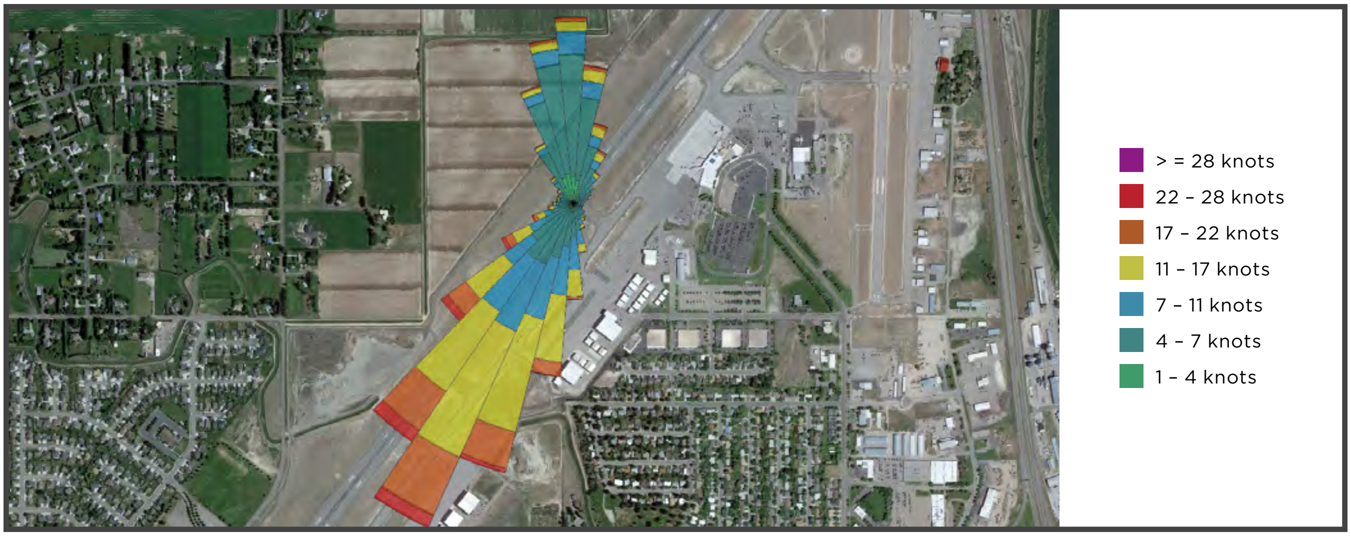
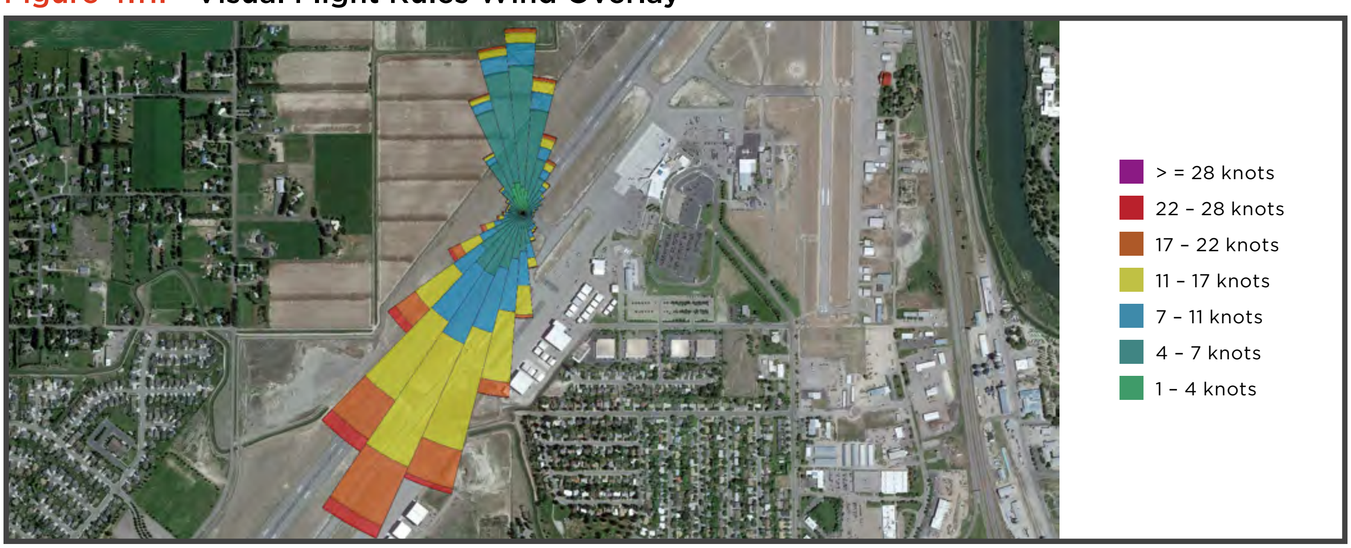



**Figure 4.10: Instrument Flight Rules Wind Overlay**


**Figure 4.11: Visual Flight Rules Wind Overlay**




Source: FAA Airport Data and Information Portal

## 4.2. Airport Zoning

Effective compatible land use planning around an airport addresses airspace, safety, and noise considerations. In many instances, the community's willingness to take a proactive approach in establishing compatible land use policies around the airport prevents the need to be reactive and mitigate more severe conflicts in the future. Effective comprehensive land use compatibility plans take both height and land use restrictions into consideration and are incorporated via zoning. Coupled with other proactive measures, such as voluntary noise abatement programs and selective fee-simple land acquisition, proactive planning around the airport protects both the airport and the surrounding community. Furthermore, federal 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.

It is important to point out there is a difference between basic land use zoning and height restrictive zoning. As its name implies, the intent of height restrictive zoning is to protect the airspace around an airport from objects or structures that may pose hazards to aircraft operations. In general, this type of zoning conforms to Title 14 of the Code of Federal Regulations Part 77 (**Part 77**). On the other hand, the intent of land use zoning is to prevent incompatible land uses near an airport. The practice of taking both height and land use restrictions into consideration protects the airport and helps prevent the effects of airport operations, such as noise, dust, fumes, or aircraft accidents, from having a negative impact on sensitive land uses such as residential areas.

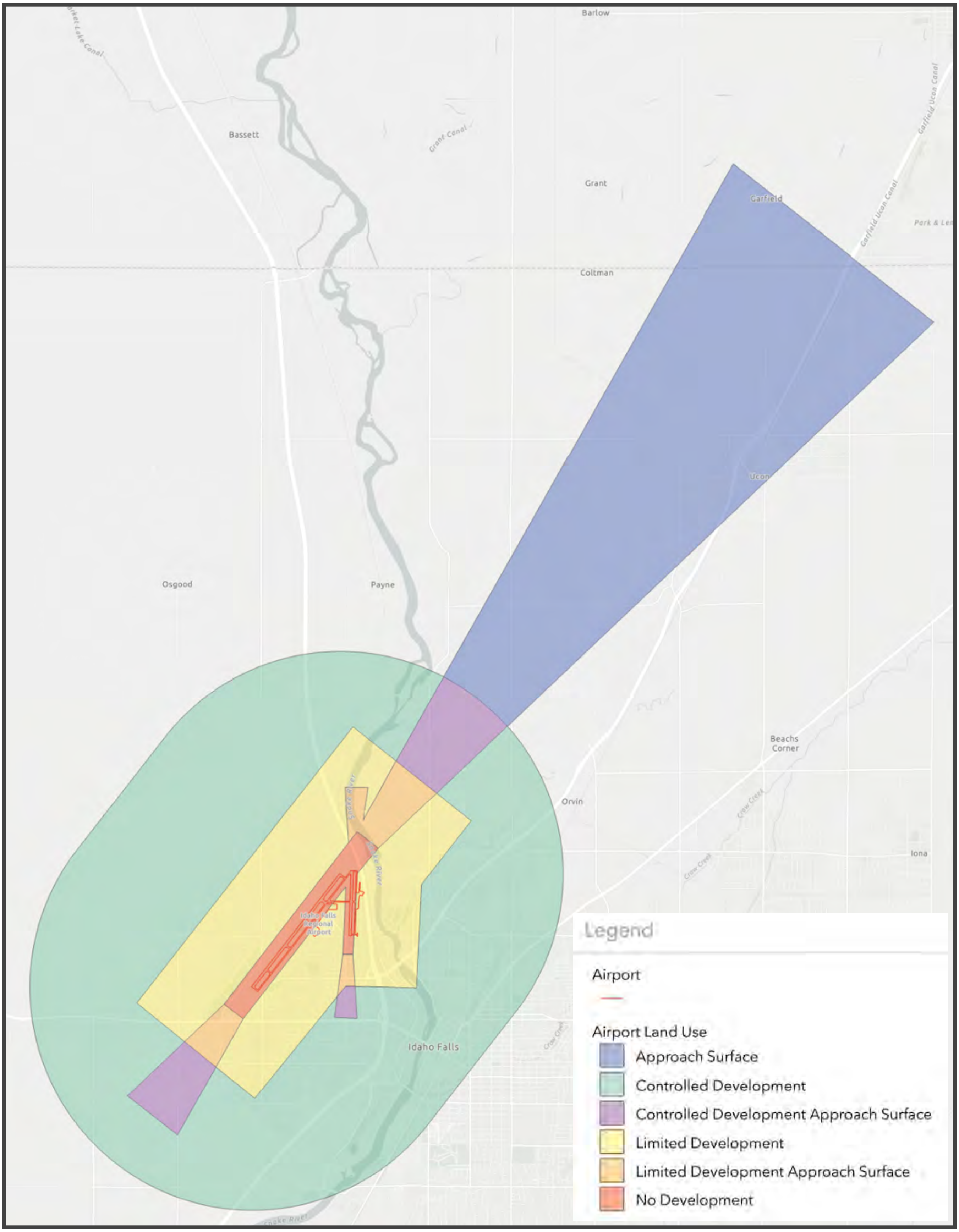
### 4.2.1. City Land Use Protections

The city of Idaho Falls has developed a comprehensive plan that provides a road map for city and community leaders to address and strategically plan for growth. An update to this plan, *Imagine IF, A Plan to Move Idaho Falls Forward Together, City of Idaho Falls' Comprehensive Plan*, was completed in 2021 and approved by the city council February 24, 2022.[8]

As part of the comprehensive planning process, background studies were performed to provide an understanding of current conditions of several resources important to the community—including the airport. The section that discusses the airport refers to the airport overlay zones that were adopted by the city in 2019 with the intention of restricting incompatible uses from locating near the airport (Idaho Falls City Code; Title 11, Chapter 5, Section 11-5-3).[9]

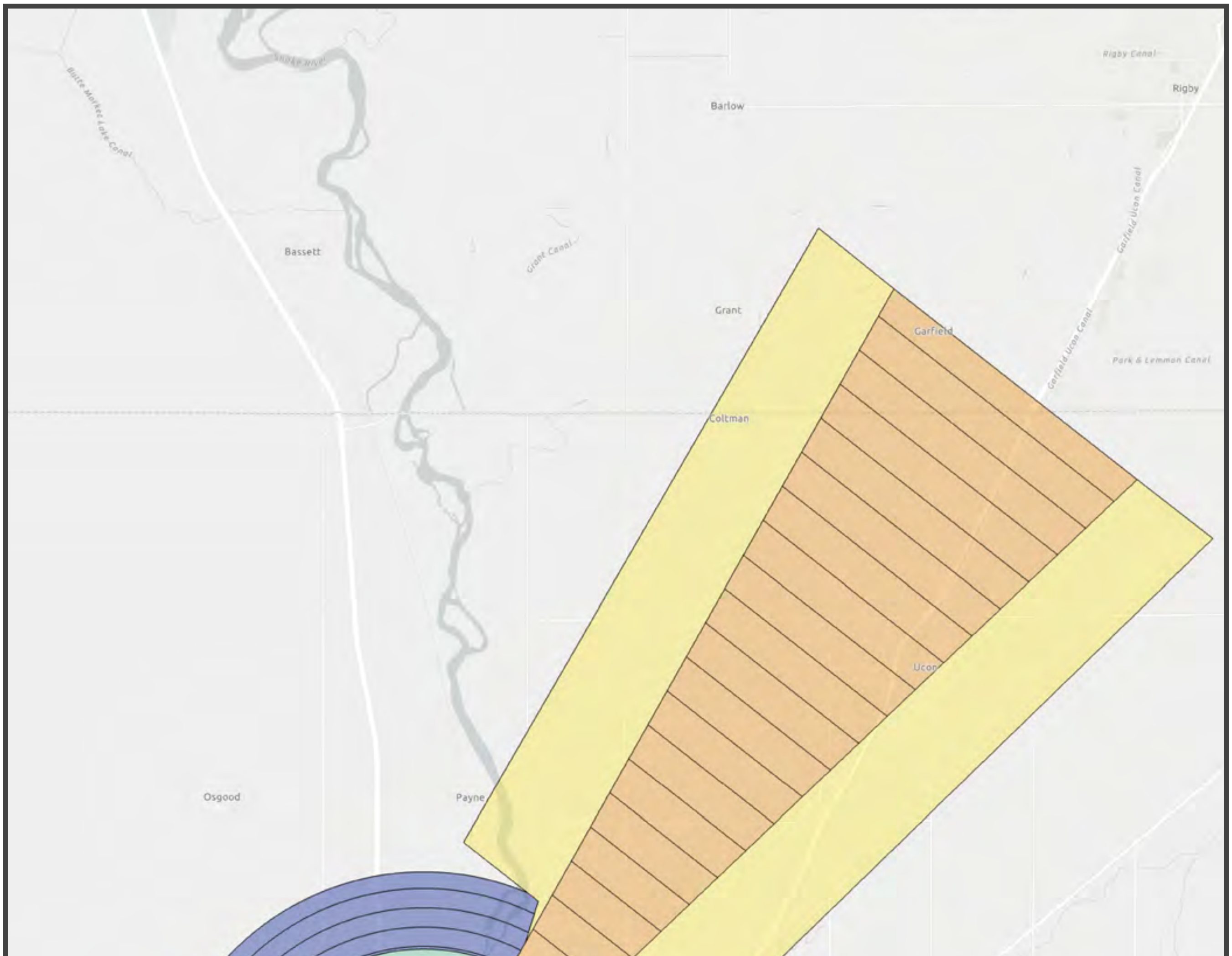
The compatible land use designations, which are shown in Figure 4.12, include a No Development Zone, Limited Development Approach Surface Zone, Controlled Development Approach Surface Zone, Limited Development Zone, and Controlled Development Zone. Height zone designations, which protect the airport's Part 77 surfaces, are shown in Figure 4.13. These include an Approach Surface Height Zone, Transitional Surface Height Zone, Horizontal Surface Height Zone, and Conical Surface Height Zone. As shown in Figure 4.14, the city's land use regulations designate airport property as Light Manufacturing and Heavy Commercial (**LM**). Additionally, a map showing the location of all public property located in the vicinity of the airport is included as Figure 4.15. This includes land owned by the city of Idaho Falls, Bonneville County, state of Idaho, and Bureau of Land Management (**BLM**).

Figure 4.12: Airport Land Use Zoning Map



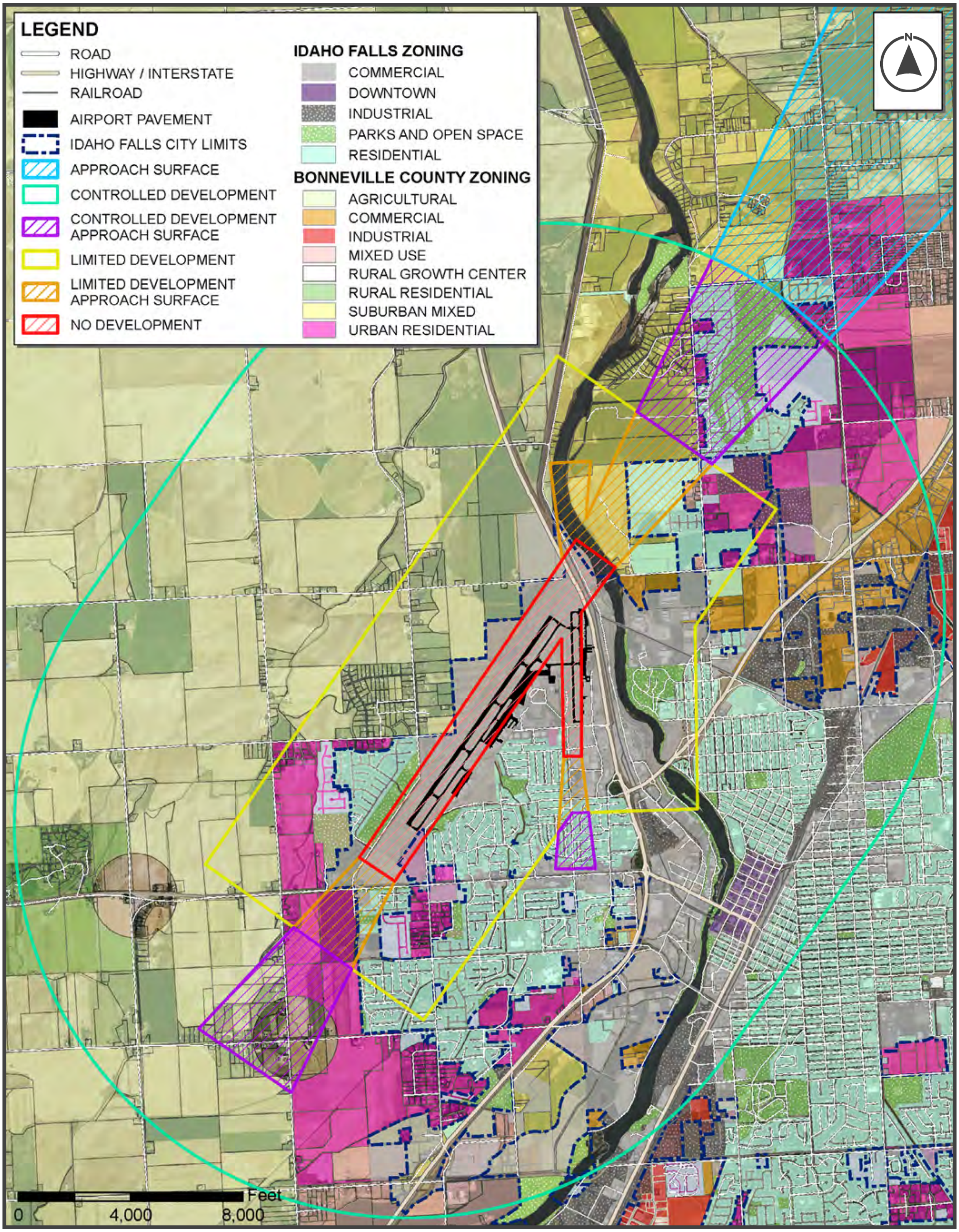

Note: Zoning outside of Idaho Falls city limits is not in effect.
Source: City of Idaho Falls

**Figure 4.13: Airport Height Zoning Map**




Note: Zoning outside of Idaho Falls city limits is not in effect.
Source: City of Idaho Falls

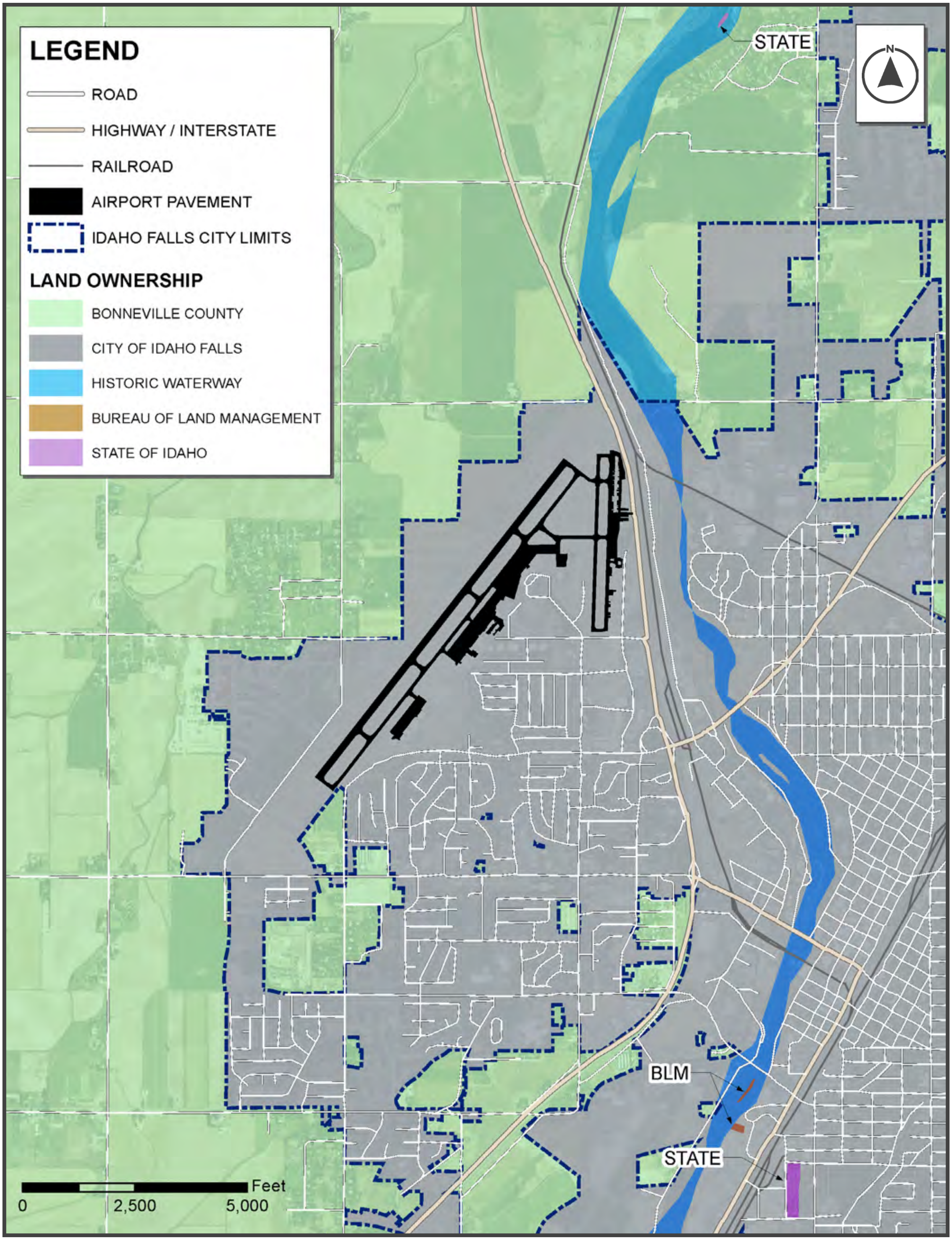
Figure 4.14: Idaho Falls Land Use Zoning Map




Note: Zoning outside of Idaho Falls city limits is not in effect.

Source: City of Idaho Falls and Bonneville County

Figure 4.15: Idaho Falls Corporate Boundaries




Source: Bureau of Land Management

## 4.3. Based Aircraft

According to the Airport Master Record, Form 5010-1, there are 168 aircraft based at the airport. This includes 128 single engine, 29 multi-engine, six jets, and five helicopters. In addition, there are three gliders listed that are not included in this number. The 2010 Airport Master Plan reported a total of 151 based aircraft, and the 2019 planning study completed for Runway 17/35 reported approximately 100 based aircraft. Accurately determining the number of based aircraft can be somewhat challenging for an airport because it is primarily determined using self-reported information provided by airport tenants.

## 4.4. Pavement Condition

Airport sponsors that receive federal assistance to construct or repair airfield pavements are required to establish a pavement maintenance management program. This has been shown to be the most cost efficient method for ensuring airfield pavement is safe. Pavement tends to deteriorate relatively slowly during the first several years. However, it eventually begins to deteriorate at a faster rate which results in an accelerated drop in condition. Timely maintenance can renew the pavement condition and prolong its lifespan. An effective pavement maintenance management program will include scheduling the necessary maintenance prior to its condition beginning to deteriorate rapidly. At a minimum, a pavement maintenance management program must include an inventory of the airfield pavement, an inspection schedule, and records of all pavement inspections and maintenance activities. Information about airport pavement maintenance management programs can be found in FAA AC 150/5380-7B, *Airport Pavement Management Program (PMP)*.

A pavement condition report was completed as of November 2015 by Applied Research Associates, Inc. This report details the pavement condition index rating for each of the paved surfaces at the airport as of July 2015. The pavement condition index (PCI) is a rating of the condition of each pavement surface and indicates its functional performance. Standard PCI values range from 0–100. As shown in Table 4.4, these ratings are grouped into seven color-coded categories. Typically, scores of 65 or more only require preventative maintenance, such as crack sealing, while scores between 41–64 require major rehabilitation. Pavements with a PCI rating of 40 or less require reconstruction.

**Table 4.4: Pavement Condition Index Rating Categories**

| Rating | 0–10 | 11–25 | 26–40 | 41–55 | 56–70 | 71–85 | 86–100 |
|---|---|---|---|---|---|---|---|
| Category | Failed | Serious | Very Poor | Poor | Fair | Satisfactory | Good |

Reconstruction Required | Major Rehabilitation | Preventative Maintenance

Source: Applied Research Associates, Inc.

The findings from the 2015 pavement condition report are summarized in the tables on the following pages and illustrated in Figure 4.16. It is important to note that multiple pavement maintenance projects have been completed since 2015, and the PCI values shown may not reflect current PCI ratings. These projects include rehabilitation of Taxiways A and C as well as rehabilitation of Runway 3/21 and the associated connecting taxiways.

As shown in Table 4.5, the overall average for all airfield pavements was 79 with an average PCI of 86 for the runways, 65 for the taxiways, and 83 for the aprons. Table 4.6 lists the size of each branch of pavement and the number of sections within each branch. A detailed summary of each section is shown in Table 4.7. This includes the type of surface, size, age, and PCI rating for each section.

**Table 4.5: Average Airfield Pavement PCI Rating by Facility Type, 2015**

| Facility Type | Average PCI Rating |
|---|---|
| Runways | 86 |
| Taxiways | 65 |
| Aprons | 83 |
| **Overall Average Airfield Pavement PCI Rating** | **79** |

Source: Applied Research Associates, Inc.

**Table 4.6: Pavement Branch Identification**

| Branch ID | Name | Number of Sections | Square Footage |
|---|---|---|---|
| AFBO | FBO Ramp | 3 | 52,320 |
| AFEDEX | FedEx Ramp | 3 | 68,637 |
| AGA | GA Ramp | 8 | 323,562 |
| ASQ | South Quad Ramp | 1 | 257,883 |
| ATERM | Terminal Ramp | 9 | 1,151,413 |
| RW1735 | Runway 17/35 | 1 | 304,442 |
| RW220 | Runway 2/20 (3/21) | 4 | 1,350,240 |
| TLA | Hangar Taxilane | 1 | 9,875 |
| TWA | Taxiway A | 2 | 570,812 |
| TWA1 | Taxiway A-1 | 1 | 26,380 |
| TWA2 | Taxiway A-2 | 1 | 33,755 |
| TWA3 | Taxiway A-3 | 1 | 33,458 |
| TWA4 | Taxiway A-4 | 1 | 34,089 |
| TWA5 | Taxiway A-5 | 1 | 42,972 |
| TWB | Taxiway B | 1 | 325,880 |
| TWC | Taxiway C | 3 | 196,863 |

Source: Applied Research Associates, Inc., Table 1

**Table 4.7: Pavement Age and PCI Ratings, 2015**

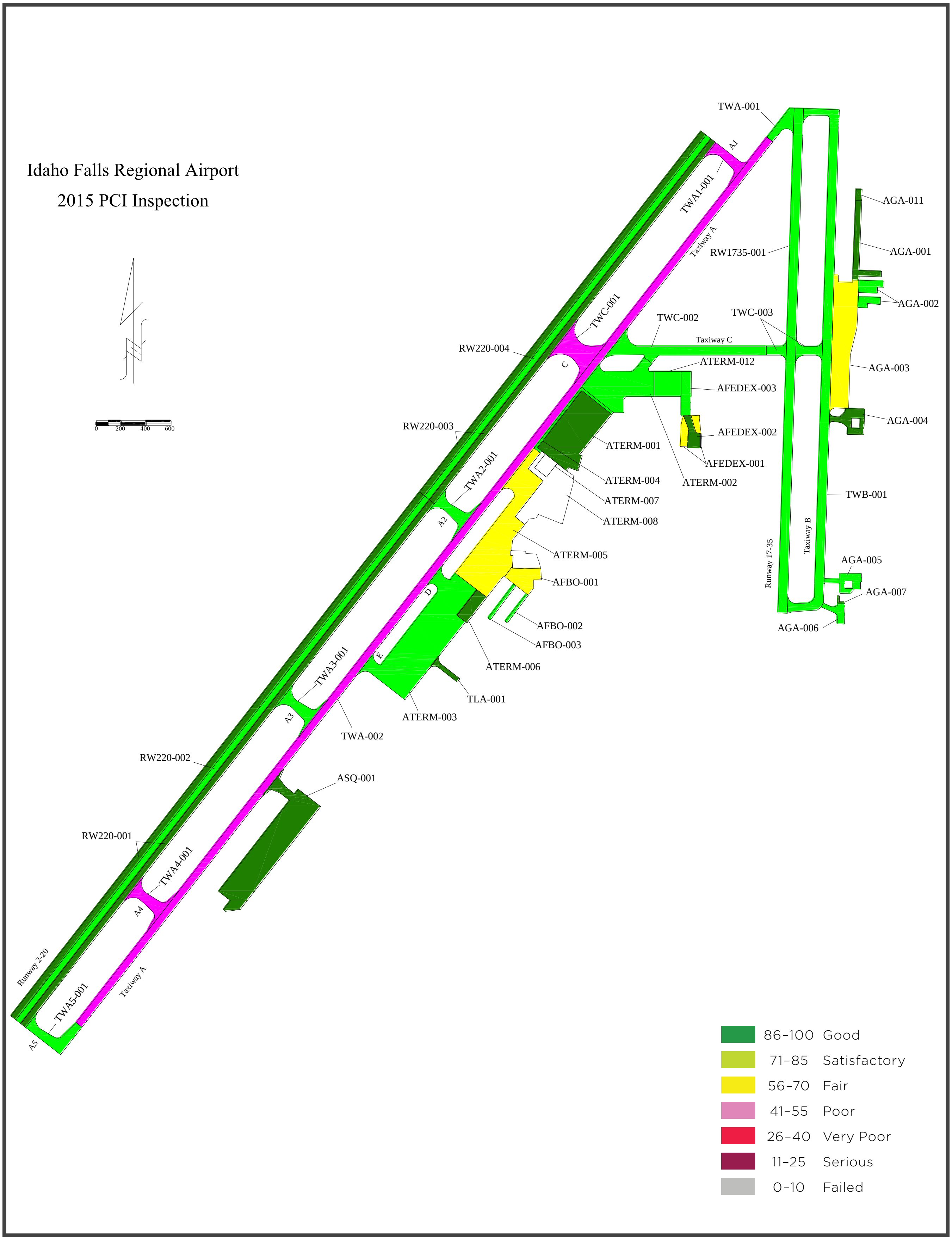
| Branch ID | Section | Surface Type | Square Footage | Year Built | 2015 PCI |
|---|---|---|---|---|---|
| AFBO | 1 | Asphalt with Asphalt Overlay | 38,120 | 2003 | 67 |
| AFBO | 2 | Asphalt with Asphalt Overlay | 6,050 | 2004 | 76 |
| AFBO | 3 | Asphalt with Asphalt Overlay | 8,150 | 2004 | 82 |
| AFEDEX | 1 | Asphalt Cement | 20,593 | 2004 | 69 |
| AFEDEX | 2 | Asphalt Cement | 19,702 | 2014 | 100 |
| AFEDEX | 3 | Asphalt Cement | 28,342 | 2004 | 78 |

Source: Applied Research Associates, Inc., Table 3

| Branch ID | Section | Surface Type | Square Footage | Year Built | 2015 PCI |
|---|---|---|---|---|---|
| AGA | 1 | Asphalt Cement | 38,707 | 2006 | 88 |
| AGA | 11 | Asphalt Cement | 4,362 | 2014 | 100 |
| AGA | 2 | Asphalt Cement | 29,525 | 2005 | 79 |
| AGA | 3 | Asphalt with Asphalt Overlay | 178,016 | 2004 | 66 |
| AGA | 4 | Asphalt Cement | 31,816 | 2005 | 86 |
| AGA | 5 | Asphalt Cement | 24,693 | 2006 | 82 |
| AGA | 6 | Asphalt Cement | 15,060 | 2006 | 74 |
| AGA | 7 | Asphalt Cement | 1,383 | 2015 | 100 |
| ASQ | 1 | Asphalt Cement | 257,883 | 2015 | 100 |
| ATERM | 1 | Portland Cement Concrete | 181,915 | 2005 | 90 |
| ATERM | 12 | Asphalt Cement | 45,577 | 2004 | 77 |
| ATERM | 2 | Asphalt with Asphalt Overlay | 138,240 | 2004 | 83 |
| ATERM | 3 | Asphalt Cement | 340,480 | 2006 | 83 |
| ATERM | 4 | Asphalt with Asphalt Overlay | 19,031 | 2004 | 82 |
| ATERM | 5 | Asphalt with Asphalt Overlay | 254,000 | 2003 | 68 |
| ATERM | 6 | Asphalt Cement | 26,240 | 2012 | 94 |
| ATERM | 7 | Portland Cement Concrete | 17,080 | 2015 | 100 |
| ATERM | 8 | Asphalt Cement | 130,850 | 2015 | 100 |
| RW1735 | 1 | Asphalt Cement | 304,442 | 2004 | 78 |
| RW220 | 1 | Asphalt Cement | 553,000 | 2008 | 90 |
| RW220 | 2 | Asphalt Cement | 266,500 | 2008 | 85 |
| RW220 | 3 | Asphalt with Asphalt Overlay | 367,160 | 2008 | 89 |
| RW220 | 4 | Asphalt with Asphalt Overlay | 183,580 | 2008 | 85 |
| TLA | 1 | Asphalt Cement | 9,875 | 2006 | 88 |
| TWA | 1 | Asphalt Cement | 23,278 | 2005 | 78 |
| TWA | 2 | Asphalt Cement | 547,534 | 1998 | 54 |
| TWA1 | 1 | Asphalt Cement | 26,380 | 1998 | 44 |
| TWA2 | 1 | Asphalt Cement | 33,755 | 2008 | 83 |
| TWA3 | 1 | Asphalt Cement | 33,458 | 2008 | 84 |
| TWA4 | 1 | Asphalt Cement | 34,089 | 1998 | 46 |
| TWA5 | 1 | Asphalt Cement | 42,972 | 2008 | 80 |
| TWB | 1 | Asphalt with Asphalt Overlay | 235,880 | 2005 | 78 |
| TWC | 1 | Asphalt Cement | 60,475 | 1998 | 54 |
| TWC | 2 | Asphalt with Asphalt Overlay | 105,000 | 2004 | 73 |
| TWC | 3 | Asphalt Cement | 31,388 | 2004 | 80 |

Source: Applied Research Associates, Inc., Table 3

**Figure 4.16:** Pavement Condition Index Diagram




Source: Applied Research Associates, Inc.

## 4.5. Aviation Facilities

The airport property is a total of 866 acres, and the elevation is 4,743.7 feet above mean sea level (MSL). Figure 4.17 shows the general layout of the airport's main facilities.

### 4.5.1. Runways

The primary runway, Runway 3/21, is a northeast-southwest oriented runway (Figure 4.18).[1] As shown in Table 4.8, the runway is 9,002 feet long and 150 feet wide, and declared distances are all equal to the full runway length. The elevation of the Runway 3-end is 4,742 feet, and the elevation of the Runway 21-end is 4,731 feet. As a result, the runway slopes down toward the Runway 21-end at a 0.11% grade. As shown in Table 4.9, the runway is equipped with high intensity runway lights (HIRL) and has precision instrument runway markings. The runway is paved with asphalt that has been grooved.[2] Its published pavement classification number (PCN) is 57/F/B/X/T. This classification is a relative indication of the load-carrying capacity of the pavement; F is pavement type (flexible), B is the subgrade category (medium strength), X indicates tire pressure (medium, limited to 218 psi), and T is the method used to determine the PCN value (technical evaluation). It has a published weight bearing capacity of 140,000 pounds for single wheel (SW), 175,000 pounds for dual wheel (DW), and 270,000 pounds for dual tandem wheel (DTW) configurations (Table 4.8).

The secondary or crosswind runway, Runway 17/35, is a north-south oriented runway (Figure 4.18). This runway is 3,964 feet long and 75 feet wide. There are no declared distances listed on the Airport Master Record for Runway 17/35. The elevation of the Runway 17-end is 4,731.1 feet, and the elevation of the Runway 35-end is 4,731.2 feet. As a result, the runway has a very slight downward slope toward the Runway 17-end with an approximate grade of 0.007%. The runway is equipped with medium intensity runway lights (MIRL) and has visual runway markings. The remarks section of the Airport Master Record states that takeoffs and landings are not authorized for this runway between sunset to sunrise unless air traffic control services are available. The runway is paved with asphalt with a published PCN of 7/F/B/X/T. It has a published weight bearing capacity of 43,000 pounds for SW and 58,000 pounds for DW configurations.

**Table 4.8: Runway Pavement Dimensions and Maximum Allowable Gross Weights**

| Runway | Length | Width | SW | DW | DTW |
|---|---|---|---|---|---|
| **Runway 3/21** | 9,002 feet | 150 feet | 140,000 # | 175,000 # | 270,000 # |
| **Runway 17/35** | 3,964 feet | 75 feet | 43,000 # | 58,000 # | — |

Source: Pavement Consultants, Inc.

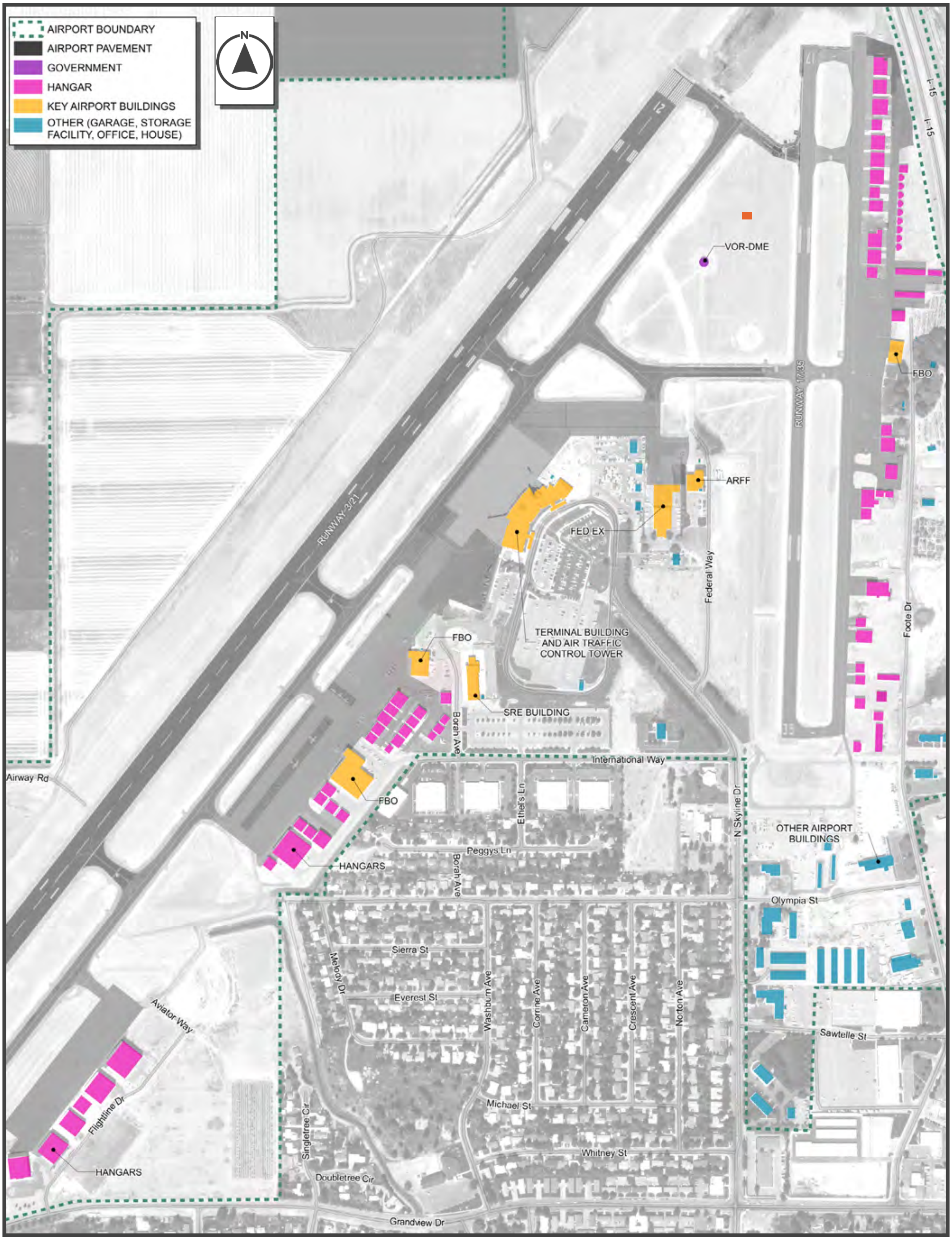
**Table 4.9: Runway Lighting**

| NAVAID | Runway 3 | Runway 21 | Runway 17 | Runway 35 |
|---|---|---|---|---|
| **HIRL** | • | • | | |
| **MIRL** | | | • | • |
| **Markings** | Precision | Precision | Visual | Visual |

Source: Ardurra.

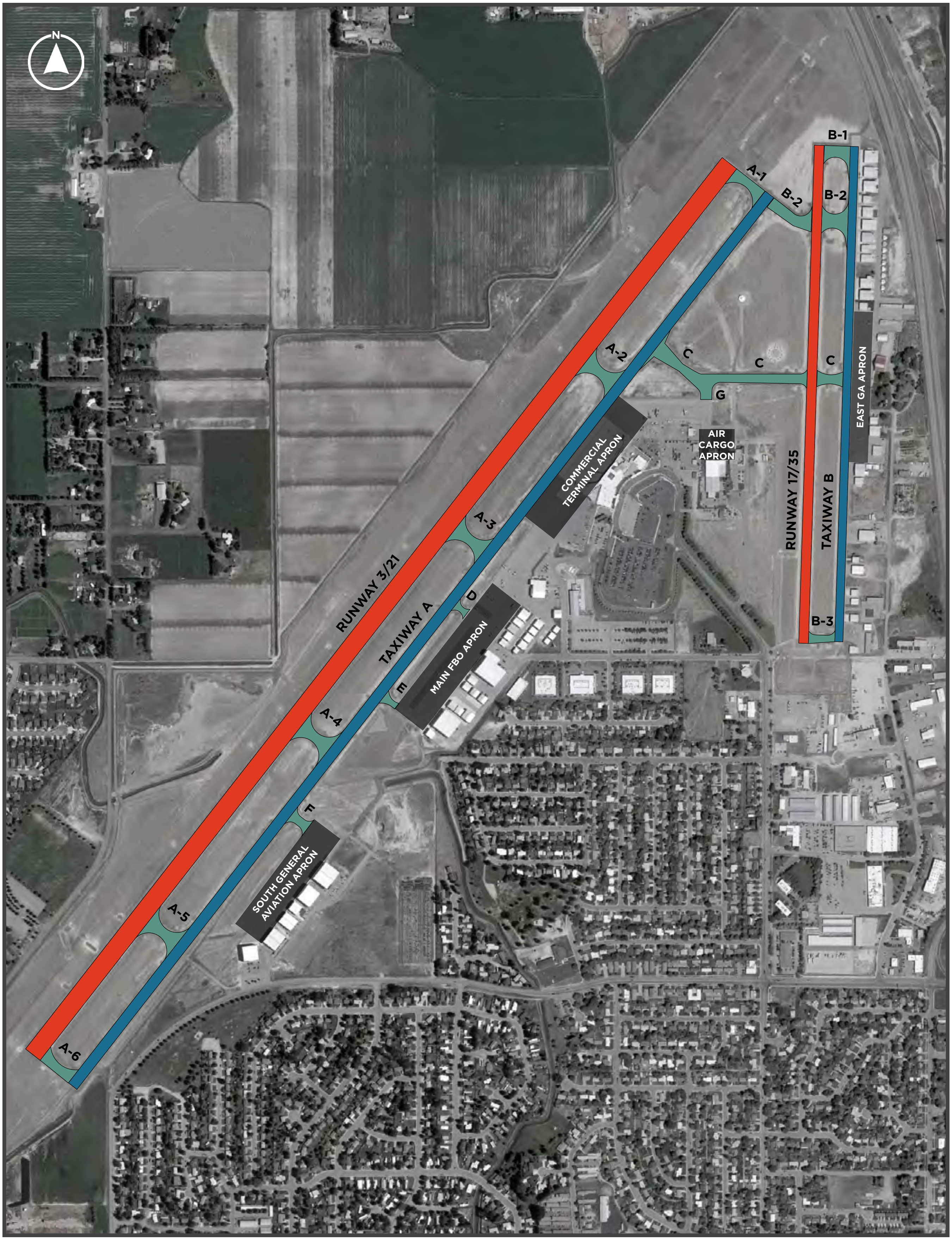
1. The runway's designation was revised from 2/20 to 3/21 in 2018 to account for normal changes in magnetic declination.
2. Pavement grooving improves drainage which helps to eliminate standing water on the runway, reduces the risk of hydroplaning, and protects against ice formation.

## Figure 4.17: Main Airport Facilities




Source: Ardurra.

**Figure 4.18: Runway and Taxiway System**




Source: Ardurra.

### 4.5.2. Taxiways, Taxilanes, and Connectors

Taxiways and taxiway connectors increase airfield traffic flow and capacity by allowing aircraft to safely and efficiently get to and from the runway without interfering with takeoffs or landings. Both are considered part of the movement area. At airports with an air traffic control tower, such as IDA, air traffic controllers are responsible for maintaining aircraft separation within the movement area. Pilots must get permission from air traffic control before entering these areas when the control tower is open.[3]

Taxiways, which are designated with a letter or a letter and number combination, look similar to runways but are usually not as wide and have different markings. Taxilanes, which are not considered to be part of the movement area, allow aircraft to safely access taxiways and taxiway connectors from other non-movement areas of the terminal apron such as those used for loading, refueling, parking, or maintenance. They are intended for low speed and precise movement of aircraft.

Idaho Falls Regional Airport has three main taxiways, several taxiway connectors, and no designated taxilanes. All taxiways are equipped with medium intensity taxiway lights (MITL) except for Taxiway B and its connectors to Runway 17/35 which are equipped with blue taxiway reflectors.

#### West Taxiway System

As shown in Figure 4.18, Taxiway Alpha (A) is a full-length parallel taxiway for Runway 3/21. It is 60 feet wide with 20-foot unpaved shoulders. The Taxiway A centerline is 400 feet from the Runway 3/21 centerline. This meets the runway centerline to taxiway centerline separation requirements for ARC C-III. Much of Taxiway A was either reconstructed or rehabilitated between 2017 and 2018.

There are six taxiway connectors between Taxiway A and Runway 3/21. These connectors have been designated as A-1 through A-6 (from north to south) and are of varying widths due to curves and fillets. Taxiways A-1 and A-2 were reconstructed in 2018.

Taxiway Foxtrot (F) connects the south general aviation apron to Taxiway A. Taxiways Echo (E) and Delta (D) connect the main fixed base operator (FBO) apron to Taxiway A. Taxiway Golf (G), which connects the north terminal apron to Taxiway Charlie (C), was constructed in 2018.

Taxiway C is the main taxiway that connects the east general aviation complex at Taxiway Bravo (B) and Runway 17/35 to Taxiway A. Taxiway C is 70 feet wide between Taxiway B and Runway 17/35 and is 60 feet wide between Runway 17/35 and Taxiway A. This taxiway was reconstructed and realigned in 2018.

#### East Taxiway System

As shown in Figure 4.18, Taxiway B is a full-length parallel taxiway for Runway 17/35. It is 35 feet wide and was last rehabilitated in 2005. The Taxiway B centerline is 270 feet from the Runway 17/35 centerline. The movement area boundary is approximately 30 feet from the Taxiway B centerline and does not meet standards.

There are four connecting taxiways between Taxiway B and Runway 17/35. They have been designated as B-1, B-2, C, and B-3 (from north to south). Taxiways B-1 and B-2 were constructed in 2020 when the Runway 17-end was shortened. Taxiway B-2 also connects Runway 17/35 to Taxiway A at A-1.

3. The boundaries of the movement area are typically established by way of a letter of agreement between the control tower and the airport operator.

### 4.5.3. General Aviation Apron

There are three general aviation aircraft parking aprons at IDA. The south general aviation apron, which was constructed in 2015, is approximately 258,000 square feet. As shown in Figure 4.19, there is space for aircraft parking, but there are no marked spaces.

**Figure 4.19: South General Aviation Apron**

Source: Ardurra.

The main FBO apron, which is constructed of asphalt, is approximately 650,000 square feet. It is located along Taxiway A to the south of the commercial terminal apron. As shown in Figure 4.20, there are 23 marked spaces for large aircraft and 24 spaces for small aircraft. Undesignated taxilanes provide access to the 15 hangars located within the main FBO apron.

**Figure 4.20: Main FBO Apron**

Source: Ardurra.

The east general aviation apron, which is constructed of asphalt, is approximately 178,000 square feet. It is located along Taxiway B where it intersects with Taxiway C. As shown in Figure 4.21, there are 21 marked spaces for small aircraft parking, three helicopter parking circles, and a compass calibration pad.

**Figure 4.21: East General Aviation Apron**

Source: Ardurra.

### 4.5.4. Commercial Terminal Apron

The commercial terminal apron, which is constructed of asphalt and concrete, is approximately 425,000 square feet. As shown in Figure 4.22, it is centrally located on the airfield and is situated along Taxiway A.

**Figure 4.22: Commercial Terminal Apron**

Source: Ardurra.

The commercial terminal apron is marked with six aircraft parking stands, a vehicle service road, and a security identification display area (SIDA) boundary line. There is a concrete deicing pad on the south side of the apron.

### 4.5.5. Air Cargo Facilities

The air cargo apron is approximately 55,000 square feet and has one marked aircraft parking space. It is located between the car rental parking area and the aircraft rescue and fire fighting (ARFF) station. As shown in Figure 4.23, the cargo facility is operated by FedEx. This facility has approximately 30,000 square feet of warehouse space along with additional room for receiving and office space. There are three dedicated cargo operators at IDA. As shown in Table 4.10, all three operate between IDA and Salt Lake City.

**Figure 4.23: Air Cargo Apron**


Source: Ardurra.

**Table 4.10: Cargo Service**

| Airline | Destination | Aircraft (ARC) |
|---|---|---|
| Alpine Air | Salt Lake City | Beech 1900 (B-II) |
| Corporate Air | Salt Lake City | Cessna 208 (A-II) |
| Empire | Salt Lake City | ATR-72 (B-II) |

Source: FlightAware

### 4.5.6. Airport Traffic Control Tower

IDA has an airport traffic control tower (ATCT) located above the commercial terminal building (Figure 4.24). It operates daily from 7 a.m. to 8 p.m. and provides air traffic control services to airport users. These services include weather reports, clearance delivery, ground control, and local control within the Class D airspace surrounding the airport. The tower, which was constructed in 1960, is approximately 85 feet tall and managed by Serco under the FAA Federal Contract Tower (FCT) program.

**Figure 4.24: Airport Traffic Control Tower**


Source: Ardurra.

### 4.5.7. Airfield Signage

Airfield signs provide visual cues and instructions to pilots and vehicle operators that enhance safe and efficient movement on the runways and taxiways. As shown in Figure 4.25, elevated signs protect aeronautical surfaces and convey ground navigation information that enhances situational awareness when maneuvering on the airfield. The runways and taxiways at IDA are equipped with a combination of mandatory instruction signs, location signs, destination signs, information signs, and boundary signs.

**Figure 4.25: Airport Signage**


Source: Ardurra.

### 4.5.8. Aircraft Fuel Facilities

Fuel services at IDA are provided by Aero Mark. The fuel farm is adjacent to the snow removal equipment building located at the end of Borah Avenue. It has three 25,000-gallon underground storage tanks for Jet A fuel and one 25,000-gallon underground storage tank for Aviation Gasoline (avgas).

There is one self-serve fuel island located at the east general aviation area south of the Red Baron Hangar. This fuel pump dispenses avgas and is supplied by a 12,000-gallon underground storage tank.

Aero Mark also operates seven fuel trucks. Four are for Jet A fuel; one with a capacity of 3,000 gallons, and three with a capacity of 5,000 gallons. The other three trucks are for avgas and have capacities of 900 gallons, 1,200 gallons, and 1,500 gallons.

### 4.5.9. Hot Spots

At an airport, a hot spot is a location within the movement area that has been identified by the FAA as having a history or potential risk of collisions or runway incursions. Pilots and drivers of ground support vehicles need to pay close attention while traveling in these areas.

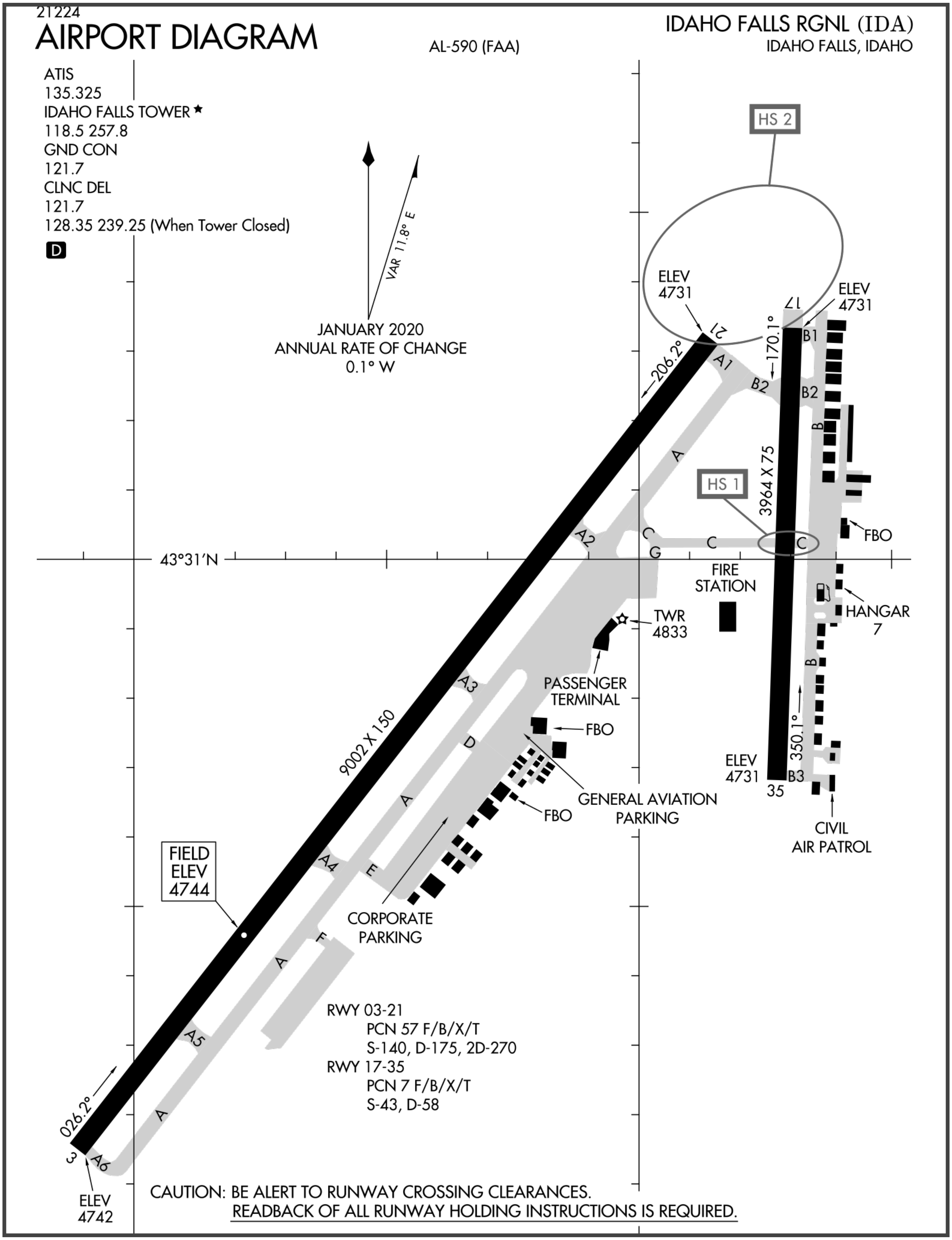
As shown in Figure 4.27, there are two hot spots, identified as HS 1 and HS 2, that are noted in the Chart Supplement for IDA. HS 1 is the intersection of Taxiway C and Runway 17/35. According to the Chart Supplement, pilots should use caution and look carefully for the runway hold line when using Taxiway C, as Runway 17/35 does not have runway edge markings and can be mistaken for a taxiway. However, in contradiction to the Chart Supplement, Runway 17/35 does have runway edge markings (Figure 4.26).

HS 2 is near the approach end of Runways 17 and Runway 21. Pilots often line up for Runway 17 when cleared to land on Runway 21.

**Figure 4.26: Runway Edge Markings, Runway 17/35**


Source: Ardurra.

**Figure 4.27:** Hot Spots




Source: FAA.

## 4.6. Navigational Aids and Lighting Systems

The airport is outfitted with multiple types of navigational aids (NAVAIDS) to assist pilots in obtaining the visual environment of the airport and enhance situation awareness.

### 4.6.1. Instrument Landing System

An instrument landing system (ILS) is a ground-based electronic NAVAID that enables pilots to execute a precision instrument approach procedure to a runway end. It consists of a localizer (LOC), glideslope (GS), and an approach lighting system. The localizer provides horizontal (left/right) guidance along the extended runway centerline, and the glideslope provides vertical (up/down) guidance to the runway touchdown point—typically at a three-degree glide path angle. Approach lights assist the pilot while transitioning from instrument to visual flight when close to the runway. This is in addition to distance measuring equipment (DME) which provides positive distance information to the touchdown point (if collocated with the GS) or another NAVAID listed in the approach procedure.

Instrument landing system approaches are categorized into three types of precision approaches based on the equipment at the airport and the experience level of the pilot. Category I approaches provide for an approach height above touchdown of not less than 200 feet. Category II approaches provide for an approach height above touchdown of not less than 100 feet. Category III approaches provide for an approach with no height minimum. Category II and III approaches require special equipment and pilot certification.

Runway 3/21 at IDA is equipped with an ILS that provides for Category I precision or non-precision approaches to Runway 21, and a non-precision approach to Runway 3 by way of a back course localizer. Runway 21 is equipped with a medium intensity approach lighting system with runway alignment indicator lights (MALSR) suited for a Category I approach.

### 4.6.2. Runway End Identifier Lights

Runway end identifier lights (REIL) are installed at runway ends to provide positive identification of that runway. The system consists of a pair of synchronized flashing lights placed laterally on each side of the runway threshold facing the approach to the runway. Runway 3 at IDA is the only runway equipped with REIL.

### 4.6.3. Precision Approach Path Indicators

Precision Approach Path Indicator (PAPI) systems aid pilots by providing visual glideslope guidance during landing. They consist of one row of two or four lights located on the left side of the landing runway at the approximate touchdown point. All runways at IDA are equipped with PAPI systems. Runway 17 is equipped with a two-light PAPI, and the others have four lights.

### 4.6.4. Segmented Circle and Wind Cones

A segmented circle helps pilots identify the aerial traffic pattern when flying under visual flight rules (VFR). Each airport has an established traffic pattern which has been developed to help pilots avoid obstacles like mountains, towers, and other aircraft. Runways 3/21 and 17/35 both have standard left-hand patterns. The segmented circle is typically centrally located on the airfield alongside the airport's primary wind cone. At IDA, they are both located just north of Taxiway C between Runway 17/35 and the approach end of Runway 21. It is lighted at night for improved visibility (Figure 4.28).

Federal regulation (14 CFR Part 139.323) requires commercial service airports to have supplemental wind cones located at the end of each runway available for air carrier use. Runway 3/21 is the only runway at IDA suitable for use by an air carrier. As such, it has supplemental wind cones located at each end.

**Figure 4.28: Segmented Circle and Lighted Wind Cone**

Source: Ardurra.

### 4.6.5. Very High Frequency Omnidirectional Range with Distance Measuring Equipment

A very high frequency omnidirectional range (VOR) is a ground-based NAVAID that is widely used within the National Airspace System (NAS). It is aligned with magnetic north and transmits azimuth information for high and low altitude routes and airport approaches. When the VOR is located alongside distance measuring equipment (DME), it is referred to as a VOR-DME. Together, they transmit both azimuth and distance information to aircraft.

There is a federally-owned VOR-DME located on the airfield between the approach ends of Runways 17 and 21 (Figure 4.29). Its identifier, IDA, is the same as the airport's. The VOR-DME is surrounded by a circular area with a 1,000-foot radius. This area is designated as critical, and structures are not permitted.

### 4.6.6. Airport Beacon

Airport beacons are rotating omni-directional lights mounted on tall towers or structures that indicate the location of the airport. Airport beacons normally operate from dusk until dawn or during the day when the airport is operating under instrument flight rules. In the United States, different types of airports, such as civilian land, water, or military, are represented by specific color combinations of the beacon. At civilian land airports, the beacon alternates between green and white lights. At IDA, the beacon is located atop the ATCT at the passenger terminal. There is also a historic beacon tower located at the east general aviation apron which is no longer in use.

Figure 4.29: Very High Frequency Omnidirectional Range

Source: Ardurra.

### 4.6.7. Automated Surface Observing System

An automated surface observing system (ASOS) is a weather sensing suite designed to assist pilots and flight planners by automatically providing up-to-date meteorological observations. These systems, which can have a variety of sensors, typically measure wind direction and speed, cloud ceiling height, visibility, air temperature, precipitation, dew point, barometric pressure, and humidity. An ASOS may be accessible via telephone, online, radio, or local computer terminal. The ASOS at IDA, which is federally owned, is located approximately 1,000 feet west of the approach end of Runway 21 next to the glideslope antenna. It is surrounded by a circular critical area with a 500-foot radius. The wind data collected by this system was used to create the wind roses and wind overlays included in Section 4.1.4. Wind Coverage.

### 4.6.8. Wind Equipment F-420 Wind System

The wind equipment F-420 (WEF) wind system provides a second source of required wind observations at towered airports. At IDA, the system is in the infield at the intersection of Taxiways A and C. It receives its power from the VOR-DME.

### 4.6.9. Runway Visual Range System

The runway visual range (RVR) system measures visibility, background luminance, and runway light intensity to determine how far a pilot should be able to see down the runway while taking off or landing. RVR is one of the components used in determining what the ILS minimums will be for each landing category. The RVR system at IDA consists of a single sensor array positioned on the west side of Runway 3/21 located approximately 1,500 feet from the Runway 21 threshold.

## 4.7. Airport Support Facilities

Support facilities at the airport consist of infrastructure and equipment used for airport maintenance, airfield lighting, access control, emergency response, and snow removal.

### 4.7.1. Snow and Ice Control

According to 14 CFR Part 139.313, a commercial service airport that is in an area where snow and ice conditions occur must prepare, maintain, and carry out a snow and ice control plan that is approved by the FAA. The plan must include provisions for prompt removal or control of snow, ice, and slush on the movement area; positioning of snow off the movement area to allow clearance for air carrier aircraft; selection and application of authorized materials to control ice and snow while minimizing engine ingestion; timely commencement of snow and ice control operations; and prompt airfield condition reporting to air carriers. FAA AC 150/5220-20A, *Airport Snow and Ice Control Equipment*, provides guidance to assist airport operators with selecting the type and quantity of snow and ice control equipment and with establishing priority areas for snow removal.

In 2010, the airport completed construction of a new 15,000-square-foot snow removal equipment (SRE) building (Figure 4.30). It is located on Borah Avenue between the long-term parking lot and the Aero Mark FBO building. In addition, there are two above-ground glycol storage tanks used for deicing aircraft. Both are located at the south end of the terminal apron and are adjacent to the employee parking lot. One belongs to Allegiant and holds 4,000 gallons. The other belongs to SkyWest and holds 6,000 gallons. Application of glycol is performed on the terminal apron.

**Figure 4.30: Snow Removal Equipment Facility**


Source: Ardurra.

### 4.7.2. Aircraft Rescue and Fire Fighting

IDA is an aircraft rescue and fire fighting (ARFF) Index B airport. This determination is made based on there being a minimum of five daily departures of air carrier aircraft measuring at least 90 feet but less than 126 feet in length (e.g., an Airbus 320 or Embraer 175).

As an ARFF Index B facility, the airport must meet one of the following two requirements:

- One vehicle capable of carrying at least 500 pounds of sodium based dry chemical, halon 1211, or clean agent and 1,500 gallons of water and the commensurate quantity of aqueous film forming foam (AFFF) for foam production.

Or two vehicles:

- One capable of carrying at least 500 pounds of sodium-based dry chemical, halon 1211, or clean agent; or 450 pounds of potassium-based dry chemical and water with a commensurate quantity of AFFF to total 100 gallons for simultaneous dry chemical and foam application.
- One capable of carrying an amount of water and the commensurate quantity of AFFF so the total quantity of water for foam production by both vehicles is at least 1,500 gallons.

According to 14 CFR Part 139.319, at least one ARFF vehicle must reach the midpoint of the farthest runway from its assigned position and begin application of the extinguishing agent within three minutes of the time of the alarm. Within four minutes of the time of the alarm, all other ARFF vehicles must reach the same point and begin application of the extinguishing agent.

ARFF, structural fire, and ambulance services are provided by the operations division of the City of Idaho Falls Fire Department. The ARFF station is located at the airport and is just east of the air cargo and rental car facilities at the end of Federal Way. This station, Fire Station 3, serves as both an ARFF station and a municipal station. There are two hospitals in Idaho Falls. Eastern Idaho Regional Medical Center (EIRMC) has 318 licensed beds and 399 physicians on staff.[10] Mountain View Hospital has 43 licensed beds.[11]

### 4.7.3. Fencing and Gates

The airport is fully fenced with a combination of six-foot and eight-foot fencing topped with a triple strand of barbed wire. The fence, which is approximately 5.7 miles long, serves the dual purpose of providing physical security for the airport and helping to prevent wildlife from entering airport property. Access points include 11 automatic vehicle gates and 10 pedestrian gates operated by keypads. There are 14 manual gates locked with padlocks.

### 4.7.4. Lighting Vault and Emergency Generator

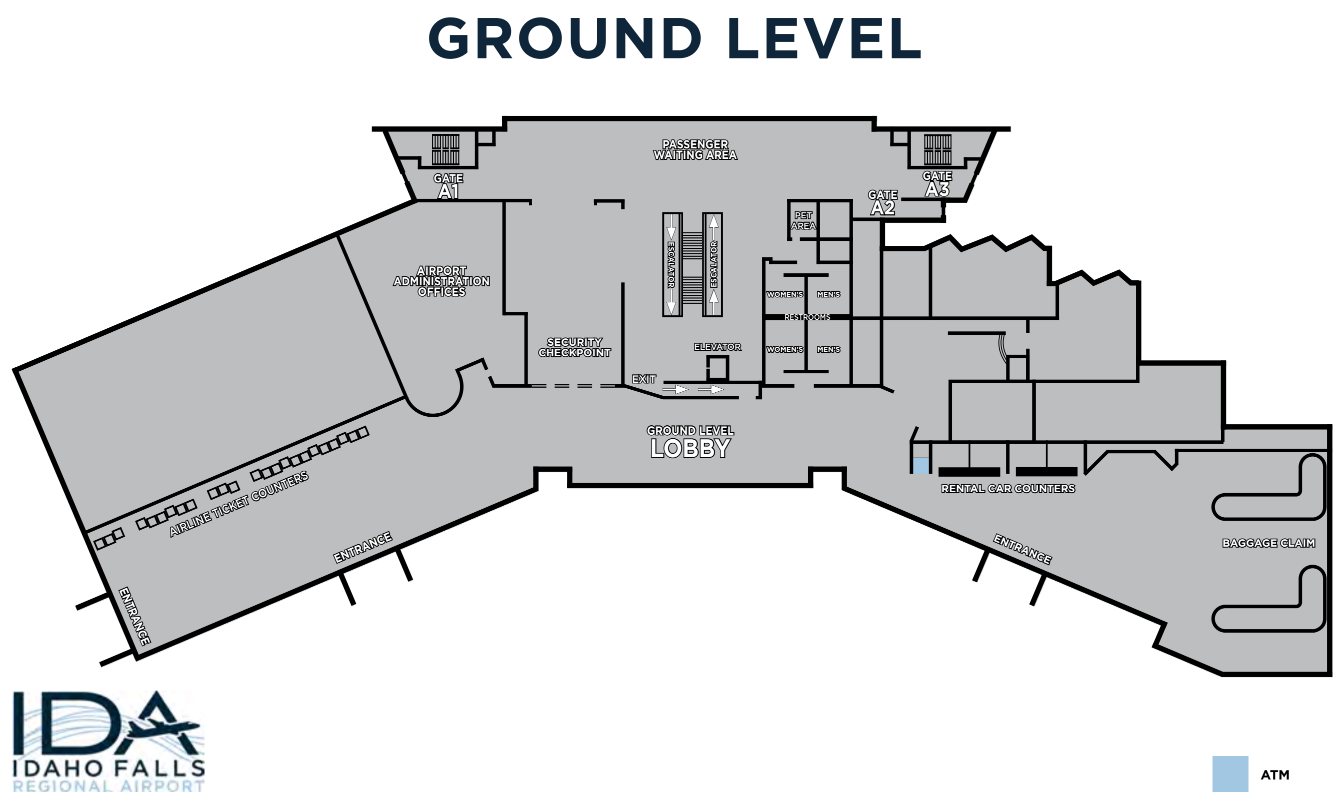
The airfield lighting vault is located inside the commercial terminal. There is also an emergency generator in the concrete structure located at the north end of the commercial terminal building along with a 1,000-gallon, above-ground, diesel fuel storage tank.

## 4.8. Commercial Terminal

The terminal is located at the end of North Skyline Drive. It was originally constructed in the late 1950s and opened in 1960. It has since gone through many upgrades and expansions. The most recent expansion, which is currently underway, will increase its size to approximately 72,000 square feet. This includes 51,000 square feet that is dedicated to passenger use. These renovations have an estimated completion date of spring 2022.

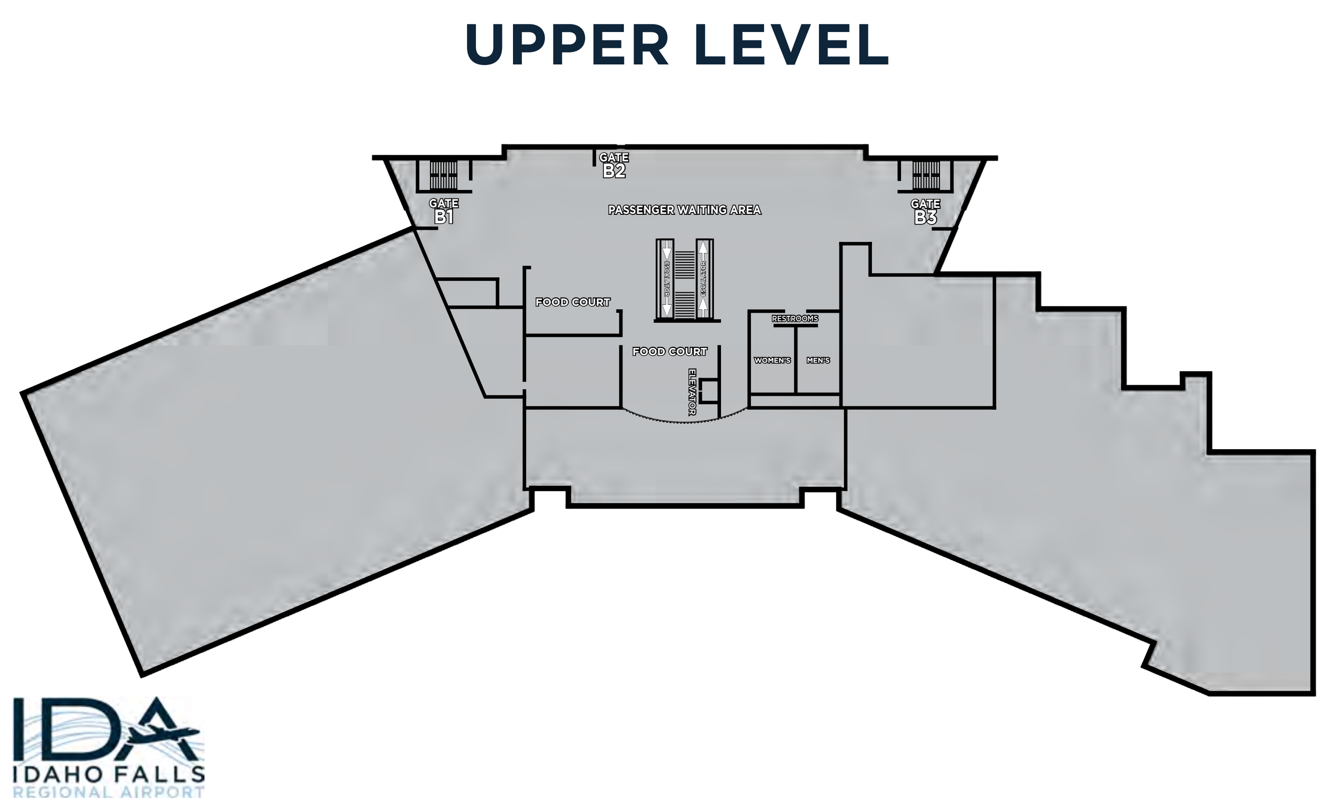
As shown in Figure 4.31 and Figure 4.32, the terminal is a two-story structure. There are three passenger gates on the first floor with covered walkways that allow passengers all-weather access when boarding and disembarking aircraft. There are also three passenger gates on the second floor with jet bridges that extend from the terminal gate to the aircraft.

**Figure 4.31: Terminal Map, Ground Level**




Source: Ardurra.

**Figure 4.32: Terminal Map, Upper Level**




Source: Ardurra.

Passenger processing occurs on the first floor. This includes curbside drop-off (Figure 4.33) and pick-up (Figure 4.34) as well as airline ticketing, security screening (Figure 4.35), baggage claim, and car rental check-out.

**Figure 4.33: Departure Curbside**


Source: Ardurra.

The airport administration offices are also on the first floor and are located behind the passenger access areas. This includes office space used by law enforcement, the Transportation Security Administration (TSA), and the airlines.

**Figure 4.34: Arrival Curbside**


Source: Ardurra.

**Figure 4.35: Security Screening Area**


Source: Ardurra.

The airline ticket counters are located in the south wing of the first floor near the airline and airport administration offices (Figure 4.36). As of July 2021, five airlines operating at IDA with nonstop service to 11 destinations. As shown in Table 4.11, three of these are currently seasonal routes.

**Figure 4.36: Airline Ticket Counters**


Source: Ardurra.

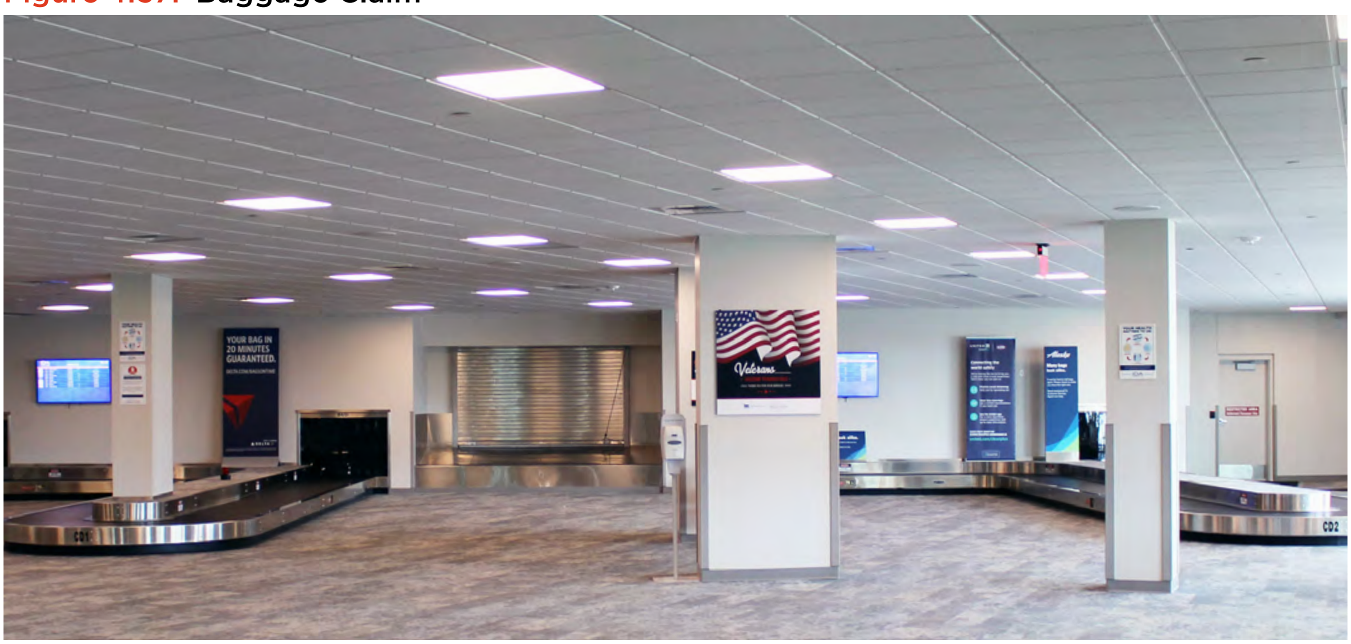
**Table 4.11: Airline Service**

| Airline | Destination | Aircraft | ARC |
|---|---|---|---|
| Alaska (Horizon) | Seattle (SEA) | Q400 | B-III |
| Allegiant | Las Vegas (LAS) | A319 & A320 | C-III |
| Allegiant | Los Angeles (LAX)* | A319 & A320 | C-III |
| Allegiant | Oakland/San Francisco (OAK)* | A319 & A320 | C-III |
| Allegiant | Phoenix/Mesa (AZA) | A319 & A320 | C-III |
| Allegiant | Portland (PDX) | A319 & A320 | C-III |
| Allegiant | San Diego (SAN)* | A319 & A320 | C-III |
| American (SkyWest) | Dallas/Fort Worth (DFW) | CRJ700 | C-II |
| American (SkyWest) | Phoenix (PHX) | CRJ700 | C-II |
| Delta (SkyWest) | Salt Lake City (SLC) | CRJ200 & CRJ700 | C-II |
| United (SkyWest) | Denver (DEN) | CRJ200 & E175 | C-II & C-III |

*Seasonal
Source: Idaho Falls Regional Airport

The baggage claim area (Figure 4.37) and the car rental counters (Figure 4.38) are both located in the north wing of the first floor of the terminal. There are six rental car agencies at IDA which include Alamo, Avis, Budget, Enterprise, Hertz, and National.

**Figure 4.37: Baggage Claim**



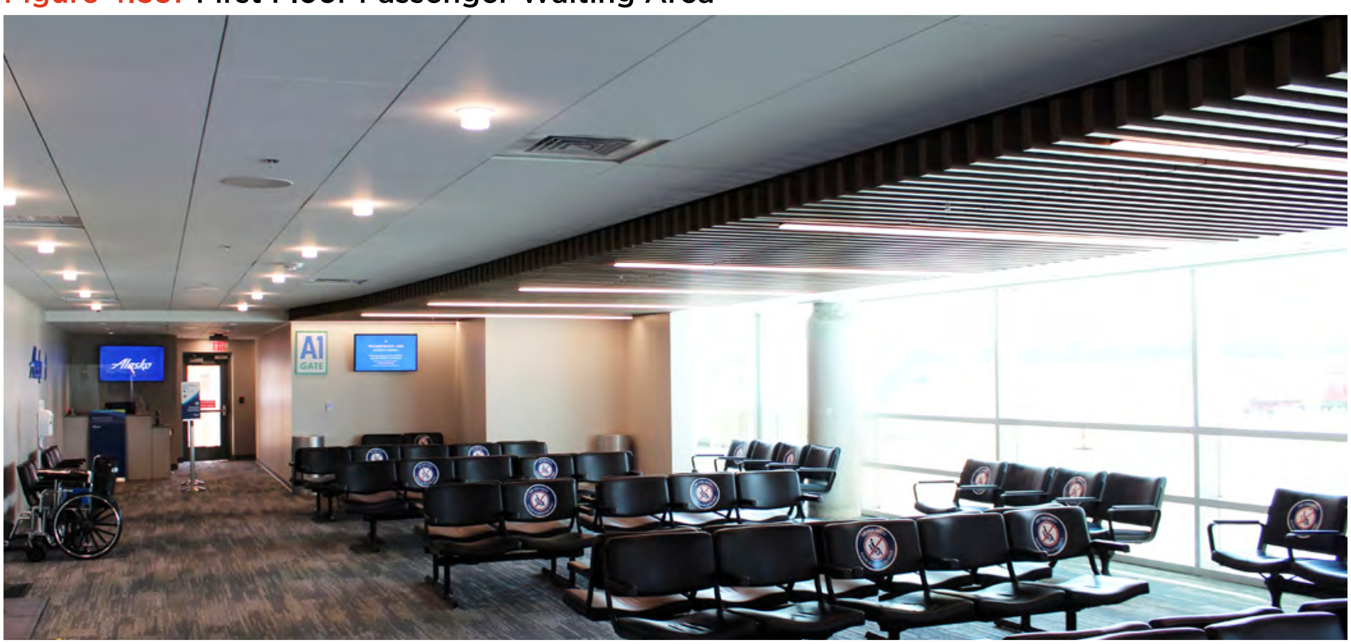

Source: Ardurra.

**Figure 4.38: Rental Car Services**


Source: Ardurra.

There are passenger waiting areas located at the passenger gates for each floor. The waiting area located on the first floor is shown in Figure 4.39.

**Figure 4.39: First Floor Passenger Waiting Area**




Source: Ardurra.

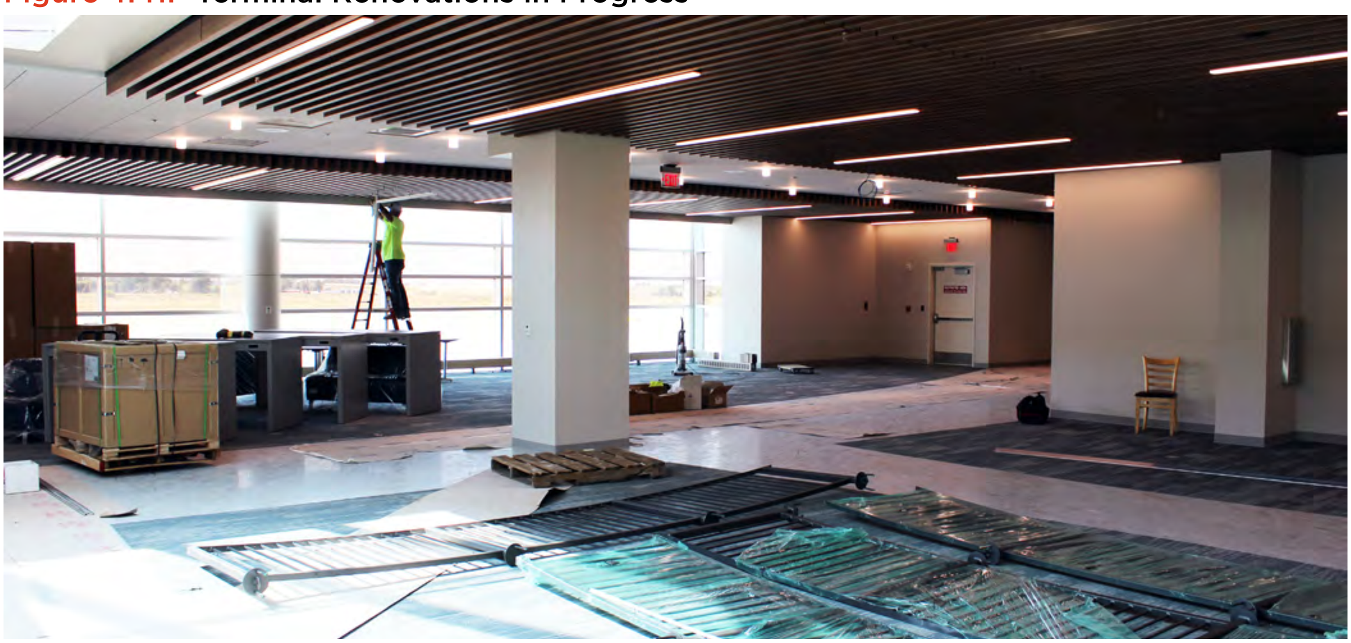
Passenger amenities in the terminal waiting areas include a restaurant, food court, restrooms, a pet relief area, an ATM, free Wi-Fi, and electronic charging stations. The majority of the concessions are closed during the terminal renovations. The temporary concession stand is shown in Figure 4.40.

**Figure 4.40: Terminal Amenities**


Source: Ardurra.

The terminal renovations, which are shown in Figure 4.41, have an estimated completion date of spring 2022.

**Figure 4.41: Terminal Renovations in Progress**



Source: Ardurra.

## 4.9. Commercial Terminal Parking Areas

Parking for the terminal is separated into short-term hourly, short-term daily, and long-term parking. These lots are all accessed via North Skyline Drive (Figure 4.42). The short-term parking lot has approximately 435 spaces and the long-term parking lot has approximately 478 spaces for a combined total of 913 spaces. Parking services are managed under contract by SP Plus Corporation (SP+).

The employee parking lot, which is located south of the terminal between North Skyline Drive and the terminal apron, has approximately 72 parking spaces. This lot is accessed via Borah Avenue.

**Figure 4.42: Parking Signage**


Source: Ardurra.

## 4.10. Car Rental Parking Facilities

The car rental parking lots are located just outside the terminal building and are adjacent to the north parking apron next to the air cargo facility.[4] The total parking area is approximately 3.5 acres in size, and most of this space is used as a staging area for the rental fleet.

Enterprise uses a large vehicle washing building which is located to the south of the cargo facility. It can be accessed via Federal Way, Skyline Drive, or the rental car staging area. Hertz and Avis/Budget have their own wash stations in their respective areas within the staging area.

4. The north parking apron is currently being used as an equipment staging area.

## 4.11. Fixed Base Operator

A fixed base operator (FBO) is a business that operates at an airport and provides a wide range of services to the flying public. Typically, these services are aimed at general aviation customers and include aircraft fueling, parking, servicing, charter flights, aircraft rentals, maintenance, hangar rentals, flight instruction, pilot lounge, conference room facilities, car rental arrangements, and more.

Aero Mark, which is the only FBO at the airport, has three on-site locations. The two main buildings are located at the FBO apron with the primary building situated near the apron midpoint, and the other building is located at the north end of the apron just west of the snow removal equipment building (Figure 4.43). Aero Mark also operates a third location out of the Red Baron Hangar located at the east general aviation area. While the FBO serves the majority of its customers from one of the two main buildings, this third location mainly caters to local GA customers.

**Figure 4.43: FBO Building**

Source: Ardurra.

## 4.12. East General Aviation Area and Historic District

The east general aviation area, which is located east of Runway 17/35 and Taxiway B, is accessed from Foote Drive. The Idaho Falls Airport Historic District, which consists of the Red Baron Hangar (Figure 4.44), caretaker's cabin, and beacon tower, is located here. Together, these historically significant buildings are rare surviving examples of the 1930s pioneering era of aviation.

The remainder of the east general aviation area extends north and south of the historic district along the full length of Taxiway B and Runway 17/35. There is a self-serve fuel island at the south end of the main parking apron, as well as a compass calibration pad (Figure 4.45). As shown in Figure 4.46, there are 45 hangar structures of various sizes.

**Figure 4.44:** Historic Red Baron Hangar

Source: Ardurra.

## 4.13. Non-Aeronautical Areas

There are numerous non-aeronautical uses within the IDA property. Some directly support aeronautical uses, such as car rental facilities, while others provide the airport with additional sources of revenue through leases and use agreements. It is important to note that the airport flight areas cannot be directly accessed from these non-aeronautical use areas.

**Figure 4.45:** East General Aviation Apron and Compass Rose

Source: Ardurra.

**Figure 4.46: Hangars**

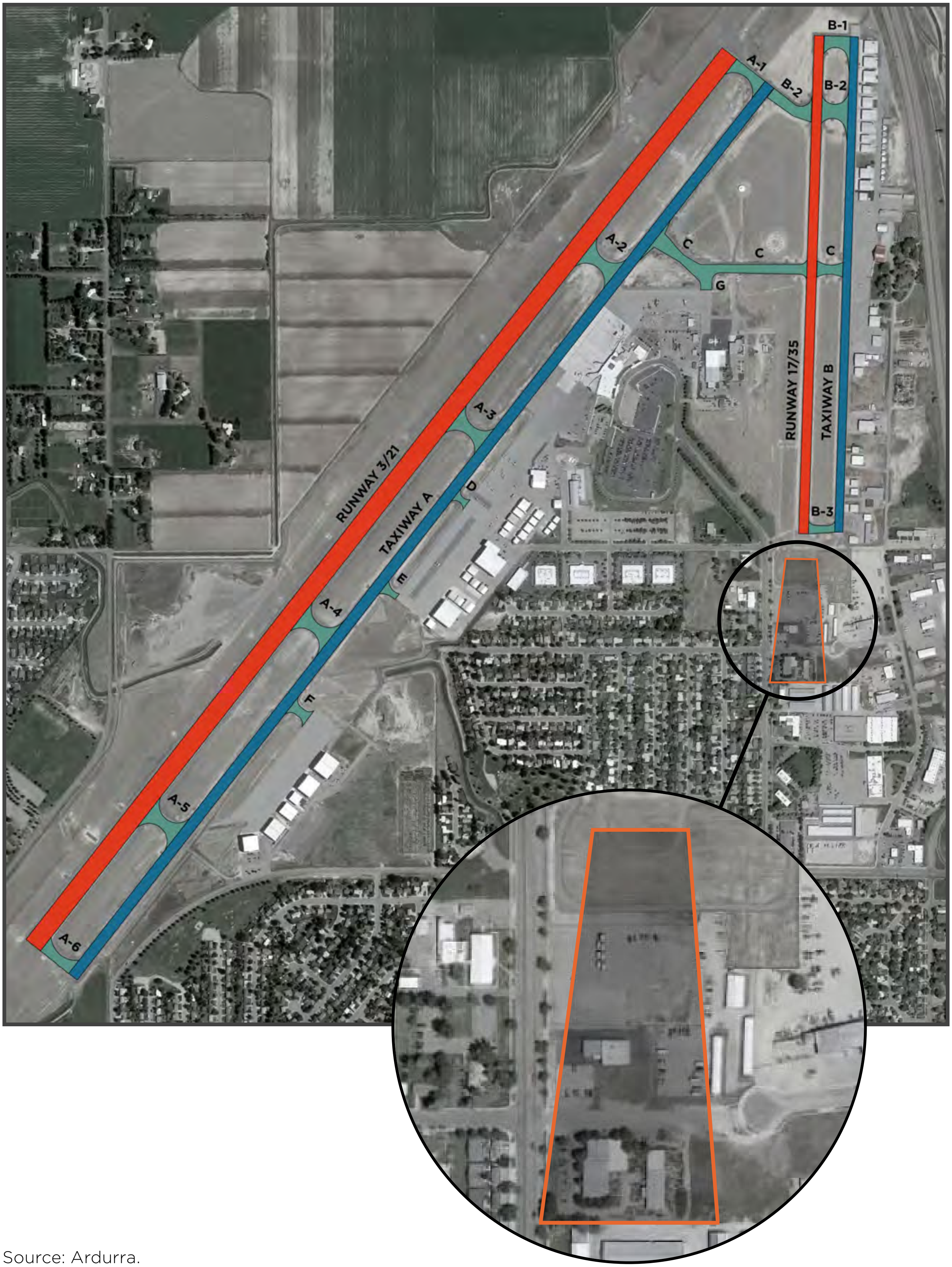
Source: Ardurra.

Non-aeronautical uses at IDA include the Old Butte Park and Soccer Complex, the Idaho Falls Dog Park, the Snake River Animal Shelter, railroad tracks, a community garden, farming, a storage facility, an air resources laboratory, and a parking lot used by people employed at an off-site commercial complex. There is also an educational software company located on airport property just east of this parking lot (Figure 4.47). In addition, there is an industrial park located to the south of the Runway 35-end. As shown in Figure 4.48, portions of this complex are within the runway protection zone (RPZ) for Runway 35.

**Figure 4.47: Commercial Building**

Source: Ardurra.

**Figure 4.48:** Runway 35 Runway Protection Zone




Source: Ardurra.

## 4.14. Utilities

The airport is served by common utilities including water, sewer, communications, power, and gas. Idaho Falls Fiber provides internet services to the city offices located in the terminal building, and, by extension, this includes telephone service because the city uses voice over internet protocol (VoIP). Each of the tenants located within the terminal building (e.g., airlines and car rental agencies) use their own internet service providers. The public Wi-Fi service is provided by Silver Star Communications. Electricity is provided by Idaho Falls Power, and natural gas is provided by Intermountain Gas Company. The terminal cooling system is electric, and the heating system is a natural gas-powered boiler. Water and sewer services are provided by the City of Idaho Falls via two eight-inch pipes. The terminal apron deicing pad which drains into a separator and then to the sanitary sewer. The airport provides on-site dumpsters for waste management which are then serviced by the City of Idaho Falls Sanitation Department. Stormwater is handled through a series of inlets, swales, and retention basins on the airport property. No stormwater is discharged off-airport.

# Endnotes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# FORECAST OF AVIATION ACTIVITY

5

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# CHAPTER FIVE
# FORECAST

The forecast is a critical component of the airport master planning process. It is used to help understand and anticipate the commercial service and general aviation (GA) activity that is expected to occur at the airport during the 20-year planning period of 2021-2041. It also provides the basis for guiding airport development needed to meet future demand.

## 5.1. Introduction

An effective forecast should be realistic, based on current data, and developed using appropriate methods. Developing a forecast for an airport master plan involves considering a variety of factors that can vary in complexity—such as the size and location of the airport, the type of aircraft using the airport, and activity levels. However, every forecast is developed using the same series of basic steps. As outlined in FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, these steps include identifying existing aviation activity, reviewing historical activity levels and previous forecasts, examining industry trends and regional socioeconomic data, selecting the appropriate forecast method; and then applying the methodology and evaluating the results.

The forecast developed for this airport master plan includes projections of aviation activity for Idaho Falls Regional Airport for the 20-year planning period of 2021–2041. It also includes projections for a short-term planning horizon of five years and for a medium-term planning horizon of ten years. Each of these projections uses 2021 as the base year when applying the selected forecasting methodology.

## 5.2. Existing Aviation Activity and Forecast Summary

It is important to first identify existing aviation activity in order to make sure the forecast includes all relevant activities likely to affect airport facilities. Idaho Falls Regional Airport is a primary, non-hub, commercial service airport that also supports significant general aviation activity as well as military operations. This forecast will address aircraft operations (i.e., takeoffs and landings), passenger enplanements, and based aircraft as well as the aircraft fleet mix and critical aircraft.

### 5.2.1. Aircraft Operations

Aircraft operations are separated into three main categories—commercial service, general aviation, and military operations. These operations are then classified as either itinerant or local. In general, local operations are flights that originate and terminate at the same airport while itinerant operations are flights that originate and terminate at different airports.

#### a. Commercial Service

Commercial service operations can include air carrier, commuter, and air taxi operations. In general, air carrier operations are conducted using aircraft with more than 60 seats while both commuter and air taxi operations are conducted using aircraft with less than 60 seats. The difference between commuter and air taxi operations is that commuter service is scheduled, and air taxi service is not scheduled.[1] In other words, air carrier operations are regularly scheduled flights on larger aircraft, commuter operations are typically shorter flights on smaller aircraft, and air taxi operations are typically shorter flights provided by smaller, boutique airlines on an on-demand basis (e.g., sightseeing or charter flights).

It is important to note that these three types of commercial operations are not handled the same way in every forecast. For example, in the TAF, the FAA considers air taxi and commuter operations to be one category because they both involve smaller aircraft while the IASP combines all three types into one category. However, in preparing the forecast for this airport master plan, air carrier and commuter operations are considered to be commercial service because they are both scheduled service while air taxi operations are considered to be general aviation operations because they are not scheduled.

Commercial service passenger operations are expected to increase from 7,856 in 2021 to 9,570 in 2041 with a compound annual growth rate (CAGR) of 0.99%. All-cargo operations are expected to increase from 676 in 2021 to 1,071 in 2041 with a CAGR of 2.33%. Overall, commercial service operations are expected to increase from 8,532 in 2021 to 10,641 in 2041 with a CAGR of 1.11%.

#### b. General Aviation

General aviation typically includes all operations that are not scheduled commercial service or military operations. These are typically charter flights, privately owned aircraft used for business or personal travel, flight training, recreation, and medical transport or other types of emergency services.

Itinerant GA operations are expected to increase from 17,228 in 2021 to 20,610 in 2041 with a CAGR of 0.90%. Local GA operations are expected to increase from 7,402 in 2021 to 8,244 in 2041 with a CAGR of 0.54%. Overall, GA operations are expected to increase from 24,630 in 2021 to 28,854 in 2041 with a CAGR of 0.79%.

#### c. Military

Unless there is specific knowledge of an upcoming change, military operations are typically forecast at existing levels because the Department of Defense provides limited details regarding future activity levels. IDA supports frequent yet unpredictable levels of military operations, and there are no reliable indicators suggesting military operations will increase during the 20-year planning period.

Based on the TAF forecast, itinerant military operations are expected to increase from 259 operations in 2021 to 389 in 2041 with a CAGR of 2.05%, and local military operations are expected to remain at 235 operations for an overall total of 624 annual military operations.

### 5.2.2. Passenger Enplanements

The passenger enplanements forecast is particularly important because it will help determine future requirements for airport facilities necessary for accommodating passengers such as the size of the terminal and parking facilities. A variety of factors and trends must be taken into consideration in order to develop an effective forecast for passenger enplanements such as socioeconomic trends as well as the airline and aviation industry trends that affect the airport.

The forecast for passenger enplanements was determined by examining historical activity levels at the airport, examining the impacts of COVID-19, and determining how industry trends will affect passenger retention rates at IDA. Overall, passenger enplanements are expected to increase from 223,741 in 2021 to 326,041 in 2041 with a CAGR of 1.90%.

### 5.2.3. Air Cargo by Volume

The forecast for cargo by volume was developed based on increased demand due to the rise in online shopping. Total annual cargo volumes are forecast to grow from approximately 6.29 million pounds in 2021 to approximately 13.49 million pounds in 2041, a CAGR of 3.89%.

### 5.2.4. Based Aircraft

The type, size, and number of aircraft based at an airport are important factors to consider when analyzing airport capacity, facility requirements, and planning future development. This is because the forecast of based aircraft can indicate a need for new hangar space as well as new or expanded services. It can also impact facility requirements for runways, taxilanes, and aprons.

The forecast for based aircraft is based on the historical trend for based aircraft from 2010 to 2019. Overall, based aircraft are expected to increase from 125 in 2021 to 165 in 2041 with a CAGR of 1.39%.

### 5.2.5. Critical Aircraft

The critical aircraft is the most demanding type of aircraft, or group of aircraft with similar characteristics, that regularly use the airport. (Regular use is defined as a minimum of 500 annual operations; excluding touch-and-go operations).[2] The critical aircraft is often referred to as the design aircraft because is used to determine the correct design standards for certain areas of the airport, such as the separation distance between taxiways and runways.

For airports like IDA where the infrastructure must support a wide range of aircraft and operations, it is wise to identify separate commercial service, air cargo, and general aviation critical aircraft. Although the commercial service critical aircraft will be the driver for the runway and primary taxiway design standards, the general aviation and cargo critical aircraft will aid in planning and developing the areas of the airport that cater to general aviation and cargo operations.

#### a. Commercial Service

The critical aircraft for commercial service is the Airbus A320. However, the Bombardier Q-400 will be used to determine the standard for taxiway design because this aircraft is the most demanding aircraft relating to taxiway requirements.

#### b. Air Cargo

The critical aircraft for air cargo is the ATR 72.

#### c. General Aviation

The critical aircraft for general aviation is the Bombardier Challenger 300 (CL30).

### 5.2.6. Forecast Summary

Table 5.1 summarizes the forecast of aircraft operations, passenger enplanements, cargo volumes, and based aircraft that have been developed for this airport master plan. However, it is important to understand that actual activity may differ from these forecasts because aviation activity can be affected by a wide range of unforeseen developments at the local, regional, and national levels. A copy of the FAA approval of this airport master plan forecast is included as **Appendix B: Forecast Approval**.

**Table 5.1: Forecast Summary**

| | Base Year | Forecast Years | | | Compound Annual Growth Rate | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2041 | 5-Year | 10-Year | 20-Year |
| **Operations** | | | | | | | |
| Passenger Aircraft | 7,856 | 9,468 | 9,484 | 9,570 | 3.80% | 1.90% | 0.99% |
| All-Cargo Aircraft | 676 | 843 | 918 | 1,071 | 4.51% | 3.11% | 2.33% |
| **Total Commercial** | **8,532** | **10,311** | **10,402** | **10,641** | **3.86%** | **2.00%** | **1.11%** |
| Itinerant GA | 17,228 | 18,017 | 18,843 | 20,610 | 0.90% | 0.90% | 0.90% |
| Local GA | 7,402 | 7,604 | 7,812 | 8,244 | 0.54% | 0.54% | 0.54% |
| **Total GA** | **24,630** | **25,621** | **26,655** | **28,854** | **0.79%** | **0.79%** | **0.79%** |
| Itinerant Military | 259 | 286 | 319 | 389 | 2.00% | 2.11% | 2.05% |
| Local Military | 235 | 235 | 235 | 235 | 0.00% | 0.00% | 0.00% |
| **Total Military** | **494** | **521** | **554** | **624** | **1.07%** | **1.15%** | **1.17%** |
| **Total Operations** | **33,656** | **36,453** | **37,611** | **40,119** | **1.61%** | **1.12%** | **0.88%** |
| **Passengers** | | | | | | | |
| **Total Enplanements** | **223,741** | **289,508** | **300,869** | **326,041** | **5.29%** | **3.01%** | **1.90%** |
| **Cargo** | | | | | | | |
| **Total Weight** | **6,288,882** | **9,952,995** | **11,072,550** | **13,488,226** | **9.62%** | **5.82%** | **3.89%** |
| **Based Aircraft** | | | | | | | |
| Single-Engine | 93 | 101 | 109 | 123 | 1.66% | 1.60% | 1.41% |
| Multi-Engine | 20 | 22 | 24 | 28 | 1.92% | 1.84% | 1.70% |
| Jet | 5 | 5 | 5 | 6 | 0.00% | 0.00% | 0.92% |
| Helicopter | 4 | 4 | 4 | 5 | 0.00% | 0.00% | 1.12% |
| Glider | 3 | 3 | 3 | 3 | 0.00% | 0.00% | 0.00% |
| **Total Based Aircraft** | **125** | **135** | **145** | **165** | **1.55%** | **1.50%** | **1.39%** |

Source: IDA, U.S. Department of Transportation, FAA, Ricondo & Associates, Inc., Ardurra.

## 5.3. Historical Aviation Activity

It is important to assemble the airport's historical aviation activity and identify past trends before preparing the forecast. Understanding the airport's usage patterns and historical demand for aviation services is used to help analyze the accuracy of previous forecasts, develop the forecast, and evaluate the results. Table 5.2 summarizes the historical activity levels at the airport for 2011-2020.

**Table 5.2: Historical Aviation Activity, 2011–2020**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Operations** | | | | | | | | | | |
| Air Carrier | 594 | 806 | 1,098 | 973 | 1,218 | 1,325 | 1,268 | 1,349 | 2,002 | 2,029 |
| Air Taxi & Commuter | 8,982 | 8,318 | 8,502 | 10,740 | 10,060 | 11,102 | 11,258 | 6,070 | 5,398 | 3,978 |
| **Total Commercial** | **9,576** | **9,124** | **9,600** | **11,713** | **11,278** | **12,427** | **12,526** | **7,419** | **7,400** | **6,007** |
| Itinerant GA | 13,612 | 13,916 | 12,517 | 13,123 | 13,695 | 10,055 | 9,644 | 12,240 | 13,565 | 11,046 |
| Local GA | 14,097 | 15,816 | 13,516 | 8,696 | 8,881 | 5,514 | 5,931 | 6,680 | 6,170 | 7,034 |
| **Total GA** | **27,709** | **29,732** | **26,033** | **21,819** | **22,576** | **15,569** | **15,575** | **18,920** | **19,735** | **18,080** |
| Itinerant Military | 176 | 112 | 128 | 163 | 214 | 288 | 259 | 243 | 249 | 181 |
| Local Military | 8 | 32 | 74 | 14 | 92 | 142 | 137 | 96 | 235 | 168 |
| **Total Military** | **184** | **144** | **202** | **177** | **306** | **430** | **396** | **339** | **484** | **349** |
| **Total Operations** | **37,469** | **39,000** | **35,835** | **33,709** | **34,160** | **28,426** | **28,497** | **26,678** | **27,619** | **24,436** |
| **Passengers** | | | | | | | | | | |
| Air Carrier | 41,842 | 50,443 | 47,779 | 48,242 | 45,816 | 39,946 | 41,901 | 42,858 | 46,160 | 31,083 |
| Air Taxi & Commuter | 104,624 | 108,724 | 104,426 | 111,891 | 108,934 | 105,971 | 104,451 | 113,266 | 129,485 | 81,973 |
| **Total Enplanements** | **146,466** | **159,167** | **152,205** | **160,133** | **154,750** | **145,917** | **146,352** | **156,124** | **175,645** | **113,056** |
| **Based Aircraft** | | | | | | | | | | |
| **Total Based Aircraft** | **166** | **170** | **170** | **170** | **167** | **171** | **168** | **171** | **171** | **171** |

| CAGR | Operations | Passengers | Based Aircraft |
|---|---|---|---|
| 2011–2020 | -4.64% | -2.84% | 0.33% |

Source: FAA, TAF

### 5.3.1. Aircraft Operations

Airport traffic control tower (ATCT) personnel collect operations data when the tower is open. The following sections summarize the historical data for each of the three main categories of aircraft operations.

#### a. Commercial Service Operations

Commercial service operations at the airport have fluctuated between a high of 12,526 in 2017 to a low of 6,007 in 2020. The CAGR was 14.62% for air carrier operations, -8.65% for air taxi and commuter operations, and -5.05% overall for 2011 to 2020.

#### b. General Aviation Operations

General aviation operations make up the majority of the operations flown at IDA. General aviation operations have fluctuated between a high of 29,732 in 2012 to a low of 15,575 in 2017. This generally echoes national trends for general aviation activity, and it reflects how closely tied GA activity is to the U.S. economy. The CAGR was -2.29% for itinerant general aviation operations, -7.43% for local general aviation operations, and -4.63% overall for 2011 to 2020.

#### c. Military Operations

Military operations at the airport have fluctuated between a high of 484 in 2019 to a low of 144 in 2012. It is typical to see this type of variance in military operations as the Department of Defense alters its operational requirements. The CAGR was 0.31% for itinerant military operations, 40.25% for local military operations, and 7.37% overall for 2011 to 2020.

### 5.3.2. Passenger Enplanements

Passenger activity levels have fluctuated between a high of 175,645 in 2019 and a low of 113,056 in 2020. The CAGR was -3.25% for air carrier passengers, -2.67% for air taxi and commuter passengers, and -2.84% overall for 2011 to 2020.

### 5.3.3. Based Aircraft

A based aircraft is any operational and airworthy aircraft that is based at the airport for the majority of the year.[3] The number of aircraft based at the airport has fluctuated between a high of 171 to a low of 166. The overall CAGR for based aircraft was 0.33% for 2011-2020.

The airport provides the FAA with an annual inventory of based aircraft which is then used by the FAA to update the TAF forecast for the airport. The Airport Master Record, FAA Form 5010-1 for Idaho Falls Regional Airport, indicates a total of 171 aircraft were based at the airport for 2021. However, airport management reports 125 aircraft were actually based at the airport for 2021. The airport records, which show approximately 93 single engine piston aircraft, 20 multi-engine, five jets, four helicopters, and three gliders, will be used as the baseline in this forecast.

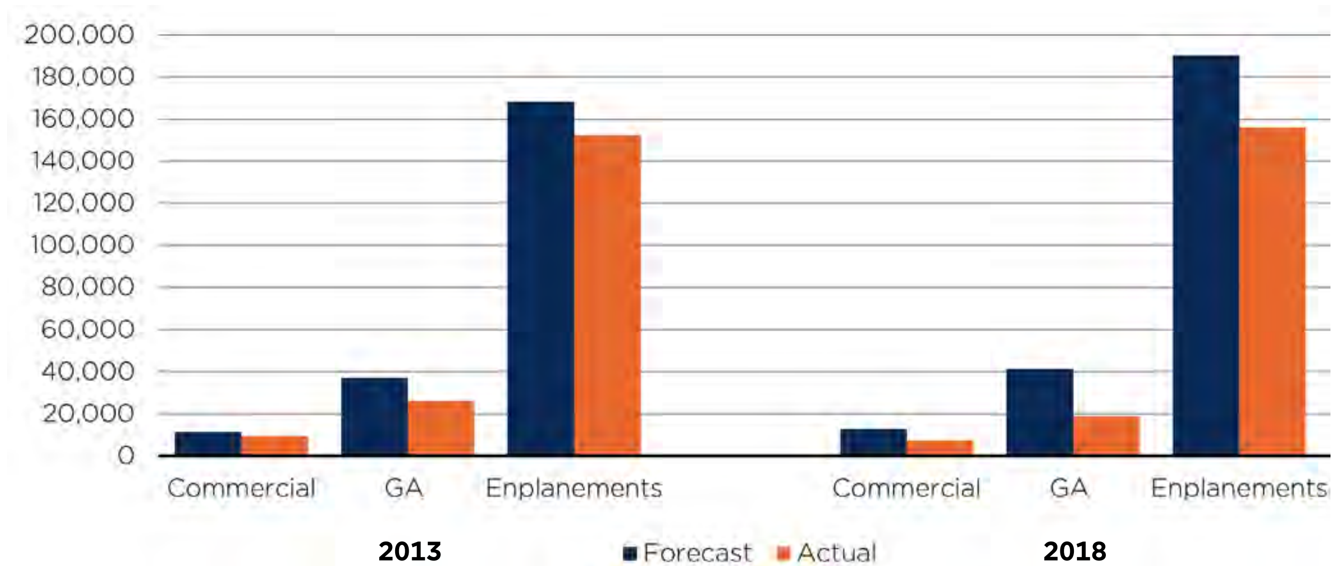
## 5.4. Review of Previous Forecasts

When preparing a forecast of aviation demand, it is important to examine previous forecasts that have been prepared for the airport. This includes the forecast prepared as part of the previous airport master plan, the Terminal Area Forecast prepared for the airport by the FAA, and the forecast included with the 2020 Idaho Airport System Plan Update. These forecasts should be examined in terms of the assumptions made at the time as well as the actual projections. Analyzing the accuracy of previous forecasts can be helpful in identifying past trends and changes in the aviation industry that have affected the airport's usage patterns.

### 5.4.1. 2010 Airport Master Plan Forecast

The previous airport master plan for Idaho Falls Regional Airport, which uses 2008 as the base year, was completed in 2010. A comparison of the 2010 forecast to actual operations data is shown in Figure 5.1.

**Figure 5.1: 2010 Airport Master Plan Forecast**




Source: 2010 Airport Master Plan; FAA, TAF

The previous forecast was based on the assumption that enplanement rates would grow at a slower rate than the population projections. It was also based on the economy, which was expected to slow down during the forecast period.

Based on these assumptions, commercial operations were forecast to increase from 10,392 in 2008 to 12,938 in 2018 while the TAF reflects 7,419 commercial service operations in 2018. General aviation operations were forecast to increase from 33,404 in 2008 to 41,448 in 2018 while the TAF shows 18,920 GA operations in 2018. Passenger enplanements were forecast to increase from 148,798 in 2008 to 190,473 in 2018 while the TAF reflects 156,124 passenger enplanements in 2018.

### 5.4.2. Terminal Area Forecast for Idaho Falls Regional Airport

The Terminal Area Forecast (TAF) is the FAA's official forecast of aviation activity for all U.S. airports included in the National Plan of Integrated Airport Systems (NPIAS). This forecast is published annually, and the current edition is *Terminal Area Forecast, Fiscal Years 2021–2045*. This report contains historical and forecast data for itinerant and local operations as well as enplanements (i.e., revenue paying passengers boarding commercial flights) and based aircraft. This forecast is developed based on local and national economic conditions as well as conditions affecting the aviation industry.[4] The FAA's TAF projection for Idaho Falls Regional Airport provides an important point of comparison when developing local forecasts and is discussed throughout this chapter.

As shown in Table 5.3, the TAF shows Idaho Falls Regional Airport had an estimated 2,145 commercial operations in 2021. These are expected to increase at a CAGR of 2.96% and are expected to reach 3,843 in 2041. The airport also had approximately 25,800 general aviation operations and 494 military operations in 2021. General aviation operations are forecasted to decrease at a CAGR of -0.09% and are expected to total 25,327 in 2041 while military operations are expected to total 624 in 2041. The airport had an estimated 149,954 passenger enplanements in 2021. These are forecasted to increase at a CAGR of 2.49% and are expected to reach 245,318 in 2041. According to the TAF, the airport is expected to have 171 based aircraft in 2041.

**Table 5.3: Terminal Area Forecast, Idaho Falls Regional Airport, 2021–2041**

| | Base Year | Forecast Years | | | Compound Annual Growth Rate | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2041 | 5-Year | 10-Year | 20-Year |
| **Operations** | | | | | | | |
| Total Commercial Svc. | 2,145 | 2,933 | 3,217 | 3,843 | 6.46% | 4.14% | 2.96% |
| Total General Aviation | 25,800 | 24,086 | 24,485 | 25,327 | -1.37% | -0.52% | -0.09% |
| Total Military | 494 | 521 | 554 | 624 | 1.07% | 1.15% | 1.17% |
| **Total Operations** | **28,439** | **27,540** | **28,256** | **29,794** | **-0.64%** | **-0.06%** | **0.23%** |
| **Passengers** | | | | | | | |
| **Total Enplanements** | **149,954** | **183,637** | **203,658** | **245,318** | **4.14%** | **3.11%** | **2.49%** |
| **Based Aircraft** | | | | | | | |
| **Total Based Aircraft** | **171** | **171** | **171** | **171** | **0.00%** | **0.00%** | **0.00%** |

Source: FAA, TAF

### 5.4.3. Idaho Airport System Plan Forecast for Idaho Falls Regional Airport

The Idaho Transportation Department Division of Aeronautics provides a statewide forecast for both commercial service and general aviation airports. This report is published annually, and *2020 Idaho Aviation System Plan (IASP) Update* is the current edition.[5] The 2020 IASP Update used 2017 as the base year with a 20-year planning horizon ending in 2037. This forecast uses a combination of national, state, and local data to examine three main indicator categories—annual operations, enplanements, and based aircraft. While the agency uses data from the FAA, individual airport reports, and aviation industry reports to help develop its forecast, it uses the TAF as the common baseline, rather than data reported by the individual airports, to help ensure consistency. The agency did note some differences between the TAF and the airport-reported data, but they are relatively minor with an approximate statewide difference of less than 1%.

As shown in Table 5.4, Idaho Falls Regional Airport had 12,526 commercial operations in 2017. According to the 2020 IASP Update, these are forecasted to increase at a CAGR of 0.34% and are expected to reach 13,394 in 2037. The airport also had 15,575 general aviation operations and 396 military operations in 2017. General aviation operations are forecasted to increase at a CAGR of 0.41% and are expected to reach 16,911 in 2037. Military operations are forecasted to increase at a CAGR of 1.46% and are expected to reach 529 in 2037. The airport had 145,730 passenger enplanements in 2017. These are forecasted to increase at a CAGR of 1.74% and are expected to reach 205,584 in 2037. The airport had 171 based aircraft in 2017, and based aircraft are expected to remain at 171 during the forecast period.

**Table 5.4: Idaho Airport System Plan, Idaho Falls Regional Airport, 2017–2037**

| | Base Year | Forecast Years | | | Compound Annual Growth Rate | | |
|---|---|---|---|---|---|---|---|
| | 2017 | 2022 | 2027 | 2037 | 5-Year | 10-Year | 20-Year |
| **Operations** | | | | | | | |
| Total Commercial Svc. | 12,526 | 11,795 | 12,304 | 13,394 | -1.20% | -0.18% | 0.34% |
| Total General Aviation | 15,575 | 16,343 | 16,530 | 16,911 | 0.97% | 0.60% | 0.41% |
| Total Military | 396 | 421 | 449 | 529 | 1.23% | 1.26% | 1.46% |
| **Total Operations** | **28,497** | **28,559** | **29,283** | **31,374*** | **0.04%** | **0.27%** | **0.39%** |
| **Passengers** | | | | | | | |
| **Total Enplanements** | **145,730** | **154,619** | **170,401** | **205,584** | **1.19%** | **1.58%** | **1.74%** |
| **Based Aircraft** | | | | | | | |
| **Total Based Aircraft** | **171** | **171** | **171** | **171** | **0.00%** | **0.00%** | **0.00%** |

*Table 4-14, 2020 IASP includes this math error.

Source: 2020 IASP Update

## 5.5. Factors Affecting Aviation Activity

This section identifies the national, statewide, and local forecasts, trends, and other factors expected to affect aviation activity. It also identifies the geographic area served by the airport and the regional characteristics that influence aviation demand.

### 5.5.1. National Aviation Forecast, FAA Aerospace Forecast, Fiscal Years 2021–2041

Local aviation trends generally follow national trends. Therefore, it is necessary to analyze the industry from a broad perspective and then apply local socioeconomic factors to refine the forecast. The FAA publishes an annual update of the agency's national aviation forecast. While the forecast is prepared to the meet budget and planning needs of the FAA, it is also widely used by state and local authorities, the aviation industry, and the general public. It is developed using statistical models to explain and incorporate emerging trends for each segment of the aviation industry including commercial airlines, cargo operations, GA, unmanned aircraft systems, and commercial space travel. The following discussion is summarized from the current edition, *FAA Aerospace Forecast, Fiscal Years 2021–2041*.[6]

The U.S. airline industry, which has a long history of volatility, has experienced steady and significant growth since the end of the Great Recession in 2009. The recession required the airlines to refine their business models and minimize losses by lowering operating costs, eliminating unprofitable routes, and grounding older, less fuel-efficient aircraft. The results of these efforts were impressive, and 2019 marked the eleventh consecutive year of profitability for the industry. However, this was brought to a rapid end in 2020 by the COVID-19 pandemic. Despite this significant blow, the FAA's forecast anticipates a return to the long-term growth trend for the U.S. airline industry. The agency also notes that recent data indicates the potential pace of recovery for the aviation industry is faster than previously expected. This is due, in part, to COVID-19 relief bills, the rapid availability of vaccinations, reduced rates in transmissions, and pent-up demand.[7]

#### a. National Forecast for Commercial Service

The recovery from the pandemic will drive the near-term growth. Consequently, elevated growth is predicted to last until around 2025 and 2026. After operations reach pre-pandemic levels, the longer term economic health, along with the growth in air travel demand, will drive the long-term growth in operations at FAA facilities for the rest of the forecast period. The FAA's domestic baseline forecast assumes that economic growth rebounds moderately in 2021 and then remains slightly above trend in the medium-term. The unemployment rate retreats gradually, reaching its pre-pandemic rate in 2024. Oil prices remain moderate by historic standards and there are no external shocks.[8]

The following points are also of particular importance:

- Economic Growth: According to forecasts by IHS Markit, real gross domestic product (GDP) in the U.S. is anticipated to grow 2.4% per year.
- Enplanements: Domestic enplanements are expected to grow at an average annual rate of 4.9% per year.
- Load Factors: The domestic load factor is expected to increase from 68.7% to 86.6%.
- Seat Capacity: Expected to increase an average of 4.0% per year for domestic markets.
- Air Carriers: Average seats per aircraft mile is expected to increase from 171 in 2021 to 177.4 in 2041.
- Air Carrier: Operations are expected to increase at an average rate of 4.2%.
- Regional Carriers: Average seats per aircraft mile is expected to increase from 66.4 in 2021 to 68.9 in 2041.
- Regional Carriers: The overall fleet is expected to grow at an average rate of 0.4% per year. This includes an average decrease of 6.2% for non-jet aircraft and an increase of 1.3% for jet aircraft each year.
- Air Taxi and Commuter: Operations are expected to increase at an average rate of 1.1% per year.
- Air Cargo: Revenue ton miles are expected to increase at an average rate of 1.6% domestically for all-cargo carriers and 1.7% for passenger carriers.

### b. National Forecast for General Aviation

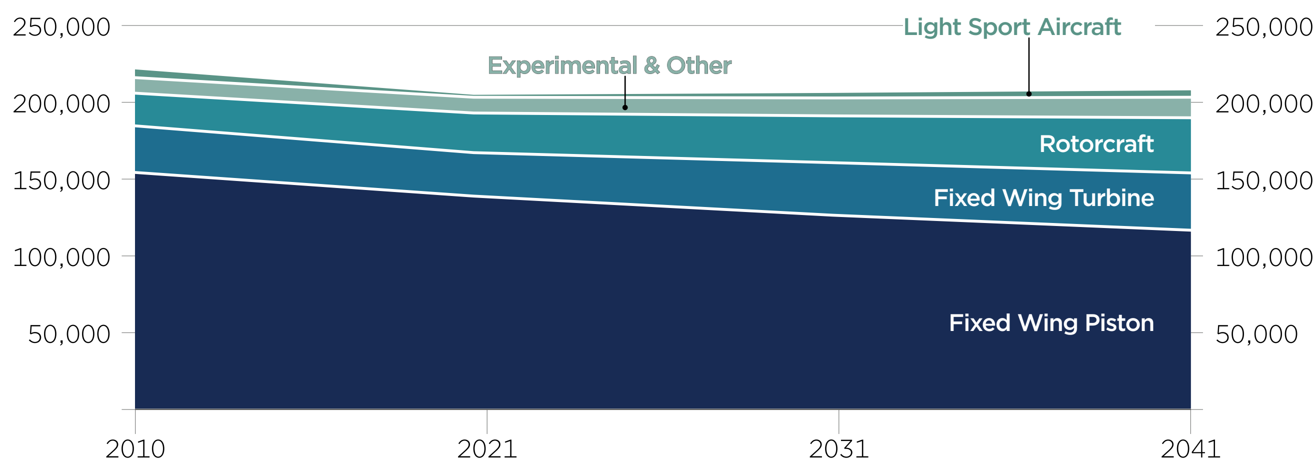
The FAA Aerospace Forecast includes projections for fleet mix and hours flown for GA aircraft such as fixed wing piston, fixed wing turbine, rotorcraft, light sport aircraft (LSA), experimental aircraft, and others. These forecasts use the results of the agency's annual surveys to establish a baseline and, in addition to assumptions for retirement rates, include data for new aircraft deliveries provided by the General Aviation Manufacturers Association (GAMA). It is important to note that these forecasts are only for active aircraft with active aircraft defined as one that has been flown at least one hour per year.

General aviation was not as severely affected by the pandemic as the airlines, and the FAA is predicting a promising long-term outlook for GA. The agency expects growth at the high end will offset continuing aircraft retirements at the low end of the market. GA operations, which accounted for 51.4% of total U.S. operations in 2019, declined approximately 17% in 2020. They are projected to increase at an average rate of 0.4% per year through 2041 and are expected to return to pre-pandemic levels by 2026.

#### National Forecast for the General Aviation Fleet Mix

The results of the FAA's most recent General Aviation and Part 135 Activity Survey, which was completed in 2019, shows an estimated 210,981 active aircraft (a decline of 0.4% from 2018). The data also reflects an increase in fixed wing turbine, rotorcraft, lighter-than-air, and light sport aircraft that is offset by a corresponding decrease in fixed wing piston, experimental aircraft, and gliders. There was an overall decrease of 12.4% in deliveries of GA aircraft for 2020 from the previous year. This includes a 46.6% decrease for multi-engine piston aircraft and a 3.2% increase for single engine piston aircraft. This equates to an overall 0.1% decline in deliveries of fixed wing piston aircraft. Additionally, shipments of business jets declined by 29.8% while turboprop deliveries declined by 17.7%. This equates to a 24.5% decrease for fixed wing turbine aircraft. The national forecast for active GA aircraft is shown in Figure 5.2.

**Figure 5.2: National Forecast for the General Aviation Fleet Mix**

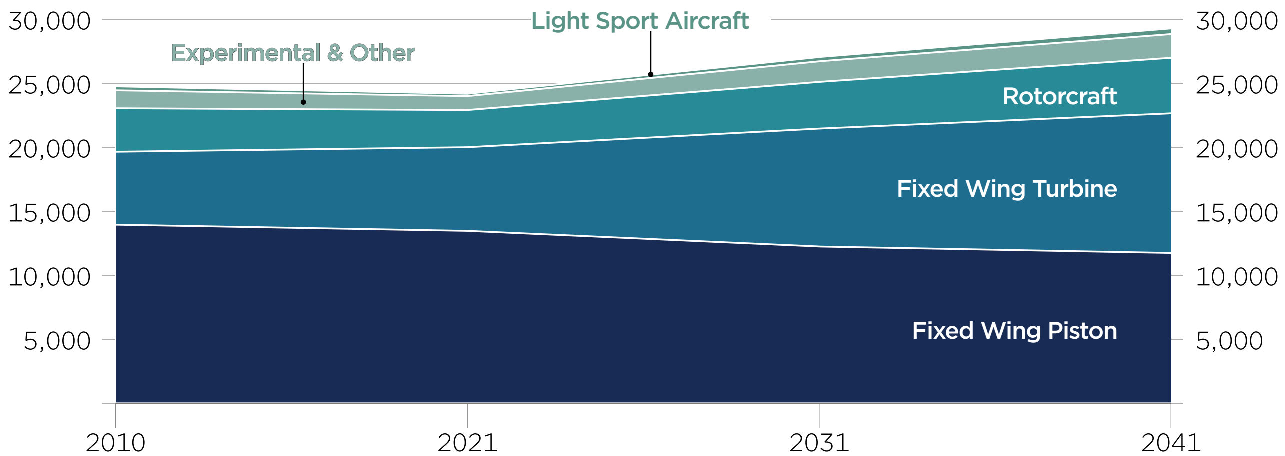



Source: FAA Aerospace Forecast, 2021–2041

#### National Forecast for General Aviation Hours Flown

Despite the marginal decline projected for the GA fleet, the FAA has projected the number of GA hours flown to increase by an average of 0.6% per year with total hours flown increasing from 25.6 million for 2019 to 29.4 million for 2041. This increase is partly due to an anticipated increase in hours flown for newer aircraft. It also reflects a 0.9% decrease projected for fixed wing piston aircraft which is more than offset by the 2.2% increase projected for fixed wing turbine aircraft, a 1.7% increase projected for rotorcraft, and a 4% increase projected for light sport aircraft. The national forecast for GA hours flown is shown in Figure 5.3.

**Figure 5.3:** National Forecast for General Aviation Hours Flown

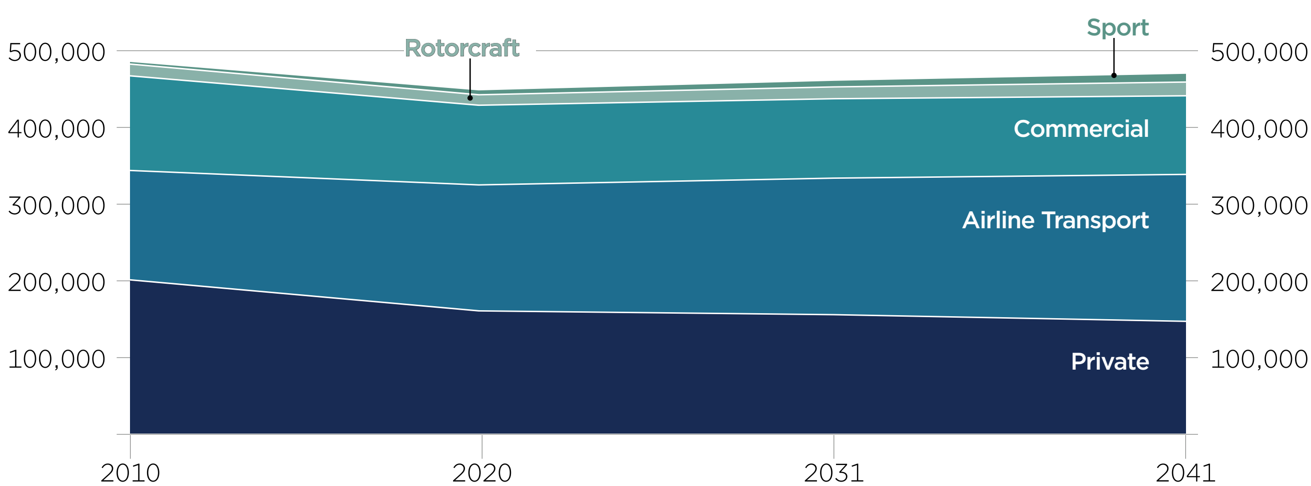



Source: FAA Aerospace Forecast, 2021–2041

### National Forecast for Active Pilots by Certificate Type

The FAA forecast indicates that the type of certifications pilots are earning is still changing. This transition is largely the result of legislative and regulatory changes that have taken place in recent years. Overall, there were 691,691 active pilots at the end of 2020 which reflects a decrease in air transport pilot (ATP) and rotorcraft certifications and an increase in commercial pilot and sport pilot certifications. The FAA has forecasted a 0.06% decrease for commercial pilot certifications, a 0.04% decrease for general aviation certifications, and a 0.42% decrease for private pilot certifications. It also projects a 0.7% increase for ATP certifications and a 2.7% increase for sport pilot certifications. The national forecast for active general aviation pilots by certificate type is shown in Figure 5.4.

**Figure 5.4:** National Forecast for General Aviation Pilots by Certificate Type




Source: FAA Aerospace Forecast, 2021–2041

### 5.5.2. National Factors Affecting Aviation Activity

It is important to take national factors relating to commercial service, general aviation, and air cargo into consideration when developing local aviation forecasts. The following factors were considered, either directly or indirectly, in developing the aviation activity forecasts for Idaho Falls Regional Airport.

#### a. National Economy

Trends in airline travel have historically been closely correlated with national economic trends, especially changes in gross domestic product (GDP). The national GDP is expected to increase approximately 2% annually through the forecast period. This should result in a general increase in demand for air service. Actual economic activity may differ from this expectation, especially on a year-to-year basis, and demand for air travel may be impacted by changes in economic performance.

#### b. Mergers, Acquisitions, and New Airlines

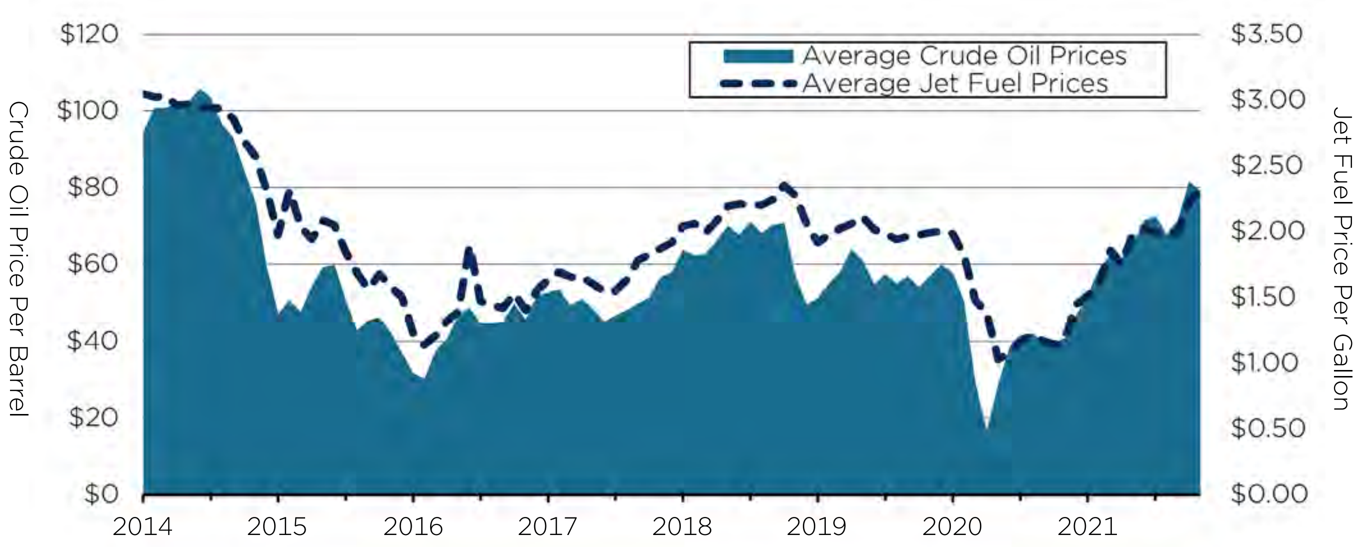
U.S. airlines have a long history of merging or acquiring competitors in order to achieve operational and commercial value and to improve financial performance. This consolidation has resulted in the realignment of several airline route networks as airlines have sought efficiencies in their service. Further consolidation of the U.S. airline industry could affect the capacity offered at IDA and could alter the competitive landscape.

For example, two new airlines began operating in the U.S. in 2021; Avelo Airlines and Breeze Airways. These airlines are not currently in direct competition with established airlines because they provide service between cities that did not previously have nonstop connections. As these airlines grow, they may begin to compete with established airlines by creating new nonstop routes. These new nonstop flights could then stimulate additional demand at airports like IDA and other locations.

#### c. Cost of Aviation Fuel

As of the second quarter of 2021, jet fuel accounted for 15.1% of total airline operating costs. According to Airlines for America, this was second only to labor costs.[9] The average price of jet fuel has increased steadily since April 2020, and, as of November 2021, the average price of jet fuel was $2.31 per gallon. However, this is still below the high prices previously sustained in 2014. Figure 5.5 shows the monthly averages for jet fuel and crude oil prices from January 2014 through November 2021. Fluctuating fuel costs continue to affect airline profitability and could lead to changes in air service.

**Figure 5.5: Historical Averages of Jet Fuel and Crude Oil Prices, 2014–2021**




Source: U.S. Bureau of Transportation Statistics, U.S. Energy Information Administration, January 2022

### d. Threat of Terrorism

The potential recurrence of terrorism incidents against either domestic or international flights has been a risk since September 11, 2001. Tighter security measures restored the public's confidence in the integrity of both the U.S. and global aviation security systems. However, any terrorist incident targeting aviation could have an immediate and significant impact on the demand for air travel.

### e. COVID-19 Pandemic

According to the International Air Transport Association (IATA), the COVID-19 pandemic severely curbed global aviation demand. Globally, airlines experienced an operating loss of $137.7 billion in 2020 and are projected to lose an additional $52.3 billion in 2021. Domestic airlines are projected to record a slight profit for 2022 while international airlines are expected to lose another $21.5 billion. IATA airline profitability estimates for 2009 to 2022 are shown in Figure 5.6.[10]

**Figure 5.6: Net Profit of Commercial Airlines Worldwide, 2016–2022**


Note: 2021E = IATA estimates; 2022F = IATA forecast for 2022; Bankruptcy reorganization & large non-cash costs are excluded. Includes all commercial airlines. Historical data is subject to revision.

Source: International Air Transport Association, October 2021

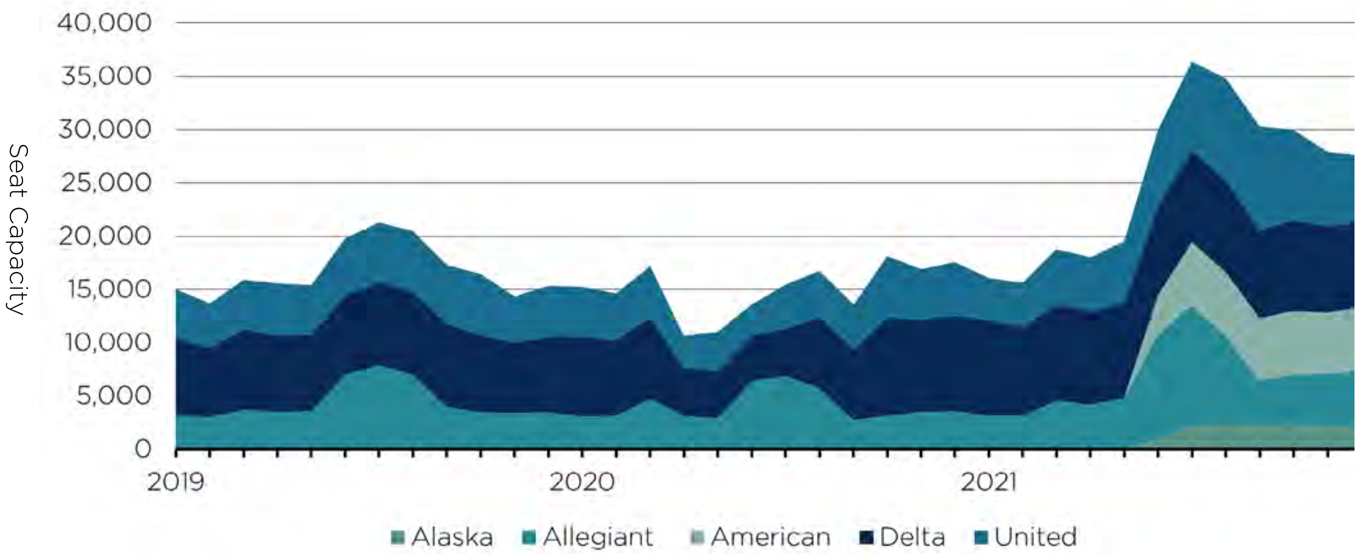
### The Pandemic's Impact on Idaho Falls Regional Airport

The COVID-19 pandemic first began to impact air travel within East Asia in December 2019, and other regions were being affected by March and April 2020. Airlines responded by reducing capacity across their networks due to decreased demand, travel restrictions, and border closures. However, following an initial reduction in capacity in May 2020, IDA experienced robust growth during the pandemic.

Airline capacity began its industry-wide recovery in June 2020. Areas with access to sun and leisure activities, like eastern Idaho, saw capacity restored at a greater rate than the rest of the country. Demand for air service was concentrated on destinations people could visit while remaining socially distanced.

By December 2020, nationwide departing seat capacity increased to 51.6% of December 2019 capacity while IDA saw capacity increase by 14% compared to December 2021. Demand for travel to or from IDA continued to outpace the rest of the nation through 2021. By June of 2021, Alaska Airlines and American Airlines both initiated service at IDA to take advantage of the increased demand for destinations with access to outdoor leisure activities. Existing airlines also increased capacity, and, by February 2021, all airlines had exceeded pre-pandemic levels for seating capacity at IDA (Figure 5.7).

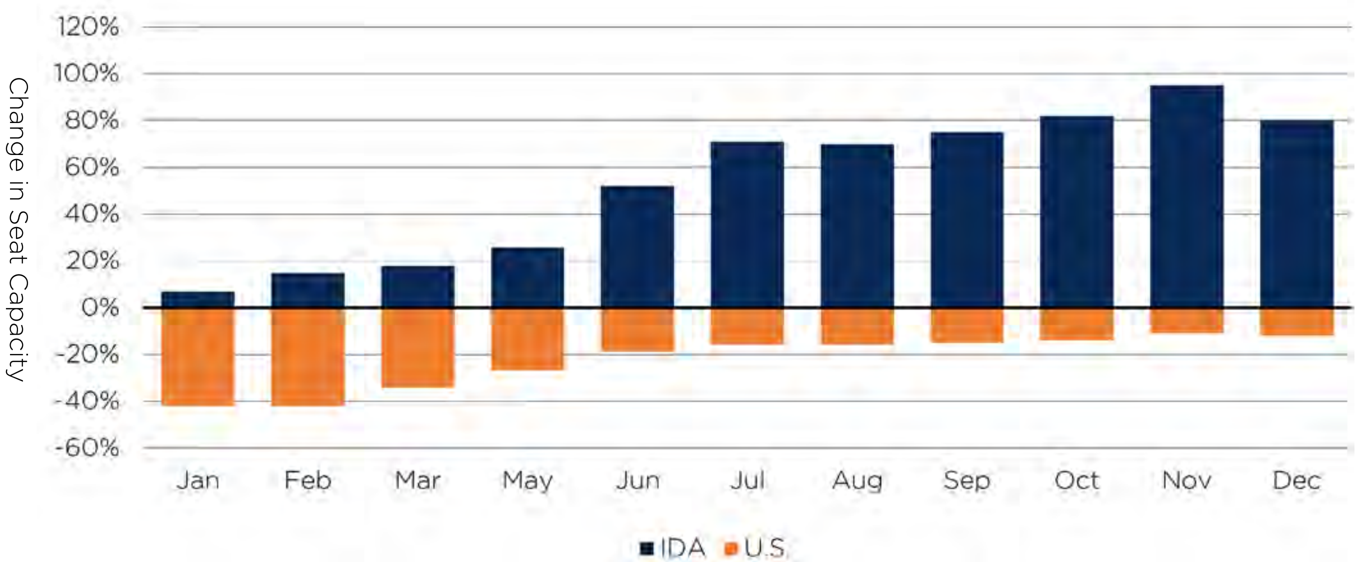
**Figure 5.7: Monthly Seat Capacity, 2019–2021**




Source: Innovata, October 2021

By December 2021, scheduled departing seats at IDA were approximately 180% of the seats available in December 2019, while nationwide seat capacity was only approximately 88%. Figure 5.8 shows IDA's seat capacity for 2021 in relation to 2019 seat capacity alongside the nationwide recovery rate.

**Figure 5.8: Seat Capacity Recovery, 2021 vs. 2019**




Source: Innovata, October 2021

Published airline schedules do not necessarily represent actual capacity because airlines may cancel scheduled flights or switch to an aircraft with a different seat capacity. While flight cancellation rates have decreased from their peak in 2020, future schedules are likely to remain volatile until the demand environment stabilizes. Ultimately, the pandemic's lasting impact on demand and airline profitability may result in increased uncertainty in future activity throughout the industry—including IDA.

### 5.5.3. Statewide Aviation Industry Forecast, 2020 Idaho Airport System Plan Update

The IASP forecast indicates an overall positive outlook, and the agency anticipates growth in all three indicator categories (i.e., operations, enplanements, and based aircraft) through 2037.

According to the IASP, Idaho's commercial service airports reported a total of 280,904 operations—including commercial, GA, and military operations—for 2017. Boise Air Terminal/Gowen Field accounts for approximately 44% of these operations with the remaining taking place at Joslin Field-Magic Valley Regional, Idaho Falls Regional, Pullman-Moscow Regional, Lewiston-Nez Perce County, Friedman Memorial, and Pocatello Regional, respectively. Overall aviation demand at these airports is expected to grow, and annual aircraft operations are expected to increase at a CAGR of 0.8%, enplanements at 2.3%, and based aircraft at 0.8% through 2037.[11]

#### a. Statewide Forecast for Commercial Operations

According to the 2020 IASP, there were 100,268 commercial service operations at Idaho's commercial service airports in 2017. Boise Air Terminal/Gowen Field accounts for approximately 55% of these operations with the remaining taking place at Idaho Falls Regional, Friedman Memorial, Pocatello Regional, Lewiston- Nez Perce County, Joslin Field-Magic Valley Regional, and Pullman-Moscow Regional, respectively. Overall, commercial operations are expected to grow 1.5% annually with 136,337 operations projected for 2037.[12]

#### b. Statewide Forecast for General Aviation and Military Operations

Most commercial service airports are also used by GA customers and the military. GA activity can include helicopters, personal, or business aircraft that support a wide variety of industries such as recreation, agriculture, and various emergency services as well as corporate and business travel.

There were 167,673 GA operations and 12,566 military operations at Idaho's commercial service airports in 2017. Once again, the majority of these operations took place at Boise Air Terminal/Gowen Field. An overall annual increase of 0.4% is projected for GA operations with 180,764 operations projected for 2037. Only a slight increase of 0.1% annually is projected for military operations because these are typically determined by national security issues and are generally unknown for the future.[13]

#### c. Statewide Forecast for Passenger Enplanements

Idaho's commercial service airports experienced nearly 2.2 million enplanements in 2017. Approximately 79% of these enplanements occurred at Boise Air Terminal/Gowen Field with the remaining taking place at Idaho Falls Regional, Friedman Memorial, Lewiston-Nez Perce County, Pullman-Moscow Regional, Joslin Field-Magic Valley Regional, and Pocatello Regional, respectively. Enplanements are expected to continue to grow at a steady rate with a projected annual increase of 2.3% and are projected to reach nearly 3.5 million by 2037.[14]

#### d. Statewide Forecast for Based Aircraft

There were a total of 978 aircraft based at Idaho's commercial service airports in 2017. Nearly 28% of these were based at Boise Air Terminal/Gowen Field with the remaining based at Idaho Falls Regional, Friedman Memorial, Lewiston-Nez Perce County, Joslin Field-Magic Valley Regional, Pullman-Moscow Regional, and Pocatello Regional, respectively. These are projected to increase at an annual rate of 0.8% and are forecasted to reach 1,137 in 2037.[15]

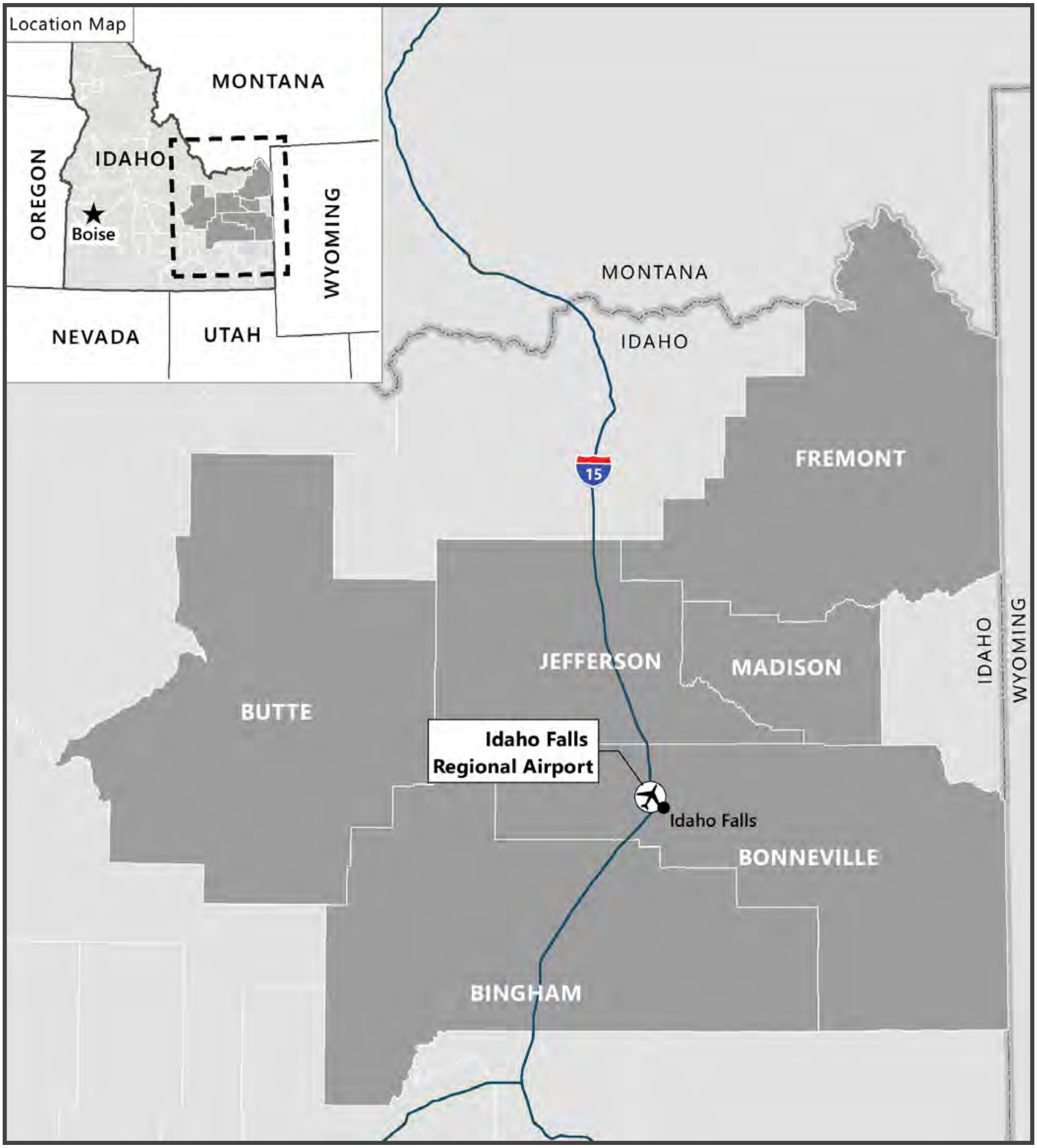
### 5.5.4. Local Factors With Potential to Affect Aviation Demand and Activity

The following local factors were considered in developing the aviation activity forecasts for IDA.

### a. Air Trade Area

The airport is supported by an air trade area (ATA) comprised of six counties surrounding Idaho Falls (Figure 5.9). The MSA, which was used for the GA forecast, presents a localized socioeconomic outlook that is more closely associated with GA than commercial service. For the commercial service forecast, the ATA is a more relevant study area because it presents a more complete representation of the geographic area from which the airport can expect to draw commercial air service passengers.

Figure 5.9: Air Trade Area for Idaho Falls Regional Airport




Source: 2016 TIGER/Line Shapefiles; Ricondo & Associates, Inc.

### b. Competing Airports

There are five competing airports located within driving distance of IDA's ATA. The airport conducted a retention and leakage study in 2019 to identify the percentage of passengers traveling to or from the Idaho Falls area that use these other airports instead of IDA. The study found that 53.5% of the passengers located in or around Idaho Falls use IDA for air travel. Approximately 38.1% use SLC. The remaining 8.4% use either Boise Airport (BOI), Pocatello Regional Airport (PIH), Jackson Hole Airport (JAC), or Bozeman Yellowstone International Airport (BZN).[16] Table 5.5 lists each of these competing airports along with their distance from IDA, the percentage of Idaho Falls area passengers who use each airport, and the average cost of a one-way fare from each airport to IDA's 50 largest origin or destination (O&D) markets.

**Table 5.5: Retention and Leakage Study, 2019**

| Airport | Distance | % of Passengers | Average Fare |
|---|---|---|---|
| Idaho Falls Regional Airport (IDA) | — | 53.50% | $228 |
| Salt Lake City International Airport (SLC) | 200 Miles | 38.10% | $175 |
| Boise Airport (BOI) | 280 Miles | 4.60% | $146 |
| Pocatello Regional Airport (PIH) | 55 Miles | 2.20% | $186 |
| Jackson Hole Airport (JAC) | 100 Miles | 1.50% | |
| Bozeman Yellowstone International (BZN) | 200 Miles | 0.10% | |

Source: Volaire Aviation Consulting, May 2020

Passengers are choosing other airports due to the availability of multiple flights—most of which are nonstop—along with the lower average fares offered at these airports. For example, SLC, which is located approximately 200 miles south of Idaho Falls, serves as a hub for Delta. As of November 2021, Delta provided service to 83 domestic destinations and seven international destinations from SLC, and many of these destinations were served by multiple daily flights. However, the study also found that leakage to SLC has fallen from 50% in 2017 to 38% in 2019 while IDA's retention grew from 40% in 2017 to 54% in 2019. The improved retention rate is likely due in part to the new services and seat capacity added at IDA during this period.

Allegiant, Delta, and United have provided service at the airport since 2012 while Alaska and American both began providing service at the airport in 2021. For Delta and United, the airport serves as an origin or destination (O&D) within their route networks. This allows passengers to fly to connecting hubs or focus cities which enables them to reach many destinations with one stop. While Allegiant Air offers service to larger destinations in the western United States on a point-to-point basis, it does not offer connecting itineraries.

As of January 2022, regularly scheduled service was provided to eight domestic destinations. Alaska provided service to Seattle (SEA); Allegiant provided service to Phoenix/Mesa (AZA), Las Vegas (LAS), and Portland (PDX); American provided service to Dallas/Ft. Worth (DFW) and Phoenix-Sky Harbor (PHX); Delta provided service to Salt Lake City (SLC); and United provided service to Denver (DEN).

As shown in Table 5.6, an average of approximately 15 daily flights and 1,212 daily departing seats were offered from IDA during July 2021; the busiest month in 2021 with seasonal service. Eleven destinations were served at least once daily, and three destinations were served by multiple daily flights (DEN, SLC, and DFW).

**Table 5.6: Scheduled Nonstop Service, July 2021**

| Destination | Average Daily Departures | Average Daily Seats | Number Of Airlines |
|---|---|---|---|
| Phoenix/Mesa (AZA) | 0.6 | 108 | 1 |
| Denver (DEN) | 5.0 | 290 | 1 |
| Dallas/Ft. Worth (DFW) | 2.0 | 135 | 1 |
| Las Vegas (LAS) | 0.3 | 45 | 1 |
| Los Angeles (LAX)* | 0.3 | 54 | 1 |
| Oakland (OAK)* | 0.3 | 54 | 1 |
| Portland (PDX) | 0.3 | 54 | 1 |
| Phoenix (PHX) | 1.0 | 70 | 1 |
| Seattle (SEA) | 1.0 | 76 | 1 |
| Salt Lake City (SLC) | 4.0 | 290 | 1 |
| **Total** | **15** | **1,212** | |

Note: *Denotes seasonal service. Average is calculated as the number of seats or departures scheduled in July 2021 divided by the number of days in the month (31).

Source: Idaho Falls Regional Airport

The top domestic O&D markets at IDA, measured as passengers per day each way (PDEW), for the four quarters ending June 2021 are listed in Table 5.7. During this period, approximately 40%, or 137 PDEW, traveled between IDA and one of the top five destinations. The top 25 markets comprised approximately 72%, or 247 PDEW, of the domestic O&D market. Six of the top nine O&D markets have nonstop service.

**Table 5.7: Top 25 Domestic O&D Markets at Idaho Falls Regional Airport**

| Rank | Destination | Average Fare | Rank | Destination | Average Fare |
|---|---|---|---|---|---|
| 1 | Phoenix (PHX & AZA) | $76 | 13 | Washington, D.C.[1] | $250 |
| 2 | Las Vegas | $50 | 14 | Sacramento | $213 |
| 3 | Southern California[2] | $183 | 15 | Salt Lake City | $134 |
| 4 | San Francisco[3] | $122 | 16 | Minneapolis/St. Paul | $191 |
| 5 | Denver | $183 | 17 | Austin | $212 |
| 6 | Seattle | $170 | 18 | Nashville | $215 |
| 7 | Dallas (DFW & DAL) | $194 | 19 | Kansas City | $187 |
| 8 | San Diego | $102 | 20 | San Antonio | $203 |
| 9 | Portland | $133 | 21 | New York City[4] | $266 |
| 10 | Houston (IAH & HOU) | $193 | 22 | Chicago (ORD & MDW) | $219 |
| 11 | Atlanta | $241 | 23 | Spokane | $177 |
| 12 | Orlando | $219 | 24 | St. Louis | $184 |
| | | | 25 | Detroit | $248 |

1 Includes Ronald Reagan (DCA), Dulles International (IAD), and Baltimore/Washington International (BWI) Airports.
2 Includes Los Angeles (LAX), Ontario (ONT), Burbank (BUR), Long Beach (LGB), and John Wayne (SNA) Airports.
3 Includes San Francisco International, Oakland International, and San Jose International (SJC) Airports.
4 Includes John F. Kennedy International (JFK), Newark Liberty International (EWR), and LaGuardia (LGA) Airports.

Source: U.S. Department of Transportation, DB1B Survey, October 2021

### c. Socioeconomic Trends

There is typically a strong connection between socioeconomic trends and aviation demand. Local socioeconomic conditions—especially population, employment, and income—can have either an upward or downward influence on aviation activity. In addition to providing a general understanding of the socioeconomic conditions surrounding Idaho Falls Regional Airport, local and regional socioeconomic trends can provide an important indicator of future demand for aviation services.

Table 5.8 summarizes the socioeconomic projections for the Idaho Falls metropolitan statistical area (MSA) by Woods and Poole Economics, Inc., an independent firm specializing in long-term economic and demographic projections.

**Table 5.8: Socioeconomic Forecast, Metropolitan Statistical Area, 2021–2041**

| | Base Year | Forecast Years | | | Compound Annual Growth Rate | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2041 | 5-Year | 10-Year | 20-Year |
| **Population** | | | | | | | |
| Population Forecast | 154,999 | 164,672 | 174,469 | 193,970 | 1.22% | 1.19% | 1.13% |
| **Employment** | | | | | | | |
| Employment Forecast | 100,483 | 108,241 | 116,116 | 132,244 | 1.50% | 1.46% | 1.38% |
| **Per Capita Income** | | | | | | | |
| Income Forecast | $50,559 | $61,711 | $77,223 | $122,406 | 4.07% | 4.33% | 4.52% |

Source: Woods and Poole Economics, Inc.

As previously mentioned, the ATA is a more relevant study area for the commercial service forecast because it is a more complete representation of the area from which the airport can expect to draw commercial air service passengers. Socioeconomic projections for the ATA are summarized in Table 5.9

**Table 5.9: Socioeconomic Characteristics, Airport Air Trade Area, 2021–2041**

| | Base Year | Forecast Years | | | Compound Annual Growth Rate | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2041 | 5-Year | 10-Year | 20-Year |
| **ATA Population** | | | | | | | |
| Population Forecast | 255,000 | 268,000 | 281,000 | 305,000 | 1.00% | 0.98% | 0.90% |
| **ATA Employment** | | | | | | | |
| Employment Forecast | 154,800 | 166,400 | 178,100 | 201,700 | 1.46% | 1.41% | 1.33% |
| **ATA Per Capita Income** | | | | | | | |
| Income Forecast | $39,076 | $42,255 | $45,483 | $52,307 | 1.58% | 1.53% | 1.47% |
| **ATA Earnings** | | | | | | | |
| Earnings Forecast | $6.7M | $7.5M | $8.3M | $10.0M | 2.14% | 2.08% | 2.00% |
| **ATA GRP** | | | | | | | |
| GRP Forecast | $10.2M | $11.3M | $12.6M | $15.2M | 2.19% | 2.12% | 2.03% |

Source: Woods and Poole Economics, Inc.

Table 5.10 summarizes the national projections used in developing the commercial service forecasts.

**Table 5.10: Socioeconomic Characteristics, United States, 2021–2041**

| | Base Year | Forecast Years | | | Compound Annual Growth Rate | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2041 | 5-Year | 10-Year | 20-Year |
| **U.S. Per Capita Income** | | | | | | | |
| Income Forecast | $53,188 | $57,922 | $62,781 | $73,147 | 1.72% | 1.67% | 1.61% |
| **U.S. GDP** | | | | | | | |
| GDP Forecast | $20.3M | $22.5M | $24.7M | $29.6M | 2.08% | 2.01% | 1.91% |

Source: Woods and Poole Economics, Inc.

## 5.6. Aviation Forecast Methodologies

There are several methods for forecasting aviation activity. Selecting the most appropriate method is typically a matter of professional judgment and experience based on the analyst's industry knowledge and assessment of local conditions. Quite often, the most reliable approach for generating a reasonable estimate involves using multiple methods. As stated in FAA AC 150/5070-6B, *Airport Master Plans*, the most common techniques are regression analysis, trend analysis, market share analysis, and smoothing.

### 5.6.1. Regression Analysis

Regression analysis is a statistical technique used to identify trends in data by measuring the relationship between dependent variables (e.g., aviation demand) and independent variables (e.g., population, income). This method is effective when using relatively simple data sets, a strong statistical correlation is evident, and reliable data is available for the independent variables.

### 5.6.2. Trend Analysis

Trend analysis uses historical patterns to project future activity. This approach is useful when local conditions are unusual enough to differentiate the study airport from other airports in the region.

### 5.6.3. Market Share Analysis

This technique assumes a top-down relationship between national, regional, and local forecasts. It involves conducting a historical review of the airport activity and identifying its percentage, or share, of a larger regional, state, or national aviation market. The historical market share trend is then used to project the future market share based on forecasts developed for the larger geographical area. This type of forecast is useful when the activity has a constant share of a larger market.

### 5.6.4. Smoothing

Smoothing is a statistical technique used to make predictions based on applying recent trends and conditions to historical data. It is most effective for generating short-term forecasts.

### 5.6.5. Forecasting Methodology and Approach Used

Several methodologies were used to establish the most reasonable forecast for each element of the airport master plan forecast. The assumptions and methodologies used to develop the forecasts for GA and military forecasts are discussed alongside the presentation of the GA and military forecasts. The methodologies used to develop the commercial forecasts are described in the following sections.

### a. Commercial Forecast Methodology

A bottom-up methodology was used to forecast demand for the short-term (2022–2025), and a top-down approach was used to forecast demand for the long term (2026–2041).

#### Short Term Methodology (2022-2025)

The airport's records were used to determine baseline activity levels through December 2021. For the first quarter of 2022, published airline schedules were considered and flight segment-level estimates of performance were developed based on airline-specific load factor trends and completion rates (i.e., the number of flights scheduled compared to the number flown). Due to the volume of new capacity being introduced, it is expected that load factors will decline in the near term and then slowly return to normal.

As previously discussed, future schedules have been increasingly subject to change during the COVID-19 pandemic. Therefore, to estimate the remaining nine months of 2022, the historical share of enplaned passengers and passenger airline operations for January through March were compared to flights scheduled for the full year. This information was then used to forecast enplaned passengers and passenger airline operations for the rest of 2022. New air services introduced during 2021 were assumed to remain in place at similar levels of capacity and frequency throughout 2022. While planned runway closures at surrounding airports in 2022 may have a temporary impact on the activity at IDA, they are not expected to result in a significant or lasting change in demand. Therefore, this was not analyzed as part of these forecasts. For 2023 through 2025, the passenger activity estimated for 2022 was used to estimate growth rates using socioeconomic regression analysis.

#### Long Term Methodology (2026-2041)

Forecasts of passenger demand for the long term were also developed using socioeconomic regression analysis. Forecasts of passenger demand were combined with estimates of airline capacity deployment which resulted in forecasts of passenger airline operations. The expectations of airline capacity deployment were developed through an analysis of fleet plans, airline industry performance trends, and an analysis of possible new air service opportunities.

#### Socioeconomic Regression Analysis to Estimate Future Growth

Several methodologies were explored for developing the long-term growth forecast of enplaned passengers at the airport. These methodologies included market share analyses, trend analyses, and single and multi-variable socioeconomic regression analyses.

A standard measure of how well each socioeconomic variable explains passenger demand is the regression model's coefficient of determination or r-squared. A result of 100% is the maximum value possible for a coefficient of determination and represents a perfect fit among the variables analyzed. For the purposes of this analysis, a r-squared value of 70% or better was considered adequate. The socioeconomic characteristics used in these analyses are listed in Table 5.9 and Table 5.10. Outputs of the regression analyses are listed in Table 5.11.

1. Market Share: This approach considers how IDA will grow relative to the rest of the industry. IDA's share of total U.S. enplaned passengers has varied significantly during the past ten years. It declined from 0.022% of total U.S. passengers in 2017 down to 0.017% in 2017 before growing to 0.027% in 2020. This approach was eliminated due to the lack of an identifiable trend.

2. Trend Analysis: A trend analysis was conducted as a time series model forecast which involved the extrapolation of existing activity levels. Activity at IDA has experienced years of growth followed by years of decline. While IDA recorded growth in each year between 2016 and 2019, the rate of growth in each year varied significantly—from 0.4% in 2017 to 9.4% in 2018. This approach was eliminated due to the variation in annual growth rates.

3. Single Variable Regression Analysis: A function of regression analysis was used to analyze the relationship between passenger volumes as the dependent variable and socioeconomic trends as independent variables. This approach yielded multiple predictive relationships with r-squared values exceeding 70% and was identified as the most appropriate method.

**Table 5.11: Regression Model Outputs and Implied Growth of Passenger Volumes**

| Dependent Variable | Independent Variable | R-Squared (Times 100) | Passenger Growth (2019–2041 CAGR) |
|---|---|---|---|
| Passenger Volumes | ATA Total Employment | 78.5% | 1.7% |
| | ATA Total Earnings | 76.9% | 1.8% |
| | ATA Gross Regional Product | 80.1% | 2.0% |
| | U.S. Gross Domestic Product | 73.2% | 1.9% |
| | | **Average** | **1.9%** |

Source: Woods and Poole Economics, Inc.; Ricondo & Associates, Inc.

The socioeconomic regression analysis was selected to serve as the baseline forecast approach. These analyses were conducted to identify relationships between IDA passenger demand and socioeconomic variables at the national level and for the IDA air trade area, using historical data from 1994 through 2020.

The forecasts were developed using these regression models that incorporated independent projections of the relevant socioeconomic variables. While all socioeconomic variables were analyzed, the four socioeconomic variables that showed the most correlation with passenger demand at IDA were total employment, total earnings, gross regional product within the ATA, and national gross domestic product. Historical and projected data for these independent variables were obtained from Woods & Poole Economics, Inc. The forecasts resulting from the application of each of these regression results to the projected socioeconomic variables were averaged to develop the baseline passenger forecast.

### b. Cargo Forecast Methodology

The forecast of cargo activity was developed using a socioeconomic regression analysis to evaluate the relationship between total cargo weight being moved at IDA and several local and national socioeconomic variables. Multiple predictive relationships were identified between the socioeconomic variables and total cargo weights. The resulting forecast from each identified relationship was then averaged to develop the average annual growth rate of total cargo weight at IDA. As shown in Table 5.12, cargo by volume is expected to grow at an average of 2.4% for 2021-2041.

**Table 5.12: Regression Model Outputs and Implied Growth of Cargo Volumes**

| Dependent Variable | Independent Variable | R-Squared (Times 100) | Cargo Growth (2021–2041 CAGR) |
|---|---|---|---|
| IDA Cargo Weight | ATA Gross Regional Product | 86.7% | 2.5% |
| | ATA Total Earnings | 82.7% | 2.3% |
| | U.S. Total Per Capita Income | 76.1% | 2.6% |
| | | **Average** | **2.4%** |

Source: Woods & Poole Economics, Inc.; Ricondo & Associates, Inc.

## 5.7. Sources of Data

The following sources of operations and aircraft data were used, in addition to the TAF, in developing the forecast for this airport master plan.

### 5.7.1. Operations Network

The Operations Network, typically referred to as OPSNET, is the FAA's official source of air traffic operations and delay data for the National Airspace System (NAS). Air traffic control (ATC) personnel are required to collect operational data when the tower is open, and this information is reported daily to OPSNET. The report provides a historical account of both itinerant and local arrivals and departures.[17]

The airport traffic control tower (ATCT) collects operational data when the tower is open between the hours of 7 a.m. and 8 p.m. The OPSNET report for IDA was used to help establish an accurate historical account of the number of operations occurring at the airport for the past decade.

### 5.7.2. FAA Traffic Flow Management System Counts

A limitation of OPSNET data is that it does not indicate the specific type of aircraft or model information. One of the best sources of this information is the FAA's Traffic Flow Management System Counts (TFMSC) database. One of the main sources of TFMSC data is the information provided by pilots when they file a flight plan.

This database typically includes all commercial operations because they operate under Instrument Flight Rules (IFR) and are therefore required to file a flight plan. However, it only captures a small portion of general aviation activity because they typically operate under visual flight rules (VFR) and are therefore not required to file a flight plan.[18] Despite this limitation, this data is helpful in identifying general trends in airport activity and provides a good starting point for determining aircraft types for total operations. The TFMSC data for IDA was used to help establish a historical record of the types and classes of aircraft using the airport for the past decade.

### 5.7.3. U.S. Department of Transportation T-100 Data

The Air Carrier Statistics database, also known as the T-100, contains domestic and international airline market and segment data. This report contains carrier, origin, destination, and service class for enplaned passengers as well as freight and mail data for domestic markets. It also includes carrier, origin, destination, aircraft type, available capacity, scheduled departures, departures performed, aircraft hours, and load factors as well as service class for passengers, freight, and mail for domestic non-stop segments. U.S. air carriers report this information to the U.S. Bureau of Transportation Statistics Office of Airline Information on a monthly basis.[19]

This database is frequently used by the aviation industry, the press, and the legislature to produce reports and analyses on air traffic patterns and carrier market shares as well as passenger, freight, and mail cargo flow. The T-100 data for IDA was used to help establish a historical record of the commercial operations and passenger activity levels for the past decade.

#### a. T-100 Data for Idaho Falls Regional Airport

An examination of T-100 data for IDA was taken into consideration when developing the commercial forecasts for passenger aircraft operations and passenger enplanements.

- Enplaned passenger activity at the airport increased at a CAGR of 1.47% from 2012 to 2019.
- In 2012, enplaned passengers increased 7.5% while passenger airline operations declined 8.4% despite United discontinuing service to San Francisco International Airport (SFO) mid-year. This was mainly due to Allegiant's service to Los Angeles International Airport (LAX) and Oakland International Airport (OAK) using a 166-seat McDonnell Douglas MD-83 aircraft which is significantly larger than the 50-seat regional jets used by the other airlines to service the airport at the time.

- In 2013, Allegiant reduced seasonal service to LAX and OAK which resulted in an 8.3% decline in enplaned passengers and an 8.4% decline in aircraft operations.
- In 2014, enplaned passengers grew 13.5% while aircraft operations grew 4.7% despite Delta discontinuing some regional jet flights to Salt Lake City International Airport (SLC). This was due to Frontier adding service to Denver International Airport (DEN) using an Airbus A319 mainline aircraft.
- In 2015, enplaned passengers declined 11.4% and aircraft operations declined 17.2%. Frontier discontinued the service to DEN it introduced the prior year.
- In 2016, enplaned passengers declined 1.2% while aircraft operations grew 0.2%. Delta reduced the number of flights it offered to Minneapolis/St. Paul International Airport (MSP) while also switching to larger regional jet aircraft for its existing flights to SLC.
- In 2017, enplaned passenger volumes grew 2.9% while aircraft operations declined 1.4%. Allegiant increased the number of flights to Phoenix/Mesa Airport (AZA), and Delta reduced capacity by switching to smaller regional jets for some of its flights to SLC.
- In 2018, enplaned passengers grew 6.6% while aircraft operations grew 3.8%. United increased the number of flights to DEN, and Allegiant added flights to AZA.
- In 2019, enplaned passengers grew 10.9% and passenger airline operations grew 3.3%. United increased service to DEN, and Allegiant increased flights to AZA.
- In 2020, enplaned passengers declined 41.5% and aircraft operations declined 23.2% as a result of the COVID-19 pandemic. This included Allegiant pausing its LAX service. However, airlines began restoring capacity at IDA as demand started to recover during the summer.
- In 2021, enplaned passengers grew 115.1% and aircraft operations grew 76.5%. American introduced service to Dallas/Ft. Worth International Airport (DFW) and Phoenix Sky Harbor International Airport (PHX). Alaska introduced service to Seattle/Tacoma International Airport (SEA). Allegiant restored service to LAX and began service to Portland International Airport (PDX).
- The airport's share of total U.S. enplaned passengers decreased from 0.022% in 2011 to 0.019% in 2019. However, the airport saw an increase for 2020 (the latest full year U.S. enplaned passenger data was available) when the airport's share grew to 0.027% as the recovery of passenger activity at the airport outpaced the rest of the country during the COVID-19 pandemic (Figure 5.10).

**Figure 5.10: Market Share of Enplaned Passengers, 2012–2021**


Source: Idaho Falls Regional Airport; U.S. Department of Transportation, T-100, January 2022

## 5.8. Aircraft Operations Forecast

This section presents the forecast for aircraft operations. The projections for commercial service operations, general aviation operations, and military operations are each discussed separately.

### 5.8.1. Commercial Service Operations

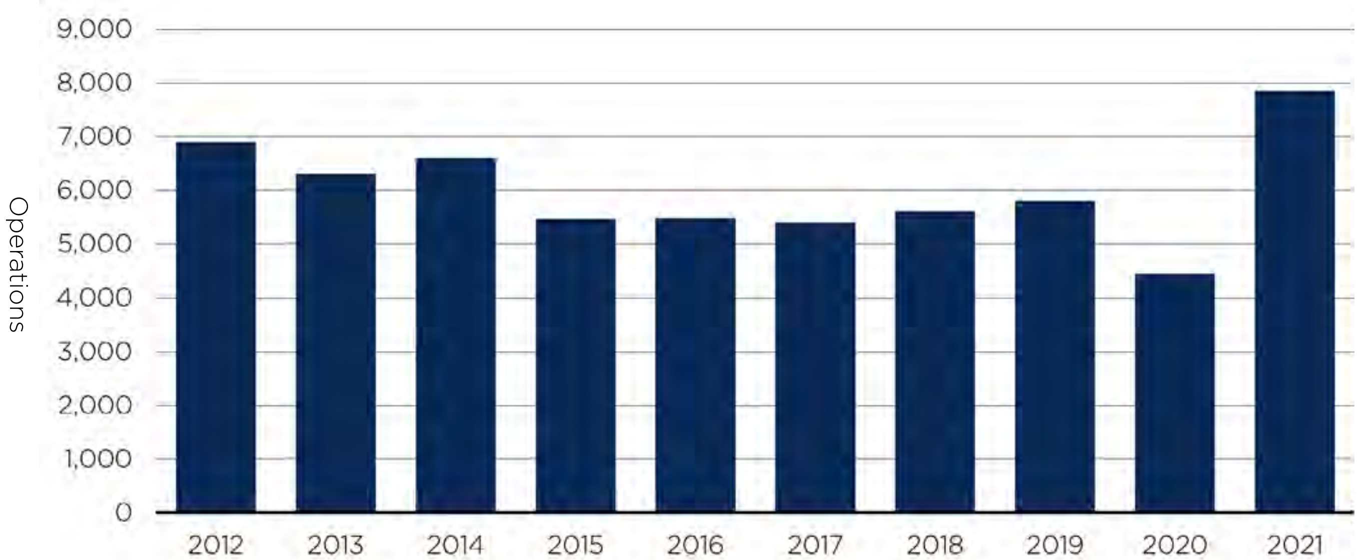
Commercial service operations are influenced by a variety of national and local factors, airline and aviation industry trends, and socioeconomic trends. The forecast for commercial service operations, along with the passenger enplanements forecast, will help determine future requirements for airport facilities—especially those necessary for accommodating passengers.

While 2021 is the base year for the forecast, partial year actual and scheduled data for 2022 were incorporated in the development of these forecasts. Additionally, some comparisons to 2019 activity levels are also included to provide a point of comparison to pre-pandemic activity levels.

#### a. Passenger Aircraft Operations

Figure 5.11 shows historical rates of commercial service operations for 2012-2021 as reported by the U.S. Department of Transportation. This data shows there were 7,856 passenger aircraft operations at the airport in 2021. This was the highest activity level on record for the airport. Overall, passenger aircraft operations grew at a CAGR of 1.46% for 2012–2021. This growth was mainly the result of new air service added in 2021.

Figure 5.11: Passenger Airline Operations, 2012–2021

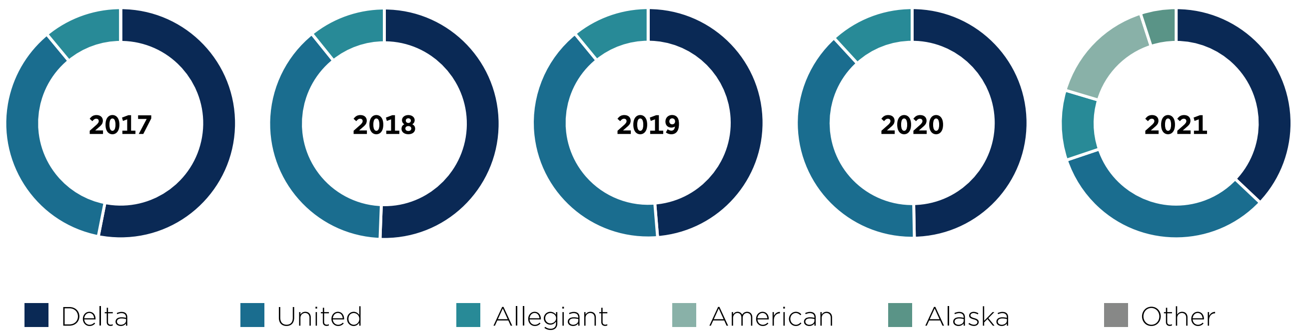



Source: Idaho Falls Regional Airport; U.S. Department of Transportation, T-100

#### b. Passenger Airline Service Levels

As of January 2022, five passenger airlines operate at the airport; Alaska Airlines, Allegiant Air, American Airlines, Delta Airlines, and United Airlines. As shown in Figure 5.12, Delta has maintained the largest share of operations at the airport from 2017 to 2021. However, the airline's share of the market has declined from 53.1% in 2017 to 37.1% in 2021 as a result of growth by existing and new entrant airlines. United and Allegiant both increased their shares between 2017 and 2020 but also saw declines in 2021 when American Airlines and Alaska Airlines began providing service at IDA. While Allegiant operated approximately 10% of passenger airline operations in 2021, the airline's share of enplaned passengers was 21% because of the airline's use of Airbus A319 and A320 aircraft which have a larger capacity than aircraft used by other airlines.

**Figure 5.12: Historical Share of Aircraft Operations by Airline, 2017–2021**

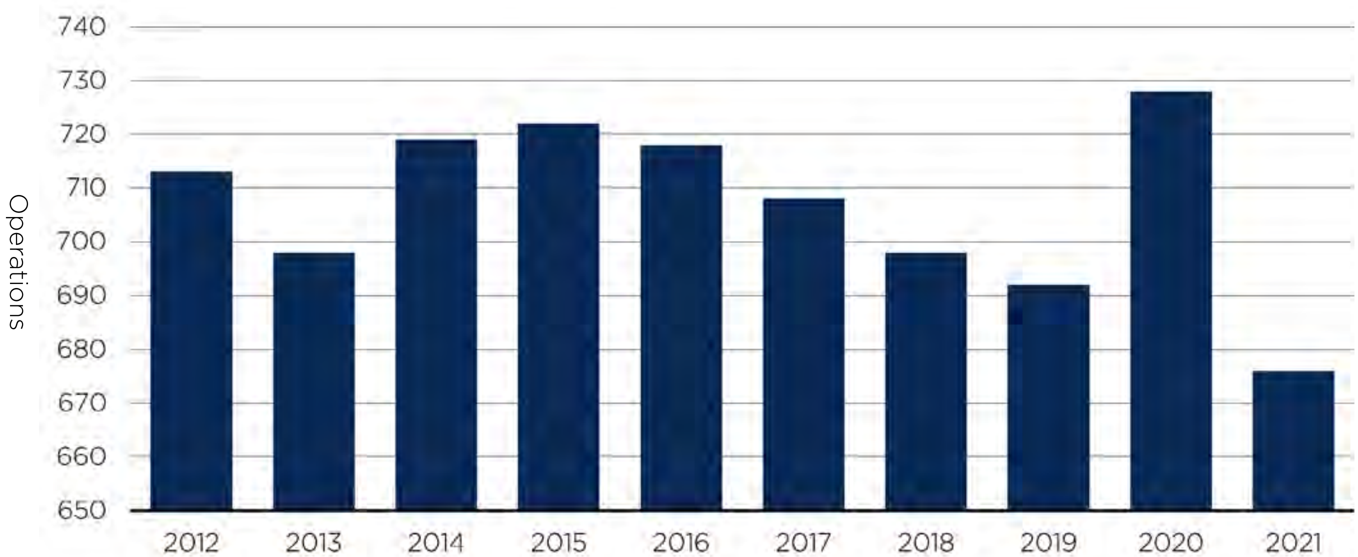



Source: U.S. Department of Transportation, T-100

### c. Air-Cargo Operations

Figure 5.13 shows historical rates of all-cargo aircraft operations for 2012–2021. All-cargo operations have remained relatively steady throughout the historical period and have ranged from a low of 676 operations in 2021 to a high of 728 operations in 2020. Recent growth in all-cargo operations has been supported in part by the nationwide increase in e-commerce activity. Overall, all-cargo operations declined at a CAGR of -0.59% for 2012–2021.

**Figure 5.13: All-Cargo Operations, 2012–2021**




Note: Cargo aircraft operations based on airport records (2018 through 2021), and airport records and U.S. Department of Transportation data (2012 through 2017)
Source: Idaho Falls Regional Airport; U.S. Department of Transportation, T-100; FAA, OPSNET

### d. All-Cargo Service Levels

As of January 2022, three all-cargo airlines operate at the airport; Ameriflight, Corporate Air, and Empire. These cargo operators use single-engine or twin-engine propeller aircraft rather than jet aircraft.

### e. Commercial Service Operations Forecast Scenarios

A series of forecast scenarios were prepared for both passenger airline and all-cargo operations and then compared to determine the most suitable forecast.

#### Passenger Airline Forecast Scenarios

- Scenario #1: As previously discussed, this forecast uses a bottom-up methodology for the short-term (2022–2025) and a top-down approach for the long term (2026–2041) using a socioeconomic regression analysis. As noted in Table 5.11, the variables used for this analysis included total employment, total earnings, and gross regional product for the ATA, along with the national gross domestic product, which were averaged to determine the annual growth rate. This forecast shows passenger aircraft operations increasing at a CAGR of 0.38%.
- Scenario #2: A forecast that assumes airlines will introduce additional flights to new markets (e.g., Portland and Chicago-O'Hare) and new entrant airlines will begin service at IDA as a result of the increased demand and socioeconomic growth shown in Scenario #1. This forecast shows passenger aircraft operations increasing at a CAGR of 0.99%.

#### All-Cargo Forecast Scenarios

- Scenario #1: A forecast that uses a socioeconomic regression analysis to predict future activity levels. As previously discussed, the variables used for this analysis are total earnings and the gross regional product for the ATA, along with per capita income for the U.S., which were averaged to determine the annual growth rate. This forecast shows all-cargo operations increasing at a CAGR of 1.75%.
- Scenario #2: A forecast that assumes FedEx, UPS, or other cargo carrier will introduce new scheduled service beginning in 2022 as a result of the increased demand and socioeconomic growth shown in Scenario #1. This forecast shows all-cargo operations increasing at a CAGR of 2.33%.

As shown in Table 5.13, the preferred forecast is Scenario #2 for both passenger and cargo operations.

**Table 5.13: Commercial Service Operations Forecast Scenarios**

| Passenger Airline Operations | | |
|---|---|---|
| Year | Scenario #1 | Scenario #2 |
| 2021 | 7,856 | 7,856 |
| 2026 | 8,323 | 9,468 |
| 2031 | 8,358 | 9,484 |
| 2041 | 8,476 | 9,570 |
| CAGR | Scenario #1 | Scenario #2 |
| 2021-2041 | 0.38% | 0.99% |

| All-Cargo Operations | | |
|---|---|---|
| Year | Scenario #1 | Scenario #2 |
| 2021 | 676 | 676 |
| 2026 | 748 | 843 |
| 2031 | 817 | 918 |
| 2041 | 957 | 1,071 |
| CAGR | Scenario #1 | Scenario #2 |
| 2021-2041 | 1.75% | 2.33% |

Source: Idaho Falls Regional Airport; U.S. Department of Transportation, T-100; Ricondo & Associates, Inc.

### f. Commercial Service Operations Forecast Assumptions

These commercial service forecasts are based on several assumptions of national aviation trends as well as national and regional economic conditions.

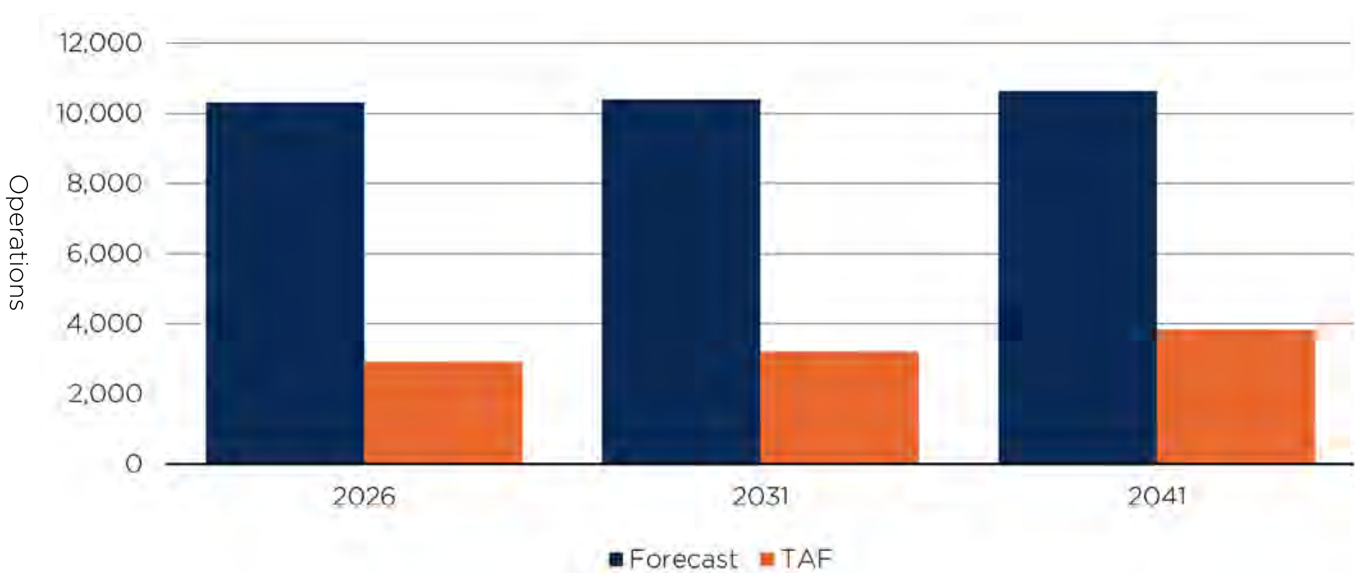
- IDA will continue to primarily serve O&D passengers and no airlines will develop a base of operations at IDA with the goal of serving a combination of O&D and connecting passengers.
- Competition with other airports in or near the IDA ATA is expected to remain stable with no structural advantages or disadvantages occurring relative to other regional airports.
- Additional airline consolidations and mergers that may occur during the forecast period are not likely to negatively affect the number of enplaned passengers at IDA. New airline alliances, should they develop, would be restricted to code-sharing and loyalty program reciprocity and would not reduce airline competition at IDA.
- Similar to the FAA's nationwide forecasts, it was assumed that no terrorist incidents would occur during the forecast period that would have significant negative and prolonged effects on demand at IDA.
- Economic disturbances will occur during the forecast period which will cause year-to-year variations in airline traffic. However, traffic at IDA is expected to increase for the long term.

Many of the factors influencing aviation demand cannot be readily quantified, and any forecast is subject to uncertainties. As a result, the forecast process should not be viewed as precise. Actual airline traffic at IDA may differ from the forecasts presented herein because events and circumstances may not occur as expected and these differences may be significant.

### g. Commercial Service Operations Forecast Evaluation

Figure 5.14 shows a comparison of these two forecast scenarios. The preferred forecast for commercial service operations differs from the TAF by 251.55% for the five-year forecast, 223.34% for the ten-year forecast, and 176.89% for the 20-year forecast.

**Figure 5.14: Commercial Service Operations Forecast Comparison**




Source: FAA, TAF; Ricondo & Associates, Inc.

### 5.8.2. General Aviation Operations

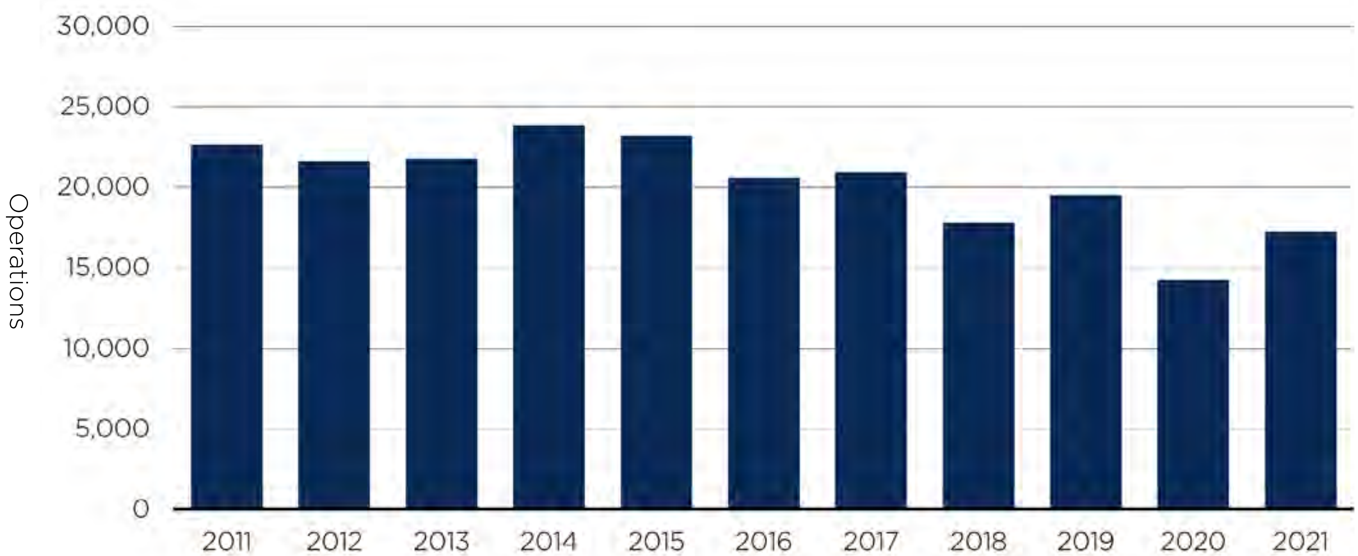
General aviation includes all operations that are not scheduled commercial service or military operations. This includes charter flights, air taxi, emergency services, and recreational operations. The forecast for general aviation operations, along with the based aircraft forecast, will aid in planning and developing the areas of the airport that cater to GA customers.

This forecast uses OPSNET data as the baseline for both itinerant and local GA operations. A review of historical TAF and OPSNET data showed that these reports reflected nearly identical numbers of operations for IDA, but the OPSNET report included more recent data than the TAF. At the time of this forecast, the OPSNET report included data through 2021 while the TAF only included data through 2019. However, it is important to understand that any operations occurring when the tower is closed are not accounted for in the OPSNET data.

#### a. Historical Itinerant General Aviation Operations

Itinerant operations are all operations that originate or terminate at different airports. Figure 5.15 shows historical rates of itinerant general aviation operations for 2011–2021 as reported by OPSNET. This data shows the CAGR for itinerant GA operations was -2.70% for 2011 to 2021.

**Figure 5.15: Itinerant General Aviation Operations, 2011–2021**

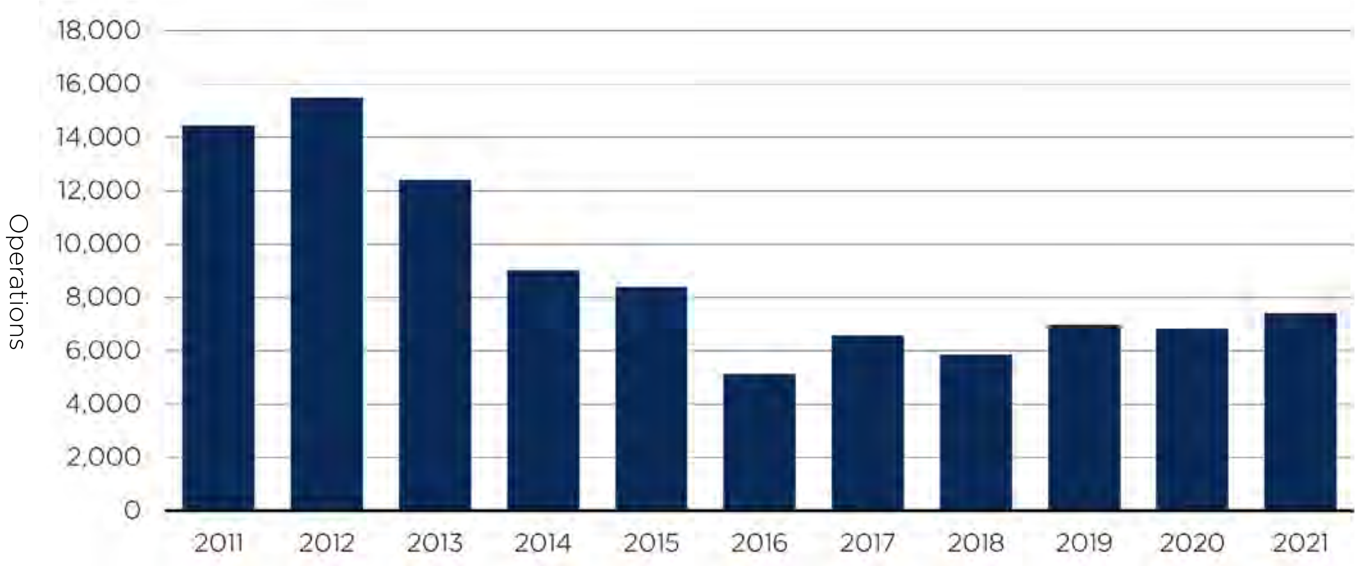



Source: FAA, OPSNET

### b. Historical Local General Aviation Operations

The FAA defines local GA operations as those operating in the local traffic pattern, within the airport line of sight, are known to be departing for or arriving from a flight in the local practice area, or those that execute simulated instrument approaches or low passes at the airport. Figure 5.16 shows historical rates of local general aviation operations for 2011–2021 as reported by OPSNET. This data shows the CAGR for local GA operations was -6.46% for 2011 to 2021.

**Figure 5.16: Local General Aviation Operations, 2011–2021**




Source: FAA, OPSNET

### c. General Aviation Operations Forecast Scenarios

Due to the weak statistical correlation between local general aviation operations and the socioeconomic profile of the IDA MSA, a regression analysis was not a suitable method for forecasting operations. Instead, a series of scenarios were prepared and then compared to the TAF to determine the most suitable forecast.

- Scenario #1: The FAA's TAF forecast for IDA, with a CAGR of -0.26% for itinerant GA and 0.34% for local GA, used as the base case.
- Scenario #2: A forecast that assumes the ten-year OPSNET trend, with a CAGR of -1.00% for itinerant GA operations and -5.98% for local GA operations, will continue through 2041.
- Scenario #3: A forecast that assumes itinerant GA operations would follow the FAA's Aerospace projections with a CAGR of 0.90%.[20]
- Scenario #4: A forecast that assumes local GA operations will continue to follow the ten-year trend for operations per based aircraft (OPBA) with a CAGR of 0.54%. The ten-year historical median of 50 OPBA was applied to the based aircraft forecast to determine the forecast for local GA operations.

As shown in Table 5.14, the preferred forecast for itinerant GA operations is Scenario #3 and the preferred forecast for local GA operations is Scenario #4.

**Table 5.14: General Aviation Operations Forecast Scenarios**

| Itinerant General Aviation Operations | | | |
|---|---|---|---|
| **Year** | **Scenario #1** | **Scenario #2** | **Scenario #3** |
| 2021 | 18,975 | 17,228 | 17,228 |
| 2026 | 17,141 | 15,985 | 18,017 |
| 2031 | 17,420 | 15,120 | 18,843 |
| 2041 | 18,017 | 14,100 | 20,610 |
| **CAGR** | **Scenario #1** | **Scenario #2** | **Scenario #3** |
| 2021-2041 | -0.26% | -1.00 | 0.90% |
| **Difference From TAF** | **Scenario #1** | **Scenario #2** | **Scenario #3** |
| | 0% | -21.74% | 14.39% |

| Local General Aviation Operations | | | |
|---|---|---|---|
| **Year** | **Scenario #1** | **Scenario #2** | **Scenario #4** |
| 2021 | 6,825 | 7,402 | 7,402 |
| 2026 | 6,945 | 5,459 | 7,604 |
| 2031 | 7,065 | 4,006 | 7,812 |
| 2041 | 7,312 | 2,157 | 8,244 |
| **CAGR** | **Scenario #1** | **Scenario #2** | **Scenario #4** |
| 2021-2041 | 0.34% | -5.98% | 0.54% |
| **Difference From TAF** | **Scenario #1** | **Scenario #2** | **Scenario #4** |
| | 0% | -70.49% | 12.78% |

Source: FAA, TAF; Ardurra.

### d. General Aviation Operations Forecast Evaluation

The FAA requires the forecast for non-hub commercial service airports to be within 10% of the TAF for the five-year forecast and within 15% for the ten-year forecast. Figure 5.17 shows the airport master plan forecast for general aviation operations alongside the TAF forecast.

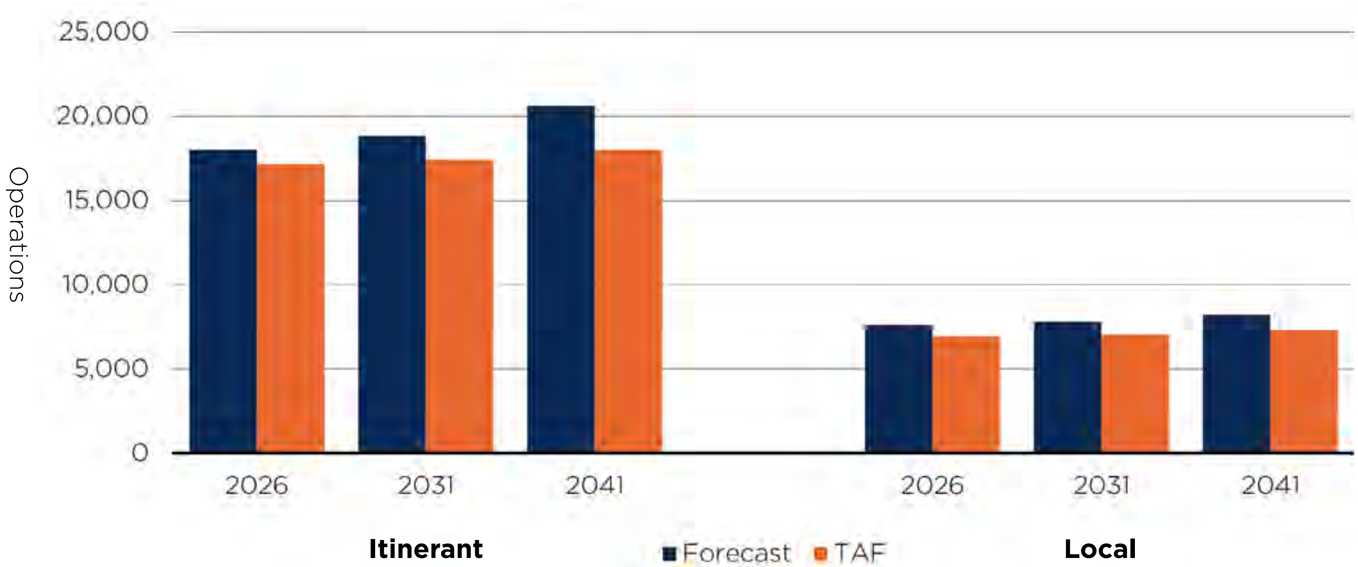
Itinerant GA operations have fluctuated drastically during the decade in response to changes in the national economy, shifting aviation trends, and the COVID-19 pandemic. These events have caused the ten-year OPSNET trend to be negative. However, a negative growth rate is not a reasonable application to determine future levels. Especially with the IDA MSA having such a healthy economy and growth is forecasted in every socioeconomic sector for the MSA. Therefore, the OPSNET ten-year trend scenario was eliminated.

The FAA Aerospace Forecast is based on the assumption that an overall economic recovery will enable the industry to recover to pre-pandemic levels.[21] With economic recovery evident in the region, it was assumed the FAA Aerospace Forecast's 0.90% growth rate was a reasonable application for itinerant operations. Additionally, the forecast for itinerant GA operations differs from the TAF by 5.11% for the five-year forecast, by 8.17% for the ten-year forecast, and by 14.39% for the 20-year forecast which means this forecast is considered to be consistent with the TAF.

The preferred forecast for local GA operations is the OPBA scenario with a growth rate of 0.54%. This forecast differs from the TAF by 9.49% for the five-year forecast, 10.57% for the ten-year forecast, and 12.75% for the 20-year forecast. This forecast is considered to be consistent with the TAF.

Overall, the forecast for general aviation operations differs from the TAF by 6.37% for the five-year forecast, 8.86% for the ten-year forecast, and 13.92% for the 20-year forecast. The overall CAGR for GA operations is approximately 0.79% for the 20-year planning period.

**Figure 5.17: General Aviation Operations Forecast Comparison**




Source: FAA, TAF; Ardurra.

### 5.8.3. Military Operations

Figure 5.18 shows historical rates of both itinerant and local military operations for 2011–2021 as reported by OPSNET. As previously mentioned, military operations tend to fluctuate as the Department of Defense alters its operational requirements. The CAGR was 3.12% for itinerant military operations, 28.21% for local military operations, and an overall CAGR of 7.40% for 2011 to 2021.

**Figure 5.18: Military Operations, 2011–2021**


Source: FAA, TAF

#### a. Historical Itinerant Military Operations Forecast

As previously mentioned, military operations are typically forecast at existing levels unless there is specific knowledge of an upcoming change that would affect future activity levels at the airport. While Idaho Falls Regional Airport supports frequent itinerant military operations, they are somewhat unpredictable, and there are no reliable indicators suggesting military operations will increase during the 20-year planning period. As a result, the TAF is the selected forecast (Table 5.15).

**Table 5.15: Itinerant Military Operations Forecast Scenarios**

| Year | TAF | Itinerant Military Forecast |
|---|---|---|
| 2021 | 259 | 259 |
| 2026 | 286 | 286 |
| 2031 | 319 | 319 |
| 2041 | 389 | 389 |
| **CAGR** | **TAF** | **Itinerant Military Forecast** |
| 2021-2041 | 2.05% | 2.05% |
| **Difference From TAF** | **TAF** | **Itinerant Military Forecast** |
| | 0% | 0% |

Source: FAA, TAF

### b. Historical Local Military Operations Forecast

As with itinerant military operations, local military operations are also typically forecast at existing levels unless there is specific knowledge of an upcoming change that would affect future activity levels at the airport. There are no reliable indicators that suggest local military operations will increase during the 20-year planning period. As a result, the TAF is the selected forecast (Table 5.16).

**Table 5.16: Local Military Operations Forecast Scenarios**

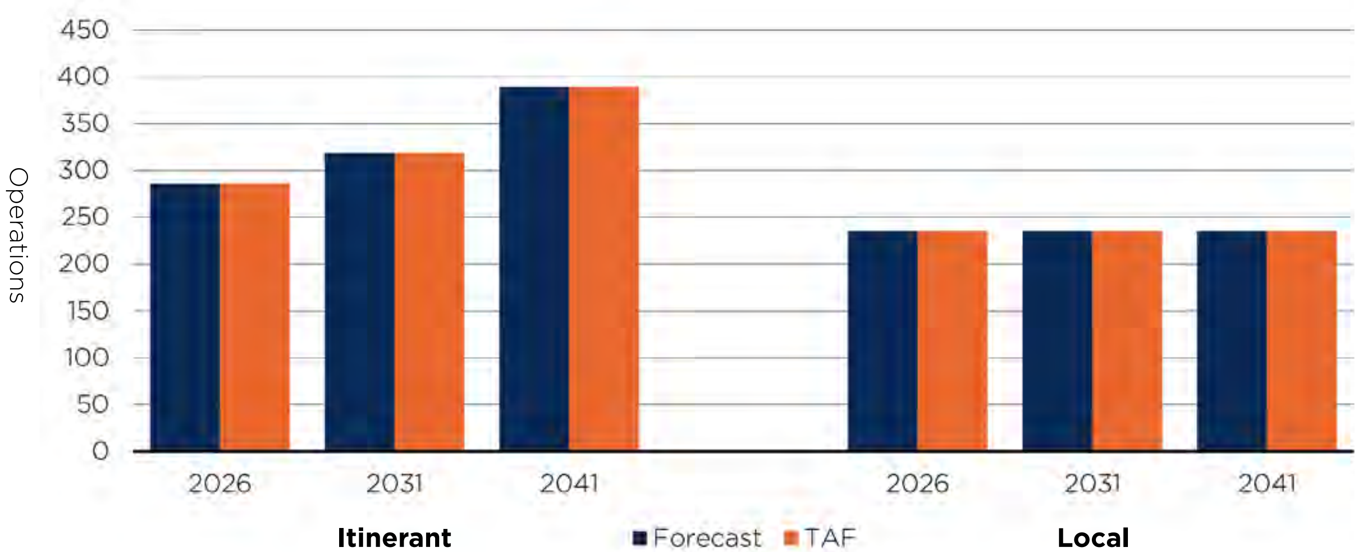
| Year | TAF | Itinerant Military Forecast |
|---|---|---|
| 2021 | 235 | 235 |
| 2026 | 235 | 235 |
| 2031 | 235 | 235 |
| 2041 | 235 | 235 |
| **CAGR** | **TAF** | **Itinerant Military Forecast** |
| 2021-2041 | 0% | 0% |
| **Difference From TAF** | **TAF** | **Itinerant Military Forecast** |
| | 0% | 0% |

Source: FAA, TAF

### c. Military Operations Forecast Evaluation

The overall forecast for both local and itinerant military operations is presented in Figure 5.19. As shown, this forecast is consistent with the TAF.

**Figure 5.19: Military Operations Forecast Comparison**




Source: FAA, TAF; Ardurra.

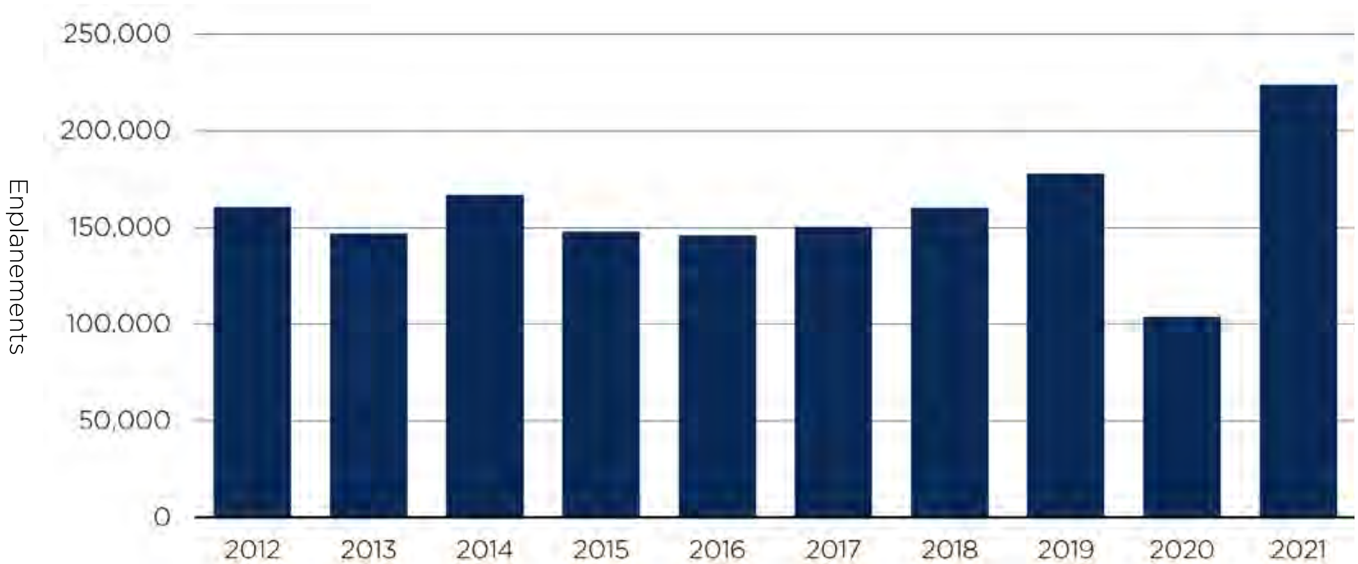
## 5.9. Passenger Enplanements Forecast

This section presents the forecast for passenger enplanements. As previously discussed, the forecast for passenger enplanements, along with the forecast for commercial service operations, will help determine future requirements for airport facilities necessary for accommodating passengers.

### 5.9.1. Historical Passenger Enplanements

Figure 5.20 shows historical passenger activity levels for 2012–2021, as reported by the U.S. Department of Transportation. This data shows there were 223,741 enplaned passengers at the airport in 2021. This was the highest activity level on record for the airport. Overall, the CAGR for passenger enplanements was 3.76% for 2012–2021.

**Figure 5.20: Passenger Enplanements, 2012–2021**

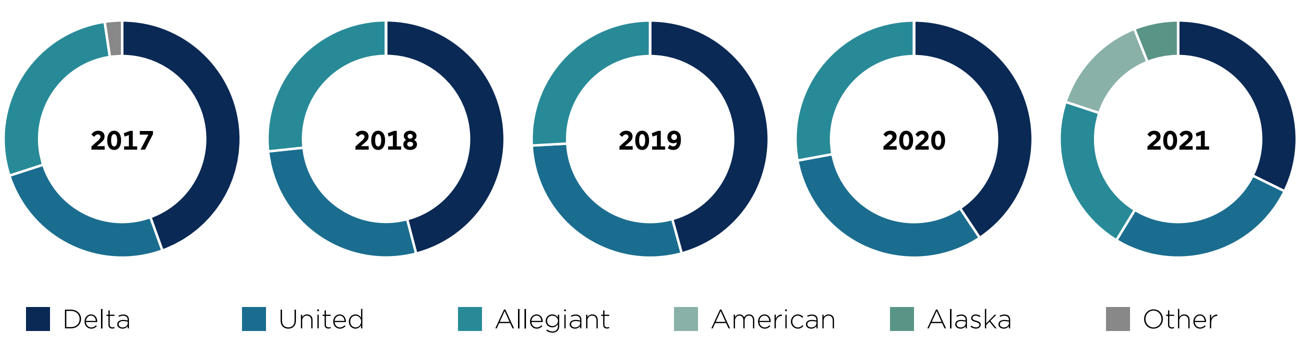



Source: U.S. Department of Transportation, T-100, January 2022

### 5.9.2. Passenger Service Levels

As previously discussed, five passenger airlines currently operate at the airport; Alaska Airlines, Allegiant Air, American Airlines, Delta Airlines, and United Airlines. As shown in Figure 5.21, Delta maintained the largest market share of enplaned passengers from 2017 to 2021 despite losing some market shares to United and Allegiant as well as the initiation of service by American and Alaska in 2021.

**Figure 5.21: Market Share of Enplaned Passengers by Airline, 2017–2021**




Source: Idaho Falls Regional Airport; U.S. Department of Transportation, T-100, January 2022

### 5.9.3. Passenger Enplanements Forecast Scenarios

Similar to the forecast for commercial service operations, a series of scenarios were prepared for the forecast of enplaned passengers.

- Scenario #1: As previously discussed, this forecast uses a bottom-up methodology for the short-term (2022–2025) and a top-down approach for the long term (2026–2041) using a socioeconomic regression analysis to predict future growth. As noted in Table 5.12, the variables used for this analysis included total employment, total earnings, and gross regional product for the ATA, along with the national gross domestic product, which were averaged to determine the annual growth rate. This forecast shows enplaned passengers growing a CAGR of 0.97% for 2021–2041.

- Scenario #2: This forecast assumes IDA will continue to increase its passenger retention rate within the ATA through 2024 as a result of the increased demand and socioeconomic growth shown in Scenario #1 as well as the greater seat capacity allocated to IDA by the airlines, increased competition from added service resulting in reduced airfares, and population migration patterns occurring in the region making it a more convenient and economical choice for air travel. This forecast shows enplaned passengers growing at a CAGR of 1.90% for 2021–2041.

As shown in Table 5.17, the preferred forecast for itinerant GA operations is Scenario #2.

**Table 5.17: Passenger Enplanement Forecast Scenarios**

| Scenario #1 | | | | |
|---|---|---|---|---|
| **Year** | **Passengers** | **Departing Seats** | **Load Factor** | **Seats/Departure** |
| 2021 | 223,741 | 305,282 | 73% | 77.7 |
| 2026 | 240,871 | 322,519 | 75% | 77.5 |
| 2031 | 250,313 | 325,973 | 77% | 78.0 |
| 2041 | 271,189 | 334,801 | 81% | 79.0 |
| **CAGR** | **Passengers** | **Departing Seats** | **Load Factor** | **Seats/Departure** |
| 2021-2041 | 0.97% | 0.46% | 0.52% | 0.08% |

| Scenario #2 | | | | |
|---|---|---|---|---|
| **Year** | **Passengers** | **Departing Seats** | **Load Factor** | **Seats/Departure** |
| 2021 | 223,741 | 305,282 | 73% | 77.7 |
| 2026 | 289,508 | 372,081 | 78% | 78.6 |
| 2031 | 300,869 | 377,477 | 80% | 79.6 |
| 2041 | 326,041 | 390,468 | 84% | 81.6 |
| **CAGR** | **Passengers** | **Departing Seats** | **Load Factor** | **Seats/Departure** |
| 2021-2041 | 1.90% | 1.24% | 0.70% | 0.25% |

Source: Idaho Falls Regional Airport; U.S. Department of Transportation, T-100; Ricondo & Associates, Inc.

### 5.9.4. Passenger Enplanement Forecast Assumptions

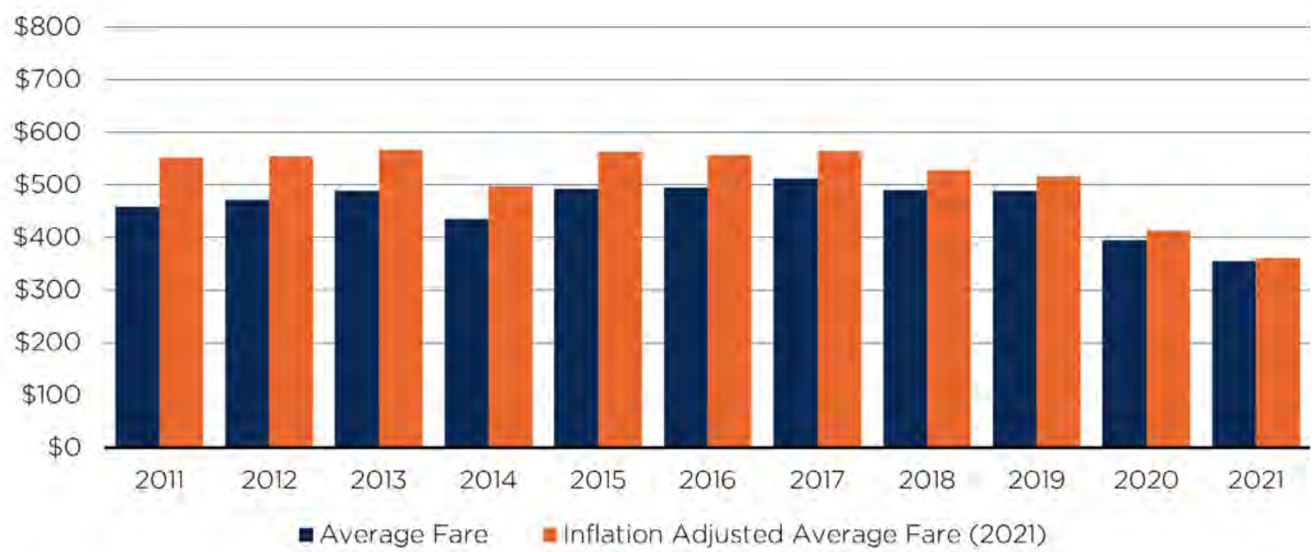
**a.** Scenario #1:

- At the onset of the pandemic, airlines reallocated larger regional jets and small narrowbody aircraft to destinations that were experiencing increased demand but were previously served by 50-seat regional jets. Some of these flights are expected to return to smaller aircraft as the rest of the industry returns to pre-pandemic levels of activity. As a result, the average aircraft size will decline slightly through 2024 but will remain higher than historic levels.
- Airlines are expected to retire their 50-seat regional jets by 2030 and will switch to using larger regional jets and narrowbody mainline aircraft to service IDA.
- Overall, the industry-wide trend of switching to aircraft with a higher seating capacity is expected to continue throughout the forecast period, and an average of 79 seats per departure is forecast by 2041.

**b.** Scenario #2:

- Increased retention is expected as a result of greater seat capacity allocated to IDA by the airlines, increased competition from added service resulting in reduced airfares, and population migration patterns occurring in the region making it a more convenient and economical choice for air travel. Figure 5.22 illustrates the decrease in average fares at IDA.

**Figure 5.22: Average Fares at IDA, 2011–2021**




Source: Bureau of Transportation Statistics, Average Domestic Airline Itinerary Fares

- Robust growth is expected in 2022 as a result of new services and new flights initiated in mid-2021 once they have been operating for the entire year.
- IDA is expected to retain an additional 20% of passengers from SLC and BOI through 2024 due to the additional flights and nonstop routes offered at the airport.
- Demand is expected to grow as a result of socioeconomic growth. As a result, airlines will offer additional flights to new markets (e.g., Portland [PDX] and Chicago-O'Hare [ORD]), and new entrant airlines will begin service at IDA.

### c. Additional Assumptions

Both forecast scenarios are based on several assumptions of national aviation trends as well as national and regional economic conditions.

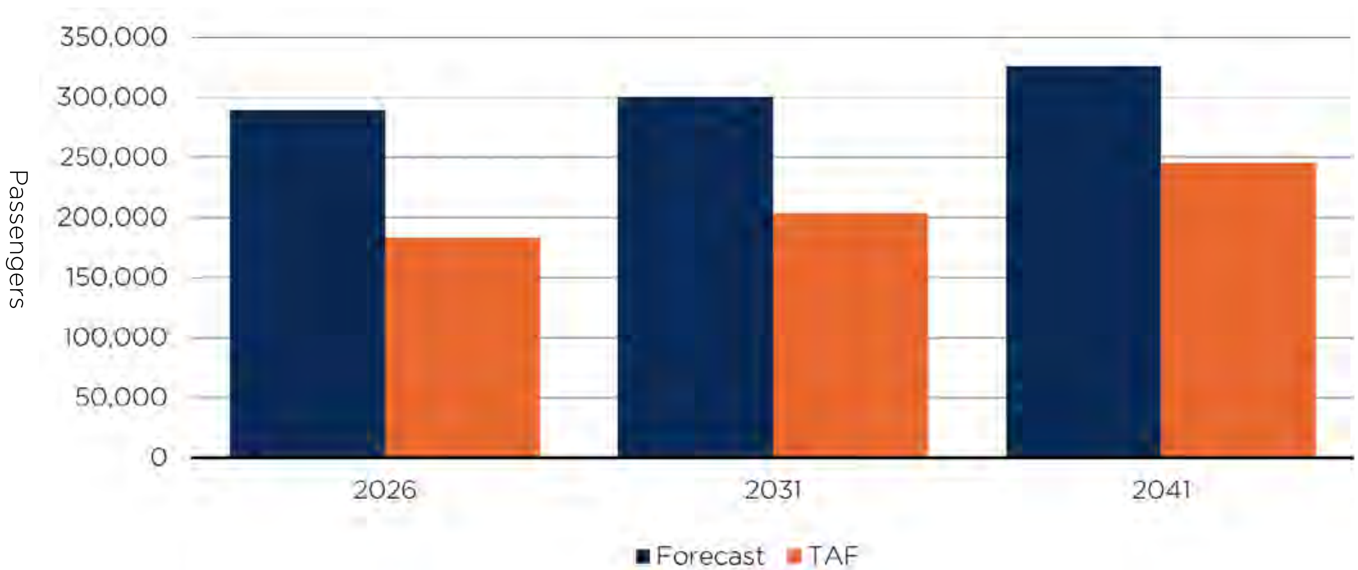
- IDA will continue to primarily serve O&D passengers and no airlines will develop a base of operations at IDA with the goal of serving a combination of O&D and connecting passengers.
- Competition with other airports in or near the IDA ATA is expected to remain stable with no structural advantages or disadvantages occurring relative to other regional airports.
- Additional airline consolidations and mergers that may occur during the forecast period are not likely to negatively affect the number of enplaned passengers at IDA. New airline alliances, should they develop, would be restricted to code-sharing and loyalty program reciprocity and would not reduce airline competition at IDA.
- Similar to the FAA's nationwide forecasts, it was assumed that no terrorist incidents would occur during the forecast period that would have significant negative and prolonged effects on demand at IDA.
- Economic disturbances will occur during the forecast period which will cause year-to-year variations in airline traffic. However, traffic at IDA is expected to increase for the long term.

Many of the factors influencing aviation demand cannot be readily quantified, and any forecast is subject to uncertainties. As a result, the forecast process should not be viewed as precise. Actual airline traffic at IDA may differ from the forecasts presented herein because events and circumstances may not occur as expected and these differences may be significant.

### 5.9.5. Passenger Enplanements Forecast Evaluation

The FAA requires the forecast for non-hub commercial service airports to be within 10% of the TAF for the five-year forecast and within 15% for the ten-year forecast. The preferred forecast for passenger enplanements, which is shown alongside the TAF forecast in Figure 5.23, differs substantially from the TAF and exceeds these thresholds. Overall, the forecast for enplaned passengers differs from the TAF by 57.65% for the five-year forecast, 47.73% for the ten-year forecast, and 32.91% for the 20-year forecast.

**Figure 5.23: Passenger Enplanement Forecast Comparison**

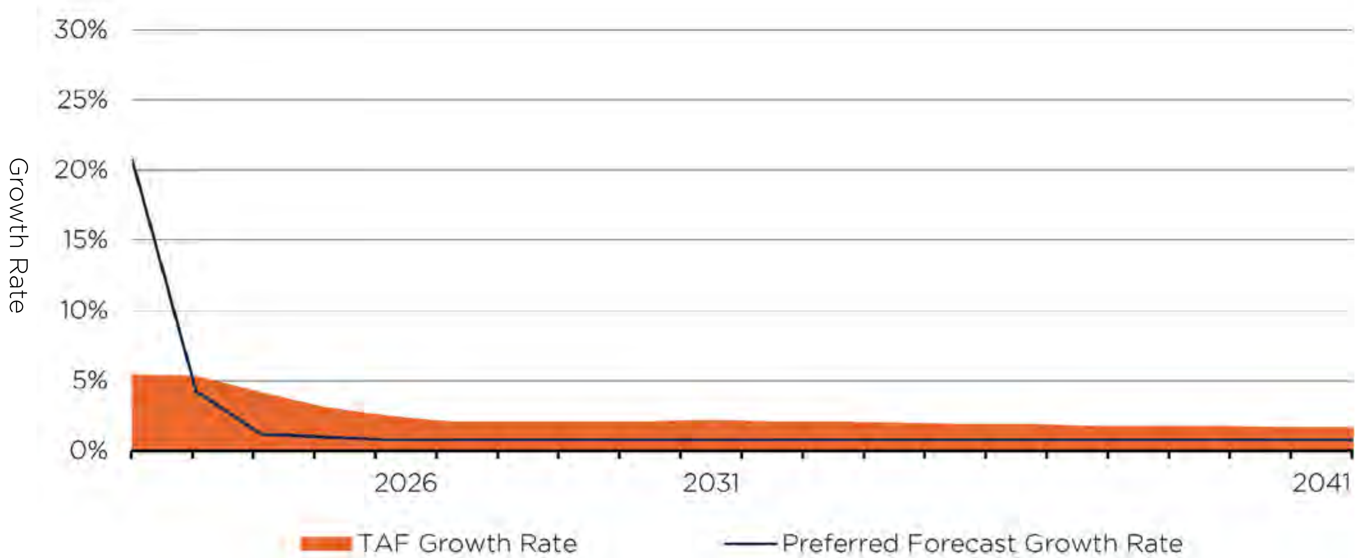



Source: U.S. Department of Transportation, T-100; FAA, TAF, May 2021; Ricondo & Associates, Inc.

This difference is due, in part, to the preferred forecast including nonrevenue passengers while the TAF excludes nonrevenue passengers. Additionally, the preferred forecast is based on a calendar year while the TAF is based on the federal government's fiscal year (i.e., October 1 through September 30). Furthermore, the preferred forecast, which uses 2021 as the base year, uses actual data from 2021 while the TAF, which was published May 2021, uses estimates for 2021. The airport reported approximately 223,741 enplaned passengers in 2021 while the TAF shows an estimated 149,954 enplaned passengers; not nearly enough to account for the significant growth experienced during the entirety of 2021.

While the near-term projections differ substantially for the forecast period, the sponsor's preferred forecast actually reflects a lower growth rate than TAF (Figure 5.24). The preferred forecast indicates an overall CAGR for enplaned passengers of approximately 1.90% for the 20-year planning period while the TAF indicates a CAGR of approximately 2.49%.

**Figure 5.24: Passenger Enplanement Forecast and TAF Growth Rates**




Source: U.S. Department of Transportation, T-100; FAA 2020 TAF; Ricondo & Associates, Inc.

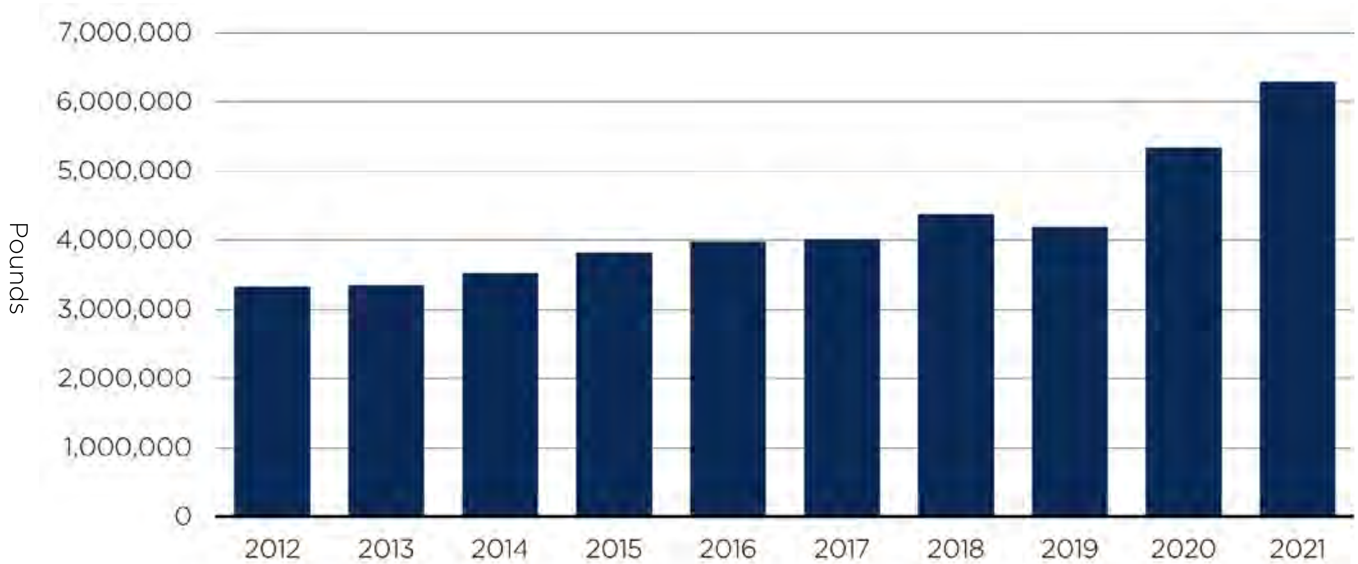
## 5.10. Air Cargo by Volume Forecast

This section presents the forecast for cargo by volume. The methodologies used to develop these projections are discussed in 5.6.5. Forecasting Methodology and Approach Used. The forecast for air cargo by volume will help determine if the cargo facilities at IDA are sufficient to handle cargo volumes throughout the forecast period.

### 5.10.1. Historical Air Cargo by Volume

Figure 5.25 shows historical rates of cargo by volume for 2012–2021. Overall, the CAGR for cargo by volume was 7.32% for 2012–2021. This growth has been supported, in part, by the nationwide increase in e-commerce activity.

**Figure 5.25: Air Cargo by Volume, 2012–2021**




Source: U.S. Department of Transportation, T-100, November 2021; Ricondo & Associates, Inc.

### 5.10.2. Air Cargo by Volume Forecast Scenarios

A series of scenarios were prepared and then compared to determine the most suitable forecast.

- Scenario #1: A forecast that uses a socioeconomic regression analysis. As previously discussed, the variables used for this analysis are total earnings and the gross regional product for the ATA, along with per capita income for the U.S., which were averaged to determine the annual growth rate of 2.4%.
- Scenario #2: A forecast that assumes FedEx, UPS, or another cargo carrier will introduce new scheduled service using a B757F aircraft beginning in 2022 as a result of the increased demand and socioeconomic growth shown in Scenario #1. This forecast is based on other markets with similar levels of B757F activity.

As shown in Table 5.18, the preferred forecast is Scenario #2.

**Table 5.18: Air Cargo by Volume Forecast Scenarios**

| Air Cargo Volumes | | |
|---|---|---|
| **Year** | **Scenario #1** | **Scenario #2** |
| 2021 | 6,288,882 | 6,288,882 |
| 2026 | 7,198,948 | 9,952,995 |
| 2031 | 8,142,017 | 11,072,550 |
| 2041 | 10,170,069 | 13,488,226 |
| **CAGR** | **Scenario #1** | **Scenario #2** |
| 2021-2041 | 2.4% | 3.89% |

Source: U.S. Department of Transportation, T-100; Ricondo & Associates, Inc.

### 5.10.3. Air Cargo by Volume Forecast Assumptions

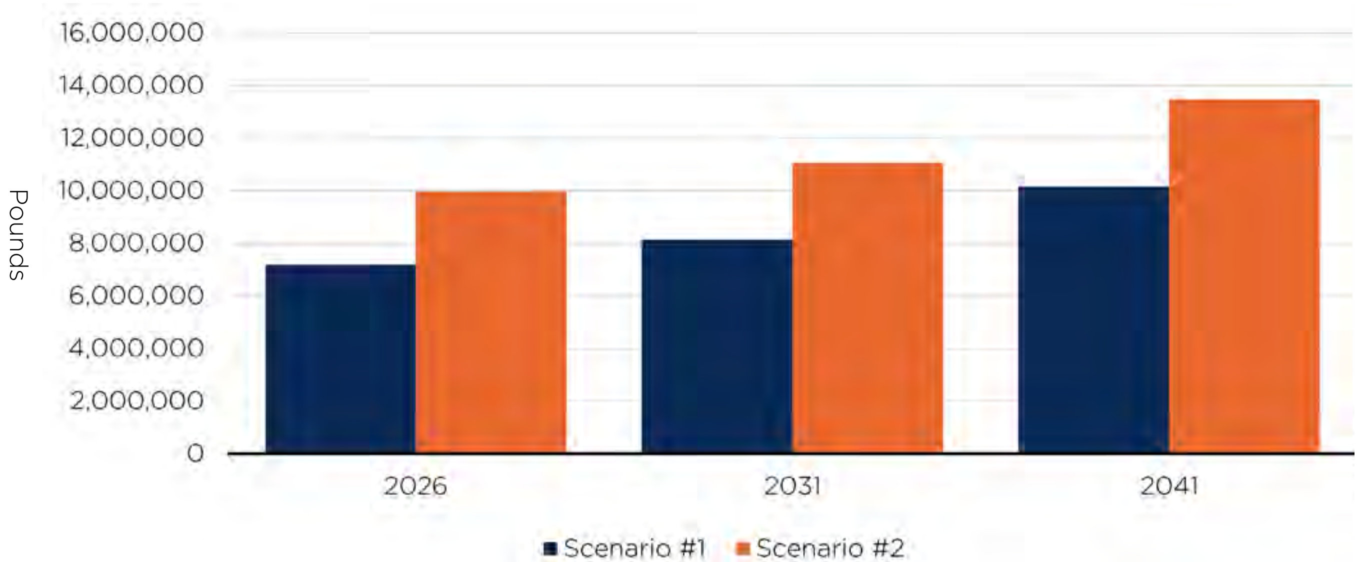
- Scenario #1: This forecast is based on the assumption that the average carrying capacity of all-cargo aircraft serving the airport would increase during the forecast period. Cargo is currently carried by a combination of single-engine and multi-engine turboprop aircraft. Operations by multi-engine turboprop aircraft are expected to increase during the forecast period; specifically the ATR 72-600F operated by Empire Air (a FedEx feeder airline). This forecast does not assume regular jet aircraft cargo service will occur at IDA during the forecast period.

- Scenario #2: This forecast assumes the new service will supplement rather than replace the existing cargo feeder service because it will serve peak-period demand. The new service is assumed to operate three to four times weekly during the three peak cargo months of the year to accommodate increased demand in eastern Idaho.

### 5.10.4. Air Cargo by Volume Forecast Evaluation

Figure 5.26 shows a comparison of these two forecast scenarios for cargo by volume.

**Figure 5.26: Comparison of Air Cargo by Volume Forecasts**

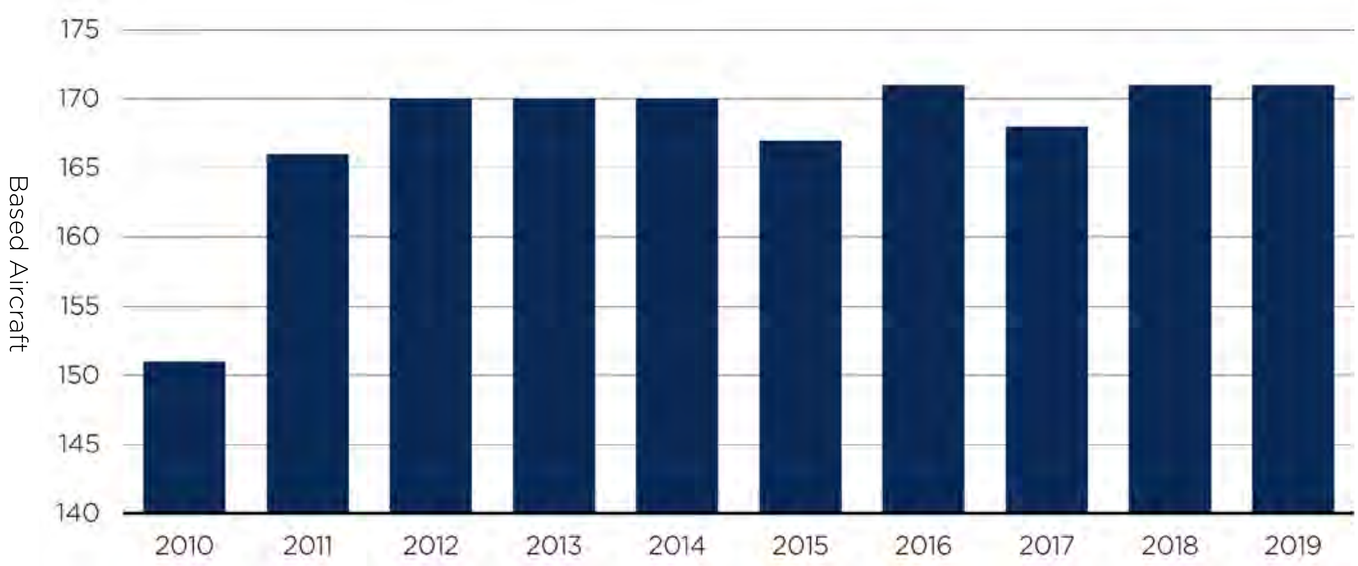



Source: U.S. Department of Transportation, T-100, November 2021; Ricondo & Associates, Inc.

## 5.11. Based Aircraft Forecast

The FAA defines based aircraft as any operational and airworthy aircraft that is based at the airport for the majority of the year. The forecast for based aircraft is essential in planning the development of GA infrastructure such as aircraft hangars and tiedowns. Additionally, based aircraft serves as a key indicator for the growth of local GA operations. Figure 5.27 shows the historical rates of based aircraft, as reported in the TAF, which shows they have increased at a CAGR of 1.39% from 2010 to 2019.

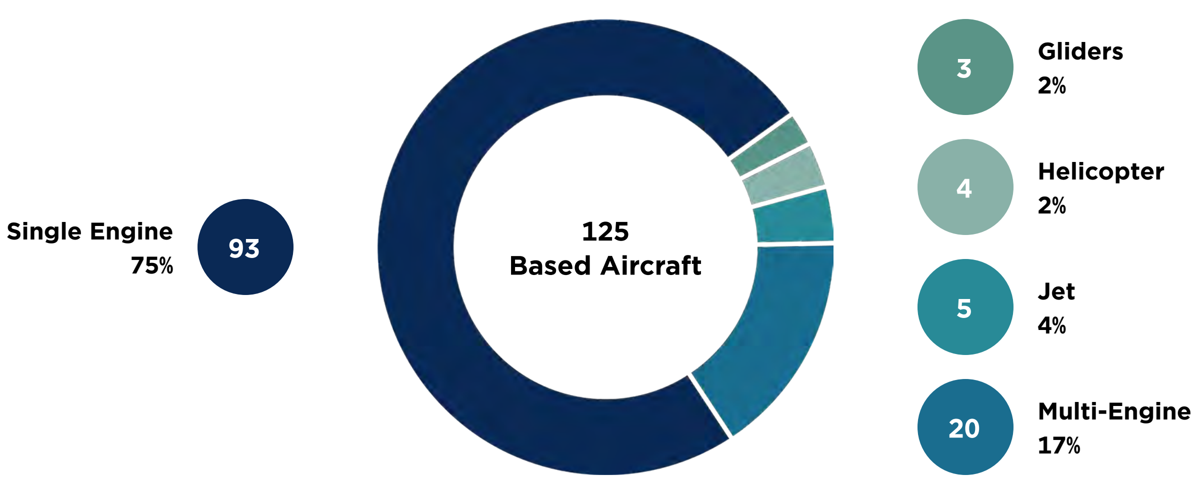
**Figure 5.27: Based Aircraft, 2010–2019**




Source: FAA, TAF

The airport provides the FAA with an annual inventory of based aircraft which is then used by the FAA to update the TAF forecast for the airport. The airport master record (FAA Form 5010-1) for IDA indicates a total of 171 aircraft were based at the airport for 2021. However, airport management reports 125 aircraft were actually based at the airport during 2021. The airport records will be used as the baseline in this forecast. As shown in Figure 5.28, approximately 93 of these aircraft were single engine piston aircraft, 20 were multi-engine, five were jets, four were helicopters, and three were gliders.

**Figure 5.28: Based Aircraft Inventory, 2021**




Source: Idaho Falls Regional Airport

#### 5.11.1. Based Aircraft Forecast Scenarios

The number of aircraft based at the airport has increased from 151 in 2010 to 171 in 2019. The number of based aircraft could not be statistically correlated to any specific socioeconomic factor, so a regression analysis was determined to not be a suitable forecasting methodology. Instead, the following series of scenarios were compared to determine the most suitable forecast:

- Scenario #1: The FAA's TAF forecast for IDA, with a CAGR of 0%, used as the baseline.
- Scenario #2: A forecast based on the historical ten-year trend (2010–2019) of 1.39% for based aircraft.

As shown in Table 5.19, the preferred forecast is the ten-year trend with a CAGR of 1.39%.

Table 5.19: Based Aircraft Forecast Scenarios

| Year | TAF | 10-Year Trend |
|---|---|---|
| 2021 | 171 | 125 |
| 2026 | 171 | 135 |
| 2031 | 171 | 145 |
| 2041 | 171 | 165 |
| **CAGR** | **TAF** | **10-Year Trend** |
| 2021-2041 | 0% | 1.39% |
| **Difference From TAF** | **TAF** | **10-Year Trend** |
| | 0% | -3.51% |

Source: FAA, TAF; Ardurra.

#### 5.11.2. Based Aircraft Forecast Evaluation

The FAA requires the forecast for non-hub commercial service airports to be within 10% of the TAF forecast for the five-year forecast and within 15% for the ten-year forecast. This forecast is not within those limits. However, this is because this forecast uses 125 aircraft as the baseline which reflects the actual number of based aircraft.

#### 5.11.3. Based Aircraft Forecast by Category

It is assumed the percentages of based aircraft will remain roughly the same throughout the planning period so applying current percentages to the forecast provides the forecast for based aircraft by category (Table 5.20).

Table 5.20: Based Aircraft Forecast by Category

| Year | Single Engine | Multi-Engine | Jet | Helicopters | Gliders | Total |
|---|---|---|---|---|---|---|
| | 75% | 17% | 4% | 2% | 2% | |
| 2021 | 93 | 20 | 5 | 4 | 3 | 125 |
| 2026 | 101 | 22 | 5 | 4 | 3 | 135 |
| 2031 | 109 | 24 | 5 | 4 | 3 | 145 |
| 2041 | 123 | 28 | 6 | 5 | 3 | 165 |

Source: Ardurra.

## 5.12. Peak Period Activity Forecast

The commercial activity forecasts presented in this chapter were developed as annual activity levels, which may not adequately describe the requirements for individual airport facilities. Annual metrics provide average demand levels for an entire year, although most airports experience peak periods during which demand far surpasses those averages. Therefore, master plan forecasts must include peak period activity levels for facilities planning purposes.

Peak operational activity, such as peak month and peak month average day (PMAD) operations, is typically used in airport facilities planning to determine the facilities needed to accommodate forecast demand and for sizing of facilities. Peak analyses need to include enplaned passenger forecasts to adequately plan, size, and design passenger terminal facilities. Annual aircraft operations should be considered in evaluating airfield facilities and infrastructure, while only those operations associated with commercial passenger airlines need to be considered in passenger terminal facilities planning. Commercial service airports experience peaks in both enplaned passengers and passenger airline aircraft operations. Therefore, each of these peak elements must be evaluated separately, because peaks in airline aircraft operations define the demand for airside facilities (gates, ramp, remote parking areas), while peak numbers of enplaned passengers directly affect terminal and landside facilities planning, such as roads and parking facilities.

### 5.12.1. Peak Period Forecast for Aircraft Operations

The peak month for commercial aircraft operations occurs during the summer, typically July or August. Averaging the peak month percentages of annual commercial aircraft operations yields an average of 10.2%. The average percentage was applied to total annual operations to determine the peak month volume of operations. Forecasts of annual, peak month, PMAD, and peak hour commercial aircraft operations are presented in Table 5.21. The peak hour of commercial aircraft operations was calculated by averaging the past five years of peak hour percentages and assumes that percentage will remain constant throughout the forecast period. As the addition of one or two flights in the peak hour at an airport the size of IDA can have substantial impacts on passenger level of service, peak hour volumes should be closely monitored when planning terminal improvements.

**Table 5.21: Peak Activity Profile, Commercial Aircraft Operations**

| Year | Annual Operations | Peak Month | Peak Month Operations | % of Annual Operations | Peak Month Avg. Day | Peak Hour % of Avg. Day | Peak Hour Operations |
|---|---|---|---|---|---|---|---|
| 2017 | 6,366 | August | 662 | 10.4% | 21 | 18.8% | 4 |
| 2018 | 6,542 | August | 698 | 10.7% | 23 | 16.7% | 4 |
| 2019 | 6,714 | August | 638 | 9.5% | 21 | 21.4% | 5 |
| 2020 | 5,530 | October | 538 | 9.7% | 17 | 21.4% | 4 |
| 2021 | 8,532 | July | 928 | 10.9% | 30 | 13.3% | 4 |
| **Forecast** | | | | | | | |
| 2026 | 10,216 | | 1,046 | 10.2% | 33 | 18.3% | 6 |
| 2031 | 10,301 | | 1,054 | 10.2% | 34 | 18.3% | 6 |
| 2041 | 10,527 | | 1,078 | 10.2% | 35 | 18.3% | 6 |

Source: U.S. Department of Transportation, T-100; Ricondo & Associates, Inc.

### 5.12.2. Peak Period Forecast for Enplaned Passengers

Historical monthly enplaned passenger data for 2017 through 2021 were reviewed to identify the peak month for passenger activity at IDA. As shown in Table 5.22, the peak month was typically August. However, the peak month was October 2020 and July 2021 because airlines reduced service during the spring and summer months due to the effect the pandemic had on demand.

The peak month percentages of annual enplaned passengers for each year were averaged to determine an appropriate peak factor. An average of 11.1% was calculated based on the historical data from 2017 through 2021. This was assumed to be constant for determining future peak month activity at the airport. The peak month average day passenger volumes are based on an assumed 31-day peak month. The peak hour percentage of peak month average day enplaned passengers was calculated by averaging the latest five years of peak hour percentages with the assumption that the percentage will remain constant throughout the forecast period.

**Table 5.22: Peak Activity Profile, Enplaned Passengers**

| Year | Annual Passengers | Peak Month | Peak Month Passengers | % of Annual Passengers | Peak Month Avg. Day | Peak Hour % of Avg. Day | Peak Hour Passengers |
|---|---|---|---|---|---|---|---|
| 2017 | 147,544 | August | 16,510 | 11.2% | 533 | 26.8% | 143 |
| 2018 | 161,483 | August | 17,980 | 11.1% | 581 | 25.1% | 146 |
| 2019 | 177,340 | August | 18,329 | 10.3% | 592 | 24.9% | 147 |
| 2020 | 101,538 | October | 10,283 | 10.1% | 332 | 29.6% | 98 |
| 2021 | 223,741 | July | 28,178 | 12.6% | 909 | 24.3% | 221 |
| **Forecast** | | | | | | | |
| 2026 | 289,508 | | 32,016 | 11.1% | 1,033 | 26.2% | 270 |
| 2031 | 300,869 | | 33,273 | 11.1% | 1,073 | 26.1% | 280 |
| 2041 | 326,041 | | 36,056 | 11.1% | 1,163 | 26.2% | 304 |

Source: U.S. Department of Transportation, T-100; Ricondo & Associates, Inc.

## 5.13. Fleet Mix Forecast

The airport reference code (ARC) is a system developed by the FAA to relate airport design criteria to the operational and physical characteristics of the airplane types that will operate at a particular airport. The ARC has two components relating to the critical aircraft. The first component, depicted by a letter, is the aircraft approach category which relates to aircraft approach speed. The second component, depicted by a Roman numeral, is the airplane design group which relates to wingspan and tail height.

### 5.13.1. Commercial Service Fleet Mix Forecast

The passenger aircraft fleet mix forecast is listed in Table 5.23. It is expected that by 2030, 50-seat regional jet aircraft will no longer operate at IDA and those passenger airline operations will be conducted in larger regional jets like the Embraer 170/175.

**Table 5.23: Passenger Aircraft Fleet Mix Forecast**

| Seat Capacity | Representative Aircraft | Base Year | Forecast Years | | |
|---|---|---|---|---|---|
| | | 2021 | 2026 | 2031 | 2041 |
| <51 | Canadair CRJ-200 | 1,289 | 1,136 | 0 | 0 |
| 51–76 | Embraer 170/175 | 5,794 | 7,101 | 8,156 | 8,135 |
| 77–100 | Embraer 190 | 0 | 0 | 0 | 0 |
| 101–130 | Airbus A319 | 307 | 568 | 664 | 766 |
| 131–150 | Airbus A320 | 467 | 663 | 664 | 670 |
| 151+ | Airbus A321 | 0 | 0 | 0 | 0 |
| | **Subtotal** | **7,857** | **9,468** | **9,484** | **9,571** |

Note: Totals may not sum due to rounding. The representative aircraft are provided as an example of aircraft operating at the airport in 2021. This is not an exhaustive list and does not imply any particular aircraft will operate at the airport in the future.

Source: U.S. Department of Transportation, T-100; FAA, OPSNET; Innovata; Ricondo & Associates, Inc.

### 5.13.2. General Aviation Fleet Mix Forecast

Several sources of 2021 operations data were used to determine the types of general aviation aircraft that use the airport. This includes OPSNET data, which consists of traffic counts as recorded by air traffic control (ATC) personnel, and TFMSC data which includes the ARC category for each aircraft. These records were compared to TAF data to determine usage percentages for each ARC category.

As previously mentioned, TFMSC data is only useful in helping to identify general trends in aircraft activity because GA aircraft typically operate under VFR and are therefore not required to file a flight plan. In order to account for total GA operations, the ARC percentages identified using the TFMSC data were then applied to OPSNET data, and a 4% modifier was applied to account for any operations occurring when the airport control tower is closed as well as helicopter operations. The results were then used to determine baseline percentages and those percentages were applied to the airport master plan forecast to determine the GA fleet mix forecast (Table 5.24).

**Table 5.24: General Aviation Fleet Mix Forecast**

| ARC | Percentages | Base Year | Forecast Years | | |
|---|---|---|---|---|---|
| | | 2021 | 2026 | 2031 | 2041 |
| A-I | 72.19% | 18,666 | 19,417 | 20,200 | 21,867 |
| A-II | 5.45% | 1,409 | 1,466 | 1,525 | 1,650 |
| B-I | 6.93% | 1,793 | 1,865 | 1,940 | 2,101 |
| B-II | 9.41% | 2,433 | 2,531 | 2,633 | 2,851 |
| B-III | 3.27% | 845 | 879 | 915 | 990 |
| C-I | 0.51% | 131 | 136 | 141 | 153 |
| C-II | 1.38% | 356 | 370 | 385 | 417 |
| C-III | 0.59% | 152 | 158 | 164 | 178 |
| D-I | 0.07% | 18 | 19 | 19 | 21 |
| D-II | 0.07% | 18 | 19 | 19 | 21 |
| D-III | 0.14% | 36 | 37 | 39 | 42 |

Note: Due to rounding and unknown TFMSC operations, the total annual operations do not precisely align with the master plan forecast. The breakdown is provided for generalized data analysis and planning purposes.
Source: FAA, OPSNET, TFMSC, TAF; Ardurra.

#### a. General Aviation Fleet Mix Forecast Assumptions

An assumption was made that the ARC percentages would remain relatively consistent throughout the planning period because there are no significant indicators to suggest these will shift.

## 5.14. Critical Aircraft

The commercial service critical aircraft will be the driver for the runway, primary taxiway, and safety area standards, and the GA critical aircraft will aid in planning and developing the areas of the airport that cater to GA customers.

### 5.14.1. Commercial Service Critical Aircraft

Based on current and scheduled operations, the critical aircraft for commercial service is a C-III aircraft, such as the Airbus A319 or A320 (Figure 5.29). More than 750 operations were scheduled at IDA in 2021 by a C-III aircraft.[22] Based on the forecast analyses, and the fleet mix expected to operate at the airport during the planning period, it is expected that a C-III aircraft, such as the Airbus A320, will remain the critical aircraft throughout the planning period. Specifications for the Airbus A320 are listed in Table 5.25.

**Figure 5.29: Commercial Service Critical Aircraft, Airbus A320**


Source: The Points Guy

**Table 5.25: Airbus A320 Specifications**

| Characteristic | Specification |
|---|---|
| Aircraft Approach Category (AAC) | C |
| Airport Design Group (ADG) | III |
| Taxiway Design Group (TDG) | 3 |
| Approach Speed | 136 Knots of Indicated Airspeed (KIAS) |
| Wingspan | 111.88 Feet |
| Length | 123.27 Feet |
| Tail Height | 39.63 Feet |
| Cockpit to Main Gear (CMG) | 50.20 Feet |
| Outer to Outer Main Gear Width (MGW) | 29.36 Feet |
| Maximum Takeoff Weight | 171,961 Pounds |

Source: FAA Aircraft Characteristics Database

Once a more demanding category of aircraft makes at least 350 operations at an airport, that airport should prepare for a shift in ARC and plan for a change in FAA design standards. Alaska Airlines, which began air service at IDA in June 2021, uses the Bombardier Q-400 aircraft. Approximately 394 Bombardier Q-400 operations took place at IDA just during the last half of 2021. The Bombardier Q-400 has a taxiway design group (TDG) of 5, and this makes it the most demanding aircraft for taxi operations. Therefore, the Q-400 will drive the design standard for taxiway design.

While Alaska Airlines is expected to begin to phase out the Q-400 by 2023, the airport has had discussions with other operators about potentially starting service using TDG 5 aircraft. Therefore, the critical aircraft for taxiway design should remain the Q-400, but this should be reexamined as part of future taxiway projects. Currently, taxiway intersections are designed to TDG 5 standards. At 60 feet wide, Taxiway A exceeds the standards for TDG 3/4 but it is not wide enough to meet TDG 5 standards.

### 5.14.2. Air Cargo Critical Aircraft

Based on the projected fleet mix, the critical aircraft for air cargo will be the ATR 72 (Figure 5.30). Specifications for the ATR 72 are listed in Table 5.26.

**Figure 5.30: Air Cargo Critical Aircraft: ATR 72**


Source: Ardurra.

**Table 5.26: ATR 72 Specifications**

| Characteristic | Specification |
|---|---|
| Aircraft Approach Category (AAC) | B |
| Airport Design Group (ADG) | III |
| Taxiway Design Group (TDG) | 1B |
| Approach Speed | 114 Knots of Indicated Airspeed (KIAS) |
| Wingspan | 88.75 Feet |
| Length | 89.13 Feet |
| Tail Height | 25.08 Feet |
| Cockpit to Main Gear (CMG) | 35.33 Feet |
| Outer to Outer Main Gear Width (MGW) | >13.4 Feet |
| Maximum Takeoff Weight | 49,603 Pounds |

Source: FAA Aircraft Characteristics Database

### 5.14.3. General Aviation Critical Aircraft

The majority of the general aviation operations in 2021, excluding cargo operations, involved ARC category C-II aircraft with approximately 356 operations. The representative critical aircraft is identified as the Bombardier Challenger 300 (CL30) (Figure 5.31). This is one of the most common air taxi and charter aircraft that use the airport and one of the FAA's 2021 top ten aircraft for domestic business jet operations.[23] Specifications for the general aviation critical are listed in Table 5.27.

**Figure 5.31: General Aviation Critical Aircraft: Bombardier Challenger 300**


Source: Bombardier.

**Table 5.27: Bombardier Challenger 300 Specifications**

| Characteristic | Specification |
|---|---|
| Aircraft Approach Category (AAC) | C |
| Airport Design Group (ADG) | II |
| Taxiway Design Group (TDG) | 1B |
| Approach Speed | 125 Knots of Indicated Airspeed (KIAS) |
| Wingspan | 63.83 Feet |
| Length | 68.75 Feet |
| Tail Height | 20.33 Feet |
| Cockpit to Main Gear (CMG) | 27.75 Feet |
| Outer to Outer Main Gear Width (MGW) | 12.64 Feet |
| Maximum Takeoff Weight | 38,850 Pounds |

Source: FAA Aircraft Characteristics Database

# Endnotes

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# FACILITY REQUIREMENTS

6

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CHAPTER SIX

# REQUIREMENTS

To properly plan for the future of Idaho Falls Regional Airport (IDA), it is necessary to determine if the existing airport facilities are able to 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 new facilities are needed as a result of the sponsor's comprehensive plan or strategic vision and mission statements.

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. They 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. Summary of Existing Facilities and Recommendations

The following summarizes the airport facilities that were examined in this evaluation as well as the outcomes and recommendations that are discussed in this chapter.

### a. Airfield and Airspace Requirements

#### Airfield Capacity

- Demand is expected to remain within 15–19% of the annual service volume (ASV) for the 20-year planning period which means there is not a need to begin planning for capacity improvements.
- Runway 17/35 does not meet the requirements for a crosswind or secondary runway unless the FAA makes a specific determination stating the runway is required.

#### Runway Requirements

- Orientation and Designation: Runway designations for Runway 3/21 and Runway 17/35 do not need to change during the planning horizon.
- Length: The current length of Runway 3/21 and Runway 17/35 is adequate to support the critical aircraft throughout the 20-year planning horizon.
- Width: Runway 3/21 width meets design standards. Runway 17/35 width exceeds design standards by 15 feet.
- Displaced Thresholds and Declared Distances: IDA does not have any displaced thresholds or need to use declared distances for any runway.
- Runway line of sight: These requirements are met for individual runways but not for the two runways combined.
- Pavement Strength: The existing weight bearing capacity of Runway 3/21 and Runway 17/35 is adequate to support the critical aircraft.
- Potential Change in Critical Aircraft: Some design standards for Runway 3/21 would change if a Boeing 757F, or other ADG-IV aircraft, were to become the critical aircraft for air cargo operations.
- Runway Incursion Mitigation: The intersection of Runway 17/35 and Taxiway C should be reviewed for alternatives to eliminate Hot Spot 1.

#### Taxiway System Requirements

- Design Standards: IDA meets appropriate design standards for all design criteria *except* taxiway width and taxiway shoulder width. Due to the varying widths along the length of the taxiways, there are areas of the taxiway that meet appropriate design standards. However, the narrowest sections do not meet the minimum requirements for FAA design.
- Object Free Areas and Safety Areas: All object free areas and safety areas are within standards and contain no penetrations or incompatible land uses.
- Potential Change in Critical Aircraft: Some design standards would change if a Boeing 757F, or other ADG-IV aircraft, were to become the critical aircraft for taxiway design.

#### Airspace Requirements

- There are known penetrations in the airport's airspace. All penetrating objects depicted on the ALP should be eliminated.

### Precision Approach Path Indicator Clearance Surfaces

- All Part 77, approach and departure, and PAPI OCS/LSCS surfaces should be protected to the maximum extent possible.
- Existing obstructions should be eliminated or marked and lighted.

### Electronic, Visual, and Satellite Navigation Aids

- The 1,000-foot critical area for the VOR-DME contains general aviation hangars. This is preventing development of the cargo apron and the installation of a holding bay at the Runway 21 end.
- The VOR-DME should be either relocated or upgraded to a Doppler VOR, which would reduce the size of the critical area by half.

### Air Traffic Control Tower

- Consideration should be given to finding an alternate site for the airport traffic control tower.

### Instrument Approach Procedures

- The current instrument approaches to Runway 3/21 at IDA are adequate to support aircraft operations through the 20-year planning period.
- Minimums can be improved by eliminating terrain obstructions for Runway 21 and adding an approach lighting system to Runway 3.

## b. Commercial Service Passenger Terminal Complex

### Commercial Apron Requirements

- Two gates will need to be added by 2026 to accommodate peak hour operations which would require an expansion of the terminal building and two additional aircraft parking spaces on the terminal apron.
- The additional parking spaces should accommodate the full range of aircraft expected to be used by the airlines during the planning horizon. This includes sufficient clearance for an ADG-IV aircraft taxiing on Taxiway A which may require shifting the vehicle service road.
- The deicing pad should be relocated outside the envelope of the gate parking positions.
- A covered lavatory dump should be considered.

### Passenger Terminal Building

- Virtually all of the functional areas in the terminal building need to be expanded or renovated if delays are to be avoided during peak hour activity.
- Multiple large aircraft operating within the peak hour—due to airline scheduling or due to system delays—will significantly impact the airport’s ability to safely and comfortably process passengers through the terminal building.

### On-Airport Circulation Roadways

- Consideration should be given to widening North Skyline Drive and reconfiguring the entry points to the parking lots to avoid extra traffic passing through the congested passenger pick-up and drop-off zones.
- Consideration should also be given to mitigating the sharp right turn vehicles have to navigate to exit the terminal circulation loop.

### Public Parking Facilities
- Reconfiguration of the existing hourly and daily lots to allocate more spaces to economy will help relieve some pressure in the immediate term.
- By 2026, reconfiguration of the existing lots alone will not be adequate to support demand.
- Other parking lot locations, along with vertical development options, should be a priority.

### Employee Parking Facilities
- The employee parking lot should be expanded, or other locations sought, in order to meet the estimated 305 spaces that will be needed by 2041.

### Rental Car Facilities
- All of the functional areas related to the rental car ready/return and quick turnaround areas will exceed existing capacity by 2026.
- Alternative areas should be sought that will enable growth without impeding aeronautical development.

## c. General Aviation Requirements

### Aircraft Hangar Storage
- Additional hangar space is needed at IDA through the entire planning horizon.

### Aircraft Tiedowns
- There are adequate tiedowns to meet demand through 2031.
- Beyond 2031, the tiedown deficiencies could be met by reconfiguring the existing apron space with more efficient markings.

## d. Air Cargo Requirements
- The existing FedEx apron is adequate for the ATR-72.
- The current configuration of the cargo apron makes it difficult to maneuver a 757F; a type of aircraft frequently used by air cargo operators.
- Air cargo operators that use a 757F would need to either use a different facility or a new facility would need to be built.
- Additional apron space is needed for storage of ground service equipment (GSE).
- The capacity of the building will need to be expanded during the planning horizon.

## e. Support Facilities

### Aircraft Rescue and Firefighting
- Consideration should be given to finding an alternate site for the ARFF station.
- Future locations should consider a live fire discharge area to properly contain and eliminate chemicals associated with firefighting operations.

### Fuel Storage
- There is adequate fuel storage.

### Snow and Ice Control

- Space should be reserved for future expansion of the snow removal equipment (SRE) building.

### Ground Service Equipment Storage

- The size of the apron used to store GSE is adequate.
- Adding markings to delineate the GSE area would enhance circulation and efficiency.
- Future terminal expansions should include extra space and reconfiguration of the baggage makeup area to eliminate constraints.

### Fencing and Gates

- Airport fencing and gates may need to be added or relocated as development progresses.

### Lighting Vault and Emergency Generator

- The capacity and location of the lighting vault and emergency generator will need to be assessed periodically as lighting is added to the airfield and as the terminal is expanded.

### f. Utilities

- Additional service connections may be required for new development.
- Consideration should be given to adding EV charging stations at the airport.

### g. Stormwater

- Stormwater infrastructure should be improved as more impervious surface is added.
- Pipes dating to the 1940s should be replaced and the capacity increased.
- The main retention basin east of Foote Drive should be reviewed to determine if it is capable of accommodating airport development.

### h. Land Use

- Federal and State Requirements: The city of Idaho Falls is compliant with federal and state requirements regarding airport land use policies and zoning. All policies and regulations should be reviewed periodically to ensure they are current and relevant as the airport experiences growth and changes.
- County Protections: The city and the airport should continue to work with Bonneville County to update its existing height restriction zoning ordinance and to adopt land use zoning that protects both the airport and surrounding community from incompatible land uses.
- Existing Incompatible Land Uses: There are incompatible land uses known to be located within the airport's RPZs.
- Potential Incompatible Land Uses: The airport should continue to seek ways to eliminate or mitigate existing incompatible land uses within the RPZ, and prohibit the introduction of new incompatible uses.
- On-Airport Wildlife Hazard Attractants: On-airport retention basins should be modified so they do not detain water for more than 48 hours.
- Off-Airport Wildlife Hazard Attractants: Proposed off-airport uses that may create a wildlife attractant should be reviewed by airport staff to assess if they comply with FAA guidance.

#### i. Strategic Vision

- Any development at IDA should support the city's strategic vision and mission.

#### j. Primary Management and Compliance Documents

- These documents should be reviewed annually and updated as necessary to remain valid. The city of Idaho Falls is currently updating the minimum standards as well as the rules and regulations for the airport.

#### k. Emerging Trends

- Airport management should remain aware of newly emerging industry trends and how they might affect the airport.

### 6.1.1. Recommendations

- Relocate the ATCT to allow for terminal expansion.
- Relocate the ARFF station to allow for cargo expansion.
- Eliminate terrain obstruction at the Runway 21 end.
- Add approach lighting system to Runway 3 end.
- Assess drainage infrastructure capacity and structural integrity.
- Reconfigure parking lot access points from N. Skyline Drive.
- Add electric vehicle (EV) charging stations to parking lot expansions.

## 6.2. Airport Design and FAA Standards

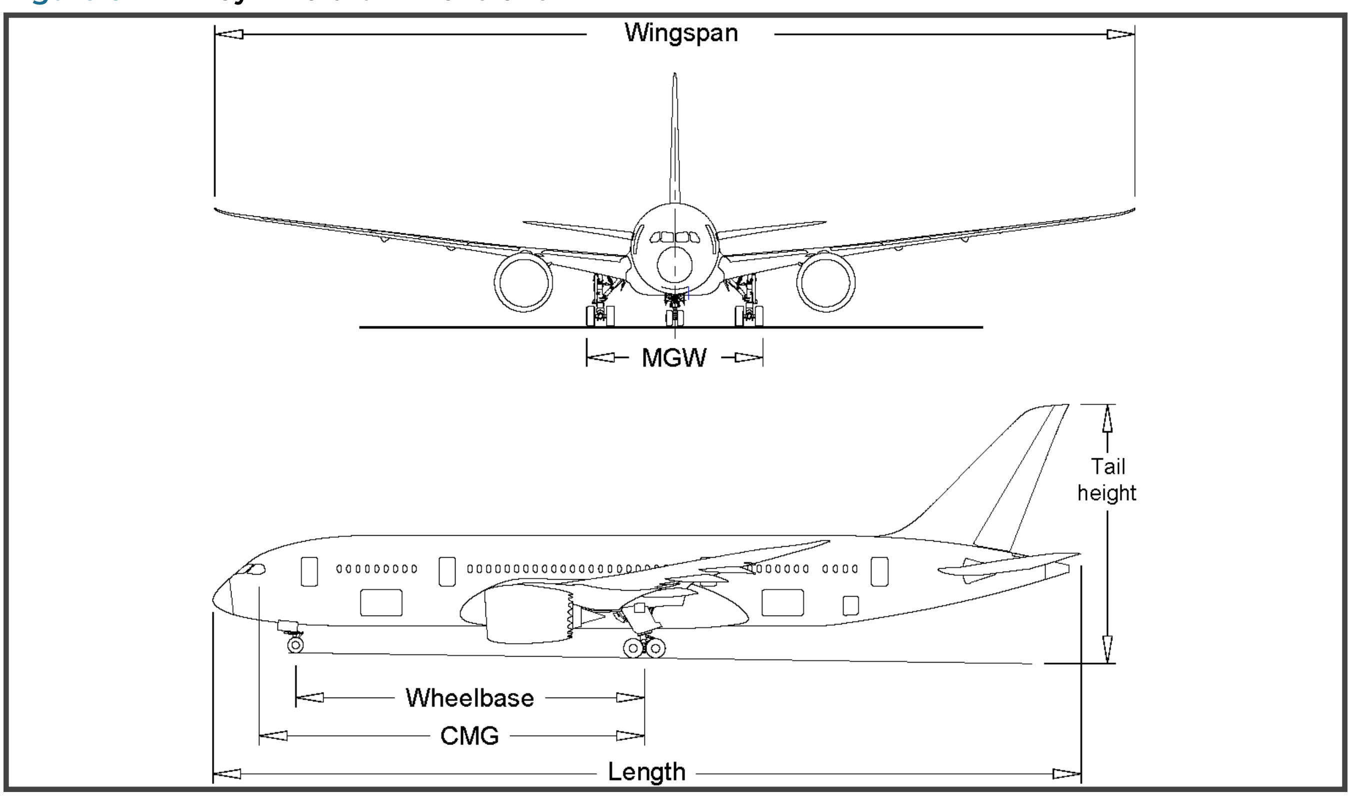
Effective airport design and planning help to ensure airport facilities are able to meet current and future aviation needs and environmental considerations while maintaining acceptable levels of safety, efficiency, and capacity. The airport design process involves a series of steps to identify aviation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

1. Identify the size, aircraft approach category, airport 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 appropriate design standards contained within FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*.[1]

### 6.2.1. 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). The critical aircraft is the most demanding type of aircraft, or grouping of aircraft with similar characteristics, that make regular use of the airport. It can be a single aircraft or a composite of the most demanding characteristics from different aircraft. Incorporating the use of 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.

**Figure 6.1: Key Aircraft Dimensions**




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

### a. Size, Weight, and Wake Turbulence Classifications

For capacity planning, the FAA uses four classifications based on an aircraft's physical aspects including its maximum certificated takeoff weight (MTOW), number of engines, and wake turbulence effect (Table 6.1).[2]

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

| Aircraft Class | Maximum Certificated Takeoff Weight (MTOW) | Number of Engines | Wake Turbulence Classification |
|---|---|---|---|
| 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 |

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.[3] (Like the aircraft size, weight, and wake turbulence classifications listed in Table 6.1, these are also 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.[4]

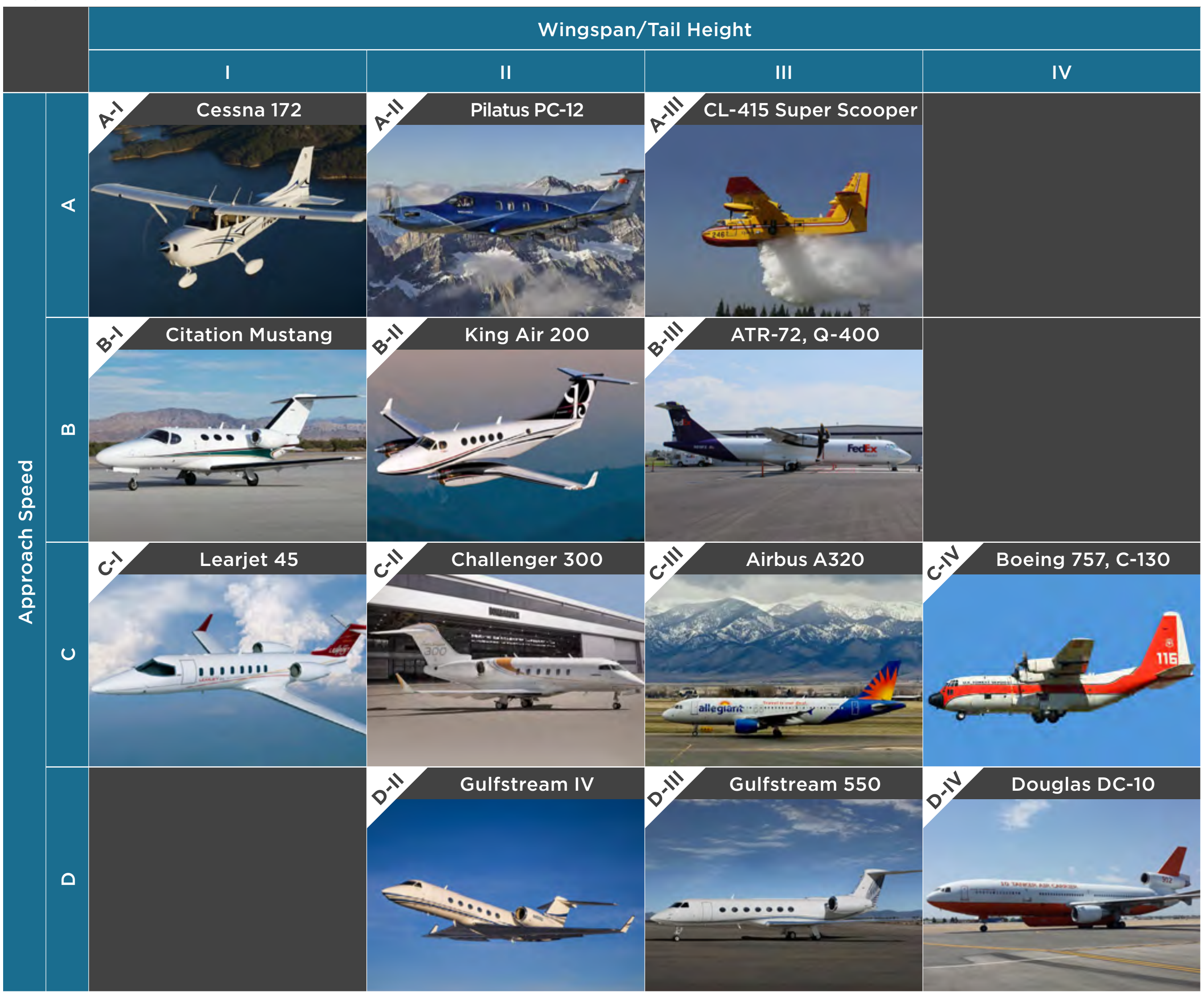
**Table 6.3: Airplane Design Groups**

| 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.

Figure 6.2 illustrates representative aircraft for several AAC and ADG combinations.

**Figure 6.2: Representative Aircraft**

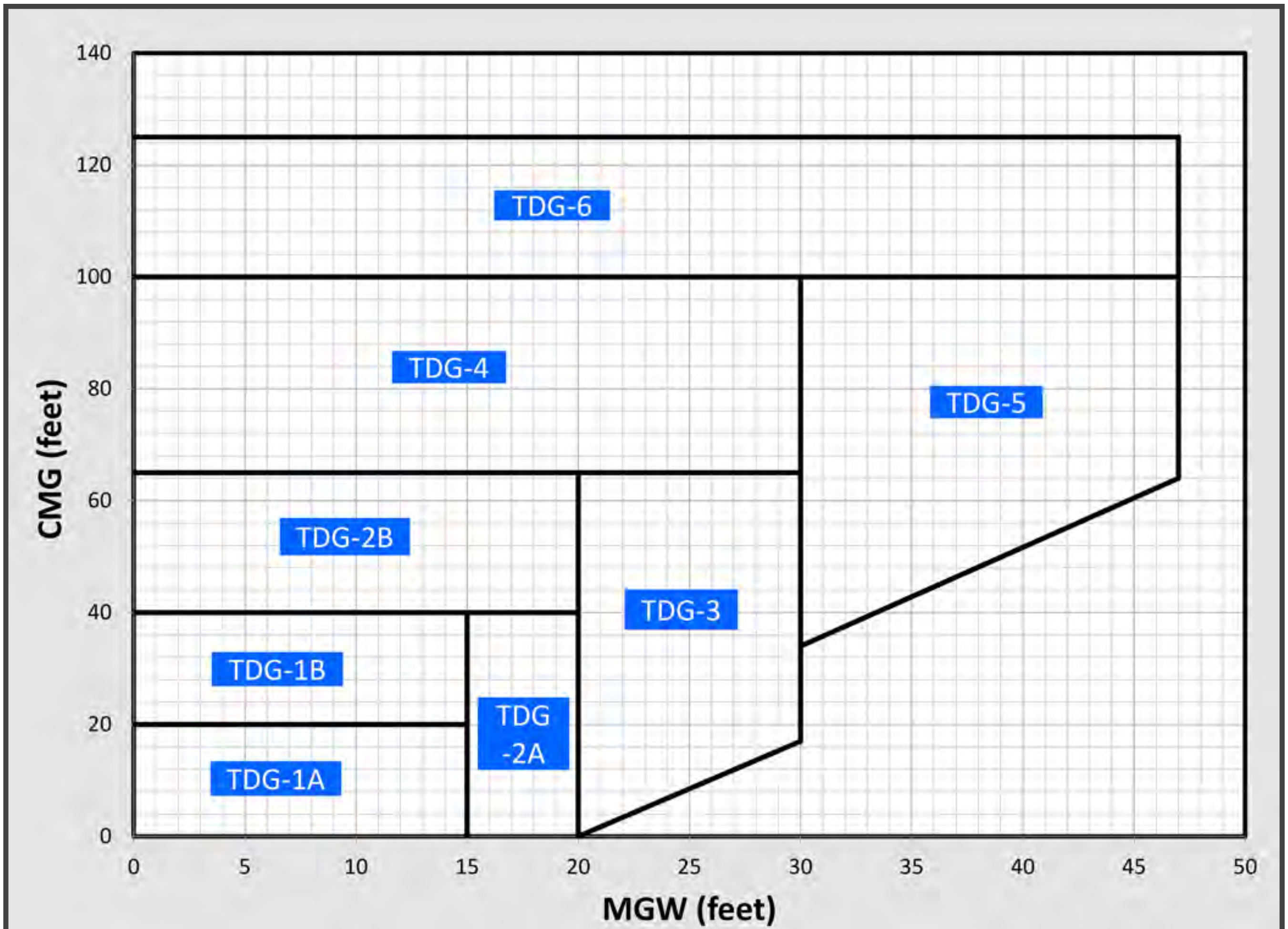



Source: Ardurra.

### d. Taxiway Design Group

The taxiway design group (TDG) is used to establish the correct design factors 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 TDG classification based on the size and type of aircraft expected to use a particular taxiway.[5]

**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.

#### e. Visibility Minimums and Runway Visual Range Values

A runway's lowest visibility published on an instrument approach chart 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.

**Table 6.4: Visibility Minimums and Runway Visual Range Values**

| Runway Visual Range Value | Instrument Flight Visibility Category (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.

#### f. Runway Design Code

The runway design code (RDC) is used to establish the design characteristics for each runway. It is comprised of three components; AAC, ADG, and RVR. These are applied to individual runways which means each runway at an airport can have a different RDC.[67]

### 6.2.2. Critical Aircraft and Applied Airfield Design Criteria

#### a. Commercial Service Critical Aircraft

The Airbus A320 was identified as the commercial service critical aircraft. As shown in Table 6.5, the A320 is a large aircraft with an AAC of C, an ADG of III, and a TDG of 3.

However, as previously mentioned in Section 5.14, Alaska Airlines recently began providing air service at IDA using the Bombardier Q-400 aircraft. The Q-400 has an AAC of B, an ADG of III, and a TDG of 5 which makes it the most demanding aircraft for taxiway design.

Therefore, design criteria associated with an AAC of C, an ADG of III, and a TDG of 5 were used for Runway 3/21; the commercial apron; and Taxiways A, A1–A6, C, and G because these areas are intended for use by commercial aircraft.

### b. Air Cargo Critical Aircraft

The ATR 72 was identified as the air cargo critical aircraft. The ATR 72 has an AAC of B, an ADG of III, and a TDG of 1B. These design standards were applied to the cargo apron.

However, as previously mentioned in Section 5.10.2, increasing levels of air cargo activity at the airport indicate there is a possibility that FedEx, UPS, or similar air cargo carrier will introduce new scheduled service at IDA using a Boeing B757F aircraft. The B757F has an AAC of C, an ADG of IV, and a TDG of 4 which would make it difficult for these carriers to use the cargo apron in its current configuration. If an ADG IV aircraft becomes the future critical aircraft, major airfield changes would need to take place.

### c. General Aviation Critical Aircraft

The Bombardier Challenger 300 was identified as the general aviation (GA) critical aircraft. It has an AAC of C, an ADG of II, and a TDG of 1B. These design standards were applied to the areas of the airport located south of the commercial apron. This includes the main FBO apron and the south general aviation apron because these areas are intended for use by general aviation aircraft (Figure 6.4).

While Runway 17/35 and the east general aviation apron are also intended for use by general aviation aircraft, they are intended strictly for light general aviation aircraft like a Cessna 182 which is considered to be a small aircraft with an AAC of A, an ADG of I, and a TDG of 1A. Therefore, these design standards were applied to Runway 17/35.

The east general aviation apron and the taxilanes east of Runway 17/35 (i.e., Taxiways B, B1 – B3, and C) were designed to AAC A, ADG-II, and TDG 3 standards. This is discussed in additional detail in Section 6.3.3, Taxiway System Requirements.

**Table 6.5: Critical Aircraft Classifications**

| Area | Aircraft | AAC | ADG | TDG |
|---|---|---|---|---|
| Commercial Service | Airbus A320 | C | III | 3 |
| Commercial Service Taxiways | Bombardier Q-400 | B | III | 5 |
| Air Cargo | ATR 72 | B | III | 1B |
| General Aviation | Bombardier Challenger 300 | C | II | 1B |

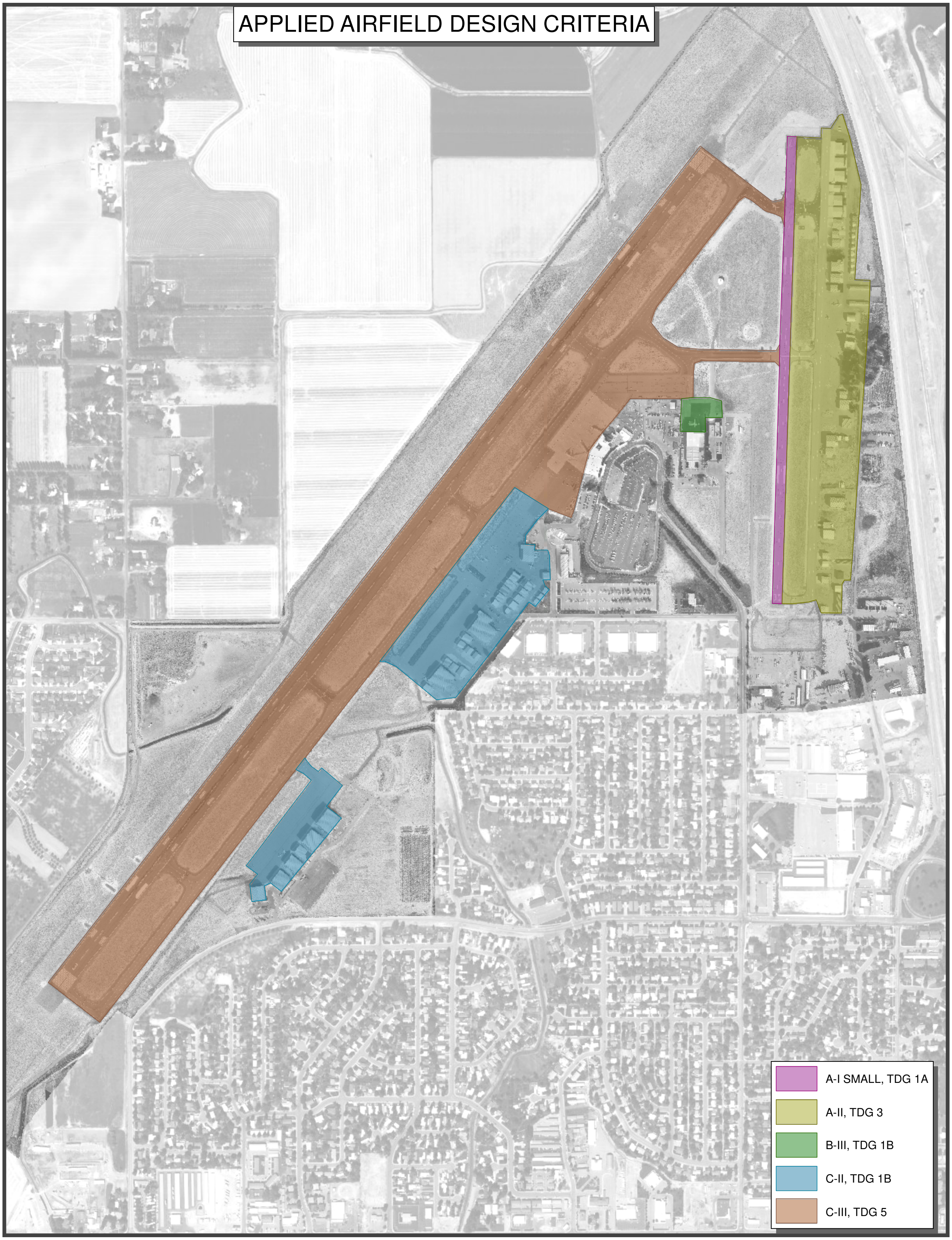
Source: FAA, AC 150/5300-13B *Airport Design*, Table 1-2.

### d. Runway Design Codes for Idaho Falls Regional Airport

- Runway 21 is intended to be used mainly by commercial service aircraft and has a published approach minimum of 1/2 mile or 2,400 feet. This combination means Runway 3/21 has an RDC of C-III-2,400.

- Runway 17/35 is intended to be used mainly by small general aviation aircraft with less than a 12,500-pound maximum takeoff weight and does not have an instrument approach procedure. This combination means Runway 17/35 has an RDC of A-I(small)–VIS.

## Figure 6.4: Applied Airfield Design Criteria




Source: Ardurra.

## 6.3. Airfield and Airspace Requirements

The determination of airfield and airspace requirements includes conducting an assessment to determine the airport's ability to safely and efficiently accommodate the activity forecasted for the 20-year planning period, and then determine if all airport facilities comply with FAA design and safety standards. The analysis is also used to help determine if and when improvements are needed to meet specific operational demands.[8]

### 6.3.1. Airfield Capacity

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*. This methodology is used to determine the annual service volume (ASV) and hourly capacity to provide a reasonable estimate of an airport's annual capacity. This methodology accounts for differences in runway use, aircraft mix, and weather conditions encountered during a typical year. The calculations derived from this method may be used if the conditions at the airport do not significantly differ from the capacity assumptions listed in the AC.

**Capacity assumptions are listed below:**

- Runway Use Configuration: Most runway layouts used at the airport can be approximated by one of the 19 runway-use configurations shown in the AC. IDA uses an open "V" configuration, number 14 for a south traffic flow, and number 15 for a north traffic flow.
- Percent Arrivals: Arrivals equal departures.
- Percent Touch and Goes: The percent of touch-and-go operations is within the limits shown in Table 2-1 of the AC. For IDA, touch-and-go operations are assumed to be local GA operations which make up approximately 22% of total operations which is within the limits.
- Taxiways: A full-length taxiway with ample runway entrance and exit taxiways, and no taxiway crossing problems.
- Airspace Limitations: There are no airspace limitations that would adversely impact flight operations or otherwise restrict aircraft that could operate at the airport.
- Runway Instrumentation: The airport has at least one runway equipped with an instrument landing system (ILS) and has air traffic control services.

**Annual service volume assumptions are listed below:**

- Weather conditions allowing for flights using instrument flight rules (IFR) occur roughly 10% of the time.
- The airport operates with the runway-use configuration which produces the greatest hourly capacity roughly 80% of the time.

#### a. Aircraft Mix Index

As previously mentioned in Table 6.1, the FAA classifies aircraft based on their maximum certified operational weight (excluding helicopter operations). The mix index is a calculated ratio of forecasted aircraft mix based on this weight classification system. The mix index increases as the number of heavier aircraft increases. This increase indicates a decrease in hourly capacity because the FAA requires heavier aircraft to be spaced further apart from other aircraft for safety reasons.

The aircraft mix index is a mathematical expression of the aircraft mix. This equation is the percent of C aircraft (more than 12,500 pounds but less than 300,000 pounds) plus three times the percent of D aircraft (more than 300,000 pounds) which is written as %(C+3D). There are no Class D aircraft projected to use the airport so the equation can be simplified to %(C). The fleet mix forecast is used to calculate the mix index which is then used to determine airfield capacity. Based on the forecast, the mix index is projected to be between 58–60%. The mix index is expected to generally remain the same throughout the planning period.

### b. Annual Service Volume

Using runway configuration number 14 from the AC, which represents a south traffic flow, the ASV is calculated to be 220,000 operations. Using runway configuration number 15, which represents a north traffic flow, the ASV is calculated to be 215,000 operations. Since runway configuration number 15 results in a decrease in capacity compared to runway configuration number 14, runway configuration number 15 will be used to determine runway capacity at IDA.

#### Conclusion

IDA's annual service volume is 215,000 annual operations with an hourly capacity of 82 operations per hour for VFR conditions and 56 operations per hour for IFR conditions. As noted in Table 5.1, there was a total of 33,656 operations at IDA for 2021 which is approximately 15% of ASV. By 2041, this is forecasted to grow to 40,119 total operations which is approximately 19% of ASV.

An airport should begin planning to make capacity improvements when capacity reaches 60% of ASV. At 80%, plans should be complete, and construction should begin. At 100%, the airport has reached capacity and improvements should be completed to avoid delays. Demand is expected to remain within 15–19% of ASV for the 20-year planning period which means there is not a need to begin planning for capacity improvements.

### c. Capacity Analysis for a One-Runway Scenario

This scenario examines the airport's capacity using only Runway 3/21 and the existing mix index of 58–60%. Previous wind coverage analysis, which is discussed in Section 4.1.4. Wind Coverage, demonstrated that Runway 3/21 provides greater than 95% wind coverage in all weather conditions. Therefore, according to FAA Order 5100.38D, *Airport Improvement Program Handbook*, Table G-1, a crosswind runway is not required. However, a secondary runway could be justified if the primary runway is operating at 60% or more of its annual capacity, or when the FAA has made a specific determination that a secondary runway is required. In this scenario, the only parameter that changed was the runway configuration. Using runway configuration number 1 from the AC, which is a single runway, the ASV is 205,000 annual operations. This is approximately 16% of ASV for 2021 and 20% of ASV for 2041; well below 60% of ASV for the 20-year planning horizon.

#### Conclusion

Based on FAA requirements outlined in Table G-1 of FAA Order 5100.38D, *Airport Improvement Program Handbook*, Runway 17/35 does not meet the requirements for a crosswind or secondary runway unless the FAA makes a specific determination stating the runway is required.

### 6.3.2. Runway Requirements

The FAA has established design standards for nearly every aspect of airports. This includes navigable airspace, airside facilities, and landside facilities. Once the existing and future airport design classifications are determined, the applicable FAA design standards are applied to provide an acceptable level of safety at an airport. These standards, which are outlined in FAA AC 150/5300-13B, *Airport Design,* include dimensions for runway width, safety areas, separation distances from fixed or movable objects, and several other facets of airport layout.

Sponsors receiving federal funds are obligated by federal grant assurances to comply with FAA design standards, and identifying these standards is a core concept for every airport master plan. Applying FAA standards ensures that airport safety and design are congruent with the types of aircraft operations occurring at the airport.

Each design criteria includes associated safety area dimensional standards. Safety areas and object free areas surrounding a runway protect both airport operations and the community. Safety areas limit the accessibility and functionality of the property, establishing a protective buffer around the airport's operating surfaces. The following definitions describe the safety areas associated with a runway and their functionality.

#### Runway Object Free Area

A runway object free area (ROFA) is an area on the ground centered about the runway centerline. The ROFA enhances the safety of aircraft operations by requiring the area to be free of objects, except for objects that need to be located in the ROFA for air navigation (fixed-by-function) or aircraft ground maneuvering purposes.

#### Runway Obstacle Free Zone

A runway obstacle free zone (ROFZ) is a volume of airspace centered on the runway centerline. Its elevation is the same as the elevation of the nearest point on the runway centerline, and it extends 200 feet beyond each end of the runway. It must be clear of objects other than frangible NAVAIDs that need to be located in the OFZ because of their function.

#### Inner-Approach Obstacle Free Zone

The inner-approach obstacle free zone (IA-OFZ) is a defined volume of airspace centered on the approach area. It applies only to runways with an approach light system (ALS). The surface begins 200 feet from the runway threshold at the same elevation as the runway threshold and extends 200 feet beyond the last light unit in the ALS. Its width is the same as the ROFZ and rises at a slope of 50 to 1 from its beginning. At IDA, this applies only to Runway 21.

#### Inner-Transitional Obstacle Free Zone

The inner-transitional obstacle free zone (IT-OFZ) is a defined volume of airspace along the sides of the ROFZ and IA-OFZ. It applies only to runways with lower than 3/4 mile approach visibility minimums. Aircraft tails may not violate the IT-OFZ. For operations on runways used by large aircraft, where the visibility minimums are lower than ¾ mile but not lower than 1/2 mile, this surface begins at the edges of the ROFZ and IA-OFZ, then rises vertically for a height (H) calculated by the equation below, then slopes 6:1 out to a height of 150 feet above the airport elevation. At IDA, this applies only to Runway 21.

H(feet) = 61 – 0.094(Sfeet) – 0.003(Efeet). S is equal to the most demanding wingspan of the RDC of the runway, and E is equal to the runway threshold elevation above sea level.

At IDA, for an Airbus A320: H = 61–0.094(111.88)–0.003(4731.32) = 61–10.52–14.19 = 36.3 ft.

### Precision Obstacle Free Zone

The precision obstacle free zone (POFZ) is defined as a volume of airspace above an area beginning at the threshold, at the threshold elevation, and centered on the extended runway centerline. This surface applies to any runway served by a vertically-guided approach with landing minimums less than 250 feet or visibility less than 3/4 statute mile or RVR is less than 4,000 feet, and an aircraft is on final approach within two miles of the runway threshold. When the POFZ is in effect, a wing or fuselage-mounted horizontal stabilizer of an aircraft holding on a taxiway may penetrate the POFZ; however, neither the fuselage nor tail-mounted horizontal stabilizer may penetrate the POFZ. At IDA, this surface applies to Runways 3 and 21 when the criteria have been met.

### Runway Protection Zone

A runway protection zone (RPZ) is trapezoidal and centered about the extended runway centerline. The function of an RPZ is to enhance the protection of people and property on the ground by limiting incompatible land uses and precluding activities involving congregations of people. It is desirable to clear the entire RPZ of all above-ground objects. Airport ownership of the entire RPZ is not always possible; however, the FAA expects airport sponsors to take all possible measures to protect against and remove or mitigate incompatible land uses and recommends airport owners should at least own the property under approach and departure areas. Coordination with the FAA is required should land use within an RPZ incorporate incompatible land uses.

### Runway Safety Area

A runway safety area (RSA) is a defined surface centered on and surrounding the runway that is prepared or suitable for reducing the risk of damage to aircraft in the event of an undershoot, overshoot, approach, or excursion from the runway. The RSA must be able to support, under dry conditions, snow removal equipment as well as aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing major damage to the aircraft. Certain items are allowed to be in the RSA, as they are "fixed-by-function," such as a PAPI, REIL, and Approach Lighting System. At IDA, the supplemental wind cone for Runway 3 is located in the RSA but is not fixed-by-function.

Table 6.6 lists the existing conditions for Runway 3/21 alongside current design standards for this runway. Table 6.7 lists the existing conditions for Runway 17/35 alongside current design standards for this runway. Areas where the runways are not in compliance with these standards are also noted in these tables.

**Table 6.6: Runway 3/21 Design Standards and Compliance**

| Design Criteria | Existing 3/21 | RDC C-III-2400 Standards | Compliant |
|---|---|---|---|
| Runway Length | 9,002 | See Section 6.3.2 (c) | N/A |
| Runway Width | 150 | 150* | Y |
| Runway Shoulder Width | 20 | 25* | N |
| Blast Pad Width | N/A | 200* | N |
| Blast Pad Length | N/A | 200 | N |
| Crosswind Component | 16 KTS | 16 KTS | Y |
| RSA Length Beyond Runway End | 1,000 | 1,000 | Y |
| RSA Length Prior to Threshold | 600 | 600 | Y |
| RSA Width | 500 | 500 | Y |
| ROFA Length Beyond Runway End | 1,000 | 1,000 | Y |
| ROFA Length Prior to Threshold | 600 | 600 | Y |
| ROFA Width | 800 | 800 | Y |
| ROFZ Length Beyond Runway End | 200 | 200 | Y |
| ROFZ Width | 400 | 400 | Y |
| RWY 21 Inner Approach OFZ Width | 200 | 200 | Y |
| RWY 3 and 21 POFZ Length | 200 | 200 | Y |
| RWY 3 and 21 POFZ Width | 800 | 800 | Y |
| **RWY 3 RPZ** | | | |
| Approach Length | 1,700 | 1,700 | Y |
| Approach Inner Width | 1,000 | 1,000 | Y |
| Approach Outer Width | 1,510 | 1,510 | Y |
| Departure Length | 1,700 | 1,700 | Y |
| Departure Inner Width | 500 | 500 | Y |
| Departure Outer Width | 1,010 | 1,010 | Y |
| **RWY 21 RPZ** | | | |
| Approach Length | 2,500 | 2,500 | Y |
| Approach Inner Width | 1,000 | 1,000 | Y |
| Approach Outer Width | 1,750 | 1,750 | Y |
| Departure Length | 1,700 | 1,700 | Y |
| Departure Inner Width | 500 | 500 | Y |
| Departure Outer Width | 1,010 | 1,010 | Y |
| Centerline to Holding Position Marking | 250 | 250 | Y |
| Centerline to Parallel TWY Centerline | 400 | 400 | Y |
| Runway Gradient | 0.12% | 1.50% Max | Y |

* For airplanes with maximum certificated takeoff weight greater than 150,000 pounds.
Source: FAA, AC 150/5300-13B *Airport Design*, Table G-9.

**Table 6.7: Runway 17/35 Design Standards and Compliance**

| Design Criteria | Existing 17/35 | RDC A-I (Small)-VIS Standards | Compliant |
|---|---|---|---|
| Runway Length | 3,964 | See Section X | N/A |
| Runway Width | 75 | 60 | Y |
| Runway Shoulder Width | N/A | 10 | N |
| Blast Pad Width | N/A | 80 | N |
| Blast Pad Length | N/A | 60 | N |
| Crosswind Component | 10.5 KTS | 10.5 KTS | Y |
| RSA Length Beyond Runway End | 240 | 240 | Y |
| RSA Width | 120 | 120 | Y |
| ROFA Length Beyond Runway End | 240 | 240 | Y |
| ROFA Length Prior to Threshold | 240 | 240 | Y |
| ROFA Width | 250 | 250 | Y |
| ROFZ Length Beyond Runway End | 200 | 200 | Y |
| ROFZ Width | 250 | 400 | Y |
| RWY 17 and 35 Approach and Departure RPZ Length (visual) | 1,000 | 1,000 | Y |
| RWY 17 and 35 Approach and Departure RPZ Inner Width (visual) | 250 | 250 | Y |
| RWY 17 and 35 Approach and Departure RPZ Outer Width (visual) | 450 | 450 | Y |
| Centerline to Holding Position Marking | 125 | 125 | Y |
| Centerline to Parallel TWY Centerline | 270 | 150 | Y |
| Runway Gradient | 0.00% | 2.0% Max | Y |

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

### a. Runway 3/21 Compliance Scenario for ADG-IV Aircraft

The preferred forecast for air cargo includes a scenario that assumes FedEx, UPS, or another cargo carrier will introduce new scheduled service using a Boeing 757F aircraft to supplement existing cargo operations at IDA at approximately 100 annual operations. Should this scenario occur, the 757F would then become the critical aircraft for cargo operations when the 500 annual operations threshold is met. At that time, the following design standards for Runway 3/21 would change:

- IT-OFZ: H = 61 – 0.094(124.83) – 0.003(4731.32) = 61 – 11.73 – 14.19 = 35.1 feet.
- The crosswind component would increase from 16 knots to 20 knots. Runway 3/21 meets this requirement.

### b. Runway Orientation and Designation

The normal shifting of the magnetic poles can result in the need to renumber, or redesignate, airport runways. A review of the geodetic and magnetic headings for Runway 3/21 and Runway 17/35 indicates redesignation is not required for either runway during the planning horizon (Table 6.8).

**Table 6.8: Runway Designation**

| Current Runway Designation | 3 | 21 | 17 | 35 |
|---|---|---|---|---|
| Latitude | 43° 30′ 09″ N | 43° 31′ 19″ N | 43° 31′ 20″ N | 43° 30′ 41″ N |
| Longitude | 112° 05′ 07″ W | 112° 03′ 52″ W | 112° 03′ 42″ W | 112° 03′ 44″ W |
| Elevation | 4,741.99’ | 4,731.32’ | 4,731.10’ | 4,731.23’ |
| Geodetic Heading | 37° 54′ 38.87″ | | 1° 54′ 30.40″ | |
| Magnetic Heading (Current) | 26° 19′ 38.87″ | | 350° 19′ 30.40″ | |
| Magnetic Declination (Current) | 11° 35′ E | | | |
| Change/Year | 0° 6′ W | | | |
| Magnetic Declination (Future) | 9° 35′ E | | | |
| Magnetic Heading (Future) | 28° 19′ 38.87″ | | 352° 19′ 30.40″ | |

Source: NOAA; Ardurra.

### Conclusion

Runway designations for Runway 3/21 and Runway 17/35 do not need to change during the planning horizon.

### c. Runway Length

Many factors are used to help determine if a runway’s length is suitable for airplane operations. These factors include the airport’s elevation above mean sea level, average temperature, wind velocity, airplane operating weights, takeoff and landing flap settings, runway surface condition (i.e., dry or wet), effective runway gradient, presence of obstructions in the vicinity of the airport, and any locally imposed noise abatement restrictions. A given runway length may not be suitable for all aircraft operations. FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*, provides recommendations for use in the design of civil airports.

Adequate runway length is an FAA recommendation, not a design standard. It is up to the pilot operating under the unique meteorological conditions and demands of a particular flight to determine the safety of the available runway length for the operation. However, it does remain a goal of the sponsor to provide a safe environment suited to the aircraft regularly operating at the airport.

The calculations for recommended runway length are driven by the airport’s critical aircraft. For aircraft weighing more than 60,000 pounds, airport planning performance charts for individual aircraft were reviewed using conditions approximating the average temperature of the hottest month (86.2 F), and the airport’s elevation of 4,744 feet.

According to FAA AC 150/5325-4B, runway length calculations for aircraft that weigh 60,000 pounds or more, as well as regional jets, are accomplished by using performance charts for the individual aircraft. This applies to the commercial airline critical aircraft, the Airbus A320, and the cargo forecast scenario using the Boeing 757F.

For the A320, Airbus performance charts from *Aircraft Characteristics: Airport and Maintenance Planning* were reviewed to determine the approximate runway length needed to operate at IDA during the summer. An A320 operating with a takeoff weight of 160,000 pounds at 86 F at IDA's field elevation results in a takeoff runway length of approximately 7,200 feet.

The cargo forecast scenario uses a Boeing 757F to supplement cargo operations at IDA. *Aircraft Characteristics: Airport and Maintenance Planning* for the 757-200/300 published by Boeing were reviewed to determine runway length requirements under certain conditions at IDA. A 757-200 equipped with Rolls Royce engines using a takeoff weight of 220,000 pounds and 20 degrees of flaps at 84 F (i.e., maximum temperature available for the 757-200) at IDA's field elevation results in a takeoff runway length of approximately 6,800 feet.

For aircraft that weigh less than 60,000 pounds, charts within AC 150/5325-4B can be used to generate runway lengths by grouping small aircraft that weigh less than 12,500 pounds, and large aircraft that weigh between 12,500 and 60,000 pounds.

It is assumed that not every aircraft will be able to take off from the existing runway during the hottest day at maximum takeoff weight. Accordingly, the curves in AC 150/5325-4B for large aircraft less than 60,000 pounds are provided for 75% of the fleet at 60 or 90% of useful load, and 100% of the fleet at 60 or 90% of useful load. The general aviation critical aircraft, the Bombardier Challenger 300, is listed in the AC Table 3-1 as being part of the 75% fleet. Using Figure 3-1 in the AC for 75% of the fleet at 90% useful load yields a runway length of 8,600 feet. The runway length for 100% of the fleet at 60% of useful load is 9,000 feet, while the runway length for 100% of the fleet at 90% of useful load is 10,400 feet. The current runway length of Runway 3/21 is 9,002 feet, which is adequate for 75% of the large aircraft fleet at 90% useful load and 100% of the fleet at 60% useful load.

For small aircraft that weigh less than 12,500 pounds, Figure 2-1 in AC 150/5325-4B provides curves for 95% and 100% of the small aircraft fleet. These aircraft would be expected to use Runway 17/35, which is 3,964 feet long. The curve for 95% of the small aircraft fleet results in a runway length of 5,800 feet, while the curve for 100% of the small aircraft fleet yields a runway length of 6,000 feet. Both lengths exceed the existing Runway 17/35 length; however, in cases where small aircraft need a longer runway, they can use Runway 3/21. As such, Runway 17/35 is considered adequate for use by small aircraft.

**Conclusion**

The current length of Runway 3/21 and Runway 17/35 is adequate to support the critical aircraft throughout the 20-year planning horizon.

### d. Runway Width

Runway 3/21 width meets design standards. Runway 17/35 exceeds design standards by 15 feet.

### e. Displaced Threshold and Declared Distances

When an object exists that is beyond the power of the owner to remove, relocate, or lower, a runway threshold may need to be relocated down the runway, which also relocates the protective airspace, keeping it clear of object penetrations. A relocated threshold is defined by the FAA as a displaced threshold. Thresholds may also be displaced for environmental considerations, such as noise abatement, or to provide the standards for RSA and ROFA lengths, and RPZ mitigation of incompatible land uses.

Displacement of the threshold reduces the length of runway available for landing and/or takeoff. Depending on the reason for displacement, the portion of the pavement beyond the runway threshold may be available for takeoffs in either direction or landings from the opposite direction.

Displaced thresholds are communicated to pilots through visual markings on the pavement, as well as distances published in the airport's chart supplement as declared distances. Declared distances are defined as follows:

#### Takeoff Run Available

The takeoff run available (TORA) is the runway length declared available and suitable for the ground run of an aircraft taking off.

#### Takeoff Distance Available

The takeoff distance available (TODA) is the TORA plus the usable length of any remaining runway or clearway beyond the TORA. The TODA may need to be reduced because of obstacles in the departure area.

#### Accelerate-Stop Distance Available

The accelerate-stop distance available (ASDA) is the runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting takeoff.

#### Landing Distance Available

The landing distance available (LDA) is the runway length declared available and suitable for landing an aircraft.

#### Conclusion

IDA does not have any displaced thresholds or need to use declared distances for any runway.

### f. Runway Line of Sight

For individual (non-intersecting) runways with a full parallel taxiway, the standard for line of sight (LOS) requirements is to ensure any point five-feet above the runway centerline is mutually visible with any other point five-feet above the runway centerline for a distance one-half the length of the runway. Runways 3/21 and 17/35 meet this requirement.

For non-intersecting, but converging runways at airports with part-time ATCT operations, FAA AC 150/5300-13B recommends providing a clear LOS from the V1 points of both runways, where V1 is the takeoff decision speed at which the pilot makes a decision to either continue or discontinue the takeoff (e.g., as the result of an engine failure).[9] At IDA, it is possible to have aircraft taking off from Runway 35 and 3 at the same time and for those pilots to not see each other until one or both are airborne.

#### Conclusion

Runway LOS requirements are met for individual runways but not for both runways combined.

### g. Runway Pavement Strength

To meet the design life goals of the airport, runway pavements must be designed to physically withstand the weight of arriving, taxiing, and departing aircraft. This is calculated using a mix of aircraft. The maximum takeoff weight of the existing critical aircraft and those aircraft forecasted to use the airport must be considered to determine pavement strength requirements. The pavement must possess sufficient stability to withstand the abrasive action of traffic, adverse weather conditions, and other deteriorating influences.

Airport pavements degrade faster when over-stressed with loads beyond their design capability. Pavements are most stressed when aircraft loads are applied slowly (e.g., when an aircraft is taxiing or parked). Pavement loading is also a function of the number of pressure points, such that the more tires an aircraft has to distribute its load the less stress is exerted on the pavement. The current weight bearing capacity of Runway 3/21 is 140,000 pounds for single wheel, 175,000 pounds for a double wheel, and 270,000 pounds for a double tandem wheel configuration. For Runway 17/35, the weight bearing capacity is 43,000 pounds for single wheel, and 58,000 pounds for double wheel configuration.

The Airbus A320 has a maximum takeoff weight of 171,961 pounds and has a double wheel configuration. The 757-200F has a maximum takeoff weight of 255,500 pounds and has a double tandem wheel configuration. Both aircraft are below the weight bearing capacity of Runway 3/21. The Challenger 300 and ATR-72 weigh considerably less than the Airbus A320 and are well beneath the weight bearing capacity of Runway 3/21. Runway 17/35 is intended to support light general aviation aircraft, such as the Cessna 182, which has a maximum takeoff weight of 2,950 pounds and a single wheel configuration. This is below the weight bearing capacity of Runway 17/35.

#### Conclusion

The existing weight bearing capacities of Runways 3/21 and 17/35 are adequate to support the forecast aircraft through the planning horizon.

### h. Runway Incursion Mitigation

In AC 150/5300-13B, *Airport Design*, the FAA recommends the three-path concept for taxiway design. This concept is intended to prevent complex intersections that increase the possibility of pilot error and confusion which can lead to a runway incursion or accident. This design practice keeps taxiway intersections simple by providing pilots no more than three choices at an intersection—left, right, and forward. This also improves safety by allowing for proper placement of airfield markings, signage, and lighting.

Other measures that help reduce confusion and runway incursions are to avoid wide expanses of pavement at runway/taxiway intersections; limit runway crossings; avoid high-energy runway crossing intersections (i.e., An intersection within the middle third of a runway); increase pilot visibility by using 90-degree turns at runway entrance or crossing points; and eliminate direct runway access from a parking apron without requiring a turn.

#### Existing Conditions

- All intersections meet the three-path concept.
- There are no wide expanses of pavement at runway/taxiway intersections.
- There is one high energy runway crossing at the intersection of Taxiway C and Runway 17/35. This crossing also provides direct access to the runway from the east general aviation parking apron. As previously mentioned in Section 4.5.9., Hot Spots, this intersection has been identified as Hot Spot 1 in the IDA Chart Supplement.

- All runway and taxiway intersections have 90-degrees turns. However, Taxiway B2, which is between Runway 17/35 and Taxiway A, has a bend just before the hold position marking.

**Figure 6.5: Runway 17/35, Taxiway C Intersection with Direct Apron Access**

Source: Ardurra.

### Conclusion

The intersection of Runway 17/35 and Taxiway C should be reviewed for alternatives to eliminate Hot Spot 1.

### 6.3.3. Taxiway System Requirements

Taxiways are defined paths that allow aircraft to move from one part of an airport to another. Like runways, taxiways have airport design standards, recommended practices, and design considerations based on the type of aircraft expected to use the taxiways. Taxiways should be designed for cockpit over centerline taxiing. This means the pavement should be sufficiently wide enough to allow a certain amount of aircraft wander from the centerline. The allowance for wander is provided by the taxiway edge safety margin (TESM) which is measured from the outside of the design landing gear to the edge of the taxiway. Dimensional taxiway design standards are established based on an FAA grouping called taxiway design group (TDG). Like runways, taxiway design includes associated safety and object free areas to provide a safety buffer around movement areas determined based on the taxiway's design standard. Guidance from Chapter 4. Taxiway and Taxilane Design, of AC 150/5300-13B, *Airport Design*, was used to establish taxiway design standards.

**Taxiway/Taxilane Centerline to Fixed or Movable Object Separation**

The minimum distance between the centerline of a taxiway or taxilane to a fixed or movable object. Objects that are fixed-by-function are allowed within this area.

**Taxiway/Taxilane Safety Area**

The taxiway/taxilane safety area (TSA) is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft deviating from the taxiway.

**Taxiway/Taxilane Object Free Area**

The taxiway/taxilane object free area (OFA) is an area on the ground centered on a taxiway/taxilane centerline provided to enhance aircraft operations safety by remaining free of objects except for any objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

The airport design code and TDG associated with the identified critical aircraft at IDA (A320) are ADG III and TDG 3. As discussed in the forecast chapter, the FAA states that different critical aircraft may be identified to define separate elements of the airport design. The most demanding aircraft for taxiway requirements is the Q-400, which is operated by Alaska Airlines, with a TDG of 5. The west taxiway system of the airport was designed and built to TDG 5 standards to account for MD-80 and Q-400s operated previously. MD-80s have since been replaced by the A320, and Alaska Airlines intends to eliminate the Q-400 from their fleet by the end of 2023. Despite this, strong passenger growth in 2021 and 2022, added Q-400 service, and the potential for increased cargo operations by larger aircraft result in a need to plan accordingly. Therefore, taxiway design at IDA for the primary runway and movement areas continues to be defined by ADG III and TDG 5 standards.

For the taxiways and taxilanes supporting Runway 17/35, the taxiway design changes due to the types of aircraft and operations in that area. In 2019, a memorandum was submitted to the FAA explaining that this area of the airport supports significant tailwheel operations. The configuration of the gear orients the pilot at an upward angle, causing the engine cowling to obstruct a pilot's vision of the taxiway while operating on the ground. A taxiing technique used to overcome the visual obscuration is to taxi with a slight swerve left and right of the taxiway centerline. Because taxiways are designed for cockpit over centerline taxiing, a wider taxiway is needed to support tailwheel aircraft needing to taxi with a swerve. This is recognized in the AC. However, the AC does not provide further guidance for taxiway design for tailwheel aircraft. The 2019 memorandum recommends that the width of taxiways at IDA should be a minimum of TDG 3, which correlates to a width of 50 feet. The most recent ALP dated 2021 also identifies the design of this area as ADG II, TDG 3.

Table 6.9 outlines the existing conditions at IDA in comparison to the FAA design standards for ADG III, TDG 5 and ADG II, TDG 3 areas, according to the runways they directly support.

**Table 6.9: Taxiway Standards**

| Design Criteria | Runway 3/21 | | Runway 17/35 | | Meets Standards? | |
|---|---|---|---|---|---|---|
| | Existing | Standard | Existing | Standard | Rwy 3/21 | Rwy 17/35 |
| **Taxiway Protection Based on Airplane Design Group (ADG)** | | | | | | |
| **Standard Applied** | | **ADG III** | | **ADG II** | | |
| Taxiway Safety Area (TSA) Width | 118 ft. | 118 ft. | 79 ft. | 79 ft. | Y | Y |
| Taxiway Object Free Area (TOFA) | 171 ft. | 171 ft. | 124 ft. | 124 ft. | Y | Y |
| Taxilane OFA (TLOFA) | 158 ft. | 158 ft. | 110 ft. | 110 ft. | Y | Y |
| **Taxiway Separation** | | | | | | |
| Taxiway Centerline to Fixed or Movable Object | 93 ft. | 85.5 ft. | 65.5 ft. | 62 ft. | Y | Y |
| Taxilane Centerline to Fixed or Movable Object | 81 ft. | 79 ft. | 57.5 ft. | 55 ft. | Y | Y |
| **Taxiway Design Based on Taxiway Design Group (TDG)** | | | | | | |
| **Standard Applied** | | **TDG 5** | | **TDG 3** | | |
| Taxiway Width | Varies 60 ft. min. | 75 ft. | Varies 35 ft. min. | 50 ft. | N | N |
| Taxiway Edge Safety Margin | 14 ft. | 14 ft. | 10 feet | 10 ft. | Y | Y |
| Taxiway Shoulder Width | 20 ft. | 30 ft. | Varies 0–20 ft. | 20 ft. | N | N |

Source: FAA, AC 150/5300-13B

### Conclusion

IDA meets appropriate design standards for all design criteria except taxiway width and taxiway shoulder width, due to the varying widths along the length of the taxiways. There are areas of the taxiway that meet the standards. However, the narrowest sections do not meet the minimum requirements for FAA design. Additionally, all object free areas and safety areas are within standards and contain no penetrations or incompatible land uses.

### a. ADG-IV Taxiway Design Standards Scenario

In the event an ADG-IV aircraft becomes the critical aircraft for taxiway standards, the following taxiway design changes would occur:

- TSA: Increase from 118 feet to 171 feet.
- TOFA: Increase from 171 feet to 243 feet.
- TLOFA: Increase from 158 feet to 224 feet.
- Taxiway centerline to fixed or movable object: Increase from 85.5 feet to 121.5 feet.
- Taxilane centerline to fixed or movable object: Increase from 79 feet to 112 feet.

### 6.3.4. Airspace Requirements

Ensuring an airport's operational airspace is planned for and protected is necessary for the airport's long-term viability.

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

Title 14 of the Code of Federal Regulations (CFR) 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 and specific to individual runways based on runway category and instrument approach (Figure 6.6).

The most precise existing or proposed instrument approach for the specific runway end determines the slope and dimensions of each approach surface. Any object, natural or man-made, that penetrates these imaginary surfaces is considered to be an obstruction.

**Primary Surface**

A rectangular area, symmetrically located along the runway centerline, that extends 200 feet beyond each runway threshold. The elevation of the Primary Surface is the same as the corresponding runway elevation. The most demanding existing or planned instrument approach for either runway end determines the Primary Surface width. In all cases, the width equals the inner width of the approach surface.

**Approach Surface**

A surface that begins at the ends of the Primary Surface and slopes upward, and flares outward horizontally at a predetermined ratio. The width and elevation at the inner Approach Surface conform to the Primary Surface. The slope, length, and width of the outer ends are governed by the runway service category, existing or proposed instrument approach procedure, and approach visibility minimums.

**Horizontal Surface**

An oval-shaped, level area situated 150 feet above the highest point on the airport's usable runways. The perimeter is established by swinging arcs of specified radii from the center of each end of the Primary Surface of each runway and connecting the adjacent arcs by lines tangent to those arcs. The arcs at either end will have the same value.

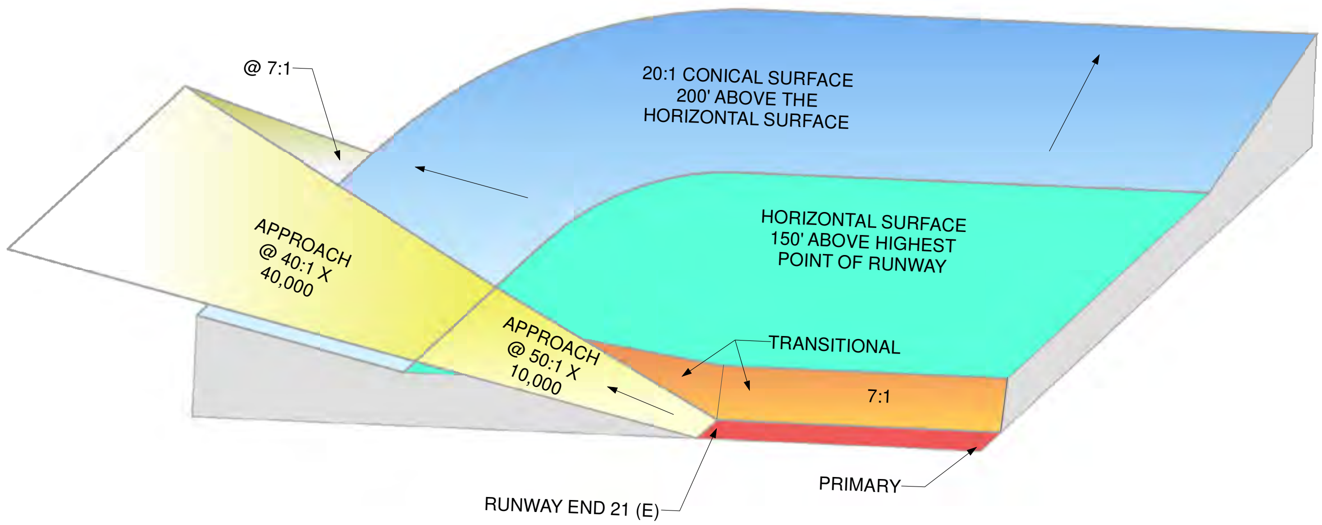
**Conical Surface**

A sloping area whose inner perimeter conforms to the shape of the Horizontal Surface.

**Transitional Surface**

An area that begins at the edge of the Primary Surface and slopes at a ratio of 7:1 (horizontal: vertical) until it intersects the Horizontal Surface.

**Figure 6.6: Part 77 Imaginary Surfaces**




Source: 14 CFR Part 77; Ardurra.

The dimensions of IDA's Part 77 surfaces are listed in Table 6.10.

**Table 6.10: IDA Part 77 Dimensions**

| Primary Surface | Runway 3/21 (Primary) | | Runway 17/35 | |
|---|---|---|---|---|
| Width | 1,000 feet | | 250 feet | |
| Length Beyond Runway End | 200 feet | | 200 feet | |
| **Horizontal Surface** | | | | |
| Height Above Airport Elevation | 150 feet | | 150 feet | |
| Radius Arc | 10,000 feet | | 5,000 feet (Encompassed by Runway 3/21) | |
| **Conical Surface** | | | | |
| Length | 4,000 feet | | 4,000 feet | |
| Slope | 20:1 | | 20:1 | |
| **Transitional Surface** | | | | |
| Slope | 7:1 | | 7:1 | |
| **Approach Surface Runway** | **RWY 3** | **RWY 21** | **RWY 17** | **RWY 35** |
| Inner Width | 1,000 feet | 1,000 feet | 250 feet | 250 feet |
| Outer Width | 4,000 feet | 16,000 feet | 1,250 feet | 1,250 feet |
| Length | 10,000 feet | 10,000 feet plus 40,000 feet | 5,000 feet | 5,000 feet |
| Slope | 34:1 | 50:1 then 40:1 | 20:1 | 20:1 |

Source: 14 CFR, Part 77

### b. Approach and Departure Standards

In addition to the Part 77 imaginary surfaces are the protective surfaces outlined in FAA AC 150-5300-13B, *Airport Design*, though they serve the same function for the protection of the use of the runway. The AC defines approach and departure surface dimensions based on the runway type, the approach category of the aircraft using the runway, and the runway's instrument approach minimums.

### c. Runway 3/21 Approach Surfaces

As previously summarized in Table 3.2, Instrument Approach Procedures, the approach procedure with the lowest minimum visibility requirement for Runway 3 is associated with the localizer performance with vertical guidance (LPV) approach which has a 3/4-mile visibility requirement. The approach procedure with the lowest minimum visibility requirement for Runway 21 is associated with the instrument landing system (ILS) approach which has a 1/2-mile visibility requirement.

The approach surface dimension standards for these approach types are listed in AC 150/5300-13B, "Table 3-4. APV and PA Instrument Runway Approach Surfaces" and illustrated in "Figure 3-7. Approach Procedure with Vertical Guidance (APV) and Precision Approach (PA) Instrument Runway Approach Surfaces." Both are included as Figure 6.7.[10] As shown in Figure 6.7, both of these approach types require approach Surface 5 and Surface 6.

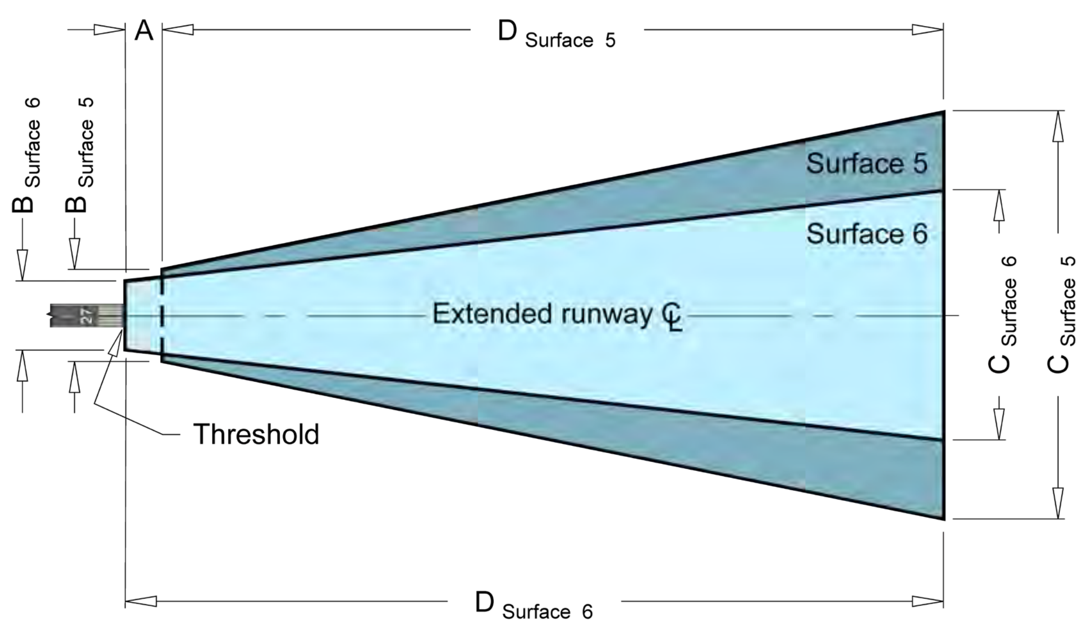
**Figure 6.7:** Instrument Runway Approach Surfaces

**Table 3-4. APV and PA Instrument Runway Approach Surfaces**

| Surface | Runway Type | Visibility minimums | A ft (m) | B ft (m) | C ft (m) | D [4] ft (m) | Slope |
|---|---|---|---|---|---|---|---|
| **Surface 5** | Approach end of runways providing ILS, MMLS, PAR, and localizer type directional aid with glidepath, LPV, LNAV/VNAV, RNP, or GLS. | ≥ ¾ statute mile (1.2 km) | 200 (61) | 400 (122) | 3,400 (1,036) | 10,000 (3,048) | 20:1 |
| | | < ¾ statute mile (1.2 km) | 200 (61) | 400 (122) | 3,400 (1,036) | 10,000 (3,048) | 34:1 |
| **Surface 6** | Approach end of runways providing ILS, MMLS, PAR, and localizer type directional aid with glidepath, LPV, LNAV/VNAV, RNP, or GLS. | All | 0 | Runway Width + 200 (61) | 1,520 (463) | 10,200 (3,109) | 30:1 |

**Note 1:** Dimension A is relative to the runway threshold.
**Note 2:** Surface 5 represents the TERPS visual portion of the final approach segment. Surface 6 represents the TERPS Vertical Guidance Surface (VGS). Both surfaces apply for APV and PA procedures. Contact the Flight Procedures Team if existing obstacles penetrate this surface.
**Note 3:** The FAA assesses TERPS final approach segment criteria (e.g., W, X, Y surfaces) for all runway ends authorized for ILS, mobile microwave landing system (MMLS), precision approach radar (PAR), and localizer type directional aid with glide slope, LPV, and GLS procedures. Refer to FAA Order 8260.3 for additional information on TERPS surfaces.
**Note 4:** Represents a nominal value for planning purposes. The actual length depends on the precision final approach fix.

**Figure 3-7. Approach Procedure with Vertical Guidance (APV) and Precision Approach (PA) Instrument Runway Approach Surfaces**




**Note:** Refer to Table 3-4 for dimensional values.

Source: FAA, AC 150/5300-13B.

### d. Runway 17/35 Approach Surfaces

Approach surface dimension standards for visual approaches are listed in Table 3-2 and illustrated by Figure 3-5 from AC 150/5300-13B; both are included as Figure 6.8.[11]

Runway 17/35 is a visual runway intended for use by small aircraft (i.e., less than 12,500 pounds) with approach speeds of 50 knots or more. As shown in Figure 6.8, both runway ends require approach Surface 2.

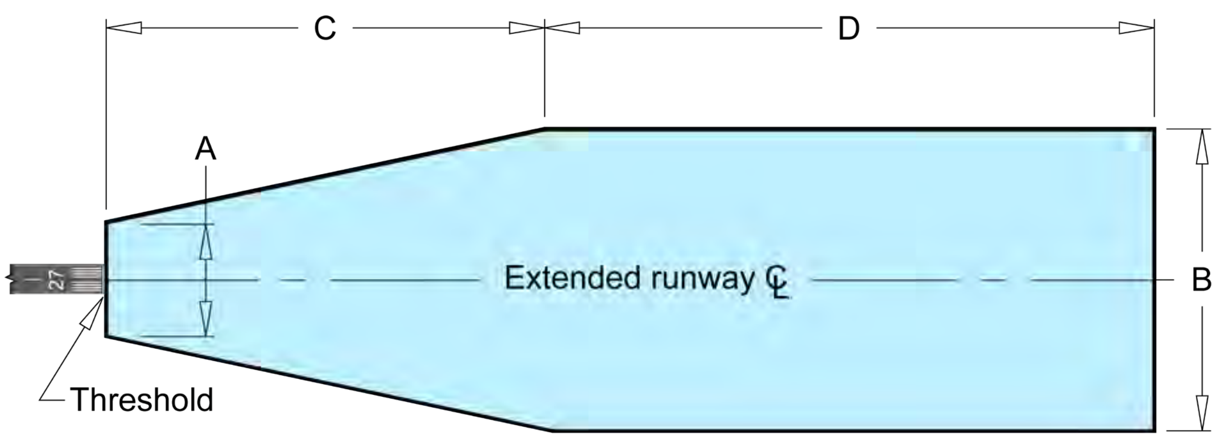
**Figure 6.8: Visual Approach Surfaces**

**Table 3-2. Visual Approach Surfaces**

| Surface | Runway Type | A ft (m) | B ft (m) | C ft (m) | D ft (m) | Slope |
|---|---|---|---|---|---|---|
| **Surface 1** | Approach end of runways serving small airplanes with approach speeds less than 50 knots. | 120 (37) | 300 (91) | 500 (152) | 2,500 (762) | 15:1 |
| **Surface 2** | Approach end of runways serving small airplanes with approach speeds of 50 knots or more. | 250 (76) | 700 (213) | 2,250 (686) | 2,750 (838) | 20:1 |
| **Surface 3** | Approach end of runway serving large airplanes (>12,500 lbs (5,669 kg)) | 400 (122) | 1,000 (305) | 1,500 (457) | 8,500 (2,591) | 20:1 |

**Note:** Approach surface begins at the runway threshold.

**Figure 3-5. Visual Approach Surfaces**




**Note 1:** Refer to Table 3-2 for dimensional values.
**Note 2:** Surface slopes upward and away from starting point.

Source: FAA, AC 150/5300-13B.

### e. Runway Departure Surfaces

Clear departure surfaces allow pilots to follow standard instrument departure procedures which assist pilots in avoiding obstacles during the initial climb from the terminal area. The FAA publishes these procedures in the *U.S. Terminal Procedures Publications* (TPP) which includes all instrument approach procedure (IAP) charts, departure procedure (DP) charts, standard terminal arrival (STAR) charts, charted visual flight procedures (CVFP), and airport diagrams for the entire United States. Unless otherwise stated in the TPP, the departure surface applies to all runways. For runway ends without an instrument departure surface, the airport operator coordinates with the FAA to identify it in the TPP as being not authorized for IFR departures.

Runway 17 is listed in the TPP as not having an instrument departure for environmental reasons. The instrument departure surface for Runway 3, Runway 21, and Runway 35 use the standards for Surface 7. These standards are listed in Table 3-5 from AC 150/5300-13B which is included as Figure 6.9. This is also illustrated by the accompanying figures from the AC, Figure 3-9 and Figure 3-11, which are included as Figure 6.10 and Figure 6.11.[12] The TPP also lists takeoff minimums and (obstacle) departure procedures. For IDA, it lists a pole as a takeoff obstacle for Runway 3 and vehicles, trees, and a pole as takeoff obstacles for Runway 35.

**Figure 6.9: Instrument Departure Surface Dimensions**

**Table 3-5. Instrument Departure Surface**

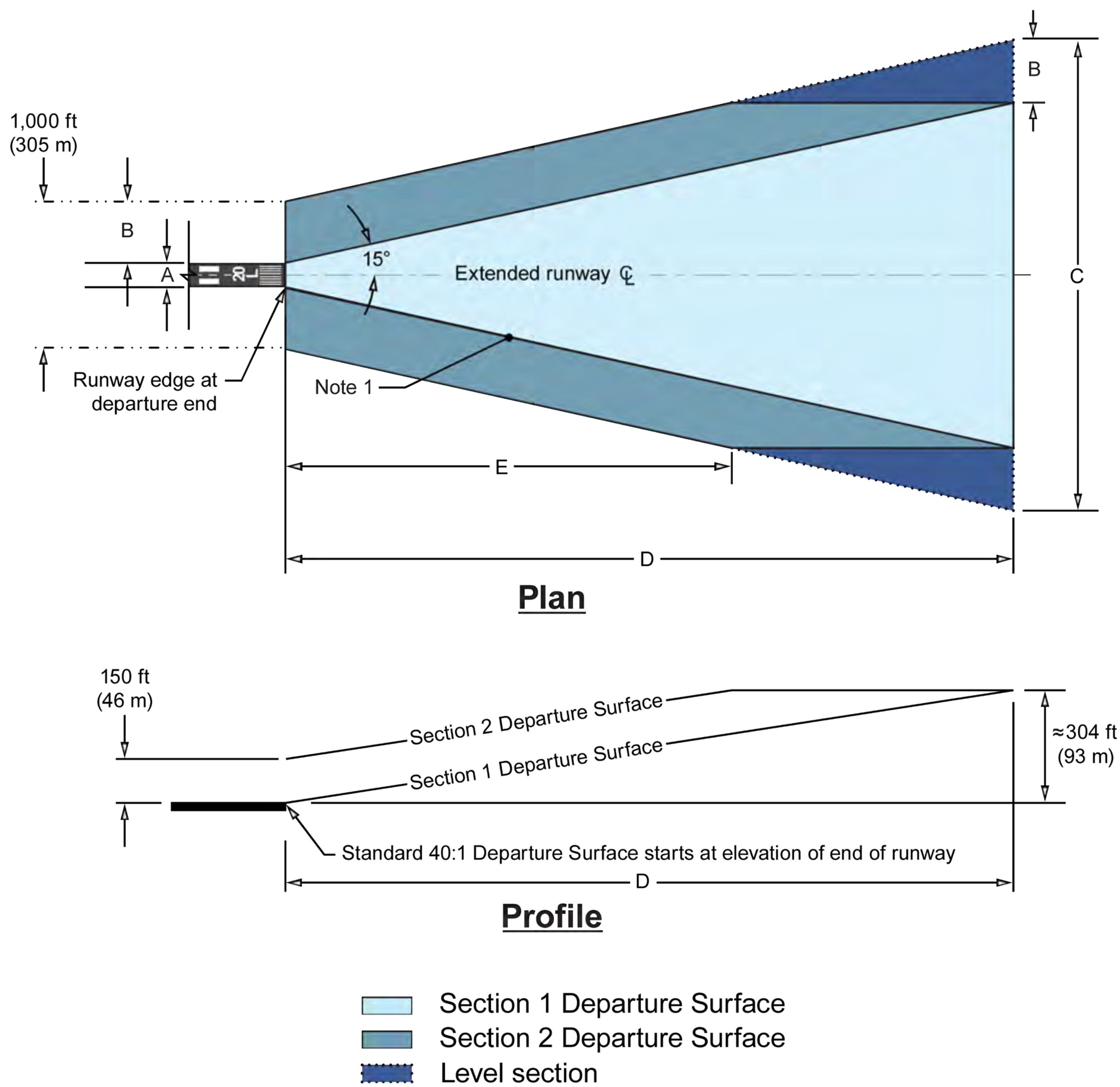
<table>
<tr><th>Surface</th><th>Runway Type</th><th>A ft (m)</th><th>B ft (m)</th><th>C ft (m)</th><th>D 4 ft (m)</th><th>E ft (m)</th><th>Section 2 Angle θ 2</th><th>Section 2 Transverse Slope m2</th></tr>
<tr><td rowspan="5">Surface 7</td><td rowspan="5">Runways providing instrument departure operations</td><td>60 (18.3)</td><td>470 (143)</td><td rowspan="5">7,512 (2,290)</td><td rowspan="5">12,152 (3,704)</td><td rowspan="5">6,152 (1,875)</td><td>17:7</td><td>3.13:1</td></tr>
<tr><td>75 (22.9)</td><td>462.5 (141)</td><td>18.0</td><td>3.08:1</td></tr>
<tr><td>100 (30.5)</td><td>450 (137)</td><td>18.4</td><td>3.00:1</td></tr>
<tr><td>150 (46)</td><td>425 (130)</td><td>19.4</td><td>2.83:1</td></tr>
<tr><td>200 (61)</td><td>400 (122)</td><td>20.6</td><td>2.67:1</td></tr>
</table>

**Note 1:** Section 1 of the departure surface starts at the DER elevation for the width of the runway and rises along the extended runway centerline at 40:1. Section 2 starts at an equal elevation to the adjoining Section 1. Section 2 continues until reaching 304 ft (93 m) and then levels off until reaching the line where Section 1 and Section 2 reach 304 ft (93 m) above DER elevation, then that part of Section 2 that leveled off continues at a 40:1 slope.
**Note 2:** See Figure 3-11 for a graphical depiction of these values.
**Note 3:** The start of the surface is relative to the departure end of the runway. For runways with published declared distances, the TODA indicates the beginning of the departure surface. See Figure 3-10.
**Note 4:** 12,152 feet (3,704 m) represents a 2 nm nominal value for planning purposes.
**Note 5:** For other runway width values, interpolation is required to determine the value of "B", the Section 2 angle, and the Section transverse slope.

Source: FAA, AC 150/5300-13B, Figure 3-9.

**Figure 6.10: Instrument Departure Surface Diagram**

**Figure 3-9. Instrument Departure Surface**

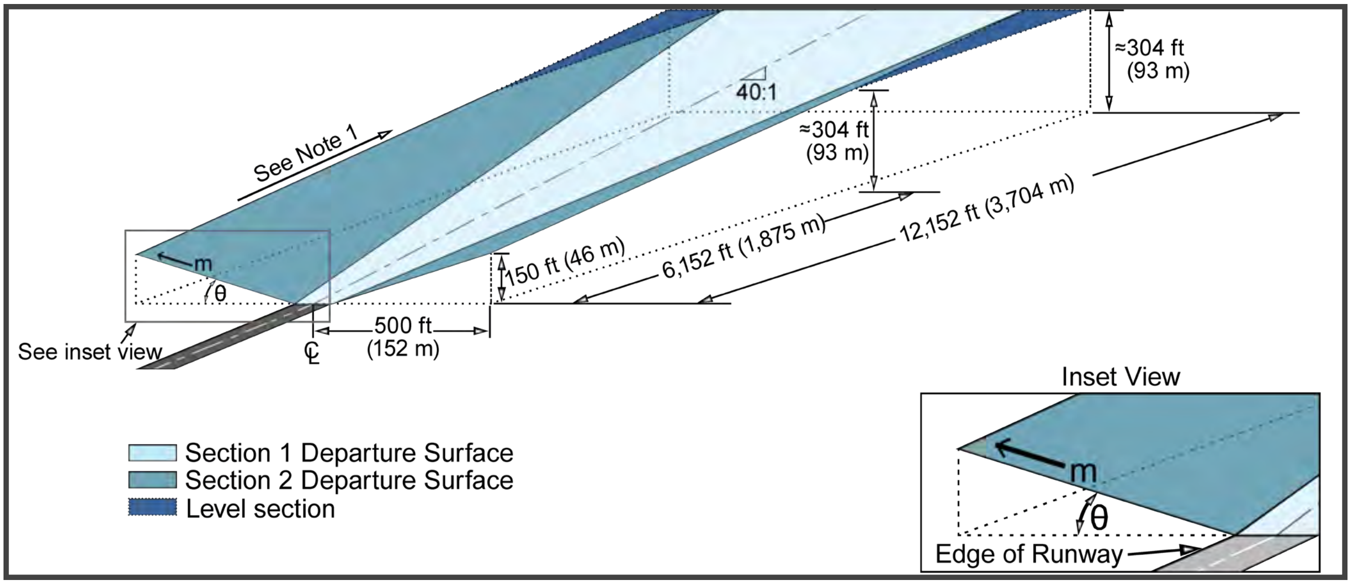



**Note 1:** The half-width of Section 1 is calculated by the formula:
Section $1_{\text{Half Width}}$ = (1/2 RWY Width) + (Tan 15° × X), where X = distance from the departure end of the runway.

**Note 2:** See Table 3-5 for dimensional values.

Source: FAA, AC 150/5300-13B.

### Figure 6.11: Departure Surface — Perspective View (Without Clearway)




Note 1: The outer edge of the Section 2 Departure Surface has a slope of 40:1.
Note 2: The 304-foot (93 m) value represents the height above the DER.
Note 3: Refer to paragraph 3.6.2.1 for additional information.

Source: FAA, AC 150/5300-13B, Figure 3-11.

### 6.3.5. Precision Approach Path Indicator Clearance Surfaces

As previously discussed in Section 4.6.3., Precision Approach Path Indicators, each runway end is equipped with a precision approach path indicator (PAPI) that provides pilots with visual glideslope guidance during landing.

A PAPI obstacle clearance surface (OCS) is established to provide pilots with a minimum clearance over obstacles during an approach. The surface begins 300 feet in front of the PAPI and extends outward vertically into the approach zone at an angle one degree less than the aiming angle of the third light unit for a four-light system or the outside light for a two-light system. The surface expands horizontally outward 10 degrees from each side of the extended runway centerline for four statute miles.

Since the OCS originates at the runway centerline, and PAPI light boxes are located off to the side of the runway, the light beams emitted from each PAPI lightbox can be well outside the OCS. This is why the obstacle clearance protection provided by the OCS survey is not entirely sufficient. In order to ensure full obstacle clearance of the PAPI lights, a light signal clearance surface (LSCS) survey is required. Details of the LSCS survey process can be found in Engineering Brief Number 95, *Additional Siting and Survey Considerations for Precision Approach Path Indicator (PAPI) and Other Visual Glide Slope Indicators (VGSI)*.

When a PAPI is used on a runway that is also equipped with electronic ILS glideslope, such as Runway 21 at IDA, the PAPI visual glide path should coincide with the electronic glideslope. For those runways without an electronic glideslope, the PAPI glide path should produce the required threshold crossing height and clearance over obstacles in the approach for that runway. The threshold crossing height is the height of the lowest on-course signal at a point directly above the runway centerline and runway threshold. Threshold crossing height for small GA runways is typically 40 feet, while runways used by airlines range between 45 and 50 feet.

For Runway 3/21, both PAPI systems are set at a 3° visual glideslope with a 50-foot threshold crossing height. For Runway 17/35, the visual glideslope for Runway 17 is set at a 3° visual glideslope with a 40-foot threshold crossing height, and the visual glideslope for Runway 35 is set at a 3.5° angle with a threshold crossing height of 45 feet.

#### Conclusion

All Part 77, approach and departure, and PAPI OCS/LSCS surfaces should be protected to the maximum extent possible. Existing obstructions should be eliminated or marked and lighted.

### 6.3.6. Electrical, Visual, and Satellite Navigation Aids

Navigational aids (NAVAIDs) are visual or electronic devices that enhance safety for airport operations. There is a wide variety of communication, navigation, surveillance, and weather (CNSW) systems that assist pilots by locating the airport, updating weather conditions, or identifying the landing direction. As discussed in Section 4.6, IDA is outfitted with multiple NAVAIDs. These include an instrument landing system (ILS), runway end identifier lights (REIL), precision approach path indicators (PAPI), a segmented circle and wind cone, a very high frequency omnidirectional range with distance measuring equipment (VOR-DME), an airport beacon, an automated surface observing system (ASOS), a supplementary wind equipment F-420 (WEF) system, and a runway visual range (RVR) system. Every NAVAID has installment specifications that can include requirements for critical areas surrounding the equipment that must be kept clear of objects and obstructions. Table 6.11 lists the general function and any critical area requirements for each of these NAVAIDS.

**Table 6.11: NAVAID Requirements**

| Equipment | General Function | Critical Area Requirements | Compliant |
|---|---|---|---|
| **ILS**<br>1.Localizer<br>2.Glide Slope | Instrument Approach | • 2,000 feet long x 400 feet wide oriented towards the approach.*<br>• 2,000 feet long x 400 feet wide oriented towards the approach and 50 feet behind the antenna. | Y |
| REIL | Runway Identification | N/A | N/A |
| PAPI | Approach Slope Angle | N/A | N/A |
| VOR-DME | Navigation | 1,000 feet | N |
| Beacon | Airport Identification | N/A | N/A |
| ASOS | Weather Reporting | • Obstructions within a 500-foot radius are limited to 15 feet below the wind sensor.<br>• No hover or taxi operations within 100 feet.<br>• Ideally, obstructions are not higher than 10 feet below the sensor or within a 500–1,000-foot radius. | Y |
| F-420<br>Wind Sensor | Wind Indicator<br>Cross-Check | • Obstructions within a 500-foot radius are limited to 15 feet below the wind sensor.<br>• No hover or taxi operations within 100 feet.<br>• Ideally, obstructions are not higher than 10 feet below the sensor or within a 500–1,000-foot radius. | Y |
| RVR | ILS Visibility | N/A | Y |

*Critical area active during ILS operations.

Source: FAA Orders 6820.10, 6850.2B, 6560.10D, AC 150/5300-13B, U.S. Dept. of Commerce FCM-S4-2019

#### Conclusion

The 1,000-foot critical area for the VOR-DME contains general aviation hangars and impedes development of the cargo apron and the installation of a holding bay at the Runway 21 end. The VOR-DME should be either relocated or upgraded to a Doppler VOR, which would reduce the size of the critical area by half.

### 6.3.7. Airport Traffic Control Tower

As previously discussed in Section 4.5.6, the airport traffic control tower (ATCT) was constructed in 1960 and currently occupies space within the passenger terminal. While the ATCT contributes to the safe operation and success of the airport, its current location restricts terminal expansion efforts required to meet passenger demand.

**Conclusion**

Consideration should be given to finding an alternate site for the airport traffic control tower.

### 6.3.8. Instrument Approach Procedures

As discussed in Section 3.3.2., Instrument Approach Procedures for Idaho Falls Regional Airport, there are currently eight instrument approach procedures for Runway 3/21. According to historic meteorological data at IDA, IFR conditions exist approximately 8% of the time. Runway 3/21 is properly equipped for instrument approaches to the runway with visibility minimums as low as 1/2 mile. By runway end, the ILS for Runway 21 lowest minimums are 250 feet height above touchdown (HAT) and 1/2-mile visibility. Runway 3 lowest minimums are achieved with the RNAV (GPS) Y with a HAT of 200 feet and visibility of 3/4 mile.

**Conclusion**

Given the percentage of IFR hourly observations and the aircraft expected to use the airport, the current instrument approaches to Runway 3/21 at IDA are adequate to support aircraft operations through the 20-year planning period. While the instrument approach procedures are adequate and appropriate, minimums can be improved by eliminating terrain obstructions for Runway 21 and adding an approach lighting system to Runway 3.

## 6.4. Commercial Service Passenger Terminal

### 6.4.1. Commercial Apron Requirements

The commercial terminal apron is approximately 425,000 square feet and consists of both concrete and asphalt pavement. There are six aircraft parking positions serviced by three ground-level enclosed walkways (Gates A1–A3) and three upper-level passenger boarding bridges (Gates B1–B3).

Gates A1 and B1 are marked to accommodate regional jets. Gates A2, A3, B2, and B3 are marked for Airbus A320 and Boeing 737 aircraft. All ground-level gates have 110V and 240V power. Gates A2 and A3 have aircraft ground power units (GPU). Each upper level gate is equipped with a GPU and pre-conditioned air (PCA) capable of serving all aircraft using the airport except the Q-400.

There are two potable water cabinets along the west face of the terminal building and one along the walkway to Gate A1. There are two remain overnight (RON) parking positions marked on the apron. The concrete deicing pad behind Gate A1 is unusable when an aircraft is parked at the gate. The airline lavatory dump is at the apron edge approximately 300 feet south of Gate A1.

According to the forecast, in 2021 the average number of commercial airline operations during the peak hour of the peak month was four. As shown in Table 6.12, this is expected to increase to six by 2026. To determine the number of gates that will be needed during the peak hour as a result of this increase, individual and combined airline schedules were taken into consideration as well as other factors such as delays, gate use agreements, and potential new flights. The calculation used to determine the number of gates needed during the peak hour was the forecast peak hour operations plus a 30% surge factor.

**Table 6.12: Terminal Gate Requirements**

| Planning Year | Peak Hour Operations | Existing Gates | Required Gates | Gates Needed |
|---|---|---|---|---|
| 2021 | 4 | 6 | 5 | -1 |
| 2026 | 6 | 6 | 8 | +2 |
| 2031 | 6 | 6 | 8 | +2 |
| 2036 | 6 | 6 | 8 | +2 |
| 2041 | 6 | 6 | 8 | +2 |

Source: Ardurra.

#### Conclusion

Adding two gates requires an expansion of the terminal building itself and two additional parking spaces on the terminal apron. The additional parking spaces should accommodate the full range of aircraft expected to be used by the airlines during the planning horizon, up to and including the Airbus A320 and Boeing 737-900MAX. FAA AC 150/5300-13B recommends a minimum clearance of 25 feet between parking positions for an ADG-III aircraft. Parking positions should also allow enough clearance for an ADG-IV aircraft taxiing on Taxiway A, which may require shifting the vehicle service road. The deicing pad should be relocated outside the envelope of the gate parking positions. A covered lavatory dump should be considered.

### 6.4.2. Passenger Terminal Building

Terminal requirements in this section are the result of a focused planning study conducted by Alliiance as part of this airport master plan. The full technical report is included as **Appendix C: Terminal Expansion Planning Study Report**. This report provides a detailed explanation of the planning assumptions used and conclusions reached. Planning activity level assumptions for this section differ from the airport master plan forecast in that these terminal requirements consider the addition of two new airlines beyond the airport master plan forecast; one using a Boeing 737-700 and the other using an Embraer 145 regional jet. Two scenarios were considered; one with the new service occurring within the peak hour, and one occurring outside the peak hour. This was done because of the extreme sensitivity of the terminal facilities to peak hour passenger activity. The preferred scenario used for this section is with the new service occurring outside of the peak hour. Table 6.13 summarizes the peak activity levels used for generating the terminal planning requirements under this section, and Table 6.14 summarizes the trigger points for each terminal functional area.

**Table 6.13: Terminal Planning Peak Activity Levels**

| Year | Peak Hour | | Avg. Load Factor | Peak Month Avg Day | | Peak Month Enplanements | Annual Enpl. | CAGR |
|---|---|---|---|---|---|---|---|---|
| | Enpl. | Dep Ops | | Enpl. | Dep Ops | | | |
| **Historical** | **21.7%** | | | **27** | | **12.6%** | | |
| 2021 | 228 | 3 | 75.9% | 1,052 | 16 | 28,178 | 223,741 | |
| **Forecast** | **19.1%** | | | | | **11.1%** | | |
| 2026 | 302 | 4 | 79.0% | 1,581 | 23 | 49,011 | 441,541 | 1.3% |
| 2031 | 322 | 4 | 84.0% | 1,686 | 23 | 52,266 | 470,865 | 1.3% |
| 2041 | 366 | 4 | 95.0% | 1,919 | 23 | 59,489 | 535,937 | 1.3% |

Source: Alliiance

#### Conclusion

Virtually all of the functional areas in the terminal building need to be expanded or renovated if delays are to be avoided during peak hour activity. One major factor contributing to terminal requirements is airline scheduling and aircraft types. Multiple large aircraft operating within the peak hour, either by schedule or by system delays, will cause significant impacts on the terminal's ability to safely and comfortably process passengers.

**Table 6.14: Terminal Planning Trigger Points**

| Functional Area | 2021 | | Forecast | | |
|---|---|---|---|---|---|
| | Existing | Recommended | 2026 | 2031 | 2041 |
| **General** | | | | | |
| Annual Enplanements | 223,741 | - | 441,541 | 470,865 | 535,937 |
| Peak Hour Enplaned | 228 | - | 302 | 322 | 366 |
| Peak Hour Deplaned | 240 | - | 285 | 303 | 345 |
| **Gates/Aircraft Positions** | | | | | |
| Small Regional (Cessna/Metro) | - | - | - | - | - |
| Medium Regional (CRJ/ERJ) | - | - | - | - | - |
| Large Regional (Q400/E175/CRJ9) | - | 5 | 5 | 5 | 6 |
| Narrowbody (A320/B737W) | 6 | 1 | 1 | 2 | 2 |
| Total Aircraft Gates/Positions | 6 | 6 | 6 | 7 | 8 |
| **Public Space** | | | | | |
| Circulation Total (sf) | 20,431 | 21,570 | 24,280 | 26,980 | 29,720 |
| Ticket Lobby Circulation (sf) | 1,727 | 1,170 | 1,850 | 1,850 | 2,050 |
| Baggage Claim Circulation (sf) | 3,323 | 1,500 | 1,500 | 1,500 | 1,500 |
| Airside Concourse Circulation (sf) | 3,247 | 6,970 | 6,970 | 8,130 | 9,300 |
| General Public Circulation (sf) | 12,134 | 11,930 | 13,960 | 15,500 | 16,870 |
| **Security Screening Checkpoint (sf)** | **4,909** | **5,190** | **7,390** | **7,390** | **7,390** |
| Number of Lanes | 2 | 1 | 2 | 2 | 2 |
| Security Screening Area (sf) | 2,638 | 3,090 | 4,690 | 4,690 | 4,690 |
| Queuing Area (sf) | 777 | 600 | 1,200 | 1,200 | 1,200 |
| TSA Offices (sf) | 1,494 | 1,500 | 1,500 | 1,500 | 1,500 |
| **Queuing/Waiting Area Total (sf)** | **7,623** | **7,500** | **8,900** | **8,970** | **9,460** |
| Public Seating (sf) | 655 | 480 | 610 | 650 | 720 |
| Ticket Lobby/Kiosks (sf) | 2,558 | 2,010 | 3,180 | 3,180 | 3,510 |
| Baggage Claim Devices | 2 | 2 | 2 | 2 | 2 |
| Linear Frontage (public side) (lf) | 182 | 180 | 180 | 180 | 180 |
| Baggage Claim Hall (sf) | 4,410 | 4,500 | 4,500 | 4,500 | 4,500 |
| Meeter/Greeter Lobby (sf) | - | 510 | 610 | 640 | 730 |
| **Gate Lounges/Holdrooms Total (sf)** | **12,642** | **10,900** | **10,900** | **13,900** | **15,480** |
| Medium Regional (sf) | - | - | - | - | - |
| Large Regional (sf) | - | 7,890 | 7,890 | 7,890 | 9,470 |
| Narrowbody (sf) | - | 3,010 | 3,010 | 6,010 | 6,010 |
| **Restrooms Total (sf)** | **2,781** | **5,330** | **5,660** | **6,260** | **6,730** |
| Restrooms post security (sf) | 1,786 | 3,400 | 3,400 | 4,000 | 4,470 |
| Restrooms pre security (sf) | 855 | 1,530 | 1,860 | 1,860 | 1,860 |

Source: Alliiance

| Functional Area | 2021 | | Forecast | | |
|---|---|---|---|---|---|
| | Existing | Recommended | 2026 | 2031 | 2041 |
| Service Animal Relief Area (SARA) (sf) | 140 | 140 | 140 | 140 | 140 |
| Nursing Mothers' Room (sf) | - | 260 | 260 | 260 | 260 |
| **Airline Space Total (sf)** | **3,379** | **2,730** | **4,330** | **4,330** | **4,780** |
| Linear Ticket Counter Positions (kiosk) | 16 | 12 (0) | 19 (0) | 19 (0) | 21 (0) |
| Total Check-In Positions (kiosk) | 28 (12) | 15 (3) | 24 (5) | 24 (5) | 27 (6) |
| Total Linear Position Length (lf) | 114 | 78 | 124 | 124 | 137 |
| Counter Area (sf) | 1,052 | 780 | 1,240 | 1,240 | 1,370 |
| Airline Ticket Offices (ATO) (sf) | 2,327 | 1,950 | 3,090 | 3,090 | 3,410 |
| **Other Airline Space Total (sf)** | **5,920** | **8,080** | **9,000** | **10,020** | **10,290** |
| Outbound Baggage Makeup (sf) | 1,481 | 1,790 | 2,500 | 2,880 | 2,940 |
| Checked Baggage TSA Screening (sf) | 931 | 1,800 | 1,800 | 1,800 | 1,800 |
| Level 1 Inspection Units | 1 | 1 | 1 | 1 | 1 |
| Airside Operations/Storage (sf) | 1,137 | 1,330 | 1,330 | 1,790 | 1,960 |
| Inbound Baggage Claim, Secure (sf) | 341 | 2,200 | 2,200 | 2,200 | 2,200 |
| Baggage Circulation/Storage (sf) | 2,030 | 760 | 970 | 1,080 | 1,100 |
| Other Airline Offices & Support (sf) | - | 200 | 200 | 270 | 290 |
| **Pre-Security Concession Space (sf)** | **4,641** | **2,070** | **2,630** | **2,710** | **2,880** |
| Rental Car Counters | 4 | 4 | 4 | 4 | 4 |
| Rental Car Area/Offices (sf) | 1,028 | 1,030 | 1,030 | 1,030 | 1,030 |
| Rental Car Queue (sf) | 458 | 460 | 460 | 460 | 460 |
| Landside Concessions (sf) | 2,137 | 450 | 880 | 940 | 1,070 |
| Landside Support/Storage (sf) | 1,018 | 130 | 260 | 280 | 320 |
| **Post-Security Concession Space (sf)** | **3,157** | **2,330** | **4,590** | **4,900** | **5,580** |
| Airside Concessions (sf) | 2,213 | 1,790 | 3,530 | 3,770 | 4,290 |
| Airside Support/Storage (sf) | 944 | 540 | 1,060 | 1,130 | 1,290 |
| **Non-Public Space Total (sf)** | **23,388** | **17,560** | **19,930** | **21,320** | **22,520** |
| Airport Administration (sf) | 2,882 | 3,110 | 3,110 | 3,110 | 3,110 |
| Airport Police (sf) | 248 | 250 | 250 | 250 | 250 |
| FAA Tower (sf) | 2,787 | 700 | 700 | 700 | 700 |
| Restrooms (sf) | 114 | 110 | 220 | 220 | 220 |
| Circulation (sf) | 1,456 | 1,610 | 1,820 | 1,930 | 1,990 |
| Airport Maintenance/Support (sf) | 3,545 | 1,430 | 1,700 | 1,830 | 1,970 |
| Mechanical/Electrical/IT/Comm (sf) | 9,086 | 7,150 | 8,380 | 9,170 | 9,860 |
| Building Structure (sf) | 3,271 | 3,200 | 3,750 | 4,110 | 4,420 |
| **Total Functional & Support Area (sf)** | **85,600** | **80,060** | **93,860** | **102,670** | **110,410** |
| **Total Gross (sf)** | **88,871** | **83,260** | **97,610** | **106,780** | **114,830** |

Source: Alliiance

### 6.4.3. On-Airport Circulation Roadways

The terminal building, public parking lots, rental car parking, air cargo facility, and ARFF station can all be accessed via North Skyline Drive which enters airport property from the south. North Skyline Drive has two northbound lanes that converge into one lane at the airport entrance. As shown in Figure 6.12, drivers looking to access the cargo facility or ARFF station turn right onto Federal Way while passenger and rental car traffic continues to the terminal.

Traffic entering the main terminal area meets with terminal return traffic where it becomes two lanes. From this point, drivers looking to access the short-term daily parking lot take the first left and continue through a narrow access gate. However, the daily lot is typically unused and barricaded. Drivers looking to access the short-term hourly parking lot take the second left and continue through a narrow access gate. Drivers looking to access the rental car ready/return area take the right just before the arrivals curbside area. Just beyond the arrivals area is the departures curbside area.

The two lanes in front of the terminal building measure approximately 435 feet long—from the start of the arrivals area to the end of the departures area. The curb in this section is marked to indicate the separate passenger pick-up and drop-off zones.

There is another decision point just beyond the departures area where drivers can access the daily or economy lots via a left turn or continue straight ahead. There is a second entrance to the economy lot prior to completing the circulation loop. The intersection at the end of the circulation loop allows drivers to either return to the terminal by continuing straight or make a sharp right turn to exit the airport.

This configuration requires drivers looking to access the primary entrance to the daily and economy parking lots to pass through the passenger pick-up and drop-off zones. This presents a pain point for these customers because vehicles are often stopped as pedestrians with luggage cross the road.

The configuration of North Skyline Drive—from International Way to the departures curbside area—has not changed significantly in more than 20 years despite significant passenger growth and expansions to the passenger terminal and public parking lots. During airline schedule surge periods, traffic along North Skyline Drive backs up from the terminal building off-airport beyond International Way.

#### Conclusion

Consideration should be given to widening North Skyline Drive and reconfiguring the entry points to the parking lots to avoid extra traffic passing through the congested passenger pick-up and drop-off zones. Consideration should also be given to mitigating the sharp right turn vehicles have to navigate to exit the terminal circulation loop.

**Figure 6.12:** Terminal Roadway and Parking Circulation


Source: Ardurra.

### 6.4.4. Public Parking Facilities

As previously mentioned in Section 4.9., Commercial Terminal Parking Areas, the public parking lot at the terminal is separated into three distinct parking areas; short-term hourly, short-term daily, and long-term parking (Figure 6.13). There are approximately 144 short-term hourly spaces, 291 short-term daily spaces, and 478 long-term spaces for a combined total of 913 spaces. Parking services are managed under contract by SP Plus Corporation (SP+).

Parking data provided by the airport's parking contractor, SP+, was used to analyze actual parking performance from each of the three areas. This data was then compared to the peak month enplanement data and projections from the focused terminal planning study forecast to determine parking needs at IDA through the planning horizon.

On average, there is a total of 400 cars parked per day during the peak month. As shown in Table 6.15, approximately 48% of these vehicles are parked in the hourly lot, 15% in the daily lot, and 38% use the long-term (i.e., economy) lot. It should be noted that these parking patterns did not account for the addition of Economy Lot 2, which added 240 to the airport parking lot inventory in mid-2022. Presently, there are 718 economy lot spaces.

**Table 6.15: Vehicle Parking Patterns**

| Parking Lot | Avg. Vehicles Per Day | Avg. Duration Parked | Avg. % of Passengers | Avg. % of Vehicles |
|---|---|---|---|---|
| Short-Term Hourly | 190 | 1 hr 10 min | 21% | 48% |
| Short-Term Daily | 60 | 1 day | 7% | 15% |
| Long-Term Economy | 150 | 4 days | 17% | 38% |

Source: SP+; Alliiance; Ardurra.

As shown in Table 6.15, the hourly lot has a high turnover rate. In many cases, cars are parked in this lot for less than 30 minutes because the first half-hour is complimentary. This suggests the hourly lot is being used to drop off passengers and as a waiting area when picking up passengers. On average, cars are parked in the daily lot for one day. Cars are parked in the economy lot for an average duration of four days which means vehicles are stacking up over a rolling four-day average. To determine parking requirements for the hourly lot, peak hour enplanement levels were applied to the percentage of enplaned passengers using the hourly lot. For the daily requirements, peak day enplanement levels were applied to the percentage of enplaned passengers using the daily lot. For the economy lot requirements, peak day enplanement levels were applied to the percentage of enplaned passengers using the economy lot, times four days. The results are shown in Table 6.16.

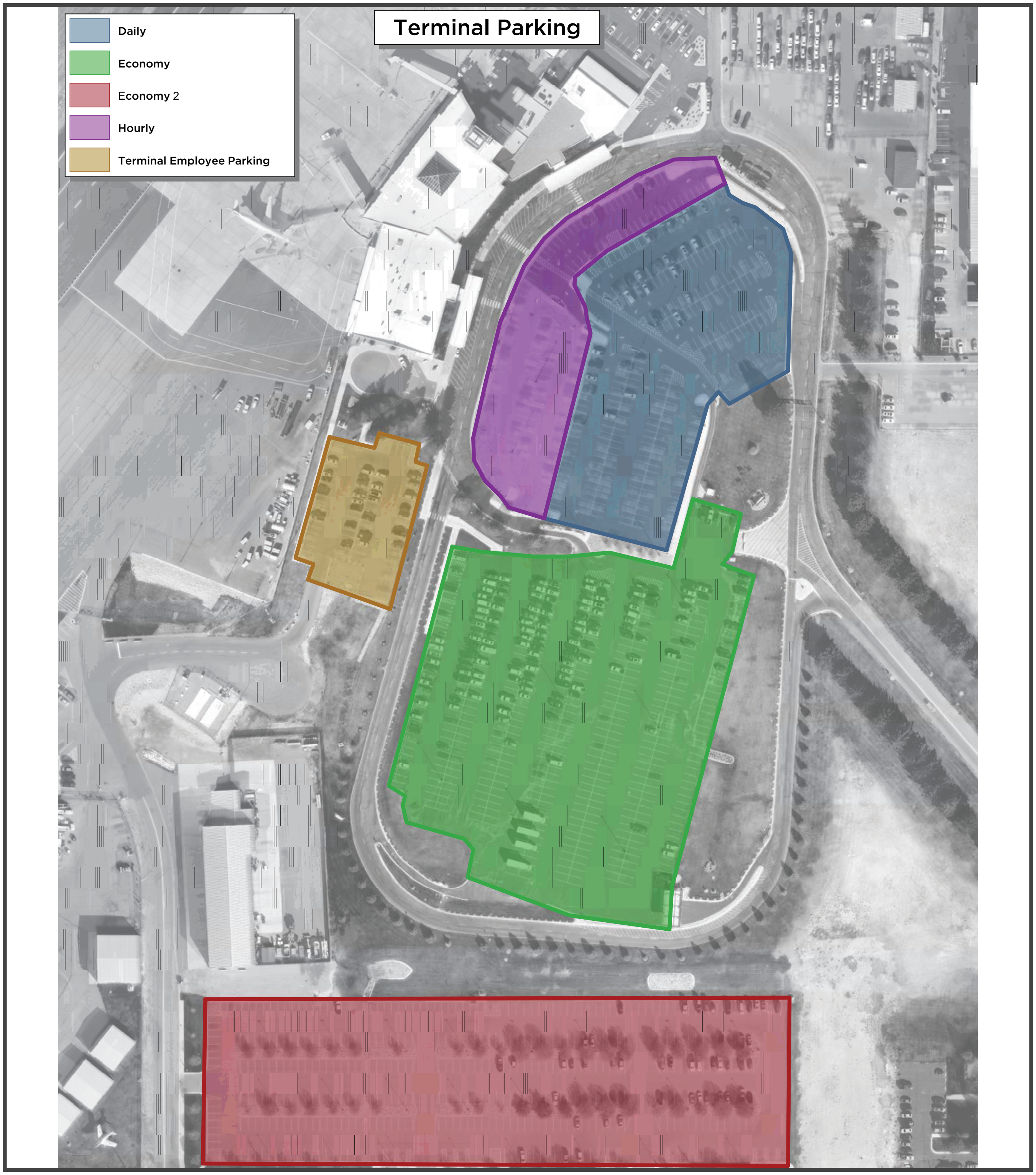
**Table 6.16: Vehicle Parking Requirements**

| Year | Hourly (144) | Daily (291) | Economy (718) | Combined (1,153) | Need (Economy) | Need (Overall) |
|---|---|---|---|---|---|---|
| 2021 | 48 | 60 | 694 | 802 | -24 | -351 |
| 2026 | 63 | 104 | 1,044 | 1,211 | 326 | 58 |
| 2031 | 67 | 111 | 1,113 | 1,291 | 395 | 138 |
| 2041 | 77 | 127 | 1,267 | 1,471 | 549 | 318 |

Source: Ardurra.

### Conclusion
Reconfiguration of the existing hourly and daily lots to allocate more spaces to economy will help relieve some pressure in the immediate term. By 2026, reconfiguration of the existing lots alone will not be adequate to support parking demand. Other parking lot locations, along with vertical development options should be a priority.

**Figure 6.13: Terminal Parking**




Source: Ardurra.

### 6.4.5. Employee Parking

The employee parking lot, which is located south of the terminal between North Skyline Drive and the terminal apron, currently has approximately 72 parking spaces. This parking lot is used both by airport employees and employees of companies affiliated with the airport. This includes the Transportation Security Administration (TSA), air traffic control (ATC), airlines, and concessionaires. The total number of employees using the parking lot is estimated to be between 200—250 during peak periods. It is assumed that employee parking needs will increase at the same rate as commercial operations. Using 250 parking spaces as the baseline, Table 6.17 shows the increased number of employee parking spaces required based on the CAGR of 1.0% forecasted for commercial operations.

**Table 6.17: Employee Parking Requirements**

| Year | Spaces Required (350 Square Feet per Stall) |
|---|---|
| 2021 | 250 |
| 2026 | 263 |
| 2031 | 276 |
| 2041 | 305 |

Source: Ardurra.

#### Conclusion

The employee parking lot should be expanded, or other locations sought, in order to meet the estimated 305 spaces that will be needed by 2041.

### 6.4.6. Rental Car Facilities

Requirements for rental car facilities at IDA are based on the results of a questionnaire completed by the rental car companies operating at the airport during the first quarter of 2022 which included Avis-Budget, Hertz, Enterprise, Alamo, and National. These requirements apply to the ready/return area as well as the quick turnaround area (QTA) where several car rental support functions are located including fuel dispensers, wash bays, maintenance bays, rental car overflow parking, and rental car employee parking (Figure 6.14). Table 6.18 summarizes the results of the questionnaire.

**Figure 6.14: Rental Car Facilities**


Source: Ardurra.

**Table 6.18: Rental Car Company Questionnaire Results**

| Area | Current | Desired |
|---|---|---|
| Ready/Return Area (spaces) | 100 | 250 |
| Quick Turnaround Area (QTA) | | |
| Fuel Dispensers | 4 | 7 |
| Wash Bays | 4 | 6 |
| Maintenance Bays | 3 | 5 |
| Overflow Spaces | 90 | 200 |
| Staging Spaces | 40 | 75 |
| Employee Spaces | 15 | 30 |

Source: Rental Car Questionnaire

Using partial data received from the rental car companies, the peak hour for rental returns during the peak month is 8 a.m., and the peak hour for car rentals is between 1–3 p.m.

Market share data for gross revenue of each rental car company during fiscal year 2021 was applied to data received from the questionnaire to determine that there is a daily average of 18 rental cars returned during the 8 a.m. hour of the peak month and a daily average of 13 cars rented during the peak hours of 1–3 p.m.

To determine ready/return space requirements, a 30% surge factor was applied to each average, then a two-hour utilization rate was used for returns, and a three-hour utilization rate was used for rentals to allow a buffer for potential delays during the peak periods. Future requirements were projected using forecast enplanement growth.

**Table 6.19: Rental Car Ready/Return Requirements**

| Year | Spaces Required (350 Square Feet per Stall) |
|---|---|
| 2021 | 98 |
| 2026 | 108 |
| 2031 | 118 |
| 2041 | 143 |

Source: Rental Car Questionnaire; Ardurra.

QTA requirements were projected using the forecast enplanement growth applied to the existing conditions, adding a 30% surge factor.

**Table 6.20: Rental Car Quick Turnaround Area Requirements**

| QTA | 2021 (Existing) | 2026 | 2031 | 2041 |
|---|---|---|---|---|
| Fuel Dispensers | 4 | 6 | 6 | 8 |
| Wash Bays | 4 | 6 | 6 | 8 |
| Maintenance Bays | 3 | 4 | 5 | 6 |
| Overflow Spaces | 90 | 129 | 141 | 170 |
| Staging Spaces | 40 | 57 | 63 | 76 |
| Employee Spaces | 15 | 21 | 24 | 28 |

Source: Rental Car Questionnaire; Ardurra.

### Conclusion

All of the functional areas related to the rental car ready/return and quick turnaround areas will exceed existing capacity by 2026. Alternative areas should be sought that will enable growth without impeding aeronautical development.

## 6.5. General Aviation Requirements

### 6.5.1. Aircraft Hangar Storage

There are currently 96 hangar spaces at IDA of varying sizes. Some of the hangars, such as those at Aero Mark, are capable of accommodating multiple aircraft. The *2020 Idaho Airport System Plan (IASP) Update* sets the objective for primary commercial airport hangar storage at 80% of based aircraft and 25% of transient aircraft. For this Airport Master Plan, the objective was 80% of based aircraft and 10% of transient aircraft, as it is assumed more GA transient aircraft requesting a hangar would use the main FBO on the west side of the airport, where the large hangars are located. Transient aircraft are assumed to be 70% of itinerant aircraft during the average day of the peak month (July). Itinerant aircraft were a combination of Air Taxi and GA itinerant operations from the forecast. Itinerant cargo and military are not included in the hangar requirement calculation. The based aircraft and fleet mix projections from the forecast, along with the aforementioned assumptions, were used to calculate the hangar requirements shown in Table 6.21.

**Table 6.21: Hangar Requirements**

| Year | Based Aircraft | Transient Aircraft | Spaces Required | Spaces Existing | Spaces Needed |
|---|---|---|---|---|---|
| 2021 | 100 | 4 | 104 | 96 | 8 |
| 2026 | 108 | 5 | 113 | 96 | 17 |
| 2031 | 116 | 5 | 121 | 96 | 25 |
| 2041 | 132 | 5 | 137 | 96 | 41 |

Source: Ardurra.

### Conclusion

Additional hangar space is needed at IDA through the entire planning horizon.

### 6.5.2. Aircraft Tiedowns

Currently, there are 68 marked tiedown spaces at IDA. While there are large, unmarked sections of apron that could accommodate additional tiedowns, only marked spaces were considered to determine if the existing tiedown spaces are sufficient to accommodate forecasted demand.

The *2020 Idaho Airport System Plan* (IASP) set an objective for primary commercial airports to have enough marked tiedown spaces to accommodate 20% of based aircraft and 50% of transient aircraft. However, for this airport master plan, an objective of 20% of based aircraft and 75% of transient aircraft was determined to be more appropriate.

The based aircraft forecast, as discussed in Section 5.11, was used in this calculation along with the same transient aircraft assumptions used in the hangar requirements section. The resulting tiedown requirements are shown in Table 6.22.

**Table 6.22: Tiedown Requirements**

| Year | Based Aircraft | Transient Aircraft | Spaces Required | Spaces Existing | Spaces Needed |
|---|---|---|---|---|---|
| 2021 | 25 | 32 | 57 | 68 | (11) |
| 2026 | 27 | 35 | 62 | 68 | (6) |
| 2031 | 29 | 37 | 66 | 68 | (2) |
| 2041 | 33 | 40 | 73 | 68 | 5 |

Source: Ardurra.

**Conclusion**

There are adequate tiedowns to meet demand through 2031. Beyond 2031, the tiedown deficiencies could be met by using existing apron space with a more efficient use of markings.

## 6.6. Air Cargo Requirements

As previously discussed in Section 4.5.5., Air Cargo Facilities, FedEx operates the only air cargo facility at IDA. It has approximately 30,000 square feet of warehouse space, approximately 55,000 square feet of apron space with one marked aircraft parking space, 7,000 square feet of apron space used for ground service equipment (GSE) storage, 2,400 square feet of space used for receiving and office space, and a parking lot for FedEx employees with 75 parking spaces. Guidance from Airport Cooperative Research Program (ACRP) Report 143, *Guidebook for Air Cargo Facility Planning and Development*, was used to establish air cargo facility requirements.

To determine the amount of GSE apron space that will be required during the 20-year planning period, the ratio of annual tonnage per square foot was applied to the forecasted air cargo weights (converted to tons) established in Section 5.10., Air Cargo by Volume Forecast. To determine the amount of warehouse space required, the forecasted growth rate of 3.9% for air cargo by volume was applied to the square footage of the existing warehouse space.

**Table 6.23: Forecast Cargo Weight in Pounds and Tons**

| Unit of Weight | Base Year | Forecast Years | | |
|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2041 |
| Pounds | 6,288,882 | 9,952,995 | 11,072,550 | 13,488,226 |
| Tons | 3,144 | 4,976 | 5,536 | 6,744 |

Source: Ardurra.

**Table 6.24: Air Cargo Facility Requirements**

| Element | Existing | Required | Forecast Years | | |
|---|---|---|---|---|---|
| | 2021 | 2021 | 2026 | 2031 | 2041 |
| GSE Apron | 7,000 sq. ft. | 5,517 sq. ft. | 8,731 sq. ft. | 9,713 sq. ft. | 11,832 sq. ft. |
| Warehouse Space | 30,000 sq. ft. | 30,000 sq. ft. | 36,300 sq. ft. | 44,000 sq. ft. | 64,500 sq. ft. |

Source: ACRP Report 143; Ardurra, Aviation Forecast.

**Table 6.25: Apron Space Requirements**

| Aircraft | Length + Buffers | Wingspan + 25-foot Buffer | Tail Height | Required Apron |
|---|---|---|---|---|
| ATR 72 | 124.2 feet | 113.8 feet | 25 feet | 14,128 feet |
| Boeing 757-200 | 285.2 feet | 150 feet | 45.1 feet | 42,780 feet |

Source: ACRP 143, Tables 4-6 and 4-8.

### Conclusion

Additional apron space for GSE is needed immediately. Building capacity will need to be expanded during the planning horizon. The existing FedEx cargo apron is adequate for use by ATR-72 aircraft through the 20-year planning horizon. However, the FedEx apron is adjacent to the rental car area which makes it difficult to maneuver a 757F. If another air cargo carrier company operating the 757F, decides to add scheduled air cargo service to IDA, they will need to use a different facility.

## 6.7. Airport Support Facilities

Airport support facilities include infrastructure and equipment used for emergency response, fuel storage, access control, equipment storage, and airport maintenance which are vital in ensuring the smooth, efficient, and safe operation of the airport. While the FAA provides guidance for assessing the future needs of some aviation support facilities, speaking with airport management, tenants, and users is a more reliable way of understanding existing and future requirements for aviation support facilities.[13]

### 6.7.1. Aircraft Rescue and Fire Fighting Station

As previously discussed in Section 4.7.2., Aircraft Rescue and Fire Fighting, IDA is an aircraft rescue and fire fighting station (ARFF) Index B airport. This is adequate for the Airbus A320, and the ARFF index is not expected to change during the 20-year planning period. While these facilities are adequate, the current location inhibits growth of the cargo facility. Relocating the ARFF station closer to the midpoint of the air carrier runway, Runway 3/21, would reduce response times to that runway and allow for opportunities to expand the cargo facilities.

#### Conclusion

Consideration should be given to finding an alternate site for the ARFF station. Future locations should consider a live fire discharge area to properly contain and eliminate chemicals associated with firefighting operations.

### 6.7.2. Fuel Storage

As previously discussed in Section 4.5.8., Aircraft Fuel Facilities, the fuel farm currently has three underground storage tanks used for Jet A fuel that hold a total of 75,000 gallons, and two underground storage tanks used for avgas that hold a total of 37,000 gallons.

Fuel records provided by airport staff for 2021 show the peak month for Jet A fuel was July with 363,210 gallons pumped. The peak month for avgas was June with 13,519 gallons pumped. The five-day average for each fuel type was applied to the operations forecast to determine fuel storage requirements (Table 6.26).

**Table 6.26: Fuel Storage Requirements**

| Year | 5-Day Jet A Average | 5-Day Avgas Average |
|---|---|---|
| 2021 | 58,582 gallons | 2,253 gallons |
| 2026 | 61,571 gallons | 2,368 gallons |
| 2031 | 64,711 gallons | 2,489 gallons |
| 2041 | 71,481 gallons | 2,749 gallons |

Source: Airport Staff, Current Fuel Usage; Ardurra, Aviation Forecast.

#### Conclusion

There is adequate fuel storage to support the five-day fuel requirements for the entire 20-year planning period.

### 6.7.3. Snow Removal Equipment and Airport Maintenance Building

As previously discussed in Section 4.7.1., Snow and Ice Control, the current 15,000-square-foot snow removal equipment (SRE) building was constructed in 2010. It contains office space for operations and maintenance personnel. It is adjacent to an enclosed storage yard that is approximately 33,000 square feet. Both the building and yard are also used to store airport maintenance vehicles.

The building has six bays; two of which allow pull-through access for large equipment. Two of the bays are used to store small equipment vehicles and to perform maintenance while the other two have a back-in design for large equipment. The building is 65 feet wide which does not allow double parking of large equipment with the snow removal attachments connected.

According to current guidance from FAA AC 150/5220-20A, *Airport Snow and Ice Control Equipment*, the airport is eligible for nine pieces of snow removal equipment.[14] These include one rotary plow, two displacement snowplows, three towed or self-propelled runway brooms with air blast, and three support vehicles for deicing or anti-icing chemical application. While the airport is eligible for nine pieces of snow removal equipment, the building is not large enough to store all nine pieces in a ready-to-use state.

#### Conclusion

The actual size required to store all of the snow removal equipment depends on the layout selected. Space should be reserved for future expansion.

### 6.7.4. Ground Service Equipment Storage

The ground service equipment (GSE) used by the airlines is currently stored along the fence on the commercial apron to the south of the terminal building. There is a small, covered area outside of the baggage makeup bays that can be used to stage ground service equipment to hook them up to baggage carts. This area is confined by the Gate A1 enclosed walkway which can reduce efficiency. This becomes especially noticeable when an aircraft is parked at the gate.

#### Conclusion

The size of the apron used to store ground service equipment is adequate. Adding apron markings to delineate the ground service equipment parking area would enhance circulation and efficiency. Future terminal expansions should include extra space and reconfiguration of the baggage makeup area to eliminate the constraints associated with Gate A1.

### 6.7.5. Fencing and Gates

The airport is fenced with a series of vehicle and pedestrian gates. As development progresses, airport fencing and gates may need to be added or re-aligned. Changes in security requirements also may dictate future fence and gate configuration needs.

### 6.7.6. Lighting Vault and Emergency Generator

The capacity of the regulators and emergency generator located in the lighting vault were not evaluated under this master plan. Future airfield development that includes additional lighting may require more capacity than provided by the existing lighting vault. Future terminal expansions may also require the lighting vault to be relocated elsewhere at the airport.

## 6.8. Utilities

As previously discussed in Section 4.14., 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. There are no electric vehicle (EV) charging stations at the airport.

**Conclusion**

Consideration should be given to adding electric vehicle charging stations at the airport.

## 6.9. Stormwater

Stormwater runoff at IDA is carried away by a series of inlets, swales, and culverts to two retention basins located on airport property where the water collects and then infiltrates into the soil. No stormwater runoff is treated at the airport or leaves the airport property through an outfall. Since no runoff leaves the airport through an outfall, the airport is not required to have a Storm Water Pollution Prevention Plan (SWPPP). Additionally, the airport is not part of the Idaho Falls MSA contributing area.

The main retention basin, which has been in use since at least the 1940s, is located to the east of Runway 17 between Foote Drive and Interstate 15. It receives runoff from the terminal area through a 27-inch concrete pipe that also dates back to the 1940s. This retention basin also receives runoff from International Way and the industrial park located just to its south (off-airport). The stormwater manholes located between the FBO and commercial apron have been known to overflow during heavy storm events due to surcharge of the 27-inch main line.

The second retention basin, which was constructed in 2006, is located to the east of Taxiway A between Taxiway A4 and Taxiway E. It receives runoff from the infield between Taxiway A and the FBO apron.

**Conclusion**

Stormwater infrastructure at the airport should be improved as more impervious surface is added. Pipes dating to the 1940s should be replaced and the capacity increased. The main retention basin east of Foote Drive should be reviewed to determine if it is capable of accommodating airport development.

## 6.10. Land Use

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, airport operations, and potential growth.

Effective land use compatibility plans take both height and land use restrictions into consideration and are incorporated via local zoning laws. This type of proactive planning around an airport protects 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.

### 6.10.1. Federal Policies and Regulations

FAA Grant Assurance 20 requires airport sponsors to take appropriate action as needed to protect the airspace used for instrument and visual approaches by mitigating existing hazards and preventing the introduction of new hazards. Grant Assurance 21 requires airport sponsors to "…take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations including landing and takeoff of aircraft."[15]

### 6.10.2. State Policies and Regulations

The Idaho Transportation Department (ITD) Division of Aeronautics published *Idaho Airport Land Use Guidelines* in 2016 to assist airport sponsors in meeting regulatory requirements for local land use planning. These regulatory requirements include, but are not limited to, protecting public airports, including a Public Airport Facilities Section "q" in comprehensive plans, notifying an airport operator of a pending land use action, and preventing the creation or establishment of aviation hazards. Additionally, when an airport sponsor accepts grant funding from ITD Aeronautics, it agrees to comply with certain grant assurances. State Grant Assurance 23 states, "The Sponsor should have compatible land use and height restrictive zoning for the airport to prevent incompatible land uses and the creation or establishment of structures or objects of natural growth which would constitute hazards or obstructions to aircraft operating to, from, on, or in the vicinity of the subject airport."[16]

### 6.10.3. City Land Use Protections

As mentioned in Section 4.2.1., City Land Use Protections, Idaho Falls City Code; Title 11, Chapter 5, Section 11-5-3 established an Airport Overlay Zone that addresses compatible land uses and height restrictions to protect normal aircraft operations and IDA's airspace as well as people and property on the ground. While the land use zone designations in the Airport Overlay Zone do not have the same names and dimensions as those recommended in *Idaho Airport Land Use Guidelines,* they do serve the intended purpose.

Idaho Falls adopted a new comprehensive plan, *Imagine IF, A Plan to Move Idaho Falls Forward Together*, February 24, 2022. Background studies completed for this plan included a section for the airport which is equivalent to the Section "q" required by Idaho Statute 67-6508q.

### 6.10.4. County Land Use Protections

The *Bonneville County Comprehensive Plan* recognizes the importance of the airport and in protecting the airport from "…the thoughtless development of neighboring lands."[17] In 1967, Bonneville County adopted an airport zoning ordinance to protect the airspace around the airport. This ordinance has remained unchanged since its adoption. However, the runway configuration has changed substantially since 1967. Additionally, the county has not enacted land use zoning that is compatible with the airport. As a result, the county approved a zoning change in 2020 that allowed a new residential subdivision to be located approximately 3,000 feet from the Runway 21-end.

#### Conclusion

As the airport sponsor, the city of Idaho Falls is compliant with federal and state requirements regarding airport land use policies and zoning. Policies and regulations should be reviewed periodically to ensure they are current and relevant as the airport experiences growth and changes. The city and the airport should continue to work with Bonneville County to update its existing height restriction zoning ordinance and to adopt land use zoning to protect both the airport and the surrounding community from incompatible land uses.

### 6.10.5. Incompatible Land Use in Runway Protection Zones

The FAA updated its runway protection zone (RPZ) design standards with its March 2022 release of AC 150/5300-13B, *Airport Design*. It also replaced its land use compatibility planning guidance with its September 2022 release of AC 150/5190-4B, *Airport Land Use Compatibility Planning* which replaced the former FAA memorandum, "Interim Guidance on Land Uses Within a Runway Protection Zone.

The FAA expects sponsors to take appropriate measures to protect against, remove, or mitigate land uses that introduce incompatible development within runway protection zones. This includes having or securing sufficient control of the runway protection zone, ideally through fee simple ownership, to include off-airport property within the runway protection zone. For existing incompatible uses within runway protection zones, the FAA expects airport sponsors to seek all possible opportunities to eliminate, reduce, or mitigate such uses by way of land acquisition, land exchanges, right-of-first-refusal to purchase, agreements with property owners on land uses, easements, or other similar measures. The FAA also expects sponsors to document their efforts to eliminate incompatible uses within the runway protection zone to demonstrate they are complying with the grant assurances. For proposed or new incompatible uses, the FAA expects sponsors to take active steps to prevent or mitigate such uses. Sponsors should actively monitor conditions and object publicly to proposed incompatible land uses and make it a priority to acquire land or otherwise establish land use and zoning controls that prevent incompatible uses. The FAA will consider financial assistance to an airport sponsor for land acquisition, even if the sponsor has no land use control (i.e., when the runway protection zone extends into another jurisdiction), but only if the sponsor demonstrates they are taking all appropriate steps available to enhance control and mitigate existing risks.[18]

### a. Existing Incompatible Land Uses

The following existing incompatible land uses are known to be located within the airport's runway protection zones:

- An industrial park is located within the Runway 35 runway protection zone.
- Interstate 15 is located within the Runway 17 runway protection zone.
- The soccer fields are located within the Runway 3 runway protection zone.
- Interstate 15, railroad tracks, and Lindsay Blvd. are all located within the Runway 21 runway protection zone.

### b. Potential New Incompatible Land Uses

The Idaho Transportation Department is in the process of conducting an environmental impact statement (EIS) for reconfiguration of the intersection of Interstate 15 and U.S. Highway 20. One of the alternatives may result in a substantial increase in traffic driving through the Runway 17 and Runway 21 runway protection zones. The remaining viable alternatives will require airport land. As a result, the airport and the FAA's Helena Airports District Office (ADO) are both serving as coordinating agencies for the environmental impact statement.

The FAA sees both a substantial increase in traffic within the runway protection zone and the introduction of a new road within the runway protection zone as unacceptable modifications to the land use within the runway protection zone. This has been communicated to the environmental impact statement team and will be taken into consideration as part of the evaluation of alternatives.

### Conclusion

The airport should continue to seek ways to eliminate or mitigate existing incompatible land uses within the runway protection zones and prohibit the introduction of new incompatible uses. All steps being taken by the airport should be documented to demonstrate compliance with FAA grant assurances.

### 6.10.6. Wildlife Hazard Attractants

FAA AC 150/5200-33C, *Hazardous Wildlife Attractants on or near Airports*, provides guidance on land uses that have the potential to attract hazardous wildlife on or near airports. Airports, like IDA, that hold an Airport Operating Certificate issued under 14 CFR Part 139, may use the standards, practices, and recommendations contained in AC 150/5200-33C as a means of complying with the wildlife hazard management requirements of Part 139.[19]

For airports serving turbine-powered aircraft, the FAA recommends a separation distance of 10,000 feet from wildlife attractants. These can include municipal landfills, wastewater treatment facilities, and stormwater management facilities that create standing bodies of water. In order to protect approach and departure corridors, the FAA recommends a five-mile separation from the wildlife attractant and the nearest aircraft operating area.

#### a. On-Airport Attractants

- Stormwater runoff at IDA collects in a retention basin between Foote Drive and I-15 located behind the NOAA Air Resources Laboratory. The water collects into a standing body of water where it infiltrates into the soil. This standing body of water could be considered a wildlife attractant for the airport.

#### b. Off-Airport Attractants

- The Hatch Pit is a landfill operated by Bonneville County. It is located approximately 6,000 feet, or 1.2 miles, northwest of IDA's aircraft operating area and northern approach corridor.
- The City of Idaho Falls Wastewater Treatment Plant is located approximately 2.8 miles south of IDA.

#### Conclusion

On-airport retention basins should be modified so they do not detain water for more than 48 hours. Airport staff should make sure any proposed development is reviewed to determine if it would comply with FAA AC 150/5200-33C, *Hazardous Wildlife Attractants on or near Airports.*

IDA conducted a Wildlife Hazard Assessment (WHA) between 2002 and 2003. A Wildlife Hazard Management Plan (WHMP) was updated in 2020.

## 6.11. City of Idaho Falls Strategic Vision

*Imagine IF, A Plan to Move Idaho Falls Forward Together* is the city's comprehensive plan. It articulates the city's vision, mission, and commitment to community expectations. It also outlines the means of successfully implementing this plan.

### 6.11.1. City of Idaho Falls Strategic Vision

"The City of Idaho Falls promotes a welcoming, attractive, safe and diverse community. We embrace small town values, big city efficiencies and forward-thinking approaches to provide outstanding services and sustainable economic, social and recreational opportunities for our whole community."[20]

### 6.11.2. City of Idaho Falls Strategic Mission

"The City of Idaho Falls works to provide outstanding quality of life to all our community members and be a model organization with emphasis on leadership, strategic planning and partnership, community engagement, asset and financial management and project implementation.

We achieve our mission by:

- Supporting opportunities for diverse economic and social growth and development,
- Adopting forward-thinking housing, economic and growth policies and approaches,
- Acting proactively to plan, develop and maintain infrastructure,
- Leading in emergency response and public safety,
- Providing excellent social and recreational amenities and services,
- Fostering strategic partnerships,
- Managing operations,
- Listening to and engaging with all members of our community.
- Idaho Falls Commitment to Community Expectations:
- Access to culture, recreation, leisure, life-long learning opportunities,
- Attractive, clean, and livable community,
- Strong, stable, and vibrant economic growth and opportunity,
- Environmental sustainability and resource preservation,
- Well-planned growth and development,
- Reliable public infrastructure, transportation, and mobility,
- Safe and secure community,
- Fiscally responsible, transparent, and efficient governance,
- Equitable and fair access to City government and services and active community engagement."[21]

### Conclusion

Any development at IDA should support the city's strategic vision and mission.

## 6.12. Management and Compliance Documents

An airport's primary management and compliance documents (PMCD) are a collection of rules, regulations, policies, and standards that guide the management, operation, and development of the airport. These documents provide an effective framework for airport sponsors to comply with federal obligations, set expectations, and ensure airport access is fair, reasonable, and not unjustly discriminatory. Common primary management and compliance documents at all airports include minimum standards, rules and regulations, leasing and development standards, minimum insurance requirements, rates and fees, an airport master plan, and an airport layout plan. Commercial service airports also have an airport certification manual, airport security manual, and airport emergency plan.

### Conclusion

Primary management and compliance documents should be reviewed annually and updated as necessary to remain valid. The city of Idaho Falls is currently updating the minimum standards and rules and regulations for the airport.

## 6.13. Emerging Trends

The aviation industry is always evolving, and these changes can affect the size, quantity, and type of airport facilities needed to accommodate future demand. These trends can include topics that have a direct relationship with future airport growth and development needs such as unmanned aircraft systems (UAS), vertiports, sustainable aviation fuels (SAF), and electric aircraft. They can also include topics that are less directly related such as electric vehicle and ground service equipment integration which should be considered for inclusion as part of medium- and long-term planning. Moreover, trends with indirect ties to airports that are current social and political issues will likely lead to future financial and regulatory decisions at the federal, state, and local levels. These topics could include climate change and climate resilience; accessibility (e.g., ADA, wayfinding, gender-neutrality); social and economic justice; diversity, equity, and inclusion (DEI); and the ever-evolving impacts of COVID-19 which can include social distancing and touchless interfaces.

### Conclusion

Airport management should remain aware of newly emerging industry trends and how they might affect the airport.

# 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** U.S. Department of Transportation. Federal Aviation Administration. “Airport Capacity and Delay." September 23, 1983. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5060_5.pdf.

**3** 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.

**4** Ibid.

**5** Ibid.

**6** Ibid.

**7** Ibid.

**8** U.S. Department of Transportation. Federal Aviation Administration. “Advisory Circular 150/5070-6B, Change 2 to Airport Master Plans.” Page 50. January 27, 2015. https://www.faa.gov/documentlibrary/media/advisory_circular/150-5070-6b-change-2-consolidated.pdf.

**9** U.S. Department of Transportation. Federal Aviation Administration. "Pilot’s Handbook of Aeronautical Knowledge, FAA-H-8083-25B." 2016. https://www.faa.gov/sites/faa.gov/files/2022-03/pilot_handbook.pdf.

**10** U.S. Department of Transportation. Federal Aviation Administration. “Advisory Circular 150/5300-13B, Airport Design.” Table 3-4 and Figure 3-7, Approach Procedures with Vertical Guidance (APV) and Precision Approach (PA) Instrument Runway Approach Surfaces. March 31, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf.

**11** U.S. Department of Transportation. Federal Aviation Administration. “Advisory Circular 150/5300-13B, Airport Design.” Table 3-2 and Figure 3-5, Visual Approach Surfaces. March 31, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf.

**12** U.S. Department of Transportation. Federal Aviation Administration. “Advisory Circular 150/5300-13B, Airport Design.” Table 3-5 and Figure 3-9. March 31, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf.

**13** U.S. Department of Transportation. Federal Aviation Administration. “Advisory Circular 150/5070-6B, Change 2 to Airport Master Plans.” Page 63. January 27, 2015. https://www.faa.gov/documentlibrary/media/advisory_circular/150-5070-6b-change-2-consolidated.pdf.

**14** U.S. Department of Transportation. Federal Aviation Administration." Advisory Circular 150/5220-20A, Airport Snow and Ice Control Equipment." September 24, 2014.https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_150_5220-20A.pdf.

**15** U.S. Department of Transportation. Federal Aviation Administration. "Assurances, Airport Sponsors." May 2022. https://www.faa.gov/sites/faa.gov/files/airports/new_england/airport_compliance/assurances-airport-sponsors-2022-05.pdf.

**16** T-O Engineers. "Idaho Airport Land Use Guidelines." State of Idaho. Idaho Transportation Department. Division of Aeronautics. Boise, Idaho. July 2016. https://itd.idaho.gov/wp-content/Aero/Publications/LandUse_Guidelines.pdf.

**17** Bonneville County. "Bonneville County Comprehensive Plan." January 5, 1995, Amended October 3, 2013. https://bonneville-county-planning-and-zoning-bonneville.hub.arcgis.com/pages/comprehensive-plan,

**18** U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular 150/5190-4B, Airport Land Use Compatibility Planning." September 16, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5190_4b_Land_Use_Compatibility.pdf.

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**20** City of Idaho Falls. Community Development Services. "Imagine IF, A Plan to Move Idaho Falls Forward Together, City of Idaho Falls' Comprehensive Plan." Idaho Falls, Idaho. 2021. https://www.idahofallsidaho.gov/DocumentCenter/View/14027/ImagineIF?bidId=.

**21** Ibid.

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# 7

# DEVELOPMENT ALTERNATIVES

# FIGURES

CHAPTER SEVEN

# DEVELOPMENT

This chapter brings together many of the previous elements of this airport master plan in order to identify the development options that will best meet the needs of Idaho Falls Regional Airport (IDA), the community, and align with the strategic vision of the airport sponsor. Each of the facilities described in Chapter 4, Airside and Landside Inventory, were analyzed in Chapter 6, Facility Requirements, to determine if any improvements are needed in order to safely and efficiently accommodate the forecasted activity levels discussed in Chapter 5, Forecast of Aviation Activity, or to meet new or updated standards developed and adopted by the Federal Aviation Administration (FAA) or other regulatory agencies.

Alternative concepts were developed by dividing the airport into three functional areas. These included the terminal, airfield, and west side development area. The following approach was then used to identify and evaluate the available development options:

- Identification of alternative ways to address facility requirements.
- Evaluation of these alternatives, individually and collectively, through a series of meetings with airport staff, the technical advisory committee (TAC), and the public to develop a thorough understanding of the strengths, weaknesses, and other implications of each option.
- Selection of the preferred alternative by the Idaho Falls City Council.

## 7.1. Terminal Area

Facility requirements to be addressed within the terminal area include the need to expand or relocate the following facilities:

**Terminal Building**
Addition of two aircraft gates and expansion of functional areas.

**Passenger Parking Capacity**
Addition of 318 parking spaces for a total of 1,471 spaces.

**Rental Car Ready/Return Area and Quick Turnaround Area Capacity**
More parking spaces for staging, overflow, and employees as well as additional support facilities for fuel, wash bays, and maintenance.

**Air Cargo Facilities**
Additional apron space for aircraft and ground service equipment, more than twice the existing warehouse space, and additional space for a second air cargo operator.

**Snow Removal Equipment Facilities**
Expansion of the snow removal equipment building.

**Employee Parking Capacity**
Addition of 233 parking spaces for a total of 305 spaces.

**Potential Airport Traffic Control Tower and Aircraft Rescue and Fire Fighting Station Relocation**
To address increased growth of the commercial terminal and associated apron expansion as well as improve airport traffic control tower (ATCT) response times.

### 7.1.1. Alternatives Concept Development Process

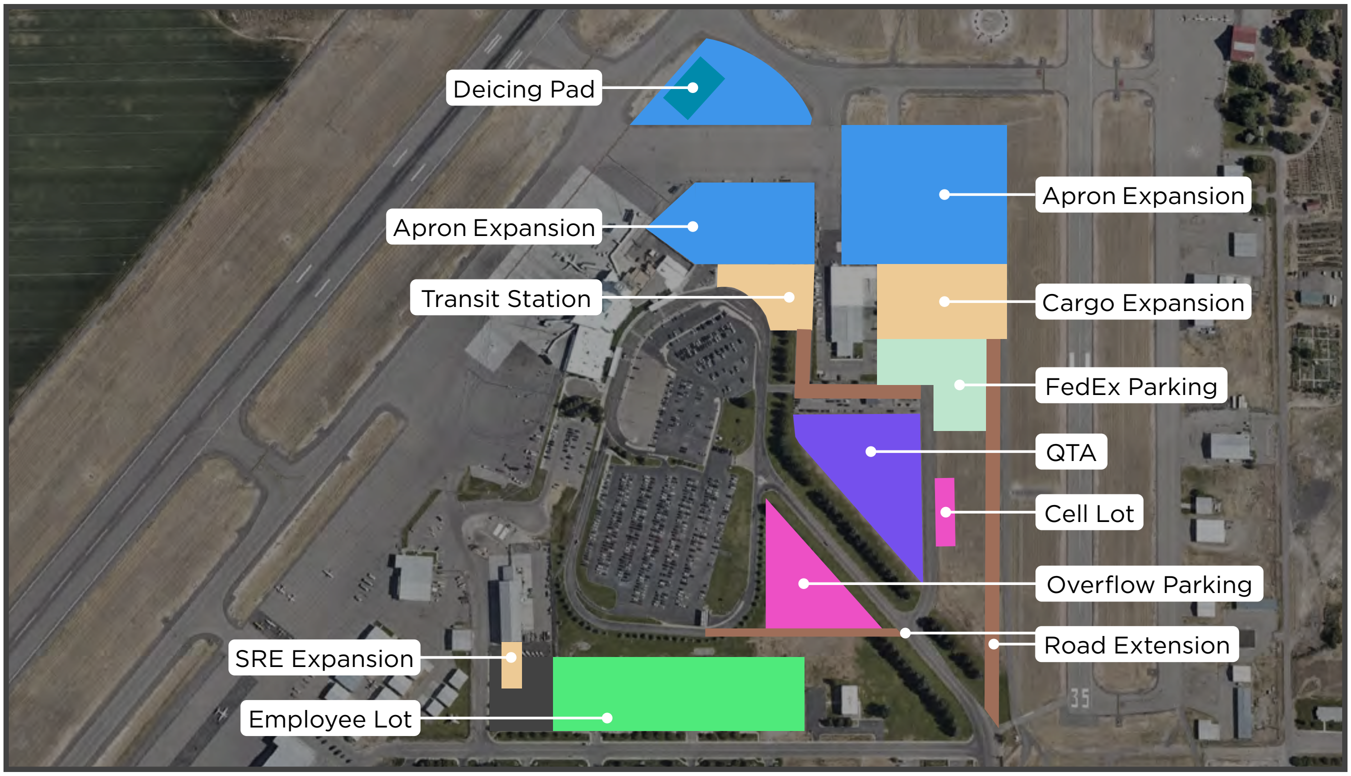
The airport master plan alternatives process began by developing four block-diagram terminal area concepts. Each concept included various parking garage options and terminal expansion alternatives developed through a separate terminal planning study completed during this airport master plan. These concepts all assume the rental car ready/return area, quick turnaround area, and aircraft rescue and fire fighting (ARFF) station have all been relocated to create space for an expanded aircraft parking apron and a new deicing pad north of the terminal building. The goal of these concepts was to explore sizing and land use opportunities and garner feedback from airport staff and stakeholders.

Each concept, combined with the garage layouts, meets or exceeds the requirements of the airport master plan 20-year planning period. The feedback and analysis received for each of the concepts was used in developing the alternatives described in Section 7.2. Terminal Area Alternatives. This section also describes locations that were evaluated for the potential relocation of the aircraft rescue and fire fighting station and airport traffic control tower.

### 7.1.2. Initial Terminal Concept 1

As shown in Figure 7.1, this concept keeps the existing road configuration and adds to it. A separate road is proposed that leads from Skyline and International Way to an expanded FedEx facility. The rental car ready/return area is placed on the first floor of a new parking garage and the quick turnaround area is placed within the field between Skyline Drive and Federal Way. A cell phone lot is added across from the quick turnaround area and a bypass road leads to a transit station. The employee parking lot is relocated to the existing Economy 2 lot and the snow removal equipment building is extended to the south. This concept meets all the terminal area facility requirements when combined with a new parking garage to be placed inside the Skyline Drive terminal loop. (Parking garage concepts are discussed in Section 7.1.6. Initial Garage Options.)

**Figure 7.1: Initial Terminal Concept 1**

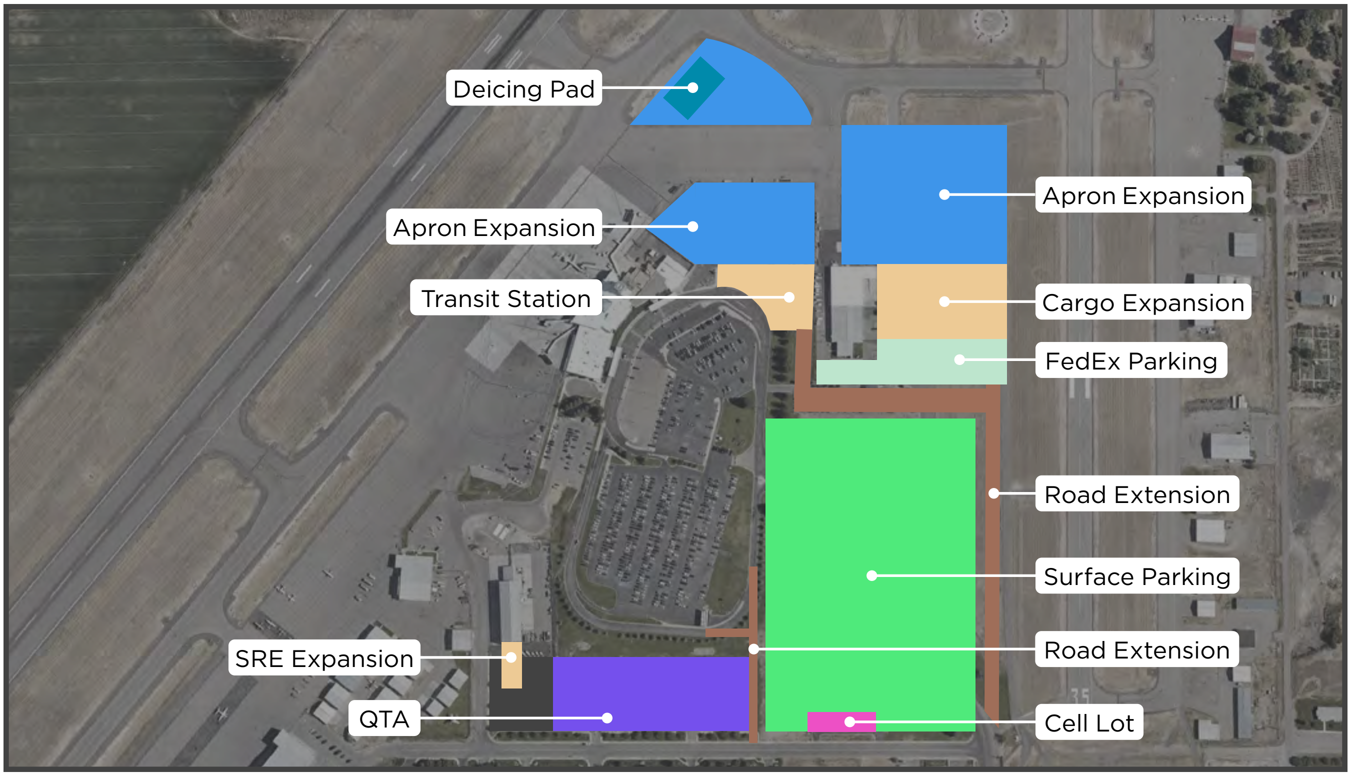



Source: Google Earth, Ardurra.

### 7.1.3. Initial Terminal Concept 2

As shown in Figure 7.2, this concept is similar to initial concept 1, but it eliminates the diagonal segment of Skyline Drive and the building at 1690 International Way which are replaced with a large surface parking lot for passengers and employees. The quick turnaround area is relocated to the existing economy 2 lot to reduce rental car traffic interactions with passenger traffic on the Skyline Drive loop. This concept meets all terminal area facility requirements when combined with a new parking garage to be placed inside the Skyline Drive terminal loop. (Parking garage concepts are discussed in Section 7.1.6. Initial Garage Options.)

**Figure 7.2: Initial Terminal Concept 2**

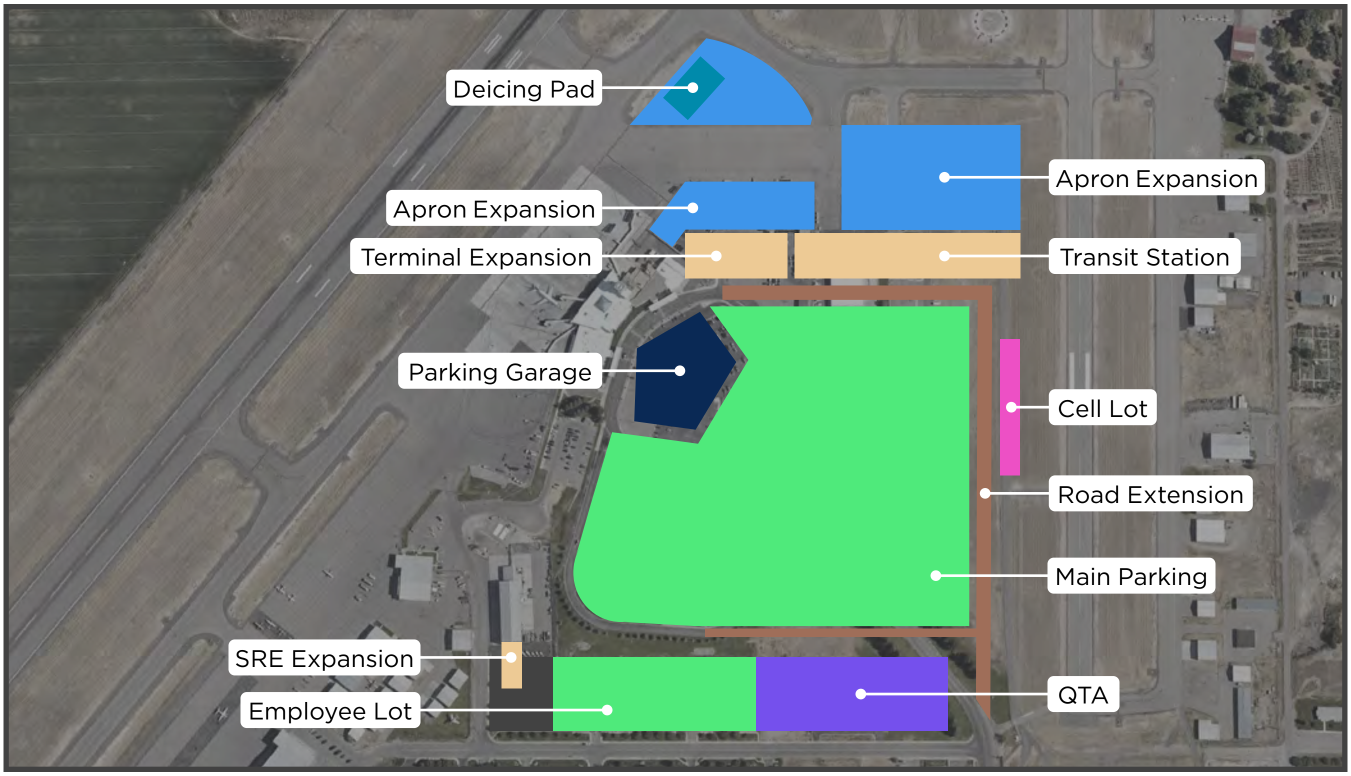



Source: Google Earth, Ardurra.

### 7.1.4. Initial Terminal Concept 3

As shown in Figure 7.3, this concept assumes the FedEx facility has been relocated as this allows the airport loop road to be expanded to accommodate a large surface parking area that meets parking requirements well beyond the planning horizon. This concept allows for any of the garage layouts described in Section 7.1.6. Initial Garage Options. With the FedEx facility relocated, additional space is available for an additional terminal expansion if it is required after the 20-year planning period or if new opportunities arise within the next 20 years. The quick turnaround area and employee parking lot would be relocated similarly to the prior alternatives.

**Figure 7.3: Initial Terminal Concept 3**

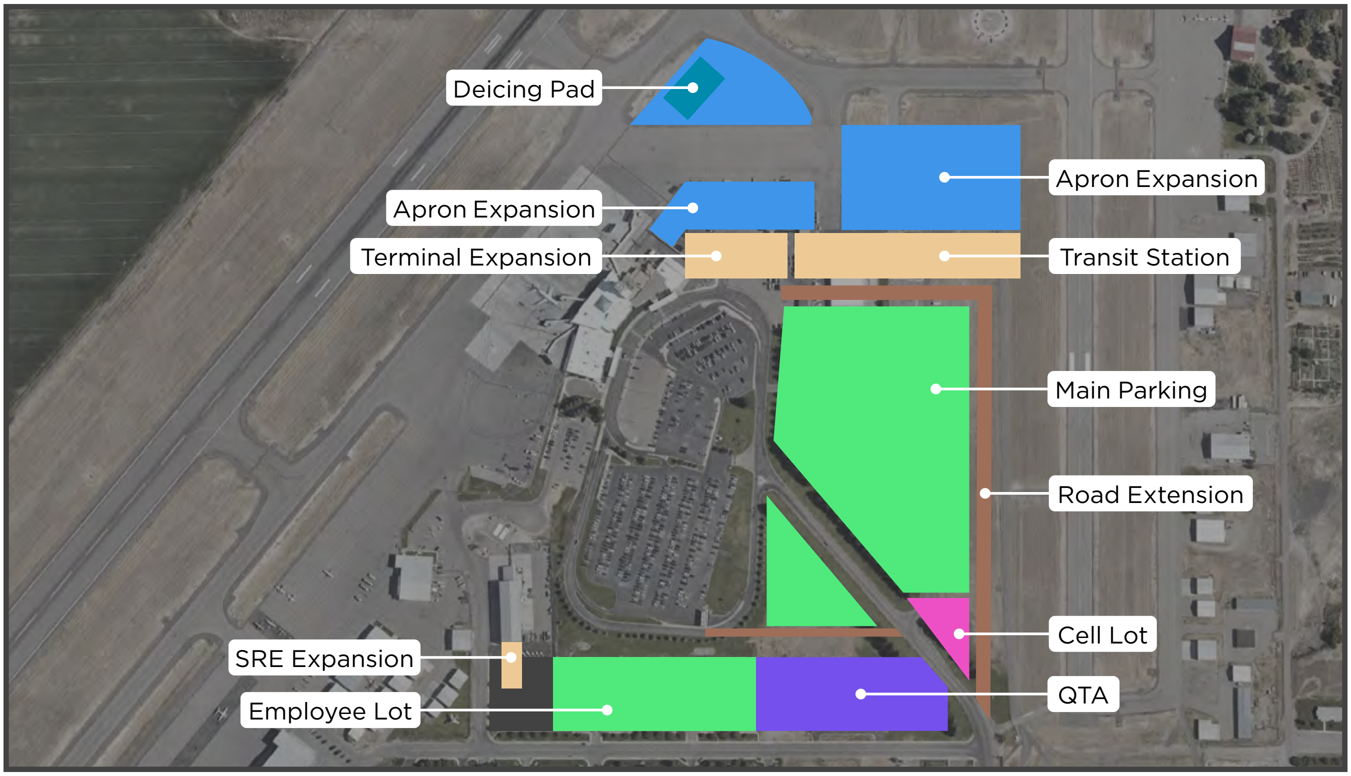



Source: Google Earth, Ardurra.

### 7.1.5. Initial Terminal Concept 4

This concept assumes the FedEx facility has been relocated but keeps the diagonal segment of Skyline Drive and the Skyline terminal loop roadway. A large surface parking area provides access to a potential long-term terminal expansion to the east, with the quick turnaround area remaining clear of the passenger circulation routes. As shown in Figure 7.4, this concept assumes the building at 1690 International Way has been removed. However, the option remains to keep that building and rearrange the employee lot and quick turnaround area within the terminal area.

Figure 7.4: **Initial Terminal Concept 4**




Source: Google Earth, Ardurra.

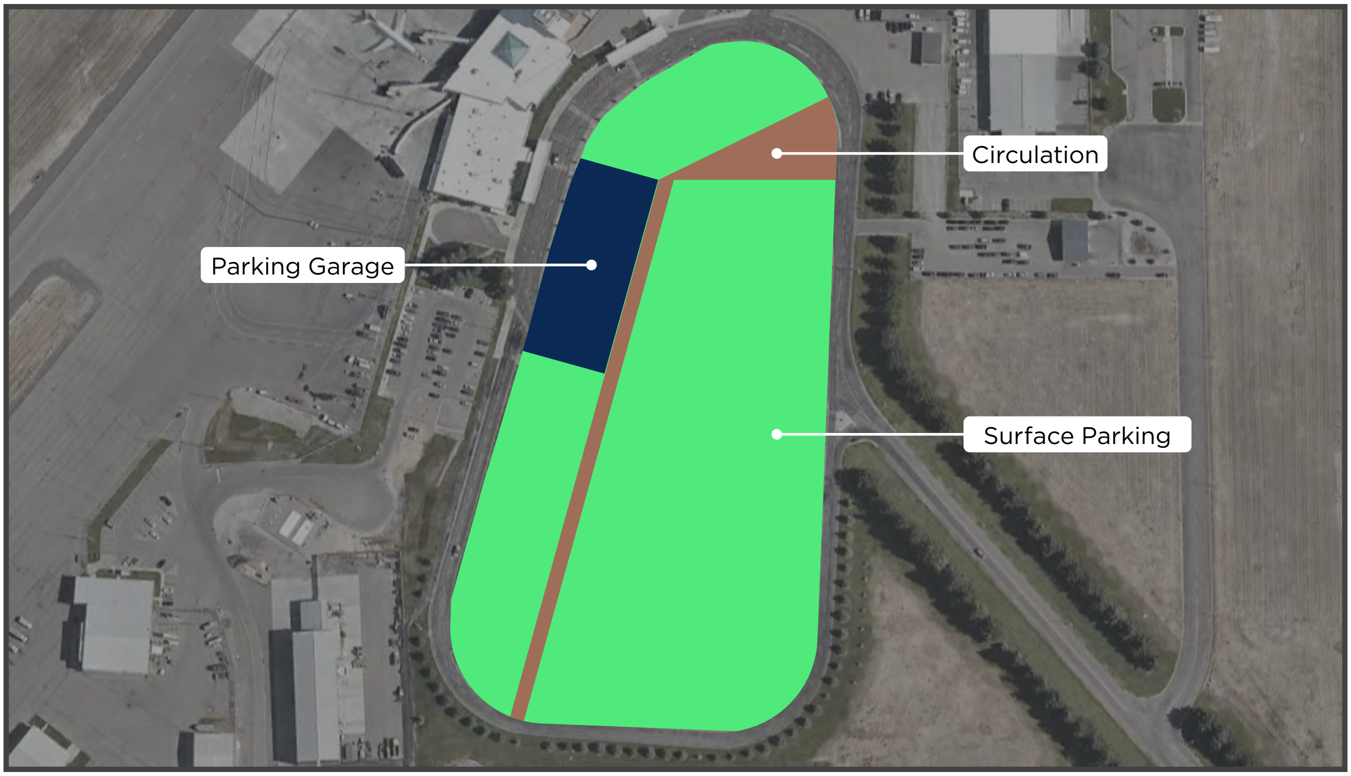
### 7.1.6. Initial Garage Options

Three options were created for garage locations within the Skyline terminal loop. Each option assumes a three-level garage with the rental car ready/return area placed on the first level. All three options include accommodations for drainage infrastructure within the Skyline terminal loop footprint.

### 7.1.7. Initial Garage Concept 1

As shown in Figure 7.5, concept 1 places a parking garage facing the south end of the terminal building with a parking access and exit lane separate from the main terminal loop. All vehicle traffic enters the garage before the terminal curbside and exits at the south end of the loop. This garage is the smallest of the three options and allows for one potential passenger bridge across Skyline Drive to the terminal.

**Figure 7.5: Initial Garage Concept 1**

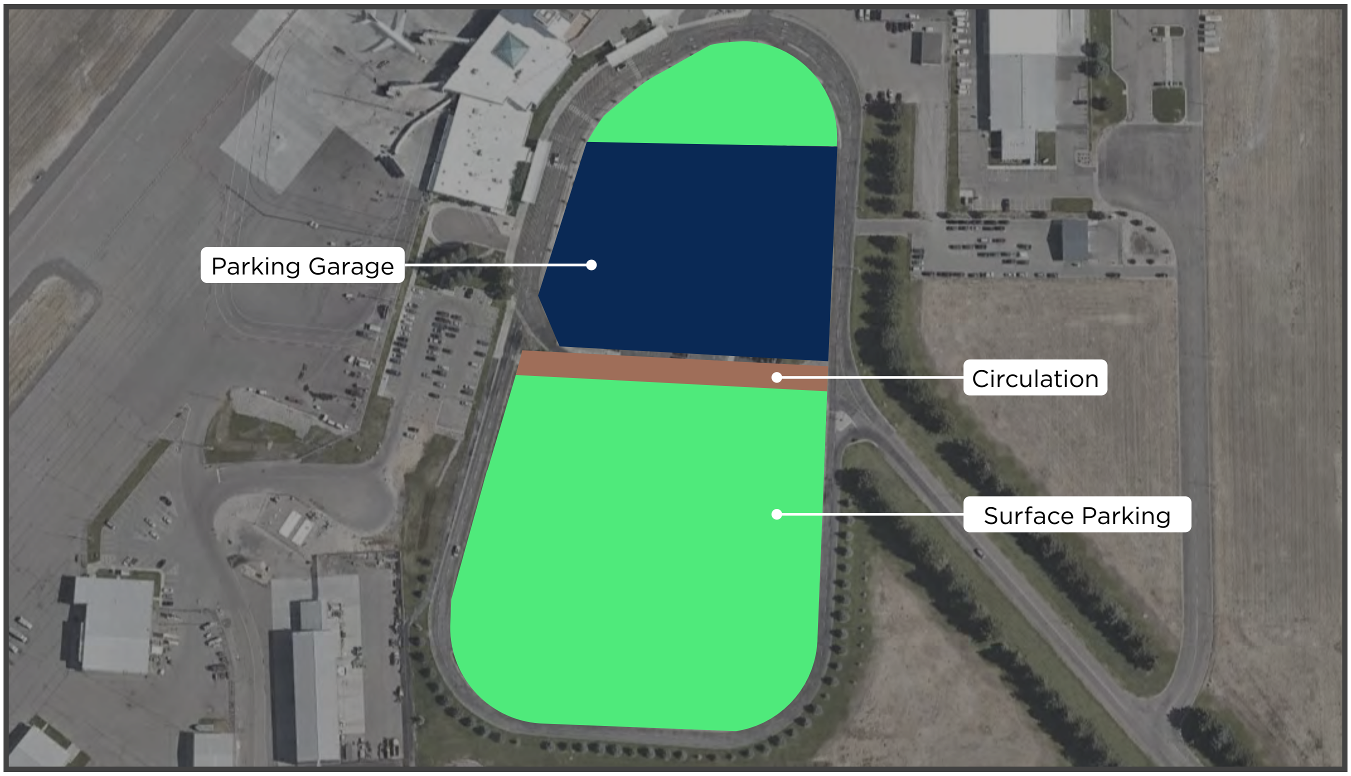



Source: Google Earth, Ardurra.

### 7.1.8. Initial Garage Concept 2

As shown in Figure 7.6, concept 2 is the largest of the three garage options and incorporates a parking access and exit lane through the center of the existing terminal loop to avoid putting traffic on the terminal curbside. Hourly surface parking is placed at the north end of the loop with additional surface parking at the south end. This garage concept allows for one passenger bridge across Skyline Drive to the terminal.

Figure 7.6: **Initial Garage Concept 2**

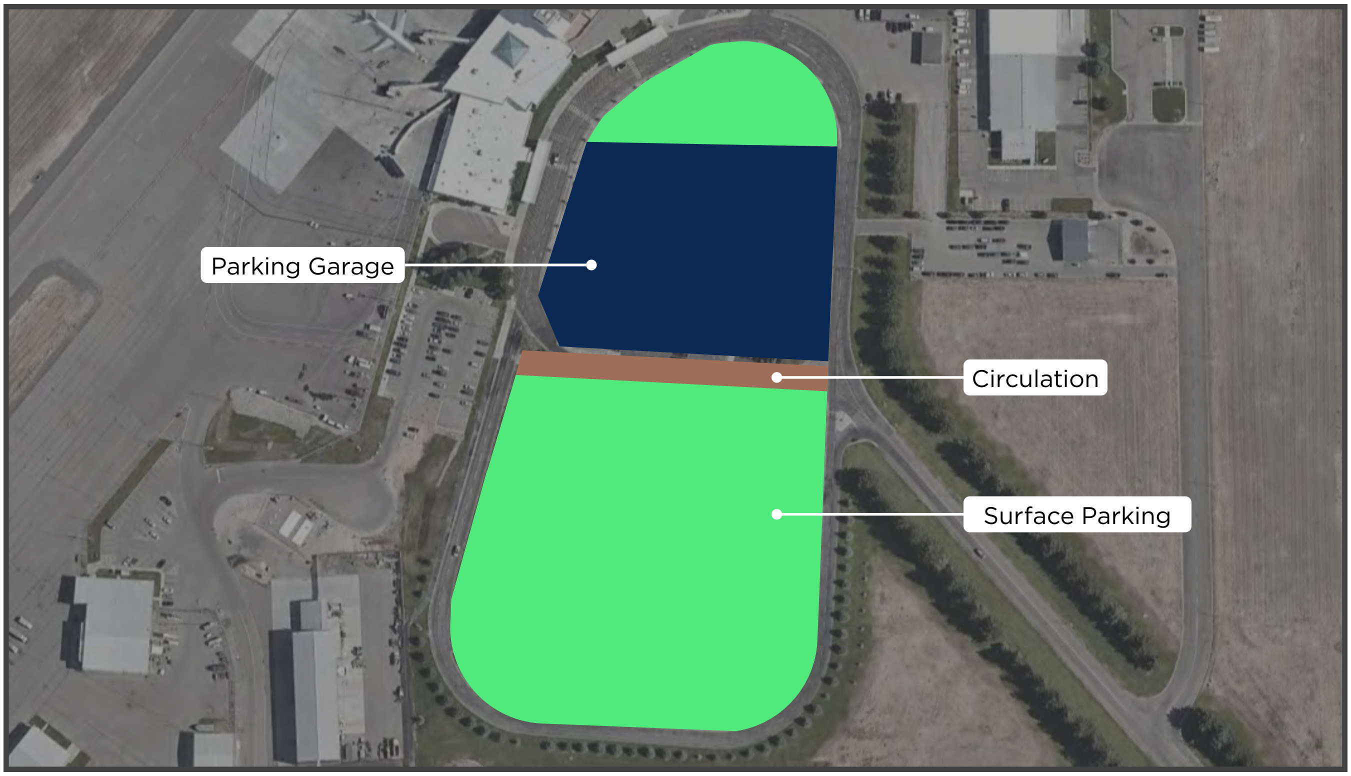



Source: Google Earth, Ardurra.

### 7.1.9. Initial Garage Concept 3

As shown in Figure 7.7, concept 3 places the garage directly in front of the terminal building and allows for two potential passenger bridges across Skyline Drive to a future terminal expansion. The access and exit lane would be similar to concept 2. Concept 1 and concept 3 do not meet all of the parking requirements within the Skyline terminal loop and require additional parking within the terminal area. Concept 2 meets the parking requirements without the need for additional parking outside of the Skyline terminal loop.

**Figure 7.7: Initial Garage concept 3**




Source: Google Earth, Ardurra.

### 7.1.10. Initial Terminal Area Evaluation

Each of the initial terminal area concepts and garage options resolves at least one of the facility requirements, enhances safety and efficiency, improves compliance with federal grant assurances through increased revenue generation, and does not cause any known significant environmental impacts. Feedback received from airport staff and the technical advisory committee eliminated initial terminal concept 2 and concept 3 from further consideration because the airport staff wanted to retain the diagonal segment of Skyline Drive as the signature entryway to the airport. Initial garage concept 1 and concept 3 were eliminated from further consideration due to the small size of the garage in concept 1 and the potential elimination of an airport traffic control tower relocation site due to the location of the garage footprint in concept 3. The following elements were found desirable and brought forward into the formalized alternatives analysis:

- Relocating the quick turnaround area.
- Adding a cell phone waiting lot.
- Eventually relocating the FedEx facility.
- Relocating the employee parking lot.
- Adding a transit center for public transportation and terminal deliveries.
- Expanding the apron and relocating the deicing pad.
- Realigning the terminal circulation routes.
- Reserving space for a future expansion of the terminal building.

### 7.1.11. Additional Quick Turnaround Area Concepts

During the initial terminal area concept development, two additional sites were reviewed for relocation of the rental car quick turnaround area. These include the area south of International Way across from the building at 1690 International Way and the south quad parcel along Grandview Drive. The International Way location requires land acquisition but is close to the terminal area. The south quad option is on airport property but is far from the terminal and reduces the land available for aeronautical development. These options were eliminated from further consideration because airport staff wanted to keep the quick turnaround area within the existing terminal area.

## 7.2. Terminal Area Alternatives

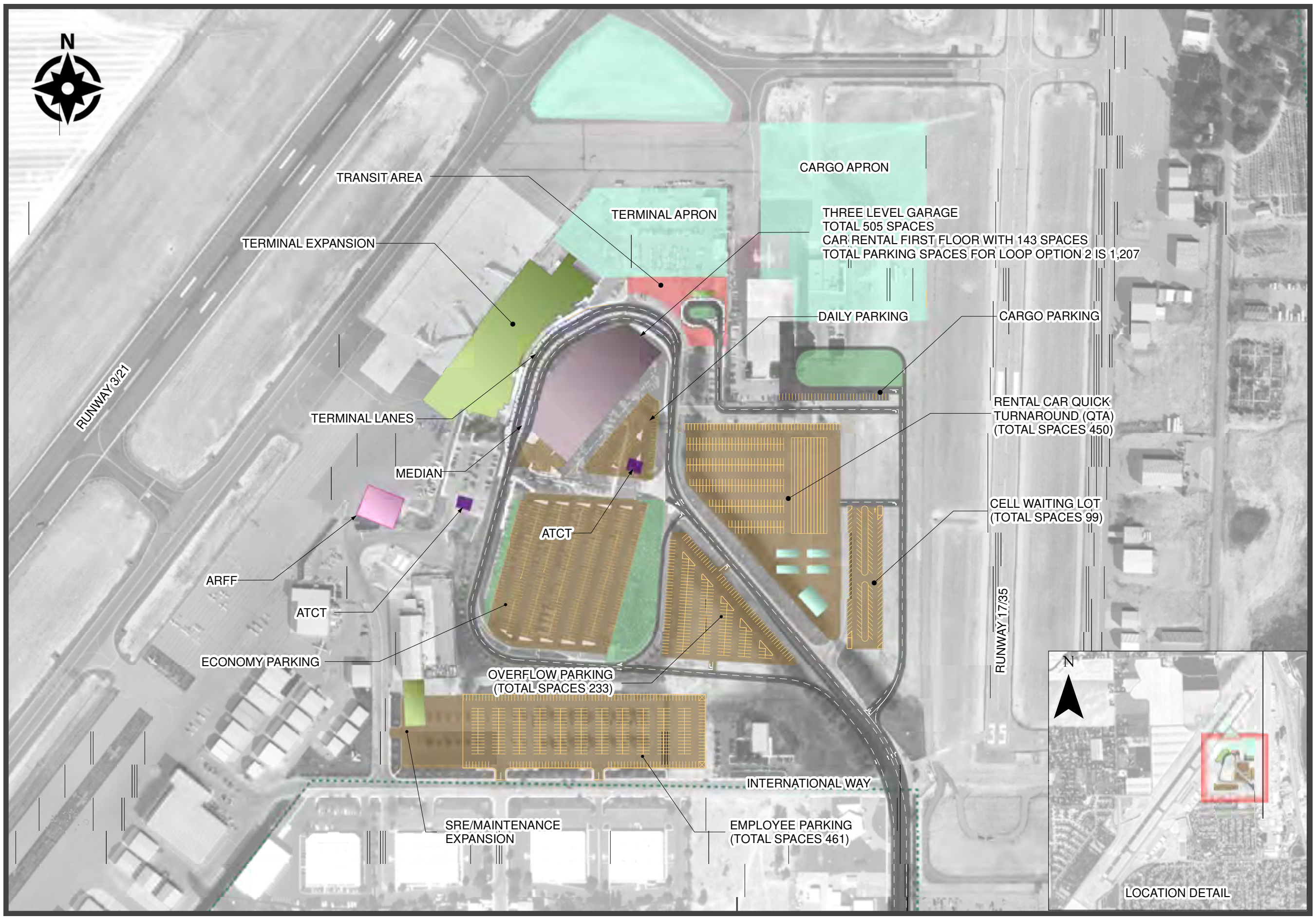
Following the initial evaluation of development concepts, and input from airport staff and the technical advisory committee, refinements were made to the options carried forward for further evaluation and discussion. Vehicle parking spaces shown generally exceed the requirements to demonstrate the ultimate potential of each alternative. Actual parking lot sizing would be based on need and added incrementally. The refined alternatives were termed phase 1 and phase 2. They worked together to demonstrate long-range potential phasing as well as alternatives to be compared against each other. Each of the terminal phases work towards an ultimate vision that includes:

- A slight realignment of Skyline Drive to increase efficiency and capacity.
- An eventual relocation of the FedEx facility. (Discussed in Section 7.3. Airfield and Section 7.4. West Side Development.)
- Further terminal expansion to the east.
- The addition of a combined transit and delivery station.
- The addition of a three-level parking garage facing the terminal building with the rental car ready/return occupying the first level.
- Relocation of the rental car quick turnaround area.
- Additional parking areas for passengers and airport employees.
- Addition of a cell phone waiting lot.

### 7.2.1. Terminal Area Phase 1

As shown in Figure 7.8, terminal area phase 1 is an all-encompassing layout of the future passenger interface from city streets to the terminal curbside. Space is reserved for two potential airport traffic control tower locations and one potential aircraft rescue and fire fighting station relocation. Phase 1 maintains space for the FedEx facility in its current location until a suitable replacement facility is built.

**Figure 7.8: Terminal Area Phase 1**

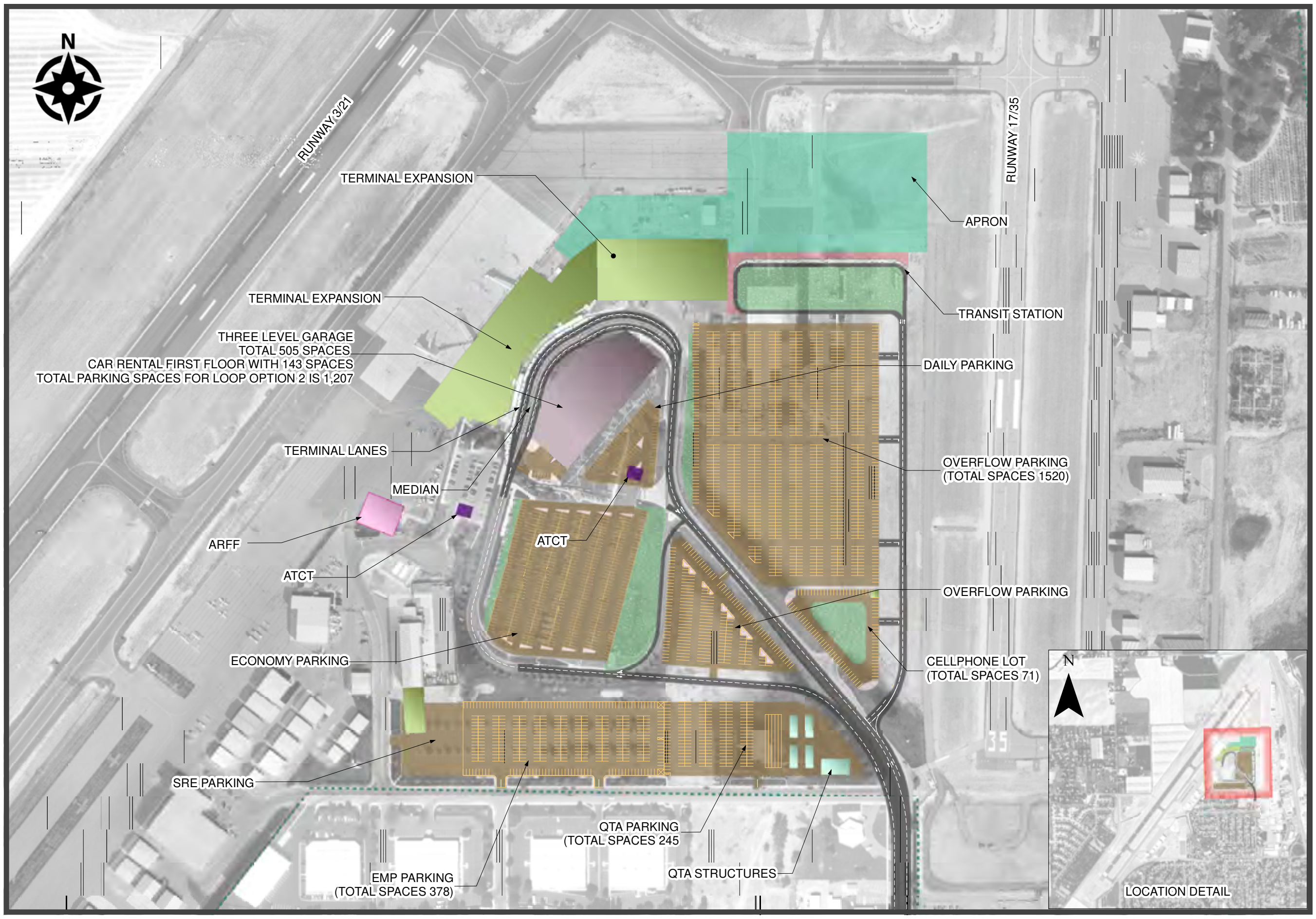



Source: Ardurra.

### 7.2.2. Terminal Area Phase 2

Terminal area phase 2 assumes the FedEx facility has been relocated to maximize the terminal area for passenger activity. In its place, a larger transit center exists that provides access to a future terminal expansion to the east should passenger activity require it. The building at 1690 International Way has been removed and replaced with the rental car quick turnaround area to reduce rental car conflicts with passenger traffic. As shown in Figure 7.9, the remaining space has been filled in with a cell phone waiting lot and extra parking that accounts for future passenger demand beyond the planning horizon.

**Figure 7.9: Terminal Area Phase 2**

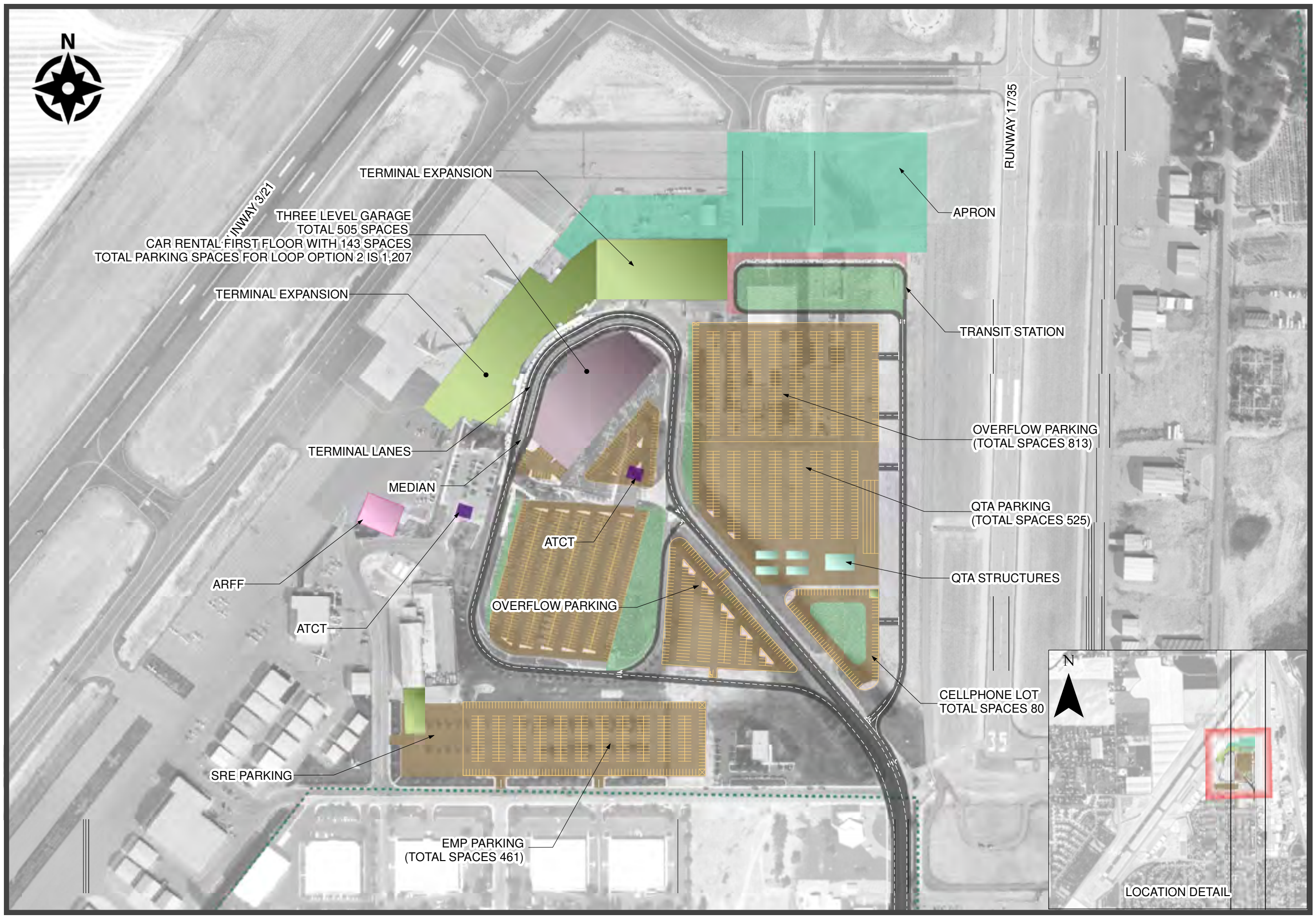



Source: Ardurra.

### 7.2.3. Terminal Area Phase 2A

As shown in Figure 7.10, the difference between phase 2 and phase 2A is that the building at 1690 International Way remains at its current location for use as airport administrative support or another revenue source. In this case, the quick turnaround area is expanded from the same location in phase 1, and the remaining space is filled in with parking and a cell lot.

**Figure 7.10: Terminal Area Phase 2A**




Source: Ardurra.

The phase 1, phase 2, and phase 2A alternatives were used to further assess each element being considered for relocation or expansion and to garner additional stakeholder feedback. That process culminated with the preferred option described in Section 7.5. Selection of the Preferred Alternatives.

## 7.3. Airfield

Airfield alternatives address airport design deficiencies, the possibility of closing Runway 17/35 due to its lack of FAA eligibility, and the addition of 41 new hangars.

### 7.3.1. Runway 17/35

The future disposition of Runway 17/35 was discussed during the development of the initial airfield development concepts since it is not eligible for FAA funding based on wind coverage and capacity. The two options considered during this phase were to close the runway and repurpose it as a taxiway for expanded general aviation (GA) and air cargo development on the east side of the airport or keep the runway open and maintain it using local funds. Both options have positive and negative consequences.

Keeping Runway 17/35 open is a no-action alternative that maintains the existing condition. Accordingly, small, light general aviation traffic and large, heavy commercial airline traffic are separated. Keeping the runway open allows light general aviation traffic to continue to have a crosswind option for training. Additionally, there is infrastructure and services tailored to light general aviation on the east side of the airport, such as fuel, maintenance, hangars, and aircraft parking. Since Runway 17/35 is not eligible for FAA funding, any maintenance and capital costs related to the runway would have to be funded using local funds. With intersecting extended runway centerlines, the traffic pattern on Runway 17/35 overlaps with traffic operating on Runway 3/21. Runway 17/35 also has incompatible land uses in the runway protection zone (RPZ), and there is a runway incursion hot spot at Taxiway C that needs to be addressed.

Closing Runway 17/35 and converting it to a taxiway makes the pavement eligible for FAA funding—a primary consideration for closing it. Closing the runway would eliminate the incompatible land uses, the runway incursion hot spot at Taxiway C, and the overlapping traffic patterns. Closing the runway would also create more space for general aviation development. This includes hangars and aircraft parking. Conversely, closing Runway 17/35 turns Idaho Falls Regional Airport into a single runway airport where a diverse mix of fast and slow, light and heavy, small and large aircraft are forced to use the same runway and traffic pattern. Taxi times from the east side of Runway 17/35 would become longer for aircraft taxiing to the Runway 3-end. If an aircraft becomes disabled on Runway 3/21, the airport would be closed to fixed-wing operations. This would create delays and diversions for all fixed wing operations until the disabled aircraft is removed from the runway. This includes commercial air carrier, corporate aircraft, medical transport, and general aviation aircraft operations.

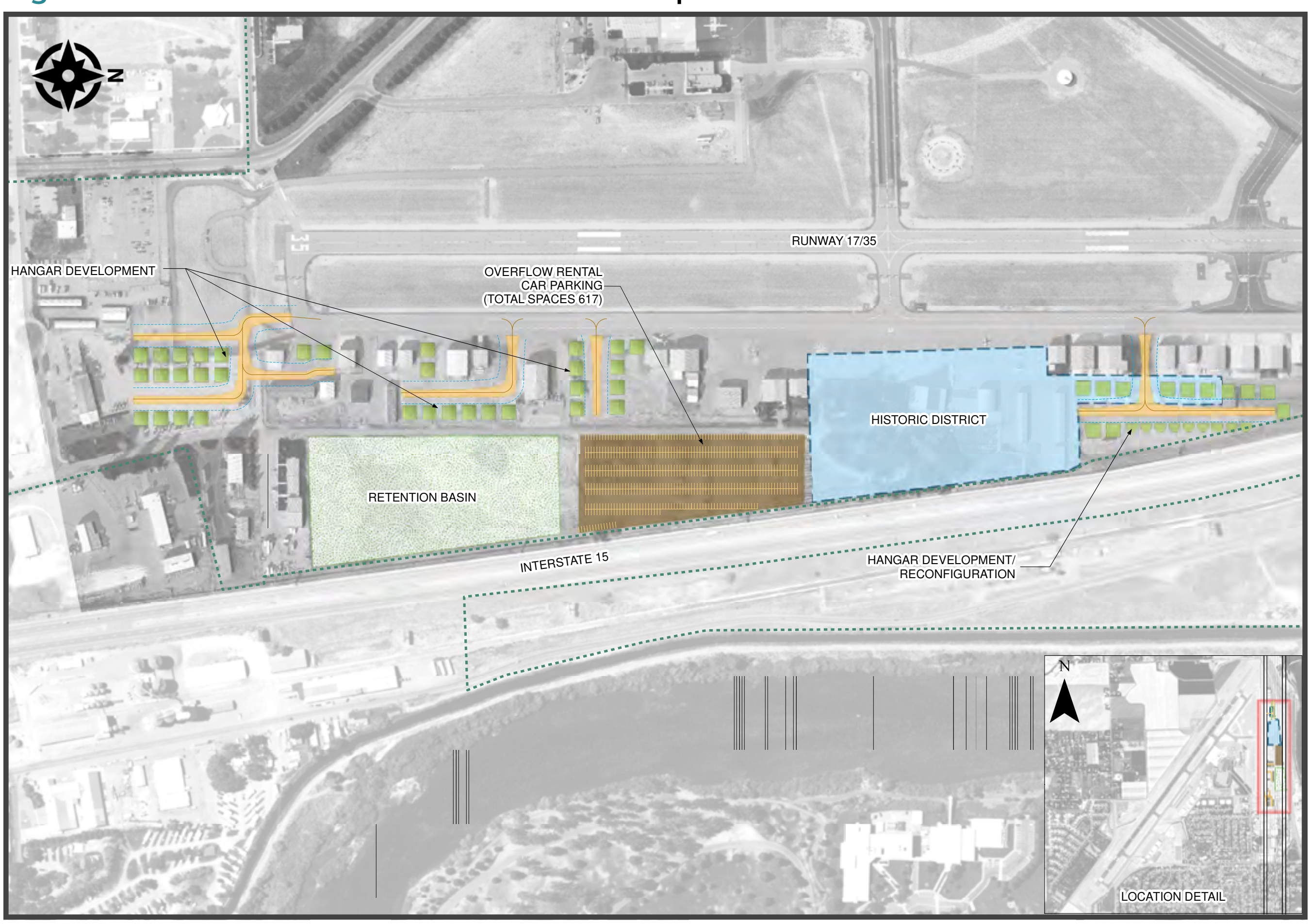
### 7.3.2. East Side General Aviation

Regardless of the disposition of Runway 17/35, development on the east side of Runway 17/35 focuses on maintaining its existing use for light general aviation aircraft. Other considerations were to maintain the integrity of the historic district, retain and enhance the existing stormwater retention basin to accommodate development of the terminal area, address design standards related to light general aviation aircraft, and fill in the existing hangar area to the maximum extent possible with hangars and taxilanes.

The concept shown in Figure 7.11 allows for development of 31 additional 50-foot by 50-foot hangars with room for up to 14 more hangars to be built when the 1505 Foote Drive parcel becomes available for conversion to an aeronautical use.

The parcels east of Foot Drive north of the retention basin show potential for additional vehicle parking of up to 617 spaces for rental cars in an area currently occupied by a community garden and the Holley Tree Farm. These are lots 12, 13, 14, and 15 of the Airport Industrial Park Addition, Division 3. The parcels were initially considered for aeronautical use, but the grade difference across from Foote Drive made it impractical for aircraft taxiing. Creating a vehicle parking lot on this parcel allows for the relocation of rental car overflow parking from the Runway 35 runway protection zone to a compatible location. However, it may result in the community garden and tree farm being displaced.

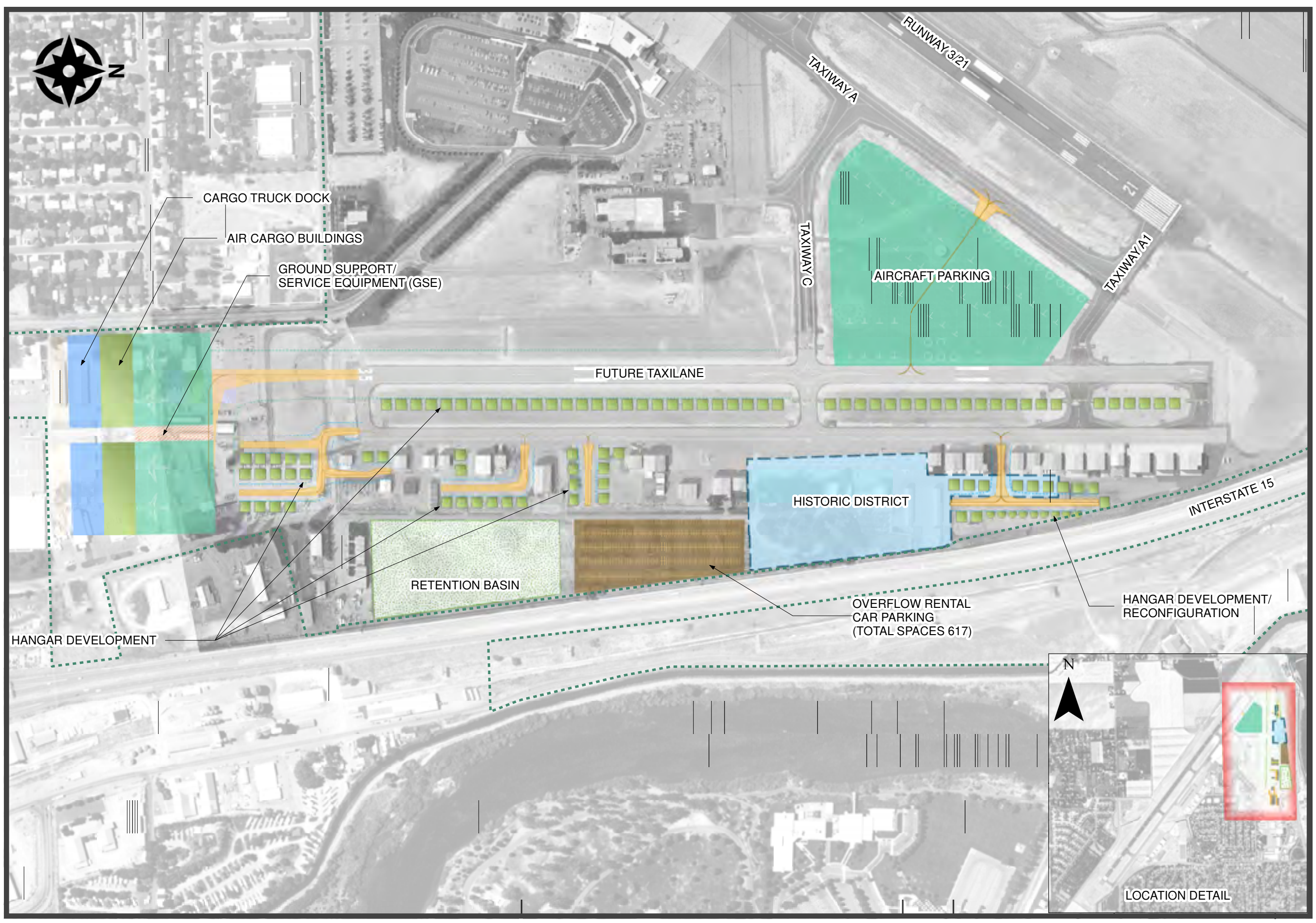
**Figure 7.11: East Side General Aviation Development**




Source: Ardurra.

Should Runway 17/35 be closed and converted to a taxiway, the area presently occupied by the Runway 35 runway protection zone could be converted for use by air cargo operators. There is enough space to meet the needs of FedEx plus another independent air cargo operator at that location. It is assumed the runway would be converted to a taxiway meeting ADG-IV standards to accommodate large air cargo aircraft. As shown in Figure 7.12, closing the runway also allows for more hangars and parking spaces in the infield with enough space for an ADG-IV taxiway or taxilane. Overall, the runway was determined to be maintained. The conclusion of that decision and the final configuration carried forward to the airport layout plan are discussed in Section 7.5. Selection of the Preferred Alternatives.

**Figure 7.12: East Side Development with Runway 17/35 Closed**




Source: Ardurra.

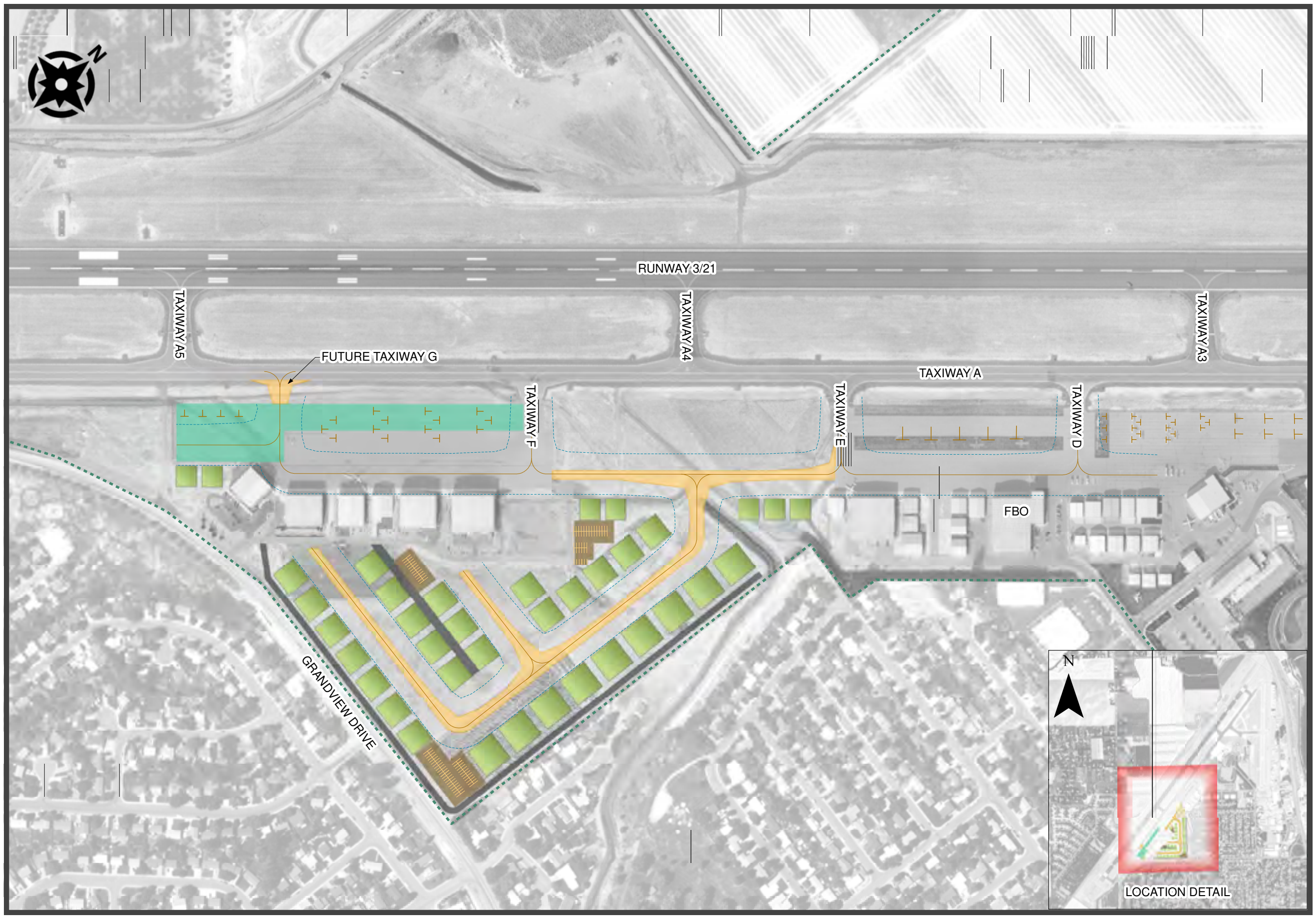
### 7.3.3. South Quad Parcel

The south quad parcel is located along Grandview Drive on airport property east of an existing development intended for large general aviation aircraft. Initial development concepts for this parcel include either dedicated general aviation use, dedicated air cargo use, or mixed aeronautical and nonaeronautical use that would include a rental car facility and air cargo or general aviation. Discussions with airport staff and the technical advisory committee ruled out the split-use concept with a rental car facility because it would be too far from the terminal area and would limit aeronautical use. Further discussion concluded the highest and best use of the south quad parcel was for medium and large general aviation aircraft because that is the existing adjacent use. As shown in Figure 7.13, Figure 7.14, and Figure 7.15, three different layouts were created with a mix of large, medium, and small executive hangars. These three layouts all incorporate the following features:

- Space for vehicle access and parking.
- A connecting taxilane between Taxiway E and Taxiway F.
- Maintaining the existing retention basin for drainage.
- Existing apron expansion with additional aircraft tiedowns.
- A future Taxiway G connecting the apron to Taxiway A.

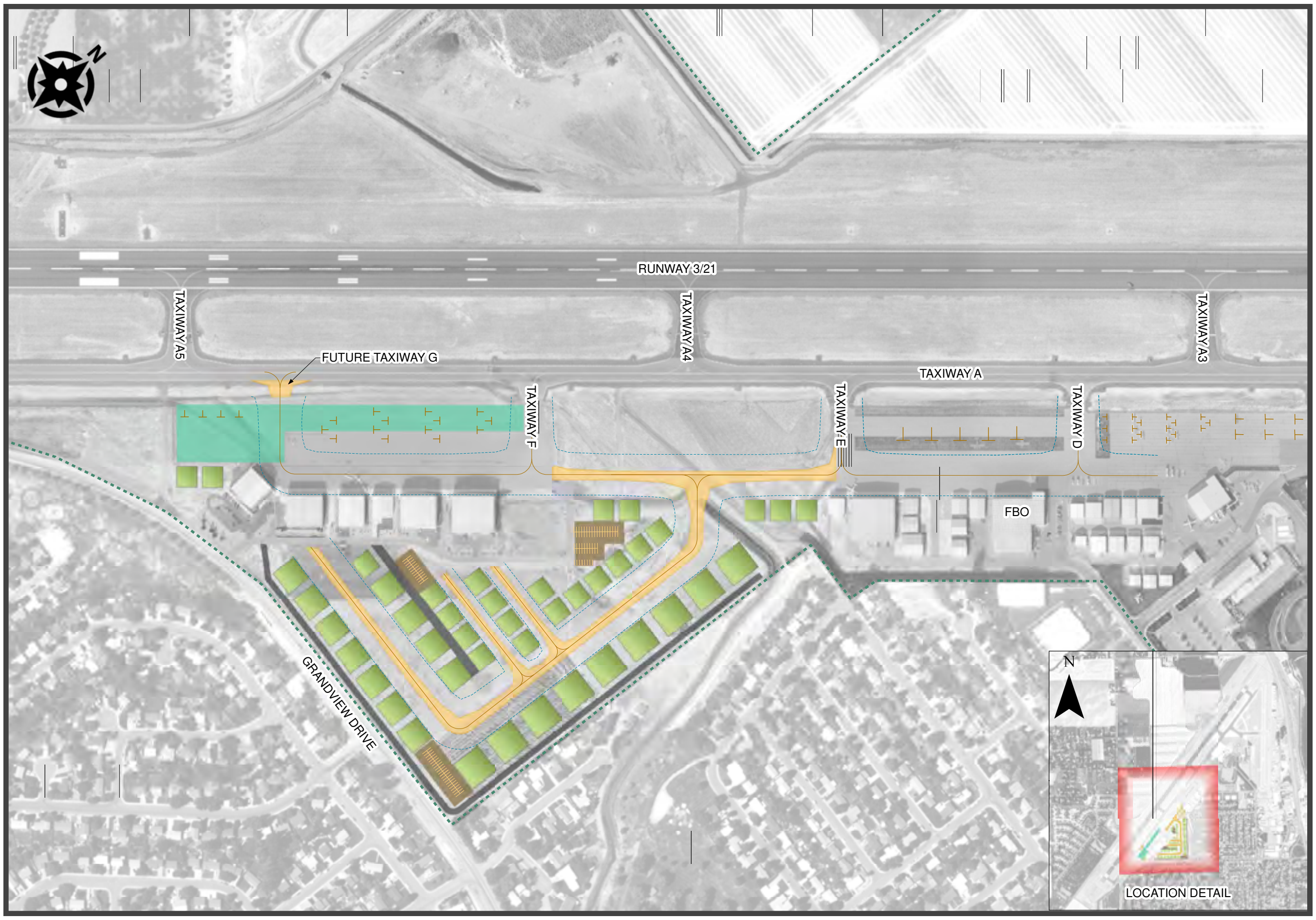
These hangar layout alternatives assisted in determining a final alternative to be carried forward into the airport layout plan. The final configuration carried forward is discussed in Section 7.5. Selection of the Preferred Alternatives.

## Figure 7.13: South Quad General Aviation Development Layout 1



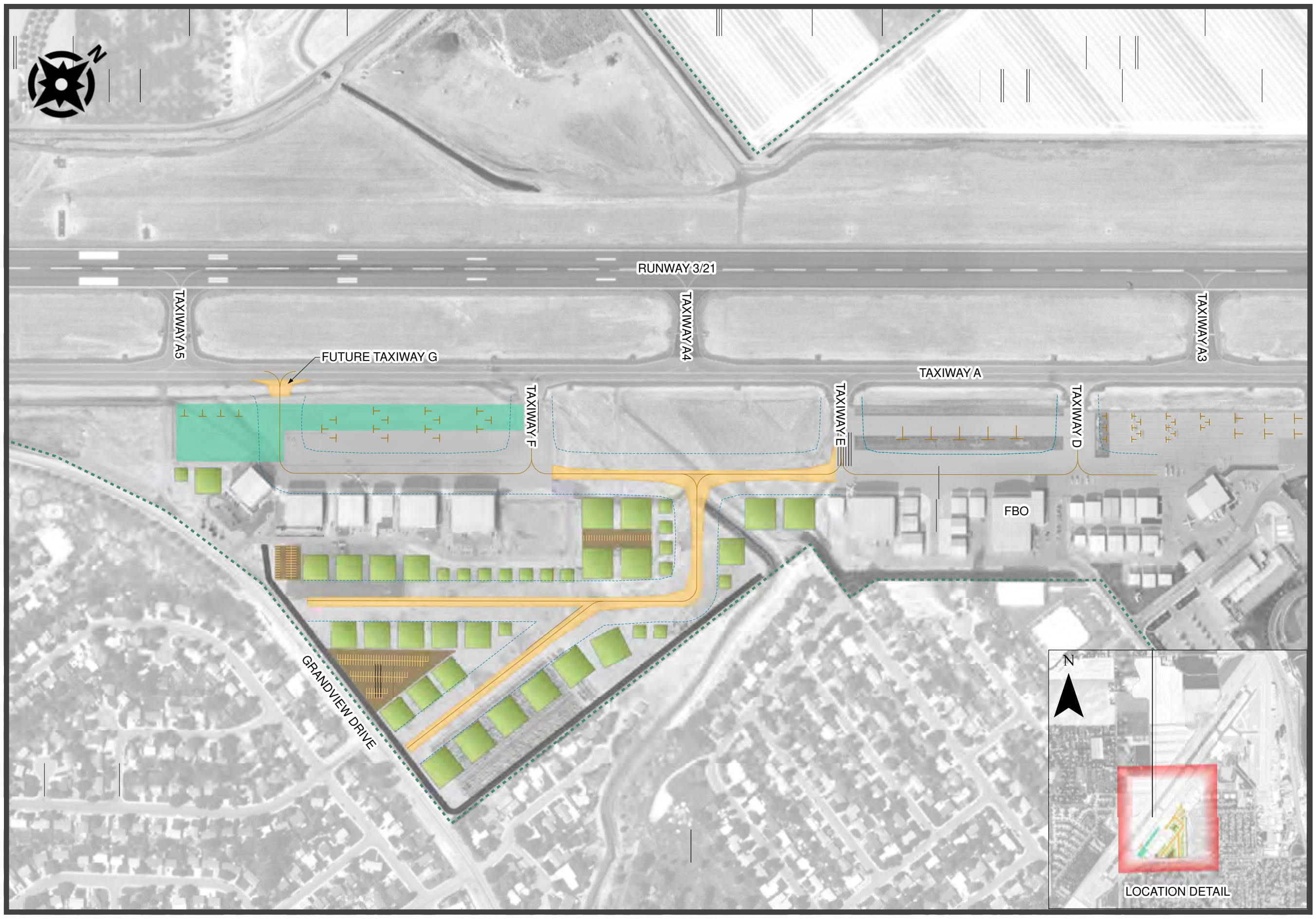

Source: Ardurra.

**Figure 7.14:** South Quad General Aviation Development Layout 2




Source: Ardurra.

## Figure 7.15: South Quad General Aviation Development Layout 3




Source: Ardurra.

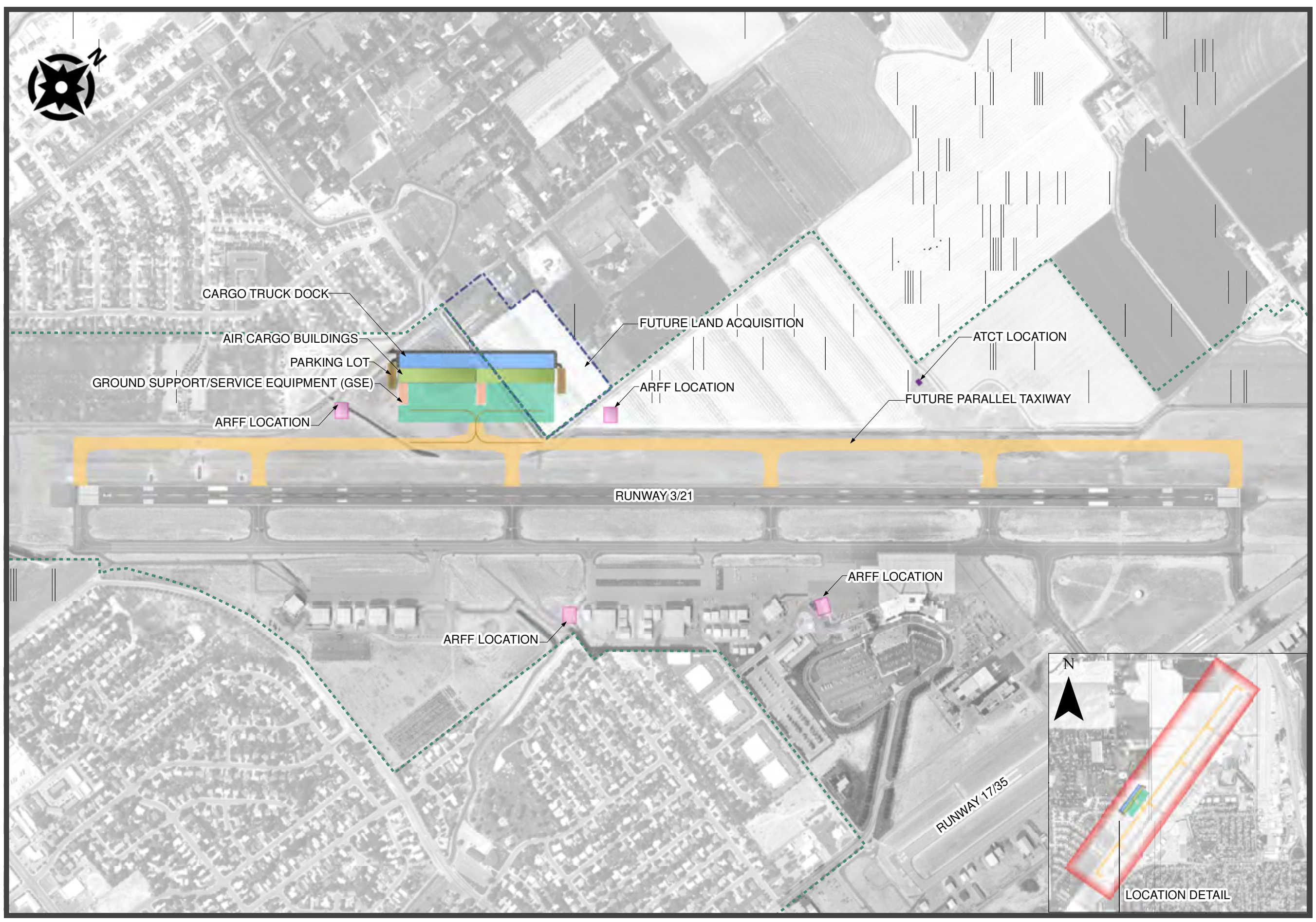
## 7.4. West Side Development

The west side development concept is driven by the need to double the size of FedEx's facility and create space for a second air cargo operator that is equal to or larger than the FedEx facility. As discussed in the terminal area alternatives, the air cargo facility needs to be relocated to make room for the eventual expansion of passenger activity within the terminal building, outside the terminal building on the apron, and within the vehicle parking area. The west side development complex includes a full-length parallel taxiway, land acquisition, space for a new air cargo facility, a placeholder for future aviation development, space for airport support, and space for drainage infrastructure.

### 7.4.1. West Side Development Phase 1

As shown in Figure 7.16, phase 1 of the west side development includes space for two air cargo facilities and preserves space for the potential relocation of the aircraft rescue and fire fighting facility and the airport traffic control tower. Phase 1 maintains access using the existing surface streets and does not disrupt the soccer fields. There is enough space available for FedEx to relocate to this area using existing airport property with a partial parallel taxiway. For phase 1 to achieve full build out, land acquisition is required to the north. Phase 1 requires extensive infrastructure improvements and an environmental evaluation.

Figure 7.16: West Side Development Phase 1

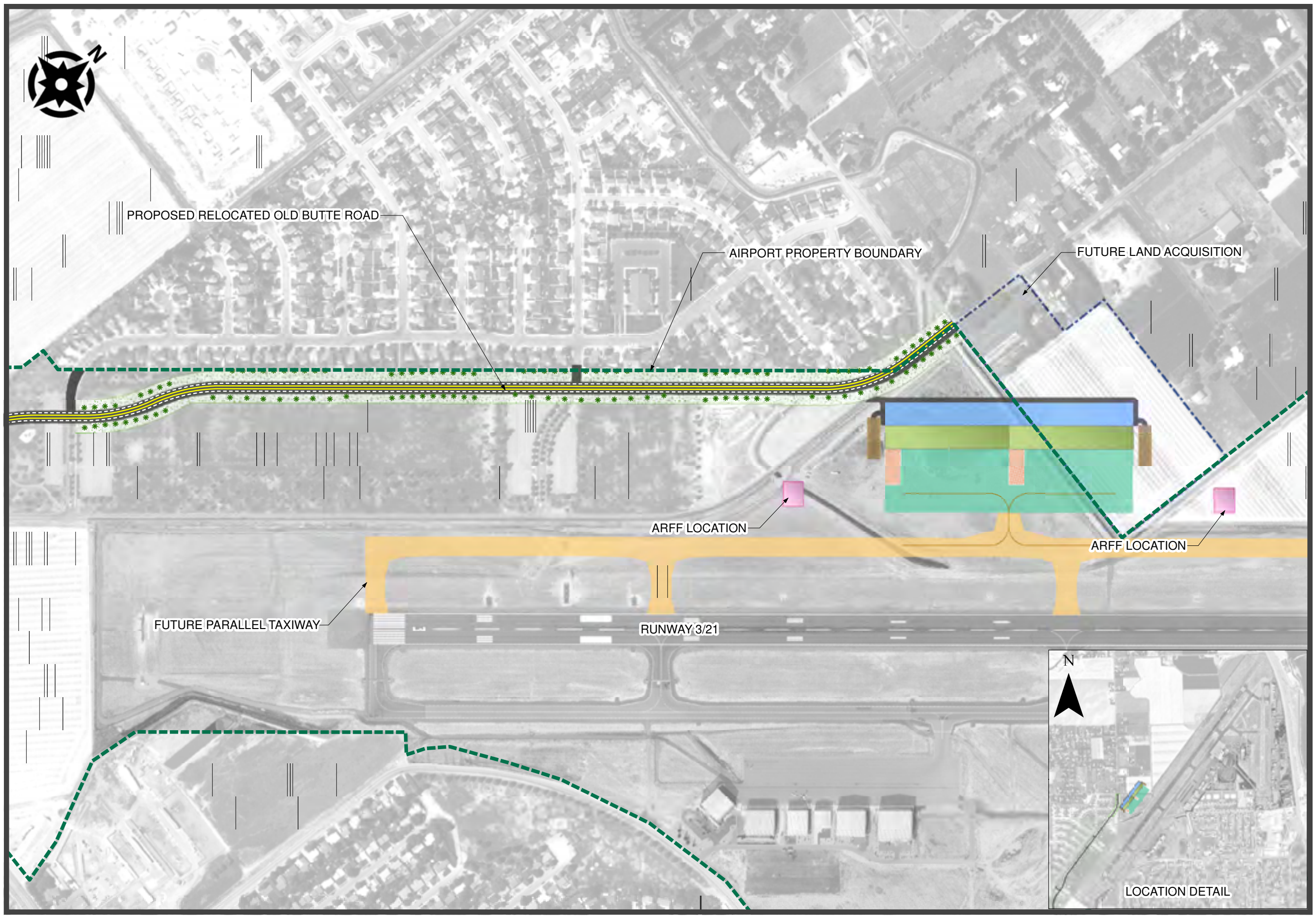



Source: Ardurra.

### 7.4.2. West Side Development Phase 2

As shown in Figure 7.17, phase 2 of the west side development is primarily an airport land use protection alternative because the area is not projected to be needed for airport use during the 20-year planning period for this airport master plan. Old Butte Road is shown relocated to the western edge of the airport property boundary. This is necessary because the property was purchased with federal funds and is intended for aeronautical use. The exact alignment, size, and timing of this relocation are dependent on traffic levels as well as input from others that are unknown at the time of this airport master plan.

**Figure 7.17: West Side Development Phase 2**

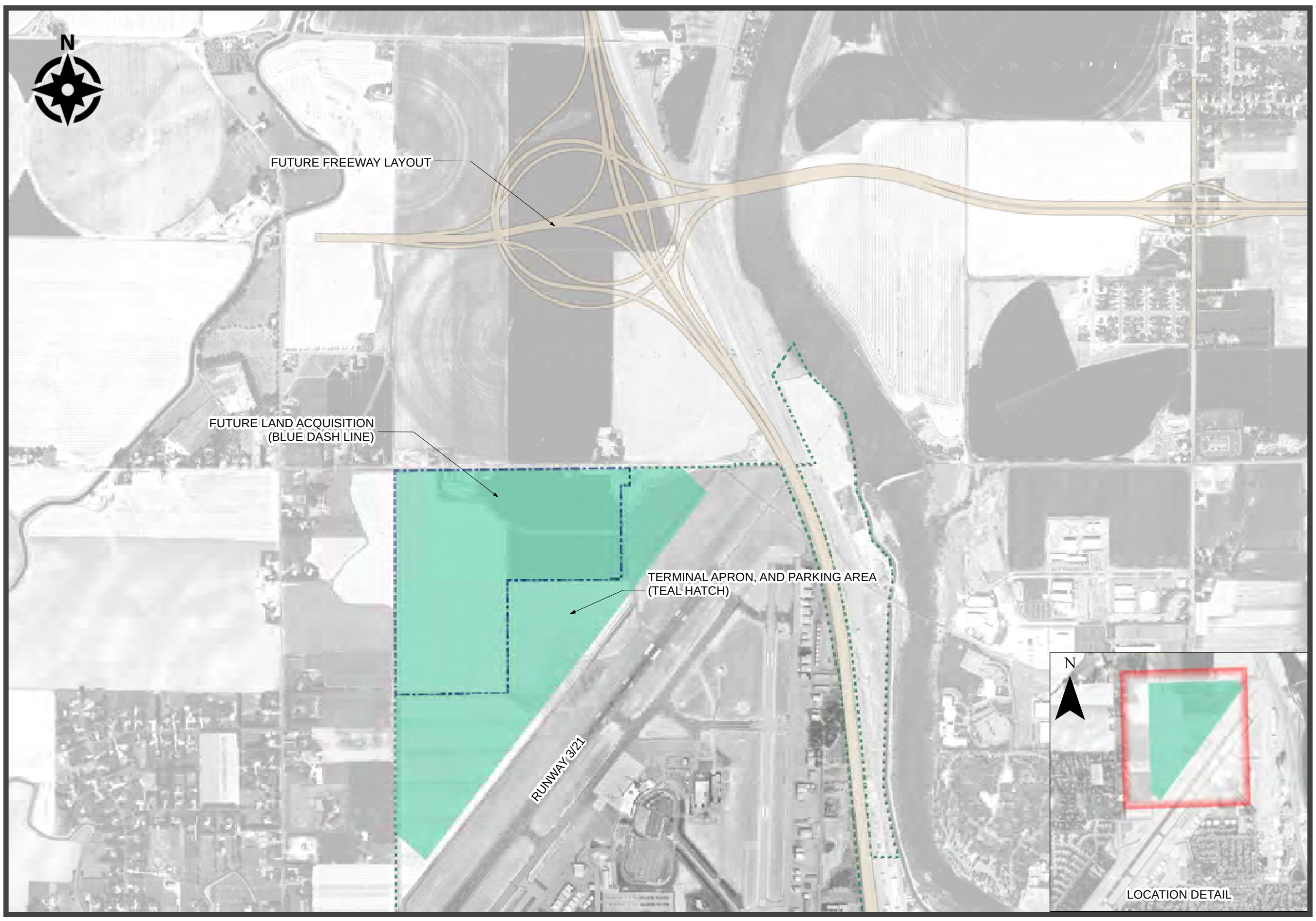



Source: Ardurra.

### 7.4.3. West Terminal Concept

At the time of this study, the Idaho Transportation Department (ITD) was evaluating a possible Interstate 15 and U.S. Highway 20 interchange north of the airport. While likely beyond the planning horizon of this study, should this scenario materialize, it would open possible new access points to airport property from the northwest. Funding notwithstanding, this could allow for development of a purpose-built terminal complex along with associated support infrastructure that would include parking, rental cars, and airline cargo. As shown in Figure 7.18, moving the terminal complex to this location would move vehicle traffic away from the residential area along Skyline Drive and allow the existing terminal area to be repurposed for other aviation uses. Other possible uses of this area include an expanded air cargo space, corporate flight operations, private hangar development, commercial aviation operations, and advanced air mobility operations. These scenarios are beyond the planning horizon of this airport master plan. Consideration should be given to protecting the northwest quadrant of the airport and the adjacent properties from permanent uses that would prevent future development opportunities.

**Figure 7.18: West Terminal Concept**




Source: Ardurra.

## 7.5. Selection of the Preferred Alternatives

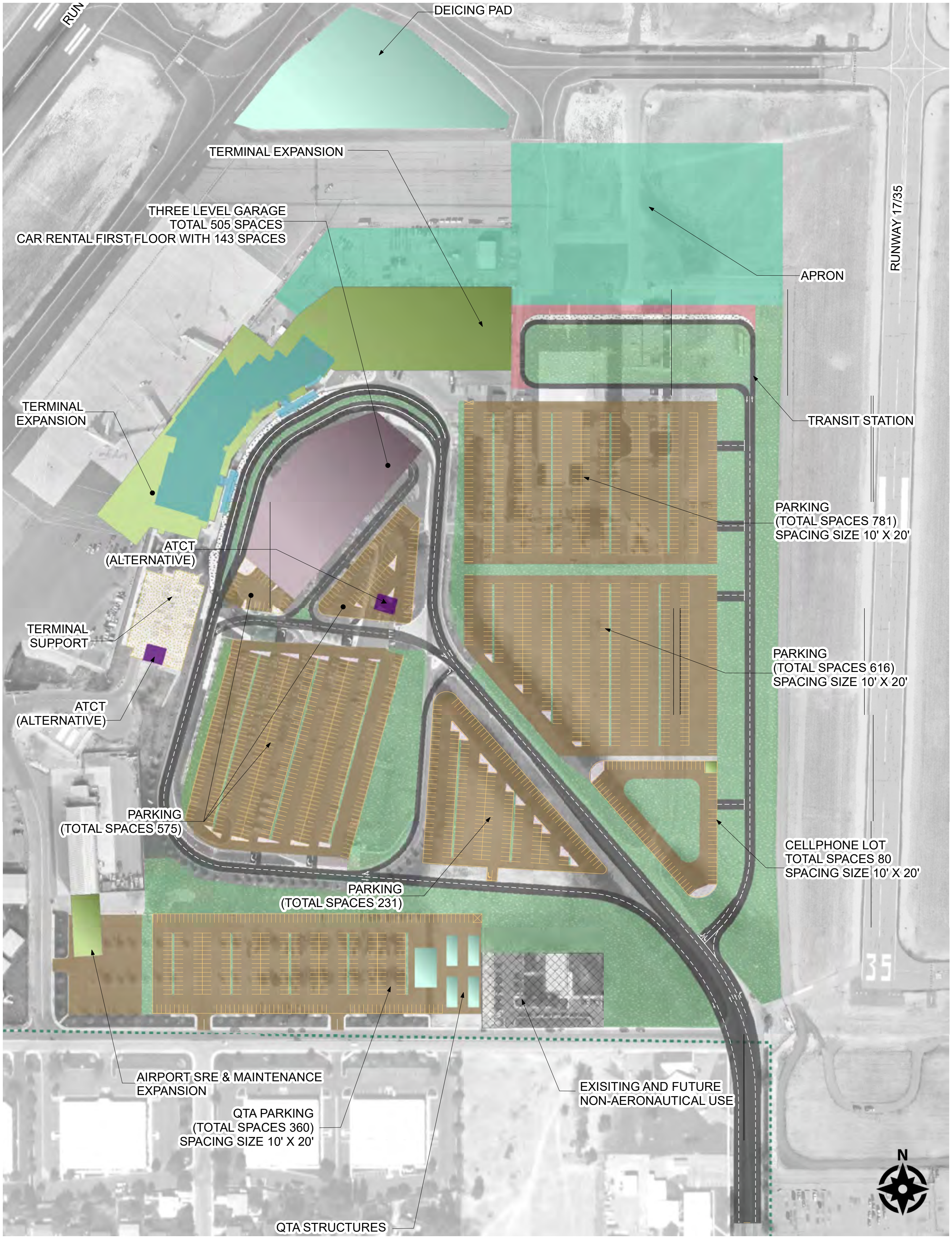
A public open house was held February 7, 2024, at the Idaho Falls Activity Center near the main entrance to the airport. During the open house, the draft alternatives were presented, and questions and comments were received. The primary concerns were related to the placement of a taxiway and air cargo on the west side of the airport, relocation of Old Butte Road closer to the residential area, the disposition of the soccer field complex and its drainage infrastructure, land acquisition related to airport development on the northwest side of the airport, and the possible closure of Runway 17/35. Through consideration of public comment during the open house, the City of Idaho Falls selected a preferred alternative for each of the functional areas of airport property.

### 7.5.1. Terminal Area

From the draft terminal area alternatives, a variation of phase 2A was selected as the preferred terminal area alternative. This alternative retains the building located at 1690 International Way for existing and future nonaeronautical use. Other notable changes from phase 2A include the aircraft rescue and fire fighting relocation option at the south end of the commercial apron has been removed from further consideration, the addition of more drainage features in the parking lot expansion area, shifting the rental car quick turnaround area to the existing economy lot 2, and incorporating future employee parking elsewhere in the parking lot expansion area. Placing the rental car quick turnaround area at economy lot 2 results in 360 parking spaces which exceeds the requirement of 274 spaces. Total parking spaces available for passengers and employees is approximately 2,500 which exceeds the requirements of 1,776 combined spaces.

Overall, this alternative can be completed using a phased approach based on demand while also ensuring areas are preserved to accommodate growth beyond the 20-year planning horizon. The preferred terminal area alternative is shown in Figure 7.19.

## Figure 7.19: Preferred Terminal Area Alternative




Source: Ardurra.

### 7.5.2. Airfield – East Side

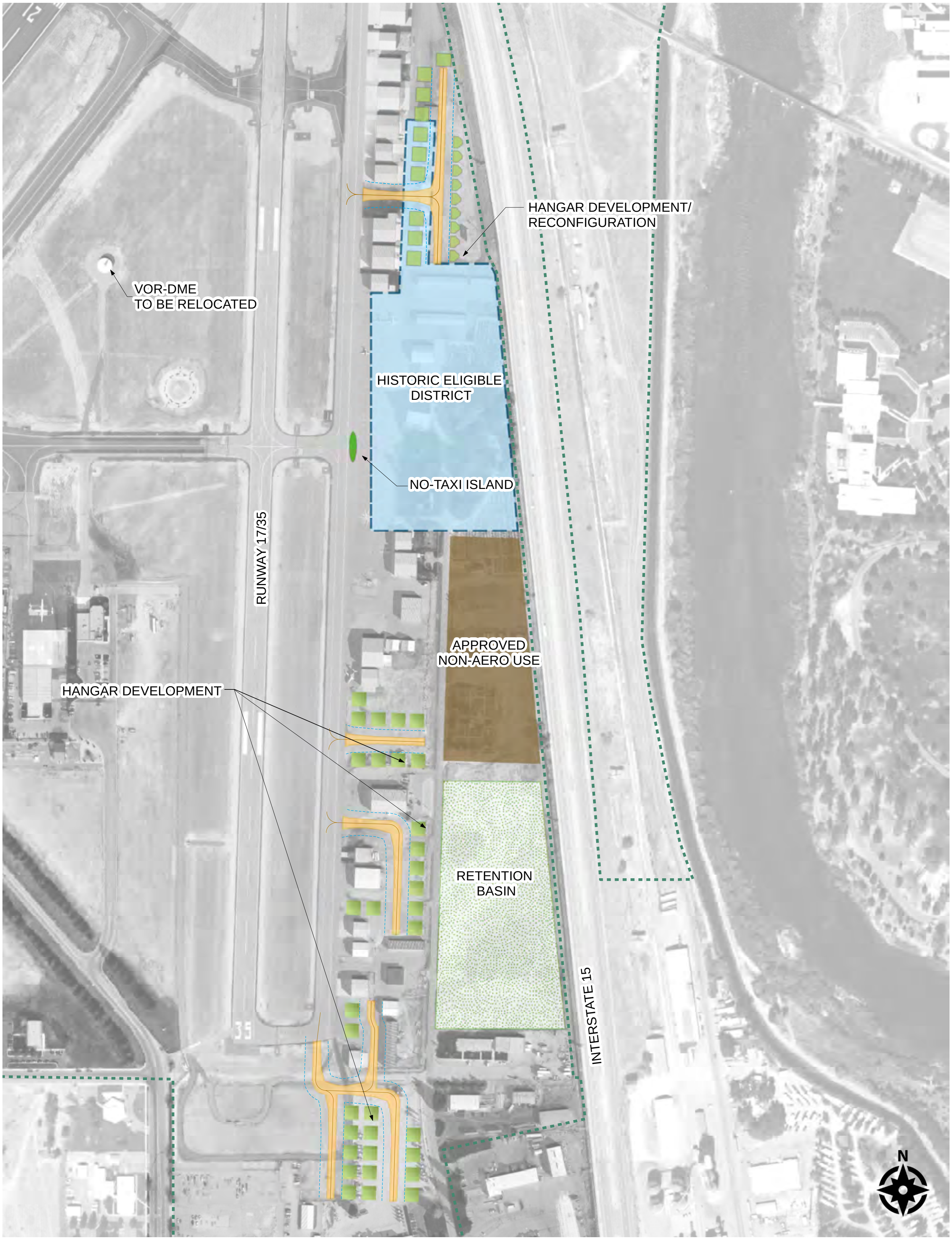
Development of the east side of the airport was contingent on retaining or closing Runway 17/35. This consideration was based solely on FAA eligibility for current and future funding for maintenance and upkeep of the runway. The preferred alternative selected for this master plan was to keep Runway 17/35 and continue to maintain it using local funds. The runway pavement is in good enough condition that it can be maintained during the short-term to medium-term planning period of five to ten years for this airport master plan without a full reconstruction. However, the airport rate structure should be reviewed to determine if adjustments are needed to account for the progressively increasing cost of maintaining the runway as the pavement degrades over time. Additional or alternate funding sources from federal, state, and private sources should be pursued to help support the airport operations and maintenance fund for the long-term planning horizon of 11–20 years for this airport master plan.

With Runway 17/35 being retained for this airport master plan, it means the hot spot at Taxiway C would remain. This is mitigated by adding a no-taxi island on the apron in front of Taxiway C to force pilots to make turns before entering the runway. Runway guard lights, which are sometimes called wig wags, should also be installed at the entrance to Runway 17/35 at Taxiway C to provide further visual cues to pilots.

The previous airport layout plan, as well as prior planning studies, noted the movement area boundary along Taxiway B does not account for the full width of the taxiway object free area (OFA). This was mitigated in prior plans by moving Taxiway B closer to Runway 17/35 while maintaining runway to taxiway separation standards. However, with Runway 17/35 being ineligible for FAA funding, it is unlikely the FAA would fund a relocation of Taxiway B. This preferred alternative retains Taxiway B in its present location. To mitigate for the nonstandard movement area boundary, it is recommended the airport revise the letter of agreement on file with the airport traffic control tower to adjust the movement area boundary line.

In the draft alternative for the east side, the community garden north of the retention basin was converted into an overflow parking lot for rental car companies. The preferred alternative earmarks this area for a nonspecific, future approved nonaeronautical use. The preferred east side area alternative is shown in Figure 7.20.

**Figure 7.20: Preferred East Side Alternative**

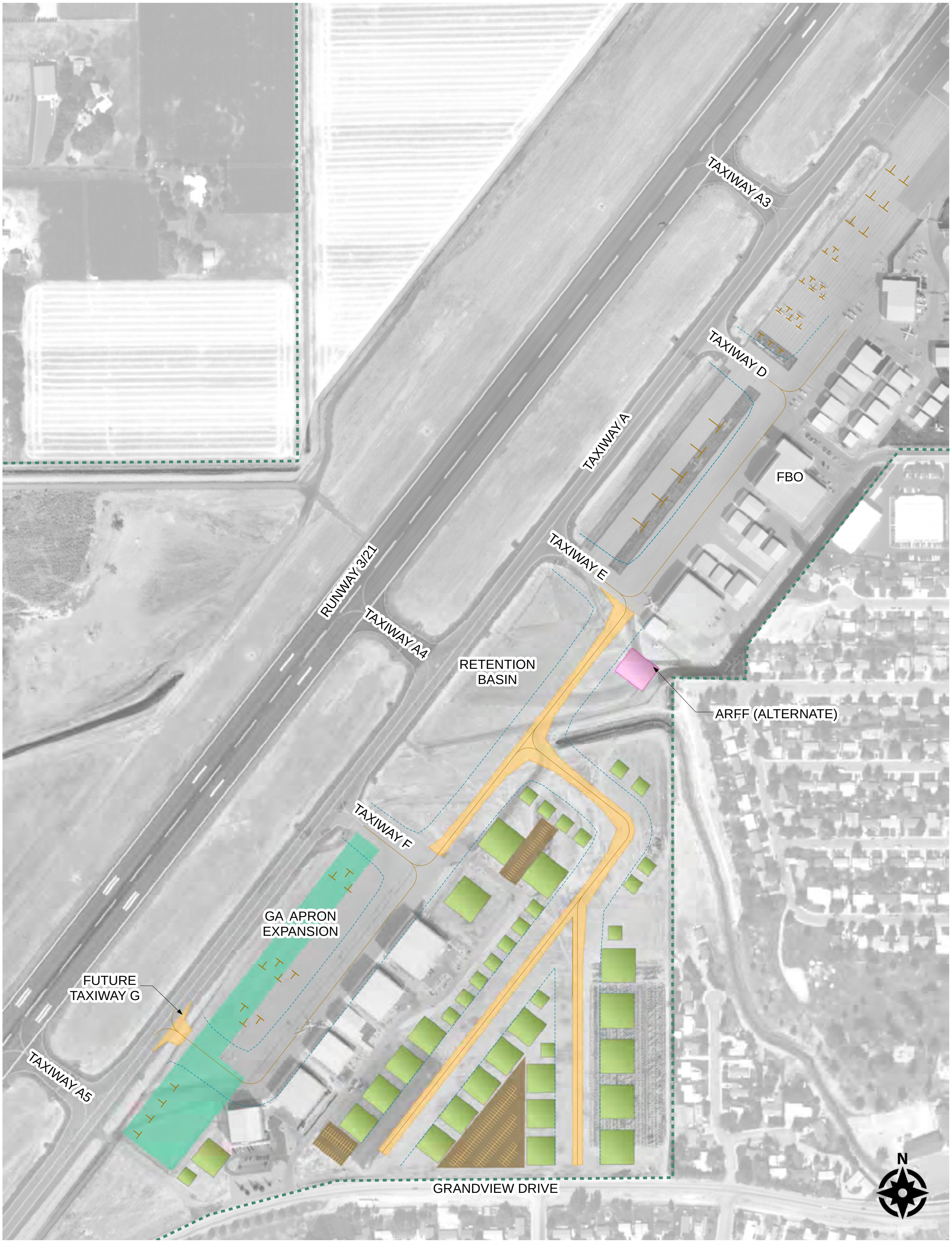



Source: Ardurra.

### 7.5.3. Airfield – South Quad

The three hangar configurations for the south quad were evaluated by the planning team and airport staff. The preferred alternative selected was a variation of layout 3. Noted changes are the placement of a possible aircraft rescue and fire fighting relocation at the south end of the FBO area near Olympia Drive which would shift the taxilane south to avoid the East Lateral and re-size the hangar options along the east side of the parcel to allow for an adequate buffer from the residential area to the east. The preferred alternative for the South Quad parcel is shown in Figure 7.21.

## Figure 7.21: Preferred South Quad Development Alternative




Source: Ardurra.

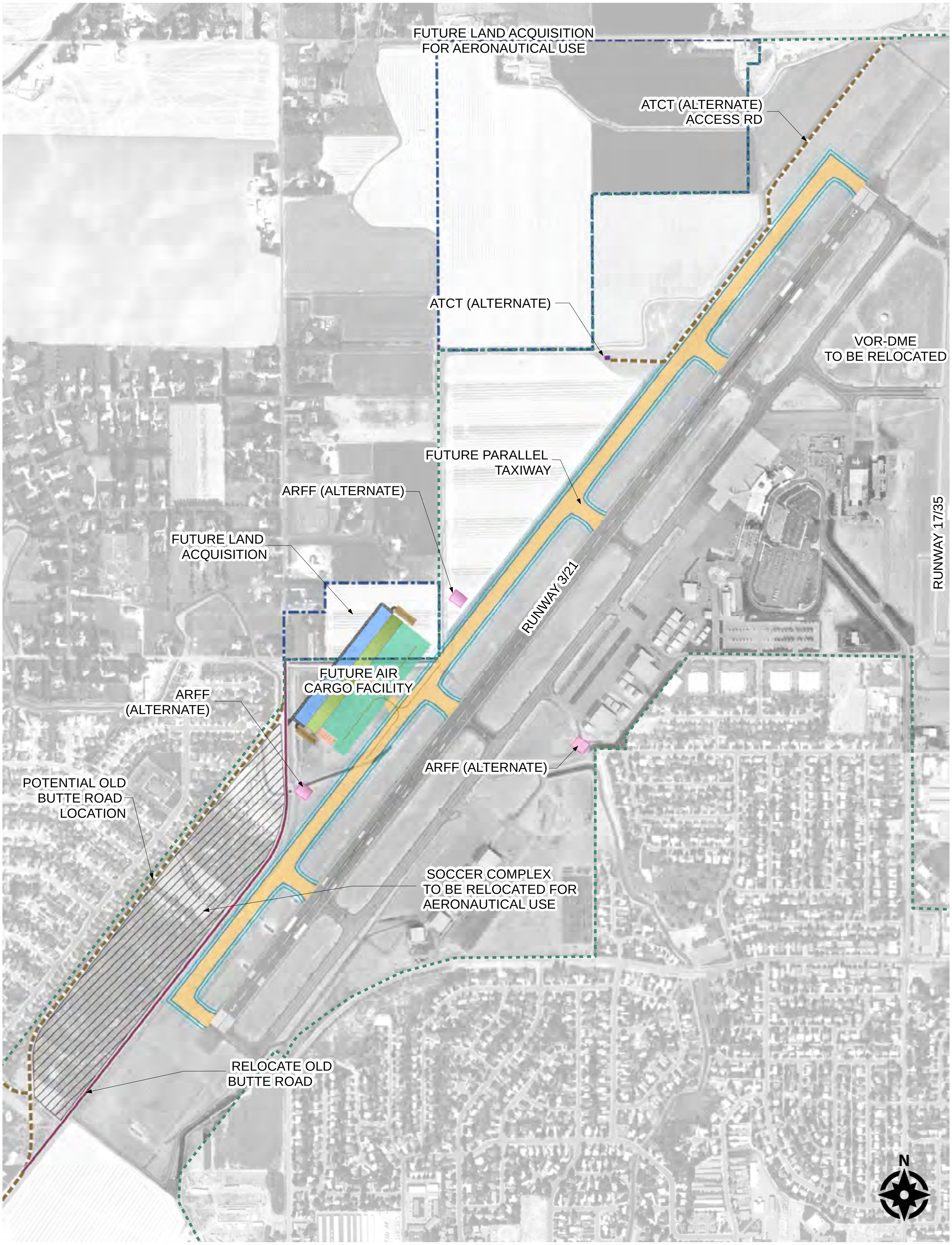
### 7.5.4. Airfield – West Side Development

With Runway 17/35 being retained, the demand for air cargo is met by developing the west side of the airport as shown in phase 1 of the draft alternative for the west side. The existing alignment of Old Butte Road is retained for the short-term planning period. It is subject to relocation based on both the aviation demand of the airport and regional transportation requirements of the community. One possible future alignment of Old Butte Road is along the western edge of the airport property boundary. However, no specific road design is depicted because it is too speculative as to the final disposition of Old Butte Road at the time of this airport master plan. The soccer field complex is depicted as being relocated because the City of Idaho Falls has already commenced the process of moving the complex. Future aviation use of the soccer complex will be dependent on when and what the demand calls for, but is not expected to occur during the 20-year planning period of this airport master plan. The drainage basin currently located at the soccer complex will be retained until aviation demand requires the use of the soccer field parcel. At that time, drainage requirements will be assessed and incorporated into any future development.

As for the northwest section of the airport, the draft alternatives depict a possible terminal complex that could be accessed from a potential Interstate 15 and U.S. Highway 20 interchange connecting to the airport from the north. However, since this possibility is still too speculative at the time of this master plan, the northwest corner of the airport is shown only as future aeronautical use, and the private parcels adjacent to the airport are shown as future land acquisition for aeronautical use as a land use protection measure. Timing of such development or land acquisition will be dependent on the final outcome of the Interstate 15 and U.S. Highway 20 interchange project but is not expected to occur within the horizon of this airport master plan. The preferred alternative for west side development is shown in Figure 7.22.

With development occurring on the west side of the airport during, and potentially beyond the master plan horizon, coordination should begin immediately with city planners to update or revise local and regional land use and zoning designations. Present zoning for the soccer field complex on the airport property is public while the rest of the airport is light manufacturing and heavy commercial.[1] The current land use designation for the soccer field complex is cultural, entertainment, and recreation (athletic field) while the rest of the airport is transportation, communication, and utilities (airport).[2] The future land use map depicted in *Imagine IF, Imagine IF, A Plan to Move Idaho Falls Forward Together, City of Idaho Falls' Comprehensive Plan*, shows the future designation of the soccer field complex as park and open space while the rest of the airport is designated as special use.[3] However, the soccer field complex within the airport property should be designated the same as the other operational areas of the airport. The off-airport parcels shown for future acquisition adjacent to the northwest of the existing airport property are presently not in the City of Idaho Falls limits or area of impact but are designated as special use on the future land use map in the comprehensive plan. Present zoning and comprehensive plan land use designations by Bonneville County are agricultural.[4] Coordination with Bonneville County planners should begin once the northwest corner of the airport is ready for development to facilitate its incorporation into the City of Idaho Falls purview.

## Figure 7.22: Preferred West Side Development Alternative




Source: Ardurra.

# Endnotes

**1** City of Idaho Falls. Maps. "Zoning & Development." Accessed June 7, 2024. https://www.idahofallsidaho.gov/332/Maps.

**2** City of Idaho Falls. Maps. "Land Use." Accessed June 7, 2024. https://www.idahofallsidaho.gov/332/Maps.

**3** City of Idaho Falls. Community Development Services. “Imagine IF, A Plan to Move Idaho Falls Forward Together, City of Idaho Falls’ Comprehensive Plan.” Idaho Falls, Idaho. 2021. https://www.idahofallsidaho.gov/DocumentCenter/View/14027/ImagineIF?bidId=.

**4** Bonneville County. "Bonneville County Maps." Accessed June 7, 2024. https://bonneville-county-maps-bonneville.hub.arcgis.com/.

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# ENVIRONMENTAL OVERVIEW

# 8

# CONTENTS

# TABLES



# FIGURES

CHAPTER EIGHT

# ENVIRONMENTAL

An environmental overview is designed to assist the planning team by providing information regarding the possible presence of sensitive environmental resources that could be affected by airport improvement projects. This information is intended to help determine if additional alternatives are needed in order to avoid or minimize the environmental impact of a project; identify the level of coordination and analysis needed for these projects; and identify if an environmental assessment or environmental impact statement would be required or whether categorical exclusions may apply in order to help the planning team estimate costs and scheduling to complete the National Environmental Policy Act (NEPA) process.[1]

The purpose of this environmental overview is to identify existing environmental conditions in and around the airport. This environmental overview is a preliminary review and is based mainly on existing studies and documentation gathered from federal, state, and local government agencies with limited field investigation or agency coordination. It is intended to help Idaho Falls Regional Airport (IDA) conduct an initial evaluation of the airport improvement projects discussed in Chapter 7, Development Alternatives, in order to expedite the environmental review and compliance process.[2]

## 8.1. The Environmental Review Process

When federal funding is used for airport improvement projects, these activities are considered to be federal actions and are then subject to the NEPA process. This process is an independent, federal decision making process requiring public disclosure of critical planning and environmental information regarding the proposed action and its reasonable alternatives. Depending on the potential environmental effects of the proposed project, it can require either a categorical exclusion (CATEX), an environmental assessment, or an environmental impact statement to be completed as part of the environmental review process.

### 8.1.1. Categorical Exclusion

A proposed action may be categorically excluded from a detailed environmental analysis if it meets certain criteria that the Federal Aviation Administration (FAA) has previously determined to have no significant environmental impact. These actions normally involve administrative and planning-related actions such as approval of an airport layout plan (ALP) or authorization for the purchase of snow removal equipment. However, they can also include projects such as installing or upgrading airfield lighting as well as making certain improvements to an existing airfield facility such as resurfacing runway pavements.

### 8.1.2. Environmental Assessment

An environmental assessment (EA) is a concise document that takes a hard look at the expected environmental effects of a proposed action in order to determine if the proposed action has the potential to cause significant environmental effects. These actions typically involve more extensive projects such as approval of a new runway or a major runway extension. If the FAA determines the action will not have a significant environmental impact, the agency will issue a finding of no significant impact (FONSI) that explains the reason for this determination. If the agency determines the action will have a significant environmental impact, an environmental impact statement will be required.

### 8.1.3. Environmental Impact Statement

An environmental impact statement (EIS) is a more detailed and rigorous evaluation of the environmental impacts of the proposed action. The types of proposed actions that typically require an environmental impact statement include construction of a new commercial service airport located in a metropolitan statistical area. The environmental impact statement process requires the FAA to publish a notice of intent in the Federal Register to inform the public of the upcoming environmental analysis and describe how the public can become involved in the process. This is followed up with a draft of the environmental impact statement being published for public review and comment for a minimum of 45 days. Upon close of the public comment period, the FAA considers all substantive comments and, if necessary, conducts further analyses. The final environmental impact statement is then published along with responses to substantive comments. After a 30-day wait period, the process ends with the FAA issuing a record of decision (ROD) that explains the decision, describes the alternatives considered, and discusses any plans for mitigation and monitoring.[3]

### 8.1.4. Environmental Documentation Required

While some of the projects proposed in this airport master plan may be within the scope of a categorical exclusion, most of these projects will likely require an environmental assessment.

## 8.2. Environmental Overview Summary

This environmental overview discusses existing conditions associated with the environmental impact categories defined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, that need to be evaluated as part of the environmental review and compliance processes.[4] These environmental impact categories are listed in Table 8.1 along with a summary of potential impacts or agency coordination and permits that may be required.

**Table 8.1: Environmental Overview Summary**

| Environmental Impact Category | Potential Impacts and Required Permits |
|---|---|
| Air Quality | •Unlikely to have a significant impact.<br>•An Idaho Department of Environmental Quality permit to construct may be required. |
| Biological Resources | •Unlikely to have a significant impact. |
| Climate | •Unlikely to have a significant impact. |
| Coastal Resources | •No coastal resources are associated with the airport. |
| Department of Transportation Act, Section 4(f) | •West side development projects will impact Section 4(f) resources.<br>•Will likely require consultation with the agencies having jurisdiction over Section 4(f) resources. |
| Farmlands | •May require coordination with the Natural Resources Conservation Service (NRCS) and a Farmland Conversion Impact Rating Form AD-1006 to be completed. |
| Hazardous Materials, Solid Waste, and Pollution Prevention | •May require Phase I and Phase II Environmental Site Assessments to determine if hazardous materials are located at the project site.<br>•May require development of a hazardous materials response plan and a spill prevention, control, and countermeasure plan. |
| Historical, Architectural, Archeological, and Cultural Resources | •West side development projects will potentially impact historic resources.<br>•Will require coordination with the state historic preservation office (SHPO) and the tribal historic preservation office (THPO).<br>•May require development of an inadvertent discovery plan. |
| Land Use | •Will require coordination with the City of Idaho Falls Planning Division to ensure projects are consistent with local plans.<br>•May require a letter from the City of Idaho Falls stating the proposed action is consistent with existing land use plans. |
| Natural Resources and Energy Supply | •Unlikely to have a significant impact. |
| Noise and Noise-Compatible Land Use | •Unlikely to have a significant impact. |
| Socioeconomics, Environmental Justice, and Children's Health and Safety Risks | •Unlikely to have a significant impact.<br>•Relocation assistance would be required for projects that involve property acquisition. |
| Visual Effects | •West side development projects will likely impact visual effects. |
| Water Resources | •A wetland delineation and a U.S. Army Corps of Engineers Section 404 permit may be required for projects involving the East Lateral, Armstrong Lateral, or Hoff Lateral.<br>•National Pollutant Discharge Elimination System (NPDES) and Idaho Pollution Discharge Elimination System (IPDES) permits may be required. |

## 8.3. Resources Not Affected

### 8.3.1. Coastal Resources

Idaho Falls Regional Airport is located in Bonneville County, Idaho, which is not within the Coastal Barrier Resources System (CBRS) as shown on U.S. Fish and Wildlife Service coastal barrier maps.[5] Therefore, no coastal resources are associated with the airport.

### 8.3.2. Wild and Scenic Rivers

According to the Nationwide Rivers Inventory, which is maintained by the National Parks Service, there are no Wild and Scenic Rivers or river segments located on airport property or in its immediate vicinity.[6] Therefore, the projects proposed in this airport master plan would have no effect on Wild and Scenic Rivers.

## 8.4. Air Quality

### 8.4.1. Regulatory Setting

The Clean Air Act (CAA) authorized the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These pollutants, which are known as criteria pollutants, include carbon monoxide (CO), nitrogen dioxide ($NO_2$), ozone ($O_3$), particulate matter ($PM_{10}$ and $PM_{2.5}$), sulfur dioxide ($SO_2$), and lead (Pb).

The Idaho Department of Environmental Quality is responsible for monitoring emissions to make sure levels of these pollutants meet federal and state air quality standards throughout Idaho.[7]

#### a. Attainment, Nonattainment, and Maintenance Areas

Attainment areas are areas where the air quality meets or exceeds the national standard. If the air quality does not meet the national standard, the EPA designates the area as a nonattainment area. Nonattainment areas are then required to have a state implementation plan (SIP) that details the emission reduction strategies to bring nonattainment areas into attainment. After the air quality in that area once again meets the national standard, the EPA designates the area as a maintenance area.[8]

#### b. Required Permits

An Idaho Department of Environmental Quality air quality permit to construct (PTC) is required before constructing or modifying buildings, structures, and installations that emit or may emit air pollutants.[9]

### 8.4.2. Affected Environment

Idaho Falls Regional Airport is located in Bonneville County. According to the Idaho Department of Environmental Quality, which monitors air quality at 30 sites within the state, the closest monitoring station is in Idaho Falls and is located approximately 3.78 miles southeast of the airport.[10] According to the EPA Green Book, as of May 2023, Bonneville County is in attainment for all criteria air pollutants.[11]

### 8.4.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on air quality, both direct and indirect impacts resulting from the construction and operation of these projects need to be examined. This requires preparing an emissions inventory to determine the amount of criteria pollutants that would be generated by construction and operation of each proposed project.

#### a. Construction Emissions

Construction of the projects proposed in this airport master plan would result in both direct and indirect impacts to air quality. However, these impacts will be short-term and are considered normal for construction activities.

#### b. Operational Emissions

The projects proposed in this airport master plan are unlikely to result in an increase in the number of flights, type of aircraft, or number of airport users beyond expected growth, and therefore would have no impact on air quality.

### 8.4.4. Significance Determination

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on air quality is if, *"The action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the Environmental Protection Agency under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations."*[12]

#### a. Potential Impacts

The airport is located in an attainment area for all criteria air pollutants, and a temporary increase in emissions due to construction is unlikely to affect Bonneville County's attainment status. Therefore, the projects proposed in this airport master plan are not expected to have a significant impact on air quality.

## 8.5. Biological Resources

### 8.5.1. Regulatory Setting

The Endangered Species Act (ESA) requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to determine if a proposed action the agency authorizes, funds, or carries out is likely to jeopardize a species listed as threatened or endangered or result in the destruction or adverse modification of designated critical habitat.

### 8.5.2. Affected Environment

As previously discussed in Section 4.1. Natural and Physical Environment, the airport is located within the city of Idaho Falls and is situated less than 1,000 feet from the western bank of the upper Snake River. It is also within the eastern section of the Snake River Plain which is a large and wide depression that extends east to west across southern Idaho. The Upper Snake River Plain is nearly level and contains pastureland, cities, suburbs, industries, and cropland where extensive surface irrigation occurs.

The airport property has been previously disturbed by development activities and has minimal vegetation as it is maintained to support aircraft operations. The airport property is currently zoned as light manufacturing and heavy commercial. The land surrounding the airport is primarily zoned as agricultural farmland, commercial, and residential.

#### a. Federally-Protected Species; Critical Habitat; Essential Fish Habitat

Several public databases were reviewed to determine the special status species that may be present on airport property. These databases include the U.S. Fish & Wildlife Service Information, Planning, and Consultation (IPaC) database and the National Oceanic and Atmospheric Administration Essential Fish Habitat Mapper. According to these databases, there are no designated or proposed critical habitats, and no essential fish habitats or habitat areas of particular concern located on airport property. According to the IPaC database, the monarch butterfly (*Danaus plexippus*) is a candidate species that could potentially occur on or near airport property. However, consultation with the U.S. Fish & Wildlife Service is not required for candidate species under Section 7 of the Endangered Species Act.[13]

### b. State-Protected Species

The Idaho State Wildlife Action Plan is the state's guiding document for managing and conserving at-risk species with the potential to be listed under the Endangered Species Act. The species of greatest conservation need and the habitats upon which they depend that have been observed within Bonneville County are listed in Table 8.2.[14]

**Table 8.2: Idaho Species of Greatest Conservation Need**

| Common Name | Scientific Name | Common Name | Scientific Name |
|---|---|---|---|
| **Tier 1 Species** | | | |
| Morrison's Bumble Bee | *Bombus morrisoni* | Yellow-billed Cuckoo | *Coccyzus americanus* |
| Western Bumble Bee | *Bombus occidentalis* | Wolverine | *Gulo gulo* |
| Greater Sage-Grouse | *Centrocercus urophasianus* | Grizzly Bear | *Ursus arctos* |
| **Tier 2 Species** | | | |
| Clark's Grebe | *Aechmophorus clarkii* | Pinyon Jay | *Gymnorhinus cyanocephalus* |
| Western Grebe | *Aechmophorus occidentalis* | Harlequin Duck | *Histrionicus histrionicus* |
| Western Toad | *Anaxyrus boreas* | Silver-haired Bat | *Lasionycteris noctivagans* |
| Golden Eagle | *Aquila chrysaetos* | Hoary Bat | *Lasiurus cinereus* |
| Sagebrush Sparrow | *Artemisiospiza nevadensis* | Northern Leopard Frog | *Lithobates pipiens* |
| Burrowing Owl | *Athene cunicularia* | Lewis's Woodpecker | *Melanerpes lewis* |
| American Bittern | *Botaurus lentiginosus* | Long-billed Curlew | *Numenius americanus* |
| Ferruginous Hawk | *Buteo regalis* | Sage Thrasher | *Oreoscoptes montanus* |
| Black Tern | *Chlidonias niger* | Bighorn Sheep | *Ovis canadensis* |
| Idaho Dune Tiger Beetle | *Cicindela arenicola* | American White Pelican | *Pelecanus erythrorhynchos* |
| Rocky Mountain Duskysnail | *Colligyrus greggi* | White-faced Ibis | *Plegadis chihi* |
| Trumpeter Swan | *Cygnus buccinator* | Caspian Tern* | *Hydroprogne caspia* |
| Bobolink | *Dolichonyx oryzivorus* | California Gull* | *Larus californicus* |
| Common Loon | *Gavia immer* | | |
| **Tier 3 Species** | | | |
| Grasshopper Sparrow | *Ammodramus savannarum* | Franklin's Gull | *Leucophaeus pipixcan* |
| Short-eared Owl | *Asio flammeus* | Western Small-footed Myotis | *Myotis ciliolabrum* |
| Yellow Bumble Bee | *Bombus fervidus* | Little Brown Myotis | *Myotis lucifugus* |
| Hunt's Bumble Bee | *Bombus huntii* | Clark's Nutcracker | *Nucifraga columbiana* |
| Common Nighthawk | *Chordeiles minor* | Mountain Goat | *Oreamnos americanus* |
| Olive-sided Flycatcher | *Contopus cooperi* | Rotund Physa | *Physella columbiana* |
| Townsend's Big-eared Bat | *Corynorhinus townsendii* | White-headed Woodpecker | *Picoides albolarvatus* |
| Monarch | *Danaus plexippus* | Great Gray Owl | *Strix nebulosa* |
| Sandhill Crane | *Grus canadensis* | Ring-billed Gull* | *Larus delawarensis* |

*Breeding population only

Source: Idaho Department of Fish and Game, Bonneville County Observations List.

### c. Migratory Birds

Certain birds are protected by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Activities that may result in impacts to Birds of Conservation Concern (BCC) or their habitats should be coordinated with the USFWS, and all appropriate regulations and conservation measures should be followed. According to the IPaC database, there are 18 species on the Birds of Conservation Concern list or that warrant special attention that could potentially occur on or near airport property (Table 8.3).[15]

**Table 8.3: Birds of Conservation Concern**

| Common Name | Scientific Name | Breeding Season |
|---|---|---|
| American White Pelican | *pelecanus erythrorhynchos* | April 1 – August 31 |
| Bald Eagle | *Haliaeetus leucocephalus* | December 1 – August 31 |
| Black Tern | *Chlidonias niger* | May 15 – August 20 |
| Bobolink | *Dolichonyx oryzivorus* | May 20 – July 31 |
| California Gull | *Larus californicus* | March 1 – July 31 |
| Cassin's Finch | *Carpodacus cassinii* | May 15 – July 15 |
| Clark's Grebe | *Aechmophorus clarkii* | June 1 – August 31 |
| Evening Grosbeak | *Coccothraustes vespertinus* | May 15 – August 10 |
| Franklin's Gull | *Leucophaeus pipixcan* | May 1 – July 31 |
| Lesser Yellowlegs | *Tringa flavipes* | Breeds elsewhere |
| Lewis's Woodpecker | *Melanerpes lewis* | April 20 – September 30 |
| Marbled Godwit | *Limosa fedoa* | Breeds elsewhere |
| Olive-sided Flycatcher | *Contopus cooperi* | May 20 – August 31 |
| Pinyon Jay | *Gymnorhinus cyanocephalus* | February 15 – July 15 |
| Rufous Hummingbird | *selasphorus rufus* | April 15 – July 15 |
| Sage Thrasher | *Oreoscoptes montanus* | April 15 – August 10 |
| Western Grebe | *aechmophorus occidentalis* | June 1 – August 31 |
| Willet | *Tringa semipalmata* | April 20 – August 5 |

Source: U.S. Fish & Wildlife Service, Information for Planning and Consultation.

## 8.5.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on biological resources, impacts from construction and ongoing operations need to be examined. This includes the following:

- Identifying potential impacts from construction activities such as the destruction or alteration of habitat, the disturbance or elimination of local fish, wildlife, or plant populations, and the introduction of invasive species.
- Identifying the vegetation types and wildlife species associated with the project area.
- Identifying potential impacts from operation of the proposed project. This includes discussing disturbances to noise-sensitive terrestrial and aquatic animal species generated by operational noise within the vicinity of the project area as well as any land area or open water that aircraft would fly over.[16]

### 8.5.4. Significance Determination

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on biological resources is if, "*The U.S. Fish and Wildlife Service or the National Marine Fisheries Service determines that the action would be likely to jeopardize the continued existence of a Federally-listed threatened or endangered species, or would result in the destruction or adverse modification of federally-designated critical habitat.*"

The FAA has not established a significance threshold for non-listed species. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does identify the following factors to consider in evaluating potential impacts.

The action would have the potential for:

- A long-term or permanent loss of unlisted plant or wildlife species from a large project area.
- Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats.
- Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations.
- Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance.[17]

#### a. Potential Impacts

The projects proposed in this airport master plan are not expected to have a significant impact on biological resources.

## 8.6. Climate

### 8.6.1. Regulatory Setting

The Clean Air Act authorized the U.S. Environmental Protection Agency to regulate greenhouse gas emissions. The EPA determined there are six greenhouse gases that need to be regulated which include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride ($SF_6$).

### 8.6.2. Affected Environment

The U.S. Environmental Protection Agency prepares an annual *Inventory of U.S. Greenhouse Gas Emissions and Sinks.* According to this report, total gross U.S. greenhouse gas emissions were 6,340.2 million metric tons of carbon dioxide equivalent (MMT $CO_2$ Eq.) for 2021 with transportation activities accounting for 28.5%. This includes 6.6% contributed by commercial aircraft and 2.0% contributed by other aircraft.[18]

According to the U.S. EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks by State,* Idaho's total greenhouse gas emissions for 2020, which was the most recent year of analysis, was estimated at 35.369 million metric tons of carbon dioxide equivalent. In Idaho, the transportation sector contributed approximately 10.312 million metric tons of carbon dioxide equivalent.[19]

### 8.6.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on climate, the same emission sources included in the air quality analysis should be examined. For non-aircraft sources of emissions, greenhouse gas emissions should be determined from projections of fuel burn and converted to $CO_2e$. This includes evaluating both direct and indirect emissions that would occur as a result of any operational changes as well as construction of these projects.[20]

#### a. Operational Changes

The projects proposed in this airport master plan are unlikely to result in an increase in the number of flights, type of aircraft, or number of airport users beyond expected growth, and therefore would not have a direct impact on climate.

#### b. Construction Emissions

Construction of the projects proposed in this airport master plan would result in both direct impacts (e.g., the use of construction equipment) and indirect impacts (e.g., worker commutes to the site) to climate. However, these impacts will be short-term, of local impact, and are considered normal for construction activities.

### 8.6.4. Significance Determination

The FAA has not established a significance threshold for climate. However, guidance provided by the Council on Environmental Quality does recommend federal agencies consider the potential effects of a proposed action, as indicated by its greenhouse gas emissions, and the implications regarding climate change. It is also important to note that there are currently no accepted methods for determining the impact an aviation project would have on climate change.[21]

#### a. Potential Impacts

The projects proposed in this airport master plan are not expected to have a significant impact on climate.

## 8.7. Department of Transportation Act, Section 4(f)

### 8.7.1. Regulatory Setting

Under Section 4(f) of the U.S. Department of Transportation Act, any transportation project that requires the use of public land considered to be a significant resource is prohibited unless there is no feasible and prudent alternative, and the project includes all possible planning to minimize harm resulting from the use. Any part of a Section 4(f) property is presumed to be significant unless there is a statement of insignificance relative to the entire property by the federal, state, or local official having jurisdiction over the property. Section 4(f) protects only those historic or archaeological properties that are listed or eligible for inclusion on the National Register of Historic Places (NRHP).

A project that would use Section 4(f) parks or recreation areas must also comply with Section 6(f) of the Land and Water Conservation Fund if the property was acquired or developed with financial assistance under the Land and Water Conservation Fund State Assistance Program.

#### a. Land and Water Conservation Fund Act, Section 6(f)

Section 6(f) of the Land and Water Conservation Fund Act established a grant program for states and local governments to acquire and develop public outdoor recreation sites and facilities. It also prevents these lands from being converted to non-recreation uses unless the U.S. Department of the Interior (DOI) approves the conversion. Section 6(f), which is administered by the National Park Service (NPS), requires that areas funded through the program remain for public outdoor recreation use or be replaced by lands of equal value, location, and recreation usefulness.

### 8.7.2. Affected Environment

An initial review of publicly available records was conducted to identify potential Section 4(f) resources located at or adjacent to the airport. This includes records maintained by the National Park Service, the National Register of Historic Places, and the city of Idaho Falls.

#### a. Parks and Recreational Resources

Publicly owned parks and recreational areas are considered to be Section 4(f) resources when they are of national, state, or local significance and open to the public. The public parks and recreational areas that are located at or adjacent to the airport and could potentially be considered 4(f) resources are listed in Table 8.4.[22]

Esquire Acres Park was developed using Land and Water Conservation Fund Act funds as well as FAA funds and has the potential to be a Section 6(f) property. However, there is no proposed development associated with Esquire Acres Park and the master plan alternatives.

Table 8.4: Parks and Recreational Areas

| Property Name | Location |
|---|---|
| Old Butte Park and Soccer Complex | 1055 North 26th West |
| Esquire Acres Park | 800 Moonlite Drive |
| Reinhart Park | 1055 Washburn Avenue |

Source: City of Idaho Falls.

#### b. Wildlife and Waterfowl Refuges

Publicly-owned wildlife and waterfowl refuges are considered to be Section 4(f) resources when they are of national, state, or local significance and are open to the public. According to the U.S. Fish & Wildlife Service, there are no wildlife or waterfowl refuges located on or adjacent to airport property.[23]

#### c. Historic Sites

Public and privately owned historic sites are considered to be Section 4(f) resources when they are of national, state, or local significance regardless of whether they are open to the public. The National Register of Historic Places was reviewed to identify existing historic sites located on or adjacent to airport property that could potentially qualify as Section 4(f) resources (Table 8.5).[24] As discussed in Section 8.10. Historical, Architectural, Archeological, and Cultural Resources, an additional 24 resources were recently identified as potentially being eligible for listing in the National Register of Historic Places.

**Table 8.5: Existing Historic Sites**

| Property Name | Location |
|---|---|
| Airport Historic District | 2381 Foote Drive |
| East Lateral Canal System | Adjacent to and on airport property |

Source: National Park Service, National Register of Historic Places.

### 8.7.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on Section 4(f) resources, both the physical use and constructive use of these resources need to be examined.[25]

#### a. Physical Use

A physical use of Section 4(f) resources occurs if a proposed project involves the actual physical taking of a Section 4(f) property through the purchase of land or a permanent easement, physical occupation of a portion or all of the property, or alteration of structures or facilities on the property. This typically does not include the temporary occupancy of a Section 4(f) property for construction-related activities.

#### b. Constructive Use

A constructive use occurs if a proposed project impacts a Section 4(f) property so severely that the activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.

### 8.7.4. Significance Determination

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on Section 4(f) resources is if, *"The action involves more than a minimal physical use of a Section 4(f) resource or constitutes a "constructive use" based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource. Resources that are protected by Section 4(f) are publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; and publicly or privately owned land from an historic site of national, state, or local significance. Substantial impairment occurs when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished."*[26]

#### a. Potential Impacts

West side development projects will likely impact the parks and recreational areas considered to be Section 4(f) resources and also have the potential to impact sections of the Armstrong, East, and Hoff laterals which are sub-features of the historic East Lateral Canal System.

## 8.8. Farmlands

### 8.8.1. Regulatory Setting

The Farmland Protection Policy Act (FPPA) regulates federal actions with the potential to convert farmland to non-agricultural uses.

### 8.8.2. Affected Environment

The National Resources Conservation Service (NRCS) keeps an inventory (i.e., the Web Soil Survey) of the prime and unique farmland in the United States. This inventory identifies the classification, soil type, and location of important rural lands needed to produce food, feed, fiber, forage, and oilseed crops. The farmland classifications for each of the soil types identified in the National Resources Conservation Service Web Soil Survey for Idaho Falls Regional Airport are listed in Table 8.6.

**Table 8.6: Farmland Classifications**

| Soil Type | Farmland Classification | Acres | Percentage |
|---|---|---|---|
| Bannock loam | Prime farmland if irrigated | 4.6 | 0.5% |
| Bock loam | Prime farmland if irrigated | 63.1 | 7.4% |
| Packham gravelly loam | Prime farmland if irrigated | 20.8 | 2.4% |
| Pancheri silt loam 0–2% slopes | Prime farmland if irrigated and reclaimed of excess salts and sodium | 447.2 | 52.4% |
| Pancheri silt loam 2–4% slopes | Prime farmland if irrigated and reclaimed of excess salts and sodium | 263.3 | 30.9% |
| Pancheri silt loam 4–8% slopes | Not prime farmland | 30.0 | 3.5% |
| Polatis-Rock outcrop complex 2–25% slopes | Not prime farmland | 5.2 | 0.6% |
| Stan sandy loam | Prime farmland if irrigated | 19.1 | 2.2% |

Source: USDA, NRCS.

According to the National Resources Conservation Service Web Soil Survey, approximately 12.5% of the airport property consists of soil types that are considered prime farmland if irrigated (map units 6, 7, 20, and 47), and approximately 83.3% consists of soil types that are considered prime farmland if irrigated and reclaimed of excess salts and sodium (map units 22 and 23). Some of this property is currently being used for active farming.[27]

### 8.8.3. Environmental Consequences

For projects that involve converting farmlands to non-farm use, U.S. Department of Agriculture (USDA) Form AD-1006, *Farmland Conversion Impact Rating*, will need to be completed and submitted to the local National Resources Conservation Service office or U.S. Department of Agriculture service center for evaluation in order to determine potential impact on farmlands.[28]

### 8.8.4. Significance Determination

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on farmlands is if, "*The total combined score on Form AD-1006, "Farmland Conversion Impact Rating," ranges between 200 and 260 points.*"[29]

#### a. Potential Impacts

The projects proposed in this airport master plan are not expected to have a significant impact on farmlands.

## 8.9. Hazardous Materials, Solid Waste, and Pollution Prevention

### 8.9.1. Regulatory Setting

The Resource Conservation and Recovery Act (RCRA) authorized the U.S. Environmental Protection Agency to establish a comprehensive regulatory program that ensures hazardous waste is safely managed from the time it is created until it is disposed of. This includes how it is transported, treated, and stored. Under Idaho's Rules and Standards for Hazardous Waste, hazardous waste is regulated at the state level by the Idaho Department of Environmental Quality (DEQ).[30]

According to FAA Advisory Circular 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program (AIP) Assisted Projects*, an adequate due diligence environmental audit should be conducted as part of the project planning and environmental assessment phases to determine if hazardous materials or contamination are present on the property. These audits include Phase I and Phase II Environmental Site Assessments which should identify quantities of any hazardous materials located at the proposed project site or in its immediate vicinity.[31]

### 8.9.2. Affected Environment

Construction of the projects proposed in this airport master plan would generate construction debris that would result in a temporary increase in the quantity of solid waste generated at the airport. Additionally, this debris may potentially contain hazardous materials such as asbestos or lead-based paint.

#### a. Identification of Contaminated Sites

The U.S. Environmental Protection Agency maintains a list of superfund sites that have known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States called the National Priorities List (NPL). According to this list, there are no sites located on airport property or in its immediate vicinity.[32]

According to the EPA's MyEnvironment online search application, there have not been any toxic releases to air, land, or water reported on airport property. However, this site did identify the Snake River Animal Shelter to be a Brownfield property because this location was operated as a landfill in 1968.[33] Brownfield sites are vacant or underutilized properties that may have been compromised by actual or perceived contamination.[34]

A review of the Idaho Department of Environmental Quality facility mapper revealed two reports of leaking underground storage tanks (LUST) on airport property. These include a storage tank owned by Aero Mark (Case 430) reported in 1992 and a storage tank owned by Delta Air Lines (Case 1285) reported in 1998. Both spills were cleaned up.[35]

A Phase 1 Environmental Site Assessment (ESA) of the east side retention basin, tree farm, RV parking, and community garden was completed July 2023 by North Wind Environmental Consulting Services. This report is included as **Appendix D: Phase I Environmental Site Assessment**. Small amounts of hazardous materials were present but stored properly, and one *de minimus* environmental condition was observed (an above ground storage tank, oil stained dirt, and bags of herbicide and fertilizer). No further environmental surveys were recommended for these sites.[36]

#### b. Identification of Solid and Hazardous Waste Disposal Capacity

The Peterson Hill Landfill serves as the sole municipal solid waste landfill for Bonneville County, and most construction and demolition debris is diverted to the Hatch Pit. As of 2008, the landfill currently accepted between 65,000 and 75,000 tons of waste per year and had a total projected life of approximately 150 years.[37]

### 8.9.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on hazardous materials, solid waste, and pollution prevention, impacts from construction and ongoing operations need to be examined. This includes determining the following:

- Describe the waste that would be generated from the construction and operation of the projects. This includes waste generated from the disturbance of hazardous materials at an existing contaminated site.
- Determine if the projects would impact the capacity of waste disposal facilities.
- Determine whether the projects would interfere with any ongoing remediation of existing contaminated sites at the proposed project site or in its immediate vicinity.

#### a. Hazardous Materials

- Identify types and quantities of any hazardous materials (e.g., oil, gasoline, or jet fuel) that would be used during construction and operation of the proposed projects or any waste generated from the disturbance of hazardous materials at an existing contaminated site, and describe how these hazardous materials would be stored, managed, and transported.
- Determine if any identified contaminated sites would be impacted by the proposed projects.
- Provide the locations of aboveground and underground storage tanks located in the area and if they would be used or potentially impacted by the proposed projects. Determine if waste disposal related to the projects would result in impacts to the capacity of disposal facilities.

#### b. Hazardous Waste

- Identify any hazardous waste that would be generated by construction and operation of the proposed projects, and describe how it would be stored, managed, and transported.
- Identify any on-site treatment, engineering, or administrative controls that may be applied to the hazardous waste encountered.

#### c. Solid Waste

- Identify the solid waste that would be generated by construction and operation of the proposed projects, and describe how it would be stored, managed, and disposed.

#### d. Pollution Prevention

- Describe any pollution prevention activities, plans, programs, or policies currently being undertaken or in effect that may be relevant to the proposed projects.
- Describe how pollution prevention plans or programs associated with the proposed projects would help avoid, prevent, or reduce pollutant discharges or emissions.
- Describe aspects of operations and waste generation from the proposed projects that could result in accidental discharges with the potential to negatively impact the environment.
- Describe appropriate pollution prevention planning measures that will be taken to address accidental discharges, and describe methods to be employed to control spills and any other unauthorized releases during construction and operation of the proposed projects.[38]

### 8.9.4. Significance Determination

The FAA has not established a significance threshold for hazardous materials, solid waste, and pollution prevention. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does identify the following factors to consider in evaluating potential impacts:

- The proposed project would have the potential to involve a contaminated site or violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials or solid waste management.
- The proposed project would generate a quantity or type of solid waste that would exceed local capacity.
- The proposed project would adversely affect human health and the environment.[39]

#### a. Potential Impacts

The projects proposed in this airport master plan are not expected to have a significant impact on hazardous materials, solid waste, and pollution prevention.

## 8.10. Historical, Architectural, Archeological, and Cultural Resources

### 8.10.1. Regulatory Setting

The National Historic Preservation Act (NHPA) established the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places within the National Park Service. In Idaho, these are administered by the Idaho State Historic Preservation Office. Resources eligible for inclusion in the National Historic Preservation Act are also covered by Section 106 of the National Historic Preservation Act and Section 4(f) of the U.S. Department of Transportation Act.

### 8.10.2. Affected Environment

A cultural resources survey was conducted by Preservation Solutions LLC and T-O Engineers in May 2019 as part of Airport Improvement Program project #3-16-0018-041-2016. This survey evaluated above-ground resources for the entire airport and two abutting properties which included Reed's Dairy and Swanson Farmstead.

### a. Historical and Architectural Resources

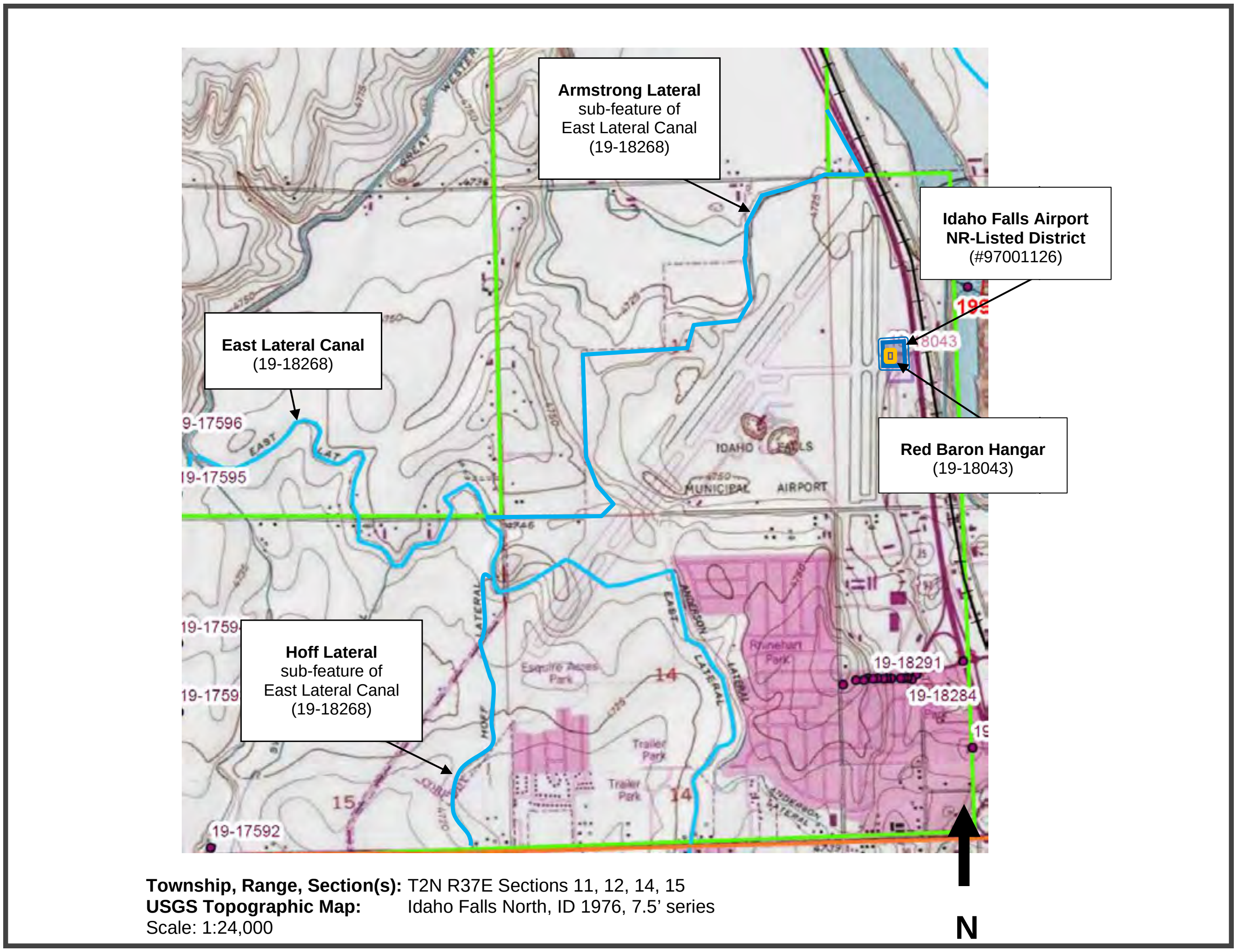
According to this survey, three properties in the survey area have been previously documented and found to be eligible for listing in the National Register of Historic Places (Table 8.7 and Figure 8.1).

Table 8.7: Previously Documented Historic Properties

| Reference # | Property | Associations | Status |
|---|---|---|---|
| 97001126 | Idaho Falls Airport Historic Dist. | WPA, early-to-mid 20th century aviation | Listed |
| 19-18043 | Red Baron Hangar | WPA, early-to-mid 20th century aviation | Listed, contributing |
| 19-18268 | East Lateral Canal System | Early settlement | Eligible |

Source: Preservation Solutions LLC, Idaho Falls Regional Airport Historic Resource Documentation.

Figure 8.1: Previously Documented Historic Properties




Source: Preservation Solutions LLC, Idaho Falls Regional Airport Historic Resource Documentation.

During the on-site investigation, an additional 24 resources were identified as potentially being eligible for listing in the National Register of Historic Places. These include a Craftsman-style farmhouse and two garages as well as a sub-lateral of the East Lateral Canal system located on the Reed's Dairy property; a sub-lateral of the East Lateral Canal system located on the Swanson Farm; three sub-lateral sections of the East Lateral Canal system located on airport property; and an additional 16 structures that are potentially eligible to be included as part of the NRHP-listed Idaho Falls Airport Historic District (Table 8.8 and Figure 8.2).[40]

**Table 8.8: Potentially Eligible Idaho Falls Airport Historic District Structures**

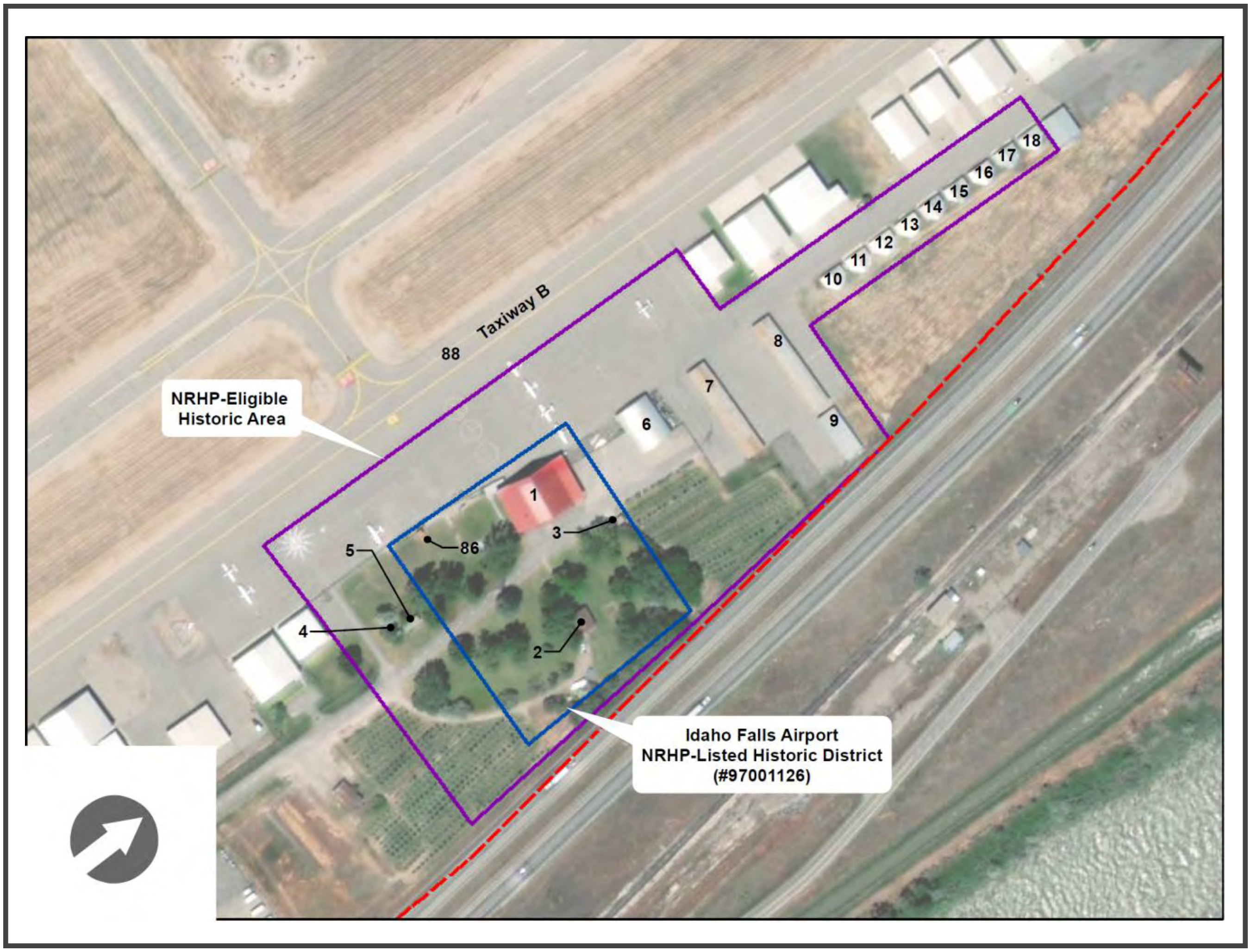
| Resource # | Resource | Potential NRHP Eligibility | Date |
|---|---|---|---|
| 03 | Shed | Contributing | c.1940 |
| 04 | Power Utility Bldg. | Contributing | c.1945 |
| 05 | Water Well Shed | Contributing | c.1945 |
| 06 | Shop | Contributing | c.1957 |
| 07 | Six-bay Hangar | Contributing | c.1947 |
| 08 | Six-bay Hangar | Contributing | c.1947 |
| 09 | Two-bay Hangar | Contributing | c.1950 |
| 10 | Single-bay Hangar | Contributing | c.1956 |
| 11 | Single-bay Hangar | Contributing | c.1956 |
| 12 | Single-bay Hangar | Contributing | c.1956 |
| 13 | Single-bay Hangar | Contributing | c.1956 |
| 14 | Single-bay Hangar | Contributing | c.1956 |
| 15 | Single-bay Hangar | Contributing | c.1956 |
| 16 | Single-bay Hangar | Contributing | c.1956 |
| 17 | Single-bay Hangar | Contributing | c.1956 |
| 18 | Single-bay Hangar | Contributing | c.1956 |

Source: Preservation Solutions LLC, Idaho Falls Regional Airport Historic Resource Documentation.

### 8.10.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on historical, architectural, archaeological, and cultural resources, both direct and indirect impacts from construction and ongoing operations need to be examined. This is determined through consultation with the State Historic Preservation Office (SHPO), the Tribal Historic Preservation Office (THPO), and other relevant agencies. When assessing effects, there are three possible outcomes: no historic properties affected, no adverse effect on historic properties, or adverse effect on historic properties.[41]

Figure 8.2: **Potentially Eligible Idaho Falls Airport Historic District Structures**




Source: Preservation Solutions LLC, Idaho Falls Regional Airport Historic Resource Documentation.

### 8.10.4. Significance Determination

The FAA has not established a significance threshold for historical, architectural, archeological, and cultural resources. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does state that a factor to consider in evaluating potential impacts is if a proposed action would result in a finding of Adverse Effect through the Section 106 process.[42]

#### a. Potential Impacts

West side development projects have the potential to impact sections of the Armstrong Lateral, East Lateral, and Hoff Lateral which are sub-features of the historic East Lateral Canal System.

## 8.11. Land Use

### 8.11.1. Regulatory Setting

Under the Airport Improvement Program, the FAA may not approve a grant for an airport development project unless the project is consistent with local land use plans. This section should assess the compatibility of land uses in the vicinity of the airport to ensure those uses do not adversely affect safe aircraft operations. This includes identifying any municipal solid waste landfills (40 CFR § 258.10), water management facilities, wildlife refuges, wetlands, or other land uses referenced in FAA Advisory Circular 150/5200-33, *Hazardous Wildlife Attractants on or Near Airports* that have the potential to attract hazardous wildlife.

### 8.11.2. Affected Environment

As previously discussed in Section 4.2. Airport Zoning, and Section 6.10. Land Use, the city of Idaho Falls and Bonneville County are the two jurisdictions that control land use in the immediate areas surrounding the airport. The city's land use regulations designate airport property as Light Manufacturing and Heavy Commercial (LM) (Figure 4.14). Additionally, the city adopted an Airport Overlay Zone in 2019 to restrict incompatible uses from being located near the airport (Figure 4.12). This includes height zone limitations to protect the airport's Part 77 surfaces (Figure 4.13).

#### a. Wildlife Hazards

As previously discussed in Section 6.10.6. Wildlife Hazard Attractants, the airport completed a Wildlife Hazard Assessment (WHA) in 2003. The following potential wildlife attractants were identified in this assessment:

- Stormwater runoff at IDA collects in a retention basin located behind the National Oceanic and Atmospheric Administration (NOAA) Air Resources Laboratory between Foote Drive and Interstate Highway 15. The water collects into a standing body of water where it infiltrates into the soil. This standing body of water could be considered a wildlife attractant.
- The Hatch Pit is a landfill operated by Bonneville County. It is located approximately 6,000 feet, or 1.2 miles, northwest of IDA's aircraft operating area and northern approach corridor.
- The City of Idaho Falls Wastewater Treatment Plant is located approximately 2.8 miles south of the airport.

### 8.11.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on land use, both existing and future land uses must be examined. This includes determining if these projects would result in land uses that are incompatible with existing or future planned uses and assessing the compatibility of land uses in the vicinity of the airport to ensure those uses do not adversely affect safe aircraft operations.

### 8.11.4. Significance Determination

The FAA has not established a significance threshold for land use. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does state that the determination that significant impacts exist in the land use impact category is normally dependent on the significance of other impact categories. For example, if a proposed project included acquisition of property or noise impacts were associated with airport operations, the project could be considered to have a significant impact on land use.[43]

#### a. Potential Impacts

The projects proposed in this airport master plan are not expected to have a significant impact on land use.

## 8.12. Natural Resources and Energy Supply

### 8.12.1. Regulatory Setting

The Council on Environmental Quality (CEQ) requires federal agencies to consider energy requirements, natural depletable resource requirements, and the conservation potential of proposed projects.

### 8.12.2. Affected Environment

As previously discussed in Section 4.14, Utilities, the airport is located in a well-developed area with adequate access to water, sewer, power, and natural gas, and none of these resources are in short supply in the region.

#### a. Suppliers of Resources

The City of Idaho Falls is the airport's water and sewer service provider, Idaho Falls Power provides electricity, and Intermountain Gas Company provides natural gas service.

#### b. Consumption of Resources

Construction of the projects proposed in this airport master plan would likely result in a temporary increase in the airport's consumption of natural resources. These resources include a variety of construction materials, electricity, fuel, oil, and water. These resources are widely available in Bonneville County and the surrounding area, and construction of these projects is not expected to place an undue strain on supplies within the region.

Long-term operation and maintenance of these projects (e.g., terminal and cargo facility expansions) will likely permanently increase demands on water, electricity, and natural gas. These demands are expected to be met by existing infrastructure and are not expected to place an undue strain on supplies within the region.

### 8.12.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on natural resources and energy supply, impacts from construction as well as ongoing operations and maintenance need to be examined. This includes determining how a proposed project would increase demand for utilities servicing the area, fuel consumption, and consumable materials—especially scarce or unusual materials—in and around the study area.

### 8.12.4. Significance Determination

The FAA has not established a significance threshold for natural resources and energy supply. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does state that a factor to consider in evaluating potential impacts is if the action would have the potential to cause demand to exceed available or future supplies of these resources.[44]

#### a. Potential Impacts

The projects proposed in this airport master plan are not expected to have a significant impact on natural resources and energy supply.

## 8.13. Noise and Noise Compatible Land Use

### 8.13.1. Regulatory Setting

The Aviation Safety and Noise Abatement Act required the FAA to establish a single system for measuring aviation noise around airport communities that takes into account noise intensity, duration of exposure, frequency of operations, and time of occurrence as well as identifying land uses normally compatible with various noise exposures. As a result, the FAA determined that a person's cumulative exposure to noise resulting from aviation activities must be established in terms of day night average sound level (DNL).

This metric accounts for noise levels of individual aircraft operations, the number of times per day they occur, and when they occur by logarithmically averaging aircraft sound levels at a location during a complete 24-hour period. This metric applies a 10-decibel (dB) penalty to noise that occurs at night (i.e., between 10 p.m. and 7 a.m.). This penalty counts each operation occurring at night the same as ten daytime operations. The penalty attempts to correct for the fact that nighttime noise events are more disruptive than those generated during daytime hours when ambient noise levels are generally higher.

### 8.13.2. Affected Environment

Noise contours were developed for this airport master plan in order to identify current and future noise conditions. These noise contours were prepared using the FAA's software system, Aviation Environmental Design Tool (AEDT), for determining noise impacts. Figure 8.3 shows the current DNL noise contours based on 2021 operations while Figure 8.4 shows the future DNL noise contours based on operations forecast for 2041.

### 8.13.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on noise and noise compatible land use, both direct and indirect noise impacts that would occur as a result of construction and ongoing operation of these projects will need to be examined. This includes determining the following information:

- The number of residences located within each noise contour where aircraft noise exposure is at or above DNL 65 dB as well as the location and number of other noise sensitive uses such as schools, hospitals, parks, and recreation areas.
- The identification of noise sensitive areas within the DNL 60 dB contour that are exposed to aircraft noise at or above DNL 60 dB but below DNL 65 dB and are projected to experience a noise increase of DNL 3 dB or more.

Figure 8.3: **2021 Noise Contours**

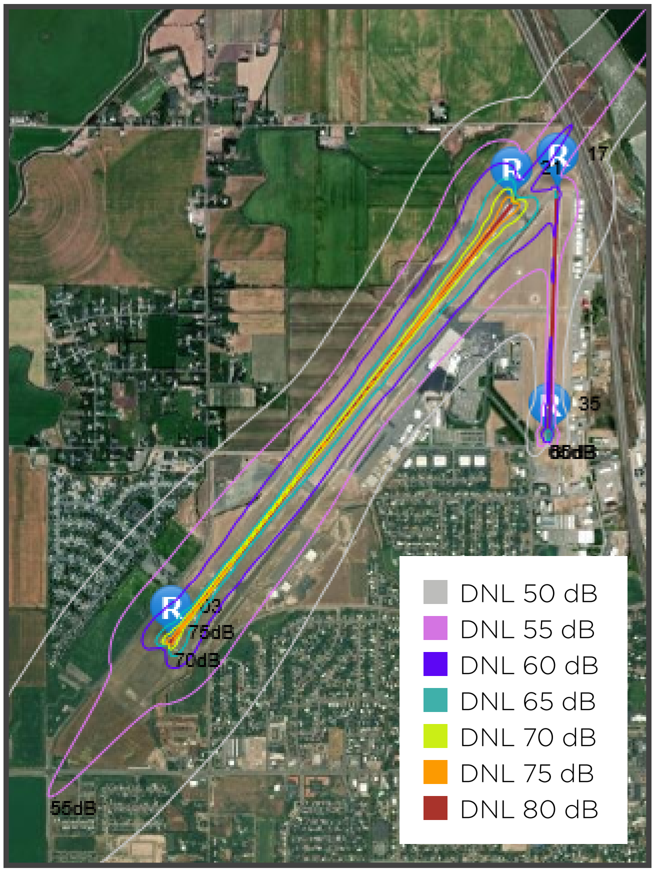
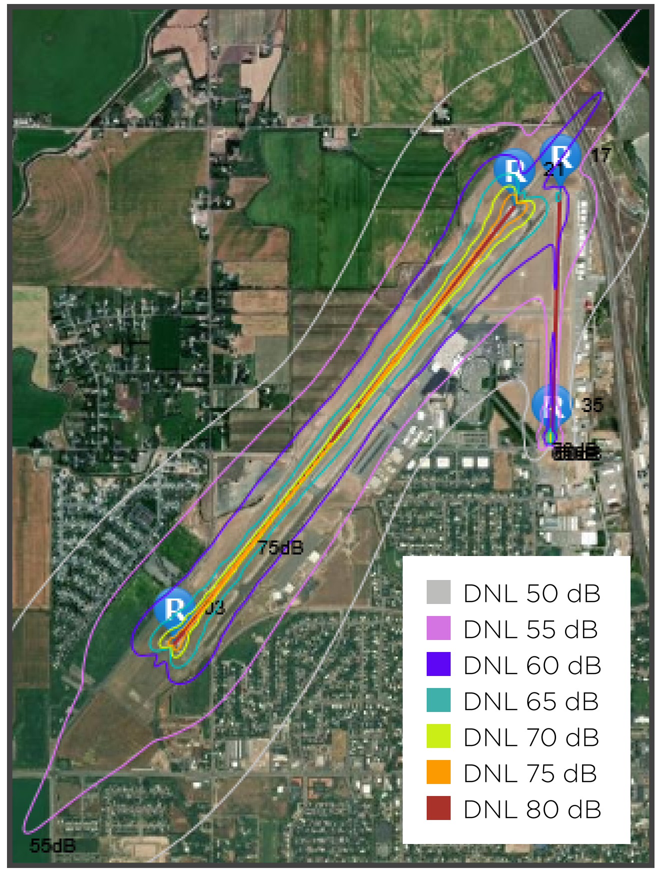



Figure 8.4: **2041 Noise Contours**




Source: Ardurra.

### 8.13.4. Significance Determination

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if the action would have a significant impact on noise and noise-compatible land use is if, "*The action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.*"[45]

#### a. Potential Impacts

Both the current and future 65 dB DNL contours are contained entirely within airport property. Therefore, the projects proposed in this airport master plan are not expected to have a significant impact on noise and noise compatible land use.

## 8.14. Socioeconomics, Environmental Justice, and Children's Health & Safety Risks

### 8.14.1. Regulatory Setting

#### a. Socioeconomics

The Uniform Relocation Assistance and Real Property Acquisitions Policy Act is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real estate or displaces persons from their homes, businesses, or farms.

#### b. Environmental Justice

Title VI of the Civil Rights Act explicitly prohibits any discrimination in federally funded programs and projects, and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, requires federal agencies to identify and address any disproportionately high and adverse health or environmental effects of proposed projects on minority and low-income populations.

#### c. Children's Health and Safety Risks

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires federal agencies to identify and assess environmental health or safety risks that may disproportionately affect children. This includes risks attributable to products a child might use or be exposed to or substances they are likely to come in contact with or ingest (e.g., air, food, water, soil).

### 8.14.2. Affected Environment

#### a. Socioeconomics

According to the U.S. Census Bureau, the city of Idaho Falls has a total population of 64,818 with a median age of 35. The median household income is $61,833, the employment rate is 60.3%, and the poverty rate is 10.8%.[46]

#### b. Environmental Justice

According to the U.S. Census Bureau, the population of the city of Idaho Falls is predominantly white and does not have a significant number of people considered to be an environmental justice population (Table 8.9).[47] In addition, it should be acknowledged that Idaho Falls Regional Airport is located on the traditional land of the Shoshoni and Bannock people and was ceded to the United States July 3, 1868, via land cession 520.[48] The City of Idaho Falls is grateful for the opportunities afforded on said land.

**Table 8.9: City of Idaho Falls Race and Ethnicity Data**

| Race and Ethnicity | Population | Percentage |
|---|---|---|
| **Total** | 64,818 | 100.00% |
| **Population of one race** | 59,764 | 92.20% |
| White | 52,860 | 81.55% |
| Black or African American | 437 | 0.67% |
| American Indian and Alaska Native | 833 | 1.29% |
| Asian | 870 | 1.34% |
| Native Hawaiian and Other Pacific Islander | 93 | 0.14% |
| Other Race | 4,671 | 7.21% |
| **Population of two or more races** | 5,054 | 7.80% |

Source: U.S. Census Bureau, 2020.

#### c. Children's Health and Safety Risks

According to the U.S. Census Bureau, approximately 4,236 (6.3%) of the city of Idaho Falls population is less than five years of age, and approximately 16,912 (25.3%) is less than 18 years of age.[49]

Areas of particular concern for this impact category are schools, daycares, parks, and children's health clinics. According to the EPA's Environmental Justice Screening and Mapping Tool, EJSreen, there are no schools, daycares, or children's health clinics located on airport property or in its immediate vicinity.[50] As previously discussed in Section 8.7. Department of Transportation Act, Section 4(f), there are three parks and recreational areas located at or adjacent to the airport (Table 8.4).

### 8.14.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on socioeconomics, environmental justice, and children's health and safety risks, both direct and indirect impacts need to be examined. This includes identifying potential impacts that would occur as a result of operational changes and construction of these projects.

#### a. Socioeconomics

- Identify the effect the proposed project would have on economic activity, employment, income, poverty rates, population growth, housing, public services, and social conditions in the study area.
- In cases where the proposed project would result in relocation of local businesses, public services, or housing, estimate the number and characteristics of the individuals and families to be displaced; describe the impact on the affected neighborhood; and provide an indication of the ability of that neighborhood to provide adequate relocation housing for the families to be displaced.

#### b. Environmental Justice

- Determine if a low income or minority population will sustain more of the impact than any other population segment, or if they will experience impacts that are appreciably more severe or greater in magnitude than the rest of the population.

#### c. Children's Health and Safety Risks

- Determine if children will sustain more of the impact than any other population segment.
- Determine if the impacts suffered by children will be appreciably more severe or greater in magnitude than the adverse effects suffered by the rest of the population.

### 8.14.4. Significance Determination

#### a. Socioeconomics

The FAA has not established a significance threshold for socioeconomics. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does identify the following factors to consider in evaluating potential impacts.

The action would have the potential to:

- Induce substantial economic growth in an area.
- Disrupt or divide the physical arrangement of an established community.
- Cause extensive relocation when sufficient replacement housing is unavailable.
- Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities.
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities.
- Produce a substantial change in the community tax base.
- When the action would result in significant impacts in other environmental impact categories and disproportionately affect an environmental justice population.
- When environmental impacts affect an environmental justice population in a way that the FAA determines to be unique or significant to that population.
- Lead to disproportionate health or safety risks to children.[51]

#### b. Environmental Justice

The FAA has not established a significance threshold for environmental justice. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does state that a factor to consider is if the action would have the potential to lead to disproportionately high and adverse impact to an environmental justice population (i.e., a low-income or minority population) or results in impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA determines are unique to the environmental justice population and significant to that population.[52]

#### c. Children's Health and Safety Risks

The FAA has not established a significance threshold for children's health and safety risks. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does state that a factor to consider in evaluating potential impacts is if the action would have the potential to lead to a disproportionate health or safety risk to children.[53]

#### d. Potential Impacts

The projects proposed in this airport master plan are not expected to have an impact on socioeconomics, environmental justice populations, or children's health and safety.

## 8.15. Visual Effects

### 8.15.1. Regulatory Setting

There are no special purpose laws or requirements specific to light emissions or visual effects. However, some visual resources are protected under federal, state, or local regulations. Some of these protected visual resources include scenic roadways; Wild and Scenic Rivers; national scenic areas; scenic easements; trails protected under the National Trails System Act; biological resources; parks, recreation areas, wildlife, or waterfowl refuges; historic properties; and other features protected under other federal, state, or local regulations. Additional laws protecting resources that may be affected by visual effects include Section 106 of the National Historic Preservation Act, and Section 4(f) of the Department of Transportation Act as well as any state and local regulations, policies, and zoning ordinances that may apply.

### 8.15.2. Affected Environment

The airport is located in Idaho Falls which is a developed area with several existing light sources from surrounding commercial and residential land uses which contribute to the overall visual environment.

#### a. Light Emissions

The airport is currently equipped with several sources of light emissions which include airfield and apron lighting, visual navigational aids, terminal lighting, parking lot lighting, airborne and ground-based aircraft operations, and roadway lighting. These sources of light emissions are typical for airports and are essential to the safe and efficient movement of aircraft as well as the safety of vehicles and pedestrians using the airport.

#### b. Visual Resources and Visual Character

As previously discussed in Section 8.7, Department of Transportation Act, Section 4(f), there are three publicly owned parks and recreational areas located at or adjacent to the airport that could potentially be considered visually protected resources. There are also two historic sites and three potential historic sites located at or near the airport that could potentially be considered visually protected resources. These sites include the Idaho Falls Airport Historic District and portions of the East Lateral Canal System as well as a Craftsman-style farmhouse and two garages located on the Reed's Dairy property.

The visual character of the airport consists of various airside and landside facilities which include the runways, taxiways, apron areas, terminal building, parking lots, air cargo facility, aircraft hangars, fuel facilities, fixed base operator, and airport landscaping.

### 8.15.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on visual effects, both direct and indirect impacts from construction and ongoing operations need to be examined.

#### a. Light Emissions

Light emission impacts are typically related to the extent to which any lighting or glare associated with the proposed projects would create an annoyance for people in the vicinity and would interfere with their normal activities. When the potential for annoyance exists, information should be included in the analysis such as the location of lights or light systems, pertinent characteristics of the lighting (e.g., intensity, flashing sequence for strobe lighting) and its intended use (e.g., security lighting, runway lighting), and mitigation measures that could be implemented to lessen any annoyance such as shielding or angular adjustment.

#### b. Visual Resources and Visual Character

Visual resources and visual character impacts are typically related to a decrease in the aesthetic quality of an area resulting from development, construction, or demolition. Analysis of visual impacts considers whether the proposed projects would affect, obstruct, substantially alter, or remove visual resources including buildings, historic sites, or other landscape features that are visually important or have unique characteristics. When the potential to obstruct a visual resource exists, information should be included in the analysis such as how a project would alter the character and quality of views and the number of locations from which the resource can be viewed.

### 8.15.4. Significance Determination

The FAA has not established a significance threshold for light emissions or for visual resources and visual character. However, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, does identify the following factors to consider in evaluating potential impacts.

The degree to which the proposed projects would have the potential to:

- Create annoyance or interfere with normal activities from light emissions.
- Affect the importance, uniqueness, or aesthetic value of the visual character of the area.
- Block or obstruct views of visual resources or contrast with the visual character of the area.[54]

#### a. Potential Impacts

West side development projects could have an impact on light emissions and visual character.

## 8.16. Water Resources

### 8.16.1. Regulatory Setting

#### a. Wetlands

Jurisdictional wetlands are federally protected under Section 404 of the Clean Water Act (CWA) which regulates the discharge of dredge or fill material into Waters of the United States, including wetlands. Under the Clean Water Act, the term wetlands means areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. This generally includes swamps, marshes, bogs, and similar areas, but does not include streams, reservoirs, and deep lakes or areas covered with water for such a short time that there is no effect on moist-soil vegetation.

#### b. Floodplains

Floodplains are lowland areas adjoining inland and coastal waters which are periodically inundated by flood waters. As part of the National Flood Insurance Program (NFIP), the Federal Emergency Management Agency established a mapping system known as the Flood Insurance Rate Map (FIRM) which is used to delineate floodplain areas within the United States. Flood hazard areas are identified on the Flood Insurance Rate Map as a Special Flood Hazard Area (SFHA). These areas are often discussed in terms of the 100-year flood. The 100-year flood is a flood having a 1% chance of occurring in any given year. The 100-year flood is also known as the base flood.

According to Executive Order 11988, *Floodplain Management*, federal agencies must avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of 100-year floodplains. This includes avoiding direct or indirect support of floodplain development wherever there is a practical alternative.

City of Idaho Falls Code, Title 10, Chapter 4, *Flood Control*, addresses local requirements for minimizing public and private losses related to flooding.

#### c. Surface Waters

Surface waters include streams, rivers, lakes, ponds, estuaries, and oceans as well as other waters on the surface of the ground that are not considered to be wetlands, floodplains, groundwater, or Wild and Scenic Rivers. Surface waters are federally protected under Section 303(d), Section 404, Section 401, and Section 402 of the Clean Water Act which regulate the discharge of pollutants into waters of the United States and established the National Pollutant Discharge Elimination System (NPDES) permit program. If a project disturbs one or more acres of land, the Idaho Department of Environmental Quality may also require an Idaho Pollution Discharge Elimination System (IPDES) permit.[55]

According to the September 2022 edition of the Idaho Falls Public Works *Engineering Design Policy Manual*, all storm drain systems that ultimately flow to an Irrigation District system must be approved of by the affected Irrigation District prior to City approval and acceptance.[56]

#### d. Groundwater

Groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term aquifer is used to describe the geologic layers that store or transmit groundwater to wells, springs, and other water sources. The Safe Drinking Water Act prohibits federal agencies from funding actions that would contaminate an EPA-designated sole source aquifer or its recharge area.

Under Idaho Code Section 39-120, the Idaho Department of Environmental Quality is designated as the agency responsible for coordinating and administering groundwater quality protection programs in Idaho.

According to the General Water Quality Rule of the Idaho Administrative Code (IDAPA 58.01.11), activities with the potential to degrade general resource aquifers shall be managed in a manner which maintains or improves existing groundwater quality through the use of best management practices and best practical methods to the maximum extent practical.

#### e. Required Permits

- A U.S. Army Corps of Engineers Section 404 permit may be required for projects involving the East Lateral, Armstrong Lateral, or Hoff Lateral.
- National Pollutant Discharge Elimination System and Idaho Pollution Discharge Elimination System permits may be required.

### 8.16.2. Affected Environment

#### a. Wetlands

According to the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) map, there are two types of wetlands located on airport property. These include a 5.75-acre riverine habitat associated with the East Lateral, a 67.57-acre riverine habitat associated with the Armstrong Lateral, a 67.57-acre riverine habitat associated with the Hoff Lateral, and a 0.18-acre freshwater emergent wetland habitat located just south of the Aero Mark building at the end of Olympia Street.[57]

An aquatic resources delineation was conducted by T-O Engineers October 13, 2022. The area surveyed for this study is approximately 9.7 acres of airport property located northeast of the Foote Drive and International Way intersection. There is one drainage ditch and two depressional wetlands located within the study area that currently serve as stormwater basins. According to this report, the study area contains a total of 0.58 acres of palustrine emergent (PEM) wetlands and 0.08 acres of palustrine forested (PFO) wetlands. However, the drainage ditch and depressional wetlands are isolated from other Waters of the United States, and therefore may not be jurisdictional under Section 404 of the Clean Water Act.[58] A jurisdictional determination (JD) was requested from the U.S. Army Corps of Engineers (USACE) and these wetlands were found to be nonjurisdictional.[59]

#### b. Floodplains

According to the Idaho Falls floodplain map, the entire airport is located in Zone C which is an area of minimal flooding.[60]

### c. Surface Waters

The following surface waters are located on airport property or in its immediate vicinity.

- The Snake River is located approximately 0.2 miles east of the airport.
- The airport is located within the New Sweden Irrigation District, and sections of the Hoff Lateral, Armstrong Lateral, and East Lateral are located on and adjacent to airport property.[61]
- Surface drainage at the airport terminates into two retention basins where the water infiltrates into the soil. No surface drainage enters the irrigation canals or the Snake River.

### d. Groundwater

According to the Idaho Department of Water Resources (IDWR) Groundwater Quality map, there are six wells located on airport property. Two of these wells are located at the Old Butte Park and Soccer Complex, one is located at the apron in front of the rental car quick turnaround area (QTA), two are located at the Snake River Animal Shelter, and one is located in the infield west of the Runway 21 approach lighting system. Additional wells exist on potential land acquisition areas as well as on land recently acquired for Runway 21 approach protection east of the Snake River.[62]

The airport is located within the Eastern Snake Plain Aquifer (ESPA) region. The Eastern Snake River Plain Aquifer is a sole source, basalt aquifer that provides drinking water for approximately 200,000 people in southeastern and south-central Idaho.[63]

## 8.16.3. Environmental Consequences

To identify the potential impact the projects proposed in this airport master plan would have on water resources, both direct and indirect impacts need to be examined. This includes identifying potential impacts that would occur as a result of operational changes as well as construction of these projects.

### a. Wetlands

- Describe how the proposed project would affect or alter the physical condition or function of any wetlands. This includes impacts resulting from any fill, excavation, or construction as well as draining, dredging, channelizing, filling, diking, impounding, or related activities.
- Determine if construction within a wetland could lead to loss of a wetland function such as natural flood control, resulting in increased flooding in the vicinity of the proposed project.
- Determine if the creation of a new impermeable surface such as a runway could lead to increased runoff and affect water quality in nearby wetlands.
- Determine if these impacts would fall under the terms and conditions of a Section 404 general permit.

### b. Floodplains

- Describe the potential direct and indirect impacts to all floodplains identified within the project area that might result from construction of the proposed project (e.g., grading).
- Where appropriate, describe impacts on natural and beneficial floodplain values, water pollution, increased runoff from impermeable surfaces, or changes in hydrologic patterns.

### c. Surface Waters

- Describe the potential direct impacts to all surface waters identified within the study area that might result from construction of the proposed project.
- Identify any indirect impacts that could occur from construction of the proposed project such as sedimentation or petrochemical spills that could reach surface waters and cause water quality issues.
- Describe any potential impacts that could occur from ongoing operation of the proposed project such as increased runoff from new impermeable surfaces or changes in hydrologic patterns that could affect water quality and hydrology in nearby surface waters.
- Determine if these impacts fall under the terms and conditions of a Section 404 permit.

### d. Groundwater

- Describe the potential impact impervious surfaces, excavation, and construction would have on groundwater. This includes potential petrochemical spills from construction activities that could reach groundwater through infiltration and cause water quality issues.
- Describe how ongoing operation of the proposed project would affect groundwater.

## 8.16.4. Significance Determination

### a. Wetlands

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on wetlands is if the action would:

- Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies including surface waters and sole source and other aquifers.
- Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected.
- Substantially reduces the affected wetland's ability to retain floodwaters or storm runoff.
- Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected wetlands.

#### b. Floodplains

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on floodplains is if, "The action would cause notable adverse impacts on natural and beneficial floodplain values." Natural and beneficial floodplain values are defined in Department of Transportation Order 5650.2, *Floodplain Management and Protection*.

#### c. Surface Waters

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on surface waters is if the action would:

- Exceed water quality standards established by federal, state, or local regulatory agencies.
- Contaminate public drinking water supply such that public health may be adversely affected.

#### d. Groundwater

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the threshold for determining if an action would have a significant impact on groundwater is if the action would:

- Exceed groundwater quality standards established by federal, state, local, and tribal regulatory agencies.
- Contaminate an aquifer used for public water supply such that public health may be adversely affected.[64]

#### e. Potential Impacts

A wetland delineation and mitigation measures may be required for projects involving the East Lateral, Armstrong Lateral, or Hoff Lateral.

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# AIRPORT LAYOUT PLAN

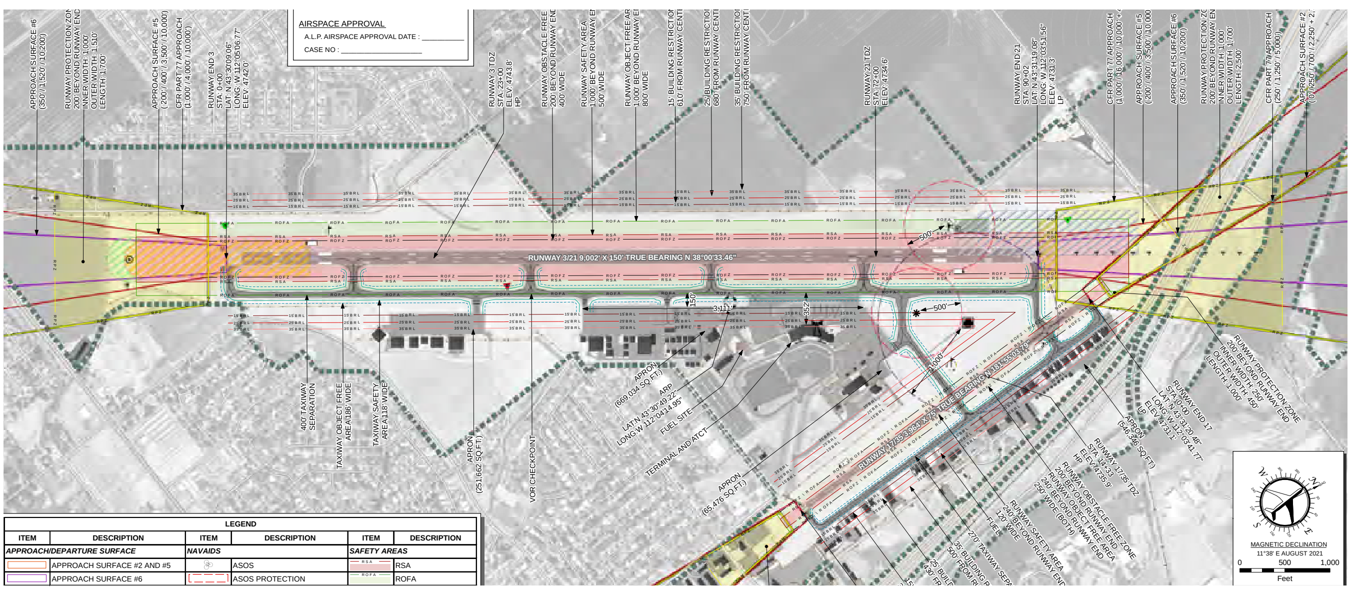
9

## CHAPTER NINE

# AIRPORT LAYOUT PLAN

The airport layout plan (ALP) is a set of drawings that depicts the current airport facilities and proposed development projects. Under the Airport and Airway Improvement Act of 1982, it is necessary for airport layout plans to be adopted by the sponsor as well as reviewed and accepted by the FAA for an airport to receive financial assistance. The airport is obligated by federal grant assurance requirements to follow its airport layout plan and keep it current. According to FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, the primary functions of the airport layout plan are:

- Create a blueprint for airport development to serve as a guideline for the airport sponsor which helps to ensure development maintains airport design standards and safety requirements and is consistent with airport and community land use plans.
- The airport layout plan is a public document that serves as a record of aeronautical requirements, both present and future, and as a reference for community deliberations on land use proposals and budget resource planning.
- The approved airport layout plan enables the airport sponsor and the FAA to plan for airport improvements. It also allows the FAA to anticipate budgetary and procedural needs. The approved airport layout plan will also allow the FAA to protect the airspace required for facility or approach procedure improvements.
- The airport layout plan can be a tool for the airport sponsor including development and maintenance staff.



## 9.1. Airport Layout Plan Drawing Set

This chapter describes each sheet included in the airport layout plan for Idaho Falls Regional Airport and the proposed improvements for the airport. It also describes information on major changes from the previous airport layout plan completed in 2022 by T-O Engineers. All layout drawings were produced using FAA standards defined in AC 150/5070-6B, *Airport Master Plans*, and AC 150/5300-13B, *Airport Design*. The airport layout plan also complies with FAA Airports Organization (ARP) Standard Operating Procedure (SOP) No. 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans*. The updated airport layout plan drawings for Idaho Falls Regional Airport are attached as **Appendix E: Airport Layout Plan and** include the following sheets.

- Sheet 1: Title Sheet
- Sheet 2: Airport Data Sheet
- Sheet 3A: Airport Layout Plan (Existing)
- Sheet 3B: Airport Layout Plan (Future)
- Sheet 4: Airport Airspace
- Sheet 5A: Runway 3/21 Profile
- Sheet 5B: Runway 17/35 Profile
- Sheet 6A: Inner Portion of the Approach Surface – Runway 3
- Sheet 6B: Inner Portion of the Approach Surface – Runway 21
- Sheet 6C: Inner Portion of the Approach Surface – Runway 17/35
- Sheet 7A: Runway Departure Surface – Runway 3/21
- Sheet 7B: Runway Departure Surface – Runway 35
- Sheet 8A: Terminal Area North
- Sheet 8B: Terminal Area South
- Sheet 9A: Off-Airport Land Use
- Sheet 9B: On-Airport Land Use (Future)
- Sheet 10: Photo and Contours
- Sheet 11A: Exhibit 'A'
- Sheet 11B: Exhibit 'A' Data Table

## 9.2. Sheet 1: Title Sheet

The title sheet provides an index of the individual sheets in the airport layout plan set along with approval signature blocks, airport location and vicinity maps, title and revision blocks, and any other information requested by the FAA.

## 9.3. Sheet 2: Airport Data Sheet

The airport data sheet includes the wind roses, runway data table, airport data table, non-standard conditions table, declared distances table, and an abbreviations index. The data tables summarize critical information about current and future planned design and safety area dimensions for each runway.

## 9.4. Sheets 3A and 3B: Airport Layout Plan

These sheets are a graphical representation of existing and future proposed airport facilities. These drawings include aircraft operating areas (e.g., runways, taxiways, aprons), required facility identifications, description labels, runway protection zones, runway and taxiway safety areas, runway and taxiway object free areas, runway obstacle free zones, building restriction lines, and navigational aids. All features are shown as complying with the FAA design standards that correspond to the critical aircraft. This sheet also includes an area for the FAA signature of approval.

## 9.5. Sheet 4: Airport Airspace

The airport airspace drawing depicts the imaginary surfaces defined by 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, and any objects penetrating those surfaces. It also includes an obstruction data table that lists each obstacle, the amount of each penetration, and its future disposition.

## 9.6. Sheets 5A and 5B: Runway Profile

The runway profile sheets depict a profile drawing that displays the centerline ground profile detail for Runways 3/21 and 17/35.

## 9.7. Sheets 6A-6C: Inner Portion of the Approach Surface

The inner portion of the approach surface sheets depict a top-down view of the inner approach surfaces for each runway end, critical ground profile for the inner approach of each runway end, and any obstructions to the inner approach surfaces.

## 9.8. Sheets 7A and 7B: Runway Departure Surfaces

These drawings depict the applicable departure surfaces for runway ends. There are no published standard instrument departures (SID) for Runway 17 due to environmental reasons. Therefore, there is no departure surface depicted at the south end of Runway 17.

## 9.9. Sheets 8A and 8B: Terminal Area

These sheets depict areas associated with existing and future general aviation and commercial aviation development. This includes the passenger terminal, air cargo, fixed base operator, hangar areas, tie-down parking areas, and vehicle parking areas.

## 9.10. Sheets 9A and 9B: Land Use

The land use drawings depict the on-airport and off-airport land uses associated with future airport development. These drawings also show the day-night average sound level (DNL) 65 decibel noise contour, runway protection zones, future property boundary of the airport, and any property to be acquired based on future runway protection zone limits and airport development.

## 9.11. Sheet 10: Photo and Contours

This sheet is a drawing that depicts two-foot and five-foot terrain contours of the land around the airport. These contours are used to identify possible terrain obstructions and penetrations of approach and departure surfaces. They are also used for planning construction and earthwork. The existing and proposed facilities, as well as the airport property boundary and safety areas, are also included for reference.

## 9.12. Sheets 11A and 11B: Exhibit 'A'

Sheet 11A is a drawing that depicts the airport property boundary and the various tracts of land that were acquired to develop the airport. Sheet 11B contains associated data tables that list how each track was acquired (i.e., source of funding) and if it has been sold. The Exhibit 'A' property map was prepared consistent with the Exhibit 'A' Review Checklist included in the FAA's Standard Operating Procedure No. 3.00, *Standard Operating Procedure (SOP) for FAA Review of Exhibit 'A' Airport Property Inventory Maps,* dated October 1, 2013. The creation of Exhibit 'A' required a boundary survey and record of survey compliant with Idaho Code, so this sheet is stamped by the licensed surveyor who oversaw that work.

## 9.13. Airport Layout Plan Changes

This section identifies the following significant changes from the previous airport layout plan completed by T-O Engineers and approved by the FAA in May 2022.

### 9.13.1. Taxiway B

The previous airport layout plan moves Taxiway B closer to Runway 17/35 to meet taxiway to runway separation standards. This airport layout plan does not show Taxiway B relocated because it is unlikely the FAA would fund a relocation of Taxiway B due to Runway 17/35 being ineligible for FAA funding.

### 9.13.2. Terminal Area

The previous airport layout plan shows a modest expansion of the terminal building to the south and no expansions of the parking lots. This airport layout plan depicts terminal expansions to the east and south, expansion of the parking lots, revisions to the terminal roadways, and expansion of the snow removal equipment building as well as the FedEx, rental car, and aircraft rescue and firefighting (ARFF) facilities being relocated.

### 9.13.3. West Side Development

The previous airport layout plan did not show any development on the west side of Runway 3/21. This airport layout plan shows a future parallel taxiway, air cargo facility, the airport traffic control tower (ATCT) relocation site, and land acquisition for future aviation development.

### 9.13.4. South Quad Development

The previous airport layout plan did not show any development in the south quad area. This airport layout plan shows future general aviation hangar development in the south quad area along with an expansion of the apron and the addition of a connector taxiway.

# FINANCIAL ANALYSIS AND IMPLEMENTATION PLAN

# FIGURES

# TABLES

CHAPTER TEN

# IMPLEMENTATION

This chapter reviews planned capital improvement projects for Idaho Falls Regional Airport (IDA) in conjunction with the Federal Aviation Administration (FAA) Airports Capital Improvement Plan (ACIP) and improvements recommended based on the analysis presented in this airport master plan. The facilities implementation plan provides guidance on when to implement the recommended improvements and includes rough order of magnitude cost estimates for each project. It also addresses the airport's planned capital improvement projects to ensure adequate funds, staff, and other resources are available. The cost estimates included in this chapter are based on general estimates of a project's cost as well as level of effort and are developed using unit costs and planning assumptions.

Projects identified through this airport master plan are depicted on the airport layout plan (ALP) which makes them eligible for FAA funding. Implementation of the proposed projects is at the airport sponsor's discretion and is contingent on the outcome of any required environmental reviews and funding commitments made at the time of implementation. Not all projects eligible for FAA funding will receive FAA funding.

## 10.1. Capital Improvement Plan

Capital improvement projects differ from operations and maintenance (O&M) projects in that capital improvement projects often require substantial funding, can take multiple years to complete, and are typically planned several years in advance. Operations and maintenance projects consist of short-term expenses normally related to the routine maintenance, operation, and management of the airport. Capital improvement projects are normally large infrastructure improvements and can include runways, terminals, taxiways, and aprons. Certain types of equipment, such as snow removal equipment, firefighting or rescue trucks, and their associated storage buildings, may also be eligible for FAA and state funding assistance.

Airport master plans and airport layout plans (ALP) are typically updated every seven to ten years and larger development needs are justified through these planning efforts. However, based on the identified growth rate of the community at large and the airport itself, this airport master plan may need to be updated more often to address growth outside the parameters identified within this airport master plan. The projects identified during the planning process are added to the FAA's Airports Capital Improvement Plan by the airport sponsor during an annual review with the FAA. During this review, completed projects are removed, pending projects are refined, and new projects are added for future years. Once a project has been added to the Airports Capital Improvement Plan, depending on the priority of the project, it may take several years to schedule the funding. Projects that are related to safety and security are the highest priority for receiving federal funding.

## 10.2. Development Phasing Plan

The phasing plan is intended to help establish interrelationships between projects, determine a sequence to minimize conflicts, and ensure priorities are maintained. Implementation of projects is typically driven by future demand. However, in some cases, some projects can be undertaken at any point during the planning period.

It is important for the airport sponsor to plan projects well in advance. This helps ensure funding is available from the FAA, state, and airport sponsor. For airport sponsors that struggle with obtaining matching funds, this level of planning is especially important.

This phasing plan is divided into three planning activity levels (PAL), which are generally based on the federal fiscal year (October 1–September 30), and five functional areas of the airport. Projects are assigned an identifier based on airport functional area (T: Terminal, E: East Side, S: South Quad, W: West Side, and A: Airfield) and a project identification number that indicates the planned sequence. Actual project sequencing will be dependent on funding availability, aviation demand, passenger demand, local priorities, environmental findings, enabling project completion, and other factors that may occur within the planning horizon. The first planning activity level is the short-term planning period of one to five years (2025–2030) and ties projects to a specific federal fiscal year. Projects within planning activity level 1 are sufficiently justified and ready for environmental review, design, or construction. Planning activity level 2 represents the mid-term planning period of six to 10 years (2030–2034) and includes projects that are sufficiently justified but require projects in planning activity level 1 to first be completed or require a more robust environmental review. Projects in planning activity level 2 may advance or recede within the planning period. Planning activity level 3 represents the long-term planning period from 2035 through 2042 and includes projects that are not assigned a specific fiscal year for completion.

Rough order of magnitude (ROM) cost estimates are included for each project with costs based on 2024 prices and dollar values. Design costs are estimated as a percentage of the construction cost and include limited environmental reviews such as a categorical exclusion (CatEx). If a more extensive environmental review is anticipated, such as an environmental assessment, they are listed as a separate project. Land acquisition cost estimates include appraisal services and assume a land value of $64,000 per acre based on a 2024 appraisal.

### 10.2.1. Planning Activity Level 1 Development

Projects included in planning activity level 1 are listed in Table 10.1. Major projects in this planning activity level include an expansion of the terminal building, construction of a new airport traffic control tower (ATCT), rehabilitation of Runway 3/21, pavement rehabilitation, and design work related to a new parking garage, parking lots, and a road realignment.

**Table 10.1: Planning Activity Level 1 Development Projects**

| Project ID | Project Description | Cost Estimate |
|---|---|---|
| **Terminal Area Development** | | |
| T-1 | deicing pad design and construction | $2,473,684 |
| T-2 | cargo apron rehabilitation | $3,946,667 |
| T-3 | commercial apron rehabilitation | $6,473,684 |
| T-4 | parking garage design | $1,688,720 |
| T-5 | Skyline Drive rehabilitation design | $138,422 |
| T-6 | Federal Way relocation design | $45,476 |
| T-7 | parking lot expansion design | $595,987 |
| T-8 | terminal expansion: Priority 1A and administration building | $100,816,442 |
| T-9 | convert economy 2 to quick turnaround area | $8,551,700 |
| T-10 | FedEx apron expansion design | $169,443 |
| T-11 | FBO apron pavement maintenance | $266,667 |
| **East Side Development** | | |
| E-1 | retention basin improvements (design) | $62,591 |
| E-2 | north hangar environmental assessment, design, and construction | $1,045,333 |
| E-3 | central hangar and taxilane design | $37,927 |
| E-4 | Runway 17/35 rehabilitation design | $178,695 |
| E-5 | Taxiway B rehabilitation design | $213,333 |
| E-6 | apron and taxilane pavement maintenance | $266,666 |
| **South Quad Development** | | |
| S-1 | hangar and taxilane design Phase 1 | $2,912,000 |
| S-2 | Taxiway G and general aviation apron expansion design | $284,272 |
| S-3 | apron and taxilane pavement maintenance | $266,666 |
| S-4 | aircraft rescue and fire fighting relocation (design) | $476,577 |
| S-5 | land acquisition (Reed) | $1,300,000 |
| **West Side Development** | | |
| W-1 | parallel Taxiway K environmental assessment | $400,000 |
| W-2 | land acquisition of parcel 44 environmental assessment | $450,000 |
| **Airfield Development** | | |
| A-1 | Runway 3/21 rehabilitation | $20,168,421 |
| A-2 | relocate VOR (design) | $220,000 |
| A-3 | acquire snow removal equipment (blower) | $842,105 |
| A-4 | install runway weather information system | $526,316 |
| A-5 | acquire snow removal equipment (plow and deicer) | $1,000,000 |
| A-6 | relocate airport traffic control tower (construction) | $15,000,000 |
| A-7 | land acquisition (Peterson) | $3,789,474 |
| | **Planning Activity Level 1 Total Costs** | **$174,607,248** |

### 10.2.2. Planning Activity Level 2 Development

Projects included in planning activity level 2 are listed in Table 10.2. Major projects continued from planning activity level 1 include the expansion of the terminal building and construction of terminal area infrastructure. West side development begins with construction of parallel Taxiway K. At the south quad, phase 1 of general aviation infrastructure development begins which will result in additional hangars and apron expansion for aircraft parking. On the east side of the airport, Runway 17/35 receives a pavement rehabilitation.

**Table 10.2: Planning Activity Level 2 Development Projects**

| Project ID | Project Description | Cost Estimate |
|---|---|---|
| **Terminal Area Development** | | |
| T-12 | snow removal equipment building expansion design & construction | $5,469,715 |
| T-13 | parking garage construction | $21,109,000 |
| T-14 | Skyline Drive construction | $1,730,272 |
| T-15 | Federal Way construction | $568,454 |
| T-16 | parking lot construction | $9,728,623 |
| T-17 | terminal expansion: Priority 1a Phase 4, 1b, and 2a | $52,398,323 |
| T-18 | conversion of rental car area to apron (design and construction) | $2,118,042 |
| T-19 | FBO north apron design and construction | $2,249,649 |
| T-20 | FBO south apron pavement maintenance | $268,141 |
| T-21 | cargo and commercial apron pavement maintenance | $489,269 |
| T-22 | quick turnaround area pavement maintenance | $134,094 |
| T-23 | deicing pad pavement maintenance | $99,478 |
| **East Side Development** | | |
| E-7 | retention basin construction | $782,384 |
| E-8 | central hangar and taxilane construction | $474,092 |
| E-9 | north hangar taxilane construction | $544,997 |
| E-10 | Taxiway B rehabilitation construction | $2,243,479 |
| E-11 | south hangar and taxilane design | $66,463 |
| E-12 | Runway 17/35 rehabilitation construction | $2,233,682 |
| E-13 | apron and taxilane rehabilitation (design and construction) | $1,161,973 |
| **South Quad Development** | | |
| S-6 | aircraft rescue and fire fighting relocation (construction) | $5,957,213 |
| S-7 | Taxiway G and general aviation apron expansion (construction) | $3,553,402 |
| S-8 | hangar and taxilane design Phase 2 | $151,031 |
| S-9 | apron and taxilane rehabilitation design and construction | $1,408,776 |
| **West Side Development** | | |
| W-3 | parallel Taxiway K (design) | $1,027,460 |
| W-4 | air cargo apron (design) | $598,275 |
| W-5 | land acquisition of parcel 44 | $1,113,600 |
| W-6 | parallel Taxiway K (construction) | $12,843,246 |
| **Airfield Development** | | |
| A-8 | Runway 3/21 pavement maintenance | $1,151,069 |
| A-9 | Taxiway C rehabilitation design | $65,795 |
| A-10 | Taxiway A rehabilitation design | $333,625 |
| A-11 | relocate VOR construction | $2,750,000 |
| A-12 | acquire snow removal equipment (plow and deicer) | $800,000 |
| A-13 | acquire aircraft rescue and fire fighting vehicle | $1,000,000 |
| | **Planning Activity Level 2 Total Cost** | **$136,815,022** |

### 10.2.3. Planning Activity Level 3 Development

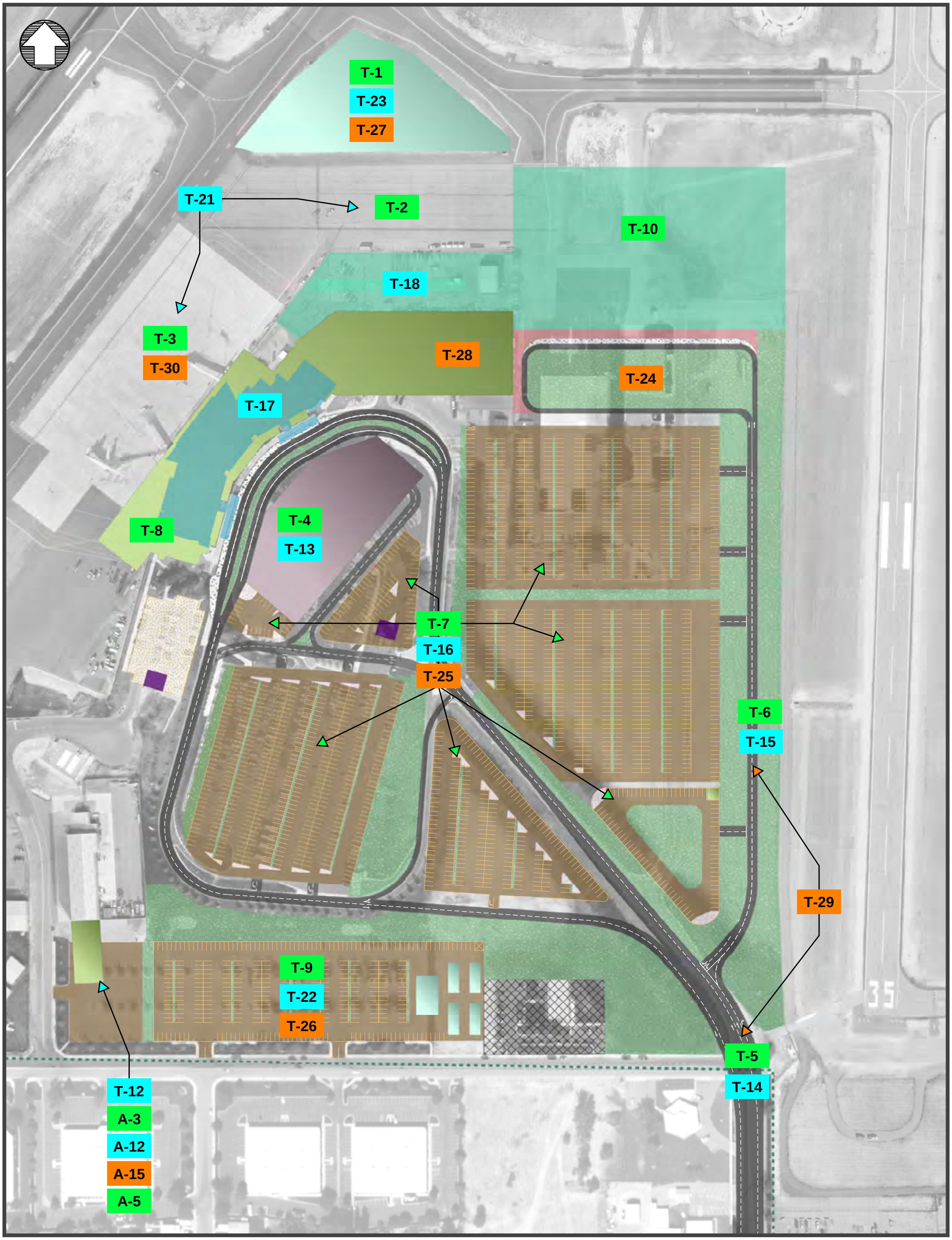
Projects included in planning activity level 3 are listed in Table 10.3. Major projects in this planning activity level include another terminal expansion, pavement maintenance projects across the airfield, and additional infrastructure at the south quad for general aviation development.

**Table 10.3: Planning Activity Level 3 Development Projects**

| Project ID | Project Description | Cost Estimate |
|---|---|---|
| **Terminal Area Development** | | |
| T-24 | transit station planning, design, and construction | $4,420,132 |
| T-25 | parking lot pavement maintenance | $3,692,349 |
| T-26 | quick turnaround area pavement maintenance | $134,094 |
| T-27 | deicing pad pavement maintenance | $99,478 |
| T-28 | terminal expansion: Priority 2b design and construction | $43,233,300 |
| T-29 | Skyline Drive and Federal Way pavement maintenance | $218,221 |
| T-30 | commercial apron rehabilitation | $4,600,780 |
| T-31 | FBO apron pavement maintenance | $2,258,325 |
| **East Side Development** | | |
| E-14 | south hangar and taxilane construction | $830,785 |
| E-15 | Taxiway B pavement maintenance | $212,875 |
| E-16 | Runway 17/35 pavement maintenance | $211,946 |
| E-17 | apron and taxilane pavement maintenance | $221,451 |
| **South Quad Development** | | |
| S-10 | hangar and taxilane construction Phase 2 | $1,887,892 |
| S-11 | apron and taxilane pavement maintenance | $606,622 |
| **West Side Development** | | |
| W-7 | air cargo apron construction | $7,478,444 |
| W-8 | Old Butte Road environmental | $600,000 |
| W-9 | Taxiway K pavement maintenance | $513,875 |
| W-10 | cargo apron pavement maintenance | $254,586 |
| **Airfield Development** | | |
| A-14 | Runway 3/21 pavement maintenance | $1,151,069 |
| A-15 | Taxiway A and Taxiway C rehabilitation construction | $4,992,745 |
| A-16 | acquire snow removal equipment | $1,000,000 |
| | **Total PAL 3** | **$78,618,969** |

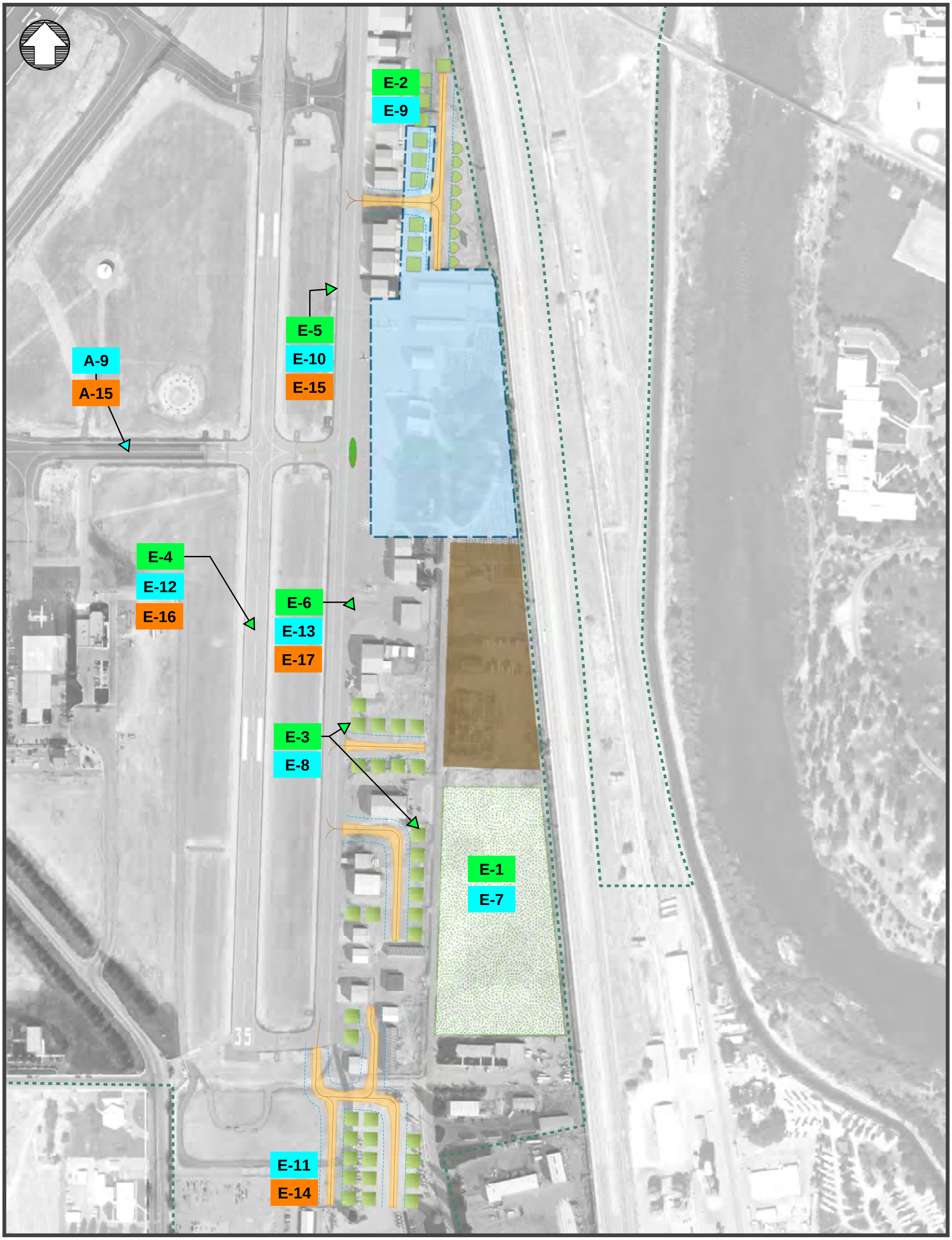
Figure 10.1, Figure 10.2, Figure 10.3, and Figure 10.4 depict the projects located within each of the functional areas with the project identification numbers corresponding to project location.

## Figure 10.1: Terminal Area Development Plan



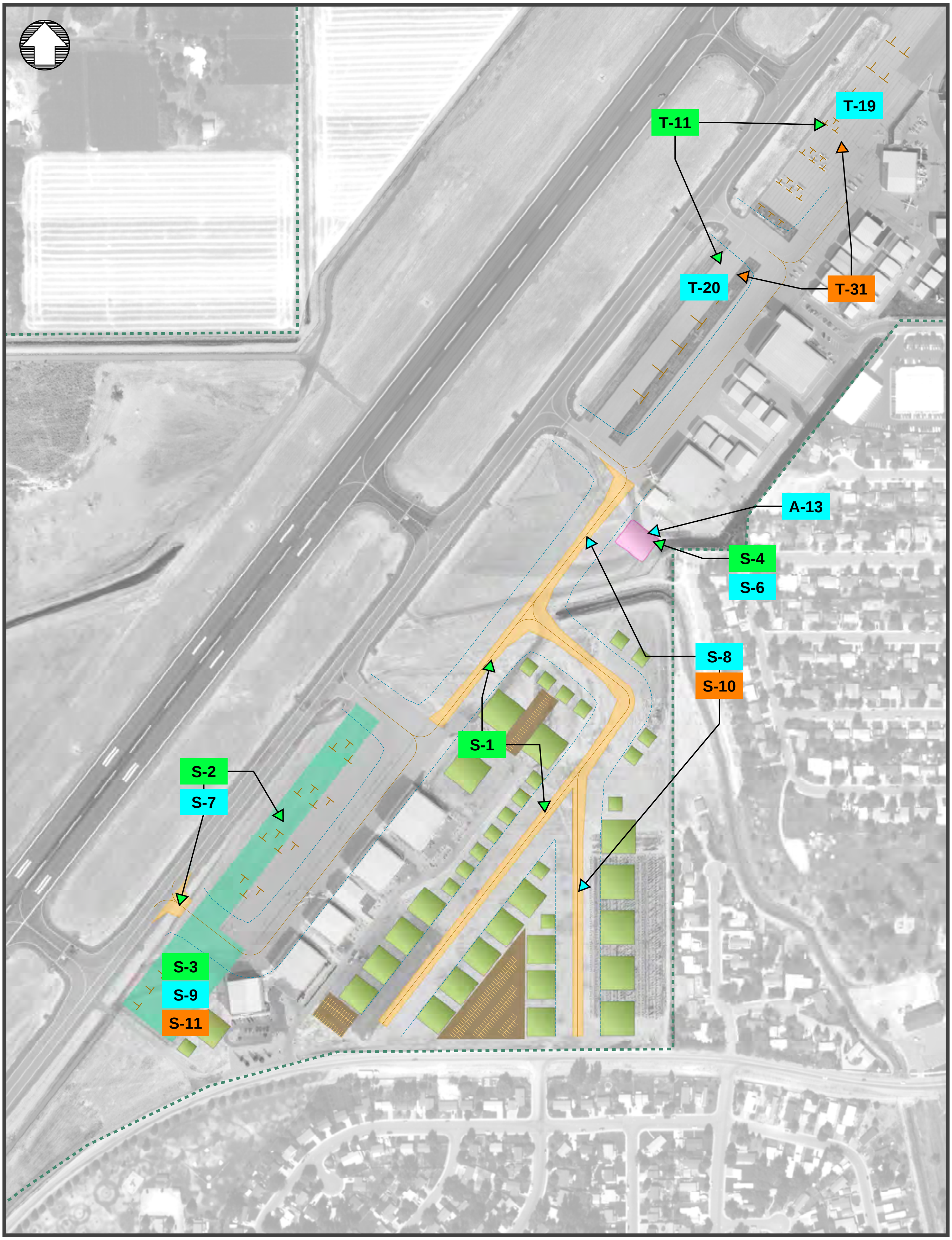

Source: Ardurra

## Figure 10.2: East Side Development Plan



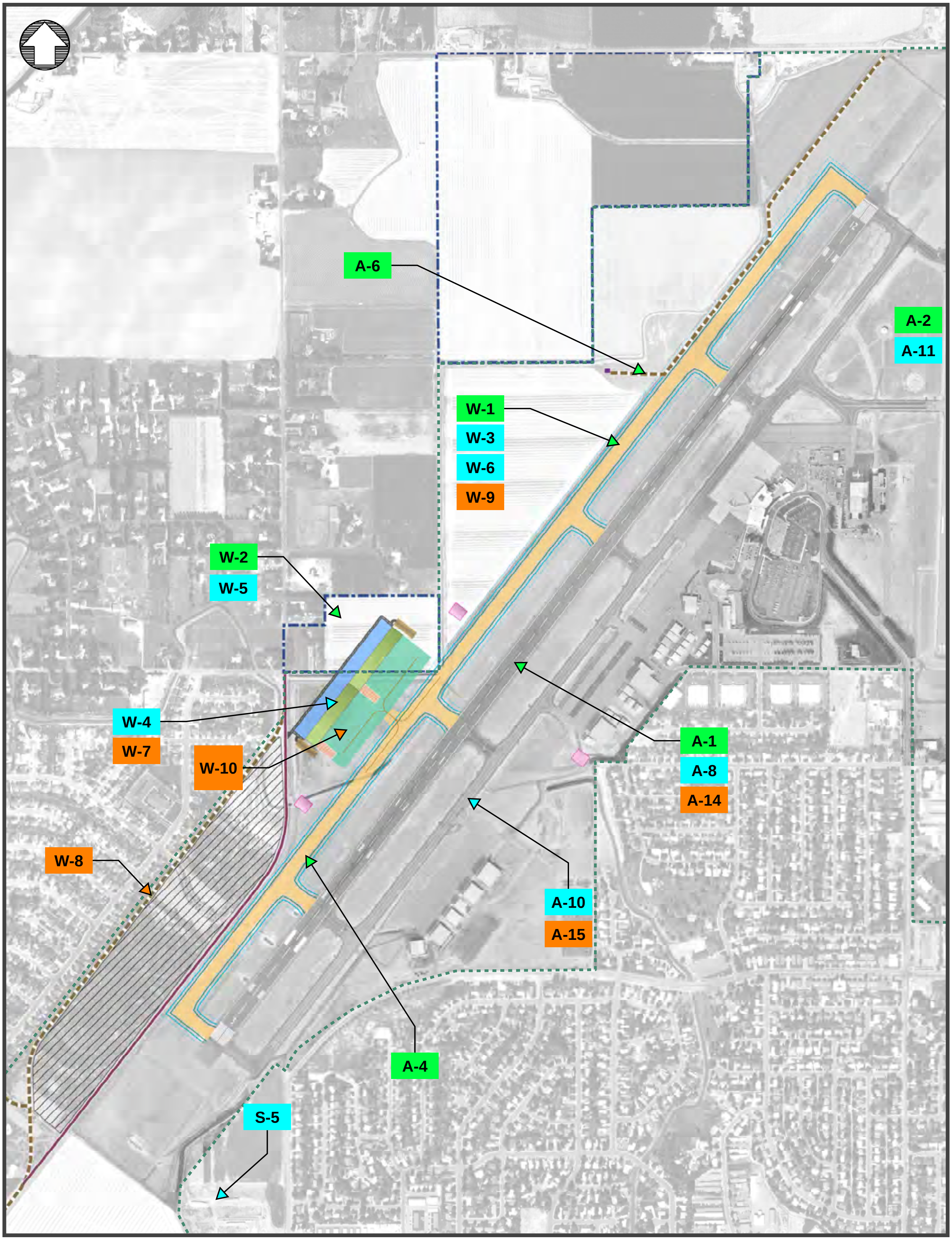

Source: Ardurra

**Figure 10.3: South Quad Development Plan**




Source: Ardurra

Figure 10.4: West Side Development Plan




Source: Ardurra

### 10.2.4. Functional Area Summary

Table 10.4 summarizes the rough order of magnitude cost estimates for each planning activity level within each airport functional area. The total estimated cost of the capital improvement plan is $390,041,239. Approximately 80% of the total cost is associated with multiple terminal expansions ($194,448,065) and pavement projects ($112,693,822).

**Table 10.4: Functional Area Summary**

| PAL | Project Highlights | Cost Estimate |
|---|---|---|
| **Terminal Area Development** | | |
| PAL 1 | Terminal expansion, parking and garage design, road design | $125,166,892 |
| PAL 2 | Terminal expansion, SRE expansion, parking, road, garage construction | $96,363,060 |
| PAL 3 | Terminal expansion, transit station construction, pavement maintenance | $58,656,679 |
| | **Terminal Area Development Total** | **$280,186,631** |
| **East Side Development** | | |
| PAL 1 | Runway 17/35, Taxiway B, and hangar design, pavement maintenance | $1,804,545 |
| PAL 2 | Runway 17/35, Taxiway B, hangar, and retention basin construction | $7,507,070 |
| PAL 3 | South hangar construction, pavement maintenance | $1,477,057 |
| | **East Side Development Total** | **$10,788,672** |
| **South Quad Development** | | |
| PAL 1 | Apron expansion, ARFF relocation, hangar design Phase 1, land acquisition | $5,239,515 |
| PAL 2 | Apron expansion, ARFF relocation, and hangar construction | $11,070,422 |
| PAL 3 | Hangar construction Phase 2, pavement maintenance | $2,494,514 |
| | **South Quad Development Total** | **$18,804,451** |
| **West Side Development** | | |
| PAL 1 | Parallel Taxiway K and land acquisition environmental assessments | $850,000 |
| PAL 2 | Parallel Taxiway K design and construction, air cargo design, land acquisition | $15,773,981 |
| PAL 3 | Air cargo construction, Old Butte Road environmental assessment | $8,846,905 |
| | **West Side Development Total** | **$25,470,886** |
| **Airfield Development** | | |
| PAL 1 | Runway 3/21 rehabilitation, ATCT construction, land acquisition, acquire SRE | $41,546,316 |
| PAL 2 | Taxiways A/C design, relocate VOR, acquire SRE and ARFF | $6,100,489 |
| PAL 3 | Taxiways A/C construction, pavement maintenance, acquire SRE | $7,143,814 |
| | **Airfield Development Total** | **$54,790,619** |
| | **Total Cost** | **$390,041,259** |

Source: Ardurra

Table 10.5 lists the potential funding sources associated with planning activity level projects. Rough order of magnitude cost estimates are an approximation and are designed to provide a starting point for financial planning. Many factors may affect these estimates such as inflation or changes in unit pricing. It is recommended that estimates are updated as projects move closer to implementation.

**Table 10.5: Planning Activity Level 1 Potential Funding Sources**

| Phasing Sequence | Project | Federal | | | PFC | Local/ Private/CFC | Total Cost |
|---|---|---|---|---|---|---|---|
| | | Entitlement | Discretionary | BIL | | | |
| T-1 (2026) | deicing pad design and construction | $1,650,000 | $700,000 | $0 | $123,684 | $0 | $2,473,684 |
| T-2 (2029) | cargo apron rehabilitation | $1,500,000 | $2,200,000 | $0 | $246,667 | $0 | $3,946,667 |
| T-3 (2025-2026) | commercial apron rehabilitation | $450,000 | $5,700,000 | $0 | $323,684 | $0 | $6,473,684 |
| T-4 (2026) | parking garage design | $0 | $0 | $0 | $0 | $1,688,720 | $1,688,720 |
| T-5 (2027) | Skyline Drive rehabilitation design | $0 | $0 | $0 | $0 | $138,422 | $138,422 |
| T-6 (2027) | Federal Way relocation design | $0 | $0 | $0 | $0 | $45,476 | $45,476 |
| T-7 (2028) | parking lot expansion design | $0 | $0 | $0 | $0 | $595,987 | $595,987 |
| T-8a (2025-2026) | terminal expansion Phase 1 | $2,000,000 | $0 | $30,076,091 | $17,677,310 | $17,500,000 | $67,253,401 |
| T-8b (2027) | terminal expansion Phase 2 | $0 | $0 | $17,200,000 | $2,659,649 | $0 | $19,859,649 |
| T-8c (2027) | terminal expansion Phase 3 | $0 | $0 | $10,200,000 | $1,503,392 | $0 | $11,703,392 |
| T-8d (2027) | terminal expansion: admin. building | $0 | $1,875,000 | $0 | $0 | $125,000 | $2,000,000 |
| T-9 (2029) | convert economy 2 to QTA | $0 | $0 | $0 | $8,551,700 | $0 | $8,551,700 |
| T-10 (2029) | FedEx apron expansion design | $158,853 | $0 | $0 | $0 | $10,590 | $169,443 |
| T-11 (2028) | FBO apron pavement maintenance | $250,000 | $0 | $0 | $16,667 | $0 | $266,667 |
| E-1 (2026) | retention basin improvements | $0 | $59,461 | $0 | $0 | $3,130 | $62,591 |
| E-2a (2028) | north hangar EA | $255,000 | $0 | $0 | $17,000 | $0 | $272,000 |
| E-2b (2029) | north hangar construction | $725,000 | $0 | $0 | $48,333 | $0 | $773,333 |
| E-3 (2026) | central hangar and taxilane design | $0 | $0 | $0 | $0 | $37,927 | $37,927 |
| E-4 (2027) | Runway 17/35 rehabilitation design | $0 | $0 | $0 | $0 | $178,695 | $178,695 |
| E-5 (2028) | Taxiway B rehabilitation design | $200,000 | $0 | $0 | $13,333 | $0 | $213,333 |
| E-6 (2028) | apron pavement maintenance | $250,000 | $0 | $0 | $16,666 | $0 | $266,666 |
| S-1 (2027-2028) | hangar and taxilane design Phase 1 | $2,180,000 | $550,000 | $0 | $182,000 | $0 | $2,912,000 |
| S-2 (2028) | Taxiway G and GA apron expansion | $266,505 | $0 | $0 | $0 | $17,767 | $284,272 |

| Phasing Sequence | Project | Federal | | | PFC | Local/ Private/CFC | Total Cost |
|---|---|---|---|---|---|---|---|
| | | Entitlement | Discretionary | BIL | | | |
| S-3 (2028) | apron pavement maintenance | $250,000 | $0 | $0 | $16,666 | $0 | $266,666 |
| S-4 (2027) | ARFF relocation | $446,791 | $0 | $0 | $0 | $29,786 | $476,577 |
| S-5 (2027) | land acquisition (Reed) | $0 | $1,235,000 | $0 | $0 | $65,000 | $1,300,000 |
| W-1 (2030) | Taxiway K environmental assessment | $380,000 | $0 | $0 | $20,000 | $0 | $400,000 |
| W-2 (2028) | land acquisition EA | $421,875 | $0 | $0 | $0 | $28,125 | $450,000 |
| A-1a (2025) | Runway 3/21 rehabilitation | $750,000 | $0 | $0 | $0 | $50,000 | $800,000 |
| A-1b (2029) | Runway 3/21 rehabilitation (design) | $750,000 | $0 | $0 | $39,474 | $0 | $789,474 |
| A-1c (2030) | Runway 3/21 rehabilitation | $2,800,000 | $14,850,000 | $0 | $928,947 | $0 | $18,578,947 |
| A-2 (2026) | relocate VOR (design) | $0 | $209,000 | $0 | $0 | $11,000 | $220,000 |
| A-3 (2027) | acquire snow removal equipment | $0 | $800,000 | $0 | $42,105 | $0 | $842,105 |
| A-4 (2030) | install runway weather system | $0 | $500,000 | $0 | $26,316 | $0 | $526,316 |
| A-5 (2026) | acquire snow removal equipment | $950,000 | $0 | $0 | $50,000 | $0 | $1,000,000 |
| A-6 (2026) | relocate airport traffic control tower | $0 | $0 | $15,000,000 | $0 | $0 | $15,000,000 |
| A-7 (2028) | land acquisition (Peterson) | $0 | $3,600,000 | $0 | $189,474 | $0 | $3,789,474 |
| | **Total** | **$16,634,024** | **$32,278,461** | **$72,476,091** | **$32,693,067** | **$20,525,625** | **$174,607,268** |

Notes: BIL includes BIL-AIG, BIL-ATP, and BIL-FCT

## 10.3. Potential Airport Funding Sources

Funding sources for airport projects typically include federal, state, local, and private sources. Most often, federal grants from the FAA are used to fund federally eligible projects. This section identifies some of the more common funding sources used for airport projects.

### 10.3.1. Airport Improvement Program

The Airport Improvement Program (AIP) provides grants for eligible planning and development projects at National Plan of Integrated Airport Systems (NPIAS) airports. Eligible projects include those related to airport safety, capacity, security, and environment. Airport Improvement Program grants may come from the following sources:

#### Passenger Entitlements

These are based on enplanements from the previous calendar year. The IDA passenger entitlement for fiscal year 2023 was $1,935,994.

#### Cargo Entitlements

These are based on an airport's share of total landed cargo weight when the annual landed weight exceeds 100 million pounds by cargo-only aircraft.

#### Discretionary

These are distributed for individual projects based on funding availability and national priority. Airport sponsors may apply for supplemental discretionary grant funds through a notice of funding opportunity (NOFO) issued by the FAA.

#### State Apportionment

This is money set aside to the state for non-primary commercial and general aviation airports based on each state's population and land area. At IDA, the FAA normally provides 93.75% of the total eligible cost of a project, with the airport providing the remainder in matching funds, typically through passenger facility charges (PFC). The FAA Reauthorization Act of 2024 increased the FAA share of eligible costs to 95% for federal fiscal years 2025 and 2026. For discretionary grants, the FAA conducts a benefit-cost analysis (BCA) for grants exceeding $10 million during the life of the project and for projects that increase airport capacity. IDA is a primary commercial service airport and is not expected to reach 100 million pounds of annual cargo landed weight so cargo entitlements and state apportionment are not expected to be funding sources.

### 10.3.2. Bipartisan Infrastructure Law

The Infrastructure Investment and Jobs Act of 2021 (IIJA), also referred to as the bipartisan infrastructure law (BIL), provided $25 billion in funding for the National Airspace System. These funds are from the General Treasury and the FAA provides 93.75% of the eligible cost of projects at IDA. Under the bipartisan infrastructure law, all airports in the NPIAS received Airport Infrastructure Grant (AIG) entitlement funds for five years (fiscal year 2022 through fiscal year 2026). Funds are available for four years beginning in the federal fiscal year the funds are allocated. Allocation for these funds is based on enplanements from the previous calendar year for primary commercial service airports. For IDA, the allocations for fiscal 2022, 2023, and 2024 were $1,806,687, $2,025,358, and $2,594,046, respectively.

**Bipartisan Infrastructure Law – Airport Terminals Program**

The Bipartisan Infrastructure Law – Airport Terminals Program (BIL-ATP) provides competitive grants for airport terminal projects and for relocating or repairing an airport-owned airport traffic control towers (ATCT). Application requirements for BIL-ATP grants are based on criteria explained in a NOFO issued by the FAA. Recipients of BIL-ATP grants are based on how well a project scores in the areas of accessibility, sustainability, efficiency, safety, and job creation. IDA received a $5.2 million grant under this program for fiscal year 2023 to expand the terminal ticketing, bag screening, hold room, passenger exit, and restroom areas as well as to improve energy efficiency. The 2023 BIL-ATP grant for IDA was provided by the FAA at 95% of eligible costs.

The FAA Contract Tower Competitive Grant is a BIL-AIG program intended to modernize sponsor-owned contract towers participating in the federal contract tower (FCT) program and the contract tower cost share program. Like BIL-ATP competitive grants, FAA Contract Tower Competitive Grants are based on requirements outlined in a NOFO issued by the FAA. IDA received a $1.5 million grant under this program for fiscal year 2022 to conduct a siting study, environmental review, and design of an airport traffic control tower relocation project.[1] The 2022 grant was provided by the FAA at 100% of eligible project costs.

### 10.3.3. Passenger Facility Charge

In 1990, congress passed legislation authorizing passenger facility charges (PFC) as part of the Aviation Safety and Capacity Expansion Act of 1990. This allowed airports to impose a fee of up to $3.00 per passenger. Some of the important provisions under the act were:

- Passenger facility charges will be collected by the air carrier.
- At airports where passengers enplaned an aircraft, passenger facility charges are limited to no more than two charges on each leg of a round trip.
- Revenue from passenger facility charges must be spent at the designated airport that imposed the fee.
- Revenue from passenger facility charges may be used to finance the allowable costs of approved projects. This includes airport planning and development projects eligible for Airport Improvement Program funding and noise compatibility plans and measures.

In 2000, the Wendell H. Ford Aviation Investment and Reform Act for the Twenty-First Century was signed into law. This increased levels of funding for aviation investments and increased the maximum passenger facility charge from $3.00 to $4.50. IDA currently charges air carriers the maximum charge of $4.50.

### 10.3.4. Customer Facility Charge

A customer facility charge (CFC) is a user fee imposed by an airport on each rental car user that is collected by rental car companies. Car rental revenues are a substantial revenue source and one of the largest nonaeronautical revenue sources for smaller airports. Customer facility charge funds can be used as capital and for financing costs related to the development and operation of rental car facilities such as a quick turnaround area (QTA) as well as buses or shuttles and roadways to and from rental car facilities. IDA currently charges $2.50 per rental car transaction per day.

### 10.3.5. Local Funding

Local funds are derived from income generated by the operation of the airport through leases and user fees or contributions by the sponsoring agency. Local funds are used to match grants that do not cover 100% of project costs and to fund the operation, maintenance, and administration of the airport.

Interdepartmental loans are another funding source used by the airport. IDA has entered into agreements with the City of Idaho Falls enterprise fund to secure loans to acquire land for approach protection with an expectation that FAA grants will be used to repay the loans.

### 10.3.6. Bond Proceeds

Airports can also obtain financing for infrastructure projects by issuing bonds. Airport bonds involve leveraging future funding to pay for projects. This allows airport authorities to borrow money up front to finance infrastructure projects and this money is then paid back with interest. U.S. airports may qualify for tax-exempt bonds to support airport projects for federal tax purposes because most airports are owned by government agencies. The tax-exempt status enables airports to issue bonds at lower interest rates than taxable bonds which reduces the cost to finance a project. IDA has no current debt issued. Additionally, while Idaho laws generally require debt to be approved by a vote of the electorate, the Idaho Constitution grants an exception for debt repaid with fees generated by an airport.

### 10.3.7. Idaho State Grant Programs

The Idaho Airport Aid Program (IAAP) provides for discretionary allocation of grant funds to Idaho airports that are owned by public entities. Any county, city, village, or agency designated in Idaho Code is deemed an eligible public entity for participation in this program.

This program is administered according to Idaho Administrative Code IDAPA 39.04.01. This rule states that an airport owner should have a state approved airport plan (section 701.01) and protective zoning (Idaho law Title 67 Chapter 6508 Section q) in place to participate in this program. However, if they do not have a plan or protective zoning in place, or if these need to be updated, the Idaho Airport Aid Program can provide funding for those items.

The airport recently received grants from the Idaho Transportation Department (ITD) for airport projects and as matching funds for FAA grants. In 2022, the airport received a $215,000 grant under the Idaho Airport Aid Program to replace a chiller for the terminal building. In 2023, the airport received a grant of $20,000 under the Idaho Airport Aid Program as part of the city's match to an Airport Improvement Program grant to rehabilitate Runway 3/21, expand the apron and terminal, and acquire snow removal equipment (SRE). In 2024, the airport received a grant for $1 million under the Idaho governor's Idaho First plan. This grant is dedicated to an expansion of the terminal building.

### 10.3.8. Transportation Infrastructure Finance and Innovation Act Program

The Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides federal credit assistance in the form of direct loans, loan guarantees, and standby lines of credit to finance surface transportation projects. This can include highways, transit systems, railways, and other infrastructure initiatives. Its main objectives are to facilitate funding for large-scale transportation projects, stimulate economic development, and support the enhancement of the nation's transportation infrastructure.[2]

Under the Bipartisan Infrastructure Law, as defined in section 40117(a) of title 49, the Build America Bureau can now consider TIFIA loans for airport-related projects and to support surface transportation projects at airports, such as consolidated rental car facilities and inter-modal facilities, through other eligibilities.[3]

The Rural Project Initiative (RPI) is a targeted program under the broader TIFIA program aimed at addressing the unique transportation infrastructure needs of rural areas. The program is designed to improve transportation infrastructure in rural areas, which often face different challenges compared to urban areas, such as lack of funding opportunities, fewer transportation options, and greater distances between communities. For this program, a community qualifies as rural if it is located outside an urban area or within an urban area that has less than 150,000 population (per the 2020 Census) with an eligible project costing between $10 million and $100 million.[4]

### 10.3.9. Private Funding

Private funding for airport improvements typically comes in the form of investors who intend to make extensive use of the airport through hangar development or an airport business such as an FBO or air cargo facility. Such endeavors may require substantial infrastructure improvements that ultimately benefit the public use portions of the airport but obligate the investor with a large financial commitment. Financial commitments of this magnitude require long-term agreements between the private entity and airport sponsor to make it attractive to investors.

### 10.3.10. Airport Sustainability Grants

Airport sustainability grants are designed to help airports reduce their carbon footprint, improve environmental practices, and encourage sustainable development in the aviation sector. The Voluntary Airport Low Emission (VALE) program is a federal initiative designed to support airports in their attempts to reduce air pollution and greenhouse gas emissions. The fiscal year 2023 Supplemental Discretionary Notice of Funding Opportunity (NOFO) introduced a significant change to this program by removing the requirement for the airport to be in a non-attainment area. Previously, these grants were restricted to airports located in non-attainment areas for air quality standards. A non-attainment area is defined as a region where air quality fails to meet the National Ambient Air Quality Standards (NAAQS) set by the Environmental Protection Agency (EPA). The fiscal year 2023 Notice of Funding Opportunity eliminated this requirement which allowed all eligible public-use airports, regardless of their air quality designation, to apply for these grants. This change allows more airports to participate in this program and promotes a wider embrace of clean technologies.[5]

The Airport Zero Emission Vehicle (ZEV) program is a pilot program aimed at promoting the adoption of zero-emission vehicles and sustainable practices at airports. This program addresses both airport operations and the broader environmental impact of aviation activities. It allows airports that are eligible for Airport Improvement Program funds to purchase zero-emissions airport vehicles and the infrastructure necessary to operate them.[6]

## 10.4. Revenue Enhancement

According to FAA Grant Assurance #24, the airport sponsor is required to maintain a fee and rental structure that makes the airport as self-sustaining as possible under the circumstances that exist at the airport.[7] According to FAA Order 5190.6B, *Airport Compliance Manual*, fees for aeronautical uses need to be fair and reasonable, and fees for nonaeronautical uses must be at fair market value. Charging less than fair market value for nonaeronautical uses is a violation of Grant Assurance #25 because it constitutes a subsidy of local government and is considered revenue diversion.[8] The FAA expects airport sponsors to charge police or fire fighting units that operate aircraft at the airport reasonable fees for their aeronautical use but may offset the value of those services against airport fees (in-kind services). Airport sponsors may reduce rental rates for military tenants, aviation museums, Civil Air Patrol units that operate an aircraft at the airport, and aeronautical education programs provided by accredited institutions; to the extent that these organizations benefit civil aviation.

As development occurs around the airport, so does the potential for new sources of revenue, such as hangar rent for additional hangars. However, revenue from increased development may be offset by increased maintenance and utility costs. One opportunity that should be explored is leasing the facility at 1690 International Way as a source of nonaeronautical revenue, following the expiration of any existing leases. Another opportunity is to restructure the leases associated with the Airport Industrial Park located south of Runway 17/35.

## 10.5. Financial Feasibility

The purpose of the financial feasibility analysis is to demonstrate the airport sponsor's ability to fund the projects described in this airport master plan. Much of the funding is intended to come from the FAA Airport Improvement Program and Bipartisan Infrastructure Law programs. Internal revenue goes to the operating and maintenance (O&M) budget and includes personnel, supplies, equipment, maintenance, repair, and other incidental costs.

Financial and administrative management are key functions of airport management. Airports should strive to be as self-sustaining as possible through revenue generation and good fiscal management of expenditures through budgeting. Appropriate lease documents, established rates and charges, maximizing grant funding (if eligible), and minimizing risk through insurance are also important fiscal management tools.

### 10.5.1. Airport Revenue and Expenses

Idaho Falls Regional Airport annual budgets from 2021 to 2025 were reviewed to evaluate revenue and expense trends. These budgets, which are summarized in Table 10.6, reflect a drastic increase in intergovernmental revenue that is primarily due to FAA grant funding as well as an increase in capital outlay expenses mainly due to terminal expansion projects.

## 10.6. Summary

The development plan for IDA is appropriate to satisfy the existing needs and the forecasted growth. Alternative funding sources, along with enhanced revenue-generating capacity at the airport will be key to the successful implementation of projects in this airport master plan.

Note the projects contained in the development plan are for planning and programming purposes and do not commit the airport sponsor or FAA to carry out or fund the projects. If a project is not financially feasible or justified, it will not be pursued.

**Table 10.6:** **Airport Revenue and Expenses**

| Budget Item | 2021 (actual) | 2022 (actual) | 2023 (actual) | 2024 (adopted) | 2025 (proposed) |
|---|---|---|---|---|---|
| **Airport Fund Revenue** | | | | | |
| Intergovernmental Revenue | $14,068,029 | $5,759,944 | $7,615,383 | $23,116,311 | $30,575,877 |
| Fine/Forfeitures | $378 | $4,190 | $9,718 | $3,560 | $10,000 |
| Investment Income | $8,180 | ($41,572) | $97,924 | $0 | $0 |
| Rentals and Leases | $358,991 | $334,009 | $457,881 | $358,253 | $390,000 |
| Misc. | $11,136 | $195,856 | ($50,921) | $1,000 | $1,000 |
| Non-Revenue Transfer | $754,939 | $492,374 | ($422,974) | $1,299,645 | $1,828,333 |
| Charges for Services | $2,264,587 | $3,898,498 | $4,364,547 | $4,285,702 | $5,379,333 |
| **Total Airport Fund Revenue** | **$17,466,240** | **$10,643,298** | **$12,071,558** | **$29,064,471** | **$38,184,543** |
| **PFC Fund Revenue** | | | | | |
| Charges for Services | $716,117 | $1,353,346 | $1,039,561 | $1,197,645 | $1,233,000 |
| Investment Income | $97 | ($26,706) | $49,378 | $0 | $20,000 |
| Non-Revenue Transfer | ($171,713) | $0 | ($562,092) | ($1,197,645) | ($1,828,333) |
| **Total PFC Fund Revenue** | **$544,501** | **$1,326,640** | **$526,848** | $0 | **($575,333)** |
| **CFC Fund Revenue** | | | | | |
| Charge for Services | $0 | $0 | $277,723 | $488,808 | $451,000 |
| Investment Income | $0 | $0 | $3,044 | $0 | $5,000 |
| **Total CFC Fund Revenue** | **$0** | **$0** | **$280,766** | **$488,808** | **$456,000** |
| **Total Revenue** | **$18,010,741** | **$11,969,939** | **$12,879,171** | **$29,553,279** | **$38,065,210** |
| **Expenses** | | | | | |
| Salaries & Wages | $688,994 | $1,302,883 | $2,005,736 | $2,069,083 | $2,055,349 |
| Benefits | $366,996 | $426,108 | $627,883 | $863,037 | $1,037,708 |
| Current Operating Expense | $2,098,063 | $2,545,755 | $3,281,446 | $3,564,096 | $3,795,163 |
| Capital Outlay | $140,072 | $348,963 | $842,218 | $18,936,713 | $21,275,346 |
| MERF* Allocation | $37,800 | $37,800 | $32,700 | $102,000 | $120,000 |
| MERF* Expenditures | $0 | $34,918 | $0 | $0 | $0 |
| Grant Expenditures | $0 | $0 | $1,546 | $0 | $0 |
| Debt Service | $60,447 | $0 | $112,667 | $150,000 | $555,000 |
| **Total Expenses** | **$3,392,372** | **$4,696,427** | **$6,888,120** | **$25,684,929** | **$28,838,566** |

*MERF = Machinery and Equipment Replacement Fund

Source: City of Idaho Falls

# Endnotes

**1** U.S. Department of Transportation. Federal Aviation Administration. "Bipartisan Infrastructure Law - Airport Infrastructure." November 19, 2024. https://www.faa.gov/bil/airport-infrastructure.

**2** U.S. Department of Transportation. Build America Bureau. "Program Overview." January 4, 2024. https://www.transportation.gov/buildamerica/financing/tifia.

**3** U.S. Department of Transportation. Build America Bureau. "Airports." November 4, 2024. https://www.transportation.gov/buildamerica/airports.

**4** U.S. Department of Transportation. Build America Bureau. "TIFIA Rural Project Initiative (RPI)." July 2, 2024. https://www.transportation.gov/buildamerica/financing/tifia/tifia-rural-project-initiative-rpi.

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**6** U.S. Department of Transportation. Federal Aviation Administration. "Airport Zero Emissions Vehicle and Infrastructure Pilot Program." October 22, 2024. https://www.faa.gov/airports/environmental/zero_emissions_vehicles.

**7** U.S. Department of Transportation. Federal Aviation Administration. "Grant Assurances (Obligations)." Tuesday, August 2, 2022. https://www.faa.gov/airports/aip/grant_assurances.

**8** Ibid.

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# PLANNING FOR COMPLIANCE

11

CHAPTER ELEVEN

# COMPLIANCE

Airport sponsors that accept federal grants or federal property must also agree to certain obligations known as grant assurances. FAA Order 5190.6B, *Airport Compliance Manual*, provides guidance in interpreting and implementing these commitments, and the FAA's airport compliance program helps airport sponsors meet their obligations. In general, these grant assurances remain in effect for the useful life of the project but do not last longer than 20 years. An exception is for land acquisition grants which last for as long as the airport is owned and operated as an airport. The duration and applicability of each grant assurance for airport sponsors are summarized in FAA Order 5100.38D, *Airport Improvement Program Handbook*, Table 2-5, Duration and Applicability of Grant Assurances (Airport Sponsors).[1]

Title 14 of the Code of Federal Regulations (CFR) Part 139, *Certification of Airports*, establishes standards for airports with (scheduled or unscheduled) commercial passenger service. Part 139 airports are subcategorized as Class I–IV airports based on the size of the air carrier aircraft that operate at the airport. Under Part 139, the size of the aircraft depends on the number of seats the aircraft has. An air carrier with 10–30 seats is considered to be small, and an air carrier with more than 30 seats is considered to be large. Idaho Falls Regional Airport, which is a Class I Part 139 airport, has scheduled operations of large and small aircraft as well as unscheduled operations of large aircraft.

## 11.1. Sources of Obligations

Each grant agreement and deed of property conveyance includes the obligations an airport sponsor must agree to as a condition of accepting grant funding or property from the federal government. FAA-administered airport financial assistance programs include:

- Grant agreements issued through airport development grant programs such as the Federal Aid to Airports Program (FAAP), Airport Development Aid Program (ADAP), and Airport Improvement Program (AIP).
- Grant agreements and instruments of non-surplus conveyance issued under the 1946 Airport Act, 1970 Airport Act, or the Airport and Airway Improvement Act of 1982 (AAIA).
- Surplus property instruments of transfers issued under the provisions of Section 13(g) of the Surplus Property Act of 1944.
- Deeds of conveyance issued under Section 16 of the 1946 Airport Act, Section 23 of the 1970 Airport Act, and Section 516 of the Airport and Airway Improvement Act.
- AP-4 agreements authorized by various acts between 1939 and 1944.
- Exclusive Rights under Section 303 of the Civil Aeronautics Act of 1938 and Section 308(a) of the FAA Act.
- Commitments included in environmental documents prepared in accordance with FAA requirements related to the National Environmental Policy Act of 1969 (NEPA) and the Airport and Airway Improvement Act.
- Written agreements between the sponsor and the FAA which includes settlement agreements resulting from litigation.

## 11.2. Federal Grant Assurances

There are 39 Grant Assurances that federally obligated airport sponsors must comply with in the performance of grant agreements for airport development, planning, and noise compatibility programs.[2] The FAA has published *Airport Sponsor and Airport User Rights and Responsibilities* to provide airport sponsors with guidance in understanding and fulfilling these grant assurances by explaining some of the more complex grant assurances (Grant Assurances 5, 22, 23, 24, and 25 ) in simple terms.[3]

Most violations of grant assurances occur unintentionally rather than in a deliberate attempt to avoid federal obligations because many airport sponsors do not fully understand every requirement or how they apply in a specific circumstance. The FAA's Airport Compliance Program is designed to help ensure airport sponsors are fully informed of their federal obligations and understand how to comply with each grant assurance given the circumstances at a particular airport. The Airport Cooperative Research Program (ACRP) Report 184, *Understanding FAA Grant Assurance Obligations*, has also been published by the Transportation Research Board (TRB) to provide additional guidance in interpreting and meeting these obligations. According to this report, the majority of compliance complaints made against airports were related to the following grant assurances.[4]

### 11.2.1. Grant Assurance 5: Preserving Rights and Powers

Grant Assurance 5, Preserving Rights and Powers, prohibits an airport sponsor from taking or permitting any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement without FAA approval. It also requires airport sponsors to act promptly to acquire, extinguish, or modify any outstanding rights or claims of rights of others that would interfere with the sponsor's ability to comply with all of its obligations. In other words, airport sponsors can't take any action or enter into any agreement that could prevent it from complying with its grant obligations. This means most real estate transactions require prior FAA approval.

### 11.2.2. Grant Assurance 19: Operation and Maintenance

Grant Assurance 19, Operation and Maintenance, applies to airports subject to Federal Aid to Airports Program, Airport Development Aid Program, and Airport Improvement Program agreements; surplus property; and conveyances as well as deeds of conveyance issued under Section 16, Section 23, and 516.

Obligation: To preserve, operate, and maintain the airport facilities in a safe and serviceable condition for the benefit of the public and in a manner that will eliminate aviation hazards. This applies to all facilities shown on the approved airport layout plan which are dedicated for aviation use, and includes facilities conveyed under the Surplus Property Act.

### 11.2.3. Grant Assurance 20: Hazard Removal and Mitigation

Grant Assurance 20, Hazard Removal and Mitigation, requires airports to prevent, as much as reasonably possible, the growth or establishment of obstructions in the aerial approaches to the airport. The term obstruction refers to natural or man-made objects that penetrate the imaginary surfaces as defined in Part 77, *Safe, Efficient Use and Preservation of the Navigable Airspace.* (Previously discussed in Section 6.3.4. Airspace Requirements.)

### 11.2.4. Grant Assurance 21: Compatible Land Use

Grant Assurance 21, Compatible Land Use, requires airports to take appropriate action, to the extent reasonably possible, to restrict the use of lands in the vicinity of the airport to activities and purposes compatible with normal airport operations.

### 11.2.5. Grant Assurance 22: Economic Nondiscrimination

Grant Assurance 22, Economic Nondiscrimination, requires airports to operate the airport for the use and benefit of the public, and to make it available to all types, kinds, and classes of aeronautical activity on fair and reasonable terms and without unjust discrimination.

### 11.2.6. Grant Assurance 23: Exclusive Rights

Grant Assurance 23, Exclusive Rights, requires airports to operate the airport without granting or permitting any exclusive right to conduct any aeronautical activity at the airport. Aeronautical activity is defined as any activity that involves or is related to the operation of an aircraft or contributes to the safety of such operations (e.g., air taxi and charter operations, aircraft storage, sale of aviation fuel).

### 11.2.7. Grant Assurance 24: Fee and Rental Structure

Grant Assurance 24, Fee and Rental Structure, requires airports to maintain a fee and rental structure for the facilities and services being provided to airport users that will make the airport as self-sustaining as possible. (Note: Fair and reasonable for aeronautical activities and fair market value for nonaeronautical activities.)

### 11.2.8. Grant Assurance 25: Airport Revenue

Grant Assurance 25, Airport Revenue, requires airports to use all airport revenues for the capital or operating costs of the airport, the local airport system, or other local facilities that are owned or operated by the owner or operator of the airport and directly relate to the actual air transportation of passengers or property.

#### a. Special Conditions Affecting Noise Land and Future Aeronautical Use Land

Airports must apply interim revenue derived from noise land or future aeronautical use land to projects eligible for grants under the Airport Improvement Program. This income may not be used for the matching share of any grant.

### 11.2.9. Grant Assurance 29: Airport Layout Plan

Grant Assurance 29, Airport Layout Plan, requires airports to develop, operate, and maintain the airport in accordance with its most recently approved airport layout plan (ALP). Airport land depicted on the latest property map included in Exhibit A of this document cannot be disposed of or otherwise encumbered without prior FAA approval.

### 11.2.10. Grant Assurance 31: Disposal of Land

Grant Assurance 31, Disposal of Land, requires airports to obtain FAA approval for the sale or other disposal of property acquired under the Federal Aid to Airports Program, Airport Development Aid Program, or Airport Improvement Program as well as for the use of any net proceeds.

### 11.2.11. Other Obligations

Grants agreements can also include obligations relating to:

- Use of Government Aircraft
- Land for Federal Facilities
- Standard Accounting Systems
- Reports and Inspections
- Consultation with Users
- Terminal Development Prerequisites
- Construction Inspection and Approval
- Minimum Wage Rates
- Veterans Preference
- Audits, Audit Reports and Record Keeping Requirement
- Local Approval
- Civil Rights
- Construction Accomplishment
- Planning Projects
- Good Title
- Sponsor Fund Availability

## 11.3. Complaint Resolution

Under Title 14 of the Code of Federal Regulations 13.1, *Reports of Violations*, any person who knows of a violation of federal aviation laws, regulations, rules, policies, or orders may informally report the violation to the FAA. Under this section, airport users may make an informal complaint to report allegations of grant assurance violations to the FAA. Individuals seeking to file informal complaints are encouraged to do so in writing. Alleged violations are then investigated by the FAA's Airports District Office or Regional Airports Division.

Title 14 of the Code of Federal Regulations Part 16, *Rules of Practice for Federally-Assisted Airport Enforcement Proceedings*, which is commonly referred to as Part 16, outlines the formal complaint process. To file a formal complaint under Part 16, complainants must be directly and substantially affected by any alleged noncompliance. Part 16 includes regulatory time frames and detailed procedures associated with the process. This includes engaging in a good faith effort to resolve the matter informally as this is the preferred course of action when it comes to addressing violations. The FAA maintains a Part 16 Decision Database that contains copies of all the final determinations of these complaints. For airports facing a formal complaint, it may be helpful to review previous decisions made in similar cases.[5]

## 11.4. Compatible Land Use

Land use compatibility is attained when property located on and near an airport is used in ways that don't adversely affect flight operations and is itself not adversely affected by airport operations. According to FAA Order 5190.6B, *Airport Compliance Manual*, land use planning and zoning are important tools that help to protect airport investments from incompatible land uses, protect airport approaches, and ensure land uses on and near airport property are compatible with normal airport operations while also meeting federal obligations relating to Grant Assurance 21.

This includes restricting uses that create or contribute to flight hazards such as tall structures or have features that block the line of sight from the control tower to the airfield, inhibit pilot visibility (e.g., glaring lights or smoke), interfere with navigational guidance systems, or attract birds. Likewise, the development of public facilities (e.g., schools, churches, concert halls) and residential areas should also be avoided near the airport due to noise and safety concerns. This includes airpark developments that allow aircraft owners to reside and park their aircraft on the same property with immediate access to an airfield because aircraft owners are entitled to the same protection from airport impacts as any other residents of the community.

A "through-the-fence" agreement is one in which the airport allows owners of property located adjacent to the airport to access the airfield. While the FAA does not support these types of agreements under any circumstances when they are associated with residential use (e.g., airpark developments), exceptions may be granted on a case-by-case basis for off-airport aeronautical businesses providing the sponsor makes sure the agreement does not violate any grant assurances.[6]

### 11.4.1. Improper and Noncompliant Land Uses

The most common improper and noncompliant land use is when property that has been designated for aeronautical use, or on property not released by the FAA for nonaeronautical use, is used or leased for nonaeronautical uses (i.e., not shown on the airport layout plan). This includes using hangars to store automobiles, using property and buildings for animal control facilities, nonairport vehicle and maintenance equipment storage, aircraft museums, and municipal administrative offices.

Failure to take adequate steps to prevent hazardous wildlife on airport property is another common area of noncompliance. This can stem from allowing incompatible land uses that are hazardous wildlife attractants such as wastewater ponds, municipal flood control channels and drainage basins, sanitary landfills, solid waste transfer stations, electrical power substations, water storage tanks, public parks, or golf courses. Additionally, towers or buildings that penetrate Part 77 surfaces or are located within a runway protection zone, runway object free area or object free zone are also incompatible land uses.[7]

## 11.5. Part 139 Certification of Airports

Part 139, Airport Operating Certificates, serves to ensure safety in air transportation. To obtain a certificate, an airport must agree to certain operational and safety standards and provide for such things as firefighting and rescue equipment. These requirements vary depending on the size of the airport and the type of flights available. Because Idaho Falls Regional Airport is a Class I airport, it is required to comply with all Part 139 requirements. As part of the certification, the airport must also have an FAA-approved Airport Certification Manual (ACM), Airport Emergency Plan (AEP), Airport Security Plan (ASP), and Snow and Ice Control Plan (SICP).

Part 139 is subdivided into parts A through D. Subpart D lists the operational requirements that a Part 139 certificate holder must meet. The following information pertains to Subpart D which explains what an airport must do to maintain its Part 139 certification.

- **§139.301, Records:** Maintain personnel training, inspection, accident and incident, and airport condition records.
- **§139.303, Personnel:** Description of the required training, re-occurring training, familiarization, and lengths to keep records of training.
- **§139.305, Paved areas:** Description when repairs are required for runways, taxiways, loading ramps, and parking areas.
- **§139.307, Unpaved areas:** Description when repairs are required for gravel, turf, and unpaved runways, taxiways, or loading ramps and parking areas.
- **§139.309, Safety areas:** Description of the safety area required to be provided by the airport for each runway and taxiway used for air carrier use.
- **§139.311, Marking, signs, and lighting:** Description of the required marking, signs, and lighting for air carrier operations.
- **§139.313 Snow and ice control:** Description of the minimum required standards for an airport's snow and ice control plan.
- **§139.315, Aircraft rescue and firefighting index determination:** Description of the length and frequency in aircraft to determine the Aircraft Rescue and Firefighting (ARFF) index.

- **§139.317, Aircraft rescue and firefighting equipment and agents:** Description of the minimum equipment and agents needed corresponding to the appropriate ARFF index.
- **§139.319, Aircraft rescue and firefighting operational requirements:** Addresses rescue and firefighting capabilities, how to increase an ARFF index, procedures for reducing capabilities, required vehicle communication, vehicle markings, vehicle readiness, response requirements, personnel training, hazardous materials guidance, emergency access roads, methods and procedures, and implementation of these requirements.
- **§139.321, Handling and storing of hazardous substances and materials:** Description of protection of persons and property for airports who handle cargo.
- **§139.323, Traffic and wind direction indicators:** Description of required traffic and wind direction indicators.
- **§139.325, Airport emergency plan:** Description of requirements for an airport emergency plan to minimize the possibility and extent of personal injury and property damage on the airport in an emergency.
- **§139.327, Self-inspection program:** Description of the required self-inspection program each airport must follow to maintain their certificate.
- **§139.329, Pedestrians and ground vehicles:** Addresses the required manner to control pedestrians and ground vehicles to prevent incursions, accidents, and incidents.
- **§139.331, Obstructions:** Addresses the requirements for obstructions.
- **§139.333, Protection of navigational aids:** Description of how to protect navigational aids.
- **§139.335, Public protection:** Description of how to protect the public from harm, including airport personnel within and the public outside the fence.
- **§139.337, Wildlife hazard management:** Description of how and when to conduct wildlife hazard assessments.
- **§139.339, Airport condition reporting:** Description of when and how to disseminate airport condition information to air carriers.
- **§139.341, Identifying, marking, and lighting construction and other unserviceable areas:** Addresses how to mark and light construction and unserviceable areas.
- **§139.343, Noncomplying conditions:** Description as to when to limit air carrier operations when noncomplying conditions exist.

To ensure that airports with Part 139 airport operating certificates are meeting these requirements, FAA airport certification safety inspectors conduct certification inspections. These inspections typically occur yearly, but the FAA can also make unannounced inspections. If the FAA finds that an airport is not meeting its obligations, it often imposes an administrative action. It can also impose a financial penalty for each day the airport continues to violate a Part 139 requirement. In extreme cases, the FAA might revoke the airport’s certificate or limit the areas of an airport where air carriers can land or takeoff.

## 11.6. Compliance at Idaho Falls Regional Airport

The following conditions at Idaho Falls Regional Airport should be closely monitored to ensure the airport is complying with required grant assurances.

### 11.6.1. Nonaeronautical Use or Disposal of Obligated Airport Property

The FAA must approve using airport property for nonaeronautical purposes if that property is subject to grant assurances, and any agreements must preserve the rights and powers of the airport sponsor to comply with its obligations. This means the sponsor will not sell, lease, encumber, or otherwise transfer its title or interest in any property shown on Exhibit A of the airport layout plan (ALP) without prior approval from the FAA. When airport property that was purchased using federal funds for noise compatibility purposes is no longer needed, the airport sponsor is required to promptly dispose of the property at fair market value (Grant Assurances 5, 19, 29, 31).[8]

The soccer fields west of Runway 3, Esquire Acres Park, Idaho Falls Dog Park, the Snake River Animal Shelter, community garden, tree farm, industrial park south of Runway 35, farmland, and any rights of way granted should be reviewed to ensure they are approved nonaeronautical uses depicted on the airport layout plan or were disposed of properly at fair market value. Any lease proceeds generated from these uses are required to be retained by the airport for capital and operating costs of the airport (Grant Assurance 25).[9]

### 11.6.2. Rates and Charges for Nonaeronautical Uses of Airport Property

An airport sponsor must charge fair market value for any nonaeronautical uses of airport property that is subject to grant assurances. However, it may make airport property available for community purposes at less than fair market value on a limited basis as long as the following conditions are met:

- The property is not needed for aeronautical purposes.
- The property is not producing airport revenue for the airport and there are no near-term prospects for producing revenue.
- Use of the property by the community will not impact the aeronautical use of the airport.
- Use of the property by the community will maintain or enhance positive community relations in support of the airport.
- The proposed use is consistent with the airport layout plan.
- The proposed use is consistent with other federal obligations regarding surplus and non-surplus property.[10]

Rates and charges should be reviewed annually to ensure they are current, relevant, and comply with FAA policies. If rates and charges for nonaeronautical uses are below fair market value, the airport must demonstrate a valid community use if the property is not needed for aeronautical purposes. Nonaeronautical uses should also comply with other grant assurances related to land use.

### 11.6.3. Runway Protection Zones

As described in Chapter Six, Facility Requirements, certain types of land uses within the runway protection zone (RPZ) must be coordinated with the FAA. These include structures, commercial and industrial buildings, recreational uses, transportation facilities, fuel storage, wastewater treatment facilities, and utilities, such as solar panels.

At IDA, there are industrial buildings in the runway protection zone south of Runway 35, a portion of Old Butte Park in the runway protection zone off the end of Runway 3, Idaho Falls Dog Park and I-15 in the runway protection zone off the end of Runway 21, and I-15 in the runway protection zone off the end of Runway 17. All of these uses, along with any proposed uses, such as the proposed I-15/US-20 connector project, should be coordinated with the FAA to ensure there are no impacts to aviation.[11]

### 11.6.4. Hangar Use Policy

According to the FAA's policy on the nonaeronautical use of airport hangars, an airport sponsor may permit nonaeronautical items to be stored in hangars provided the hangar is primarily used for aeronautical purposes, and the items do not interfere with the aeronautical use of the hangar. As with other aeronautical facilities at airports subject to federal grant assurances, the FAA must approve the nonaeronautical use of hangars, and airport sponsors must receive at least fair market value for any nonaeronautical uses of the airport. Aeronautical uses include storage of active aircraft, final assembly of aircraft under construction, non-commercial construction of amateur-built or kit-built aircraft, and storage of aircraft handling equipment as well as the maintenance, repair, or refurbishment of aircraft but not the indefinite storage of nonoperational aircraft. Additionally, sponsors should have a program to monitor use of hangars and take measures to prevent unapproved non-aeronautical use of hangars.

Airport sponsors may adopt more restrictive rules for use of hangars via airport rules and regulations, minimum standards, lease provisions, building codes, or local ordinances. The airport is in the process of updating its rules and regulations and minimum standards.[12]

### 11.6.5. Compatible Land Use

In May 2019, the City of Idaho Falls adopted an airport overlay zoning ordinance protecting the airspace around the airport and restricting land uses around the airport to those normally compatible with airport operations. While this action protects much of the area surrounding the airport, land adjacent to and around the airport is also under the jurisdiction of Bonneville County. Bonneville County currently has an airport zoning ordinance that protects the airspace around the airport but does not have a zoning ordinance restricting the use of land around the airport. Bonneville County has approved a residential subdivision approximately 3,000 feet from the Runway 21-end. While this subdivision is not within city limits, and therefore not within the city's jurisdiction, the city should take any available action to prevent the establishment of any incompatible land uses near the airport. Bonneville County's lack of airport compatible zoning around the airport is a threat to the long-term viability of the airport. City staff should work with the county to develop and adopt airport compatible land use zoning.

## 11.7. Summary

According to FAA Order 5190.6B, *Airport Compliance Manual*, the FAA's airport compliance program is contractually based and does not attempt to control or direct the operation of airports. Rather, the program is designed to monitor and enforce obligations agreed to by airport sponsors in exchange for valuable benefits and rights granted by the federal government in return for substantial direct grants of funds and for conveyances of federal property for airport purposes. The airport compliance program is designed to protect the public interest in civil aviation. Grants and property conveyances are made in exchange for binding commitments (i.e., grant assurances) designed to ensure the public interest in civil aviation will be served. The FAA bears the responsibility of seeing that these commitments are met. The FAA considers all federal airport obligations important. However, the most important objective in the FAA's oversight of the compliance program is to ensure and preserve safety at all federally obligated airports.

# Endnotes

**1** U.S. Department of Transportation. Federal Aviation Administration. "Order 5100.38D, Airport Improvement Program Handbook." February 26, 2019. https://www.faa.gov/airports/aip/aip_handbook/media/AIP-Handbook-Order-5100-38D-Chg1.pdf.

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**3** U.S. Department of Transportation. Federal Aviation Administration. "Airport Sponsor & Airport User Rights and Responsibilities." 2013. https://www.faa.gov/sites/faa.gov/files/airports/airport_compliance/compliance_guidance/airportSponsorAndUserRightsBrochure.pdf.

**4** Airport Cooperative Research Program. "Report 184, Guidebook on Understanding FAA Grant Assurance Obligations." Transportation Research Board: December 12, 2017. https://www.trb.org/Main/Blurbs/177621.aspx.

**5** U.S. Department of Transportation. Federal Aviation Administration. "Airport Sponsor & Airport User Rights and Responsibilities." 2013. https://www.faa.gov/sites/faa.gov/files/airports/airport_compliance/compliance_guidance/airportSponsorAndUserRightsBrochure.pdf.

**6** U.S. Department of Transportation. Federal Aviation Administration. "Order 5190.6B Change 2, Airport Compliance Manual." December 9, 2022. https://www.faa.gov/documentLibrary/media/Order/Order_5190_6B_Compliance_Chg2.pdf.

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**8** U.S. Department of Transportation. Federal Aviation Administration. Office of Airport Planning & Programming. "Noise Land Management and Requirements for Disposal of Noise Land or Development Land Funded with AIP." June 2014. https://www.faa.gov/sites/faa.gov/files/airports/environmental/policy_guidance/Noise-Land-Management-Disposal-AIP-Funded-Noise-Development-Land.pdf; "Assurances, Airport Sponsors." May 2022. https://www.faa.gov/sites/faa.gov/files/airports/new_england/airport_compliance/assurances-airport-sponsors-2022-05.pdf.

**9** Ibid.

**10** U.S. Department of Transportation. Federal Aviation Administration. "Order 5190.6B, Airport Compliance Manual." https://www.faa.gov/documentLibrary/media/Order/Order_5190_6B_Compliance_Chg2.pdf.

**11** U.S. Department of Transportation. Federal Aviation Administration. Advisory Circular 150/5190-4B, Airport Land Use Compatibility." September 16, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5190_4b_Land_Use_Compatibility.pdf.

**12** U.S. Department of Transportation. Federal Aviation Administration. "Policy on the Non-Aeronautical Use of Airport Hangars." Federal Register Volume 81, No. 115. Pages 38906–38911. June 15, 2016. https://www.govinfo.gov/content/pkg/FR-2016-06-15/pdf/2016-14133.pdf.

# RECYCLING AND SUSTAINABILITY

12

# TABLES

# FIGURES

CHAPTER TWELVE

# SUSTAINABILITY

The purpose of this section is to provide a general overview of sustainability and define the Airport Recycling, Reuse, and Waste Reduction Plan for Idaho Falls Regional Airport (IDA). This plan is intended to enhance airport recycling and waste minimization efforts at Idaho Falls Regional Airport and to comply with FAA requirements.

## 12.1. Sustainability

### 12.1.1. Defining Sustainability

The United Nations established the Brundtland Commission to address the growing concern about the deterioration of natural resources. In its 1987 report, the commission defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The Airports Council International-North America (ACI-NA) took this approach one step further by stating that sustainability means taking "a holistic approach to managing an airport so as to ensure the integrity of the economic viability, operational efficiency, natural resource conservation, and social responsibility (EONS) of the airport."

### 12.1.2. Reasons for Sustainability

Based on these definitions, airports should evaluate how programs and initiatives impact airport users, the surrounding community, and the natural environment and then identify how to best integrate sustainable practices as part of the airport master planning process.

This process will require each airport to consider its particular circumstances and its role in the community as it relates to sustainability in order to set the groundwork for future planning and implementation. Along with improving the community and the natural environment, sustainability makes good business sense. Airports that have adopted sustainable practices have reported tangible benefits that include:

- Greater use of assets
- Reduced operating and maintenance costs
- Improved work environment for employees
- Reduced energy consumption, waste, and emissions
- Improved water quality
- Positive community relationships

### 12.1.3. How Sustainability Relates to Idaho Falls Regional Airport

The City of Idaho Falls has established a commitment to environmental sustainability and resource preservation as part of *Imagine IF, A Plan to Move Idaho Falls Forward Together, City of Idaho Falls' Comprehensive Plan.* Accordingly, Idaho Falls Regional Airport has adopted the EONS approach to sustainability.

As articulated in the city's comprehensive plan, "The City of Idaho Falls promotes a welcoming, attractive, safe and diverse community. We embrace small town values, big city efficiencies and forward-thinking approaches to provide outstanding services and sustainable economic, social and recreational opportunities for our whole community."[1]

**Figure 12.1: EONS Approach to Sustainability**


Source: Ardurra.

## 12.2. Legislative Background

The FAA Modernization and Reform Act of 2012 (FMRA) amended Title 49 of United States Code (USC) to include several changes to the Airport Improvement Program (AIP). The two changes related to recycling, reuse, and waste reduction at airports are as follows:

- FMRA Section 132(b) expanded the definition of airport planning to include "developing a plan for recycling and minimizing the generation of airport solid waste, consistent with applicable State and local recycling laws, including the cost of a waste audit."
- FRMA Section 133 added a provision requiring airports that have a master plan, and receive Airport Improvement Program funding, to ensure that the master plan addresses solid waste recycling at the airport. This includes addressing the following issues:
  - The feasibility of solid waste recycling at the airport.
  - Minimizing the generation of solid waste at the airport.
  - Operation and maintenance requirements.
  - Review of waste management contracts.
  - The potential for cost savings or the generation of revenue.

### 12.2.1. Types of Waste and Landfill Regulations

Landfills and waste are regulated under the Resource Conservation and Recovery Act (RCRA) which defines two main types of waste; solid waste under Subtitle D and hazardous waste under Subtitle C.[2]

Subtitle D landfills are typically permitted by state and local governments to allow for the management of nonhazardous solid waste such as garbage, refuse, and discarded materials resulting from household and community activities or industrial and commercial operations while Subtitle C landfills are specifically designed to handle hazardous waste.

## 12.3. Types of Airport Waste

In general, solid waste from airports can be divided into the following categories:

**Municipal Solid Waste (MSW)** consists of everyday items that are used and then discarded. It includes items such as product packaging, furniture, clothing, bottles, and newspapers.

**Construction and Demolition Waste (C&D)** is any non-hazardous materials generated by excavation, construction, demolition, renovation, or repair of structures, roads, and utilities. Construction and demolition waste commonly includes concrete, wood, metals, drywall, carpet, plastic, pipe, cardboard, and salvaged building components. In some instances, construction and demolition waste may be subject to special requirements (e.g., materials containing asbestos).

**Compostable Waste** includes both green waste and food waste. Green waste is also referred to as yard waste and generally consists of trees, shrubs, grass clippings, leaves, weeds, seeds, and similar debris generated by landscaping activities. Food waste is any food that is not consumed and includes food scraps discarded during meal preparation.

**Deplaned Waste** is trash removed from passenger aircraft and can include bottles, cans, newspapers, magazines, plastic cups and utensils, food waste, and paper towels.

### 12.3.1. Sources and Pathways of Airport Waste

Each activity has its own set of waste streams that must be considered when implementing a sustainability and recycling program. The following waste streams are typically associated with smaller commercial and general aviation airports like Idaho Falls Regional Airport:[3]

**Aircraft:** Maintenance of aircraft and ground support equipment produces a variety of waste products that can include grease, oil, universal waste (e.g., batteries), wastewater, plastics, and vehicle waste such as tires and fluids (e.g., brake, transmission, coolant).

**Airfield:** The airfield, which includes the runways, taxiways, and infields, generally only produces a few types of waste products. They can include waste produced from aircraft operations, such as rubber from aircraft tires, and green waste from mowing as well as miscellaneous debris from sweeping and plowing.

**Airport Construction:** Construction activities have the potential to create a large amount of waste. The types of waste products produced typically include concrete, asphalt, building materials, wood, soil, construction equipment waste, miscellaneous debris, and regular trash.

**Airport Offices and Pilot Lounges:** The types of waste products generated can include paper, toner cartridges, universal waste (e.g., electronics), food, paper, plastics, aluminum cans, and general trash.

**Cargo Facilities:** Cargo being transported by air is typically loaded and offloaded at the air cargo facility and is often stored temporarily in the warehouse. Waste can include tires, fluids from equipment, universal waste, wooden pallets, plastics, and packing materials.

**Terminals:** As the heart of any airport complex, the terminal normally has the largest concentration of people, and this usually translates into the biggest concentration of waste. The terminal houses ticket counters, gates, and car rental counters as well as restaurants and restrooms that are frequented by both passengers and people employed at the airport. In addition, the terminal also houses office space and break areas for airline and airport personnel. The types of waste produced at a terminal are just as varied as the types of activities that take place there. Waste products can include food, paper, plastics, bottles and cans, restaurant grease and oil, universal wastes (e.g., batteries and fluorescent bulbs), green waste (e.g., landscaping), general trash, and deplaned waste.

## 12.4. Airport Recycling, Reuse, and Waste Reduction Plan

### 12.4.1. Scope

The content and scope of an airport recycling, reuse, and waste reduction plan varies depending on the unique conditions at each airport. For airports that already have recycling programs, certain tasks (such as a new waste audit) may not be needed.

Document scope is governed by the extent and accuracy of available information. This includes information on the airport's current recycling program, the types and amounts of airport waste, and factors that influence the scope of the program. Plans for small, low-activity airports may also be less detailed. Though certain tasks may not need to be completed to prepare a plan, review and documentation of each of the five elements listed in the FAA Modernization and Reform Act is required in airport master plans and master plan updates (including sustainability master plans) (see also 49 U.S.C. § 47106(a) (6)).

This plan only addresses municipal solid waste (MSW), construction and demolition (C&D) materials, and other waste materials that can be legally disposed of in a Subtitle D landfill. It does not address hazardous waste or universal waste (e.g., batteries, fluorescent bulbs, pesticides) because these materials are often subject to federal, state, and local laws with specific disposal and recycling requirements.

In this plan, recycling refers to reducing the amount of solid waste disposed of in a landfill through sustainable practices that include source reduction, reusing materials, or converting waste into reusable material (e.g., mulching, or composting).

### 12.4.2. Recycling Feasibility

Idaho Falls Regional Airport is large and busy enough to generate sufficient recyclable materials to justify a recycling program. Bonneville County operates a landfill, the Hatch Pit, and a transfer station that accepts many types of waste, although certain fees may apply. Additional infrastructure (bins), staffing, and funding may be needed to establish a recycling program and maintain it.

### 12.4.3. Plan to Minimize Solid Waste Generation at the Airport

The Airports Council International-North America policy handbook provides a waste decision hierarchy that shows—in order of priority—what constitutes the best overall waste management choices. These include to avoid, to reduce, to reuse, to recycle, and lastly, to dispose—with the ultimate goal of eliminating waste going to landfills.

Figure 12.2: Waste Decision Hierarchy


Source: ACI-NA Policy Handbook, Ardurra.

While effective recycling and waste minimization is a problem faced by every airport, each airport has a unique set of conditions that must be considered as part of its individual recycling and waste minimization program. With this in mind, the FAA compiled a list of 10 steps airports can take to design and implement an effective airport recycling and waste minimization program (Table 12.1).

**Table 12.1: Effective Airport Recycling and Waste Minimization Programs**

| Step | Description |
|---|---|
| 1 | Commitment from Management |
| 2 | Program Leadership |
| 3 | Waste Identification |
| 4 | Waste Collection and Hauler |
| 5 | Waste Management Plan Development |
| 6 | Education and Outreach |
| 7 | Monitor and Refine |
| 8 | Performance Monitoring |
| 9 | Promote Success |
| 10 | Continuous Improvement |

Source: FAA, *Recycling, Reuse and Waste Reduction at Airports: A Synthesis Document*

Idaho Falls Regional Airport will explore the following steps to help minimize solid waste generation:

1. Establish a commitment from management to support a recycling and waste minimization program.
2. Include lease and contract language that supports recycling and waste minimization.
3. Provide additional containers and space for recycling.
4. Educate airport staff and users about the importance of recycling and waste minimization.

### 12.4.4. Airport Operations and Maintenance Requirements

The airport's operations and maintenance requirements were examined in relation to sustainability and how waste is handled at the airport.

**Aircraft:** The amount of aircraft waste correlates with the number of operations at the airport. The person responsible for aircraft and ground support equipment waste varies depending on the vehicle's owner and who performs the maintenance. The fixed base operator and maintenance shop are responsible for aircraft maintenance waste. Some waste associated with maintenance is considered hazardous waste and must be handled accordingly.

**Airfield:** The infields are mowed regularly for habitat management and wildlife hazard mitigation, and clippings are left in place. Sweeping of airfield pavements occurs weekly or more often if needed. Debris from sweeping is disposed of in a trash dumpster. When snow is plowed from airfield pavements, some dirt and grit are also removed as part of this process. The snow, along with any accompanying dirt and grit, is pushed, swept, or blown to the infield and other undeveloped areas of the airport and left to melt.

**Airport Construction:** This waste stream increases during warmer months when construction usually occurs. The contractor is contractually responsible for waste associated with airport construction. Contractors are encouraged to reuse materials when possible.

**Cargo Facilities:** These facilities are leased and, as per the lease agreement, the tenants are responsible for trash disposal within this area.

**Airport Offices and Pilot Lounges:** These waste streams usually consist of solid waste or compostables and are steady throughout the year.

**Terminals:** There is one full-service kitchen located inside the terminal building which is associated with a restaurant. The vendor is responsible for their own waste management and waste oil or grease trap cleaning.

### 12.4.5. Review of Waste Management Contracts

The sanitation division of the city's public works department is responsible for waste management at the airport. Tenants are responsible for trash disposal within their area, per their lease agreement. The airport has four six-yard garbage dumpsters located adjacent to the terminal building and the airfield lighting vault. There are no recycle bins located in the terminal area.

### 12.4.6. Potential for Cost Savings or Revenue Generation

The City of Idaho Falls provides 13 locations across the city to recycle various items such as glass, cardboard, tin, and aluminum. They do not accept plastic or paper. One of the locations is on airport property at the Old Butte Soccer Complex. This location is intended as a general community recycling location rather than specifically for airport use.

During May of 2022, the City's sanitation division held a Clean & Green Citywide Cleanup event, where they accepted household solid waste, brush, and construction waste. As part of the airport's recycling and waste minimization education efforts, it could notify airport staff and users about similar events in the future.

Potential cost savings or revenue generation at Idaho Falls Regional Airport rests with establishing a recycling program at the airport, where revenue generated from recycling can be deposited into the airport's account and used for airport purposes.

## 12.5. Conclusion

Idaho Falls Regional Airport has opportunities to enhance airport sustainability, recycling, and waste minimization at the airport by establishing formal policies and procedures. One opportunity to enhance sustainability is the addition of electric aircraft and vehicle charging stations. Another opportunity is to reuse construction and demolition materials as much as possible and use locally sourced materials for construction projects.

Any program established at the airport should include a commitment from management to support sustainability, recycling, education and outreach, setting performance targets, monitoring progress, and seeking continuous improvement. Benefits gained from establishing a recycling and waste minimization program include:

1. Reduced operating costs.
2. Prolonged use of limited landfill space.
3. Reduced environmental liability.
4. Improved public perception of the airport.

# Endnotes


**1** City of Idaho Falls. Community Development Services. “Imagine IF, A Plan to Move Idaho Falls Forward Together, City of Idaho Falls’ Comprehensive Plan.” Idaho Falls, Idaho. 2021. https://www.idahofallsidaho.gov/DocumentCenter/View/14027/ImagineIF?bidId=.

**2** U.S. Environmental Protection Agency. “Basic Information about Landfill.” April 4, 2022. https://www.epa.gov/landfills/basic-information-about-landfills.

**3** U.S. Department of Transportation. Federal Aviation Administration. “Recycling, Reuse and Waste Reduction at Airports, A Synthesis Document.” Office of Airports Federal Aviation Administration. April 24, 2013. https://www.faa.gov/airports/resources/publications/reports/environmental/media/recyclingsynthesis2013.pdf.

13

# GLOSSARY OF TERMS

CHAPTER THIRTEEN

# GLOSSARY

## 13.1. Common Terms, Abbreviations, Acronyms, and Initialisms

This glossary was compiled using a variety of sources such as the *Pilot/Controller Glossary*, the *Pilot's Handbook of Aeronautical Knowledge*, and several advisory circulars published by the FAA as well as relevant laws and regulations. It is intended to provide the public with a general understanding of these common aviation terms and is not meant to include the exact technical or legal definition.

# A

**AAC** see aircraft approach category

**AAGR** average annual growth rate

**AATF** Airport and Airway Trust Fund

**above ground level (AGL)** The elevation of a point or surface above the underlying surface.

**AC** see advisory circular

**access road** Small airport roads typically used for maintenance, delivery, rescue, and aircraft service vehicles.

**ACHP** Advisory Council on Historic Preservation

**ACIP** see Airports Capital Improvement Plan

**ACR** see aircraft classification rating

**ACS** see American Community Survey

**active aircraft** An aircraft registered with the FAA that has been flown at least one hour during the year.

**ADAP** Airport Development Aid Program

**ADG** see airplane design group

**ADO** see airports district office

**ADS-B** see automatic dependent surveillance-broadcast

**advisory circular (AC)** Publications issued by the FAA to help explain regulations, best practices, or other information useful to the aviation community.

**AEDT** see Aviation Environmental Design Tool

**AGL** see above ground level

**AIP** see Airport Improvement Program

**air taxi** On-demand, unscheduled flights typically offered for sightseeing purposes or on a chartered basis as well as mail or cargo delivery. (see Part 135)

**air traffic control (ATC)** A service provided by ground-based personnel to help guide pilots and provide for the safe and orderly flow of aircraft in congested airspace.

**aircraft** Any device intended to be used for flight such as an airplane, airship, drone, glider, or helicopter.

**aircraft approach category (AAC)** A method of grouping aircraft based on the speed they travel when configured for landing. (Typically 1.3 times the stall speed.) The AAC of the critical aircraft is often used to determine design standards. In general, aircraft with slower approach speeds require smaller facilities and those with faster approach speeds require larger facilities.

**aircraft classification rating (ACR)** A number that expresses the effect an aircraft has on a given configuration of pavement and the underlying components based on its weight and configuration (e.g., tire pressure and type of landing gear).

**aircraft operation** A landing, takeoff, or touch-and-go procedure conducted by an aircraft on a runway.

**aircraft rescue and fire fighting (ARFF)** A special category of fire fighting that involves incident response, hazard mitigation, evacuation, and rescue of passengers and crew of an aircraft involved in aviation accidents and incidents.

**airfield** The portion of an airport that contains the facilities necessary for aircraft operations such as runways and taxiways.

**airline transport pilot (ATP)** The type of certification required to fly chartered and commercial flights.

**airplane design group (ADG)** A method of classifying aircraft based on wingspan and tail height.

**airport beacon** A lighted navigation aid indicating the location of the airport. Also referred to as a rotating beacon.

**airport elevation** The highest point of an airport's usable runways. Typically measured in feet above mean sea level (MSL).

**Airport Improvement Program (AIP)** The program used by the FAA to provide grants for the planning and development of public-use airports included in the National Plan of Integrated Airport Systems (NPIAS).

**airport layout plan (ALP)** A scaled drawing or set of drawings of both current and planned airport facilities.

**airport master plan** A comprehensive study of an airport that usually describes the short-term, medium-term, and long-term development plans for meeting future aviation demand.

**airport obstruction chart (AOC)** A scaled drawing showing airport obstruction information, Federal Aviation Regulation (FAR) Part 77 surfaces, runways, taxiways, navigation facilities, buildings, roads, and other details in the vicinity of an airport. It provides data necessary for computing maximum takeoff and landing weights, establishing instrument approach and departure procedures, and planning airport facility improvements.

**airport operations area (AOA)** All areas of the airport located inside the airport security perimeter fence.

**airport reference code (ARC)** A designation that indicates the preferred design criteria based on the approach speed and wingspan or tail height of the critical design aircraft. It is essentially a combination of two components. The first component is the aircraft approach category (AAC) which is depicted by a letter. The second component is the airplane design group (ADG) which is depicted by a Roman numeral.

**airport reference point (ARP)** The approximate center of all usable runways at the airport.

**airport sponsor** The entity that is legally and financially responsible for the management and operation of an airport. An airport sponsor is typically a public agency such as a city or county.

**Airports Capital Improvement Plan (ACIP)** The primary planning tool used by the FAA for identifying and prioritizing critical airport development for the National Airspace System. It also serves as the basis for the distribution of grant funds under the Airport Improvement Program (AIP).

**airports district office (ADO)** The local office of the FAA that coordinates planning and construction projects.

**airside** Facilities and areas located at an airport that support aircraft activities (e.g., runways, hangars, NAVAIDS).

**ALP** see airport layout plan

**ALS** see approach light system

**American Community Survey (ACS)** An ongoing survey conducted by the U.S. Census Bureau that includes a variety of socioeconomic data.

**annual service volume (ASV)** The maximum number of annual operations an airport could reasonably accommodate with an acceptable level of delay.

**AOA** see airport operations area

**AOC** see airport obstruction chart

**approach light system (ALS)** A type of visual navigation aid that help pilots locate the runway as they transition from instrument flight to visual flight. The sophistication and configuration of the approach light system varies based on the type of runway and approach available.

**approach surface** An imaginary three dimensional surface, which is longitudinally centered on the extended runway centerline, that begins 200 feet from the approach-end of the runway and extends outward and upward. The slope and size varies based on the type of runway and approach available. (see Part 77)

**apron** An area at an airport intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance. Also referred to as a ramp.

**ARC** see airport reference code

**area navigation (RNAV)** A method of navigation that permits aircraft operations on any flight path within the coverage area of ground-based or space-based navigation aids or within the limits of self-contained navigation aids.

**ARFF** see aircraft rescue and fire fighting

**ARP** see airport reference point

**ARPA** American Rescue Plan Act

**ASOS** see automated surface/weather observing system

**ASV** see annual service volume

**ATC** see air traffic control

**ATCT** airport traffic control tower

**ATP** see airline transport pilot

**automated surface/weather observing system (ASOS/AWOS)** Weather reporting system that provides surface weather observations every minute via digitized voice broadcasts and printed reports.

**Automatic Dependent Surveillance–Broadcast (ADS–B)** Equipment on an aircraft that determines its position via satellite navigation or other sensors and periodically broadcasts it so can be tracked by air traffic control.

**avgas** see aviation gasoline

**Aviation Environmental Design Tool (AEDT)** A software system used by the FAA to estimate aircraft fuel consumption, emissions, noise, and impacts to air quality.

**aviation gasoline (avgas)** The type of fuel used in small aircraft within the general aviation community. The two main types are avgas 100 and a low-lead version called avgas 100LL.

**avigation easement** An easement that permits the operation of aircraft in the airspace above a property and restricts the height of structures, trees, and other objects that could affect the safe movement of aircraft above the easement area.

**AWOS** see automated surface/weather observing system

# B

**based aircraft** Operational and airworthy aircraft based at an airport for the majority of the year.

**BGEPA** Bald and Golden Eagle Protection Act

**BLM** Bureau of Land Management

**BMP** best management practices

**building restriction line (BRL)** A line on the airport layout plan identifying suitable building area locations at airports.

**BVLOS** beyond visual line of sight

# C

**C & D** construction and demolition

**CAA** Clean Air Act

**CAGR** compound annual growth rate

**capital improvement plan (CIP)** A community planning and fiscal management tool used to coordinate the timing and financing of capital improvement projects for a multi-year period.

**CARES** Coronavirus Aid, Relief, and Economic Security Act

**categorical exclusion (CATEX)** Documents when a proposed action can be categorically excluded from a detailed environmental analysis because it meets certain criteria that a federal agency has previously determined as normally having no significant environmental impact. (see NEPA)

**CEQ** Council on Environmental Quality

**CERCLA** Comprehensive Environmental Response, Compensation, and Liability Act

**CFI** certified flight instructor

**CFR** Code of Federal Regulations

**CIP** see capital improvement plan

**cockpit to main gear distance (CMG)** The distance from the pilot's eye to the main gear turn center.

**commercial service airport** Publicly owned airports with scheduled passenger service that have at least 2,500 passenger enplanements per calendar year.

**common traffic advisory frequency (CTAF)** The VHF radio frequency used for air-to-air communications at non-towered airports or at airports when the control tower is not operating.

**commuter operations** Typically shorter flights provided by small, boutique airlines offered on a limited schedule basis. Commuter airlines operate according to published flight schedules with at least five round trips per week.

**conical surface** An imaginary three dimensional surface that encircles the horizontal surface and extends outward for 4,000 feet and upward at a slope of 20 to 1. (see Part 77)

**controlled airspace** The area in which some or all aircraft may be subject to air traffic control to promote safe and expeditious flow of air traffic.

**CPI** Consumer Price Index

**critical design aircraft** The most demanding type of aircraft (or group of aircraft with similar characteristics) that make regular use of the airport. Regular use is defined as 500 annual operations.

**crosswind** A wind that is not parallel to a runway centerline or to the intended flight path of an aircraft.

**crosswind component** A wind component that is at a right angle to the longitudinal axis of the runway or the flight path of the aircraft.

**crosswind runway** An additional runway built parallel to the direction of the prevailing crosswinds to make it safer for small aircraft to land when strong crosswinds made landing on the primary runway difficult.

**CRRSAA** Coronavirus Response and Relief Supplemental Appropriation Act

**CTAF** see common traffic advisory frequency

**CWA** Clean Water Act

# D

**day-night average sound level (DNL)** The standard metric used to reflect a person's cumulative exposure to sound for an average 24-hour period based on an airport's annual aircraft operations. To account for a higher sensitivity to noise exposure at night, DNL calculations add a penalty of ten decibels for flights occurring between 10 p.m. and 7 a.m.

**DBE** disadvantaged business enterprise

**decibel (dB)** Sound is measured in units called decibels. The higher the decibel level, the louder the noise.

**DEQ** Department of Environmental Quality

**distance measuring equipment (DME)** An electronic navigation system that indicates the number of nautical miles between an aircraft and a ground station or waypoint.

**DNL** day-night equivalent sound level

**DOT** Department of Transportation

**DW** dual wheel type landing gear (see landing gear)

# E

**effective runway gradient** The difference between the highest and lowest elevations of the runway centerline divided by the runway length.

**environmental assessment (EA)** Determines whether or not a federal action has the potential to cause significant environmental effects. (see NEPA)

**environmental impact statement (EIS)** Determines if a major federal action will significantly affect the quality of the human environment. The regulatory requirements for an EIS are more detailed and rigorous than the requirements for an EA. (see NEPA)

**EPA** Environmental Protection Agency

**ESA** Endangered Species Act

# F

**FAA** see Federal Aviation Administration

**FAAP** Federal-Aid Airport Program

**FAR** Federal Aviation Regulation

**FBO** see fixed base operator

**FCT** federal contract tower

**Federal Aviation Administration (FAA)** The branch of the U.S. Department of Transportation responsible for the development of airports and the National Airspace System.

**FEMA** Federal Emergency Management Agency

**Finding of No Significant Impact (FONSI)** A public decision document that briefly describes why the project will not have any significant environmental effect and will not require the preparation of an environmental impact statement. (see NEPA)

**FIRM** flood insurance rate map

**fixed base operator (FBO)** A business that operates at an airport and provides a wide range of services. These services are typically aimed at general aviation customers and can include aircraft fueling, parking, servicing, charter flights, aircraft rentals, maintenance, hangar rentals, flight instruction, pilot lounge, conference room facilities, car rental arrangements, and more.

**fleet mix** The types of aircraft that frequent an airport and that need to be considered when planning airport facilities.

**flight plan** Information relating to the intended flight of an aircraft that is filed electronically, orally, or in writing with air traffic control.

**FONSI** see finding of no significant impact

**FPPA** Farmland Protection Policy Act

**fuel flowage fee** The fee charged by an airport for each gallon of fuel sold or dispensed on airport property to help recover the cost of operating and managing the airport.

**FY** fiscal year

# G

**GA** see general aviation

**GAMA** General Aviation Manufacturers Association

**GDP** gross domestic product

**general aviation (GA)** The segment of aviation that encompasses all aspects of civil aviation except certified air carriers and other commercial operators such as airfreight carriers.

**general aviation airport** A public airport that has less than 2,500 passenger enplanements per calendar year. These airports typically support personal and business aircraft, medical flights, aerial fire fighting, law enforcement, disaster relief, provide access to remote communities, and more.

**geographic information system** A computer system for developing maps connected to all types of data and are used to manage, analyze, and visualize that data in relation to its location. At airports, these types of smart maps are often used to help manage airport infrastructure such as runway pavements, signage, or utilities.

**GHG** greenhouse gas

**GIS** see geographic information system

**glideslope (GS)** Part of the instrument landing system that provides vertical guidance to aircraft by projecting a radio beam upward at an angle of approximately three degrees from the approach end of a runway.

**global positioning system (GPS)** A navigation system that uses satellites rather than ground-based transmitters to determine location information.

**ground support equipment** Vehicles and equipment used to service aircraft between flights. This can include services such as refueling, loading luggage and freight, transporting passengers, refreshing lavatories, and deicing.

**GS** see glideslope

**GSE** see ground support equipment

# H

**hangar** A building used to store aircraft.

**HIRL** high-intensity runway lights (see runway edge lighting system)

**horizontal surface** An imaginary surface located 150 feet above the established airport elevation that encircles the primary surface. The size of the horizontal surface is based on the type of runway and approach available. Federal Aviation Regulation Part 77 establishes standards and requirements for objects affecting navigable airspace. (see Part 77)

# I

**IAAP** Idaho Airport Aid Program

**IAP** see instrument approach procedure

**IASP** Idaho Airport System Plan

**IFR conditions** When weather conditions have significantly reduced visibility making it unsafe to pilot an aircraft under flight visual flight rules.

**IFR** see instrument flight rules

**IIJA** Infrastructure Investment and Jobs Act (Also known as the bipartisan infrastructure law or BIL.)

**ILS** see instrument landing system

**IMC** see instrument meteorological conditions

**instrument approach procedure (IAP)** A series of predetermined maneuvers pilots use to align their aircraft with the runway when flying under IFR in low visibility conditions.

**instrument flight rules (IFR)** Rules and regulations established by the Federal Aviation Administration to govern flight using electronic navigation during conditions in which flight by visual reference is not safe.

**instrument landing system (ILS)** An electronic system used by pilots when conducting a precision instrument approach procedure that provides both horizontal and vertical guidance to a specific runway. The system is often comprised of multiple components with guidance information provided by a localizer or glideslope, distance information provided by a marker beacon or distance measuring equipment, and visual information provided by approach lights, touchdown and centerline lights, or runway lights.

**instrument meteorological conditions (IMC)** Weather conditions that require pilots to fly under instrument flight rules rather than visual flight rules.

**IPaC** Information, Planning and Conservation

**ITB** Idaho Transportation Board

**ITD** Idaho Transportation Department

**itinerant operations** Flights that originate or terminate at different airports.

# K

**KIAS** knots of indicated airspeed

**knot** A unit of speed equal to one nautical mile per hour.

# L

**landing gear** Any part of an aircraft used for landing. Typical landing gear configurations include single wheel (SW), dual wheel (DW), triple wheel (TW), and quadruple wheel (QW) configurations which can also be repeated in tandem.

**large aircraft** Any aircraft with a maximum takeoff weight (MTOW) of more than 12,500 pounds.

**lateral navigation (LNAV)** Azimuth (i.e. directional) navigation without vertical navigation.

**Light Sport Aircraft (LSA)** A small, lightweight aircraft that is relatively simple to fly with a maximum gross takeoff weight of 1,320 pounds and a maximum of two seats.

**LIRL** see low-intensity runway lights (see runway edge lighting system)

**LNAV** see lateral navigation

**LOC** see localizer

**local operations** Flights taking place within the local traffic pattern, the airport line of sight, the local practice area, or those that execute simulated instrument approaches or low passes at the airport.

**localizer (LOC)** A navigational aid that is one component of instrument landing systems. It transmits signals that aircraft interpret and display on the cockpit indicator to guide the pilot until the runway is in sight.

**localizer performance with vertical guidance (LPV)** A type of approach that takes advantage of the refined accuracy of wide area augmentation system (WAAS) lateral and vertical guidance.

**LSA** see light sport aircraft

# M

**main gear width** The distance from outer edge to outer edge of the widest set of main gear tires.

**MALSR** medium-intensity approach lighting system with runway alignment indicator lights

**markings** Paint applied to runways, taxiways, holding positions, and other airport surfaces to help pilots and operators of ground support equipment while maneuvering within the movement area.

**master plan** see airport master plan

**maximum takeoff weight (MTOW)** The maximum weight for an aircraft at which the pilot is allowed to attempt to take off due to structural or other limits.

**MBTA** Migratory Bird Treaty Act

**MDA** see minimum descent altitude

**mean sea level (MSL)** The average height of the surface of the sea for all stages of tide.

**MGW** see main gear width

**minimum descent altitude (MDA)** The minimum altitude a pilot is authorized to descend to on a non-precision approach.

**MIRL** medium-intensity runway lights (see runway edge lighting system)

**MITL** medium-intensity taxiway lights

**movement area** The runways, taxiways, and other areas of an airport used by aircraft for taxiing, takeoff, and landing that are under the control of an air traffic control tower. It does not include non-movement areas such as those used for loading, refueling, parking, or maintenance.

**MSA** metropolitan statistical area

**MSL** see mean sea level

**MSW** municipal solid waste

**MTOW** see maximum takeoff weight

# N

**NAAQS** national ambient air quality standards

**National Airspace System (NAS)** The common network of U.S. airspace. It consists of air navigation facilities, equipment and services, airports or landing areas; aeronautical charts and technical information; and rules, regulations, and procedures.

**National Environmental Policy Act (NEPA)** Federal legislation requiring federal agencies to assess and document the environmental effects of their proposed actions prior to making decisions. Depending on the severity of the impact, these documents are referred to as a categorical exclusion, an environmental assessment, or an environmental impact statement.

**National Plan of Integrated Airport Systems (NPIAS)** An inventory of all existing and proposed commercial service airports, reliever airports, and selected public-owned general aviation airports. In addition to discussing the roles these airports currently serve, the NPIAS is used by the FAA in administering the Airport Improvement Program (AIP). It is updated by the FAA every two years.

**nautical mile (NM)** The most common measurement used for distance in aviation. A nautical mile is slightly longer than a land-measured mile (i.e., statute mile) and is equal to approximately 1.151 statute miles or 6,076 feet.

**nautical mile per hour** The most common measurement for aircraft speed. One knot is approximately 1.151 miles per hour.

**NAVAID** see navigation aid

**navigable airspace** The airspace at or above minimum altitudes of flight that includes the airspace needed to ensure safety in the takeoff and landing of aircraft.

**navigational aid (NAVAID)** Any facility used for the purpose of guiding or controlling flight such as lighting systems; signaling, radio direction-finding, or other electronic communication devices; or any other facility with a similar purpose.

**NEPA** see National Environmental Policy Act

**NHPA** National Historic Preservation Act

**NOAA** National Oceanic and Atmospheric Administration

**noise contour** A map showing how noise exposure can vary over extended areas. They are useful for identifying areas exposed to significant aircraft noise surrounding an airport.

**nonprecision approach** A standard instrument approach procedure in which only horizontal guidance is provided.

**notice to air missions (NOTAM)** A notice containing information essential to pilots or other personnel concerned with flight operations that is not known far enough in advance to be publicized by other means.

**NPDES** National Pollutant Discharge Elimination System

**NPIAS** see national plan of integrated airport systems

**NPS** National Park Service

**NRCS** Natural Resources Conservation Service

**NRHP** National Register of Historic Places

**NTSB** National Transportation Safety Board

**NWI** national wetlands inventory

**NWS** National Weather Service

# O

**O & M** operations and maintenance

**object free area (OFA)** An area centered on a runway, taxiway, or taxilane centerline that is free of objects except those required for air navigation or aircraft ground maneuvering purposes.

**obstacle free zone (OFZ)** The airspace below 150 feet located along the runway and extended runway centerline that is required to be clear of all objects except those required for air navigation or aircraft ground maneuvering purposes.

**obstruction** An object that penetrates any imaginary surface described in Federal Aviation Regulation Part 77. Obstructions are presumed to be hazards to air navigation until an FAA study has determined otherwise. (see Part 77)

**OFA** see object free area

**OFZ** see obstacle free zone

**OPBA** operations per based aircraft

**operation** see aircraft operation

**Operations Network (OPSNET)** The official FAA source for air traffic operations and delay data.

# P

**PAPI** see precision approach path indicator

**parallel taxiway** A taxiway that runs parallel to a runway.

**Part 135** The FAA grants the authority to operate on-demand, unscheduled air service in the form of Part 135 certificates. Air carriers authorized to operate with a 135 certificate provide a critical service to passengers and often provide a lifeline to remote populations. Part 135 is the term most people use when referring to Title 14 of the Code of Federal Regulations (CFR), Part 135, *Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft*.

**Part 139** Airports that meet certain requirements must have an airport operating certificate issued by the FAA. It is commonly associated with commercial service airports. Part 139 is the term most people use when referring to Title 14 of the Code of Federal Regulations (CFR), Part 139, *Certification of Airports*.

**Part 77** Establishes standards and requirements for objects affecting navigable airspace. Objects are considered to be obstructions when they exceed certain heights or penetrate the imaginary surfaces described within Part 77 including the approach surface, conical surface, horizontal surface, primary surface, and the transitional surface. Part 77 is the term most people use when referring to Title 14 of the Code of Federal Regulations (CFR), Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*.

**pavement classification rating (PCR)** A number that expresses the carrying capacity of a pavement for unrestricted operations.

**PCI** pavement condition index

**PCR** pavement classification rating

**peak hour** The busiest hour in a day. It is also known as the design hour because this information is used to determine if airport facilities are capable of accommodate existing and forecasted demand.

**PMP** pavement management program

**precision approach** A standard instrument approach procedure in which both vertical and horizontal guidance is provided.

**precision approach path indicator (PAPI)** A row of lights normally installed on the left side of a runway that provides visual guidance during an approach to the runway. A pilot on the correct glideslope path will see two white lights and two red lights.

**primary surface** An imaginary surface longitudinally centered on a runway. The specific dimensions of the primary surface is dependent on the type of runway. Federal Aviation Regulation Part 77 establishes standards and requirements for objects affecting navigable airspace. (see Part 77)

# R

**ramp** see apron

**RCRA** Resource Conservation Recovery Act

**RDC** see runway design code

**regional jet** A commercial jet that typically carries fewer than 100 passengers.

**REIL** see runway end identifier lights

**RNAV** see area navigation

**ROFA** runway object free area (see object free area)

**ROFZ** runway obstacle free zone (see obstacle free zone)

**rotating beacon** see airport beacon

**runway (RW)** A defined rectangular area at an airport designated for landing and takeoff.

**runway design code (RDC)** The design standards that apply to a particular runway based on the type of aircraft that will be using the runway.

**runway direction number** A number indicating the orientation of the runway centerline when measured clockwise from magnetic north.

**runway edge lighting system** A visual navigation aid used to outline the edges of a runway during periods of darkness or restricted visibility conditions. These systems are classified according to the intensity or brightness they are capable of producing which include high-intensity runway lights (HIRL), medium-intensity runway lights (MIRL), and the low-intensity runway lights (LIRL). HIRL and MIRL systems typically have variable intensity controls while LIRL systems normally have only one intensity setting.

**runway end identifier lights (REIL)** A pair of synchronized flashing lights located on each side of the runway threshold to aid pilots in identifying the approach end of a runway.

**runway orientation** The magnetic bearing of the runway centerline.

**runway protection zone (RPZ)** A trapezoidal area located at the end of a runway that is centered on the extended runway centerline. It should be kept clear of incompatible uses and activities to enhance the protection of people and property. The dimensions of the RPZ varies based on the type of runway and approach available.

**runway safety area (RSA)** A defined surface surrounding the runway that is typically 500 feet wide and extending 1,000 feet beyond each runway end that should be kept cleared, graded, free of potential hazards or objects except those required to be located within the RSA.

**runway threshold** The designated beginning of a runway. The term threshold always refers to landing rather than takeoff.

**RVR** runway visual range

**RW** see runway

# S

**segmented circle** A system of markers used by pilots to identify the aerial traffic pattern when flying under visual flight rules (VFR).

**SHPO** state historical preservation office

**SIDA** security identification display area

**small aircraft** Any aircraft with a maximum takeoff weight (MTOW) of 12,500 pounds or less.

**socioeconomic** Information relating to the interaction of social and economic factors.

**statute mile** The formal or legal name given to the land-measured mile to distinguish it from a nautical mile. A statute mile is equal to 5,280 feet.

**SW** single wheel type landing gear (see landing gear)

# T

**2D** two dual wheels in tandem type landing gear (see landing gear)

**T-hangar** An aircraft hangar in which aircraft are parked tail to tail in the T-shaped space left by the other aircraft.

**TAC** technical advisory committee

**TAF** see terminal area forecast

**taxilane** Areas intended for low speed and precise movement of aircraft that allow aircraft to safely access taxiways and taxiway connectors from non-movement areas.

**taxiway design group (TDG)** A method of classifying aircraft based on the dimensions of the main gear width (MGW) and cockpit to main gear distance (CMG).

**taxiway / taxilane safety area (TSA)** A defined surface located alongside the taxiway prepared and suitable for reducing the risk of damage to an aircraft unintentionally departing the taxiway.

**taxiway / taxiway connector** Defined paths that allow aircraft to safely and efficiently get to and from the runway without interfering with takeoffs or landings.

**TDG** see taxiway design group

**Terminal Area Forecast (TAF)** The official FAA forecast of aviation activity for all U.S. airports included in the National Plan of Integrated Airport Systems (NPIAS).

**TFMSC** see traffic flow management system counts

**THPO** tribal historical preservation office

**threshold lights** A series of lights located at a runway threshold that emit green light outward from the runway and emit red light toward the runway to mark the ends of the runway.

**tiedowns** Aircraft parking positions with fixed anchor points for securing aircraft.

**TODA** takeoff distance available

**TOFA** taxiway/taxilane object free area (see object free area)

**TORA** takeoff run available

**touch-and-go** A maneuver in which a pilot lands the aircraft and then departs without coming to a complete stop or exiting the runway. These are typically performed to build piloting skills and expertise.

**touchdown** The point at which an aircraft first makes contact with the landing surface.

**touchdown zone** The first 3,000 feet of a runway intended to be where a landing aircraft first makes contact with the landing surface.

**Traffic Flow Management System Counts (TFMSC)** An FAA database that provides information on traffic counts for flights operated under instrument flight rules (IFR) and flights detected by the National Airspace System, usually via RADAR.

**transient operations** Flights performed by aircraft not based at the airport.

**transitional surface** An imaginary surface that extends outward and upward from the primary and approach surfaces at right angles to each of the runway centerlines at a slope of seven feet horizontally for each foot vertically. The transitional surface ends where it meets the horizontal surface at an elevation of 883 feet. (see Part 77)

**Transportation Security Administration (TSA)** The federal agency that regulates aviation security and operates airport screening checkpoints.

**TSA** see taxiway or taxilane safety area

**TW** see taxiway or taxiway connector

# U

**USACE** U.S. Army Corps of Engineers

**USC** United States Code

**USDA** U.S. Department of Agriculture

**USFS** U.S. Forest Service

**USFWS** U.S. Fish and Wildlife Service

**USGS** U.S. Geological Survey

**utility runway** A runway that is intended to be used by aircraft with a maximum gross weight of 12,500 pounds or less.

# V

**VASI** see visual approach slope indicator

**very high frequency omnidirectional range (VOR)** A ground-based NAVAID aligned with magnetic north that transmits azimuth information for high and low altitude routes and airport approaches.

**very high frequency omnidirectional range/tactical air navigation (VORTAC):** A navigation aid consisting of both a very high frequency omnidirectional range (VOR) and tactical air navigation (TACAN) that transmits both azimuth and distance information to aircraft.

**VFR** see visual flight rules

**VHF** very high frequency

**visual approach** An air traffic control authorization for an aircraft on an IFR flight plan to proceed to the airport and make an approach using visual references rather than an instrument approach.

**visual approach slope indicator (VASI)** A type of approach light system normally installed on the left side of a runway that provides visual guidance during an approach to the runway. A pilot on the correct glideslope path will see a set of red lights over a set of white lights.

**visual flight rules (VFR)** Rules and regulations established by the Federal Aviation Administration to govern flight using visual reference.

**visual meteorological conditions (VMC)** Weather conditions expressed in terms of visibility, distance from clouds, and ceiling equal to or better than specified minimum during which flight under visual flight rules (VFR) is permitted.

**visual runway** A runway intended solely for the operation of aircraft using visual approach procedures.

**VMC** see visual meteorological conditions

**VNAV** vertical navigation

**VOR** see very high frequency omnidirectional range

**VOR-DME** When the very high frequency omnidirectional range (VOR) is located alongside distance measuring equipment (DME), it is referred to as a VOR-DME. Together, they transmit both azimuth and distance information to aircraft.

**VORTAC** see very high frequency omnidirectional range/tactical air navigation

# W

**wide area augmentation system (WAAS)** An extremely accurate navigation system developed for civil aviation.

**wind cone or windsock** A fabric cone tube resembling a giant sock that is used as a basic indicator of wind direction and strength.

**wind rose** A diagram showing wind direction, strength, and frequency for a particular location.

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**3** U.S. Department of Transportation. Federal Aviation Administration. "Advisory Circular No: 150/5300-13B, Airport Design." March 22, 2022. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf.

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**5** U.S. Department of Transportation. Federal Aviation Administration. "Pilot/Controller Glossary." May 19, 2022. https://www.faa.gov/air_traffic/publications/media/pgc_basic_with_chg_1_2_dtd_5-19-22.pdf.

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# APPENDIX A

# Community Engagement Summary

Idaho Falls
Regional Airport
2025 Airport Master Plan

March 2025

# CONTENTS


2022 Airport Master Plan
Kick-Off Meeting

# Community Engagement Summary

ARDURRA

APPENDIX A

# COMMUNITY ENGAGEMENT

Community involvement and coordination is a critical component of the airport master planning process. Airport staff and the project team used several methods to engage the public and held several public meetings where members of the community were encouraged to share their ideas and provide feedback on key elements of the airport master plan.

**Public Information Meetings**

Airport staff and the project team hosted several public information meetings at key milestones in the planning process to share relevant and timely information with the public and invite feedback. These meetings were advertised in the local newspaper, on social media, and the city and project websites. Mailings and press releases were also sent out to increase awareness and participation. Meeting attendees were asked to sign in and provided with informational handouts and comment forms. All attendees were also made aware of future opportunities to be involved in the planning process. Members of the public could also view plan documents and submit comments via the project website.

**Technical Advisory Committee**

The airport staff and project team relied heavily on members of the technical advisory committee (TAC) to help guide development of the plan. This committee was comprised of members who have a deep understanding of the airport, its role in the community, and its opportunities in the future. Committee members included city representatives and several members of the community who interact with the airport for work or pleasure on a regular basis. The technical advisory committee provided the aviation planning team with valuable feedback and insight into the needs of the local aviation community and kept the team informed of local issues throughout the planning process.

# 01 Public Information Meeting Summaries

## 01.1. Public Meeting #1

### a. Meeting Summary

Date: August 31, 2021

Time: 6–8 p.m.

Place: Idaho Falls City Hall Council Chambers
680 Park Avenue, Idaho Falls, Idaho 83402

- Airport Director Rick Cloutier welcomed attendees and provided opening comments.
- T-O Engineers Airport Planner Rick Patton introduced the planning team members, provided a brief history of the airport, described the purpose of airport master plans, and gave an overview of how airport projects are funded.
- T-O Engineers Airport Planner Wayne Reiter covered the elements and steps of an airport master plan, roles and responsibilities of the various stakeholders, airport compliance, public involvement, tentative meeting schedule, airport website, key issues, and next steps.
- The following questions and comments were made by in-person attendees:

Question: What does Runway 17-35 viability mean from Key Issues?
Answer: It is primarily related to FAA justification for future FAA funding. The FAA may fund a crosswind runway based on primary runway wind coverage, or a secondary runway based on capacity. The justification for continued FAA funding of the runway will be reviewed as part of this Master Plan considering both wind coverage and capacity.

Question: Will the previous Runway 17-35 planning study be used for this master plan?
Answer: It was a targeted study for Runway 17-35 that did not encompass the entire airport as this master plan will do. The planning study will be reviewed, but this master plan will take a fresh look at the entire airfield including Runway 17-35 design standards and potential historic eligibility of hangars and structures.

Question: Will there be a master plan review committee?
Answer: Yes, there will be a Technical Advisory Committee for this master plan. It will consist of airport users.

Question: How will the I-15/US-20 connector project influence the master plan?
Answer: The airport is on the EIS project review committee and is coordinating with ITD and the FAA.

Comment: Expressed concerns about the future of Runway 17-35.

Comment: Would like to see safety and maintenance issues addressed in the master plan.

Question: Will regional stakeholders be involved in the master plan?
Answer: The county and surrounding communities have been invited to participate. The team will engage Bonneville County when preparing Land Use recommendations.

Comment: Concerned about future property acquisitions and requested to keep the surrounding community informed.

- The following questions and comments were made by online attendees:

Question: What are the dates for future meetings?
Answer: The next meeting is planned for the Fall of 2021 to present the forecast, dependent on FAA approval.

Comment: Audio from the presentation was difficult to hear.
Response: The meeting is being recorded and a project website will be updated with project information.

- There were no further comments.
- Airport Director Rick Cloutier thanked everyone for attending, encouraged public input, and closed the meeting.

## b. Meeting Supplement

**Idaho Falls Regional Airport**
**Master Plan Kickoff Supplement**
**Frequently Asked Questions**
**Common Terms**
**August 31, 2021**

**Presentation Contents:**

1. Welcome and Introductions
2. Project Description
3. Master Plan Objectives
4. Master Plan Elements
5. Roles and Responsibilities
6. Public Participation
7. Key Airport Issues
8. Project Schedule
9. Next Steps
10. Public Comments

**Contact Information:**


| | |
|---|---|
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### Airport Master Plans

An Airport Master Plan is a comprehensive study of an airport that describes short-, medium-, and long-term development plans needed to support future aviation demand.

The elements of an Airport Master Plan are outlined by the Federal Aviation Administration (FAA); however, the complexity of each element depends upon the size, function, and challenges of the airport.

The Idaho Falls Regional Airport Master Plan will present a strategy for development while considering the potential environmental and socioeconomic impacts throughout the planning period.

The Idaho Falls Regional Airport Master Plan will meet the following objectives:

- Understand airport issues, opportunities, and constraints.
- Consider the impacts of aviation trends.
- Identify the capacity of existing airport infrastructure.
- Determine need for airport improvements.
- Estimate project costs and funding sources.
- Develop a schedule for project implementation.
- Obtain stakeholder and public input.



### Master Plan Process

The process begins with a pre-planning phase to determine the scope of work, then systematically follows the steps shown in the figure. The Idaho Falls Regional Airport Master Plan will incorporate a significant amount of public involvement to ensure the best final product possible. Effective public involvement includes numerous stakeholders, including airlines, aircraft owners, airport staff, public officials, funding agencies, airport businesses, and the surrounding community.

Information will be available online throughout the Airport Master Plan project to include a project schedule, announcements for upcoming meetings, draft documents, references, as well as a portal to ask questions and provide comments. The website can be accessed through the Idaho Falls Regional Airport main website, or by visiting IFAirportMP.com




### Frequently Asked Questions

**Q: What is an Airport Master Plan?**

A: An Airport Master Plan is a comprehensive study of an airport that describes short-, medium-, and long-term development needs to meet future aviation demand.

**Q: Why is an Airport Master Plan needed?**

A: An Airport Master Plan provides the developmental framework for airports to ensure appropriate planning for future needs. An Airport Master Plan is typically updated every 5-10 years due to FAA changes in airport design, swings in the economy, and transformational changes in aviation and how people travel. The last Airport Master Plan completed for Idaho Falls Regional Airport was in 2010.

**Q: What are the major elements of an Airport Master Plan?**

A: Airport Master Plans are developed based on guidance from the FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans.*

- Inventory of Existing Conditions
- Aviation Forecast
- Facility Requirements
- Environmental Considerations
- Alternatives Development
- Airport Layout Plan (ALP)
- Facilities Implementation

**Q: What are the Airport Master Plan Objectives:**

A: The objectives of an Airport Master Plan are:

- To understand airport issues, opportunities and constraints.
- Consider the impacts of aviation trends.
- Identify the capacity of existing airport infrastructure.
- Determine the need for airport improvements.
- Estimate project costs and funding sources.
- Develop a schedule for project implementation.
- Obtain stakeholder and public input.

**Q: Who is funding the Airport Master Plan project and at what cost?**

A: The FAA is providing 100% of funding for this Airport Master Plan project, totaling $701,987.

**Q: Who Approves a Master Plan?**

A: The Airport Sponsor, in this case the City of Idaho Falls, approves the Airport Master Plan.

FAA approval is required for the Airport Master Plan Forecast, as well as the Airport Layout Plan (ALP). The FAA also provides a review of the Master Plan documents, and accepts the final document.

**Q: What results from an Airport Master Plan?**

A: The approved Airport Master Plan becomes the primary guiding document for airport development.



### Common Terms

**Advisory Circular (AC)**: External publications issued by the FAA consisting of non-regulatory material providing for the recommendations relative to a policy, and guidance and information relative to a specific aviation subject.

**Aircraft Operation**: The landing, takeoff or touch-and-go procedure by an aircraft on a runway at an airport. A touch-and-go equals two aircraft operations.

**Airport Capital Improvement Plan (ACIP)**: The planning program used by the FAA to identify, prioritize, and distribute funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.

**Airport Improvement Program (AIP)**: The Airport Improvement Program of the Airport and Airways Improvement Act of 1982, as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987. Under this program, the FAA provides funding assistance for the planning, design and development of airport facilities.

**Airport Layout Plan (ALP)**: A graphic presentation, to scale, of existing and proposed airport facilities, their location on the airport, and the pertinent clearance and dimensional information required to show conformance with applicable standards. To be eligible for AIP funding assistance, an airport must have an FAA approved ALP.

**Airport Sponsor**: An entity that is legally responsible for the management and operation of an airport including the fulfillment of the requirements of laws and regulations related thereto, usually a city, county, or airport authority.

**Based Aircraft**: The total number of active general aviation aircraft which use or may be expected to use an airport as a home base.

**Critical (Design) Aircraft**: The most demanding aircraft (or combination of aircraft) with at least 500 annual operations that operates, or is expected to operate, at the airport.

**Commercial Service Airport**: A publically owned airport with at least 2,500 annual enplanements and scheduled air carrier service.

**Enplanement**: The boarding of one passenger on a commercial service aircraft that departs an airport.

**Federal Aviation Administration (FAA)**: Created by the act that established the Department of Transportation. Assumed all of the responsibilities of the former Federal Aviation Agency including aircraft safety, movement, and controls.

**General Aviation (GA)**: The segment of aviation that encompasses all aspects of civil aviation except certified air carriers, military, and other commercial operators, such as airfreight carriers.

**Land Use Plan**: Shows on-airport land uses as developed by the airport sponsor under the master plan effort and off-airport land uses as developed by surrounding communities.

**Large Aircraft**: Aircraft weighing more than 12,500 pounds maximum certificated takeoff weight.

**National Environmental Policy Act (NEPA)**: Federal legislation that establishes environmental policy for the nation. It requires an interdisciplinary framework for federal agencies to evaluate environmental impacts and contains action-forcing procedures to ensure that federal agency decision makers take environmental factors into account.

**National Plan of Integrated Airport Systems (NPIAS)**: A plan prepared by the FAA which identifies, for the Congress and the public, the composition of a national system of airports together with the airport development necessary to anticipate and meet the present and future needs of civil aeronautics, national defense, and the postal service. The plan includes both new facilities and qualitative improvements to existing airports to increase their capacity, safety, technological capability, etc.

**Public Airport:** An airport for public use, publicly owned, and under control of a public agency.

**Small Aircraft:** Aircraft of 12,500 pounds or less maximum certificated takeoff weight.

## c. Presentation


## d. Postcard

## e. News Release

Posted on: August 27, 2021

### Idaho Falls Regional Airport (IDA) To Kick Off Year-Long Master Planning Process


(Idaho Falls, ID) – The Idaho Falls Regional Airport (IDA) will be hosting a kick-off meeting on Tuesday, August 31 at 6 p.m. as they begin a year-long process of updating their master plan for the future of the airport.

The meeting will be held in the Idaho Falls City Council Chambers in the City Hall Annex located at 680 Park Avenue in downtown Idaho Falls. The meeting will be open to the public but will also be broadcast live via WebEx for virtual participation, due to social distancing at the meeting.

"Given the massive changes around the globe over the past few years, there have been a lot of impacts to the way people travel and the way that the airline industry serves their customers," said Rick Cloutier, Director of IDA. "We want to make sure that we are getting all the input we can to adequately plan for future growth, anticipate changes in the industry and changes in the way we serve and take care of our customers. This process will help us do that."

The IDA Airport Master Plan is a comprehensive study of the airport to help identify the short, medium, and long-term development plans needed to support future aviation demand. The plan provides the developmental framework for the airport to ensure appropriate planning for future needs.

The plan is updated every five to 10 years to ensure compliance with changes in airport design, economic changes, technological changes in aviation and passenger travel needs. The last IDA Master Plan was completed in 2010. The current planning process is being led by Idaho-based company, TO Engineering.

"We are hoping for a very robust process that will allow us to hear from a wide variety of IDA customers," said Cloutier. "We really encourage anyone with an interest in the airport and its future to come out or participate virtually with one or more of our meetings. This will be a year-long process, so there will be ample opportunity for people's voices to be heard."

Written comments about the plan can be submitted to Jayme Verish, the Assistant Director of IDA at 2140 Skyline Drive, Idaho Falls, Idaho 83402. Additional information can be obtained by emailing TO Engineering at wreiter@to-engineers.com or by calling 208-370-3906.

Future meeting dates and announcements will be advertised on the IDA's webpage as well as their Facebook page and on other city social media. A virtual link to attend meetings is also available at www.IFairportMP.com.

###

## f. Newspaper Ad

**POST REGISTER LEGALS • 08/29/2021**

Legals | Legals | Legals | Legals | LEGALS | Legals

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**SUMMONS FOR PUBLICATION ON COMPLAINT FOR JUDICIAL FORECLOSURE AND DECLARATORY RELIEF SUMMONS FOR PUBLICATION ON COMPLAINT FOR JUDICIAL FORECLOSURE AND DECLARATORY RELIEF**
CV10-20-1447

NEWREZ LLC D/B/A SHELLPOINT MORTGAGE SERVICING, Plaintiff,
v.
THE UNKNOWN HEIRS, ASSIGNS AND DEVISEES OF ROLAND TALAMANTEZ; GREGORY ROLAND TALAMANTEZ; TRINITY FINANCIAL SERVICES, LLC; AND DOES 1 THROUGH 20, INCLUSIVE, including all parties with an interest in and/or residing in real property commonly known as, 331 E. 16TH ST., IDAHO FALLS, IDAHO 83404, and legally described as: LOTS 32 AND 33, BLOCK 58, CROWS ADDITION, TO THE CITY OF IDAHO FALLS, COUNTY OF BONNEVILLE, STATE OF IDAHO, ACCORDING TO THE PLAT RECORDED SEPTEMBER 3, 1890, BOOK 1 AT PAGE 19, Defendants.

TO: **DEFENDANTS THE UNKNOWN HEIRS, ASSIGNS AND DEVISEES OF ROLAND TALAMANTEZ and DOES 1 through 20**, inclusive, including all parties with an interest in and/or residing in real property commonly known as **331 E. 16TH ST., IDAHO FALLS, IDAHO 83404:**

You have been sued by NewRez LLC d/b/a Shellpoint Mortgage Servicing, the Plaintiff, in the District Court in and for the County of Bonneville, Idaho, Case No. CV10-20-1447.
The nature of the claim against you is an action for declaratory relief and judicial foreclosure of the real property currently known as **331 E. 16TH ST., IDAHO FALLS, IDAHO 83404** and legally described as
**LOTS 32 AND 33, BLOCK 58, CROWS ADDITION, TO THE CITY OF IDAHO FALLS, COUNTY OF BONNEVILLE, STATE OF IDAHO, ACCORDING TO THE PLAT RECORDED SEPTEMBER 3, 1890, BOOK 1 AT PAGE 19.**

Any time after 21 days following the last publication of this summons, the court may enter a judgment against you without further notice, unless prior to that time you have filed a written response in the proper form, including the Case Number and paid any required filing fee to the Clerk of the Court at 605 N. Capital Ave., Idaho Falls, ID 83402, (208) 529-1350, and serve a copy of your response on the Plaintiff's attorney, Sydney K. Leavitt, at ALDRIDGE PITE, LLP, 3597 E. Monarch Sky Ln., Ste. 240, Meridian, ID 83646.
A copy of the Summons and Complaint can be obtained by contacting either the Clerk of the Court or the attorney for Plaintiff.
If you wish for legal assistance, you should immediately retain an attorney to advise you in this matter.

CLERK OF THE COURT
By: Emmy Yates, Deputy

**Published: 8/29, 9/5, 9/12, 9/19, 2021 (140060-12811)**

**SUMMONS IN THE DISTRICT COURT OF THE SEVENTH DISTRICT OF THE STATE OF IDAHO IN AND FOR THE COUNTY OF BONNEVILLE**
CV10-21-3979

JOEL WARD, Plaintiff,
vs.
BISHOP CONSTRUCTION, LLC, an Idaho limited liability company, and REN BISHOP, an individual, Defendants.
**NOTICE:**
**YOU HAVE BEEN SUED BY THE ABOVE-NAMED PLAINTIFF. THE COURT MAY ENTER JUDGMENT AGAINST YOU WITHOUT FURTHER NOTICE UNLESS YOU RESPOND WITHIN TWENTY-ONE (21) DAYS. READ THE INFORMATION BELOW.**
**TO: REN BISHOP and BISHOP CONSTRUCTION, LLC**
Any time after 21 days following the last publication of this Summons, the Court may enter a judgment against you without further notice, **unless** prior to that time you have filed a written response in proper form, including the Case No., and paid any required filing fee to the Clerk of the Court at Bonneville County Courthouse, 605 N. Capital Ave., Idaho Falls, Idaho 83402, (208) 529-1350, and served a copy of your response on the Plaintiff's attorney at Nathaniel H. Wadsworth, Esq., Holden, Kidwell, Hahn & Crapo, P.L.L.C., PO Box 50130, Idaho Falls, Idaho, 83405.
A copy of the Summons and Verified Complaint can be obtained by contacting either the Clerk of the Court or the attorney for the Plaintiffs.
If you wish legal assistance, you should immediately retain an attorney to advise you on this matter.

DATED: 8/11/2021

Penny Manning, Clerk of the Court
By: John W. Frey, Deputy

**Published: 8/15, 8/22, 8/29, 9/5, 2021 (133939-10904)**

IDA IDAHO FALLS REGIONAL AIRPORT

**Idaho Falls Regional Airport Master Plan Public Meeting #1**
Date: August 31, 2021
Time: 6 p.m. – 8 p.m.
Location: Idaho Falls City Hall Council Chambers
308 Constitution Way, Idaho Falls

The Idaho Falls Regional Airport is conducting a comprehensive study that will identify short-, medium-, and long-term development plans to meet aviation demand over the next 30 years. Airport staff and the master plan consultant team are hosting a public meeting to share information about the process and next steps.

For more information:
Wayne Reiter
wreiter@to-engineers.com
(208) 370-3906
IFAirportMP.com

**Published: 8/29/2021 (135735-16418)**

**Legals**

**NOTICE TO CREDITORS IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT STATE OF IDAHO, IN AND FOR BONNEVILLE COUNTY**
CV10-21-4734
IN THE MATTER OF THE ESTATE OF JULIE ANN JOHNSON-BUTIKOFER, Deceased.
NOTICE IS HEREBY GIVEN that the undersigned has been appointed Personal Representative of the above named decedent. All persons having claims against the decedent or the decedent's estate are required to present their claims within four months after the date of the first publication of this Notice or said claims will be forever barred.
Claims must be presented to the undersigned at the address indicated and filed with the Clerk of the Court.
Dated: 8/25/2021
Kevin Butikofer
Personal Representative
650 Gladstone Street, Apt. 8
Idaho Falls, Idaho 83401
Attorney for the Personal Representative:
Kevin B. Homer, Esq.
1565 South Boulevard
Idaho Falls, ID 83404
**Published: 8/29, 9/5, 9/12, 2021 (139817-10774)**

**SUMMONS IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF BONNEVILLE**
Case No. CV10-20-7972
BONNEVILLE BILLING & COLLECTIONS, INC., a corporation,
Plaintiff, vs.
JAMES P. WADDOUPS,
Defendant.
You have been sued by Bonneville Billing & Collections, Inc., the Plaintiff, in the Seventh District Court in and for Bonneville County, Idaho, Case No. CVI0-20-7597. The nature of the claim against you is collection. Any time after 21 days following the last publication of this summons, the court may enter a judgment against you without further notice, unless prior to that time you have filed a written response in the proper form, including the Case No., and paid any required filing fee to the Clerk of the Court at 605 North Capital, Idaho Falls, ID 83402, (208)529-1350, and served a copy of your response on the Plaintiffs attorney at Todd Erikson, 3456 E. 17th St., Ste. 280, Idaho Falls, Idaho 83406. A copy of the Summons and Complaint can be obtained by contacting either the Clerk of the Court or the attorney for Plaintiff. If you wish legal assistance, you should immediately retain an attorney to advise you in this matter.
Dated: 7/28/2021
Penny Manning
Bonneville County
District Court
By Tawnya Corona,
Deputy Clerk
Todd R. Erikson, #4374
Todd R. Erikson, P.A.
3456 E. 17th St., Ste. 280
Idaho Falls, ID 83406
Telephone: (208) 522-3305
eriksonlaw@gmail.com
Attorney for Plaintiff
**Published: August 15, 22, 29, Sept. 5, 2021. (133745-12227)**


## g. Facebook Post


## h. Display Ad

IDA IDAHO FALLS REGIONAL AIRPORT

You're Invited!
**Idaho Falls Regional Airport Master Plan Public Meeting #1**

The Idaho Falls Regional Airport is conducting a comprehensive study that will identify short-, medium-, and long-term development plans to meet aviation demand over the next 30 years.

Airport staff and the master plan consultant team are hosting a public meeting to share information about the process and next steps.

**PUBLIC MEETING DETAILS**

**Date:** August 31, 2021
**Time:** 6 p.m. – 8 p.m.
**Location:** Idaho Falls City Hall Council Chambers
308 Constitution Way, Idaho Falls

**CONTACT**

IFAirportMP.com

For more information:
Wayne Reiter
wreiter@to-engineers.com
(208) 370-3906

## i. Photos

## j. Welcome Board

## k. Sign-In Sheets

Idaho Falls Regional Airport Master Plan
Meeting 1 – Kickoff
August 31, 2021
6:00 to 8:00 PM MDT

IFAirportMP.com

IDA IDAHO FALLS REGIONAL AIRPORT

| Name | Company/Representing | Address | Contact Number(s) | Email Address |
|---|---|---|---|---|
| Steve Henderson | IFAA | [redacted] | [redacted] | [redacted] |
| Dominic McCown | N/A | [redacted] | [redacted] | [redacted] |
| Zane Mickelson | BEA | [redacted] | [redacted] | [redacted] |
| Dan Ward | NA | [redacted] | [redacted] | [redacted] |
| Amy Taylor | US Senator Risch | [redacted] | [redacted] | [redacted] |
| Reese Cox | N/A | [redacted] | [redacted] | [redacted] |
| Anas Almassraly | IF Planning Division | [redacted] | [redacted] | [redacted] |
| Carl Dixon | Self | [redacted] | [redacted] | [redacted] |

Idaho Falls Regional Airport Master Plan
Meeting 1 – Kickoff
August 31, 2021
6:00 to 8:00 PM MDT

IFAirportMP.com

IDA IDAHO FALLS REGIONAL AIRPORT

| Name | Company/Representing | Address | Contact Number(s) | Email Address |
|---|---|---|---|---|
| Alan Reed | Reed Dairy | [redacted] | [redacted] | [redacted] |
| Bobby Picker | Aviation CAP Pilot | [redacted] | [redacted] | [redacted] |
| Robert Roesener | Self | [redacted] | [redacted] | [redacted] |
| John Grubb | CAP | [redacted] | [redacted] | [redacted] |
| Eric Parmee | Self | [redacted] | [redacted] | [redacted] |
| Derek [illegible] | PCMS | [redacted] | [redacted] | [redacted] |
| Kristin Cook | | [redacted] | [redacted] | [redacted] |
| Gary Dixon | Self | [redacted] | [redacted] | [redacted] |

T-O ENGINEERS

Idaho Falls Regional Airport Master Plan
Meeting 1 – Kickoff
August 31, 2021
6:00 to 8:00 PM MDT

IFAirportMP.com

IDA IDAHO FALLS REGIONAL AIRPORT

| Name | Company/Representing | Address | Contact Number(s) | Email Address |
|---|---|---|---|---|
| Doyle Beck | Rail 1 LLC | [redacted] | [redacted] | [redacted] |
| Roger Blew | | [redacted] | [redacted] | [redacted] |
| Farrell Virginia Tracy | | [redacted] | [redacted] | [redacted] |
| Kevin Pettingill | | [redacted] | [redacted] | [redacted] |
| [illegible] Williams | | [redacted] | [redacted] | [redacted] |
| Steve Wackerli | | [redacted] | [redacted] | [redacted] |
| [illegible] | | [redacted] | [redacted] | [redacted] |
| Declan Dethrick | Skyline Storage LLC | [redacted] | [redacted] | [redacted] |

Idaho Falls Regional Airport Master Plan
Meeting 1 – Kickoff
August 31, 2021
6:00 to 8:00 PM MDT

IFAirportMP.com

IDA IDAHO FALLS REGIONAL AIRPORT

| Name | Company/Representing | Address | Contact Number(s) | Email Address |
|---|---|---|---|---|
| William Westphal | 5095 Pevero | [redacted] | [redacted] | [redacted] |
| Wayne Reiter | T-O Engineers | [redacted] | [redacted] | [redacted] |
| Jared Wingo | T-O Engineers | [redacted] | [redacted] | [redacted] |
| Rick Patton | T-O Engineers | [redacted] | [redacted] | [redacted] |
| Nathan Cuvala | T-O Engineers | [redacted] | [redacted] | [redacted] |
| Dave Sherman | T-O Engineers | [redacted] | [redacted] | [redacted] |
| Rick Cloutier | Idaho Falls Regional Airport | [redacted] | [redacted] | [redacted] |
| Jayne Verish | Idaho Falls Regional Airport | [redacted] | [redacted] | [redacted] |

T-O ENGINEERS

## l. Comment Forms

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Meeting Comment Card**

Please fill out this comment card if you wish to make a comment during the meeting. Comments will be limited to 3 minutes, unless prior arrangements have been made with the planning team.

Name and Affiliation: Steve Henderson

City of Residence: Idaho Falls

Phone: 208 [redacted] Email: [redacted]

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Meeting Comment Card**

Please fill out this comment card if you wish to make a comment during the meeting. Comments will be limited to 3 minutes, unless prior arrangements have been made with the planning team.

Name and Affiliation: Roger Blew

City of Residence: Idaho Falls

Phone: 208 [redacted] Email: [redacted]

## 01.2. Public Meeting #2

### a. Meeting Summary

Date: October 20, 2022

Time: 4–8 p.m.

Place: College of Eastern Idaho, Building 6, Rooms 150 & 152
1600 S. 25th E., Idaho Falls, Idaho

- The meeting was held in an open house format and was split into four one-hour sessions.
- The staff at the sign-in table explained the meeting format to participants as they arrived and asked them to sign-in. They were each given a comment form and project handout that included a brief overview of the meeting and explained the type of input requested.
- Community members then had an opportunity to talk with project staff and provide input about the master plan at four information stations.

**Information Stations**

- Airport Master Plan Overview
- Airport Overview
- Aviation Demand Forecast
- Facility Requirements and Next Steps

**Project Staff**

- Wayne Reiter, T-O Engineers
- Nathan Cuvala, T-O Engineers
- Rick Patton, T-O Engineers
- Airport staff

**Key Taking Points**

- The master plan helps the airport prepare for change and examines future operations, passenger, and cargo activity requirements and identifies what the airport needs to do to accommodate those requirements for the next 20 years.
- An airport master plan includes a review of existing conditions, passenger forecasts, terminal building requirements, cargo requirements, parking requirements, rental car requirements, general aviation requirements, compliance with Federal Aviation Administration standards and grant assurances, and implementation and funding strategies.
- When an airport uses federal funds to acquire property for aeronautical use, the airport is obligated to use that property for aeronautical purposes. This obligation does not expire.
- If federally-obligated airport property is no longer needed for aeronautical purposes, the FAA must approve of the nonaeronautical use of this property, it must be documented on the airport layout plan, and the airport must receive fair market value rent for the property.

- The FAA does not have jurisdiction in local land use or zoning approvals. Both the city and county are responsible for implementing policies and laws to protect the airspace surrounding the airport.
- The disposition of the soccer fields is unknown at this time. The next phase of the master plan will focus on developing a variety of alternatives to help the airport meet each of the facility requirements presented at the meeting.
- 2021 was a record year with a total of 223,741 enplaned passengers.
- There was a total of 219,683 enplaned passengers between January 1 and August 31, 2022.
- There was a total of 33,656 operations for 2021.
- There was approximately 6.3 million pounds of cargo processed at the airport in 2021.
- There are five public meetings planned for this master plan. The next meeting will focus on development alternatives being considered, and the fourth meeting will focus on the draft master plan and airport layout plan. The fifth meeting will occur at a city council meeting where the final master plan and airport layout plan will be considered for adoption.
- A project website has been set up to inform the public and provide access to documents as they become available: https://ifairportmp.com/
- The planning team has completed the inventory, developed the aviation forecast, and determined the facility requirements needed to meet that demand as well as any improvements needed to meet updated safety requirements. The next step is to focus on development alternatives to meet those requirements.
- The Federal Aviation Administration approves the forecast and the airport layout plan and accepts the airport master plan report.
- The Idaho Falls City Council adopts and implements the airport master plan.

## b. Meeting Supplement

**Idaho Falls Regional Airport**
**Master Plan Open House**
**College of Eastern Idaho**
**October 20, 2022**
**4:00 - 8:00 pm**

### Open House Stations

1. Sign In Desk
2. Master Plan Overview
3. Airport Overview
4. Forecast
5. Facility Requirements
6. Comment Forms

### Contact Information:


Rick Cloutier, C.M.
Airport Director
rcloutier@idahofalls.gov
208-612-8224

Jayme Verish, C.M., ASC
Assistant Airport Director
jverish@idahofalls.gov
208-612-8267

Nathan Cuvala, P.E.
Project Manager
ncuvala@to-engineers.com
208-323-2288

Rick Patton
Aviation Planner
rpatton@to-engineers.com
208-433-1900

Wayne Reiter, A.A.E.
Aviation Planner
wreiter@to-engineers.com
208-762-3644


### Airport Master Plan Overview and Project Update

An Airport Master Plan is a 20-year plan to meet aviation demand at an airport.

- This project began in July of 2021
- Kickoff meeting in August of 2021
- Airport Master Plans are normally a 2-year process
- We are about halfway through the technical aspects of this Airport Master Plan
- Chapters completed to-date: Introduction, Existing Conditions (Socioeconomic Overview, Background, and Inventory), Forecast of Aviation Demand, and Facility Requirements
- Next Step: Development of Alternatives to meet the facility requirements, then hold a public workshop
- Project website with draft documents: https://www.ifairportmp.com/

### Forecast Summary and Critical Aircraft

Passenger enplanements are projected to grow at 1.9%. Overall operations are projected to grow at 0.9%. The critical aircraft are as follows:

Commercial Airline: Airbus A319/320

Cargo: ATR 72

General Aviation: Challenger 300

| Forecast Year | Itinerant | | | | | | Local | | Total Airport Operations |
|---|---|---|---|---|---|---|---|---|---|
| | Enpl | Airline Ops | Cargo (Lbs.) | Cargo Ops | GA Ops/Air Taxi | Military Ops | GA Ops | Military Ops | |
| 2021 (Baseline) | 223,741 | 7,856 | 6,288,882 | 676 | 17,228 | 259 | 7,402 | 235 | 33,656 |
| 2026 | 289,508 | 9,468 | 9,952,995 | 843 | 18,017 | 286 | 7,604 | 235 | 36,453 |
| 2031 | 300,869 | 9,484 | 11,072,550 | 918 | 18,843 | 319 | 7,812 | 235 | 37,611 |
| 2041 | 326,041 | 9,570 | 13,488,226 | 1,071 | 20,610 | 389 | 8,244 | 235 | 40,119 |
| CAGR | 1.9% | 1.0% | 3.9% | 2.3% | 0.9% | 2.1% | 0.5% | 0% | 0.9% |

*Idaho Falls Regional Airport Master Plan* T-O ENGINEERS

*Idaho Falls Regional Airport Master Plan* T-O ENGINEERS

### Facility Requirements Summary

AIRFIELD

- Relocate Runway 3 windcone outside of the Runway Safety Area (RSA)
- Expand runway shoulders and blast pads
- Expand taxiway width and shoulders
- Eliminate the direct access to Runway 17/35 at Taxiway C from the GA parking apron
- Relocate the deicing pad
- Relocate the VOR-DME
- Add an additional 41 hangars
- Reconfigure GA parking spaces

LANDSIDE

- Expand the terminal building and add two additional aircraft gates
- Expand the economy and employee parking lots
- Expand the rental car facility
- Expand the cargo apron and processing building
- Expand the SRE building
- Expand the terminal access road

**Recommendations**

- Relocate the ATCT to allow for terminal expansion
- Relocate the ARFF station to allow for cargo expansion
- Eliminate terrain obstruction at the Runway 21 end
- Add approach lighting system to Runway 3 end
- Assess drainage infrastructure capacity and structural integrity
- Reconfigure parking lot access points from N. Skyline Drive
- Add electric vehicle (EV) charging stations to parking lot expansions

### Airport Layout

*Idaho Falls Regional Airport Master Plan* T-O ENGINEERS

*Idaho Falls Regional Airport Master Plan* T-O ENGINEERS

## c. Posters

# Idaho Falls Regional Airport 2022 Airport Master Plan

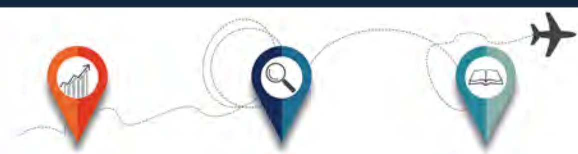
### What is an Airport Master Plan?

An airport master plan is the process of establishing an airport's blueprint for long-term development to meet future aviation demand. It helps to ensure the airport will continue to meet the needs of its customers and that future development is consistent with local, state, and national goals. This includes identifying potential environmental and socioeconomic impacts of future airport projects.

### Why Does the Airport Need One?

An airport master plan is typically updated every five to ten years. This helps the airport respond to updated design requirements as well as industry trends and changes in the economy. The last airport master plan was completed in 2010.

### The Airport Master Plan Process



**Research**

- Research the airport's history.
- Inventory existing conditions.
- Develop a forecast of future activity levels.
- Identify critical aircraft.
- Forecast approval.

**Requirements**

- Identify improvements required due to updated standards or to accommodate forecasted activity.
- Evaluate each option to determine the most responsible plan.

**Implementation**

- Prepare an implementation plan with a preliminary schedule and estimated costs.
- Prepare a capital improvement plan.
- Prepare an airport layout plan (ALP).

### Who Determines This Process?

The elements of an airport master plan are outlined by the Federal Aviation Administration (FAA), but the process is tailored to meet the needs of the airport.

### Who Approves the Plan?

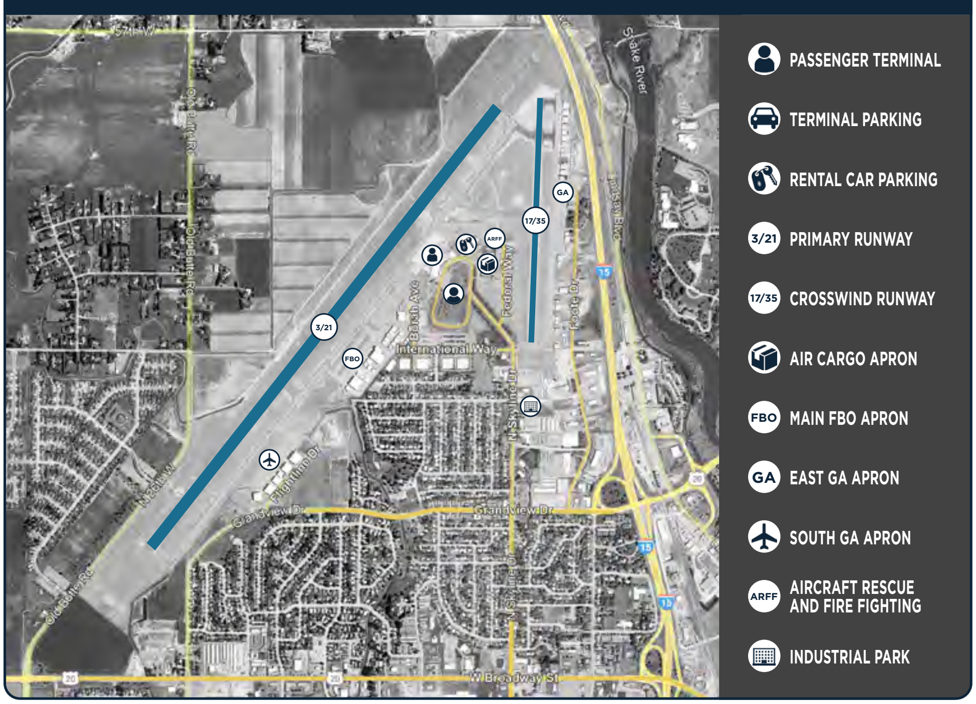
The City of Idaho Falls approves the plan. However, FAA approval is required for the forecast and the airport layout plan (ALP) these are used to determine grant funding.

### What Is the Purpose of the Plan?

- Identify the condition and capacity of existing airport infrastructure.
- Identify existing problems, opportunities, and constraints.
- Determine if improvements are needed to meet current safety standards or future activity levels.
- Identify industry trends and their potential impact to the airport.
- Ensure the airport is able to continue to safely and efficiently meet the needs of customers.
- Allow the community to provide input on the plan.
- Develop a financially responsible plan for airport development.
- Establish a realistic schedule for project implementation.
- Identify potential funding sources.
- Keep the community informed.

# Idaho Falls Regional Airport Overview

### Idaho Falls Regional Airport




### Passenger Airlines


### Primary Runway 3/21

- Oriented: Northeast-Southwest
- Length: 9,002 Feet
- Width: 150 Feet
- Markings: Precision Instrument

### Crosswind Runway 17/35

- Oriented: North-South
- Length: 3,964 Feet
- Width: 75 Feet
- Markings: Visual

# Idaho Falls Regional Airport Aviation Forecast

## Aircraft Operations

An aircraft operation is when an aircraft lands, takes off, or conducts a touch-and-go procedure. They are separated into three main categories; commercial service, general aviation, and military operations.

## Passengers

The passenger enplanements forecast is particularly important because it will help determine future requirements for airport facilities that accommodate passengers such as the size of the terminal and parking facilities.

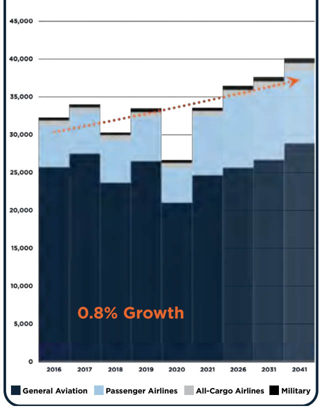
## Air Cargo

The forecast for air cargo by volume will help determine if the airport's cargo facilities will be able to handle the expected increases in the volume of cargo throughout the forecast period.

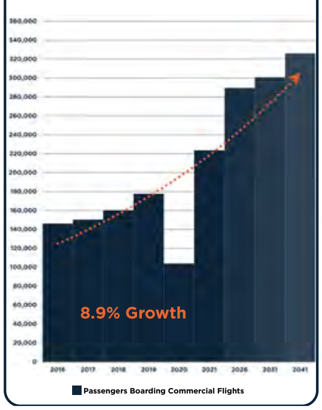
## Critical Aircraft

The critical aircraft is often referred to as the design aircraft because it is used to determine the correct design standards, such as the separation distance between taxiways and runways.

### Aircraft Operations Forecast




### Passenger Enplanement Forecast

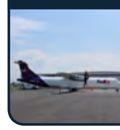



### Air Cargo Forecast


### Commercial Service

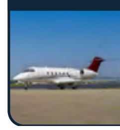
| Airbus A320 | |
|---|---|
| Aircraft Approach Category | C |
| Airport Design Group | III |
| Taxiway Design Group | 3 |
| Maximum Takeoff Weight | 171,961 Pounds |
| Approach Speed | 136 Knots |
| Wingspan | 111.88 Feet |
| Length | 123.27 Feet |

### Air Cargo Service



| ATR 72 | |
|---|---|
| Aircraft Approach Category | B |
| Airport Design Group | III |
| Taxiway Design Group | 2 |
| Maximum Takeoff Weight | 49,603 Pounds |
| Approach Speed | 114 Knots |
| Wingspan | 88.75 Feet |
| Length | 89.13 Feet |

### General Aviation



| Bombardier Challenger 300 | |
|---|---|
| Aircraft Approach Category | C |
| Airport Design Group | II |
| Taxiway Design Group | 1B |
| Maximum Takeoff Weight | 38,850 Pounds |
| Approach Speed | 125 Knots |
| Wingspan | 63.83 Feet |
| Length | 68.75 Feet |

# Idaho Falls Regional Airport Facility Requirements

## Airfield Requirements

- Relocate Runway 3 windcone outside the RSA
- Expand runway shoulders and blast pads
- Expand taxiway width and shoulders
- Eliminate direct access to Runway 17/35 at Taxiway C from the general aviation (GA) aircraft parking apron
- Relocate the deicing pad
- Relocate the VOR-DME
- Add 41 hangars
- Reconfigure GA aircraft parking spaces

## Landside Requirements

- Expand the terminal building
- Add two aircraft gates
- Expand the economy parking lot
- Expand the employee parking lot
- Expand the rental car facility
- Expand the cargo apron
- Expand the cargo processing building
- Expand the snow removal equipment building
- Expand terminal access road

## Recommendations

- Relocate the air traffic control tower to allow for terminal expansion
- Relocate the aircraft rescue and firefighting (ARFF) station to allow for cargo expansion
- Eliminate terrain obstruction at Runway 21 end
- Add approach lighting system to Runway 3 end
- Assess drainage infrastructure capacity and structural integrity
- Reconfigure parking lot access points from N. Skyline Drive
- Add electric vehicle (EV) charging stations to parking lot

## >>> Next Steps

1. Identify potential alternatives to meet facility requirements.
2. Evaluate each alternative to determine the most environmentally, socially, and financially responsible plan.
3. Present each alternative to the public and seek feedback from the community.
4. Prepare an implementation plan with a preliminary schedule and estimated costs.
5. Conduct a financial analysis and prepare a capital improvement plan.
6. Prepare the airport layout plan (ALP).

## d. Handout

Idaho Falls Regional Airport

Airport Master Plan 2022

**Introduction**

**Idaho Falls Regional Airport (IDA) is owned and operated by the city. It proudly serves the aviation needs of Idaho Falls and the surrounding communities.**

**What is an Airport Master Plan?**
An airport master plan is the process of establishing an airport's blueprint for long-term development. It is a comprehensive study of the airport to determine an effective plan for future airport development. It ensures the airport will continue to meet the needs of its customers in the future and that development is consistent with local, state, and national goals. This includes identifying potential environmental and socioeconomic impacts of future airport projects. An airport master plan is an important step in helping the airport become more efficient as well as financially and socially responsible.

**Why Does the Airport Need One?**
An airport master plan is typically updated every five to ten years. This helps the airport respond to updated design requirements, changes in the economy, and industry changes. The last airport master plan was completed for Idaho Falls Regional Airport in 2010.

**Who Determines This Process?**
The elements of an airport master plan are outlined by the Federal Aviation Administration (FAA), but the process is tailored to meet the needs of the airport and our community. An airport's size, as well as the number and type of aircraft using the airport, will determine the level of detail required.

**DID YOU KNOW?**

- The majority of the airport's capital improvements are funded through state and federal grants.
- Idaho Falls Regional Airport has an annual economic impact of more than $145.6 million (2020 Idaho Airport Economic Impact Analysis).

**What Is the Purpose of the Plan?**
The purpose of the Idaho Falls 2022 Airport Master Plan is to meet the following goals:

- Identify the condition and capacity of existing airport infrastructure.
- Identify existing problems, opportunities, and constraints.
- Determine if improvements are needed to meet current safety standards or future activity levels.
- Identify industry trends and their potential impact to the airport.
- Ensure the airport is able to continue to safely and efficiently meet the needs of customers.
- Allow the community to provide input on the plan.
- Develop a financially responsible plan for airport development.
- Determine the potential environmental and socioeconomic impact of airport development.
- Establish a realistic schedule for project implementation.
- Identify potential funding sources.
- Keep the community informed.

**The Airport Master Plan Process**
The FAA provides airports with guidance in the preparation of airport master plans. According to FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans* each master plan should include the following steps:

- Research the airport's history.
- Inventory existing conditions.
- Develop a forecast of future activity levels.
- Assess the airport's ability to accommodate forecasted activity.
- Identify potential improvements or new facilities needed to accommodate forecasted levels of activity safely and efficiently.
- Evaluate each option to determine the most environmentally, socially, and financially responsible plan.
- Prepare a financial plan that describes how the airport will pay for each project.
- Prepare an implementation plan that includes a preliminary schedule and estimated costs.
- Prepare an airport layout plan (ALP) that illustrates the long-term development plan.

**Project Funding**
The FAA is providing the airport with 100% of the funding needed to develop the airport master plan. While the FAA does provide the funding, it does not direct the process.

**Project Sponsor**
As the owner of the airport, the City of Idaho Falls is the airport sponsor. The airport master plan will be supervised by the airport director with support from the IDA Airport Board.

**Plan Guidance**
The technical advisory committee (TAC) will also help guide the development of the plan. The TAC is comprised of stakeholders and city representatives. The TAC provides the aviation planning team with valuable feedback and insight into the needs of the local aviation community and keeps the team informed of local issues.

**Who Approves a Master Plan?**
The airport sponsor approves the airport master plan. FAA approval is required for the forecast and the airport layout plan (ALP) because the agency uses these elements to help determine the airport's eligibility for grant funding of proposed development.

IDAHO FALLS REGIONAL AIRPORT 2022 Airport Master Plan

**Community Outreach**
Public meetings are an important part of this plan. These meetings provide airport planners with the opportunity to learn about your concerns and questions about the future of the airport. They also provide the community with access to the planning team, airport management, and city officials.

The planning team will hold several meetings where they will update the community as they reach major milestones in the plan. **The whole community is invited to attend these public meetings. We encourage you to share your thoughts and ideas and help shape the future of our airport.**

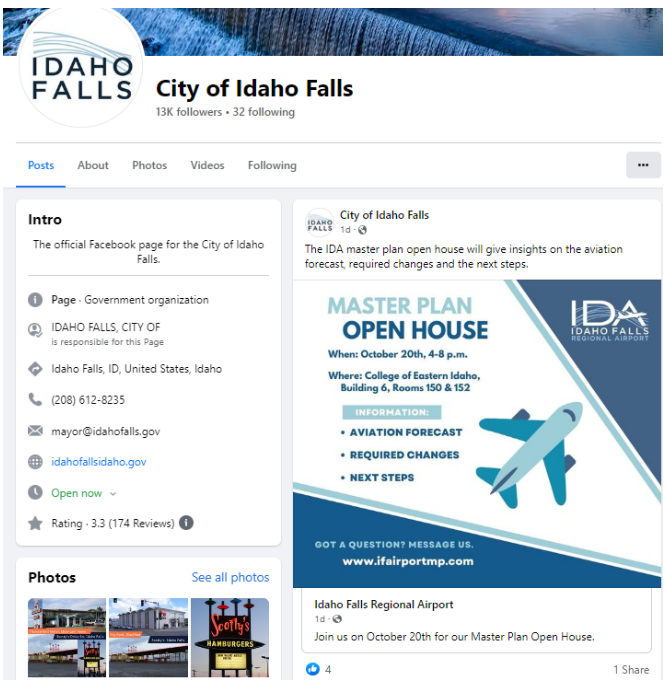
**Plan Information and Updates**
Project information and updates will also be posted online throughout the airport master plan process. This includes a project schedule, meeting announcements, and copies of plan documents as well as a comment page where you can submit your questions, concerns, and comments.

**Please visit us online:**
https://ifairportmp.com

**Or please contact:**

- **Jayme Verish, Assistant Airport Director**
  JVerish@IdahoFallsIdaho.gov
  (208) 612-8267
- **Wayne Reiter, Aviation Planner**
  WReiter@TO-Engineers.com
  (208) 762-3644
- **Nathan Cuvala, Aviation Planner**
  NCuvala@TO-Engineers.com
  (208) 323-2288

## e. Facebook Posts




## f. Website Notice


## g. Photos

## h. Sign-In Sheets

Idaho Falls Regional Airport Master Plan
Meeting 2 – Forecast and Facility Requirements
October 20, 2022
4:00 to 8:00 PM
IFAirportMP.com

| Name | Affiliation | Address | Phone | Email | Would you like to receive newsletters? |
|---|---|---|---|---|---|
| Jim Francis | City Council | [redacted] | | | |
| Traci Hodgins | WSP | | | | |
| [illegible] | [illegible] | | | | |
| Lane Clayson | [illegible] Hangar | | | | |
| Milt Rule | Home Owner | | | | |
| Shanni Rule | Home Owner | | | | |
| Jon Rae Young | Home Owner | | | | |
| Troy Robinson | Home Owner | | | | |

Idaho Falls Regional Airport Master Plan
Meeting 2 – Forecast and Facility Requirements
October 20, 2022
4:00 to 8:00 PM
IFAirportMP.com

| Name | Affiliation | Address | Phone | Email | Would you like to receive newsletters? |
|---|---|---|---|---|---|
| Jim Freeman | City Council | [redacted] | | | |
| Rene Macarski | | | | | |
| Rob Brochu | | | | | |
| Kerry Beutler | City Planning | | | | |
| [illegible] Stevens | CPS | | | | |
| Caitlin Long | City planning | | | | |
| Kevin + Jill Steel | | | | | |
| John Radford | City Council | | | | |

Idaho Falls Regional Airport Master Plan
Meeting 2 – Forecast and Facility Requirements
October 20, 2022
4:00 to 8:00 PM
IFAirportMP.com

| Name | Affiliation | Address | Phone | Email | Would you like to receive newsletters? |
|---|---|---|---|---|---|
| Erin [illegible] | Self | [redacted] | | | |
| Paul [illegible] | Self | | | | |
| David [illegible] | Self | | | | |
| Kim McCall | Self | | | | |
| [illegible] | Self | | | | |
| [illegible] | Self | | | | |
| Patrick Warren | Self | | | | |
| Dennis [illegible] | Self | | | | |

Idaho Falls Regional Airport Master Plan
Meeting 2 – Forecast and Facility Requirements
October 20, 2022
4:00 to 8:00 PM
IFAirportMP.com

| Name | Affiliation | Address | Phone | Email | Would you like to receive newsletters? |
|---|---|---|---|---|---|
| Amanda Ryan Selbach | we live near | [redacted] | | | |
| Rebecca Casper | I.F. Resident City Employee | | | | |
| Ken Schreck | IDA Based Pilot | | | | |
| Bill Crane | Village Resident | | | | |
| Kerry Kunkler | Rosewood | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Idaho Falls Regional Airport Master Plan
Meeting 2 – Forecast and Facility Requirements
October 20, 2022
4:00 to 8:00 PM
IFAirportMP.com

| Name | Affiliation | Address | Phone | Email | Would you like to receive newsletters? |
|---|---|---|---|---|---|
| Steve Henderson | Pilot IFAA | [redacted] | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## i. Comment Forms

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

Contact Information (optional):

Name or Affiliation: Kerry Beutler, City Planning office

Address:

Phone: Email:

Please provide your comments about the Idaho Falls Regional Airport Master Plan:

future land use planning should take into consideration the possibility of Highway 20 moving to the north. & the land use implications this would have. It might indicate a need for airport operations to move or change on the property.

If its possible to create better public access to the Historic vet Baron hanger that would be beneficial.

If you would like to return this comment form outside of the public meeting, please send it to:

Jayme Verish, Assistant Airport Director
2140 N. Skyline Drive
Idaho Falls, ID 83402
208-612-8267

## 01.3. Public Meeting #3

### a. Meeting Summary

Date: February 7, 2024

Time: 4–8 p.m.

Place: Idaho Falls Activity Center
1575 N. Skyline Drive
Idaho Falls, Idaho 83402

IDAHO FALLS REGIONAL AIRPORT MASTER PLAN

# Public Meeting #3 Summary

The Idaho Falls Regional Airport hosted in-person and online public meetings to share proposed plans for improvements to airport facilities and operations. The meeting was rescheduled to February from the original date of January 10, 2024, due to a severe winter storm.

In-person meeting participants were given a comment form and informational hand-outs on the master plan process and planning efforts to date. Participants were able to view display boards during the open house portion that included the following information:

- Master Plan Process and Schedule
- Airport Overview
- Forecast and Facility Requirements
- Potential Development Alternatives

The master plan team presented detailed information on proposed alternatives and the public was invited to ask questions. The City of Idaho Falls recorded the session and it is available here: **Idaho Falls Regional Airport Master Plan Open House 2-7-2024**

## MEETING INFORMATION

### In-Person Public Meeting

**February 7, 2024**
Idaho Falls Activity Center
1575 N. Skyline Drive
Idaho Falls, Idaho 83402

- **155** participants signed in
- **18** comment forms submitted

### Online Meeting

(available at ifairportmp.com)

**January 3 – March 8, 2024**

- **582** visits
- **44** comments submitted

**Facebook Post Comments**

- **3** comments submitted

*Scan me with your smartphone!*

## Common Themes

The following topic themes are excerpted from the comments submitted. These are not edited for content, grammar, or spelling.

### West Side Development Options

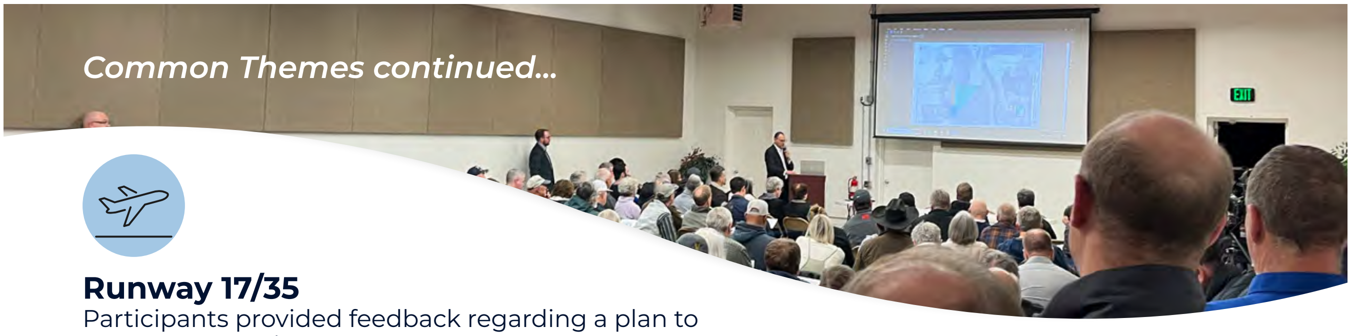
Participants communicated concerns regarding expansion on the west side of the airport:

- Phase 1 and 2 options (expensive)
- Removing soccer complex trees and green space is a detriment to community
- Increased noise pollution with air cargo buildings near Village neighborhood
- Safety issue: relocating busy Old Butte Road closer to playground and neighborhood homes
- Leave berm in place by Village subdivision

*"The most logical choice would be to eliminate all westside options and close small runway and expand from there."*

1 Idaho Falls Regional Airport Master Plan | Public Meeting #3 Summary

## *Common Themes continued...*



### Runway 17/35

Participants provided feedback regarding a plan to close runway 17/35:

- Concern with facility access for air charter, air cargo, medical evacuation, and other essential air service aircrafts
- Consider converting runway 17/35 to a taxi way
- Two runways at a towered airport are a fantastic training environment for both GA [general aviation] students and the tower personnel
- Concern with losing an alternative runway in case of 3/21 closure for refurbishment
- Maintaining runway 17/35 and developing west side for cargo provides for future growth and revenue generation

*"As an Idaho Falls Based GA pilot, I support East side GA option 1 with runway 17/35 to remain open."*

*"What data shows that taxiway C and Runway 17/35 intersection is high risk?"*

### Hangar Space

Participants provided comments on additional hangar space plans:

- Pressing need – glad it's included in plans
- Hangar expansion next to tree farm is acceptable
- Questioned why General Aviation hangar is not open for space now
- Increasing the number of hangars while simultaneously decreasing airport capacity by removing runways does not make sense

### News Coverage

- Post Register News Story – December 25, 2023 *(Updated February 8, 2024)*
- City of Idaho Falls News – January 19 2024
- Post Register News Story – January 19, 2024
- Local News 8 News Story – February 7, 2024

## b. Meeting Supplement

IDA IDAHO FALLS REGIONAL AIRPORT

**Idaho Falls Regional Airport**
**Master Plan Open House**
**Idaho Falls Activity Center**
**February 7, 2024**
**4:00 - 8:00 pm**

**Open House Stations**

1. Sign-In Desk
2. Master Plan Overview
3. Airport Overview
4. Forecast Review
5. Facility Requirements
6. Development Alternatives
7. Comment Forms

**Contact Information:**

Ronald Elliott, A.A.E.
Interim Airport Director
rkelliott@idahofalls.gov
208-612-8224

Jayme Verish, C.M., ASC
Assistant Airport Director
jverish@idahofalls.gov
208-612-8267

Nathan Cuvala, P.E.
Project Manager
ncuvala@ardurra.com
208-323-2288

Wayne Reiter, A.A.E.
Aviation Planner
wreiter@ardurra.com
208-762-3644

### Airport Master Plan Overview and Project Update

An Airport Master Plan is a 20-year plan to safely and efficiently meet aviation demand at an airport.

- This project began in July of 2021
- Kickoff meeting in August of 2021
- Forecast and Facility Requirements public open house in October of 2022
- Airport Master Plans are normally a 2-year process
- We are about 70% through the technical aspects of this Airport Master Plan
- Completed: Introduction, Existing Conditions (Socioeconomic Overview, Background, Inventory), Forecast of Aviation Demand, Facility Requirements, Environmental Overview, Recycling Plan, Compliance, and Survey
- Now: Development of Alternatives to meet the facility requirements
- Next: Selection of a Preferred Alternative, then implementation plan and complete the ALP
- Project website with draft documents: https://www.ifairportmp.com/



### Forecast Summary and Critical Aircraft

Passenger enplanements are projected to grow at 1.9%. Cargo movement is projected to grow at 3.9%. Overall operations are projected to grow at 0.9%. The critical aircraft are as follows:

Commercial Airline: Airbus A319/320

Cargo: ATR 72

General Aviation: Challenger 300

| Forecast Year | Itinerant | | | | | | Local | | Total Airport Operations |
|---|---|---|---|---|---|---|---|---|---|
| | Enpl | Airline Ops | Cargo (Lbs.) | Cargo Ops | GA Ops/Air Taxi | Military Ops | GA Ops | Military Ops | |
| 2021 (Baseline) | 223,741 | 7,856 | 6,288,882 | 676 | 17,228 | 259 | 7,402 | 235 | 33,656 |
| 2026 | 289,508 | 9,468 | 9,952,995 | 843 | 18,017 | 286 | 7,604 | 235 | 36,453 |
| 2031 | 300,869 | 9,484 | 11,072,550 | 918 | 18,843 | 319 | 7,812 | 235 | 37,611 |
| 2041 | 326,041 | 9,570 | 13,488,226 | 1,071 | 20,610 | 389 | 8,244 | 235 | 40,119 |
| CAGR | 1.9% | 1.0% | 3.9% | 2.3% | 0.9% | 2.1% | 0.5% | 0% | 0.9% |



### Facility Requirements Summary

**AIRFIELD**

- Relocate Runway 3 windcone outside of the Runway Safety Area (RSA)
- Expand runway shoulders and blast pads
- Expand taxiway width and shoulders
- Eliminate the direct access to Runway 17/35 at Taxiway C from the GA parking apron
- Relocate the deicing pad
- Relocate the VOR-DME
- Add an additional 41 hangars
- Reconfigure GA parking spaces

**LANDSIDE**

- Expand the terminal building and add two additional aircraft gates
- Expand the economy and employee parking lots
- Expand the rental car facility
- Expand the cargo apron and processing building
- Expand the SRE building
- Expand the terminal access road

**Recommendations**

- Relocate the Airport Traffic Control Tower (ATCT) to allow for terminal expansion
- Relocate the Aircraft Rescue and Firefighting (ARFF) station to allow for cargo expansion
- Eliminate terrain obstruction at the Runway 21 end
- Add approach lighting system to Runway 3 end
- Assess drainage infrastructure capacity and structural integrity
- Reconfigure parking lot access points from N. Skyline Drive
- Add electric vehicle (EV) charging stations to parking lot expansions



### Draft Alternatives Summary

**TERMINAL AREA PHASE 1 AND 2**

- Relocate ARFF and FedEx
- Relocate the rental cars
- Expand the terminal building
- Realign and widen Skyline Drive
- Add a transit station near the terminal
- Relocate and expand employee parking
- Add a cell phone waiting lot
- Add a parking garage
- Expand the SRE building and maintenance yard
- Add a second lane at the terminal curbside
- Relocate the Airport Traffic Control Tower

**EAST SIDE GENERAL AVIATION**

- Determine if Runway 17/35 should be closed or remain open
- Add small hangars
- Replace the community garden with a rental car overflow parking lot
- Enhance the retention basin for drainage

**SOUTH QUAD GENERAL AVIATION**

- Add medium and large hangars
- Add taxiways for circulation
- Expand the apron for more aircraft parking
- Maintain the existing retention basin for drainage

**WEST SIDE DEVELOPMENT PHASE 1**

- Add space for two air cargo operators (FedEx plus one additional operator)
- Add a parallel taxiway
- Acquire land
- Provide space for two potential ARFF locations
- Maintain the soccer fields and existing road access

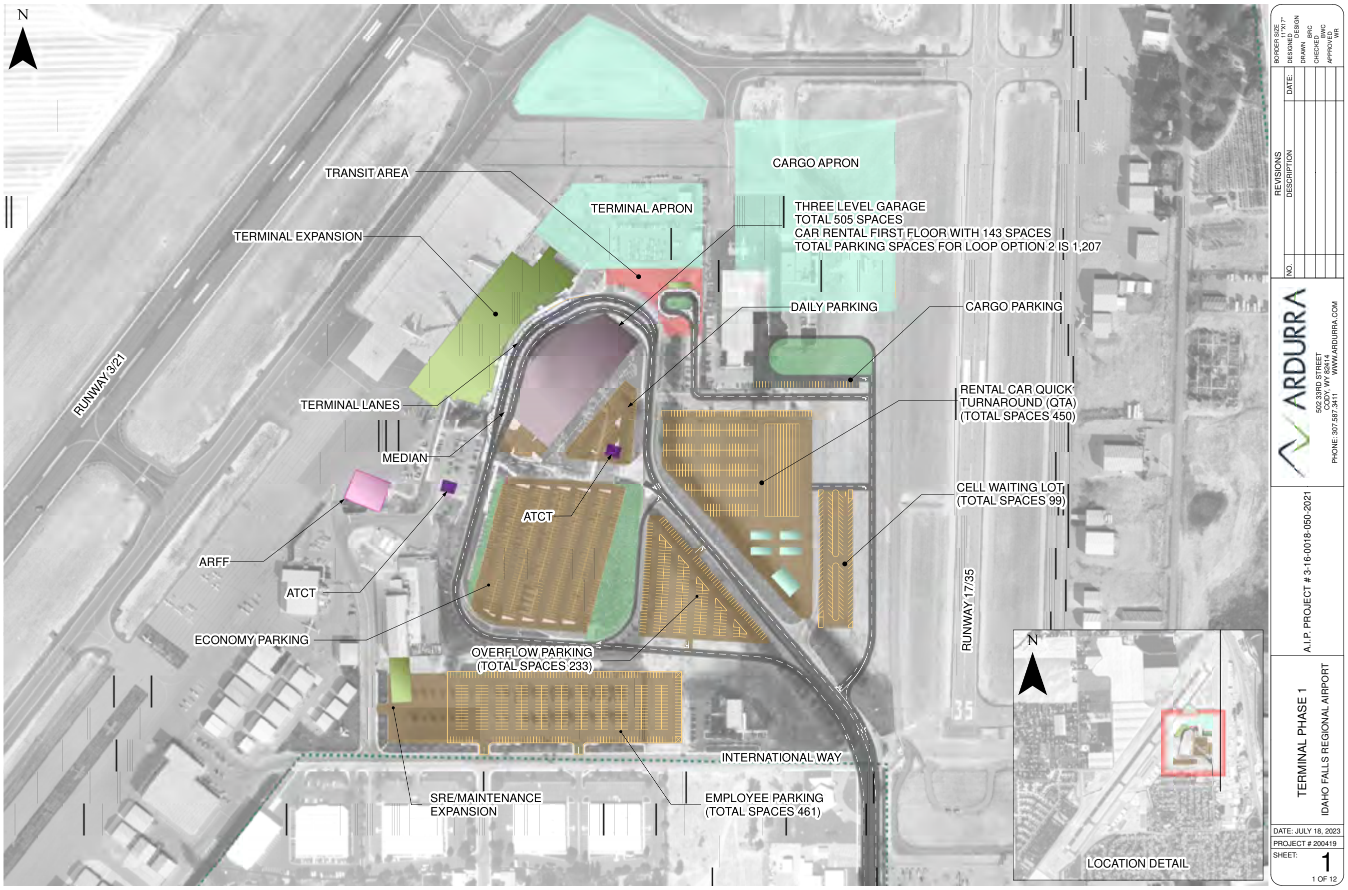
**WEST SIDE DEVELOPMENT PHASE 2**

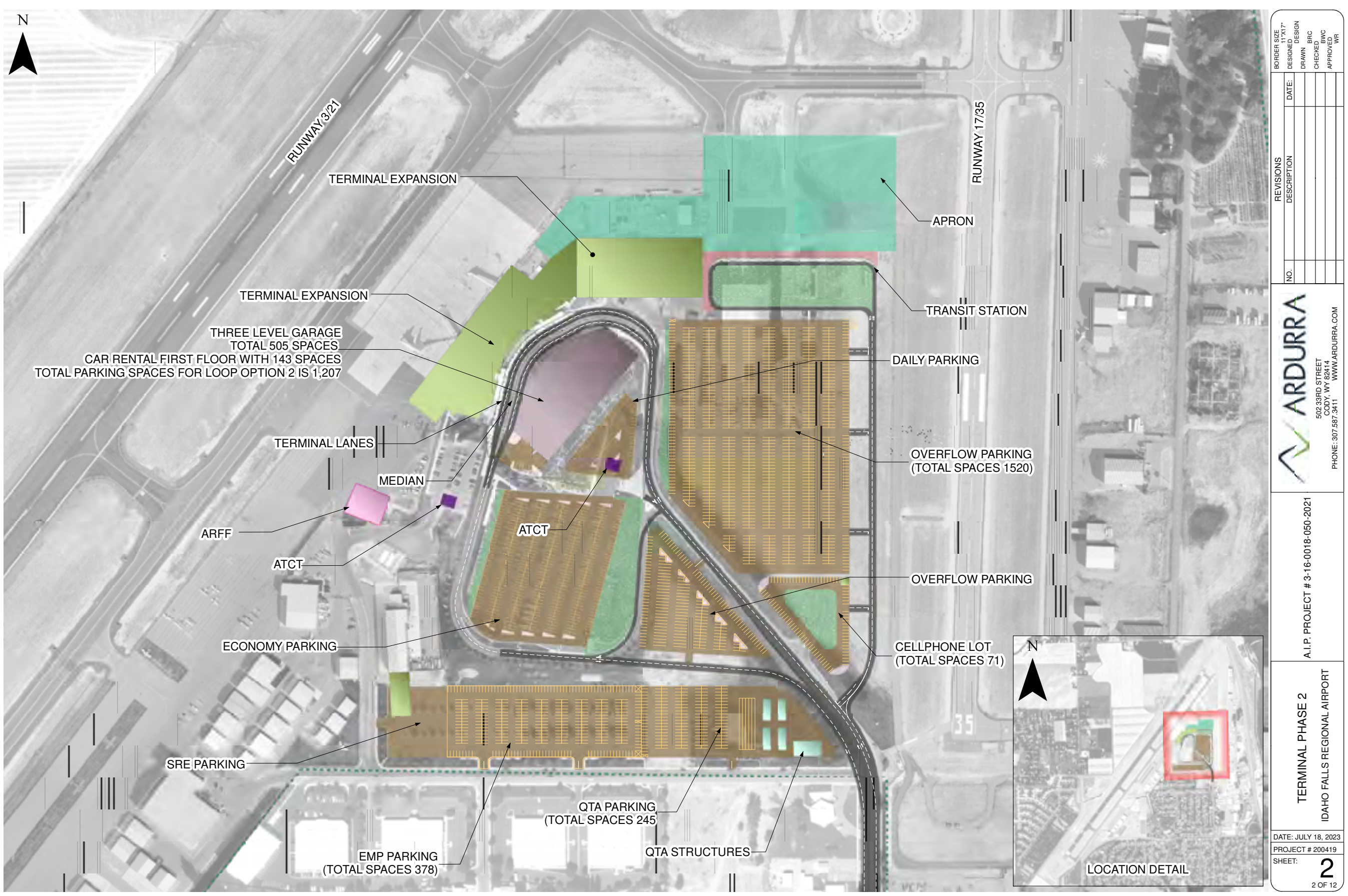
- Primarily a land use protection alternative
- Future airport development - based on demand
- Relocates Old Butte Road to make the property available for future planning needs

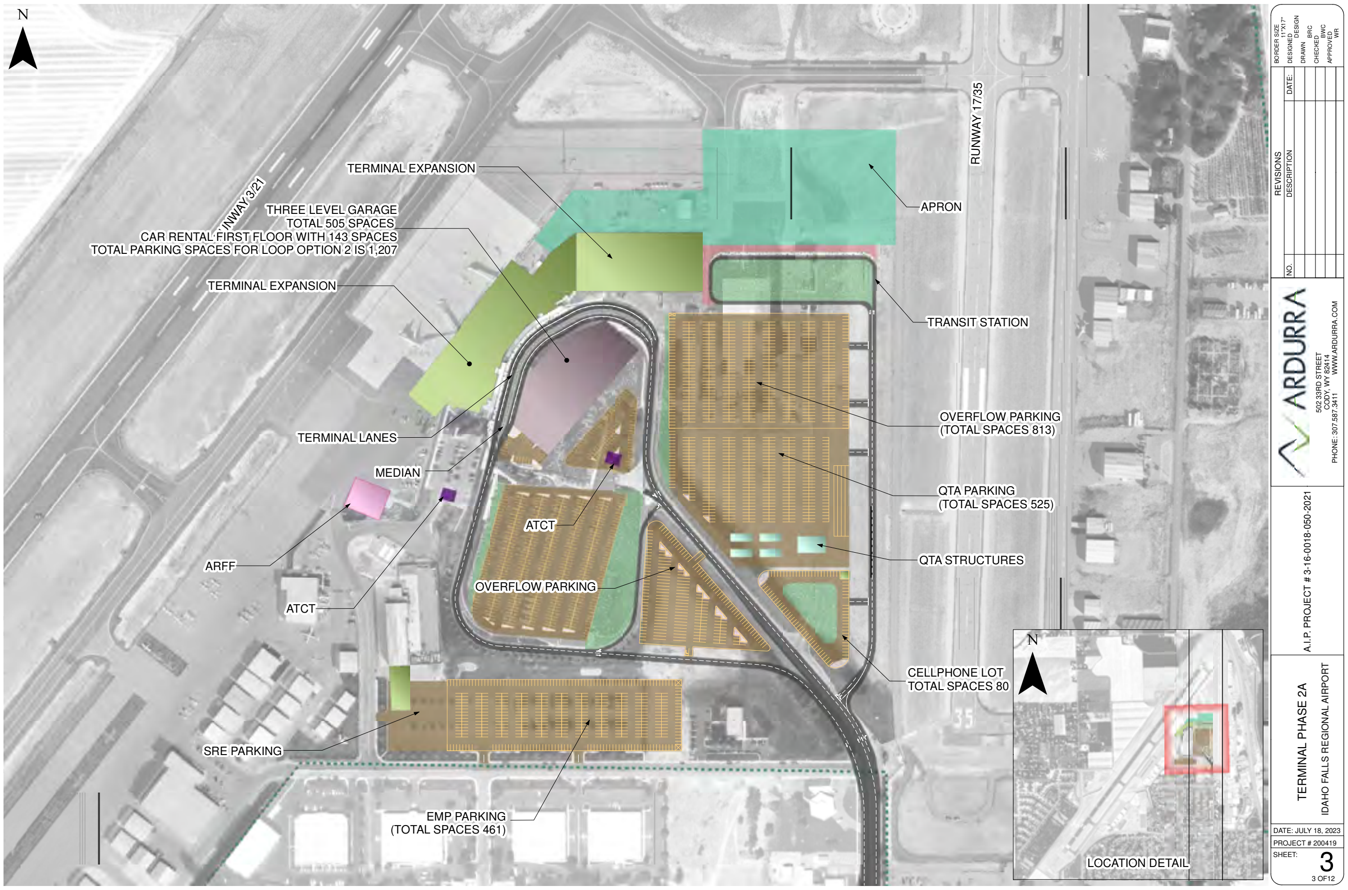
**WEST SIDE TERMINAL CONCEPT**

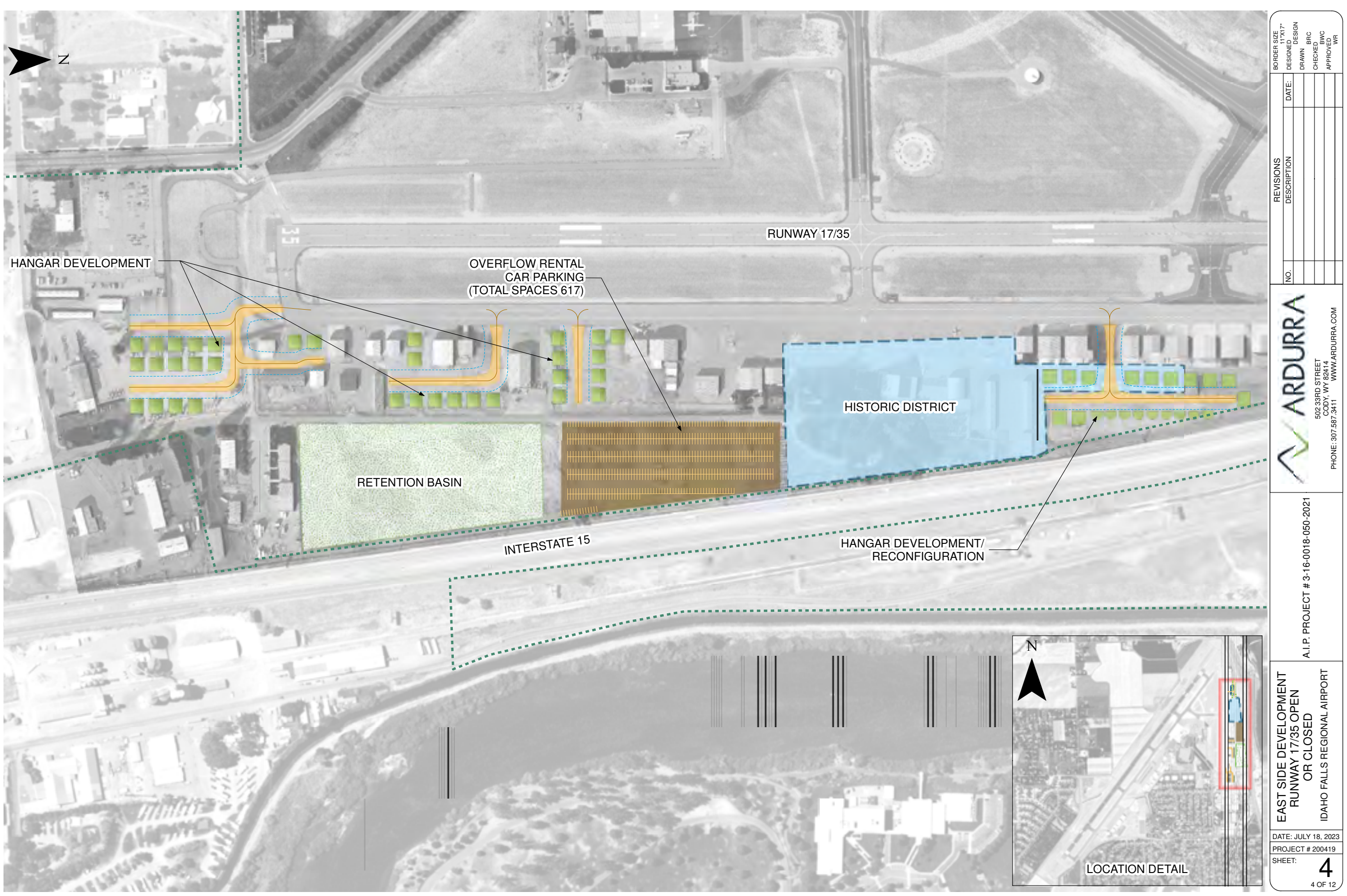
- An option if the north I-15/US 20 interchange takes place
- Build a completely new terminal area in the northwest corner of the airport
- This concept is likely beyond the planning horizon of this master plan
- Primarily a land use protection alternative

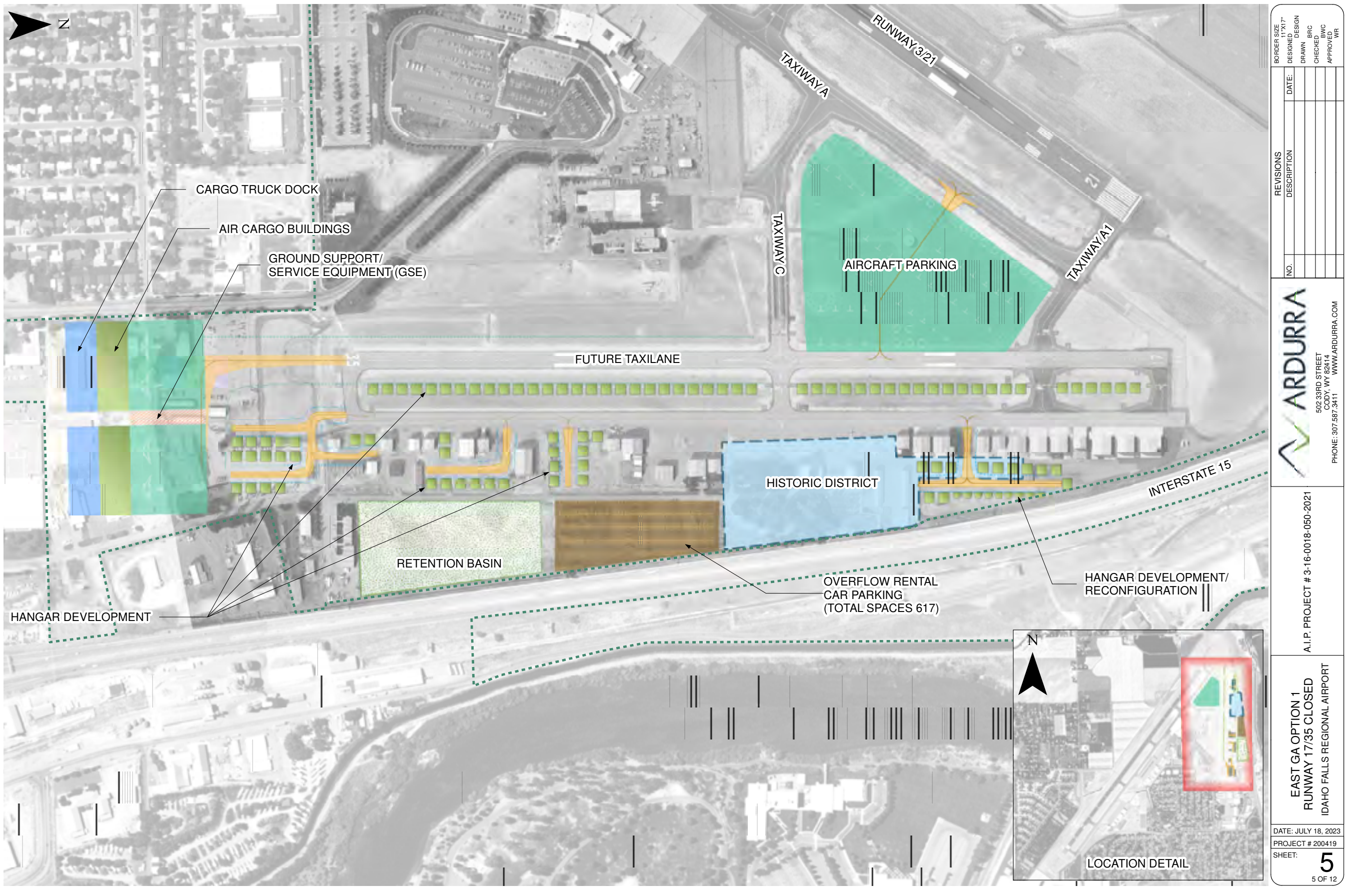
## c. Posters and Exhibits




N
TERMINAL EXPANSION
RUNWAY 3/21
THREE LEVEL GARAGE
TOTAL 505 SPACES
CAR RENTAL FIRST FLOOR WITH 143 SPACES
TOTAL PARKING SPACES FOR LOOP OPTION 2 IS 1,207
TERMINAL EXPANSION
TERMINAL LANES
MEDIAN
ARFF
ATCT
ATCT
OVERFLOW PARKING
SRE PARKING
EMP PARKING
(TOTAL SPACES 461)
RUNWAY 17/35
APRON
TRANSIT STATION
OVERFLOW PARKING
(TOTAL SPACES 813)
QTA PARKING
(TOTAL SPACES 525)
QTA STRUCTURES
CELLPHONE LOT
TOTAL SPACES 80
LOCATION DETAIL
REVISIONS
NO.
DESCRIPTION
DATE
ARDURRA
A.I.P. PROJECT # 3-16-0018-050-2021
TERMINAL PHASE 2A
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET:
3
3 OF 12


N
RUNWAY 17/35
HANGAR DEVELOPMENT
OVERFLOW RENTAL
CAR PARKING
(TOTAL SPACES 617)
HISTORIC DISTRICT
RETENTION BASIN
INTERSTATE 15
HANGAR DEVELOPMENT/
RECONFIGURATION
LOCATION DETAIL
REVISIONS
NO.
DESCRIPTION
DATE
ARDURRA
A.I.P. PROJECT # 3-16-0018-050-2021
EAST SIDE DEVELOPMENT
RUNWAY 17/35 OPEN
OR CLOSED
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET:
4
4 OF 12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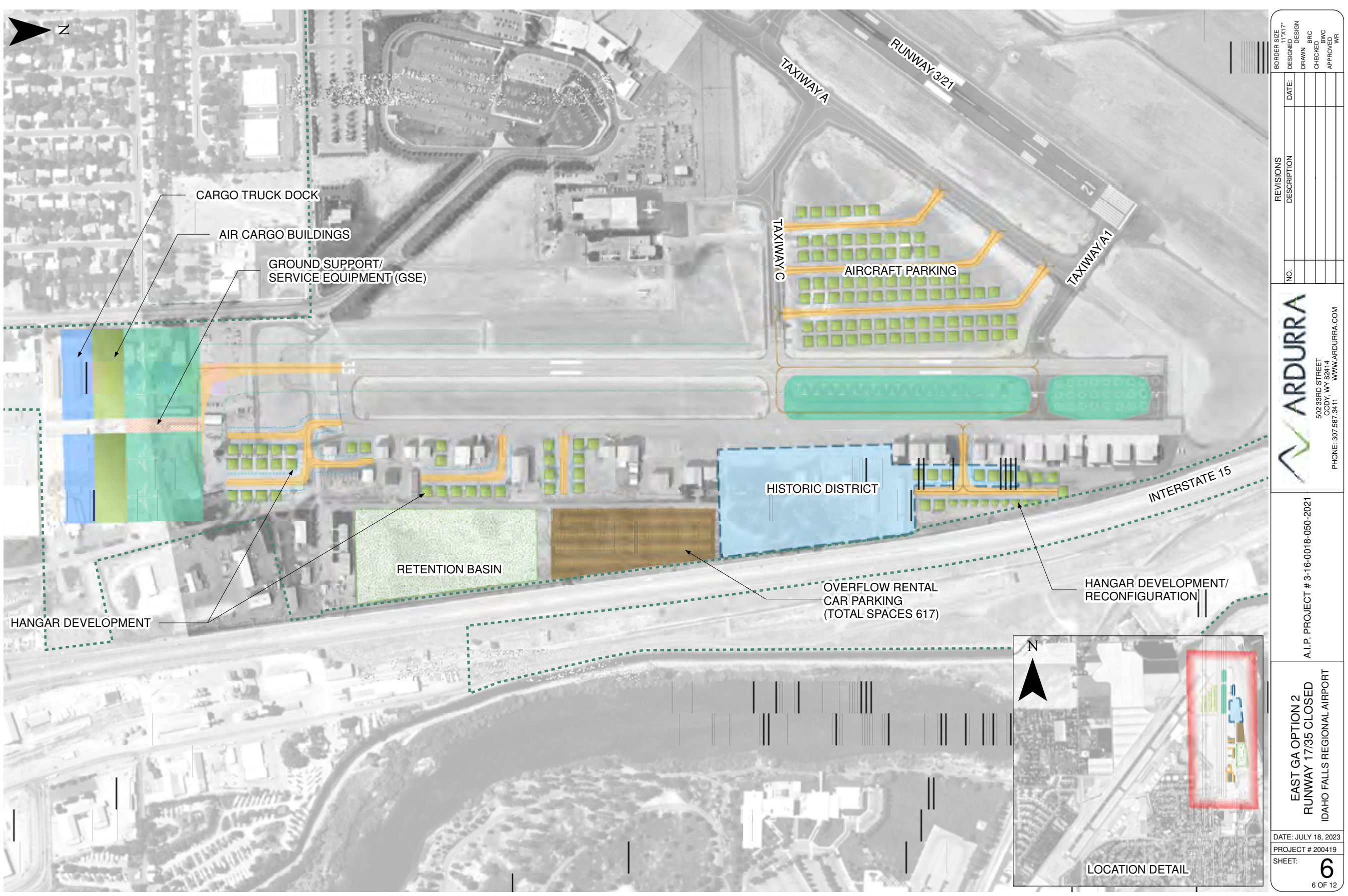
RUNWAY 3/21
TAXIWAY A
TAXIWAY C
TAXIWAY A1
CARGO TRUCK DOCK
AIR CARGO BUILDINGS
GROUND SUPPORT/
SERVICE EQUIPMENT (GSE)
AIRCRAFT PARKING
FUTURE TAXILANE
HISTORIC DISTRICT
INTERSTATE 15
RETENTION BASIN
OVERFLOW RENTAL
CAR PARKING
(TOTAL SPACES 617)
HANGAR DEVELOPMENT/
RECONFIGURATION
HANGAR DEVELOPMENT
LOCATION DETAIL
REVISIONS
NO.
DESCRIPTION
DATE
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411
WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
EAST GA OPTION 1
RUNWAY 17/35 CLOSED
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET:
5
5 OF 12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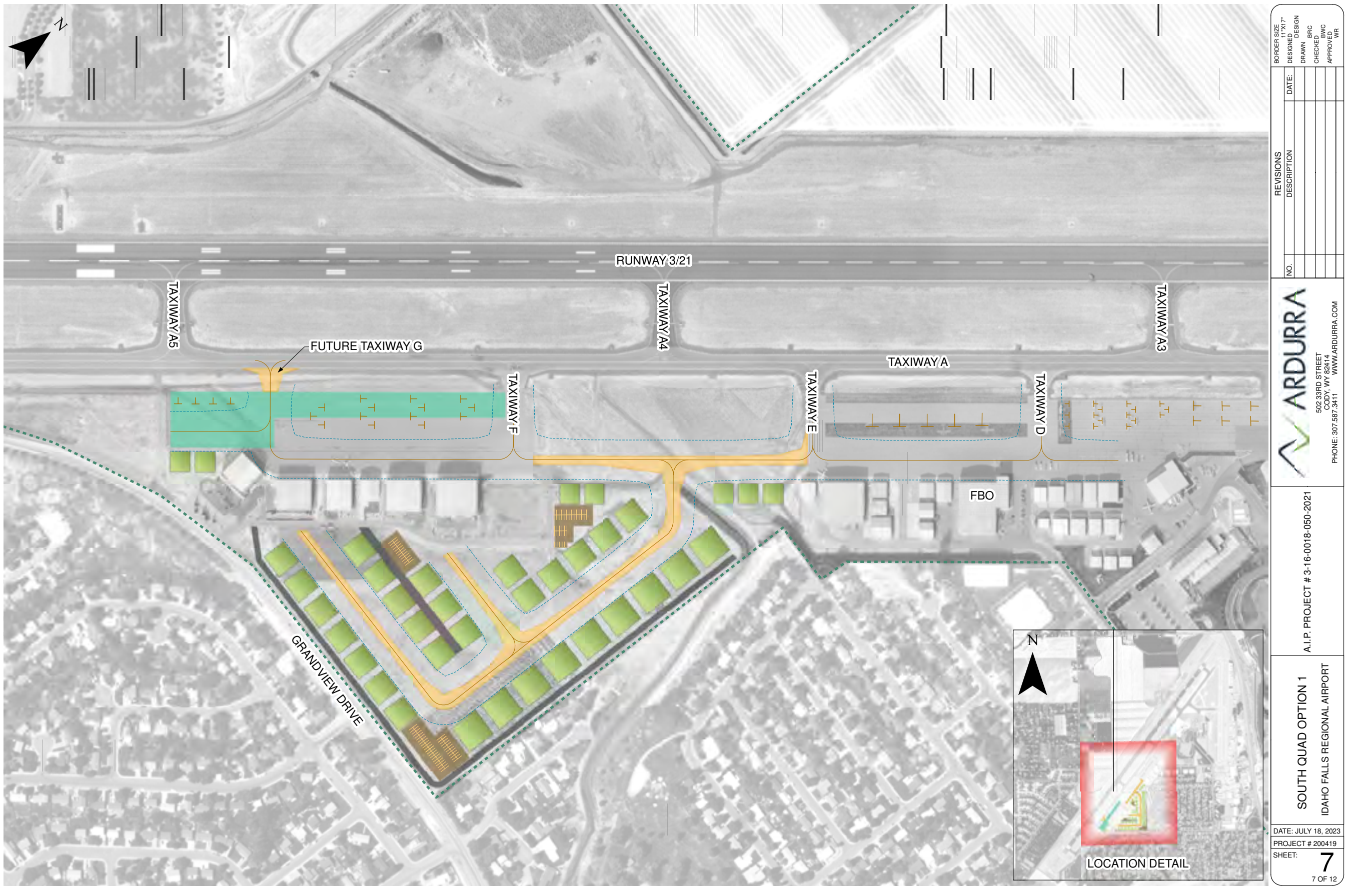
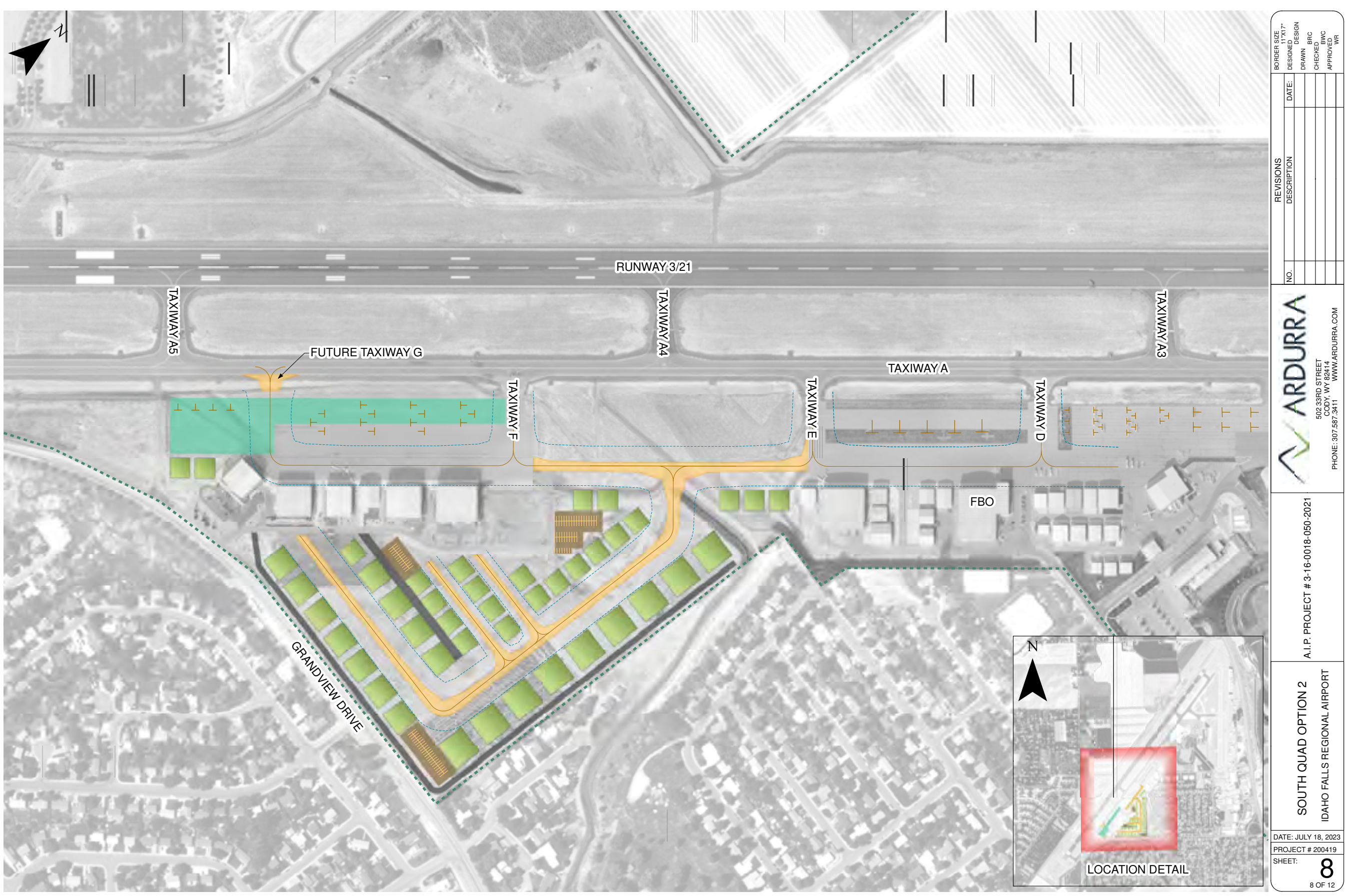
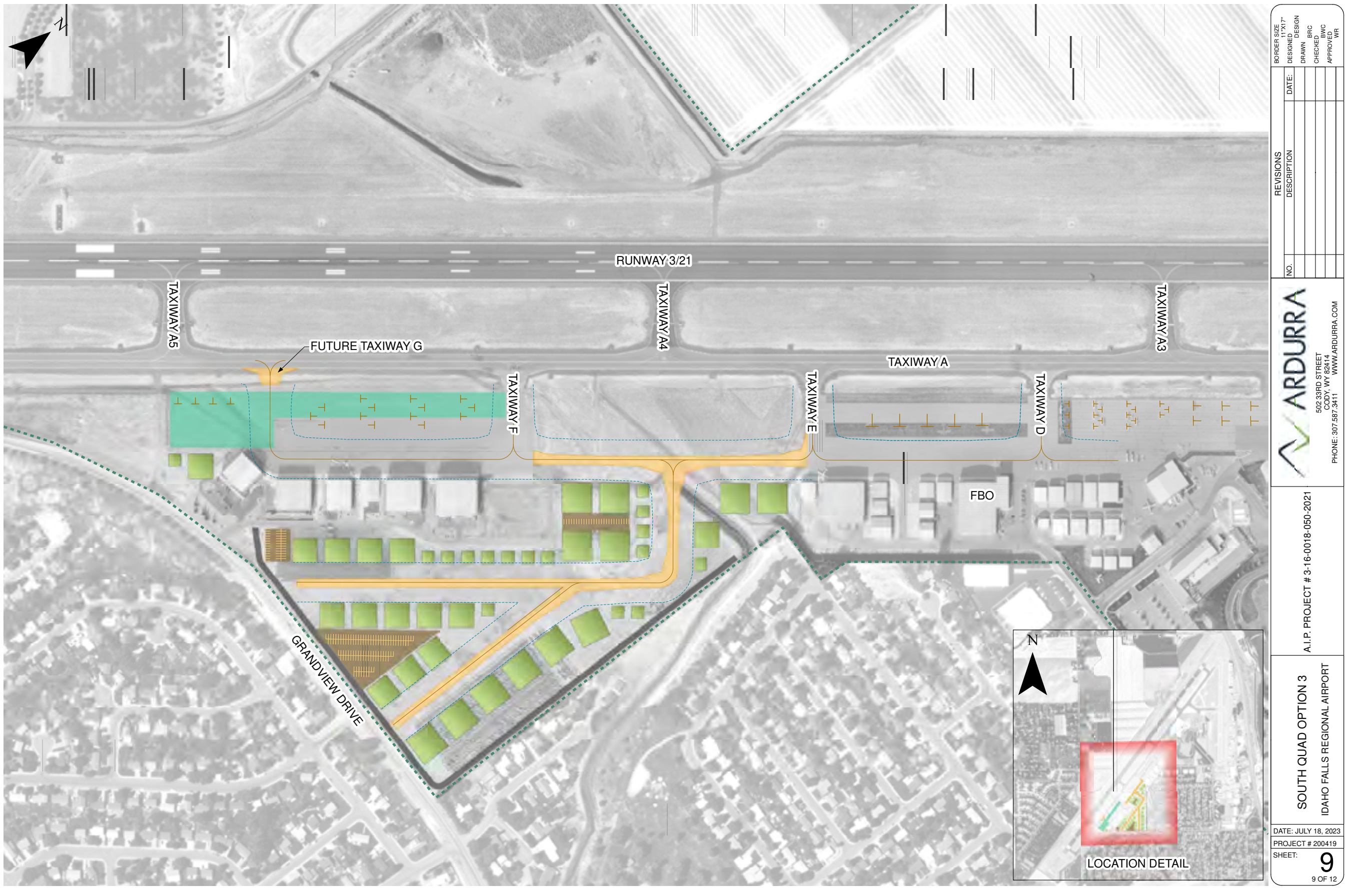
RUNWAY 3/21
TAXIWAY A
TAXIWAY C
TAXIWAY A1
CARGO TRUCK DOCK
AIR CARGO BUILDINGS
GROUND SUPPORT/
SERVICE EQUIPMENT (GSE)
AIRCRAFT PARKING
HISTORIC DISTRICT
INTERSTATE 15
RETENTION BASIN
OVERFLOW RENTAL
CAR PARKING
(TOTAL SPACES 617)
HANGAR DEVELOPMENT/
RECONFIGURATION
HANGAR DEVELOPMENT
LOCATION DETAIL
REVISIONS
NO.
DESCRIPTION
DATE
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411
WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
EAST GA OPTION 2
RUNWAY 17/35 CLOSED
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET:
6
6 OF 12


N
RUNWAY 3/21
TAXIWAY A5
TAXIWAY A4
TAXIWAY A3
FUTURE TAXIWAY G
TAXIWAY A
TAXIWAY F
TAXIWAY E
TAXIWAY D
FBO
GRANDVIEW DRIVE
N
LOCATION DETAIL
BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR
DATE:
REVISIONS
DESCRIPTION
NO.
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411 WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
SOUTH QUAD OPTION 1
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET: 7
7 OF 12


N
RUNWAY 3/21
TAXIWAY A5
TAXIWAY A4
TAXIWAY A3
FUTURE TAXIWAY G
TAXIWAY A
TAXIWAY F
TAXIWAY E
TAXIWAY D
FBO
GRANDVIEW DRIVE
N
LOCATION DETAIL
BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR
DATE:
REVISIONS
DESCRIPTION
NO.
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411 WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
SOUTH QUAD OPTION 2
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET: 8
8 OF 12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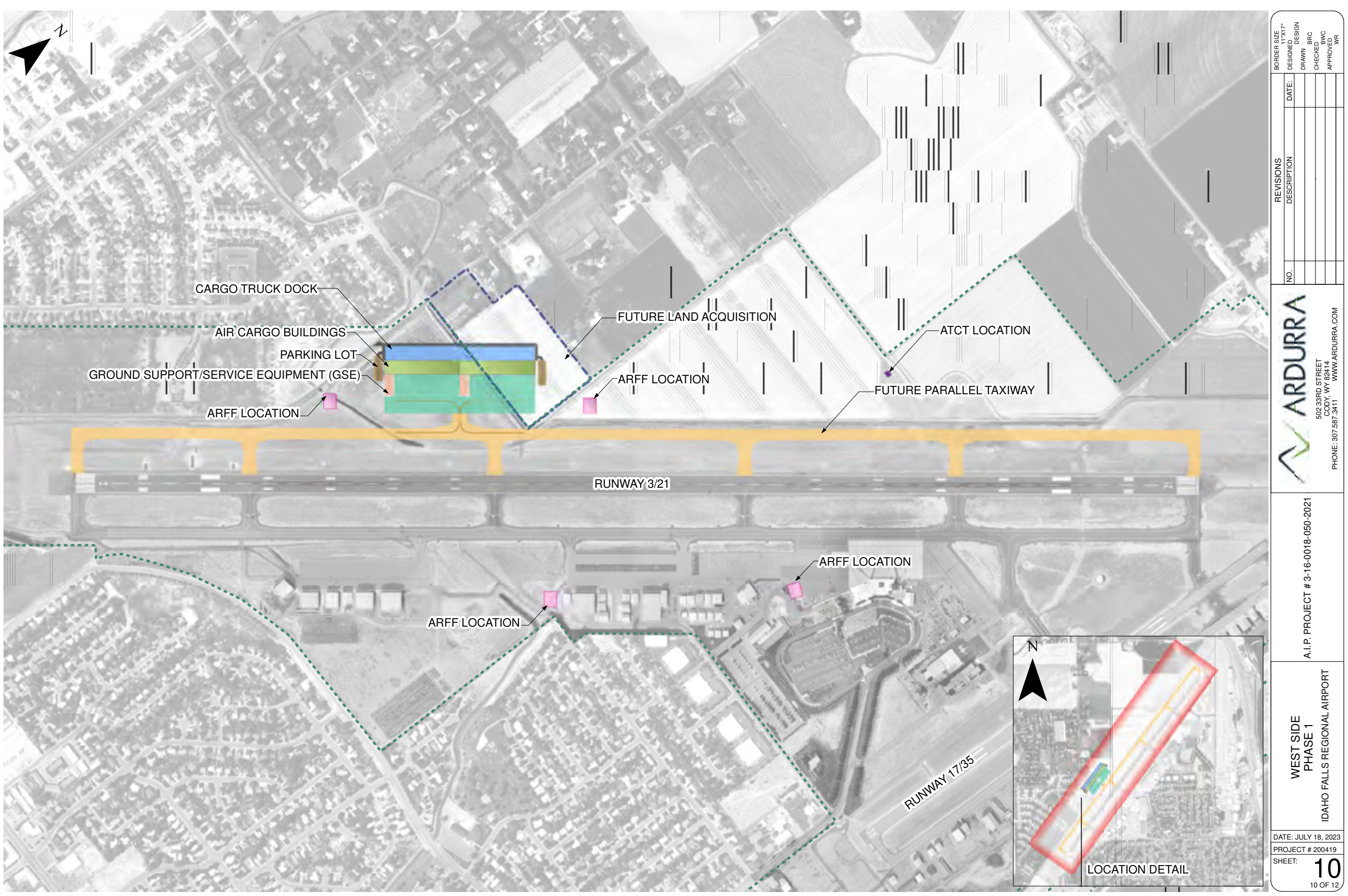
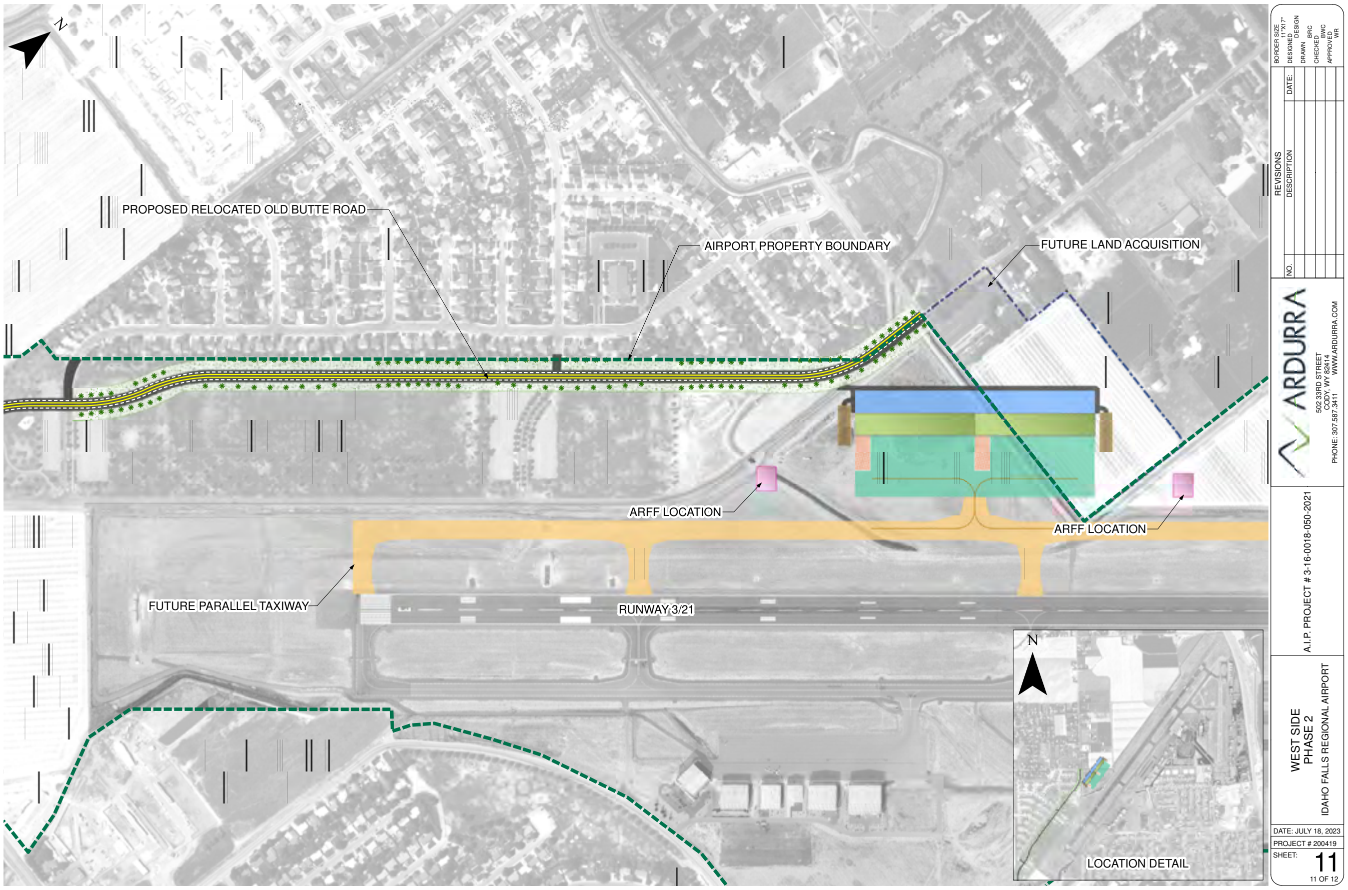
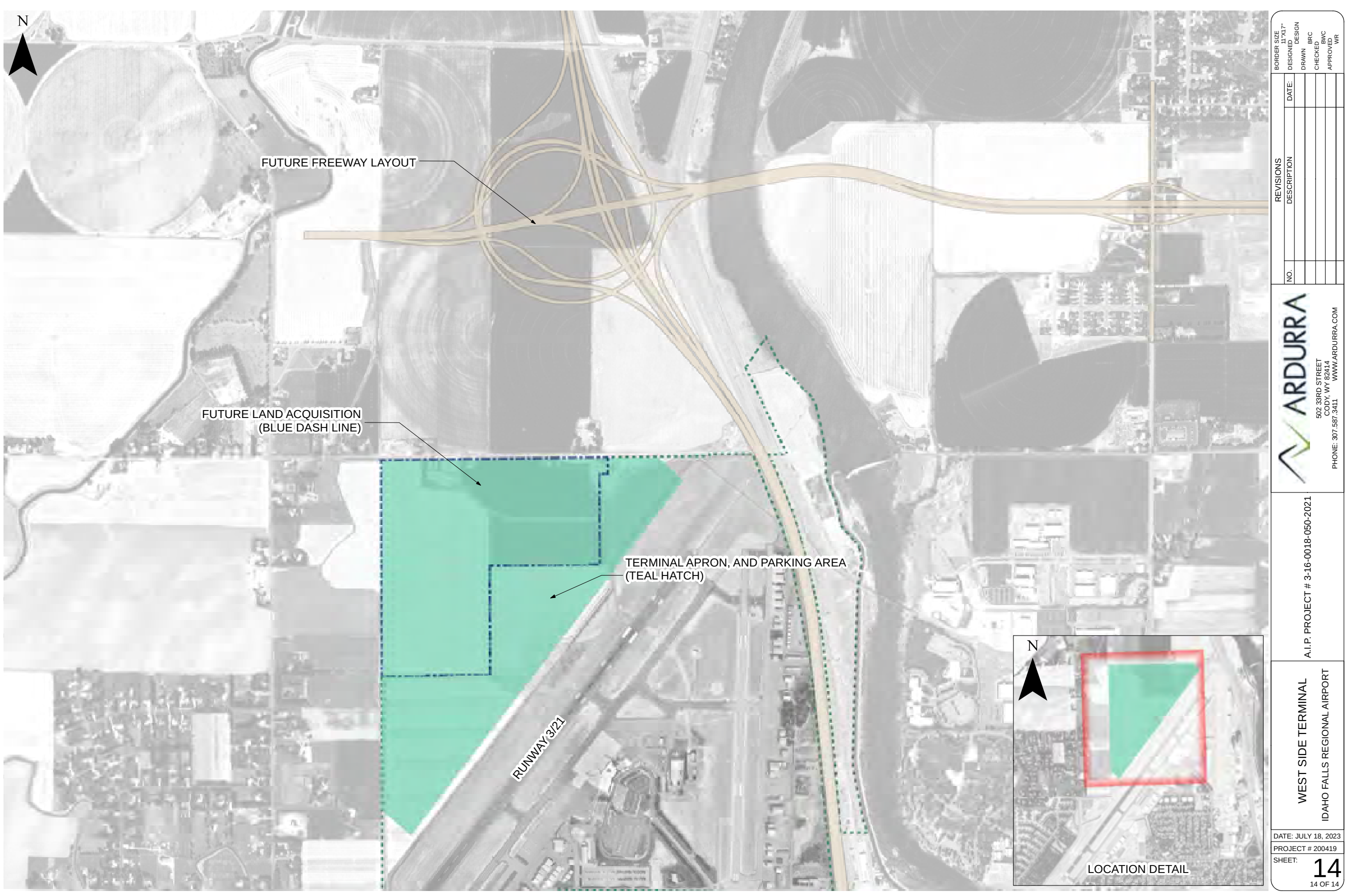
RUNWAY 3/21
TAXIWAY A5
TAXIWAY A4
TAXIWAY A3
FUTURE TAXIWAY G
TAXIWAY A
TAXIWAY F
TAXIWAY E
TAXIWAY D
FBO
GRANDVIEW DRIVE
LOCATION DETAIL
REVISIONS
NO.
DESCRIPTION
DATE
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411
WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
SOUTH QUAD OPTION 3
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET:
9
9 OF 12


N
CARGO TRUCK DOCK
AIR CARGO BUILDINGS
PARKING LOT
GROUND SUPPORT/SERVICE EQUIPMENT (GSE)
ARFF LOCATION
FUTURE LAND ACQUISITION
ATCT LOCATION
ARFF LOCATION
FUTURE PARALLEL TAXIWAY
RUNWAY 3/21
ARFF LOCATION
ARFF LOCATION
RUNWAY 17/35
LOCATION DETAIL
REVISIONS
NO.
DESCRIPTION
DATE
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411
WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
WEST SIDE
PHASE 1
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET:
10
10 OF 12


N
PROPOSED RELOCATED OLD BUTTE ROAD
AIRPORT PROPERTY BOUNDARY
FUTURE LAND ACQUISITION
ARFF LOCATION
ARFF LOCATION
FUTURE PARALLEL TAXIWAY
RUNWAY 3/21
N
LOCATION DETAIL
BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BWC
CHECKED BWC
APPROVED WR
NO. REVISIONS DESCRIPTION DATE
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411 WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
WEST SIDE PHASE 2
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET: 11
11 OF 12

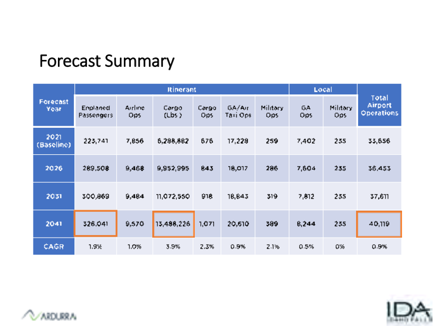

N
FUTURE FREEWAY LAYOUT
FUTURE LAND ACQUISITION
(BLUE DASH LINE)
TERMINAL APRON, AND PARKING AREA
(TEAL HATCH)
RUNWAY 3/21
N
LOCATION DETAIL
BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BWC
CHECKED BWC
APPROVED WR
NO. REVISIONS DESCRIPTION DATE
ARDURRA
502 33RD STREET
CODY, WY 82414
PHONE: 307.587.3411 WWW.ARDURRA.COM
A.I.P. PROJECT # 3-16-0018-050-2021
WEST SIDE TERMINAL
IDAHO FALLS REGIONAL AIRPORT
DATE: JULY 18, 2023
PROJECT # 200419
SHEET: 14
14 OF 14

# d. Presentation



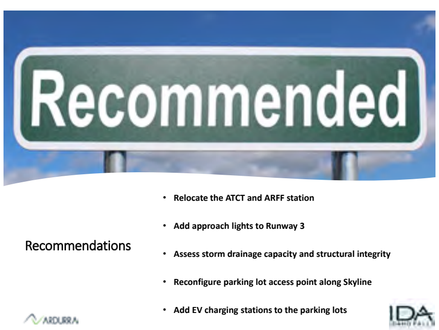


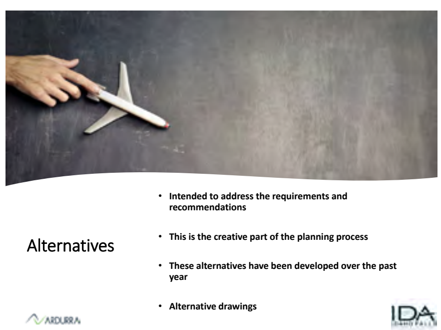


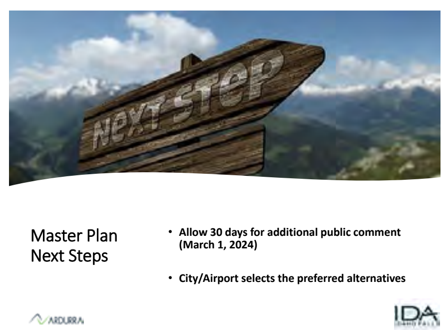



| Forecast Year | Itinerant | | | | | | Local | | Total Airport Operations |
|---|---|---|---|---|---|---|---|---|---|
| | Enplaned Passengers | Airline Ops | Cargo (Lbs ) | Cargo Ops | GA/Air Taxi Ops | Military Ops | GA Ops | Military Ops | |
| 2021 (Baseline) | 223,741 | 7,856 | 6,298,882 | 676 | 17,228 | 259 | 7,402 | 235 | 33,656 |
| 2026 | 289,508 | 9,468 | 9,952,995 | 843 | 18,017 | 286 | 7,604 | 235 | 36,453 |
| 2031 | 300,869 | 9,484 | 11,072,550 | 918 | 18,843 | 319 | 7,812 | 235 | 37,611 |
| 2041 | 326,041 | 9,570 | 13,488,226 | 1,071 | 20,610 | 389 | 8,244 | 235 | 40,119 |
| CAGR | 1.9% | 1.0% | 3.9% | 2.3% | 0.9% | 2.1% | 0.5% | 0% | 0.9% |







## e. News Releases, Invitations, and Notifications

City of Idaho Falls News

Posted on: December 12, 2023

### Idaho Falls Regional Airport seeks public input for ongoing master plan process

IDAHO FALLS – The Idaho Falls Regional Airport invites the public to discuss the airport's future as part of the ongoing master planning process.

A public open house will be held on Jan. 10, 2024, at the Idaho Falls Activity Center from 3 to 8 p.m. The open house will allow the community to see proposed concepts of the use of airport property to meet our region's future needs. This point in the process is now the time for the public to provide input and comment.

"Public feedback is essential to any airport master planning process," said Interim Idaho Falls Regional Airport Director Ron Elliott. "As we continue to work through this process that serves as a guide to the airport's future, we will continue to keep our community informed, listen to and acknowledge concerns, and provide feedback on our effort to incorporate public input while still meeting the demands and requirements of modern air service."

For those unable to attend in person, an online meeting will be available at HERE from Jan. 3 to Feb. 17, 2024. The airport asks comments to be submitted no later than Feb. 9, 2024.

The IDA Airport Master Plan is a comprehensive study of the airport to help identify the short, medium, and long-term development plans needed to support future aviation demand. The plan provides the developmental framework for the airport to ensure appropriate planning for future needs.

The plan is updated every five to 10 years to ensure compliance with changes in airport design, economic changes, technological changes in aviation and passenger travel needs. The last IDA Master Plan was completed in 2010.

This current comprehensive master planning process was initiated in August of 2021. Studies completed during the undertaking detail an increase in passenger travel and significant growth in air cargo operations.

Throughout the master planning process, the airport has held three public meetings and shared detailed information online at www.ifairportmp.com.

"We look forward to ongoing this robust process that allows us to hear from a wide variety of airport stakeholders and neighbors. We encourage anyone interested in the airport and its future to keep participating. While we can't meet everyone's specific desires, we do appreciate and value their thoughts as we work forward to creating an airport that meets our community's future needs," Elliott said.

\# # #

**Media Note:** For more information or to schedule an interview, please contact City of Idaho Falls Public Information Officer Eric Grossarth at (208) 612-8562 or egrossarth@idahofalls.gov.

Home › News Flash

City of Idaho Falls News

Posted on: January 19, 2024

### Idaho Falls Regional Airport master plan open house rescheduled


IDAHO FALLS – The Idaho Falls Regional Airport master plan open house has been rescheduled after the weather postponed the event in early January.

The open house is now set for Feb. 7, 2024, from 4 to 6 p.m., followed by a presentation and Q&A session from 6 to 8 p.m. The in-person open house will take place at the Idaho Falls Activity Center at 1575 North Skyline Drive.

For those unable to attend in person, the online meeting that launched Jan. 9 will remain available until March 1. The online meeting can be found at www.ifairportmp.com/meeting-3.

The IDA Airport Master Plan is a comprehensive study of the airport to help identify the short, medium, and long-term development plans needed to support future aviation demand. The plan provides the developmental framework for the airport to ensure appropriate planning for future needs.

The plan is updated every five to 10 years to ensure compliance with changes in airport design, economic changes, technological changes in aviation and passenger travel needs. The last IDA Master Plan was completed in 2010.

This current comprehensive master planning process was initiated in August of 2021. Studies completed during the undertaking detail an increase in passenger travel and significant growth in air cargo operations.

Throughout the master planning process, the airport has held three public meetings and shared detailed information online at www.ifairportmp.com. The public is also able to provide public input on this site.

\# # #

**Media Note:** For more information, please contact City of Idaho Falls Public Information Officer Eric Grossarth at (208) 612-8562 or egrossarth@idahofalls.gov.

RESCHEDULED

IDA IDAHO FALLS REGIONAL AIRPORT

Idaho Falls Regional Airport
ATT: Ron Elliott
Interim Airport Director
2140 Skyline Dr.
Idaho Falls, ID 83402

**Idaho Falls Regional Airport In-Person Public Meeting**

The January 10 in-person meeting (postponed due to inclement weather) is now rescheduled. We apologize for any inconvenience.

We will share future plans to improve facilities and operations at the Idaho Falls Regional Airport.


**PLEASE JOIN US!**

Airport staff and the master plan consultant will share information on potential alternatives to meet short-, medium-, and long-term development plans to meet aviation demand over the next 20 years.

**IN-PERSON MEETING**

Wednesday, February 7, 2024

**Schedule:**
Open House: 4 p.m. – 6 p.m.
Presentation: 6 p.m. – 6:30 p.m.
Q&A Session: 6:30 p.m. – 8 p.m.

**Location:**
Idaho Falls Activity Center
1575 N. Skyline Dr.
Idaho Falls, ID 83402

**Online Meeting**

The online meeting launched in January is still available at **ifairportmp.com/meeting-3**

Comments are due by **March 1, 2024.**

**Contact:**
**Wayne Reiter**
wreiter@ardurra.com
(208) 762-3644

City of Idaho Falls
December 15 at 6:30 AM ·

The Idaho Falls Regional Airport invites the public to discuss the airport's future as part of the ongoing master planning process.

A public open house will be held on Jan. 10, 2024, at the Idaho Falls Activity Center from 4 to 8 p.m. The open house will allow the community to see proposed concepts of the use of airport property to meet our region's future needs. This point in the process is now the time for the public to provide input and comment.

Throughout the master pla... See more


35 12 20

Idaho Falls Regional Airport
December 13 at 12:51 PM ·

The Idaho Falls Regional Airport invites the public to discuss the airport's future as part of the ongoing master planning process.

A public open house will be held on Jan. 10, 2024, at the Idaho Falls Activity Center from 4 to 8 p.m. The open house will allow the community to see proposed concepts of the use of airport property to meet our region's future needs. This point in the process is now the time for the public to provide input and comment.

Throughout the master pla... See more


6 1

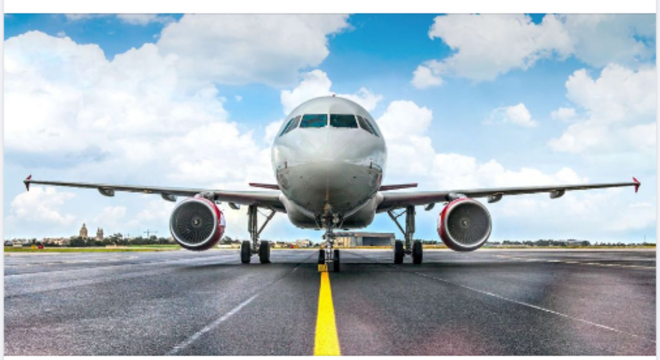
Like Comment

Idaho Falls Regional Airport
December 27, 2023 at 8:45 AM ·

For airports like IDA that support commercial, air cargo, and general aviation, it's crucial that we understand how to design for the types of aircraft that we serve most.

As part of our Master Plan, we're using these aircraft to determine design updates for our taxiways, runways, and more. Learn more about these updates at https://www.ifairportmp.com/

#iflyIDA #IdahoFalls #Airport



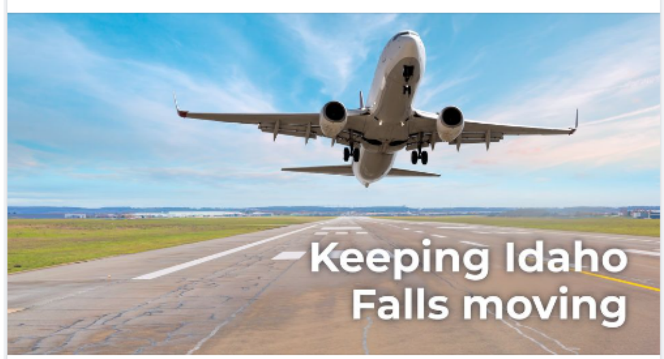
18 2

Idaho Falls Regional Airport
1d ·

Planning for the growth of IDA includes forecasting for the increase in takeoffs, landings, and other aircraft operations over the next 30 years 🛫 With our Airport Master Plan, we aim to upgrade our facilities to meet demand and keep things moving – including you!

Find more information and forecasted numbers at https://www.ifairportmp.com/

#IflyIDA #IdahoFalls




12

Like Comment

City of Idaho Falls
4h ·

Don't forget the Idaho Falls Regional Airport public open house for the master plan is ONE WEEK away. Learn more at the post below.


Idaho Falls Regional Airport
5h ·

REMINDER: Next Wednesday, Jan. 10, we're hosting a public open house for the Idaho Falls Airport Master Plan. We'll be at the Idaho Falls Activity Center from 4 PM to 8 PM, where you can learn more and comment on proposed concepts for the future of IDA.

If you're unable to attend, visit https://www.ifairportmp.com/ at any time between January 3 through February 17, 2024 to learn more and provide your feedback. Comments are due by February 9.

#IflyIDA #IdahoFalls

2 1

Idaho Falls Regional Airport
5h ·

REMINDER: Next Wednesday, Jan. 10, we're hosting a public open house for the Idaho Falls Airport Master Plan. We'll be at the Idaho Falls Activity Center from 4 PM to 8 PM, where you can learn more and comment on proposed concepts for the future of IDA.

If you're unable to attend, visit https://www.ifairportmp.com/ at any time between January 3 through February 17, 2024 to learn more and provide your feedback. Comments are due by February 9.

#IflyIDA #IdahoFalls


5 3

Like Comment

Idaho Falls Regional Airport
January 10 at 7:01 AM ·

UPDATE:

With the ongoing winter storm, the Idaho Falls Regional Airport has decided out of an abundance of caution to postpone Wednesday night's master plan open house.

Due to slick roads and continued snow across Idaho, the airport made the decision out of consideration for the safety of attendees, staff and others. The airport will reschedule the open house at a future date and update the public on any future plans. ... See more


20 4 3

Idaho Falls Regional Airport
January 19 at 10:11 AM ·

The Idaho Falls Regional Airport master plan open house has been rescheduled after the weather postponed the event in early January.

The open house is now set for Feb. 7, 2024, from 4 to 6 p.m., followed by a presentation and Q&A session from 6 to 8 p.m. The in-person open house will take place at the Idaho Falls Activity Center at 1575 North Skyline Drive.

For those unable to attend in person, the online meeting that launched Jan. 9 will remain available until March 1. The... See more


8 3 2

City of Idaho Falls
January 22 at 6:45 AM ·


Idaho Falls Regional Airport
January 19 at 10:11 AM ·

The Idaho Falls Regional Airport master plan open house has been rescheduled after the weather postponed the event in early January.

The open house is now set for Feb. 7, 2024, from 4 to 6 p.m., followed by a presentation and Q&A session from 6 to 8 p.m. The in-person open house will take place at the Idaho Falls Activity Center at 1575 North Skyline Drive.

## f. Photos





## g. Sign-In Sheets

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Kevin E. Ward | Bonn Co. P&Z | [redacted] | | |
| Cory Cottrell | Idaho Falls citizen | | | |
| Andrew Mihlkin | Pilot Land Owner | | | |
| Peggy Murdock | Land owner | | | |
| Brandon Deschamps | Citizen | | | |
| Tabitha Hoff | Aeronautic Inc | | | |
| David Gerling | Citizen | | | |
| Troy Robinson | citizen | | | |
| Bob Nitschke | citizen | | | |
| Kurt Derr | " | | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| CRAIG Ruminski | CITIZEN | [redacted] | | |
| Gary/Kim Dixon | citizen | | | |
| Carl Dixon | citizen | | | |
| Sandra Melling | citizen | | | |
| [illegible] | Post Register | | | |
| Cynthia Steele | citizen | | | |
| Herb Rockhill Lynn Rockhill | citizen | | | |
| Myrons Murowski | citizen | | | |
| Marla Carr | citizen | | | |
| ANGIE STEPAN | CITIZEN | | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Scott Davis | Self | [redacted] | | |
| Tammy & Harold Thompson | | | | |
| [illegible] | Self | | | |
| Cole Nesbett | Interested | | | |
| Celina Cain | | | | |
| Kelly Williams | | | | |
| Steve Waskerdi | | | | |
| Ryan McRae | | | | |
| Kevin Williams | | | | |
| Patrick Haney | SELF | | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Mary Toulter | Homeowner | [redacted] | | |
| Lloyd Cook | BLM | | | |
| Bob & Jane Hoff | FBO owner | | | |
| STEVE & DOTTIE LAFLIN | HANGAR OWNER I.F.A.A. | | | |
| Gene & Cheryl Jensen | Homeowner | | | |
| Julie Smith | Home owner | | | |
| Troy Rosio | Atlas | | | |
| GARRETT JENSEN | OWNER | | | |
| [illegible] | owner | | | |
| Kyle Wilson | US. Senator Risch | | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| MICHAEL CARPENTER | SELF | [redacted] | | |
| MARTY & JANE LANGSTON | | | | |
| BOB ROESENER | SELF | | | |
| Ashley Chilcutt & Dave | Local News 8 | | | |
| Wayne [illegible] | | | | |
| Steve Harrison | self | | | |
| DALE CRESAP | SELF | | | |
| STUART PROBSOM | SELF | | | |
| Kurt L Wagner | Self | | | |
| Miriam Cortez | Self | | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| John R Cunningham | Self | [redacted] | | |
| KIRK LARSEN | City | | | |
| Bill Butler | Self/Homeowner | | | |
| Farrell Tracy Virginia Tracy | Self | | | |
| Chris White | Self | | | |
| Wade Allen | ITD | | | |
| Andrew Potts | Self | | | |
| R. Williams | Self | | | |
| Eric Ash | KPVI self weather | | | |
| BRUCE COOK | INL | | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Terrin Kellogg | | [redacted] | | |
| MARK SCALES | INL | [redacted] | | |
| Rose Jones | Scott Blvd | [redacted] | | |
| Kurt Lanhend | Resident of Village | [redacted] | | |
| Lynn Lundberg | | [redacted] | | |
| Aishie Lindula | Advanced Cleaning and Restoration | [redacted] | | |
| Genene Wight | | [redacted] | | |
| Edward Ziemianski | Resident | [redacted] | | |
| Craig Good | Resident | [redacted] | | |
| Audrey Johnson | resident | [redacted] | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Claire Pincock | self MD Acoustics, LLC | [redacted] | | |
| Brad Cramer | INL | [redacted] | | |
| Paul Ahlstrom | Self | [redacted] | | |
| Rensay Owen | self | [redacted] | | |
| NICK GONTOS | SELF | [redacted] | | |
| Bobby Picker | Self | [redacted] | | |
| Landon Mickle | self | [redacted] | | |
| Mark Johnson | SELF | [redacted] | | |
| James Reynolds | retired | [redacted] | | |
| Mark Mason | Pilot | [redacted] | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| FRED KING | N/A | [redacted] | | |
| Dennis Hartman | N/A | [redacted] | | |
| Ernie & Debby Tate | N/A | [redacted] | | |
| Bill and Christin Crane | Village Residents | [redacted] | | |
| Alex Minton | Real IFFC Soccer | [redacted] | | |
| Rob Smith | NA | [redacted] | | |
| Ian Turner | IDA | [redacted] | | |
| CHRIS FREDERICKSEN | CITY OF IF | [redacted] | | |
| Maarie Edwards | N/A | [redacted] | | |
| TED RUMBEY | Home OWNER | [redacted] | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| BRUCE ADAMS | SELF | [redacted] | | |
| KADE MARQUEZ | SELF/GOVT | [redacted] | | |
| Sean Schmidt | Self | [redacted] | | |
| Ruth Byron | self | [redacted] | | |
| Cherie | | [redacted] | | |
| Maria + Rigoberto | | [redacted] | | |
| BRIAN WILSON | TOK | [redacted] | | |
| Syd Withers | Self | [redacted] | | |
| Doug Steel | | [redacted] | | |
| Roger Clapp | SELF | [redacted] | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Ryan Smith | ELECTRICAL WHOLESALE | [redacted] | | |
| Stephen Bertman | IFP | [redacted] | | |
| Richard Thomas | Clear Mark | [redacted] | | |
| Ernest Ogley | | [redacted] | | |
| Doug Miller | neighbor | [redacted] | | |
| Kerry Beutler | City of Idaho Falls | [redacted] | | |
| MacdonaldJ | Homeowner | [redacted] | | |
| Chris Jensen | Homeowner | [redacted] | | |
| Keith + Linda Gifford | Homeowner | [redacted] | | |
| | | [redacted] | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Kim McCall | Homeowner – borders Soccer field | [redacted] | | |
| Jared Gurden | Homeowner | [redacted] | | |
| Anne Hart | pilot | [redacted] | | |
| Karlynn Hiten | Sen. Crapo Office | [redacted] | | |
| Cory Johnston | Home owner Border Soccer field | [redacted] | | |
| DAN MEELEY | LOCAL | [redacted] | | |
| Nathan Hanson | Local/Farmer | [redacted] | | |
| Blair/Phyllene Welding | Homeowner | [redacted] | | |
| | | [redacted] | | |
| | | [redacted] | | |

3 Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Andrew Schelbe | General Aviation | [redacted] | | |
| Paul Hauck | Area Resident | | | |
| Jason Walloser | GA Civil Air Patrol | | | |
| | | | | |
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Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Jan Brown | Self | [redacted] | | |
| Karen Lansing | HFHIFA | | | |
| Shonni Rule | Self | | | |
| Mitt Rule | self | | | |
| Zach Dixon | | | | |
| Frank Kocsis | HAA | | | |
| Thomas Waite | Self | | | |
| Connor Woolum | Self | | | |
| Brandon Lee | BYSL | | | |
| | | | | |

2 Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Andrew Mack | Self | [redacted] | | |
| Debra Hauck | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Idaho Falls Regional Airport Master Plan
Meeting 3 – Draft Alternatives
February 7, 2024
4:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Jim Francis | City Council | [redacted] | | |
| Honore Storm S | Bonneville County P+Z ... resident | | | |
| Kelly Hoopes | Horrocks | | | |
| Terry Johnson | Hangar Owner | | | |
| Ed Naff | | | | |
| [illegible] | Local resident | | | |
| Brent Dixon | | | | |
| Jeanne Flora | Citizen | | | |
| Micah Brown | Citizen | | | |
| Richard Mattson | citizen | | | |

## h. Comment Forms

IDAHO FALLS REGIONAL AIRPORT

IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
Comment Form
IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: John R Cunningham

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

Where would the Community Gardens be relocated?

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
**jverish@idahofalls.gov**

IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Terrie Kellogg

Address: [redacted]

Phone: [redacted] Email:

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

Will any changes on airport Master Plan affect the air Quality or sound quality to the surrounding homes near the airport

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
**jverish@idahofalls.gov**

IDA IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Bob Hoff FBO

Address:

Phone: Email:

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

where does Fed Ex go with 17-35 open?
ground support equip. access to westside?
need for small hangars?

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
**jverish@idahofalls.gov**

IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN

## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Lloyd Gorash

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

Regarding removal of 17-35, what are potential consequences of losing an alternate runway in case of 3-21 closure, e.g. gear up landings and maintenance activities?

I've personally used it twice for those scenarios. I am worried about medical flights or GA pilots' ability to access the facilities

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
jverish@idahofalls.gov

IDA IDAHO FALLS REGIONAL AIRPORT

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Comment Form**
IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Terry Johnson / Hangar owner / Local Flight Instructor

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

① On Drawing for Eastside option 2 - the existing "T" hangars are not captured in the "Historic District" Why? They have been here longer than local pilot population can remember. Since late 1950's, early 1960's?

② What "Data" shows that Taxiway C and Rwy 17/35 intersection is high risk? I have been Flying @ IDA since 1979 - No Collisions that I know of?

③ What standard is used to determine 17/35 not eligible for FAA Funding.

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
**jverish@idahofalls.gov**

IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
**Question Form**

**Please provide your question about the Idaho Falls Regional Airport Master Plan:**

Do we need another runway for commercial flights?
Where would it go? Runway headings

Where would secondary cargo go? (UPS)? with earlier plans.

Why not build a large contigious T-Hangar set up for small planes. like Salt Lake

Why have they not opened up GA hangar space already?

When do you expect IDA to require need another runway the size &/or scope of current main runway? Best/Worst case.
L what effects could this have on this/future master plans?
Are you hoping for some other agency/entity to plan/Build within the county to help alleviate pressure on IDA?

What co-ordination and/or discussions are taking place with other airports in the region?

IS IDA willing to push idaho falls(city) to break land purchase/sale agreement terms? I.E. relocate Old Butte Road.
↳ if the road is relocated what do you plan to do about water retention areas & neighborhoods affected as well as what sound buffers are you willing to build.

How Long does IDA project currently constituted Airport to meet demands & regulations?
↳ With some/Any/all proposed plans/improvements?

IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN

## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Milt Rule

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

1. My Concern is the current drainfield and how it will be affected or repositioned.

2. The road rerouting what will be in between the backs of the houses and the old butte road relocation? Is the berm going to remain and will there be a sound barrier/safety wall?

If you would like to return this comment form outside of the public meeting, please send it to:

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**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
jverish@idahofalls.gov

IDA IDAHO FALLS REGIONAL AIRPORT

## IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
### Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Tammy & Harold Thompson

Address: [redacted]

Phone: [redacted] Email:

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

1. What is the status of the Village Homes facing the west side airport?

2. Will there be a sound wall placed once the Old Butte Road is going to be moved

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
jverish@idahofalls.gov

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Question Form**

**Please provide your question about the Idaho Falls Regional Airport Master Plan:**

am I correct in my understanding that there are actully no alternatives to the impact to home by the soccer fields + the home on grandview? You will still restict use of the soccer fields, relocate battle rd, and build on the land behind the grandview st home no matter what...

IDAHO FALLS REGIONAL AIRPORT

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Question Form**

**Please provide your question about the Idaho Falls Regional Airport Master Plan:**

what alternatives have been considered
to maintain the existing soccer fields.
The Village residents / neighborhood was
based on proximity to these fields.

IDA IDAHO FALLS REGIONAL AIRPORT

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Question Form**

**Please provide your question about the Idaho Falls Regional Airport Master Plan:**

How far along is the land aquisition process?
Will this end up being imment domain situation?

IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN

## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: CRAIG ROMINSKI - HOMEOWNER

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

WITH INCREASED GROWTH COMES INCREASED TRAFFIC, SINCE THERE IS ONLY ONE WAY INTO THE AIRPORT, ARE THERE PLANS TO WIDEN SKYLINE SOUTH OF GRANDVIEW

If you would like to return this comment form outside of the public meeting, please send it to:

Jayme Verish, Assistant Airport Director
2140 N. Skyline Drive
Idaho Falls, ID 83402
208-612-8267
jverish@idahofalls.gov

IDA IDAHO FALLS

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN

## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Bill Butler GA Pilot

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

1) Additional Gate access to GA hangar areas? Allow for N side access or other routes to avoid regular traffic congestion.

2) Concerns about reduction to single runway airport & impact to light GA interactions with Heavy Freight Runway closures due to aircraft problems etc (flat tire)?

3) Remote ATCT or conventional?

4) Please Keep sidewalks along Skyline for passenger pedestrian traffic to/from airport.

If you would like to return this comment form outside of the public meeting, please send it to:

Jayme Verish, Assistant Airport Director
2140 N. Skyline Drive
Idaho Falls, ID 83402
208-612-8267
jverish@idahofalls.gov

IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Anne Hart GA Pilot

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

1. You stated Rwy 17/35 is ineligible for FAA Funding for MX. What is the actual cost of this maintenance and what impact does that have on budget / operating costs?

2. What obstacles are currently too close to the VOR?

3. Who determined that Taxiway C crossing Rwy 17/35 should be eliminated and why? Even if someone classified it as "high risk" what is wrong with keeping it? "Hot Spots" do not need to be removed. All pilots are briefed + have high awareness of Hot Spots.

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
**jverish@idahofalls.gov**

IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Lloyd Corwin

Address: [redacted]

Phone: [redacted] Email:

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

Please acquire as much land near airport to prevent encroachment.

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
jverish@idahofalls.gov

IDAHO FALLS REGIONAL AIRPORT

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Comment Form**
IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Melanie Edwards

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

I oppose the option for West Side Development (Phase 1 and 2) because it is very expensive and there are better options. Also the taxiway on the West Side would be noisy and air-polluting for nearby housing in The Village subdivision.

I prefer one of the East Side options as they are less expensive and have less impact on neighborhood housing.

If you would like to return this comment form outside of the public meeting, please send it to:

**Jayme Verish, Assistant Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8267**
**jverish@idahofalls.gov**

IDA IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: LARRY & JANE LANESTON

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

DO YOU THINK YOU'LL BE ABLE TO KEEP UP WITH THE CURRENT GROWTH? ~~WHERE~~ DO YOU THINK YOU HAVE ADEQUATE FUNDING

IS DELTA AIR LINES PLANNING ON ADDING MORE FLIGHTS IN THE FORSEEABLE FUTURE TO SALT LAKE CITY AND SEATTLE?

HOW MANY GATES ARE IN PLACE NOW AT THE TERMINAL, AND HOW MANY MORE ADDITIONAL GATES WILL BE ADDED WITH THE EXPANSION OF THE TERMINAL?

If you would like to return this comment form outside of the public meeting, please send it to:

Jayme Verish, Assistant Airport Director
2140 N. Skyline Drive
Idaho Falls, ID 83402
208-612-8267
jverish@idahofalls.gov

If they close the current GA runway and all aircraft use main runway, can there be flight path restrictions to prevent GA planes from flying over the neighborhoods east and west of the main runway?

• What is the plan with the relocation of the water & sewage plant?

• What is the plan with working with on a larger scale plan with the city officials?

When will the city shed that is in the restricted zone of the end of the runway be moved and to where?

With Old Butte Park going away, is there a planned replacement that will be easily accesible to village / silver leaf residents?

## 01.4. Public Meeting #4

### a. Meeting Summary

Date: February 20, 2025

Time: 6–8 p.m.

Place: Idaho Falls Activity Center
1575 N. Skyline Drive
Idaho Falls, Idaho 83402

# b. Meeting Supplement

IDAHO FALLS REGIONAL AIRPORT

**Idaho Falls Regional Airport**
**Master Plan Open House**
**Idaho Falls Activity Center**
**February 20, 2025**
**6:00 - 8:00 pm**

### Open House Stations

1. Welcome and Sign In
2. Draft Airport Master Plan
3. Draft Airport Layout Plan
4. Comment Forms

### Contact Information:

Ian Turner, A.A.E.
Airport Director
iturner@idahofalls.gov
208-612-8221

Wayne Reiter, A.A.E.
Aviation Planner
wreiter@ardurra.com
208-762-3644

Nathan Cuvala, P.E.
Project Manager
ncuvala@ardurra.com
208-323-2288

## Airport Master Plan Overview and Project Update

An Airport Master Plan is a 20-year plan to safely and efficiently meet aviation demand at an airport.

An Airport Layout Plan (ALP) is a series of technical drawings showing the proposed future development of the airport. A current ALP is a requirement for receiving federal funding for eligible projects. Projects shown on the ALP are justified by conclusions described in the Airport Master Plan.

Project Highlights:

- This project began in July of 2021
- Kickoff meeting in August of 2021
- Forecast and Facility Requirements public open house in October of 2022
- Draft Alternatives public open house in February of 2024
- The preferred alternative was selected following public input
- We are about 90% through the technical aspects of this Airport Master Plan
- Completed: Introduction, Existing Conditions (Socioeconomic Overview, Background, Inventory), Forecast of Aviation Demand, Facility Requirements, Alternatives Development, Environmental Overview, Implementation Plan, Recycling Plan, Compliance, and Survey
- Now: Draft Airport Master Plan and Airport Layout Plan
- Next: Final approval of the Airport Master Plan and Airport Layout Plan
  + Acceptance and approval by the City of Idaho Falls Council - April 2025
  + Review and acceptance by the FAA by May 2025
- Project website with draft documents: https://www.ifairportmp.com/



## Forecast Summary and Critical Aircraft

Passenger enplanements are projected to grow at 1.9%. Cargo movement is projected to grow at 3.9%. Overall operations are projected to grow at 0.9%. The critical aircraft are as follows:

Commercial Airline: Airbus A319/320

Cargo: ATR 72

General Aviation: Challenger 300

| Forecast Year | Itinerant | | | | | | Local | | Total Airport Operations |
|---|---|---|---|---|---|---|---|---|---|
| | Enpl | Airline Ops | Cargo (Lbs.) | Cargo Ops | GA Ops/Air Taxi | Military Ops | GA Ops | Military Ops | |
| 2021 (Baseline) | 223,741 | 7,856 | 6,288,882 | 676 | 17,228 | 259 | 7,402 | 235 | 33,656 |
| 2026 | 289,508 | 9,468 | 9,952,995 | 843 | 18,017 | 286 | 7,604 | 235 | 36,453 |
| 2031 | 300,869 | 9,484 | 11,072,550 | 918 | 18,843 | 319 | 7,812 | 235 | 37,611 |
| 2041 | 326,041 | 9,570 | 13,488,226 | 1,071 | 20,610 | 389 | 8,244 | 235 | 40,119 |
| CAGR | 1.9% | 1.0% | 3.9% | 2.3% | 0.9% | 2.1% | 0.5% | 0% | 0.9% |

Note: There were 304,942 enplanements in 2024, meaning actual passenger growth is outpacing the forecast



## Facility Requirements Summary

**AIRFIELD**

- Relocate Runway 3 windcone outside of the Runway Safety Area (RSA)
- Expand runway shoulders and blast pads
- Expand taxiway width and shoulders
- Eliminate the direct access to Runway 17/35 at Taxiway C from the GA parking apron
- Relocate and enlarge the deicing pad
- Relocate the VOR-DME
- Add an additional 41 hangars
- Reconfigure GA parking spaces

**LANDSIDE**

- Expand the terminal building and add two additional aircraft gates
- Expand the economy and employee parking lots
- Expand the rental car facility
- Expand the cargo apron and processing building
- Expand the SRE building
- Expand the terminal access road

**Recommendations**

- Relocate the Airport Traffic Control Tower (ATCT) to allow for terminal expansion
- Relocate the Aircraft Rescue and Firefighting (ARFF) station to allow for cargo expansion
- Eliminate terrain obstruction at the Runway 21 end
- Add approach lighting system to Runway 3 end
- Assess drainage infrastructure capacity and structural integrity
- Reconfigure parking lot access points from N. Skyline Drive
- Add electric vehicle (EV) charging stations to parking lot expansions



## Alternatives Summary

**TERMINAL AREA**

- Relocate ARFF and FedEx
- Relocate the rental cars
- Expand the terminal building
- Realign and widen Skyline Drive
- Add a transit station near the terminal
- Relocate and expand employee parking
- Add a cell phone waiting lot
- Add a parking garage
- Expand the SRE building and airport maintenance yard
- Add a second lane at the terminal curbside
- Relocate the Airport Traffic Control Tower

**EAST SIDE GENERAL AVIATION**

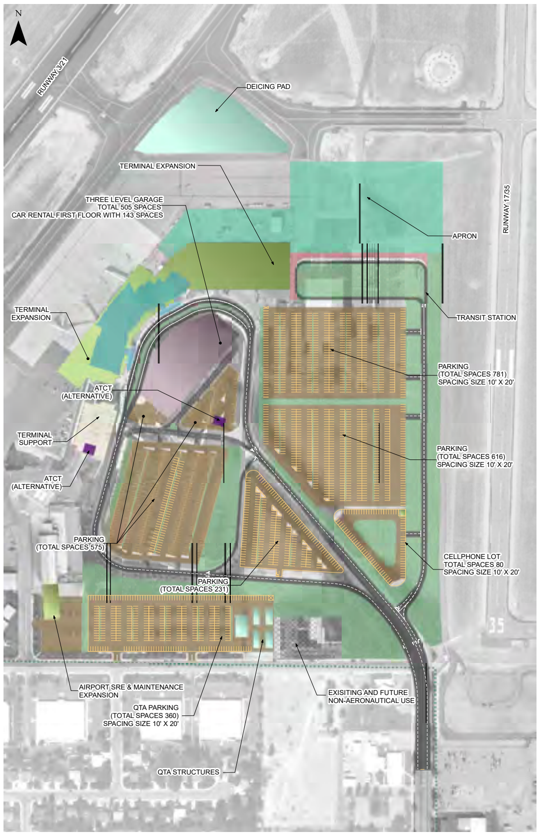
- Maintain Runway 17/35
- Add hangars
- Enhance the retention basin for drainage

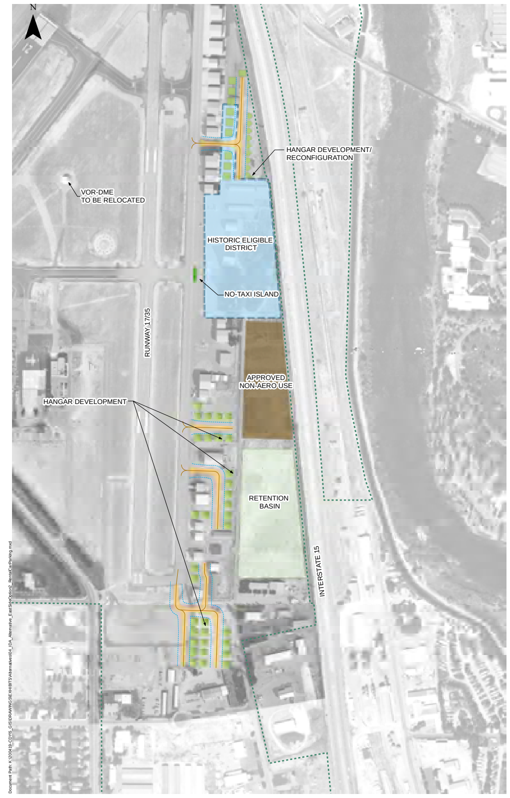
**SOUTH QUAD GENERAL AVIATION**

- Add hangars
- Add taxiways for circulation
- Expand the apron for more aircraft parking
- Maintain the existing retention basin for drainage

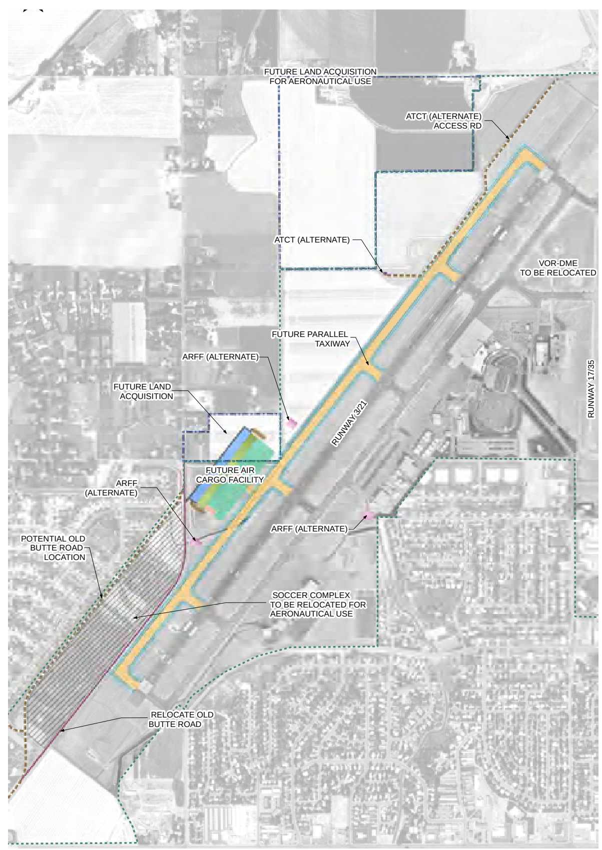
**WEST SIDE DEVELOPMENT**

- Add space for two air cargo operators (FedEx plus one additional operator)
- Add a parallel taxiway
- Acquire land for future aviation development
- Maintain the soccer fields and existing road access until they are needed for future aviation use
- Designate the soccer fields as future aviation development


DEICING PAD
TERMINAL EXPANSION
THREE LEVEL GARAGE
TOTAL 505 SPACES
CAR RENTAL FIRST FLOOR WITH 143 SPACES
APRON
RUNWAY 17/35
RUNWAY 3/21
TRANSIT STATION
TERMINAL EXPANSION
PARKING
(TOTAL SPACES 781)
SPACING SIZE 10' X 20'
ATCT
(ALTERNATIVE)
TERMINAL SUPPORT
PARKING
(TOTAL SPACES 616)
SPACING SIZE 10' X 20'
ATCT
(ALTERNATIVE)
PARKING
(TOTAL SPACES 575)
CELLPHONE LOT
TOTAL SPACES 80
SPACING SIZE 10' X 20'
PARKING
(TOTAL SPACES 231)
AIRPORT SRE & MAINTENANCE EXPANSION
EXISITING AND FUTURE NON-AERONAUTICAL USE
QTA PARKING
(TOTAL SPACES 360)
SPACING SIZE 10' X 20'
QTA STRUCTURES


HANGAR DEVELOPMENT/ RECONFIGURATION
VOR-DME TO BE RELOCATED
HISTORIC ELIGIBLE DISTRICT
NO-TAXI ISLAND
RUNWAY 17/35
APPROVED NON-AERO USE
HANGAR DEVELOPMENT
RETENTION BASIN
INTERSTATE 15


TAXIWAY A3
TAXIWAY D
TAXIWAY A
FBO
TAXIWAY E
RUNWAY 3/21
TAXIWAY A4
RETENTION BASIN
ARFF (ALTERNATE)
TAXIWAY F
GA APRON EXPANSION
FUTURE TAXIWAY G
TAXIWAY A5
GRANDVIEW DRIVE


FUTURE LAND ACQUISITION FOR AERONAUTICAL USE
ATCT (ALTERNATE) ACCESS RD
ATCT (ALTERNATE)
VOR-DME TO BE RELOCATED
FUTURE PARALLEL TAXIWAY
ARFF (ALTERNATE)
FUTURE LAND ACQUISITION
RUNWAY 3/21
RUNWAY 17/35
FUTURE AIR CARGO FACILITY
ARFF (ALTERNATE)
ARFF (ALTERNATE)
POTENTIAL OLD BUTTE ROAD LOCATION
SOCCER COMPLEX TO BE RELOCATED FOR AERONAUTICAL USE
RELOCATE OLD BUTTE ROAD

## Implementation Summary

| PAL | Project Highlights | Cost Estimate |
|---|---|---|
| **Terminal Area Development** | | |
| PAL 1 | Terminal expansion, parking and garage design, road design | $125,166,892 |
| PAL 2 | Terminal expansion, SRE expansion, parking, road, garage construction | $96,363,060 |
| PAL 3 | Terminal expansion, transit station construction, pavement maintenance | $58,656,679 |
| | **Terminal Area Development Total** | **$280,186,631** |
| **East Side Development** | | |
| PAL 1 | Runway 17/35, Taxiway B, and hangar design, pavement maintenance | $1,804,545 |
| PAL 2 | Runway 17/35, Taxiway B, hangar, and retention basin construction | $7,507,070 |
| PAL 3 | South hangar construction, pavement maintenance | $1,477,057 |
| | **East Side Development Total** | **$10,788,672** |
| **South Quad Development** | | |
| PAL 1 | Apron expansion, ARFF relocation, hangar design Phase 1, land acquisition | $5,239,515 |
| PAL 2 | Apron expansion, ARFF relocation, and hangar construction | $11,070,422 |
| PAL 3 | Hangar construction Phase 2, pavement maintenance | $2,494,514 |
| | **South Quad Development Total** | **$18,804,451** |
| **West Side Development** | | |
| PAL 1 | Parallel Taxiway K and land acquisition environmental assessments | $850,000 |
| PAL 2 | Parallel Taxiway K design and construction, air cargo design, land acquisition | $15,773,981 |
| PAL 3 | Air cargo construction, Old Butte Road environmental assessment | $8,846,905 |
| | **West Side Development Total** | **$25,470,886** |
| **Airfield Development** | | |
| PAL 1 | Runway 3/21 rehabilitation, ATCT construction, land acquisition, acquire SRE | $41,546,316 |
| PAL 2 | Taxiways A/C design, relocate VOR, acquire SRE and ARFF | $6,100,489 |
| PAL 3 | Taxiways A/C construction, pavement maintenance, acquire SRE | $7,143,814 |
| | **Airfield Development Total** | **$54,790,619** |
| | **Total Cost** | **$390,041,259** |

Planning Activity Level (PAL) 1 = short term (1 - 5 years)
PAL 2 = medium term (6 - 10 years)
PAL 3 = long term (11 - 20 years)
Schedule subject to change based on priorities, funding, and environmental outcomes

## c. News Releases, Invitations, and Notifications

**Idaho Falls Regional Airport**
February 10 at 11:00 AM ·

Idaho Falls Regional Airport Master Plan Open House Public Meeting

Airport staff and their consultant will share the airport master plan designed to meet short-, medium-, and long-term development for aviation demand over the next 20 years. The meeting will provide the public an opportunity to review the plan.

The meeting will be a self-guided, open-house format. No presentation will be given.
Throughout the master planning process, the airport held multiple public meetings and shared detailed information online at www.ifairportmp.com.

#IflyIDA #IdahoFallsRegionalAirport #IdahoFalls


7 4

Like Comment

City of Idaho Falls News

Posted on: February 11, 2025

**Public invited to review the Idaho Falls Regional Airport Master Plan**

IDAHO FALLS—The Idaho Falls Regional Airport invites the public to review the plan to improve airport facilities and operations.

A public open house will be held on Feb. 20, 2025, at the Idaho Falls Activity Center from 6 to 8 p.m. The open house will be self-guided, where the public can meet with airport staff and their consultant, who will share the airport master plan designed to meet short-, medium-, and long-term development aviation demand over the next 20 years.

The IDA Airport Master Plan is a comprehensive study that provides the developmental framework for the airport to ensure appropriate planning for future needs. The planning process was initiated in August 2021. Comprehensive studies detail an increase in passenger travel and significant growth in air cargo operations.

The IDA Airport Master Plan staff update the plan every five to 10 years to ensure compliance with changes in airport design, and economic and technological changes in aviation and passenger travel needs. The airport staff completed the last IDA Master Plan in 2010.

Those with questions about the open house can contact Wayne Rieter at wrieter@ardurra.com or (208) 762-3644.

###

Media Contact: City of Idaho Falls Public Information Officer Eric Grossarth at (208) 612-8562 or egrossarth@idahofalls.gov

## d. Meeting Photos

## e. Sign-In Sheets

Idaho Falls Regional Airport Master Plan
Draft Documents
February 20, 2025
6:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Syd [illegible] | self | [redacted] | | |
| Mark H. Petersen | Petersen Family LLC | | | |
| Wade [illegible] | City of Idaho Falls | | | |
| Russell [illegible] | Resident | | | |
| [illegible] | resident | | | |
| Randy Woods | resident | | | |
| Rebecca Atkinson | resident | | | |
| Robert & Shirley [illegible] | resident | | | |
| Ryan [illegible] | self | | | |
| [illegible] | self | | | |

Idaho Falls Regional Airport Master Plan
Draft Documents
February 20, 2025
6:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Kathryn [illegible] | Pilot + hangar resident | [redacted] | | |
| April Taylor | Community member | | | |
| Kirk Larsen | Council | | | |
| Kelly [illegible] | [illegible] | | | |
| Tim Egan | Pilot | | | |
| Ken Schreck | Pilot | | | |
| Jim Freeman | City Council | | | |
| Kim Wheeler | Pilot | | | |
| Jeanne Flora | | | | |
| David Dillon | | | | |

Idaho Falls Regional Airport Master Plan
Draft Documents
February 20, 2025
6:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Erin Petersen | Western States Equip Comp | [redacted] | | |
| Travis Butterworth | | | | |
| Mark Mason | Pilot Hangar owner | | | |
| Scott Antrim | [illegible] | | | |
| Robert Hansen | Citizen | | | |
| [illegible] | citizen | | | |
| Paula Burck | Sleep Inn & Suites | | | |
| Gus Reyes | Citizen/Pilot | | | |
| Jason [illegible] | CAP Pilot | | | |
| Robert [illegible] | self | | | |

Idaho Falls Regional Airport Master Plan
Draft Documents
February 20, 2025
6:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| [illegible] | Resident | [redacted] | | |
| Steve Hall | Integra CRE | | | |
| Dennis [illegible] | Resident | | | |
| Daniela [illegible] | Resident | | | |
| [illegible] | Business | | | |
| Richard Caummisar | GA | | | |
| Russ Burt | Resident | | | |
| Caleb Ireland | Resident | | | |
| [illegible] Dave Zitzlaff | citizen | | | |
| Carl Dixon | | | | |
| Shelby Kerby | citizen/Resident | | | |

Idaho Falls Regional Airport Master Plan
Draft Documents
February 20, 2025
6:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Jim Dixon | Resident | [redacted] | | |
| Boyd Foster | Hanger Owner | | | |
| John [illegible] | [illegible] Fighters | | | |
| Bill [illegible] | Resident | | | |
| Christine Hatch | Resident | | | |
| Dillon Erickson | Resident | | | |
| Marshall Carpenter | Resident | | | |
| John Smart | " | | | |
| Eric Hopp | pilot | | | |
| Jane Hopp | pilot | | | |
| Nick Contos | Citizen | | | |

Idaho Falls Regional Airport Master Plan
Draft Documents
February 20, 2025
6:00 to 8:00 PM

IFAirportMP.com

IDAHO FALLS REGIONAL AIRPORT

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Jim Dixon | Resident | [redacted] | | |
| Boyd Foster | Hanger Owner | | | |
| John [illegible] | [illegible] Fighters | | | |
| Bill [illegible] | Resident | | | |
| Christine Hatch | Resident | | | |
| Dillon Erickson | Resident | | | |
| Marshall Carpenter | Resident | | | |
| John Smart | " | | | |
| Eric Hopp | pilot | | | |
| Jane Hopp | pilot | | | |
| Nick Contos | Citizen | | | |

Idaho Falls Regional Airport Master Plan
Draft Documents
February 20, 2025
6:00 to 8:00 PM

IFAirportMP.com

| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Deadan Detrick | Skyline Stor | [redacted] | | |
| Bobby Picker | Pilot @ Airport | | | |
| Tresette Sumerday | Part Owner | | | |
| Cynthia Steele | | | | |
| Randall Wheeler | Pilot at IDA | | | |
| Bryce Peterson | Enterprise Mobility | | | |
| Wayne Jeman | Property owner | | | |
| Tasha Breadlbach | citizen | | | |
| Ed Naff | | | | |
| Karie Hansen | citizen | | | |

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| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| D Beck | Hanger | [redacted] | | |
| W. Price | live near airport | | | |
| Joe Bellak | Developer | | | |
| Lee Radford | Attorney | | | |
| Brett Rasmussen | citizen | | | |
| M. Drotter | Citizen | | | |
| Forrest Inler | Citizen | | | |
| Peter Hinman | Citizen | | | |
| A. Bodell | citizen | | | |
| Larry Faidner | Citizen Live Near Airport | | | |
| Leslie Kerby | citizen | | | |

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| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Steffen Verdin | State of Idaho Dir Aero | [redacted] | | |
| David Murphy | Obcore pilot | | | |
| Gary Dixon | Farmer West Side | | | |
| Micah Beck Brown | Citizen the Village | | | |
| Douglas Hiedman | Citizen | | | |
| Jake & Julie Jacobsen | Citizen | | | |
| Ernest Dayley | | | | |
| Glenn Guzman | Citizen | | | |
| Aaron Johnson | Citizen | | | |
| Olin Barkdull | Citizen | | | |

Idaho Falls Regional Airport Master Plan
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| Name | Affiliation | Address (optional) | Phone (optional) | Email (optional) |
|---|---|---|---|---|
| Farrell Tracy Virginia | | [redacted] | | |
| Paul Young | Civil Air Patrol | | | |
| Charles Wangle | | | | |
| Brian Brasebow | | | | |
| Chelsie Gerber | Teton Aviation | | | |
| Kirk Richmond | | | | |
| Dennis Hartwigen | Citizen | | | |
| LARRY Kubicek | citizen | | | |
| STEVE CONSTABLE | BUILDER | | | |
| Steve Butterworth | Citizen | | | |
| Terry A Johnson | Hangar owner | | | |

## f. Comment Forms

IDAHO FALLS REGIONAL AIRPORT

**IDAHO FALLS REGIONAL AIRPORT MASTER PLAN**
**Comment Form**

**IFAirportMP.com**

**Contact Information (optional):**

Name or Affiliation: THE PLACE

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

I believe the plan is well thought out and will be enjoyed by many. Idaho Falls is growing and I'm happy to see our airport is too. If you need support for the initiative Feel Free to contact me.

[redacted]

If you would like to return this comment form outside of the public meeting, please send it to:

**Ian Turner, Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8221**
**iturner@idahofalls.gov**

IDA IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Leslie Kerby

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

I am very supportive of the IDA master plan. I've appreciated upgrades made at the airport the past 5-ish years and enjoy the multiplying flight options right from my home town.

I think the master plan is well-thought-out and will accomodate the growth that is occuring at IDA.

Thank you for investing in our awesome city and planning for the long-term success of our community.

If you would like to return this comment form outside of the public meeting, please send it to:

**Ian Turner, Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8221**
**iturner@idahofalls.gov**

IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: Mark Mason - pilot - Hangar owner

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

Many planes Have poor Visability Directly in Front. Please Keep any obstructions short Enough To Taxi over. planes Have Taxied Directly in To Orange Constrution Cones, Very Visable But Hard To See in planes.

The "no Taxi island" Blocking Taxiway Charlie should Be very Short or Flush. Snowplow Team would appreciate it Too.

Thanks For all The Hard work

Mark Mason

If you would like to return this comment form outside of the public meeting, please send it to:

**Ian Turner, Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8221**
**iturner@idahofalls.gov**

IDA IDAHO FALLS REGIONAL AIRPORT

# IDAHO FALLS REGIONAL AIRPORT MASTER PLAN
## Comment Form

IFAirportMP.com

**Contact Information (optional):**

Name or Affiliation: KEN SCHRECK (PILOT)

Address: [redacted]

Phone: [redacted] Email: [redacted]

**Please provide your comments about the Idaho Falls Regional Airport Master Plan:**

EAST SIDE GENERAL AVIATION, PLAN TO ADD NO TAXI ISLAND ~~AT EAST END OF~~
TO PREVENT DIRECT ENTRY ONTO TAXIWAY "C".
WOULD LIKE TO SEE THAT THE "ISLAND" IS SURFACE MARKINGS WITH SURFACE
MOUNTED REFLECTORS IF REFLECTORS MUST BE ADDED.
CONVENTIONAL LANDING GEAR (TAIL DRAGGERS) HAVE A RESTRICTED SITE PICTURE
OVER THE NOSE OF THE PLANE AND THE TAILWHEEL SWINGS WHEN TAXING &
TURNING. KEEPING OBSTRUCTIONS TO AN ABSOLUTE MINIMUM WHILE MEETING
THE REQUIREMENT TO PREVENT DIRECT ~~XX~~ ENTRY ONTO THE TAXIWAY
IS APPRECIATED.

Ken Schreck

If you would like to return this comment form outside of the public meeting, please send it to:

**Ian Turner, Airport Director**
**2140 N. Skyline Drive**
**Idaho Falls, ID 83402**
**208-612-8221**
**ituner@idahofalls.gov**

### g. Comments from Website

"It would be nice to have Southwest Airlines as they have affordable fares. We travel to Milwaukee Wisconsin to see our son and the cost to fly there has skyrocketed and has not come down at all."

"Just sharing with you that you have direct flights from Seattle, Los Angeles, Phoenix, Las Vegas, Salt Lake City, Denver, and more, but No Direct flights from the San Francisco Bay Area. Only a few direct summer flights. As a Bay Area resident and a property owner in Eastern Idaho/Western Wyoming, I would greatly enjoy seeing direct flights from the Bay Area."

"I attended the meeting on 2/7/24 about the Airport Master Plan. I believe there were a couple of draft master plans presented. According to the master plan website, there will be a public open house to present the draft Master Plan/ALP. Is that open house scheduled?"

"Overview of Comments:

1. IDA needs to have an Airport Advisory Board made up of stakeholders. This is standard practice at virtually all other airports in Idaho. Stakeholders should provide input to the Master Planning Process early on, before it is too late to change it.

2. The disposal of runway 17-35 is presented as a virtual foregone conclusion. There are many reasons to keep it. The financial loss to East side GA community is not discussed. A fair presentation of all options and the pro and con of each should be provided.

3. None of the reasons to keep 17-35 are included. This is unfair.

4. Cargo, East Side Option 1 The space is too small, the neighborhood is too close, the jet blast and noise are not compatible with the location.

5. East Side General Aviation Option 1-Overflow Rental Car Parking: The resulting traffic on Foote Dr will make this a quagmire for all users, unsafe and in short unsuitable.

6. East Side General Aviation Option 1- moving existing historic T-hangars and widening taxi lane: widening is unnecessary for the class of aircraft and vehicles using this taxilane. The historic T-hangars are of insufficient value to consider disassembly and moving them to the east. The only sensible option is to leave this area as is, and focus on more effective use of funds.

7. East Side General Aviation Option 2-As indicated previously, putting the cargo facility on N. Skyline is just a bad idea. For west side homeowners, this option will seem like an easy one to support: they would gladly sacrifice runway 17-35 in exchange for putting off the changes to the soccer complex and Old Butte Road. This is a very unfair and short sighted way to put pressure on the city to close the runway.

8. Option 3 Showing a large field of hangars in the infield is fantasy. Looks good on paper, however it requires the demise of the short runway. The runway that small plane owners prefer to use. If the runway goes, forget the hangars. That is the wrong way to look at it. Keep the runway. The pilots and aircraft owners will return to IDA and space can be found to put hangars. This is the reason for an Airport Advisory Board made up of stakeholders. There is no other way to get worthwhile input based on the needs of airport users.

9. Previously proposed changes that have been "lost". The FAA hot spot at 17-35 and taxiway Charlie was to have been mitigated by making a barrier to prevent direct access from the parking area. Several safety solutions were part of the "lost" 2019 runway 17-35 safety study. These should be incorporated. They made sense then and they make sense now.

10. Soccer complex and Old Butte road. It is not fair to make pilots and hangar owners pay for an historic mistake to put a soccer complex on airport property. FAA grant assurances require it to be moved.

11. The Red Baron Historic log hangar. This irreplaceable structure should be conserved and featured as the landmark and point of interest that it is.

Please see my detailed comments attached [below] for basis and discussion on each item summarized above.

Thank you for your consideration"

"Comments on the IDA 10 year Master Plan 2/24 Final

1. General Comment: The plan was developed with input from Ardurra/FAA, Airport Management, and Idaho Falls City Council. Input from stakeholders was minimal. This by itself has steered the plan in a direction that may not best serve the stakeholders and users of the airport. There should be an Airport Advisory Board that is made up of representatives from all the stakeholder groups on the airport. Meaning: Pilots, Aircraft Owners, Hangar Owners, Airlines, FBO, Terminal Vendors, Rental Car Companies, Contractors, ATC, Fire Station. Without this input in the early stages of development, the plan can take directions that are difficult, if not impossible, to correct when the final review meetings take place. The result can be an airport that grows in ways that are not in the best interest of the users. Taking advice from everyone but the users is unfair to them.

2. The future of runway 17-35 is being treated as if it is simply a box you check or don't check, by people who never use it, have never used it, and don't understand the impact it would have on general aviation if it is lost. There is no arguing that the FAA wind algorithm and the level of use on runway 3-21 do not support an FAA funded secondary runway. The safety of airports built according to those algorithms could be argued at length, but they are based on numbers and data and manipulation thereof. Not lives lost and aircraft wrecked, or lives nearly lost and aircraft nearly wrecked. The thresholds are arbitrary and have nothing to do with safety, as they are based on averages and statistics. Airplanes rarely flip over from "average" winds. But winds are unpredictable and very liable to gust well off the average speed and direction. That said there are many nearby airports that receive no FAA funding at all, and they manage to fund a runway similar to 17-35. Why do they do it? Because it is worth every penny. Nothing is mentioned about this simple fact in the report. The costs of maintaining that runway are not substantiated, but are universally portrayed as exhorbitant. The basis for assuming that the city should not afford to maintain the short runway must be substantiated. The historic costs are in city records and should be given to the reviewers along with the costs to maintain other city features. Perhaps some of the costs will remain even if the runway is closed. The comparisons must be made without prejudice. Saying that "the FAA will fund a taxilane but not a runway" gets a lot of attention, but is counter to all the reasons the FAA gave the city so many millions of dollars in the past. Which was to make an aviation facility to support aviation. Aviation that in turn promotes commerce, growth and prosperity.

3. The need for an alternate runway regardless of wind data. The main runway has been out of service for resurfacing and other closures due to miscellaneous events. Without a second runway, IDA is just another "one runway" airport. There are many reasons to have two runways besides for cross wind. Airports are not built to increase safety on every level. They are built to fulfill a use. Ours was built and maintained over the years at great cost. Those costs and the value of the airport should be considered carefully in decisions to reduce its capability. Medivac, disaster response, training, and airshow staging to name a few. It might be very costly to try to build a runway with wind data that doesn't support FAA funding, but to destroy one that is usable is way beyond foolhardy, it is criminally short-sighted. Once one is closed, it is virtually impossible to ever restore it, especially if development encroaches into the safe separation zones. Just look at the soccer complex. Better to have less than perfect surface and markings than no options for aircraft operations in times of disaster or off normal weather. It is easy to close one sometime in the future, but now is not the time. People are moving to Idaho Falls. A percentage of them will be bringing their airplanes with them. A percentage of them will become pilots and buy airplanes in the future. Pilot training is much better when it can be done without interfering with commercial airline traffic. We need a second runway to train pilots to fly airliners and military aircraft in the future. Why should IDA play second fiddle to Pocatello?

4. Cargo East Side Option 1. Cargo projections may be good and they may be bad. Betting that recent increases will continue is probably fair, but that is very easy to do based on the recent runup in the economy. All things are cyclic. Burning bridges on the basis of an upsurge in the cycle is a mistake. There are many options to increase cargo handling capability without closing runway 17-35. Without a doubt, the cargo facility on Skyline drive is a terrible idea. It is problematic for these reasons,

a. The noise from 757 class aircraft in the area shown will be terrible for residents in the homes the west side of Skyline Dr. It will raise the ambient noise levels by more than the allowable levels for FAA airport design standards.

b. The noise from the trucks and the backup horns from forklifts will be hideous for the same homeowners. The truck traffic moving cargo to and from the cargo facility will, when combined with increased surface traffic projections on N. Skyline Drive will be another detraction to life in the nearby neighborhood.

c. The jet blast from these aircraft will throw gravel and dangerous levels of blast into homes on north Skyline and vehicles on N. Skyline Dr.

d. The jet blast from these aircraft taxiing north and turning west on to Taxiway Charlie will cause a big safety concern for light aircraft and hangars in this area.

e. In short, the facility is just not suitable for this location. All the attendant noise and jet blast needs to be over near the big runway and other jet activity.

5. East Side General Aviation Option 1-Overflow Rental Car Parking

a. Replacing the community garden with 617 parking spaces is going to make Foote Drive into an unusable traffic quagmire. Many businesses use N. Foote Dr and there is no way that this many cars can come and go into this area without causing major problems. In addition, the road north of the airport south boundary is only very rarely plowed of snow in the winter, making this option very hazardous for new and existing users. The tree farm is on airport property. Perhaps it should be moved somewhere else and hangars placed there. Sure this will involve some problems with Foote Dr. Solve them.

6. East Side General Aviation Option 1- moving existing historic T-hangars and widening taxi lane between these rows of hangars. The existing taxilane is plenty wide for all the aircraft that use these hangars, and the hangars are old, and not of sufficient value to dismantle and re-erect. These hangars and the existing taxiway should be left as-is.

7. Retention Basin. The “retention basin” as shown has a very small seasonal wetland, and is otherwise used for piling snow in the winter from the city snow removal, and dirt from Spring street sweeping. This is OK, however the area shown is probably more than sufficient for the purpose, and could be used for some airport use, such as storing snow removal equipment for Foote Dr.

8. East Side General Aviation Option 2-As indicated previously, putting the cargo facility on N. Skyline is a bad idea. Even if runway 17-35 did not have to be closed, it is just too much noise and jet blast for the nearby homes and existing hangars. It’s too far for these big jets to taxi for takeoff and after landing. Who would build all the hangars, if the east side of the airport is being strangled to death by removal of the runway? Who would want to lease a hangar that would require a 2 mile taxi for takeoff in North winds? This added taxi time would always involve mingling with large airliners, something that rarely happens now. The space between 17-35 and taxiway B should be made into a grass runway, not hangar spaces with no landside access. The jet blast from a 757 turning onto C from the Taxilane would scramble everything inside of any hangar with an open door at the corners. The aircraft parking shown in the infield would have no landside access. That area is best left as emergency overrun for accidents. Without landside access you can’t park airplanes, or put the cargo facility there either.

9. Option 3 Showing a large field of hangars in the infield is ludicrous They do not generate enough rental income to attract builders to build them. The “wait list” for hangars is largely fictitious at IDA. Nineteen new small hangars have been built and sold to eager buyers at Rigby, while none are being built at IDA. There is a reason for this. IDA has not been a GA- friendly airport for the last 5 years. Aircraft owners who do not need the airliner length runway are leaving whenever they can, for a small airplane friendly atmosphere. There are many empty hangars at IDA that just need to be used for aircraft. Airport management needs to make an effort to support and grow light GA, not continue to ignore it and increase the migration to other airports.

10. Previously proposed changes that have been “lost”. The FAA hot spot at 17-35 and taxiway Charlie was to have been mitigated by making a barrier to prevent direct access from the tiedown area. This option is not shown, leaving the hot spot as an unnecessary detract for the runway. Show this barrier and eliminate the hot spot. Taxiway Bravo was to have been moved away from the existing hangars and closer to the runway, to alleviate the spacing problem with the east side taxiway hangars. Doing this would solve many problems, and increase safety for landside vehicle traffic, but might make the infield hangars no longer an option. As stated previously, hangar space should never be the carrot to close a viable runway. Especially if the runway is the preferred runway for small hangar type aircraft. There are other places for hangars.

11. General comment on a West Side Cargo option: This facility would better be located further north where the noise and jet blast wouldn’t impact so many nearby homes.

12. Soccer Complex: There is no reason to save a soccer complex located on airport property at the expense of closing a runway and reducing the usefulness of the airport. It should not have been built there and steadily improved as it has been, knowing that airport expansion would eventually require it to be removed. Pilots, aircraft owners, airport business owners, hangar owners are not responsible and shouldn’t pay the price for this situation.

13. Relocating Old Butte road. Putting this road next to the neighborhood is a bad idea and other options should be explored. It is difficult to imagine any airport facilities other than rental car parking that would thrive in a location this far from the future West side terminal. Maybe access to the neighborhood could be moved to a new road on the west side of it, and Old Butte Road could be relocated only to the extent required for clearance to the new taxiway and become an airport/terminal access road only. That would satisfy homeowner concerns about noise and property values.

14. Red Baron Historic Log hangar. The previous airport administration rejected a grant from Idaho Heritage Trust to help put a new roof on this building. This incredibly important historic structure should be conserved and restored so future generations can see what can be done with logs and hard work. It has a storied history that should be told and recorded while those who know it are still around. There is a report with recommendations for restoration. It has never been released to the public.

Thank you for considering my comments."

"My Story: I learned to fly in 1983 and bought my first airplane then, for $9,000. It is a decision I have never regretted. I sold that 1946 Aeronca 7AC Champ and bought a 1953 Cessna 180 that I completely restored, and still own and fly regularly. I own a hangar for the Cessna and am part owner of a hangar where I keep a self-launching sailplane that I am half owner of. All my power flight training was done at IDA and it is an outstanding airport for all pilots, student pilots, local and transient. We have great maintenance facilities and AeroMark is one of the very best FBOs in the western US. I am concerned that the historic place of IDA in the nation's system of airports is changing in a way that will make it only for cargo and passenger airlines. It doesn't have to be that way. Local pilots prefer IDA to nearby smaller, less capable, airports. The reason they have left and built hangars elsewhere is because the IDA atmosphere has changed to one that is not friendly or welcoming to IDA-based GA. That can, and hopefully, will change."

"After careful review of then proposed Idaho Falls Airport Development Plan, I provide the following comments:

-First and foremost, runway 17/35 must remain open and functioning to allow for General Aviation (GA) and Freight aircraft to land and takeoff when the respective cross wind component is exceeded preventing aircraft from using runway 3/21.

- Provide outside water source (e.g. Stand Pipe) for aircraft on the east side of the airport.

- Provide additional space for hanger construction on the east side of airport.

- Solicit and allow public input on. Future studies. (e.g. parallel runways) before contract specifications are developed.

- Maintain "National Historic Register" buildings on the airport (i.e Red Baron Hanger and adjacent T hangers) on. East side of airport.

- Relocate taxiway Bravo further west toward runway 17/35.

- Provide for adequate safety distance for new proposed construction adjacent to 17/35.

- Eliminate from further consideration "East Side General Aviation option 2 & 3 Runway 17/35 Closed".

- Select "East Side General Aviation Option 1 - Runway 17/35 Open" as the preferred alternative for implementation.

I look forward to meeting on there east side of the airport soon,

Thank. You for there opportunity to provide comments"

"Idaho Falls Airport Long Range Plan 03/06/2024

Idaho Falls Mayor Casper and City Council; In response to planning the future of our municipal airport I have the following comments. Our city has a really great facility and has been giving almost constant service since it's establishment in 1929. Built on land some distance from development west of town it now finds itself surrounded like so many other airports serving growing communities. Airports have become important to all citizens providing public transportation, cargo, air rescue, along with business access making this facility critical to the future or our community. Airports are expensive to build not easily moved. If they are moved development moves with them and they are again impacted. Consequently it is imperative to protect them and not allow subsequent development to limit their use. The issue now is the future of part of our airport and what I consider giving up an irreplaceable asset. Yes, runway 17-35 is no longer used or usable for the commercial carriers but is still used and usable for cargo, medical, business, pleasure, and emergencies when, not if, 2-22 is down. When it is gone it could never be replaced, for sure. FAA policy can and does change and they could at some point realize that we should keep an alternate runway. Let's keep that option. It requires a minimal amount of maintenance at this point. There is some question about needing 800k annually. Like to see an actual budget reflecting the real costs. Please give this your best judgement call and decide to not do something we could regret down the road (runway)."

"I understand the airport has the right to do this but it would be a tragedy to ruin the soccer fields and disrupt the Village subdivision so much. I hope there will be other ways to reach goals."

"There are significant differences between this set of noise contours and the last set the airport did. I would love to see the reasoning for that addressed.

Like many others in the area I prefer the plan that does not relocate Old Butte Road. I am concerned about the noise impact of the taxiway to The Village, which will not be adequately addressed using the Aviation Environmental Design Tool. I'm also concerned about the noise impact of moving a large roadway with projected growth closer to The Village. Both of these potential impacts will need to be addressed in detail if this option is chosen."

"I am concerned that the master plan seems to be aimed at simply reserving any and all options for future expansion of the Idaho Falls Airport.

I recognize the growth in airport traffic - I've seen it firsthand, but I several of the future expansions under consideration seem to be more tailored towards expansion of the city than just accommodation of the growth in airport traffic.

The county land-use plan mandates preservation of prime farmground, and some of the plans being considered seem to not take that into account at all."

"Sir, We live across the river from the airport. The small aircraft fly close over our house daily. Their engines are very loud and disturbing. Could they be routed to other local airports?

Thankz!"

“I would like to encourage the group to highly consider closing down the current GA runway and developed that area with the cargo distribution centers rather than constructing those facilities on the west side of the airport. The impact to the GA would be much less than the number of residents impacted by the cargo facilities being built on the west side of the airport. Also I would also encourage the group to delay moving old butte road as long as possible to prevent the significant impact to all the residents who would then have a road sitting in their backyard.”

“After looking at the different options and plans you are looking at implementing, I have a few comments.

First, I understand that the airport has to grow but I am worried about the city/airport taking over the soccer field for any development/ expansion as it would take away a lot of the drainage field, the removal of all the trees in the soccer complex would not only displace a lot of birds and pollinators it would also drastically change the natural noise buffer those trees offers.

Some of your optional developments are showing the old butte road relocated directly against the Village's front row of houses without a bike lane, pedestrian walkway, or sound abatement solution, this would greatly and negatively impact the value of those houses, would create a much more dangerous area for kids, bikers or general population that is currently using the soccer complex and bike path to travel about.

A better option would be to retain and expand the butte/berm located directly against the front row of houses for noise abatement, birds, and pollinator corridor with bike lanes and pedestrian sidewalks. Also instead of stop signs for the roads coming out of the village to old butte roads, some roundabouts would be safer.

Lastly, phase 1 is planning on purchasing land and placing 2 large commercial air cargo buildings by the south/west end of the airport (near Old Butte Road and the Village) This would bring a large amount of trucks, semis, traffic and noise in general to the Village subdivision and a road that is too small to support the added traffic. A better option with the future highway ramp being planned near the north corner of the airport property, would be to place the cargo commercial near the freeway ramp and the planned rental parking.

I hope the city of Idaho Falls listens to the concerned citizens, opens a line of valued communication with, and involves said citizens with the development of the airport.

Thank you”

“I believe you should close the smaller runway and make it a taxiway funded by the FAA. Any of the options presented are fine by me that route. I see no reason to mess with old butte road in any way as all options can be achieved without doing so. Including adding a shipper on the west side of the main runway and meet the needs of Air traffic under this 20 year plan. If we are going to consider moving old butte road to accommodate future airport needs then we really should consider moving the airport 10-20 miles west altogether and starting over with a real 50+ year plan. Move the traffic control tower to the west side of the runway and expand all you want, same with the fire station. IDA can do that with what it owns now. Stop telling citizens these are the only options and combine the best of all of them to get what you need with what you already have in your possession. Otherwise have a real meeting where city officials (elected and appointed) actually follow the law and answer to citizens directly and have a realistic discussion with citizens. Then we might actually be able to show those officials respect since this last meeting showed us citizens none in my opinion. The airport plan for the next 20 years was the only allowed topic, zero deviation, zero consideration other than the options presented, zero answers of when capacity would realistically justify or need to move roads. When asked about capacity it was admitted the airport as currently constituted will meet the demands of the next 20 years just not maximize profitability for the next 20+ years. The company who presented the master plan fulfilled their duty and gave a informative presentation but admittedly has zero say in how idaho falls airport proceeds. This means the leadership of Idaho falls was absent on purpose or should resign since they have no desire to even be willing to answer to the citizens. Thanks for reading my input. Any questions you can contact me."

"After reviewing and gathering information, it seems like the most logical choice would be to eliminate all westside options and close small runway, and expand from there. The idea to preserve the small runway, and proceed to westside phases, seems to make no sense, in that its main reason for going with that is to preserve the use of small runway, that seems very extravagant choice to cater to a very exclusive/elite group of small pane owners. The cost of a new taxiway, and enormous effect on the rural /ag area would be terrible. Turning the old butte road area to commercial area would negatively effect that area forever. All needs for the timeline of this plan can be met by using Eastside/south quad options, the small aircraft community is not being displaced, only asked to use main runway which most do already."

"There is ample space across the runway from the current terminal for expansion. Expanding more fully in this area would have less impact on Idaho Falls residents than the plan to destroy the current Old Butte soccer complex. Additionally, the growth rates in the plan indicate there is no current and urgent need for expansion. Why is the plan focused on such short-term actions? Should the airport wait for the potential highway change before making and short term expenditures for expansion? Should the airport wait to see how growth numbers materialize before expenditures for expansion?"

"I understand the city/airport plan to vacate the Old Butte soccer complex regardless of the airport master plan, is this correct?"

"A few weeks ago the city/airport installed a new power pole and overhead power line over Old Butte road to the area identified in the plan where the air cargo building would be located. It appears the power feed dead ends in that location. Was this done in preparation for this new air cargo building? If so, why is the city/airport spending money to pay for infrastructure improvements in support of a plan that has not been approved?"

"To whom it may concern:
I am a citizen of Idaho Falls, a resident living in close proximity to the airport, a frequent passenger on commercial air services provided via the Idaho Falls Regional Airport, and a pilot who takes advantage of the airport's general aviation facilities. After reviewing the documentation provided for public review during the "Alternative Development" phase of the preparation for the Idaho Falls Airport Master Plan, I wish to provide the following comments for consideration:

It appears that the principle decision to be made at this phase of the plan development is whether or not Runway 17/35 should be closed in order to permit utilization of that part of the airport property for other necessary functions.

I strongly oppose the closure of Runway 17/35. If Runway 17/35 is closed, Idaho Falls Regional Airport will permanently become a single-runway airport. There are no alternative locations on the airport property for either a parallel or crosswind runway to the existing Runway 3/21 that would not require the acquisition of developed residential or commercial properties adjacent to the airport. Since any such move will certainly be met with significant public resistance and incur great expense, it is unreasonable to assume that it could be conducted if necessary in the future.

The existence of a second runway greatly enhances the utility of the airport to the city, both when it becomes necessary to close Runway 3/21 for refurbishment, which will be necessary throughout the life of the airport, and during normal airport operations. While Runway 17/35 is not currently usable by many of the larger aircraft that are explicitly considered in the Master Plan, it is usable by the majority of general aviation, air charter, air cargo, medical evacuation, and other essential air service aircraft that currently make use of the airport. These aircraft provide vital services to the greater Idaho Falls area, and while not as publicly visible as large commercial airliners, provide enormous economic benefit to the city of Idaho Falls and the surrounding region.

Without Runway 17/35, the city of Idaho Falls would be effectively cut off from all of these air services for the duration of any closure of Runway 3/21. These closures could be extensive as evidenced by the recent closure of the Jackson Hole airport for runway refurbishment during a peak tourist season.

Runway 17/35 also greatly improves traffic flow at the Idaho Falls regional airport. It allows smaller aircraft to simultaneously depart on Runway 17 while larger aircraft are arriving and departing on Runway 3/21, and keeps smaller aircraft, which must conduct extensive before-takeoff engine tests or “Run-Ups” out of the way of larger aircraft, avoiding departure delays for commercial passenger traffic. This type of operation is routine with the current airport configuration, and may not be captured adequately by the data presented in the airport utilization study.

In the event that Runway 17/35 is closed, it would be necessary to construct appropriate run-up areas at the ends of Runway 3/21 in order to maintain some of the current operational efficiency provided by Runway 17/35. These areas are not currently accounted for in the published drawings showing potential future configurations of Runway 3/21, and are likely to be of significant concern to residents living on the west side of the airport, as they would almost certainly represent a substantial increase in the ambient noise to which those residents would be exposed.

Runway 17/35 also increases the safety of the Idaho Falls Regional Airport. Idaho Falls is a popular stop for student pilots conducting their first cross-country solos in light aircraft. These light aircraft typically have much lower crosswind limitations than large commercial aircraft, and this trend is further exacerbated when they are flown by inexperienced pilots. The presence of Runway 17/35, and especially it’s arrangement at an angle to Runway 3/21 significantly increases the odds that these novice pilots will be able to land safely on at least one runway at Idaho Falls.

I acknowledge the concerns raised in the report about the risks imposed by Taxiway C crossing Runway 17/35. However, that risk is small, frequently present at airports around the world, well-understood by pilots, and could be substantially mitigated with additional technical investments (such as tower-controlled “stop bar” lighting.)

Finally, the costs associated with keeping Runway 17/35 are small. While Idaho Falls is unlikely to receive federal funding for the maintenance of Runway 17/35, the additional maintenance costs of the runway are relatively minor. Because Runway 17/35 is a smaller runway used by slower and lighter aircraft, it sees much less wear and tear than Runway 3/21 during normal operations, and can be provided with only a minimal amount of maintenance if resources are limited. The costs associated with keeping the runway are thus a small fraction of the costs associated with closing the runway now, only to discover later that it would be beneficial to re-construct it.

I consider extending the airport to the northwest of Runway 3/21 to be a preferable and more prudent long-term alternative. It appears inevitable from the provided drawings that Idaho Falls will soon run out of room on the south side of the airport, even if Runway 17/35 is closed and the space re-used for other purposes. This is evidenced by the fact that all of the proposed alternatives which construct new facilities on the south side of the airport do so by demolishing existing airport infrastructure. While this is clearly necessary for some of these projects due to the need to locate new passenger facilities in close proximity to the existing terminal, it indicates that future growth of airport capacity is intensely constrained by space limitations which cannot be easily worked around.

By contrast, the northwest side of the airport is largely "green field". While there are existing residential developments in close proximity to the existing airport boundaries, the same is true for the south side of the airport. The relatively undeveloped nature of the northwest side of the airport, and the potential for a direct highway connection pending future work on the Interstate 15 interchange (as presented in the West Side Terminal concept drawing) make it possible to design highly scalable airport infrastructure that could economically meet the needs of the city for decades to come, while imposing only small additional effects on existing residential property owners beyond those currently imposed by the presence of the airport.

I'd like to close my commentary by noting that additional hanger space has been consistently brought up by pilots and aircraft owners based at Idaho Falls as a pressing need, and I appreciate that efforts to address this shortfall are included in all of the mentioned alternatives. I think that if this shortfall is adequately addressed Idaho Falls, will see a significant increase in the amount of general aviation traffic using the airport, and thus increased economic benefit to the city and the region.

However, one topic which should also be considered by the city is the addition of a "certified radar" capability to the Idaho Falls airport control tower. Most other airports in the region (e.g., Rigby, Rexburg, Blackfoot, St. Anthony, and Pocatello) are oriented such that their primary runways are "in line" with the Idaho Falls airport. This means that most air traffic arriving or departing the region must pass through, over, or around the airspace controlled by the Idaho Falls airport control tower.

Aircraft that are not passing through the Idaho Falls airport airspace are not required to be in contact with the control tower, and may not be in contact with any air traffic controller at all. This greatly increases the potential for an airborne collision in the region. This hazard could be substantially mitigated if the Idaho Falls control tower had the ability to detect these aircraft and could issue radar vectors (i.e., instructions to turn) to pilots in contact with the control tower in order to avoid these collisions.

I appreciate the opportunity to provide comment, and look forwards to the opportunity to provide additional input as this process progresses."

"Comments on the Draft IDA Airport Master Plan

March 7, 2024

**Hot Spot 1**

The draft master plan on both pages 6-2 and 6-24 state the following conclusion.

> "The intersection of Runway 17/35 and Taxiway C should be reviewed for alternatives to eliminate Hot Spot 1."

This Hot Spot has already been reviewed and designs for addressing this Hot Spot have already been developed as part of the 2019 Runway 17-35 Planning Study. The 2019 planning team concluded that Taxiway Alternative 1:

> "Mitigates direct access between the apron and Runway 17-35. The crossing in the high-energy segment of Runway 17-35 (HS#1) is mitigated by enhanced marking but remains a nonrecommended design."

However, the 2019 planning study also noted that Taxiway Alternative 3 (which is in essence Phase 2 of the Taxiway Alternative 1):

> "Removes all hot spots and direct access from the apron to Runway 17-35."

The new master plan should include these designs from the 2019 Runway 17-35 Planning Study for mitigating, and ultimately eliminating, Hot Spot 1.

It should be noted that these actions to eliminate Hot Spot 1 were designed in 2017 and there has been no movement to implement any of these mitigation actions. **This Hot Spot could have been, and should have been, eliminated years ago.**

Any suggestion that closing Runway 17/35 is necessary for mitigating this Hot Spot would be a distortion of information supporting a pre-decision to close the runway.

**Hot Spot 2**

There is no mention of Hot Spot 2 in Chapter 6, Facility Requirements, and the draft master plan offers no recommendations for addressing it. Section 4.5.9 of the draft master plan states

> "HS 2 is in close proximity to the approach ends of Runways 17 and 21. Pilots often line up for Runway 17 when cleared to land on Runway 21."

Although this Hot Spot is a serious consideration for aviation safety, use of the word "often" is not likely an appropriate qualifier representing the frequency of occurrence. If quantitative data on frequency of occurrence are available, use that instead. Otherwise, it would be prudent to remove such language from the draft master plan. Pilots using IDA have pushed back on this unnecessarily pejorative language regarding this Hot Spot for nearly 15 years. The team preparing the 2019 Runway 17-35 Planning Study did not find it necessary to use this kind of disparaging language. Its use in the new draft master plan could be considered as a distortion of information to find support a pre-decision to close Runway 17/35.

The draft master plan offers no recommendations regarding mitigation of this Hot Spot even though mitigation was addressed in the 2019 Runway 17-35 Planning Study. Section 5.2.1 of the 2019 planning study addressed this issue and offered the following recommendations for mitigation.

> "In the past, the Runway 17-35 lights were left on at night while the Runway 3- 21 lights were set to pilot control. This would lead pilots to initially line up on Runway 17 instead of Runway 21. This condition has been addressed by closing Runway 17-35 outside of ATCT hours and turning off the lights at night. If Runway 17-35 were to

> reopen outside of ATCT hours, the runway lights should be added to the pilot control system. In addition, Runway 17 and Runway 21 are both equipped with 4 box PAPIs. It is recommended the 4-box PAPI on Runway 17 be reduced to a 2-box PAPI to further differentiate the runways on approach."

It is important to state in the draft master plan that these mitigations are still in place. They include the following.

- Runway 17 is closed outside of ATCT hours.
- Runway lights remain off when ATCT is closed.
- The 4-box PAPI has been replaced with a 2-box PAPI.

The draft master plan should include an acknowledgement of these mitigative actions already in place. In addition to the mitigations already implemented at this Hot Spot, the draft master plan should add a design for installing a blast pad and chevrons to the Runway 21 approach end. FAA AC 150/5300-13B Section 3.4.7 states the following.

> "For locations experiencing wrong surface landings due to the presence of parallel runways or taxiways, the installation of a blast pad and associated chevron markings may improve pilot visual cues to runway ends."

Although Runways 21 and 17 are not parallel, the close proximity of the runway ends has the same effect with regard to the potential for wrong surface landings. This additional visual cue to enhance differentiation of the two runway ends will aid pilots to accurately identify Runway 21 as the larger, primary runway. A blast pad will be necessary in the future as a design standard for ADG-IV aircraft, and would be needed in the future should there be a change to 757 as critical aircraft, as noted in the draft master plan.

It is important to also note that wrong surface landings also happen on taxiways. The quote above from FAA AC 150/5300-13B Section 3.4.7 reiterates this point. Converting Runway 17/35 into a taxiway would not eliminate this Hot Spot. Because the runway edge lights are now off when ATCT is closed, adding taxiway lights on this surface would undo Hot Spot mitigation already in place.

Any suggestion that closing Runway 17/35 is necessary to mitigate this Hot Spot would be a distortion of information supporting a pre-decision to close the runway.

**Runway Line of Sight (LOS)**

The draft master plan on page 6-22 states that "FAA AC 150/5300-13B recommends providing a clear LOS…." In the next paragraph on page 6-22, labelled "Conclusions," the draft master plan then states, "Runway LOS **requirements** are met for individual runways but not for both runways combined."

Although the LOS standards for individual runways can be argued to be "requirements," the guidance for Converging Non-Intersecting Runways is clearly labelled as "**Recommended Practices**" and not as "requirements" in paragraph 3.8.3.1 in FAA AC 150/5300-13B.

The draft master plan should be revised to accurately reflect the language in FAA AC 150/5300-13B by stating that all requirements for Runway LOS are currently being met.

Using the term "requirements" when referring to the LOS for both runways combined has the appearance of a distortion of information to offer support for a pre-decision to close Runway 17/35.

Although not a requirement, the 2019 Runway 17-35 Planning Study did address the safety issue associated with LOS between runways 3 and 35 and identified actions to mitigate the safety concerns. Section 5.6.2 on page 5-12 of the 2019 planning study states the following.

> "Another more appropriate solution [for the safety during simultaneous departures] for IDA would be to continue to close Runway 17-35 when the ATCT is closed."

Also, Table 5-3 on page 5-19 of the 2019 planning study regarding Runway Alternative 1 states the following.

> "This alternative offers a way to maintain safe operations at the airport for its existing and future needs."

The draft master plan should be revised to note that runway 17/35 is closed from 0300Z to 1400Z when ATCT is not available, as recommended in the 2019 Runway 17-35 Planning Study. This closure is also noted in the FAA Chart Supplement entry for KIDA.

The draft master plan should note that this closure provides mitigation for the LOS between the runways. Omitting from discussion the mitigation measures already in place gives the appearance of a distortion of information to offer support for a pre-decision to close Runway 17/35.

**West Taxiway System**

Given that the draft master plan has development alternatives that include a full-length parallel taxiway on the west side of Runway 3/21, using the label "West Taxiway System" as defined on page 4-22 of the draft master plan will undoubtedly generate confusion. The draft should use a different label when referring to Taxiway Alpha, Taxiway Charlie and the associated taxiways connecting it to aprons. Perhaps "Central Taxiway System" would be appropriate.

Continuing to use the "West Taxiway System" as it is defined on page 4-22 in the draft master plan could have the appearance of signaling a pre-decision to not build a taxiway or air cargo facility on the west side of Runway 3/21.

**East Taxiway System**

On page 4-22, the draft master plan states the following.

> "The movement area boundary is approximately 30 feet from the Taxiway B centerline and does not meet standards."

The 2019 Runway 17-35 Planning Study states on page 4-26 the following.

> "The TOFA for Taxiway B is penetrated by the non-movement area east of the taxiway. This nonconformity is due to a lack of space in this area of the airport."

However, Table 6.9 in the draft master plan indicates that the TOFA associated with Runway 17/35 meets standards.

It is unclear why the 2019 planning study and the draft master plan are not in agreement regarding Taxiway Bravo TOFA, when they clearly agree that the non-movement area is too close to the taxiway. Please clarify.

The draft master plan does not appear to make any recommendations for addressing the TOFA penetration.

The draft master plan should adopt from the 2019 Runway 17-35 Planning study the Taxiway Alternative 1 as preferred and include Taxiway Alternative 3 as a Phase II of Alternative 1. These designs address the issue of penetration of the TOFA by the non-movement area, as well as Hot Spot 1. The absence of design alternatives that address the TOFA on Taxiway Bravo could have the appearance of a distortion of information supporting a pre-decision to close Runway 17/35.

### ATCT Siting

The draft master plan does not mention whether a Line of Site (LOS) study has been completed to evaluate the proposed sites as labelled in the alternative drawings. The 2019 Runway 17-35 Planning Study stated the following.

> “It is important to note that a LOS study for the tower should be associated with any future proposed development at the airport.”

The 2019 Runway 17-35 Planning Study did conduct an ATCT LOS study and identified a recommended location for a new ATCT. ATCT Alternative 3 from the 2019 planning study would provide coverage for both runways and all taxiways without interfering with Part 77 surfaces.

Alternative 3 from the 2019 Runway 17-35 Planning Study should be brought forward to the draft master plan as the preferred alternative.

### Noise at Air Cargo Areas

The proposed air cargo area between Skyline Dr. and Foote Dr. is far too close to a residential neighborhood and is likely to generate new noise complaints. The nearest residences are barely more than 100 feet from proposed apron next to Skyline Dr. Only the width of Skyline Dr. separates the proposed air cargo facility from those residences.

Operating ATR-72 aircraft in such close proximity to residences and other off-airport neighbors along Skyline Dr. and Foote Dr. would be highly likely to illicit numerous new noise complaints. Given that the “preferred forecast” includes Boeing 757F aircraft using the new air cargo area, operating large jet aircraft this close to private residences on Skyline Dr. would certainly increase the number of noise complaints.

Planning for an air cargo facility in the area between Skyline Dr. and Foote Dr. should warrant consideration in the environmental analysis as this would undoubtedly cause an unacceptable increase in noise level to those private residences.

Given that normal ramp noise at a passenger terminal can range from 65 to 95 db, it can be readily predicted that noise in excess of 65 db would extend at least to the outer edge of the ramp if not beyond. Cargo aircraft, trucks, forklifts, etc. would use the air cargo ramp area during nighttime hours (10pm to 7am) and incur a 10-decibel penalty. Noise attenuation to the nearest residence (directly across Skyline Dr.) would not likely keep the DNL 65 db contour within the airport boundary.

The noise study described in Environmental Overview chapter does not address noise associated with ATR or 757 aircraft ground operations at the proposed air cargo areas, especially the one on Skyline Dr. that is so close to a residential neighborhood. The contours in Figure 8.4 of the draft master plan clearly do not include the potential for noise generated by ground operations associated with either of the proposed new air cargo area locations.

The high noise levels likely to occur in the neighborhood west of Skyline Dr. would likely exceed the criteria set by FAA to be considered a significant impact. Unless a noise study is completed that shows otherwise, the alternative for an air cargo facility along Skyline Dr. should be dropped from further consideration.

### Visual Effects

Operation of an air cargo facility next to Skyline Dr. would change the viewshed from the residences facing onto Skyline Dr. and for others exiting the neighborhood from Olympia onto Skyline Dr. The current view from there is to Thunder Ridge and the Big Hole Mountains. It is likely the air cargo buildings, aircraft, and trucks would impair that view.

Lighting used to illuminate the air cargo ramp and the truck loading would very likely be an annoyance to the residents in the neighborhood west of Skyline Dr. Flashing beacons, strobes, taxi lights, etc. on turboprop and jet aircraft are likely to become an annoyance to residents across Skyline Dr. as well.

Because of the obvious impacts due to visual obstruction and light emissions, the Environmental Overview section should be revised to acknowledge these potential impacts. The Environmental Overview recognizes visual impacts associated with the west side air cargo development alternative, but is blind to those impacts to residents along Skyline Dr. This oversight is especially concerning given that the neighborhood adjacent to the Skyline Dr. is physically so much closer to that proposed air cargo facility and is separated from the proposed facility by just the width of Skyline Dr.

Ignoring these potential impacts associated with the Skyline Dr. air cargo facility while acknowledging a likely impact associated with the west side air cargo alternative points to a distortion of information in the environmental analysis to support a pre-decision to select the Skyline Dr. air cargo facility option.

The Environmental Overview should be revised to recognize the impact on visual resources at the Skyline Dr. air cargo alternative. It is highly likely the impact to visual resources along Skyline Dr. are substantial in comparison to the west side alternative. The impact of lighting on the residents facing Skyline Dr. have the potential to greatly decrease the quality of life, and could arguably meet the criteria for significance. For this reason, the air cargo alternative on Skyline Dr. should be dropped for further consideration.

**Jet Blast Associated with Air Cargo Areas.**
An additional concern associated with a proposed air cargo ramp between Skyline Dr. and Foote Dr. is jet blast associated with 757-size aircraft. The jet blast from a 757 under idle thrust is considered dangerous to human safety out to 170 feet behind the tail of the aircraft. At that distance jet blast wind speeds would still be at 35 mph. Under breakaway thrust conditions, the jet blast remains above 35 mph and considered dangerous to humans out to approximately 700 feet.

Given the small size and geometry of the proposed air cargo ramp between Skyline Dr. and Foote Dr., it is clearly not possible to contain 757 jet blast within the airport boundary. Substantial mitigation would be required in the form of blast deflectors and operational limitations to prevent jet blast damage to off-airport structures, vehicles, and potential for injury to people. Air Cargo operators may find this site unacceptable due to the limitations on operations that would be necessary as well as the liability risk associated with the potential to harm people and damage property.

Given the configuration of the taxilane exiting the proposed cargo ramp, it would likely be difficult to avoid damage to the air cargo facility itself and associated ground service equipment on the ramp. Jet blast, even at idle thrust, could extend beyond the airport boundary and impact private property on the opposite sides of both Skyline Dr. and Foote Dr. Breakaway thrust directed across these roads would certainly cause damage to buildings and vehicles off airport, and have the potential to injure people in those areas.

Jet blast associated with the Skyline Dr. air cargo location would likely present an unacceptable risk to human safety and private property. These impacts to public safety have not been addressed in the draft master plan and need to be considered in the Environmental Overview as a negative impact to off-airport neighbors. The absence from the Environmental Overview of any consideration of jet blast impact to off-airport people and property has the appearance of a distortion of information that supports a pre-decision to select the Skyline Dr. air cargo area alternative.

Also, jet blast is likely to be problematic at other locations along the proposed taxilane to and from the proposed air cargo facility between Skyline Dr. and Foote Dr. For example, application of breakaway thrust while turning from the taxilane to Taxiway Charlie could risk damage to GA aircraft on ramps at the Red Baron, the AvCenter, at private hangars along taxiway Bravo, as well as at the self-serve fueling area. Damage to the NHPA protected Red Baron hangar should also a consideration as it is within 500 feet of the proposed 757 taxilane and could be subjected to jet blast well in excess of 35 mph.

If doors on hangars in this area happen to be open, the contents of those hangars would be subject to winds in excess of 35 mph, leading to damage of hangar contents. Jet blast in excess of 35 mph could cause damage to hangar doors, especially in the open position.

Similar concerns should be considered at the north end of the proposed taxilane as a powered turn by a 757 would direct jet blast greatly in excess of 35 mph at hangar doors in that area as well. Aircraft parked on the aprons of these hangars or operating on taxiway Bravo would also be at risk. Contents of open hangars in this area would also be at risk of damage by jet blast from a large jet turning from the taxilane toward

**Taxiway Alpha-1.**
It is clear the draft master plan has made no consideration for prop wash and jet blast associated with the proposed air cargo facility between Skyline Dr. and Foote Dr. Large, 757-size aircraft operating on the east side of the airport presents new complications for light GA aircraft pilots using IDA.

The airport planners are strongly encouraged to seriously consider the safety ramifications of having an air cargo facility and large ADG-IV aircraft operating in an area used now almost exclusively by ADG-I and ADG-II aircraft.

FAA AC 150/5300-13B, Airport Design, in section 5.17.1 recommends separating parking areas for GA aircraft "from turbojet aircraft parking and maneuvering areas." This FAA recommendation clearly points to the incompatibility of an air cargo facility anywhere on the east side of the airport. The draft master plan should be revised to acknowledge this incompatibility.

Operating 757-size aircraft in an area used primarily by small aircraft would constitute an unacceptable risk to human safety and private property damage on the airport. Failing to acknowledge the incompatibility of the air cargo area next to Skyline Dr. with the light GA aircraft and related infrastructure in the vicinity gives the appearance of a distortion of information to offer support for a pre-decision.

In Appendix C of AC 150/5300-13B, FAA recommends using aircraft path modeling software to identify potential risks for hazardous jet blast. Some of the recommended practices and design considerations in Appendix C include the following.

- Research the aircraft using the airport for jet exhaust and propeller wash characteristics to assess hazard risks.
- Assess the potential risks to public spaces from aircraft-generated wind in areas exterior to the AOA fence including walkways, bike paths, parking areas, waiting areas, etc.
- Position parking locations for light aircraft away from turbojets to limit risk of damage during power-out and taxi operations of turbojet aircraft.

- Consider site specific aircraft movement practices to identify areas where the three thrust levels are most likely to occur.
- Consider the exhaust stream footprint during power-up, push back, and turn maneuvers.

The draft master plan should consider these FAA recommendations and design considerations before continuing forward with plans for an air cargo facility between Skyline Dr. and Foot Dr. The airport planners are strongly encouraged to make use of aircraft path modeling software to determine the potential for jet blast from 757-size aircraft during ground operations to impact other airport users as well as off-airport neighbors.

**Air Cargo Taxiway.**
Although converting Runway 17/35 into a taxiway for accessing an air cargo facility would likely provide sufficient pavement strength for an ATR-72, based on the information in Table 4.8, it would not be sufficient to support 757 aircraft. To accommodate 757-size aircraft, the existing Runway 17/35, Taxiway Charlie, and connecting Taxiway Alpha-1 would have to be removed and reconstructed to a higher pavement strength standard. Removing and replacing these pavements would cost nearly as much as constructing a new full-length taxiway on the west side of Runway 3/21.

Because the long-range plan anticipates moving the passenger terminal to the west side of Runway 3/21, it would be an inefficient use of taxpayer dollars to construct two taxiways capable of handling transport-size aircraft. If the west side air cargo alternative is selected, then only one new taxiway would be required to support both the air cargo facility and the future passenger terminal. The cost-benefit analysis should include an acknowledgment that, with a long-range plan for a west side passenger terminal, selecting an air cargo area along Skyline Dr. rather than one on the west side, would likely result in a near duplication of costs for constructing two taxiway systems instead of just one.

FAA should not agree to fund a grant for a taxiway to an air cargo area on Skyline Dr. and then pay for a second one to access a west side passenger terminal. Because it would require only one new taxiway capable of handling large, transport aircraft, the west side development should be made the preferred alternative for air cargo facility development as it would provide the greatest benefit to the future of the airport and do so at a lower cost.

**Proposed Hangar and Tie Down Development**
The drawings for the two alternatives closing Runway 17/35 include extensive hangar development and tie downs in the infield area between Taxiways Alpha, Bravo, and Charlie. This is the area that at present contains the wind cone and the VOR-DME. The drawings do not show parking for private vehicles or any proposed route for private vehicles to reach this area. These alternatives should include details about ground vehicle access, otherwise, these hangars and tie downs should be removed from the drawings.

**West Side Development Phase II**
The West Side Phase II development alternative appears to only include the four-lane road to replace Old Butte Road. It does not appear that this road is necessary to support any future airport need or requirement. The draft master plan needs to make clear that the development of a four-lane road is only to support residential neighborhoods on the west side and not the airport. If the goal is to regain control of that parcel off airport property, the best alternative for meeting that goal would be to move the road completely off airport property, and not encumber that property further into the future with the extremely long lease to the City of Idaho Falls that would be required for a road. It would become more difficult in the future to remove that road than it will be right now. It is unlikely the FAA would approve a lease for

this road as it would essentially be considered a disposal of the property, and not consistent with the Grant Assurances. The City or BMPO should be asked to plan to move this road completely off airport property.

Unless there is some reason identified that makes this road essential to airport development, the Phase II option should be removed from the master plan as it does not address any identified airport need or requirement.

**Run-up Area Near A-1**

The draft master plan should include consideration of a run-up area near Taxiway A-1. GA operators have been asking for many years that a runup area be provided along Taxiway Alpha in the area on the east side of Taxiway Alpha. In the past, this was not possible because it would interfere with the 1,000 ft exclusion area around the VOR-DME. With the navaid moved out of this area, it would become possible to include a runup area. The airport planners are encouraged to include a runup area in this draft master plan.

If a runup area is still not feasible, a bypass taxiway and holding bay should be added at each end of Runway 3/21 to accommodate runups. This was included in the 2010 IDA Airport Master Plan (page 3-8) and ALP,but they have never been constructed.

> "The construction of a bypass taxiway and holding bay on Taxiway A at both ends of Runway 2/20 is recommended." (2010 Airport Master Plan, page 3-8)

**Sanitary Sewer**

The Utilities section of the draft master plan should consider the need for sanitary sewer access to support future east side development. Sanitary sewer connections are not available on the east side of the airport. Sewage on the east side is now handled by septic tanks and drain fields. The septic system associated with the Red Barron and historic district are approaching 100 years since installation. These septic tanks and drain fields are in close proximity to the Snake River and may constitute an environmental hazard that should be reviewed.

Drain fields take up land that could otherwise be developed for hangars, aprons, taxilanes, etc. Providing access to sanitary sewer capability would improve development opportunities on the east side of the airport and reduce the potential for environmental hazards.

**Closing Runway 17/35**

The disadvantages of closing 17/35 were addressed in the 2010 Master Plan at page 4-2. The stated disadvantages included the following.

- Requires the removal of existing infrastructure.
- Increases the taxi distance from the east side hangars and apron to an active runway.
- Eliminates an alternate runway in the event Runway 3/21 is closed for maintenance, construction, an emergency, or a disabled aircraft.

The new draft master plan should include a discussion of these and other disadvantages associated with a decision to close Runway 17/35. A conversation with stakeholders from the GA community at IDA would be a great opportunity for the airport planners to gain insight on the problems that would result from closing Runway 17/35. It is important to remember that all hangars on the airport are the result of private investment. Changes in runway and taxiway access will impact the value of those hangars. The potential financial loss to GA stakeholders must be considered in this discission.

A decision to close Runway 17/35 should only be made following a transparent assessment of the compliance issues, available mitigation, impact to those who use Runway 17/35, sustainability of GA tenants, financial impact to hangar owners, financial impact to fixed base operators, and an accounting of the costs of maintaining the runway. Unfortunately, the stakeholder involvement process for this master plan has not yet allowed for these issues to be considered.

The master plan should acknowledge that no decision on closing Runway 17/35 would be made without airport management providing for this sort of a transparent assessment and a plan for mitigating losses incurred by private investors and stakeholders. It is especially important to address these impacts considering the incompatibility of light GA aircraft with the proposed air cargo facility next to Skyline Dr. (see discussion on incompatibility above under Jet Blast). A decision to close Runway 17/35 to develop an air cargo area next to Skyline Dr. would have a devastating impact on the ability of GA pilots to continue to safely use the east side of the airport.

The master plan should acknowledge that no decision on closing Runway 17/35 would be made without providing the stakeholders with an opportunity to have their concerns heard and considered by decision makers.

### West Side Passenger Terminal

The preferred alternative for passenger terminal development should be to move the passenger terminal to the west side of Runway 3/21. This alternative should also be decoupled from a decision by ITD regarding a new highway interchange north of the airport.

It should be apparent by the difficulty of finding space to accommodate the increasing passenger demand that the present terminal location is already too small. It should be apparent in the difficulty to expand the air cargo ramp next to the existing passenger terminal also points to a logical conclusion that these airport needs can no longer be met in the space available at the present location of the passenger terminal.

Continuing increases in passenger demand is already increasing traffic using Skyline Dr. and Grandview Dr. A plan that continues to use the Skyline passenger terminal location will eventually make it very difficult for residents in the neighborhoods along Skyline and Grandview to get into and out of their neighborhoods. A decision by ITD to select an I-15/US-26 interchange alternative that brings highway traffic onto Olympia and then Skyline Dr. would greatly exacerbate the traffic problems in the vicinity of the airport. It is this effect on traffic volume on Skyline Dr. and Grandview Dr. that makes it important to decouple the decision for the west passenger terminal development from the decision by ITD to build an interchange north of the airport. Although the north interchange would greatly facilitate a west side terminal development, there is nothing that makes that interchange a required precursor.

The fact that this draft master plan is considering closing some airport facilities and negatively impacting private investors, airport stakeholders, and residential neighborhoods to make room for expansion of facilities for air cargo, passenger terminal, parking, and rental car operations makes it obvious that the existing space in the central part of the airport is no longer sufficient to meet the needs and requirements of this airport. The sacrifices that would be required of multiple stakeholder groups is a clear signal that the west side passenger terminal development should happen sooner rather than later.

If the planning team wishes to continue to push forward with alternatives for expanding the existing passenger terminal, a traffic analysis should be completed to address the impact of increased air passenger enplanements on traffic on Skyline and Grandview. The Environmental

Overview should address the impact of this increase in airport traffic on Skyline Dr. on the safety and quality of life of the residents in the adjacent neighborhoods. The potential for a USDOT-funded I-15/US20 interchange project bringing additional traffic onto Olympus and Skyline Dr. is a reasonably foreseeable action that should be addressed at least as a cumulative impact in the Environmental Overview.

A decision to develop the passenger terminal on the west side of Runway 3/21 would result in increased safety and quality of life for the residents in the neighborhoods adjacent to Skyline Dr. and Grandview Dr.

Moving the passenger terminal to the west side now would provide space for other growth opportunities at the airport, and would allow for all of the stated master plan "key issues" to be readily addressed. Moving the passenger terminal now opens space to:

- Expand the existing air cargo facilities.
- Expand GA hangars, aprons, and tiedown areas.
- Expand FBO development.
- Expand a centrally located ARFF.
- Construct a new ATCT.
- Expand facilities for storage and maintenance of snow removal equipment.

The draft master plan drawing for the West Side Terminal Alternative should also depict a redevelopment of the area occupied by the existing passenger terminal facilities to provide for all those things."

"Our home on 81st North is in the direct landing path of many flights. There needs to be a variation to the flight path for incoming planes so that we don't beat the burden of all the noise and distraction of low flying planes. I don't know if that means building runways that are directed in alternating paths or if that can be done with flights themselves. But there needs to be more variety."

"The owner of Holley Tree Farm and Foote Drive Storage, located on Grandview Parcel by the new hangars and Foote Dr. by the community gardens and Red Barron Hangar. This is a family-owned and operated business that will be passed down to my sons.

Holley Tree Farm employs 4 to 10 people and produces 2,000 to 4,000 trees annually, providing beautiful landscapes, shrubs, and trees to professional and residential dwellings in Idaho, Montana, and Utah. Holley Tree Farm encourages proper trees and maintenance in specific regions to produce lasting and attractive foliage.

From my understanding of the Master Plan on Grandview Parcel, new hangars are to be constructed, and on Foote Drive, an extended parking lot from the Community Garden to the old cabin. If this proposal is accepted, it will mean the end of Holley Tree Farm. Depending on the projected or expected timeline of the project, finding and relocating the business, trees, and equipment to an alternate site will cost an estimated $700,000 and can exceed $1,200,000. The impact of moving the trees to a holding area or alternate location will cause significant loss to the company's inventory.

Foote Drive Storage has several clients with campers and trailers that have been utilizing and renting storage for more than 2 decades. Buying or leasing a new property and building a new facility to continue to offer storage space will cause an unnecessary hardship for the clients and the business. The Master Plan calls for the research and proposal of vertical parking. Instead of taking space and putting local companies out of business, I strongly recommend looking into extending the parking capacity of not only short/long-term parking but also rental car holdings by adopting a vertical parking project.

Thank you for your time"

"In attending the IF Regional Airport meeting of February 7th, I learned much about the plans for the airport and soccer fields.

Towards the end of the meeting a gentleman suggested moving the airport out of town rather than making updates to the existing airport and honestly, that seems like the most reasonable suggestion, given the intent of the city to continue growing our population. So that would be my first choice.

If that will not be a serious consideration, then I think the next best option is to convert runway 17/35 to a taxi way so the FFA will fund maintenance of 17/35 and that burden will be removed from the airport. It is my understanding that the main runway 321 is no where near capacity, so the aircraft using 17/35 should easily be absorbed into runway 321. And this option, as I understand it will negate the need to move Old Butte Road. I view this as the second best option."

"Looking at the West Side Development and the West Side Terminal Concept, it might be a better option for the FedEx Building, which is currently placed very close to the residential areas and would require large trailers to travel down smaller roads (Bellin Rd from Hwy 20 or Broadway/old Butte rd from I-15) to be located more to the north closer to where the future highway is planned."

"Don't add a terminal for Fed Ex right by the second exit to the village. It would make more sense to put it closer to the future highway ramp/exit. It would be an eye sore and noise nuisance for the neighborhood.

If you do build a future road by the Village, please don't disturb the existing berm and trees. A sound wall for the homes along there would be needed. Still don't get how this is allowed with the drain field on the soccer fields. Feels like making money for the city trumps property owner rights.

Have a nice day."

"Is the city planning to walk away from the soccer complex in 2026 when the lease is up?"

"Don't add a terminal for Fed Ex right by the second exit to the village. It would make more sense to put it closer to the future highway ramp/exit. It would be an eye sore and noise nuisance for the neighborhood.

If you do build a future road by the Village, please don't disturb the existing berm and trees. A sound wall for the homes along there would be needed. Still don't get how this is allowed with the drain field on the soccer fields. Feels like making money for the city trumps property owner rights.

Have a nice day."

“Comments Regarding the Master Plan

**Chapter 2 – none**

**Chapter 3**
1. Page 3-4 Last Paragraph:

Change:

In addition, the Advanced Test Reactor (ATR) facility is located at the INL approximately 47 miles west of Idaho Falls. The INL, which

2. Page 3-5 Second Paragragh

The Red Baron hangar, airport beacon, and caretaker’s cabin remain intact, and along with the steel hangars built in the 1950’s make up the Idaho Falls Airport Historic District

3. Page 3-7 Paragraph 3.2.2

West Broadway also provides direct access from downtown Idaho Falls east of the Snake River, and, as U.S. Highway 20, provides access from the west

4. Page 3-10 references the Advanced Test Reactor in section 3.3.1. Why is the ATR referenced in this document? Have the references to ATR been cleared by the Department of Energy? Referencing the INL boundary is good enough.

5. Table 3-3 is titled 1983-2021, but lists a 1982 report.

**Chapter 4**
1. Define ARC C-III on page 26 of 52

Second Paragraph in section 4.5.8 states there are two self serve fuel islands.. This is not correct. The island next to the “Old Aeromark Hangar” is not self serve. Aeromark line crew always refuels aircraft using that fuel island.

Paragraph 4.5.9 Hot Spots

The chart supplement and the current airport diagram advise pilots of only 1 hot spot HS-1 at the intersection of Ruway 17/35 and Taxiway C.

HS-2 has been removed from both aforementioned documents.

Figure 4.27 should be replaced with the current Airport Diagram

2. Page 4-33 Paragraph 4.8 references a completion date of Spring 2022. Does this need correction?

3. Section 4.12 on page 4-41 does not mention the nine single aircraft steel hangars running north to South on the east side of the taxi way lane east of Runway 17/35, nor the old steel hangars running east and west just inside the north end gate on Foote drive. These are included in the state historical records, which can be accessed at the ICRIS web site, https://icris-history.idaho.gov/historic-map. These hangars have Smithsonian Numbers. For example;

Smithsonian No.: 10BV1911, IHSI No.: 19-18500

**Chapter 5**
No Comments

**Chapter 6**
No Comments

**Chapter 8**
1. Paragraph 8.7.2 (c)

Does this paragraph and table 8.5 need to include the hangars shown on the ICRIS website map?

2. Figure 8.1 captures the Red Baron Hangar, bot not the other hangars listed on the ICRIS website. Should they be listed also?

3. Paragraph 8.14.2 has misspelled the word “Stated” for United States. Change “Stated to States”

**Chapter 11**
No comments

**Chapter 12**
No comments

**Drawings,**
Sheet 1 of12 Shows two possible locations for the control tower. How tall would the tower need to be so as not to have the controllers vision to the runway or aprons blocked by the proposed parking garage?

Sheet 3 of12 No Comment

Sheet 4 of12 1) Shows 9 new hangars being located roughly where the old 1956 built hangars are located. They are also shown as part of the historic district, which they would not be, being that they are new. The old T hangars are shown as being moved further to the east with two new square hangars on their south.

2) Why place a hangar at the North end of the new taxi way between the T hangars and row of new hangars, instead leave it open as a taxiway.

Sheet 5 of12 1) Same comments as sheet 4 regarding the historic district.

2) The general perception among many local pilots is that the number of aircraft based at IDA is fairly stable, and we do not see the level of activity increasing to a point that more aircraft are based at IDA. Therefore, we do not see a need to remove runway 17/35, to make space for hangars.

3) Runway 17/35 is used for crosswind takeoff and landing training; and supports the airline traffic by providing an alternative for the smaller GA aircraft used to train pilots. It is useful for that reason.

Sheet 6 of 12 Same comments as sheets 5 and 6. Runway 17/35 is useful as for training, and allowing for crosswind practice.

Sheets 7, 8 and 9 of 12 Will access to the hangars be controlled through a fence and security gate, or will each new hangar be required to install and maintain an airport approved security system tied to the airport security system?

Sheet 10 of12 No Comment

Sheet 11 of12 No Comment

Sheet 12 of12 No Comment”

"I realize airport expansion is needed; however, I feel that taking out the soccer complex with all the beautiful trees and green space is a detriment to our community. Is there a better way to expand more to the north of the current airport?"

"When is it estimated for Westside phase 2 to start and be completed?

What happens to all the grass between the new Old Butte Rd and the Runway? How will it be maintained?"

"Regarding the West side development expansion, why does the plan not consider building the space for two air cargo operators directly across the runway from the current terminal? This option would use existing land and not require the airport to purchase additional land. It would also put the space for two air cargo operators further away from dense residential areas."

"Phase 1 of the West side expansion plan includes maintaining the soccer fields. Why are trees being removed from the soccer fields if the plan is to maintain the area?"

"Regarding Phase 2 of the West side development, why would the airport incur a significant cost to move Old Butte road before growth demand is realized? This seems like a significant investment tied to very loose plans. Is this a good use of taxpayer funds?"

"In Phase 2 of the West Side expansion the map does not show how Old Butte road would tie into Broadway. Could this added detail be provided?"

"Related to the west side expansion, how will the airport deal with storm water drainage from the Village subdivision long term if future airport development takes place in the Old Butte soccer field area?"

"In Phase 2 of the West Side development it appears the airport will be relocating Old Butte road closer to the Village subdivision. This move will place a busy road between the Old Butte playground and the neighborhood homes. Does this plan consider safety issues related to placing a busy road between a playground and homes where children live?"

"With no plans to remove the Old Butte soccer fields in Phase One or Phase Two, why is the city removing healthy trees from this area now? Citizens have observed the removal of several healthy trees in this area."

"With overall operations growth expected to be less than 1%, why would we use taxpayers money to expand so aggressively?"

"My primary concern with the airport masterplan is maintaining the current presence/location of both the green space (currently soccer fields) and old butte road. Therefore, my preference for the East Side General Aviation would be GA2. My understanding is this would close the Runway 17/35 to private planes, allowing use as a taxi way for commerical flights and eliminating the need to relocate old butte road."

"I attended the presentation on the Idaho Falls Airport Master Plan on February 7th and I have to say the presenter and material was excellent. I learned much more than what was on your website so i want to thank you for that.

I live in the Village on the west side of the airport and I have been very concerned about the impact to our neighborhood. I am not a pilot but the east side general aviation option 2 and option 3 seem to be a much better option than the others that would require development on the west side. As I understand, options 2 or 3 would close the 17/35 runway which resolves the safety and FAA funding issue. These options also put the air cargo facility next to an industrial and commercial area instead of homes, removes the need for a west side taxi lane, and the reroute of Old Butte Road in close proximity to many homes.

From the presentation I understand that this may not be to forum to discuss the soccer fields but keeping the development on the east side of the airport will give a better chance for keeping them for longer."

"East Side Option 1, keeping runway 17-35 open is the best alternative. This option includes new hanger construction to support future GA needs and keeps an important GA runway open.

East Side Options 2 and 3 (Closing Runway 17-35) has many immediate and long-term disadvantages and is not in the best interest of the airport, general aviation, or the Idaho Falls community. Some specific reasons I believe this to be the case are as follows:

1. Forcing all aircraft (large, small, fast, and slow) onto a single use runway will present safety challenges for taxing aircraft and creates greater air traffic control challenges for a non-radar equipped tower to maintain adequate separation of a growing number of aircraft with a wide range of airspeeds. There is also the matter of increased likelihood of wake turbulence and delays caused the tower's responsibility to space landing/departing aircraft to reduce that risk. These potential safety concerns would increase in potential as the airport experiences growth.

2. Elimination of runway 17-35 would reduce the overall operational reliability of the airport. In the past there have been multiple occasions for temporary or long-term maintenance closure of runway 3-21. Having an operational runway 17-35 as an alternative during those times prevented the complete closure of the airport. In the past year runway 3-21 was temporarily closed on nine occasions due to various events such as aircraft with collapsed landing gear or blown tires. During all those event's runway 17-35 remained open and available for landing and departing aircraft.

3. Closing Runway 17-35 would result in the removal of an important runway to mitigate the need for small aircraft crosswind landings on runway 3-21. While the wind data today does not support continued FAA funding of 17-35, it does point out that severe wind conditions do still occasionally exist and at times 17-35 is the safer option for small GA aircraft. Also, given our changing climatic conditions it is possible that wind data in the next 10 years could once again support FAA funding of that alternate runway.

4. Closing runway 17-35 reduces general aviation access to the east side of the airport which would impact access to the self-serve fuel station and eliminate a natural gathering location for general aviation events. It also would increase the taxing distance for all GA aircraft located on the east side of the airport.

5. Closing runway 17-35 would have a negative impact on flight training and instruction. Having an opportunity for narrower, shorter runway landings as well as practicing cross wind

landings are an important part of pilot training and proficiency. Pilot training is important to the continued growth of the industry and the continued growing demand for commercial and GA pilots.

6. Closing 17-35 is an irreversible decision. Not only would it immediately eliminate GA utilization of an important runway there is essentially no realistic scenario in which the FAA approves, or the city agrees to fund the construction of a new runway. Considering the vigorous growth anticipated in Idaho Falls in both commercial and general aviation it seems wisest to keep all our options open, even if it is necessary to develop additional funding alternatives to support the runway in the near term."

"As an Idaho Falls Based GA pilot, I support East side GA option 1 with runway 17/35 to remain open.

Having two runways available is an important safety concern for the local and transient GA pilots. Returning home after a long flight and having to deal with a cross or quartering headwind on landing is a stress that is eliminated by having runway 17/35 available.

Having both runways available at a towered airport is a fantastic training environment for both GA students and the tower personnel. Our tower is in the Air Traffic Control ATC) training pipeline. Getting experience dealing with the variety of aircraft at IDA and the flow into both runways is fantastic experience for both student pilots and ATC personnel.

In my opinion the better option for cargo growth will be to pursue Westside option 1.

The West cargo terminal is a better forward looking fit for ground deployment of cargo to and from the Airport vice the later phases of east side development.

The I-15 and US 20 connector project is currently in the Environmental Impact Statement phase and the two options being considered in this phase, E3 and H2 will both result in congestion and conflicts between cargo ground freight and commuter traffic flow if the east side cargo development was chosen for cargo capacity expansion.

Maintaining runway 17/35 and developing the west side for cargo provides the best opportunity for future growth and revenue generation from three diverse areas. Main terminal area for commercial commuter traffic, West side for cargo growth and the east side for General Aviation. With the growth of the airport projected the maintenance of the 17/35 runway would be a relatively small cost to the overall Airport maintenance budget even without Federal help."

"Master Plan Section 6.3.1 Airfield Capacity, Capacity Assumptions, Percent touch and Goes.

The assumption that touch and go operations are limited to local GA operations is not accurate. Military aircraft use IDA as a training location and conduct touch and goes. For completion the capacity assumption should be adjusted higher by approximately 2 to 3 % based on military annual operations reported in section 5.2.1.C."

"Community Development Services, a department in the City of Idaho Falls, would like to supply comments for the recently held public outreach for the Airport Master Plan. Staff has reviewed the materials online and were able to attend the open house held at the Skyline Activity Center. Our department would like to point out a few comments after reviewing the material. Development Standards will need to followed per the zoning ordinance. For example, for the parking lot configurations, no internal landscaping was shown. Any parking lot over 24 stalls must have a minimum of 10% internal landscaping. This requirement will affect number of proposed parking stalls. Parking spaces must be a minimum of 9'x20' as well. In the South Quad potential developments, along the boundary against residential, there would be a required 30ft buffer or 20ft ft buffer with a fence. Evergreen trees would also be required due to buffering purposes, in addition to other landscape requirements per the zoning ordinance for the LM, Light Manufacturing and Heavy Commercial Zone.

The expansion of the airport will also have the possibility of expanding the Airport Zoning Overlay. This could possibly have implications for pending residential development. Our department would need to work with and be aware of impending changes in order to facilitate those changes to the overlay and understand the impact to development.

In addition to the Airport Master Plan, there are, as you are aware, plans for the I15/US20 Connector. While the preferred route is H2, where it goes to the north, while reviewing Option one east GA, the other preferred out for I15, E3, is imposing on the proposed site plan.

Community Development Services also has staff that act as a liaison for our Historic Preservation Commission. The Airport is unique in that is has a historic district on the property, the Red Barron. While I understand there are limitations due to the FAA, having an access for the public to this historic district would bring value to the community and allow this historic district to have other opportunities for preservation and community involvement.

Our department is always available to collaborate, help answer development standard questions and happy to look over any designs prior to final product of the master plan to ensure development standards are incorporated. Please feel free to reach out at any time."

"You will violate the Deeds of every village homeowner by developing over the drain field. Your plan to mitigate that?"

"Add Straight Flight to St. George UT."

"Please consider drastically improved outdoor lighting for the sidewalks and crosswalks. I have nearly been hit as a pedestrian and nearly hit people while driving as well. I can't believe the City of IF hasn't noticed/addressed this issue."

"I would like to see information on community garden usage. Idaho Falls needs more green areas and ways for community members to connect with nature. Replacing the community gardens is a step backwards.

It also appears that the Christmas tree farm off grandview would be sacrificed, I'm against this as well. Hangar expansion next to the tree farm is acceptable.

I am against any portion of the Westside plan that requires acquiring additional property. Unfortunately those of us that are near the current airport property but in the county have very little influence on voting out city officials that are unwilling to protect green areas in Idaho falls and citizen homes that have been established for decades. Property acquisition should be out of the question as it is against the values of the community for keeping homes and generational property protected.

Rather than overtaking established houses and green areas, I would like to see a plan for an airport that is built outside of Idaho falls with plenty of room to expand without conflicting with citizen interests. I'm afraid that this plan is a short term fix for using a small amount of land. I would love to see the airport continue to expand in passengers, cargo movement, flight destinations and number of flights but I don't see that this is possible in the current location."

“I strongly support the east side option 1 alternative. I am a pilot of a taildragger aircraft, located on the east side, and will be limited in flying on days when a significant cross wind is present for runway 3-21. Keeping runway 17-35 open gives me a much safer option for takeoff and landing in such conditions.”

“Do not close 17-35. I have invested hundreds of hours and thousands of dollars in the KIDA GA and closing that runway would be detrimental.”

“I favor keeping RWY 17-35 open. Should the winds be from the SW, the taxi from the SE Hangars (e.g. Civil Air Patrol) to RWY 03 is extraordinarily long and increases the interaction of smaller GA aircraft with larger commercial aircraft, thereby increasing risk.”

“I am in favor of keeping RWY 17-35 open. I prefer Option 1 for the East Side General Aviation solution. Proposals to increase the number of hangars, that simultaneously decreases airport capacity by removing runways, just don't make sense.”

“I honestly wish there would just be a financially responsible investment in the Pocatello airport which isn't landlocked. Idaho Falls has never lived up to its airport aspirations in the past and this plan is based on imagined future growth that SO MANY residents DO NOT even want. Both the city and county have planned poorly for the growth we have experienced thus far. There's been little to no transparency with regards to BMPO goals/plans and residents have paid the price with too much traffic, roads in disrepair, haphazard development, poor quality housing construction, and a meat plant (foolishly allowed in city limits) stinking up the NE end of the county. This place is being ruined and this expansion of the airport would just be icing on the cake.”

“Will there be a designated park and wait area?”

“Over the past few years, the increases in the number of arrivals and departures, as well as the size and types of aircraft, (large commercial vs smaller private aircraft), has had a major effect on the noise level for neighborhoods closer to the airport. I have especially noticed the lack of a defined corridor for arrivals and departures of commercial aircraft. Since we have a single runway, it would seem that a single departure corridor over "the least populated areas" would at least "minimize" the noise impact on the greatest number of residents. Has any thought been given to this aspect of air traffic growth?”

“Interested in learning about the plans.

“Overall plan is appropriate for the future Idaho Falls growth. I provide two comments:

1) If the airport is thinking of expanding to the west in 15 -20 years then it would be prudent to invest in the land acquisition now before any additional housing development on the east side of Old Butte road.

2) What about the south end of the airport (e.g. Reed dairy area) and across West Broadway (land currently listed for sale)? Are there planning restrictions in place for that land to avoid future conflicts (such as noise, safety) with increased air traffic overhead.”

“As a resident of Idaho Falls, I am specifically interested in the transportation portion. What is the future prospects of increased incoming and outgoing flights? Has there been a study on the revenue lost to Salt Lake City in regards to individuals traveling to SLC for flights? Is it significant enough to operate more airlines and competition out of IDA? Thank you for the opportunity to participate in the Idaho Falls Regional Airports Master Plan.”

“Have we thought about adding another business or two to the waiting areas?”

“There is no public transportation to the airport early in the morning for the 6 AM departure of the Delta/Airfrance/Aeromexico flight or the United flight to Denver departing IDA at 7 AM. Similarly, there is no public transportation for passengers who arrive on flights late in the evening, at 8:54 PM and 10:05 PM. I would appreciate it if you could coordinate such transportation with GIFT for all the residents who take these flights. It would require an extension of the GIFT service hours but I'm sure that even with a higher ride price, passengers would use the service.

1. Even though the I-15/ Highway 20 interchange is mentioned at the very first of this presentation, I couldn't find any mention of it in the indexes to the sections or in skimming the text. It might be that I missed it. Please tell me where it is.

2. Although air traffic is apparently not expected to substantially increase, an interchange that is located under the takeoff and landing approach or even off to one side would bring a huge increase in traffic into the approach area. Does the airport have an accident analysis that includes estimations of the occurrences of accidents such as large fuel-laden airplanes crashing shortly before landing or after takeoff? Does it include a probabilistic analysis of such an event that also includes assumed traffic on local roadways? If so, has it been updated with estimates of increased traffic due to the proposed interchange?

3. Please include evaluations of the impact of future airport traffic and larger airplanes on the neighborhoods that surround the airport, and on the northern and southern air approaches, and mandate that all future transport aircraft be quieter than the ones they replace. We live to the north of the airport and are directly beneath the approach path of airplanes that are flying south into the airport. We knew about the noise when we moved in 20 years ago and we've not tired in watching airplanes fly over. I had hoped that newer airplanes would have quieter engines and they largely have, with the notable exception of what I believe is an Airbus. Its engines are very loud and have a penetrating, annoying high pitch.”

“#1 Highly recommend leaving the burm in place by the Village property line for traffic safety and noise reduction benefit. Add a pedestrian and bike path.

#2 What are the plans to maintain the storm drain basin? They are necessary now and will only become more necessary as additional planned subdivisions begin construction.

#3 It would be a shame to lose the many mature trees in the soccer complex. Are there any plans to offer and transplant them to community members?”

“Love to see this expansion! My only concern is the community garden and parks. Hopefully the city will have relocation sites for both?”

“It would be very nice to have a jetway entrance/exit for the A319/320 aircraft. I am not sure if Allegiant is paying less to use the ground-floor boarding or if the 3 jetways are unable to accomodate them due to demand from Skywest on behalf of Delta, American, United Airlines.”

“Considering ”long” range planning, is there any thought to lengthening the runway? The property that is for sale on the sound end of the runway and on the south side of Broadway appears to a viable expansion. The runway could be expanded with an underpass for Broadway and provide additional room for hangar needs. The property that is for sale now, would soon be filled with homes and businesses, so now would be the opportune time to purchase at lease a portion, if not all of that 70+ acres. It appears that Idaho Falls will continue to grow and the success of INL will increase the demand for the Idaho Falls Airport. Expansion to the north is not viable, expansion to the east and west is not viable. Therefore future growth is a possibility right now with that land being up for sale. I would suggest that it be given immediate consideration.”

“We are HIGHLY in favor of the new Airport plans and in support of the E3 development for routing to the airport. (1-15 connector). This will really enhance flow to the airport. Will try to attend in person meeting in Feb.”

“So as a VERY frequent flyer (25+ trips per year) I love the parking garage. Expand it - make it so most parking is covered. Most people would gladly pay more for covered parking in the winter so they don’t have to slog through snow and have to clean it off their car. It is the single best thing you can do to enhance the airport experience. At least have everything inside the loop be covered. This isn’t about capacity. For people who have a choice of airport it would make IDA their preferred airport during the winter. It will bring more business to Idaho Falls Airport and will it make everyone happier who has to park or rent a car. Idaho Falls doesn’t have a transit system so that is a waste. Cell phone area is ok, but I think it’s too big.

Terminal phase 2, seems to make the most sense, but does the fire station also need to serve outside of the Airport? I like the eastside option GA 2 with the closing of the runway 17/35 and adding the cargo to that end. this also seems to give you the greatest Taxi lengths to hold planes if the weather will not support flight. South Quad General Aviation, I would do what ever creates the most flexibility and what creates the most hanger space. West side phase 2 I would not build any buildings on that side with out considering a second runway and Taxi way for 50+ year growth. If buildings are built I would make sure they can easily be removed. With H2 being the preferred connection I like the terminal flipping to this side. I would plan for a second runway and taxiway to the west of the existing runway. for 50-100 year plan.”

“I had no idea there was a community garden at the airport, but it would be nice if it were relocated instead of totally removed for more parking.”

“Avoid westside development at all costs. Since a West Side Terminal is being considered, then any West Side Development should be be tied to it. Do not develop the west side until a decision has been made on a west side terminal. Proposed Air Cargo buildings near the Village neighborhood will have negative impacts on residents and property values nearby. Noise mitigation should be a top priority for any west side development as aircraft noise and truck traffic would increase dramatically. The proposed roadway alignment should be pushed as far east as possible.”

“Parking should be open and free as is the Pocatello airport. The cost of parking just to let off an airline passenger is exorbitant. The cost of flying is, at this time, easier and cheaper if Idaho Falls residents use the Pocatello airport.”

“I was just reaching out to see how far along you are in the development of the Idaho Falls airport expansion. This is an interesting project that I recently learned of, and Centrex specializes in aviation construction. Have you developed any drawings or plans yet for the future expansion? We do aviation projects throughout the West currently including Idaho, California, Nevada, Montana, Oregon, and Washington. For a lot of our clients, we do the design and construction phase of the projects. If you have an idea of when this project will need an RFP that would be great information to know. I appreciate your time and hope to hear from you.”

“There needs to be a nearby car parking area where people can wait for a text that their arriving party is ready to be picked up. Heretofore, there has been a long line of cars parked to the right of the road (clogging it) awaiting the same pickup request.”

“I like that the plans maintain access to the village neighborhood by moving old Butte Road. Question how much pushback you’re going to get on acquisition of lands for some of the potential expansion areas. Definitely a smart idea to plan on building a parking garage that has multilevel to accommodate more vehicles.”

“Concerned about property values around the airport. I own a home on Morningstar Cr. Is there a better place for a larger airport?”

“Can you please incorporate a cell phone waiting lane for passenger pick up.”

“The house owners on Clarence need to be compensated in some way for the undisclosed incursion of airport land use. The city's failure to take this issue in mind when they allowed the adjacent land to be developed and its failure to make it a disclosure to the first buyers is a moral issue that unfortunately is burdened on the city's present administration.”

“The timeline for the IF regional airport master plan shows a presentation of draft alternatives being completed spring 2023. Can I please get a copy of that?”

“What type of facilities are planned for the soccer fields?”

“I am a resident of the Village and would like to know when we can expect an update regarding the master plan. Many of us previously signed up for email updates, but it’s been over a year since the last meeting with zero communication.”

“I would like a copy of the original grant for the airport land that now constitutes the soccer fields. The sign up function for "Follow the master plan" was not working. I tried many times and rest the Captcha.”

“On the West Side Terminal Alternative it shows (in teal) the Terminal Apron, and Parking Area. What is that meant to be? Does that mean that the terminal would be moved from where it is now to that area or is a “terminal apron” something different than that?”

“I reviewed all of the documents that were included online but do not see a document with the proposed and alternative options. For example the documents indicate the control tower needs to be relocated to allow terminal expansion but I could find nothing in the documents about proposed relocation options. The documents also discuss incompatible land uses such as the soccer complex but could not find options for this. One document discussed the possibility of selling that land back to Idaho Falls as long as the proceeds go back to the airport. This seems like a viable option vs moving the soccer fields elsewhere. I live north of the soccer complex and utilize Old Butte Road to get to my house which also crosses through the RPZ and found no discussions about this. My concern would be that Old Butte road could get closed and access from 35th and 17th north in the winter is not good, often drifted in. Anyway, I will provide some comments but would like to see the proposed option and alternative options for the needed changes. Where can I find that?”

“May 19, 2023

Wayne Reiter Airport Planner Ardurra Group Inc.

Subject: Comments On The Initial Alternative Assessment Document Dear Wayne,

As a member of the Technical Advisory Committee (TAC) for the review and update of the Idaho Falls airport Master Plan I am providing you my comments on the Initial Alternatives Assessment document. I appreciate being an invited participant of the TAC and having this opportunity to provide you with my comments.

**Terminal Area Options**
I think that Option 3 is the best overall alternative. This alternative does impact and require relocation of cargo. However, the future expected growth in cargo coupled with potential additional future expansions of the terminal are likely to create future conflicts for space on the airport grounds. It would be best, I believe, to start taking the difficult steps now to relocate cargo facilities to better support the future overall growth of the airport and eliminating additional future conflicts.

In option 3 there needs to be special consideration of the expected increase in pedestrian traffic from the expanded main ground parking area. The pedestrian crossings in front of the terminal are fairly well marked and average traffic speeds are somewhat reduced. However, there is currently only a single pedestrian crossing south of the terminal and it is both poorly marked and poorly lit. To make matters worse, vehicle speeds are higher in this area after passenger drop offs. As airport pedestrian traffic increases the potential for vehicle pedestrian accidents in this area will also increase.

All three of the Terminal Area options reflect the tower in two possible new locations. I believe the best option would be in/near the current employee parking area. Locating the tower east of the parking garage could cause line of sight issues with ground traffic and the tower location itself would likely be in conflict with the surface parking areas.

All terminal area options clearly will improve the flow of traffic to and around the terminal area itself. However, the increased vehicle traffic associated with increases in passengers and parking will inevitably result in increased traffic on Skyline, Grandview, Broadway, and the existing I-15 — US 20 interchange. Is the Idaho DOT considering the impact of the forecasted growth at IDA in the planning of the impacted surrounding roadways to be consistent with, and in support of, the preferred alternatives selected in the Master Plan?

**Airfield Alternatives**

I think that the alternative of closing 17-35 has many immediate and long-term disadvantages and is not in the best interest of the airport, general aviation, or the Idaho Falls community. Some specific reasons I believe this to be the case are as follows:

It would reduce safety of both commercial and general aviation by forcing all aircraft (large and small) onto a single use runway. This presents additional safety challenges for taxing aircraft and creates greater air traffic control challenges for a non-radar equipped tower to maintain adequate separation of a growing number of aircraft with a wide range of airspeeds. There is also the matter of increased likelihood of wake turbulence and delays caused the tower's responsibility to space landing/departing aircraft to reduce that risk. These potential safety concerns would increase in potential as the airport experiences growth.

Elimination of runway 17-35 would reduce the overall operational reliability of the airport. In the past there have been multiple occasions for temporary or long-term maintenance closure of runway 3-21.

Having an operational runway 17-35 as an alternative during those times prevented the complete closure of the airport. In the past year runway 3-21 was temporarily closed on nine occasions due to various events such as aircraft with collapsed landing gear or blown tires. During all those event's runway 17-35 remained open and available for landing and departing aircraft.

Another factor related to safety, closing Runway 17/35 would result in the removal of an important runway to mitigate the need for small aircraft crosswind landings on runway 3-21. While the wind data today does not support continued FAA funding of 17-35, it does point out that severe wind conditions do still occasionally exist and at times 17-35 is the safer option for small GA aircraft. Also, given our changing climatic conditions it is possible that wind data in the next 10 years could once again support FAA funding of that alternate runway.

Closing runway 17-35 reduces general aviation access to the east side of the airport which would impact access to the self-serve fuel station and eliminate a natural gathering location for general aviation events. It also would increase the taxing distance for all GA aircraft located on the east side of the airport.

Closing runway 17-35 would have a negative impact on flight training and instruction. Having an opportunity for narrower, shorter runway landings as well as practicing cross wind landings are an important part of pilot training and proficiency. Pilot training is important to the continued growth of the industry and the continued growing demand for commercial and GA pilots.

The airfield alternative document notes that closing runway 17-35 improves safety because of "runway incursion mitigation". I do not think this is a valid comment. If our concern was to eliminate the possibility of all runway incursions through runway closure, we would be closing runway 3-21 as well. Obviously, this is not a justifiable reason to close 17-35.

Closing 17-55 is an irreversible decision. Not only would it immediately eliminate GA utilization of an important runway there is essentially no realistic scenario in which the FAA approves, or the city agrees to fund the construction of a new runway. Considering the vigorous growth anticipated in Idaho Falls in both commercial and general aviation it seems wisest to keep all our options open, even if it is necessary to develop additional funding alternatives to support the runway in the near term.

In the "runway open" alternative it shows expanded GA parking on both the east side and south quadrant. I think this is an excellent choice for supporting GA growth at the airport. The south quadrant obviously has ample space to install a significant number of hangars. Perhaps the lease revenue from all additional hangars could be earmarked in the airport's budget to support (at least partially) the annual maintenance costs of runway 17-35. In addition, the east side GA expansion could be consistent with future development plans to enhance the historic district to be even more compatible with GA interests.

The runway 17-35 closure option includes a new area of GA parking and hangars that would likely require the removal or relocation of the VOR. Also considering FAA's inclination to reduce the number of these types of Navaids there is a possibility that the VOR would be lost permanently if FAA would not support relocation.

One safety consideration listed under the closed runway options states that it improves runway and tower line of sight. I think this option ignores the terminal alternatives, which include relocating the control tower. Whatever location is chosen for the new control tower, adequate line of sight to both runways should be a major consideration. This would eliminate the line-of-sight issue as a safety benefit of closing 17-35.

**Additional QTA Options**

I think both QTA Options 1 and 2, are more likely to cause problems than provide solutions. The proximity to residential neighborhoods, increased traffic near residential areas, and the need for a rental car shuttle service could all be problematic.

**West Side Development**

This is clearly the best long-range plan for the continued growth of IDA. While it may be premature to start construction projects on the west side, I think the time is right to begin planning and start land acquisition to support that future option. If plans change, any purchased land could be liquidated or put to other uses by the city. Continued delay, however, will likely only increase conflicts with residential areas and increase the cost of relocating the terminal and related facilities.

Once again, thank you for providing the opportunity to make these comments."

“May 18th, 2023

Wayne J. Reiter, A.A.E., ACE
Aviation Planner
Ardurra

Wayne,

Thank you for your efforts. We look forward to working with you further on the Idaho Falls Regional Airport Master Plan.

As a representative of Aero Mark, Inc., IDA's Fixed Base Operator, I have the following observations per the Idaho Falls Regional Airport Master Plan TAC Meeting 3 on May 3rd, 2023.

Of the options provided by Ardurra in the Initial Alternatives Assessment for the IDA commercial air service terminal, and as noted in the Idaho Falls Regional Airport Master Plan TAC Meeting 3 Summary, I believe that Terminal Area Option 3 is best. This option provides the most property for the commercial air service terminal, ramp, and associated concerns to grow. It is also much simpler for traffic, and a more elegant solution. It does, however, require the opening up of the west side of the airport for the development of a commercial air freight services area. I believe that the sooner the Idaho Falls Regional Airport opens this area of the airport's property for aviation development the better.

The South Quad GA Hangar Complex, as roughly described, fits our needs. But, it should preclude any non-aviation presence, such as rental car storage.

Per the possibility of shutting down Runway 17-35: Shutting down Runway 17-35 has the potential to significantly financially harm Aero Mark, Inc., and other airport businesses.

First, when IDA's primary runway, Runway 3-21, has been shut down for periodic maintenance, including repainting, resurfacing, and reconstruction, we have been able to rely on the secondary runway, Runway 17-35, which remained open, to continue business as usual. The majority of Aero Mark's customers have been able to operate their aircraft in and out of IDA during the primary runway's shutdowns because of the availability of the secondary runway.

For instance, during the last shut down of IDA's primary runway, 3-21, from September 6th through September 10th, 2018, the secondary runway, 17-35, remained open. Commercial air freight services, including Federal Express and United Parcel Service, air medical services, including locally based AirMethods, Air St. Luke's, Intermountain Life Flight, and Life Flight Network, business aviation, general aviation, and military aviation continued to operate in and out of IDA normally. Only commercial passenger air service was affected. During that time, Aero Mark dispensed more than 5300 gallons of Jet-A product, and roughly 1300 gallons of 100LL product. That's an average of more than 1300 gallons per day. We were also able to generate revenue from all of our other non-fuel services as well.

From April 11th to June 27th, 2022, the Jackson Hole airport was shut down for the reconstruction of their solitary runway. The entire airport was shut down for 77 days. Not only was there no commercial air service, but there was no commercial air freight service, no air medical services, no business aviation, no general aviation, and no military aviation. This is because there was no secondary runway for the aircraft to use. Hence, the businesses on that airport, including the Fixed Base Operator, were unable to generate any revenue during the shutdown, and they were forced to lay off employees and take other measures to keep their business afloat.

It is inevitable that IDA's primary runway, 3-21, will require significant repairs within the time-frame of this Master Plan, with the possibility of a shutdown of similar duration to Jackson Hole's. Without the secondary runway, Aero Mark, and other airport businesses, will be unable to generate revenue for the duration of the shutdown, and we will also need to take unfortunate measures in an attempt to keep our business afloat.

Second, shutting down our secondary runway will engender a significant increase in mixed aircraft traffic. There are several concerns with this – most importantly with safety, but also with financial harm to Aero Mark, and other airport businesses. Additional mixed aircraft traffic will discourage flight training, as a single runway will be considerably less attractive to local and regional flight schools. AvCenter, one of our tenants, operates a flight school at IDA. With the shutdown of the secondary runway they would be forced to move all of their flight training operations to the primary runway, and to the detriment of their students. The long-term implications of doing so, as the airport continues to grow, are likely to prove unsustainable for that business. AvCenter is but one of the half-dozen commercial flight schools that Aero Mark services daily.

Third, Aero Mark, per the requests of our "east side," Runway 17-35 based customers, made a significant investment to provide them with reliable, twenty-four hour 100LL fuel service. At considerable cost we built the Beacon Self Service fuel system. Closing the secondary runway would likely curtail the use of this fuel system, through loss of flight training operations, and eventually all others adverse to the significant increase in mixed aircraft traffic.

Fourth, shutting down our secondary runway will make IDA less attractive to business aviation, general aviation, and other private parties looking to invest in the airport. IDA will suffer continued attrition as private parties either leave the airport, or dismiss the airport as a viable option for their investment. As above, this will be due to the significant increase in mixed aircraft traffic.

Last, and perhaps most importantly, shutting down our secondary runway will significantly negatively impact life saving flight operations at IDA. Air medical services are one of the primary usersof the airport. Aero Mark assists a half-dozen, or often more, life saving flight operations every day. During the last shutdown of IDA's primary runway, air medical services were able to continue business as usual, as our secondary runway remained open. If there ever is a significant casualty incident on our primary runway, our secondary runway can remain open to save lives. We can't put a price on that.

It has been stated that the Federal Aviation Administration is "likely," at some point in the future, to stop funding IDA's secondary runway. Hence, the Idaho Falls Regional Airport will be financially liable for the runway. It was also stated during the meeting that "funding will have to come from airport funds, specifically non-airline revenue since they don't use that runway." Why is that? Are funds split by user/runway currently? As the cost of upkeep of the secondary runway is a fraction of the cost of upkeep of the primary runway, is that necessary? I'd love to see some clarification, and hard numbers. I'd like to more deeply explore our options in keeping our secondary runway open, and viable.

Aero Mark, Inc."

# 02 Technical Advisory Committee Meeting Summaries

## 02.1. Technical Advisory Committee Meeting #1

### a. Agenda

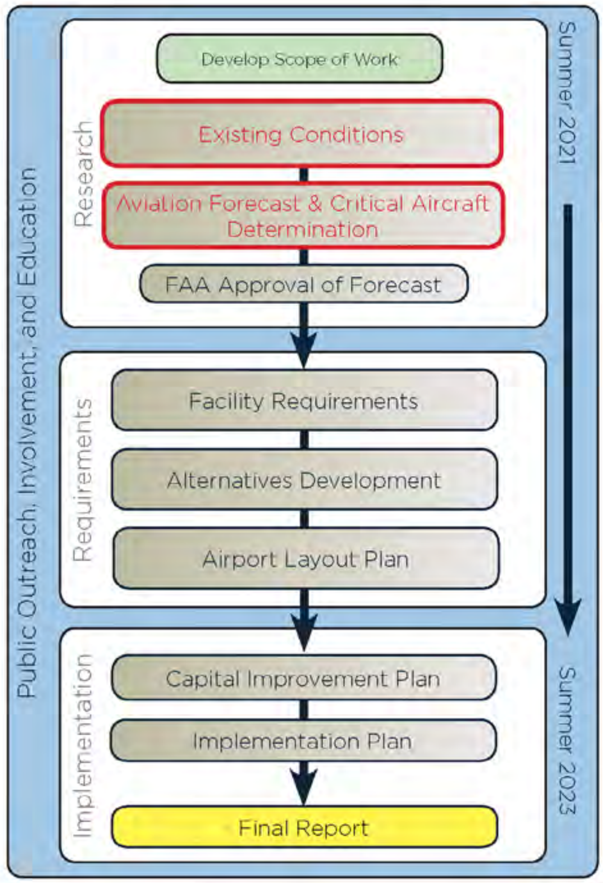
**Idaho Falls Regional Airport Master Plan**

TAC Meeting #1 • October 20th, 2021 • 1:30 pm • Teams or Call-In: 208-995-2415, ID 332282411#

IDAHO FALLS REGIONAL AIRPORT

**MEETING AGENDA**

- **Welcome & Introductions**
- **Review Principles of Participation**
- **Schedule Update**
- **Feedback on the Presentation**
- **Open Ended Discussion**
- **Next Steps**
- **Meeting Conclusion**




**Recorded Kickoff**
Please Review Prior to the Meeting

- **Welcome and Introductions**
- **Project Description**
- **Master Plan Objectives**
- **Master Plan Elements**
- **Roles and Responsibilities**
- **Public Participation**
- **Key Issues**
- **Project Schedule**
- **Next Steps**
- **Public Comments**

**Website:**
https://ifairportmp.com/

Links to the kickoff recording and meeting summary are avaiable on the website.

**Contact Information:**
Wayne Reiter, Aviation Planner
wreiter@to-engineers.com
208.370.3906

Jayme Verish, Assistant Airport Director
jverish@idahofalls.gov
208.612.8267

*Idaho Falls Regional Airport Master Plan* www.to-engineers.com

### b. Meeting Summary

Date: October 20, 2021

Time: 1:30 p.m.

T-O Engineers Airport Planner Wayne Reiter opened the meeting and noted the following attendees were present.

- Tom Hoff from Aero Mark participated in the absence of Bob Hoff
- Steve Laflin, President, Idaho Falls Airport Association
- Shanda Schmardebeck, Station Manager, SkyWest/United/Delta/Alaska
- Rick Cloutier, Airport Director, Idaho Falls Regional Airport
- Jayme Verish, Assistant Airport Director, Idaho Falls Regional Airport
- Brad Cramer, Direct of Community Development, City of Idaho Falls
- Bud Cranor, PIO, City of Idaho Falls

Not in attendance:

- Jenny Burton, Station Manager, Envoy/American Airlines
- Randy Fife, City Attorney
- Mike Kirkham, City Attorney

- Airport Director Rick Cloutier welcomed attendees and asked everyone to introduce themselves.
- Reiter reviewed the agenda and then gave an overview of the principles of participation—a set of ground rules and expectations for TAC members.
- Reiter informed attendees that data collection and research is in progress for the inventory and forecast. The sources of data used for the forecast include tower reports, flight plans, and local data collected from airport staff. Flight Aware is not one of the data sources used.
- Reiter explained that the forecast includes projections for passengers, commercial service operations, general aviation operations, based aircraft, fleet mix, cargo volume, cargo operations, and the critical aircraft. The methodologies used to make these projections may include socioeconomic factors and historic activity or a combination of factors.
- Reiter went on to explain that the forecast is a major milestone in the master plan process because the traffic volume, and especially the critical aircraft, will drive the future requirements. Additionally, cargo activity and cargo aircraft may also become a major issue if operators bring large aircraft to the airport on a regular basis.
- Reiter estimated that a draft of the forecast would be sent to airport staff by Thanksgiving. Once airport staff have reviewed the forecast, it will be sent to the FAA for review and approval. Once the forecast is approved, there will be another public meeting and TAC meeting to present the inventory and the forecast.
- Reiter gave an overview of the public kickoff presentation and asked for feedback.
- The issue of TAC input was brought up during open discussion. Since we are still in the beginning of the master plan, there are no documents to review and comment on yet. That will change during facility requirements and development of alternatives.

- There was concern for the technical aspect and jargon of a master plan for non-aviation members as well as the public. This will be taken into consideration during the creation of the documents to make sure they are understandable to as many people as possible.
- Jayme Verish thanked everyone for serving on the TAC.
- Cloutier encouraged everyone to speak up and provide good feedback on the documents and alternatives presented.
- Reiter went over the next steps, which include getting the forecast to the FAA for review and approval, then schedule the next TAC and public meeting. FAA approval may take some time due to their workload. After forecast approval occurs, the master plan will move into the facility requirements then alternative development.
- Reiter asked the TAC for input on future TAC meeting formats. A virtual format was well received. Should anyone want to meet in person at the airport, they should contact airport staff so that distancing can be accommodated.
- Reiter concluded the meeting.

## c. Principles of Participation

**City of Idaho Falls**
**Idaho Falls Regional Airport Master Plan**
**Technical Advisory Committee**

IDA IDAHO FALLS REGIONAL AIRPORT

Principles of Participation

**Mission**
The Idaho Falls Regional Airport Master Plan Technical Advisory Committee (Committee) will advise the Idaho Falls Regional Airport Master Plan project team and City of Idaho Falls as a representative voice of airport stakeholders.

**Responsibilities of Committee Members**
To accomplish the mission described above, Committee members are being asked to:

- Become familiar with existing planning and policy documents related to the airport.
- Become familiar with land uses, facilities, and environmental resources in the project area.
- Provide informed feedback to the project team (Airport staff and Consultant team) at the milestones in the planning process (see Meetings and Discussion Process below).
- Read all agenda and background materials distributed prior to the meetings by the project team.
- Publicize opportunities for members of their respective organizations, other organizations, and the general public to participate in the planning process, including the public workshops and website engagement activities.
- Listen carefully to others; the Committee will function best when we understand and value one another's views and experiences.
- Help create a respectful and productive working climate.

**Representation**
Committee members will be chosen by identifying organizations and agencies that represent the various elements that will be considered in the Airport Master Plan. Identified organizations will then be asked to choose individuals to represent them on the Committee.

Each Committee member is encouraged to report back to his or her respective constituency to inform them about the Committee's discussions and the progress of plan preparation. Meeting summaries will be prepared to facilitate this effort. Project team staff will be available to assist in this communication process, if desired.

If an invited Committee member declines participation in the Committee, or at any point becomes unable to serve, he or she will inform the project team, and the project team will find a replacement.

**Discussion Process**
Committee members agree to abide by the following discussion process during the meetings:

- All participants are welcome to speak freely.
- All comments will be brief and constructive so that others can also speak.
- All perspectives are valued.
- One person speaks at a time.
- The preferred deliberation process is collaborative problem solving. In cases of mixed opinions, alternative perspectives will be documented.
- Committee members treat each other with respect.
- A neutral third-party will facilitate the meetings.

**Attendance**
In order for the process to work effectively, full participation of representatives is essential. Committee members are asked to commit to consistently attend meetings, as well as attend public outreach events to directly hear and gather input from the community. Meetings will be generally held during the late afternoon on a weekday.

**Support**
A neutral third-party facilitator from the Consultant team will facilitate all Committee meetings. The role of the facilitator is to ensure all perspectives are heard through a collaborative discussion process. The project team will provide technical and logistical support, including making presentations, answering questions, coordinating meetings, and documenting meeting content.

**Meeting Agendas**
The project team will be responsible for preparing the agendas, with consideration of input from Committee members. Agendas and assigned reference materials will be distributed by email in advance of each meeting.

**Information Sharing**
Committee members may want to share information and documents with other Committee members during the planning process. To ensure that all members have the same information available to them, all documents are to be distributed through the established point of contact:

Wayne Reiter
Aviation Planner
T-O Engineers
wreiter@to-engineers.com

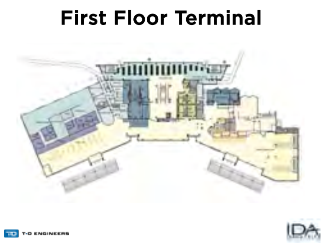
## d. Presentation



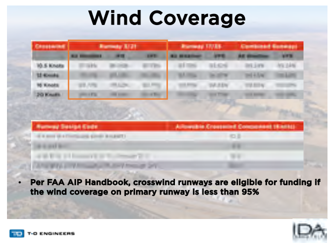


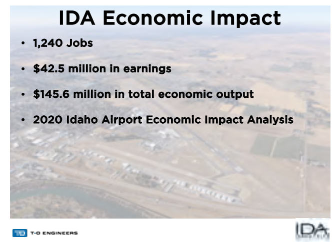




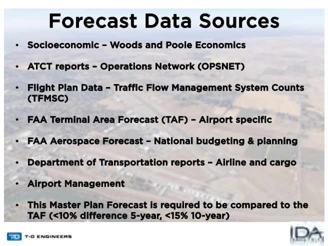




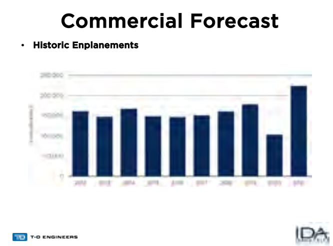


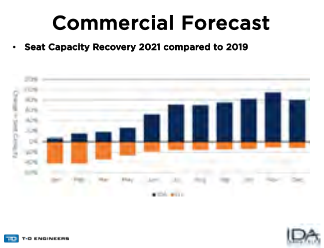



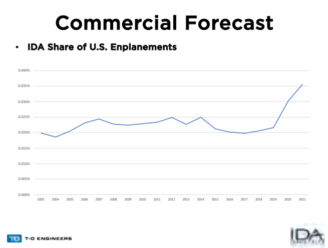


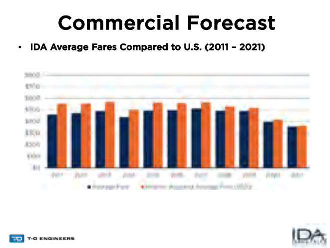


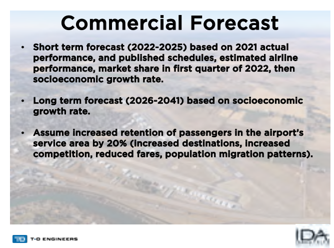


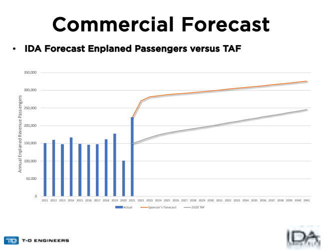


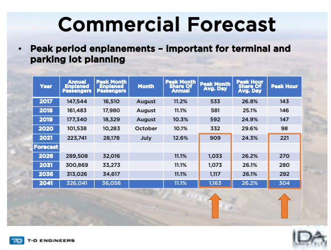



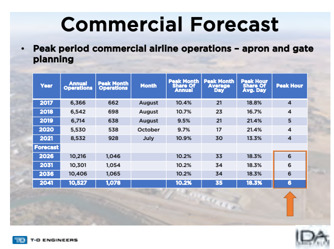



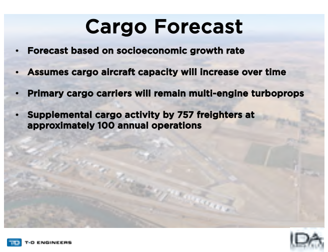



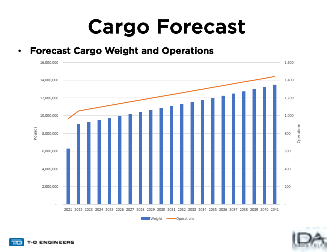









## General Aviation Forecast

- Includes air taxi and military
- Based aircraft
- Local operations
- Itinerant operations

## General Aviation Forecast

- Based Aircraft – 125 to 165
- Fleet mix percentages remain constant (from 5010)
  - Single engine – 74%
  - Multi-engine – 16%
  - Jet – 4%
  - Helicopters – 2%
  - Gliders – 2%

| Year | Single Engine | Multi Engine | Jet | Helicopters | Gliders |
|---|---|---|---|---|---|
| 2021 (Baseline) | 93 | 20 | 5 | 4 | 3 |
| 2026 | 101 | 22 | 5 | 4 | 3 |
| 2031 | 109 | 24 | 5 | 4 | 3 |
| 2041 | 123 | 28 | 6 | 5 | 3 |

## General Aviation Forecast

- Local Operations – 7,402 to 8,244
- Itinerant Operations – 17,228 to 20,610
- Military – based on TAF
  - Local – flat growth at 235
  - Itinerant – 259 to 389

## General Aviation Forecast

- Critical aircraft – Representative aircraft based on Airport Reference Code (ARC) mix from TFMSC, OPSNET, and TAF
- Bombardier Challenger 300 (ARC C-II)

## General Aviation Forecast

- General Aviation Forecast Summary

| Year | Based Aircraft | Local | | Itinerant | | Total |
|---|---|---|---|---|---|---|
| | | GA | Military | GA/Air Taxi | Military | |
| 2021 (Baseline) | 125 | 7,402 | 235 | 17,228 | 259 | 25,124 |
| 2026 | 135 | 7,604 | 235 | 18,017 | 286 | 26,142 |
| 2031 | 145 | 7,812 | 235 | 18,843 | 319 | 27,209 |
| 2041 | 165 | 8,244 | 235 | 20,610 | 389 | 29,478 |

## General Aviation Forecast

- General Aviation TAF Comparison

| Annual Operations | 2021 (Baseline) | 2026 | 2031 | 2041 |
|---|---|---|---|---|
| Master Plan Forecast | 25,124 | 26,142 | 27,209 | 29,478 |
| FAA TAF | 26,294 | 24,662 | 25,096 | 25,902 |
| % Difference | -5% | 6% | 8% | 14% |

| Based Aircraft | 2021 | 2026 | 2031 | 2041 |
|---|---|---|---|---|
| Master Plan Forecast | 125 | 135 | 145 | 165 |
| FAA TAF | 171 | 171 | 171 | 171 |
| % Difference | -27% | -21% | -15% | -4% |

## Master Plan Forecast Summary

| Forecast Year | Itinerant | | | | | | Local | | Total Airport Operations |
|---|---|---|---|---|---|---|---|---|---|
| | Enpl | Airline Ops | Cargo (Lbs.) | Cargo Ops | GA Ops/Air Taxi | Military Ops | GA Ops | Military Ops | |
| 2021 (Baseline) | 223,741 | 7,856 | 6,288,882 | 676 | 17,228 | 259 | 7,402 | 235 | 33,656 |
| 2026 | 289,508 | 9,468 | 9,952,995 | 843 | 18,017 | 286 | 7,604 | 235 | 36,453 |
| 2031 | 300,869 | 9,484 | 11,072,550 | 918 | 18,843 | 319 | 7,812 | 235 | 37,611 |
| 2041 | 326,041 | 9,570 | 13,488,226 | 1,071 | 20,610 | 389 | 8,244 | 235 | 40,119 |
| CAGR | 1.9% | 1.0% | 3.9% | 2.3% | 0.9% | 2.1% | 0.5% | 0% | 0.9% |

## Facility Requirements

- Gap analysis between forecast aviation demand and existing conditions
- Based mainly on FAA design standards – in this case AC 150/5300-13B, *Airport Design*, released 3/31/2022
- Additional sources
  - Other advisory circulars (runway length, capacity, SRE, wildlife)
  - Focused planning studies (terminal)
  - Airport Cooperative Research Program (ACRP) guidance (cargo)
  - IASP (hangar and tie down)
  - NOAA (wind and declination)
  - Part 77 (airspace)
  - FAA Orders and engineering briefs (NAVAIDs)
  - SP+ (parking)
  - ITD Land Use Guidelines and IF comprehensive plan (land use, vision)

## Facility Requirements - Airfield

- Capacity – Annual Service Volume (ASV)
- Runway length – recommendation, not a design standard
- Runway and taxiway dimensional standards – including safety buffers
- Airspace – Part 77
- Approach and departure surfaces
- Navigational Aids
- Instrument approaches

## Facility Requirements - Airfield

- ASV = 215,000 annual operations (40,203 forecast or 19%)
- Existing runway lengths are adequate
- Runway shoulders and blast pads do not meet standard
- Runway line of site not met for both runways – ATCT
- Known penetrations in the Part 77 and approach surfaces (as shown in previous ALP)
- Taxiway widths vary – do not meet standards
- Runway incursion risk – Runway 17/35 at Taxiway C
- VOR-DME 1,000' critical area contains hangars

## Facility Requirements - Airfield

- Runway 3 windcone is in the RSA
- Runway 17/35 does not meet funding eligibility based on wind coverage and capacity (AIP Handbook – Table G-1)
- Instrument approach procedures could be improved by eliminating terrain obstructions (Runway 21) and adding approach lighting to Runway 3

## Facility Requirements – ADG-IV

- ADG-III Wingspan 79' to 118'
- ADG-IV Wingspan 118' to 171'
- Runway 3/21 – IT-OFZ would lower, and crosswind component would increase from 16 to 20 knots
- Taxiway standards:
  - TSA increase from 118' to 171'
  - TOFA increase from 171' to 243'
  - TLOFA increase from 158' to 224'
  - TW CL to fixed object increase from 85.5' to 121.5'
  - TL CL to fixed object increase from 79' to 112'

## Facility Requirements – Aprons and Hangars

- Commercial apron – two parking spaces (gates) needed
  - Shift vehicle service road
  - Relocate deicing pad
- Cargo apron – additional space needed for 757 and GSE
- GA Tie-Downs – met by more efficient use of markings
- Hangars – 41 needed by 2041

## Facility Requirements – Terminal

- Based on focused planning study conducted by Alliance
- Assumed two new airlines adding service – 737-700 and ERJ-145, outside of peak hour passenger activity
- Peak hour enplanements of 366, versus 304 from the master plan

## Facility Requirements – Terminal

TERMINAL PLANNING TRIGGER POINTS SUMMARY – PREFERRED SCENARIO

| Functional Area | 2021 | | Forecast Planning Activity Levels | | | |
|---|---|---|---|---|---|---|
| | Existing | Recommended | 2026 | 2031 | 2036 | 2041 |
| General | | | | | | |
| Annual Enplanements | 223,741 | - | 441,541 | 470,865 | 502,423 | 535,937 |
| Peak Hour Enplaned | 228 | - | 302 | 322 | 343 | 366 |
| Peak Hour Deplaned | 240 | - | 285 | 303 | 324 | 345 |
| Gates/Aircraft Positions | | | | | | |
| Large Regional (Q400/E175/CRJ9) | - | 5 | 5 | 5 | 5 | 6 |
| Narrowbody (A320/B737W) | 6 | 1 | 1 | 2 | 2 | 2 |
| Total Aircraft Gates | 6 | 6 | 6 | 7 | 7 | 8 |
| Public Space Circulation Total (sf) | 20,431 | 21,570 | 24,280 | 26,980 | 27,420 | 29,720 |
| Security Screening Checkpoint (SSCP) Total (sf) | 4,909 | 5,190 | 7,390 | 7,390 | 7,390 | 7,390 |
| Number of Lanes | 2 | 1 | 2 | 2 | 2 | 2 |
| Queuing/Waiting Area Total (sf) | 7,623 | 7,500 | 8,900 | 8,970 | 9,230 | 9,460 |
| Gate Lounges/Holdrooms Total (sf) | 12,642 | 10,900 | 10,900 | 13,900 | 13,900 | 15,480 |
| Restrooms Total (sf) | 2,781 | 5,330 | 5,660 | 6,260 | 6,730 | 6,730 |
| Airline Space Total (sf) | 3,379 | 2,730 | 4,330 | 4,330 | 4,550 | 4,780 |
| Linear Ticket Counter Positions (Kiosk) | 16 | 12(0) | 19(0) | 19(0) | 20(0) | 21(0) |
| Total Check-In Positions (Kiosk) | 28(12) | 15(3) | 24(5) | 24(5) | 26(6) | 27(6) |
| Total Linear Position Length (lf) | 114 | 78 | 124 | 124 | 130 | 137 |
| Other Airline Space Total (sf) | 5,920 | 8,080 | 9,000 | 10,020 | 10,020 | 10,290 |
| Concession Space Total (Pre Security) (sf) | 4,641 | 2,070 | 2,630 | 2,710 | 2,790 | 2,880 |
| Rental Car Counters | 4 | 4 | 4 | 4 | 4 | 4 |
| Concession Space Total (Post Security) (sf) | 3,157 | 2,330 | 4,590 | 4,900 | 5,230 | 5,580 |
| Non-Public Space Total (sf) | 23,388 | 17,560 | 19,930 | 21,320 | 21,630 | 22,520 |
| Total Functional & Support Terminal Area (sf) | 85,600 | 80,060 | 93,860 | 102,670 | 104,700 | 110,410 |
| Total Gross (sf) | 88,871 | 83,260 | 97,610 | 106,780 | 108,890 | 114,830 |

## Facility Requirements – Terminal

## Facility Requirements – Terminal

## Facility Requirements – Parking

VEHICLE PARKING JULY 2021

| Parking Lots | Hourly | Daily | Economy |
|---|---|---|---|
| Avg Number of Vehicles Parked per Day | 165 | 50 | 100 |
| Avg Duration Each Vehicle Parked | 1 hr 10 min | 1 day | 4 days |
| Avg % of Enplaned Passengers (909 PMAD) | 18% | 6% | 11% |
| Avg % of Vehicles Parked (315 PMAD) | 52% | 16% | 32% |

VEHICLE PARKING REQUIREMENTS

| Existing Spaces | 144 | 291 | 478 |
|---|---|---|---|
| Planning Activity Year | Hourly | Daily | Economy |
| 2021 | 40 | 50 | 400 |
| 2026 | 49 | 57 | 455 |
| 2031 | 51 | 59 | 472 |
| 2036 | 53 | 61 | 492 |
| 2041 | 55 | 64 | 512 |

- Employee spaces from 72 to 305

## Facility Requirements – Parking

## Facility Requirements – Car Rental

RENTAL CAR READY/RETURN REQUIREMENTS

| Existing Ready/Return Spaces | 100 |
|---|---|
| Planning Activity Year | Required |
| 2021 | 98 |
| 2026 | 108 |
| 2031 | 118 |
| 2036 | 130 |
| 2041 | 143 |

RENTAL CAR QUICK TURNAROUND AREA REQUIREMENTS

| QTA | 2021 (Existing) | 2026 | 2031 | 2036 | 2041 |
|---|---|---|---|---|---|
| Fuel Dispensers | 4 | 6 | 6 | 7 | 8 |
| Wash Bays | 4 | 6 | 6 | 7 | 8 |
| Maintenance Bays | 3 | 4 | 5 | 5 | 6 |
| Overflow Spaces | 90 | 129 | 141 | 155 | 170 |
| Staging Spaces | 40 | 57 | 63 | 69 | 76 |
| Employee Spaces | 15 | 21 | 24 | 26 | 28 |

## Facility Requirements – Car Rental

## Facility Requirements – Cargo

- Need more apron space for GSE – FedEx
- Need apron space to maneuver a 757 – FedEx
- FedEx building increase from 30,000 SF to 64,500 SF
- Space for a second major operator

## Facility Requirements – Support

- SRE building expansion
- ARFF alternative locations
- ATCT alternative locations
- EV charging stations
- North Skyline Drive improvements, parking lot access points
- Passenger accessibility – contactless interface, wayfinding, ADA
- Drainage improvements

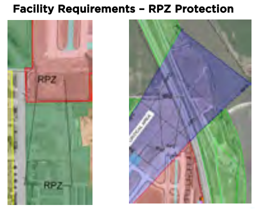
## Facility Requirements – Land Use & Compliance

- Nonaeronautical uses
- RPZ protection from incompatible uses
- Prevention of wildlife attractants – mowing, standing water
- Land use zoning – work with Bonneville County to update
- Compliance documents – minimum standards and rules and regulations currently being updated

## Facility Requirements – Nonaeronautical

## Facility Requirements – RPZ Protection


## Facility Requirements – RPZ Protection




## Master Plan Next Steps

- Hold a public meeting
- Begin developing alternatives to meet the facility requirements
- Conduct an environmental site assessment of potential development areas
- Continue building the Airport Layout Plan and Exhibit A
- Hold a TAC/public meeting to present draft alternatives
- Receive public comment on the draft alternatives, select a preferred alternative
- Develop an implementation plan, complete the ALP
- Hold a TAC/public meeting to present the draft Master Plan/ALP

## 02.2. Technical Advisory Committee Meeting #2

### a. Agenda

# Idaho Falls Regional Airport Master Plan

TAC Meeting #2 • September 15th, 2022 • 2:00 pm • MS Teams

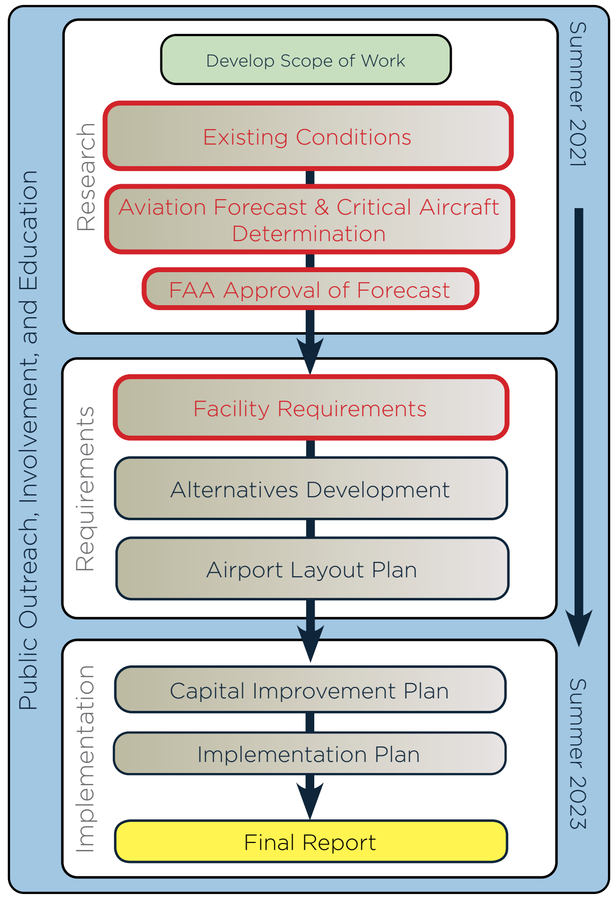
IDA IDAHO FALLS REGIONAL AIRPORT

## MEETING AGENDA

- Welcome
- Master Plan Overview
- Existing Conditions
- Forecast
- Facility Requirements
- Next Steps
- Roundtable Discussion

### Please Review

- Chapter 2 - Introduction
- Chapter 3 - Socioeconomic Overview and Airport Background
- Chapter 4 - Inventory
- Forecast Working Paper
- Facility Requirements Working Paper




**Website:**
https://ifairportmp.com/

Links to the project documents are avaiable on the website.

**Contact Information:**
Wayne Reiter, Aviation Planner
wreiter@to-engineers.com
208.370.3906

Jayme Verish, Assistant Airport Director
jverish@idahofalls.gov
208.612.8267

### b. Meeting Summary

Date; September 15, 2022

Time: 2 p.m.

T-O Engineers Airport Planner Wayne Reiter opened the meeting and noted the attendees present:

- Tom Hoff, Aero Mark
- Steve Laflin, President, Idaho Falls Airport Association
- Rick Cloutier, Airport Director, Idaho Falls Regional Airport
- Jayme Verish, Assistant Airport Director, Idaho Falls Regional Airport
- Bud Cranor, PIO, City of Idaho Falls
- Mike Kirkham, City Attorney, Idaho Falls
- Nathan Cuvala, T-O Engineers
- Rick Patton, T-O Engineers

- Wayne Reiter gave a Power Point Presentation covering the agenda – master plan overview, project update, airport existing conditions, aviation forecast, facility requirements, next steps, and a series of roundtable questions.
- Wayne started with an overview of the presentation and what an Airport Master is and what it is intended for – namely to prepare the airport to meet aviation demand throughout the 20-year planning window.
- Wayne provided an inventory of all the major facilities and major users of the airport, then went through a full review of the airfield facilities, including the runways, taxiways, aprons, and movement areas. Wayne then discussed the major uses of these areas, including commercial service, cargo, and general aviation.
- Wayne opened the forecasting section with a discussion of the elements of the forecasts, the types of forecasts the Master Plan performed, and the data sources that T-O relied upon to build a base in each of the forecasts. Wayne discussed the data used to determine the growth rate expected, such as Woods and Poole economic information, as well as other relevant sources.
- Wayne reviewed the findings of the forecast determination and, generally, IDA is exceeding national and regional averages in nearly all forecast areas – especially commercial service enplanements and cargo. The forecast models show growth throughout the 20-year forecasting window.
- Wayne presented a thorough review of the facility requirements for the airport and discussed several points where the airport was deficient of standards or requirements (a GAP analysis of the airport facility).
- Wayne spoke of the expectation and airport obligation for land use compliance, especially with nonaeronautical use of airport property. There are multiple nonaeronautical uses on airport property, including parks, an industrial park, farming, and a community garden. Nonaeronautical uses of airport property must be approved by the FAA, shown on the ALP, receive fair market value rent, and not be needed for aeronautical use.

- The City has ‘adequate’ land use protections in place (zoning) outside of the airport property, but the County does not. The Airport Master Plan is a good opportunity to initiate conversation with the County to protect the airport as a public investment.
- Wayne discussed the Runway Protection Zones (RPZ) at the airport as a place specifically designated for protection of people on the ground and that there are presently incompatible uses within the RPZs. Future incompatible uses should be avoided.
- Wayne noted several items to look forward to in the future and mentioned future public meetings and other milestones.
- Steve Laflin asked about the based aircraft disparity from the FAA TAF, and possible decline in general aviation. Wayne replied the 125 baseline was a more accurate count, and that the FAA numbers are probably dated. General aviation has shown itself to be quite resilient to the impacts related to COVID, especially in the area of flight training. Also, destination airports, such as IDA, have shown themselves to be desirable locations to get away from the big cities. Accordingly, the GA forecast shows an increase in GA rather than a decrease, despite some FAA projections.
- Tom Hoff commented that the FBO apron has been very busy with large business jet traffic, creating parking challenges. Wayne replied the facility requirements for GA parking could be addressed by more efficient use of markings. Tom also requested dedicated helicopter parking spots at the FBO. Nathan asked if Tom could provide data on transient aircraft parking from peak periods this summer.
- Steve asked about the process for alternatives development. Wayne replied it would be better to have feedback during the development, rather than at the end.
- The public meeting for this material is planned for October 19 or 20 (settled after the meeting as October 20). Notices should be sent out to the community as soon as practical. The community adjacent to the soccer fields have expressed concerns about future airport expansion and the disposition of the soccer fields. Ensuring they have the opportunity to provide input will be a key focus as development alternatives are produced.
- Wayne Reiter concluded the meeting at about 3:40 pm.

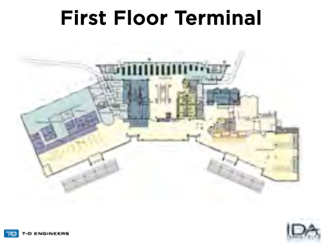
## c. Presentation



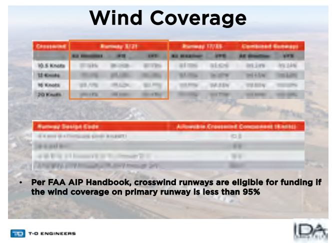




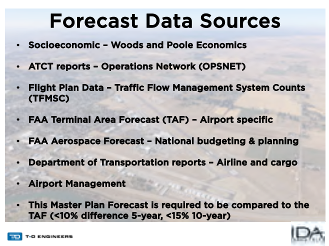




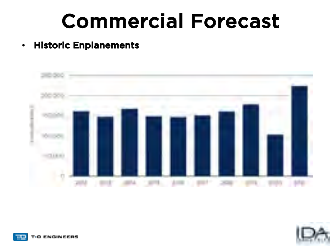


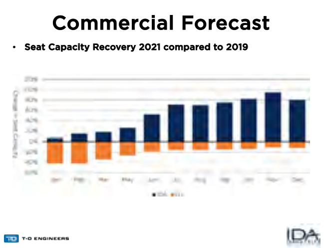


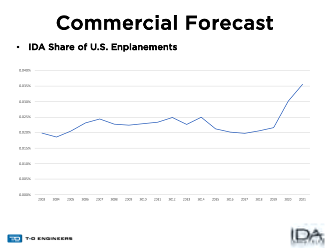


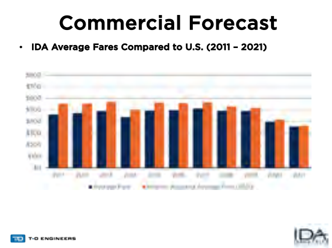



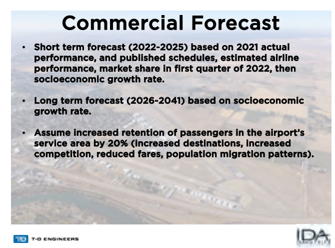


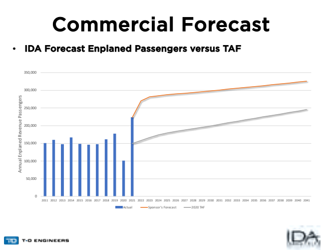


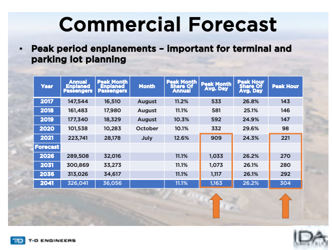



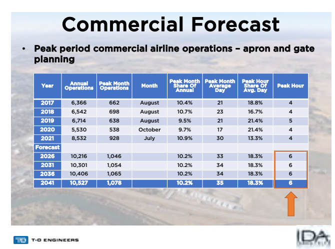





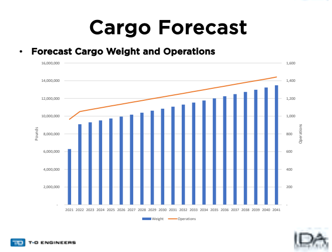



| Year | Annual Enplaned Passengers | Peak Month Enplaned Passengers | Month | Peak Month Share Of Annual | Peak Month Avg. Day | Peak Hour Share Of Avg. Day | Peak Hour |
|---|---|---|---|---|---|---|---|
| 2017 | 147,544 | 16,510 | August | 11.2% | 533 | 26.8% | 143 |
| 2018 | 161,483 | 17,980 | August | 11.1% | 581 | 25.1% | 146 |
| 2019 | 177,340 | 18,329 | August | 10.3% | 592 | 24.9% | 147 |
| 2020 | 101,538 | 10,283 | October | 10.1% | 332 | 29.6% | 98 |
| 2021 | 223,741 | 28,178 | July | 12.6% | 909 | 24.3% | 221 |
| Forecast | | | | | | | |
| 2026 | 289,508 | 32,016 | | 11.1% | 1,033 | 26.2% | 270 |
| 2031 | 300,869 | 33,273 | | 11.1% | 1,073 | 26.1% | 280 |
| 2036 | 313,026 | 34,617 | | 11.1% | 1,117 | 26.1% | 292 |
| 2041 | 326,041 | 36,056 | | 11.1% | 1,163 | 26.2% | 304 |




| Year | Annual Operations | Peak Month Operations | Month | Peak Month Share Of Annual | Peak Month Average Day | Peak Hour Share Of Avg. Day | Peak Hour |
|---|---|---|---|---|---|---|---|
| 2017 | 6,366 | 662 | August | 10.4% | 21 | 18.8% | 4 |
| 2018 | 6,542 | 698 | August | 10.7% | 23 | 16.7% | 4 |
| 2019 | 6,714 | 638 | August | 9.5% | 21 | 21.4% | 5 |
| 2020 | 5,530 | 538 | October | 9.7% | 17 | 21.4% | 4 |
| 2021 | 8,532 | 928 | July | 10.9% | 30 | 13.3% | 4 |
| Forecast | | | | | | | |
| 2026 | 10,216 | 1,046 | | 10.2% | 33 | 18.3% | 6 |
| 2031 | 10,301 | 1,054 | | 10.2% | 34 | 18.3% | 6 |
| 2036 | 10,406 | 1,065 | | 10.2% | 34 | 18.3% | 6 |
| 2041 | 10,527 | 1,078 | | 10.2% | 35 | 18.3% | 6 |






## General Aviation Forecast

- Includes air taxi and military
- Based aircraft
- Local operations
- Itinerant operations

## General Aviation Forecast

- Based Aircraft – 125 to 165
- Fleet mix percentages remain constant (from 5010)
  - Single engine – 74%
  - Multi-engine – 16%
  - Jet – 4%
  - Helicopters – 2%
  - Gliders – 2%

| Year | Single Engine | Multi Engine | Jet | Helicopters | Gliders |
|---|---|---|---|---|---|
| 2021 (Baseline) | 93 | 20 | 5 | 4 | 3 |
| 2026 | 101 | 22 | 5 | 4 | 3 |
| 2031 | 109 | 24 | 5 | 4 | 3 |
| 2041 | 123 | 28 | 6 | 5 | 3 |

## General Aviation Forecast

- Local Operations – 7,402 to 8,244
- Itinerant Operations – 17,228 to 20,610
- Military – based on TAF
  - Local – flat growth at 235
  - Itinerant – 259 to 389

## General Aviation Forecast

- Critical aircraft – Representative aircraft based on Airport Reference Code (ARC) mix from TFMSC, OPSNET, and TAF
- Bombardier Challenger 300 (ARC C-II)

## General Aviation Forecast

- General Aviation Forecast Summary

| Year | Based Aircraft | Local | | Itinerant | | Total |
|---|---|---|---|---|---|---|
| | | GA | Military | GA/Air Taxi | Military | |
| 2021 (Baseline) | 125 | 7,402 | 235 | 17,228 | 259 | 25,124 |
| 2026 | 135 | 7,604 | 235 | 18,017 | 286 | 26,142 |
| 2031 | 145 | 7,812 | 235 | 18,843 | 319 | 27,209 |
| 2041 | 165 | 8,244 | 235 | 20,610 | 389 | 29,478 |

## General Aviation Forecast

- General Aviation TAF Comparison

| Annual Operations | 2021 (Baseline) | 2026 | 2031 | 2041 |
|---|---|---|---|---|
| Master Plan Forecast | 25,124 | 26,142 | 27,209 | 29,478 |
| FAA TAF | 26,294 | 24,662 | 25,096 | 25,902 |
| % Difference | -5% | 6% | 8% | 14% |

| Based Aircraft | 2021 | 2026 | 2031 | 2041 |
|---|---|---|---|---|
| Master Plan Forecast | 125 | 135 | 145 | 165 |
| FAA TAF | 171 | 171 | 171 | 171 |
| % Difference | -27% | -21% | -15% | -4% |

## Master Plan Forecast Summary

| Forecast Year | Itinerant | | | | | | Local | | Total Airport Operations |
|---|---|---|---|---|---|---|---|---|---|
| | Enpl | Airline Ops | Cargo (Lbs.) | Cargo Ops | GA Ops/Air Taxi | Military Ops | GA Ops | Military Ops | |
| 2021 (Baseline) | 223,741 | 7,856 | 6,288,882 | 676 | 17,228 | 259 | 7,402 | 235 | 33,656 |
| 2026 | 289,508 | 9,468 | 9,952,995 | 843 | 18,017 | 286 | 7,604 | 235 | 36,453 |
| 2031 | 300,869 | 9,484 | 11,072,550 | 918 | 18,843 | 319 | 7,812 | 235 | 37,611 |
| 2041 | 326,041 | 9,570 | 13,488,226 | 1,071 | 20,610 | 389 | 8,244 | 235 | 40,119 |
| CAGR | 1.9% | 1.0% | 3.9% | 2.3% | 0.9% | 2.1% | 0.5% | 0% | 0.9% |

## Facility Requirements

- Gap analysis between forecast aviation demand and existing conditions
- Based mainly on FAA design standards – in this case AC 150/5300-13B, *Airport Design*, released 3/31/2022
- Additional sources
  - Other advisory circulars (runway length, capacity, SRE, wildlife)
  - Focused planning studies (terminal)
  - Airport Cooperative Research Program (ACRP) guidance (cargo)
  - IASP (hangar and tie down)
  - NOAA (wind and declination)
  - Part 77 (airspace)
  - FAA Orders and engineering briefs (NAVAIDs)
  - SP+ (parking)
  - ITD Land Use Guidelines and IF comprehensive plan (land use, vision)

## Facility Requirements - Airfield

- Capacity – Annual Service Volume (ASV)
- Runway length – recommendation, not a design standard
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- Runway line of site not met for both runways – ATCT
- Known penetrations in the Part 77 and approach surfaces (as shown in previous ALP)
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- ADG-IV Wingspan 118' to 171'
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| Peak Hour Enplaned | 228 | - | 302 | 322 | 343 | 366 |
| Peak Hour Deplaned | 240 | - | 285 | 303 | 324 | 345 |
| Gates/Aircraft Positions | | | | | | |
| Large Regional (Q400/E175/CRJ9) | - | 5 | 5 | 5 | 5 | 6 |
| Narrowbody (A320/B737W) | 6 | 1 | 1 | 2 | 2 | 2 |
| Total Aircraft Gates | 6 | 6 | 6 | 7 | 7 | 8 |
| Public Space Circulation Total (sf) | 20,431 | 21,570 | 24,280 | 26,980 | 27,420 | 29,720 |
| Security Screening Checkpoint (SSCP) Total (sf) | 4,909 | 5,190 | 7,390 | 7,390 | 7,390 | 7,390 |
| Number of Lanes | 2 | 1 | 2 | 2 | 2 | 2 |
| Queuing/Waiting Area Total (sf) | 7,623 | 7,500 | 8,900 | 8,970 | 9,230 | 9,460 |
| Gate Lounges/Holdrooms Total (sf) | 12,642 | 10,900 | 10,900 | 13,900 | 13,900 | 15,480 |
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| Other Airline Space Total (sf) | 5,920 | 8,080 | 9,000 | 10,020 | 10,020 | 10,290 |
| Concession Space Total (Pre Security) (sf) | 4,641 | 2,070 | 2,630 | 2,710 | 2,790 | 2,880 |
| Rental Car Counters | 4 | 4 | 4 | 4 | 4 | 4 |
| Concession Space Total (Post Security) (sf) | 3,157 | 2,330 | 4,590 | 4,900 | 5,230 | 5,580 |
| Non-Public Space Total (sf) | 23,388 | 17,560 | 19,930 | 21,320 | 21,630 | 22,520 |
| Total Functional & Support Terminal Area (sf) | 85,600 | 80,060 | 93,860 | 102,670 | 104,700 | 110,410 |
| Total Gross (sf) | 88,871 | 83,260 | 97,610 | 106,780 | 108,890 | 114,830 |

## Facility Requirements – Terminal

## Facility Requirements – Terminal

## Facility Requirements – Parking

| VEHICLE PARKING JULY 2021 | | | |
|---|---|---|---|
| Parking Lots | Hourly | Daily | Economy |
| Avg Number of Vehicles Parked per Day | 165 | 50 | 100 |
| Avg Duration Each Vehicle Parked | 1 hr 10 min | 1 day | 4 days |
| Avg % of Enplaned Passengers (909 PMAD) | 18% | 6% | 11% |
| Avg % of Vehicles Parked (315 PMAD) | 52% | 16% | 32% |

| VEHICLE PARKING REQUIREMENTS | | | |
|---|---|---|---|
| Existing Spaces | 144 | 291 | 478 |
| Planning Activity Year | Hourly | Daily | Economy |
| 2021 | 40 | 50 | 400 |
| 2026 | 49 | 57 | 455 |
| 2031 | 51 | 59 | 472 |
| 2036 | 53 | 61 | 492 |
| 2041 | 55 | 64 | 512 |

- Employee spaces from 72 to 305

## Facility Requirements – Parking

## Facility Requirements – Car Rental

| RENTAL CAR READY/RETURN REQUIREMENTS | |
|---|---|
| Existing Ready/Return Spaces | 100 |
| Planning Activity Year | Required |
| 2021 | 98 |
| 2026 | 108 |
| 2031 | 118 |
| 2036 | 130 |
| 2041 | 143 |

RENTAL CAR QUICK TURNAROUND AREA REQUIREMENTS

| QTA | 2021 (Existing) | 2026 | 2031 | 2036 | 2041 |
|---|---|---|---|---|---|
| Fuel Dispensers | 4 | 6 | 6 | 7 | 8 |
| Wash Bays | 4 | 6 | 6 | 7 | 8 |
| Maintenance Bays | 3 | 4 | 5 | 5 | 6 |
| Overflow Spaces | 90 | 129 | 141 | 155 | 170 |
| Staging Spaces | 40 | 57 | 63 | 69 | 76 |
| Employee Spaces | 15 | 21 | 24 | 26 | 28 |

## Facility Requirements – Car Rental

## Facility Requirements – Cargo

- Need more apron space for GSE - FedEx
- Need apron space to maneuver a 757 - FedEx
- FedEx building increase from 30,000 SF to 64,500 SF
- Space for a second major operator

## Facility Requirements – Support

- SRE building expansion
- ARFF alternative locations
- ATCT alternative locations
- EV charging stations
- North Skyline Drive improvements, parking lot access points
- Passenger accessibility – contactless interface, wayfinding, ADA
- Drainage improvements

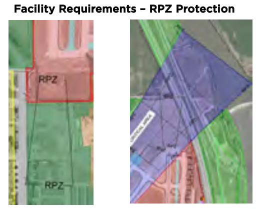
## Facility Requirements – Land Use & Compliance

- Nonaeronautical uses
- RPZ protection from incompatible uses
- Prevention of wildlife attractants – mowing, standing water
- Land use zoning – work with Bonneville County to update
- Compliance documents – minimum standards and rules and regulations currently being updated

## Facility Requirements – Nonaeronautical

## Facility Requirements – RPZ Protection

## Facility Requirements – RPZ Protection




## Master Plan Next Steps

- Hold a public meeting
- Begin developing alternatives to meet the facility requirements
- Conduct an environmental site assessment of potential development areas
- Continue building the Airport Layout Plan and Exhibit A
- Hold a TAC/public meeting to present draft alternatives
- Receive public comment on the draft alternatives, select a preferred alternative
- Develop an implementation plan, complete the ALP
- Hold a TAC/public meeting to present the draft Master Plan/ALP

## 02.3. Technical Advisory Committee Meeting #3

### a. Meeting Summary

Date: May 3, 2023

Time: 3 p.m.

Ardurra Airport Planner Wayne Reiter opened the meeting and noted the attendees present:

- Thomas Hoff, Aero Mark
- Steve Laflin, President, Idaho Falls Airport Association
- Rick Cloutier, Airport Director, Idaho Falls Regional Airport
- Jayme Verish, Assistant Airport Director, Idaho Falls Regional Airport
- Bud Cranor, Chief of Staff, City of Idaho Falls
- Jodi Mantoya, Envoy
- Kathryn Eskelson, Skywest
- Nathan Cuvala, Ardurra
- Rick Patton, Ardurra

- W. Reiter gave a Google Earth presentation covering the alternative concepts for the terminal area and airfield.
- S. Laflin: Will the terminal or east GA options conflict with 17/35.
- A: No, the intent is for the development options to be compatible with 17/35 should it remain open or be converted to a taxiway. Tower line of sight will still need to be checked.
- R. Cloutier: None of the concepts have been decided on. They reflect what could occur.
- S. Laflin: Doesn't make sense to close 17/35 to make for space for GA development.
- A: Closing 17/35 is related to FAA funding, not to create space for GA development. However, if 17/35 were to be closed, it would make space for aviation development, both GA and cargo.
- S. Laflin: Regarding the west side terminal complex, is there a limit on how big the wish list can be? Are costs going to be considered in the alternatives?
- A: Yes. The west side terminal complex is a possibility if the north I-15/US 20 connector project becomes reality and adds access to the northwest corner of the airport. In this scenario, there is a possibility of creating a new terminal complex; however, it is most likely beyond the 20-year horizon of the master plan.
- R. Patton: Another consideration for cost is in terms of land use benefit versus dollars. It is worth trading dollars for land use protections.
- T. Hoff: Is the drainage area north of the South Quad available for development?
- A: Yes, it is on the table as long as future drainage needs are met and the canal is taken into consideration.
- W. Reiter went through the initial assessment supplement that had been sent to the TAC prior to the meeting.

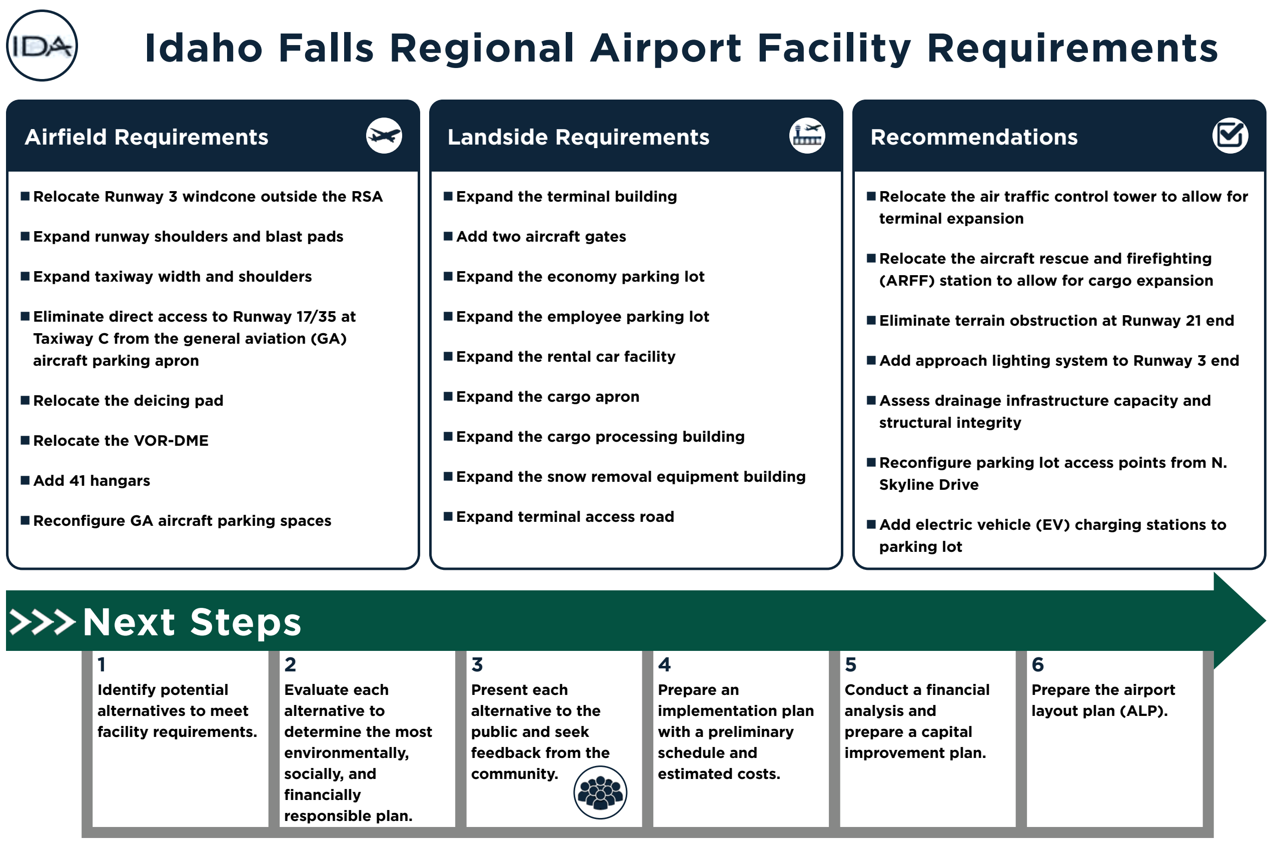
- B. Cranor: If the ultimate configuration of the airport is to put the terminal complex on the northwest quadrant following completion of the I-15/US 20 interchange project, what sort of improvements from the options shown today would need to be made to get to that point?
- A: There are still immediate needs that have to be accounted for, such as terminal expansion, parking lots, rental cars, and cargo. Recent passenger demand has gone up so fast that we're playing catch-up right now, but it's unknown how long that demand can be sustained. The new terminal complex is most likely beyond the 20-year planning horizon of this master plan, and the I-15/US 20 project is still being vetted.
- B. Cranor: What is the issue with 17/35 and what are the implications of the FAA not funding it going forward?
- A: Runway 17/35 is not justified, per the FAA, based on wind or operations; therefore, it is not likely the FAA will provide any funding for maintenance and upkeep of the runway. If the runway is to remain, then funding will have to come from airport funds, specifically non-airline revenue since they don't use that runway. This would likely mean an increase in non-airline related fees and charges.
- S. Laflin: Are the existing terminal expansion plans already approved and funded?
- A: There are a lot of moving pieces to that, but some of the expansion plans are in the works. Some plans are longer term depending on passenger demand, airline schedules (peak hour), and aircraft types. Additionally, cargo will play a big role in the terminal area because of the potential of a second operator and larger aircraft.
- S. Laflin: Given the projected growth in all areas, where are the pinch points representing the priority areas?
- A: The terminal area features (passenger terminal, cargo, parking, rental cars, and curb side) are the pinch points. We also know that the GA area needs to grow as well. There's a tower relocation study underway as well, so the development concepts will impact the decision of where it goes.
- T. Hoff: Terminal option 3 is the best option for the terminal area and moving cargo to the west side of the airport. The sooner the west side is opened up, the better. GA in the south quad is the best use of that area. Moving all terminal operations to the west is probably the best option, but that's very long term and very expensive. Closing 17/35 would hurt his business. That runway gets used a lot during peak months and it's betting to keep the light GA traffic separated from the larger business jets. Plus, there is a self-serve fuel island the light GA users have easy access to with 17/35.
- B. Cranor: Would the light GA users be expected to cover the cost of 17/35 should it be chosen to remain open?
- A: The cost would have to be spread across all GA users, not just light GA. That would occur though ground leases with hangar tenants. The airport does not have any estimates at this time for the cost to maintain 17/35, but regardless of FAA funding, the runway would still need to be maintained to FAA standards if it is to remain open.
- R. Patton: A major consideration during the alternatives process is eligibility for FAA funding. We want to present different options so that you can select the right mix of development options to meet your needs and remain eligible for funding.

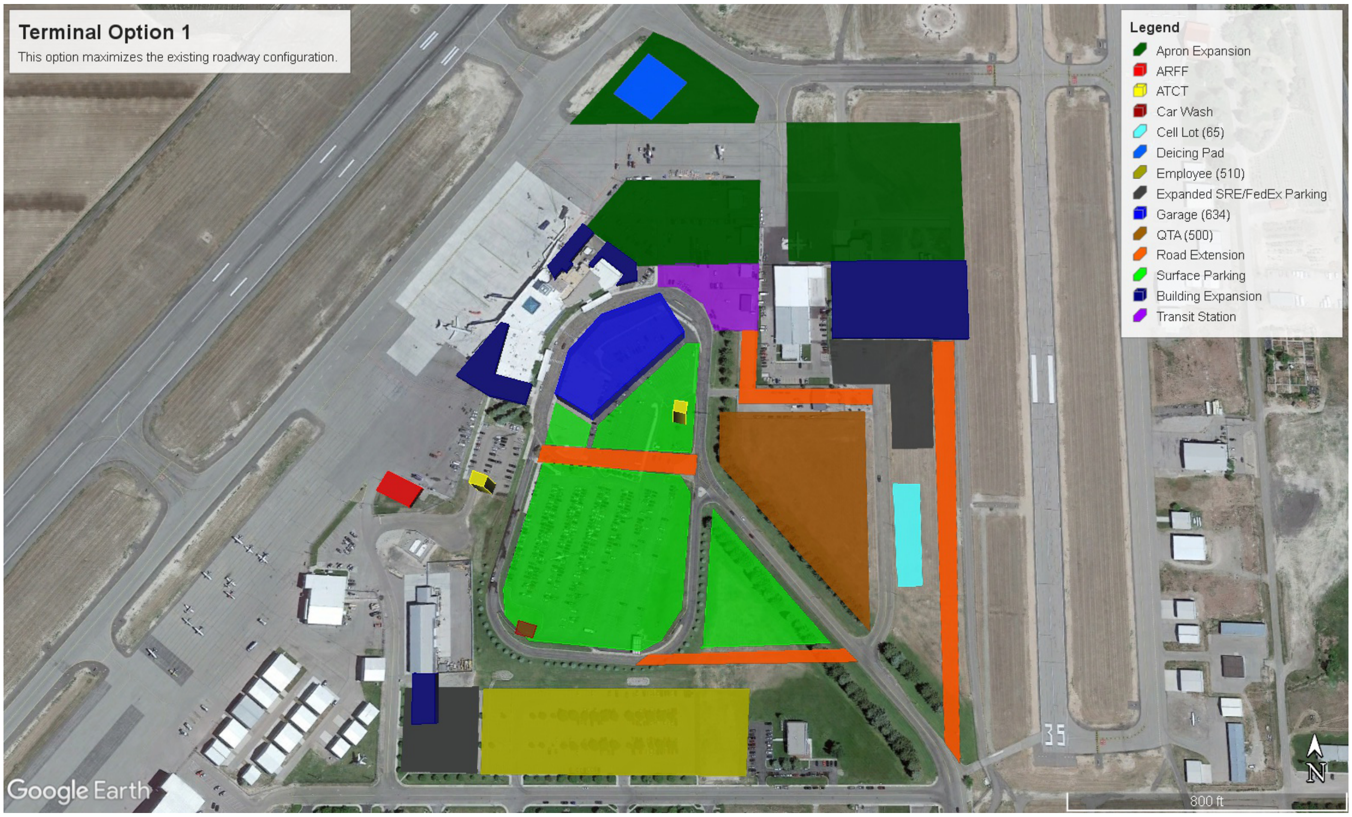
- W. Reiter: The master plan is the City's plan for the airport. If the City choses to keep 17/35 open, then that's what should be shown on the ALP. Not everything on the ALP will be eligible for funding, and even if an item is eligible, being shown on the ALP does not guarantee the project will be funded or even carried out.

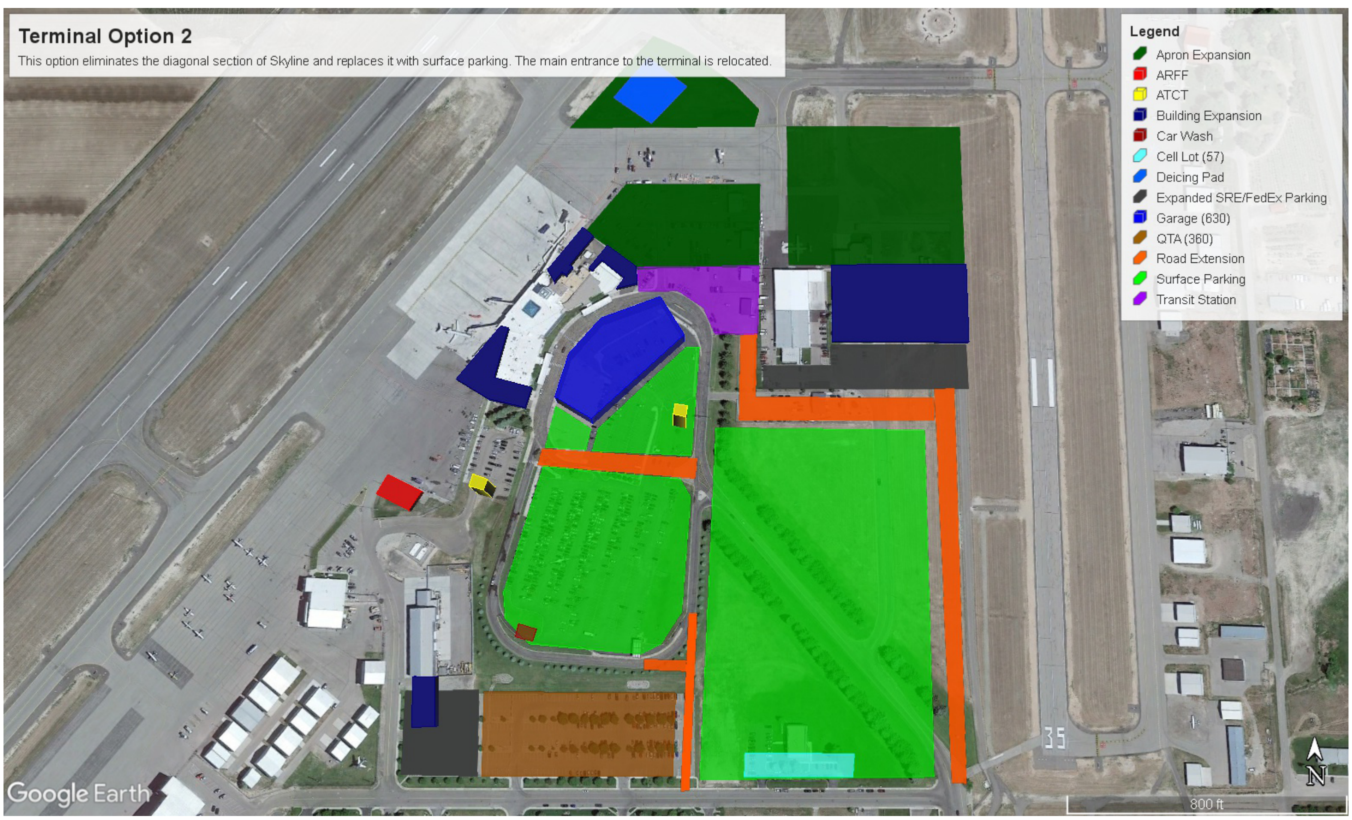
- Next steps:
  - Provide time for the TAC to absorb the material and formulate comments.
  - Comments to be provided to Ardurra by close of business Friday, May 19th.
  - Ardurra to meet with airport staff to discuss alternatives to move forward with.
  - Present the development options to the Airport Board.
  - Ardurra will put together graphics to present at a public meeting.
  - Schedule a public meeting.

W. Reiter concluded the meeting at about 4:30 pm.

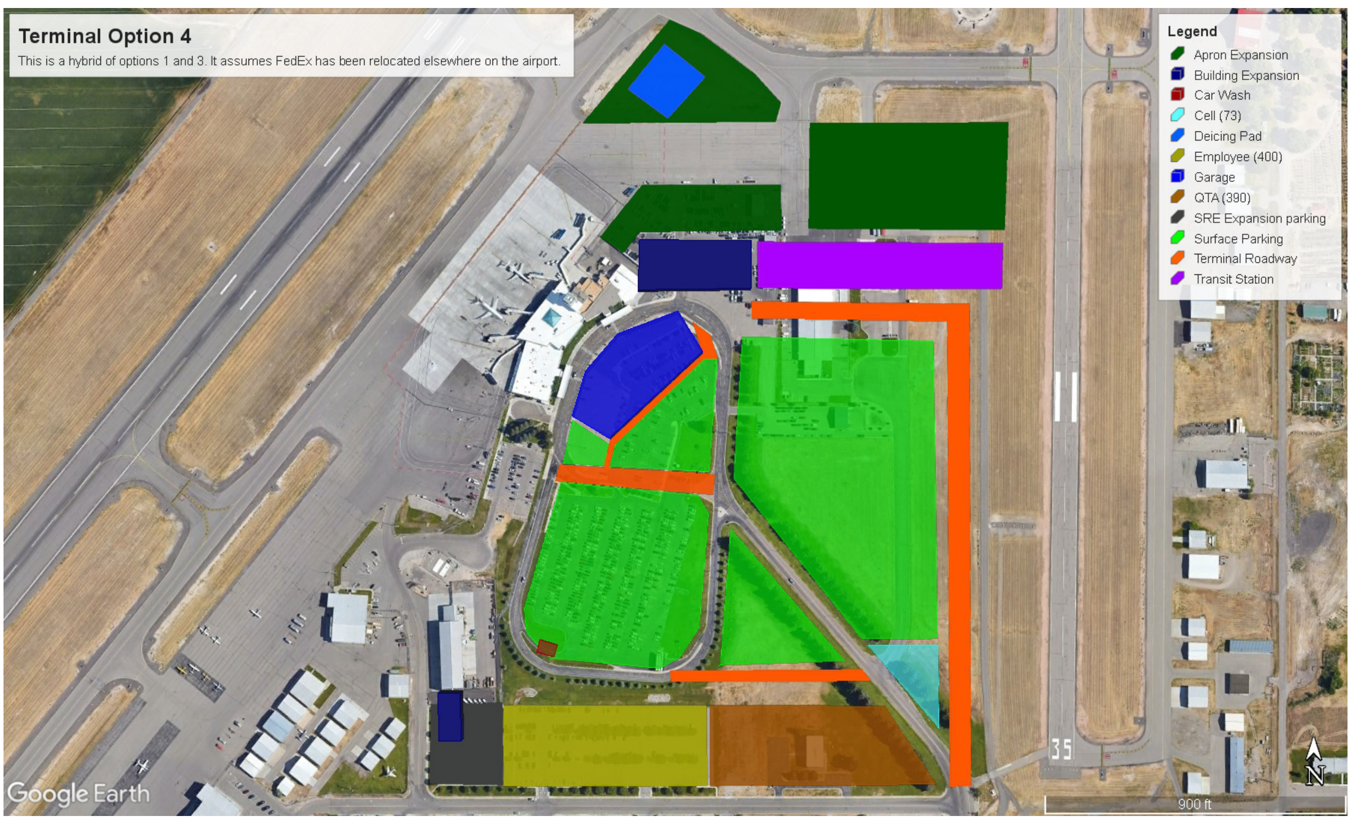
### b. Posters and Exhibits

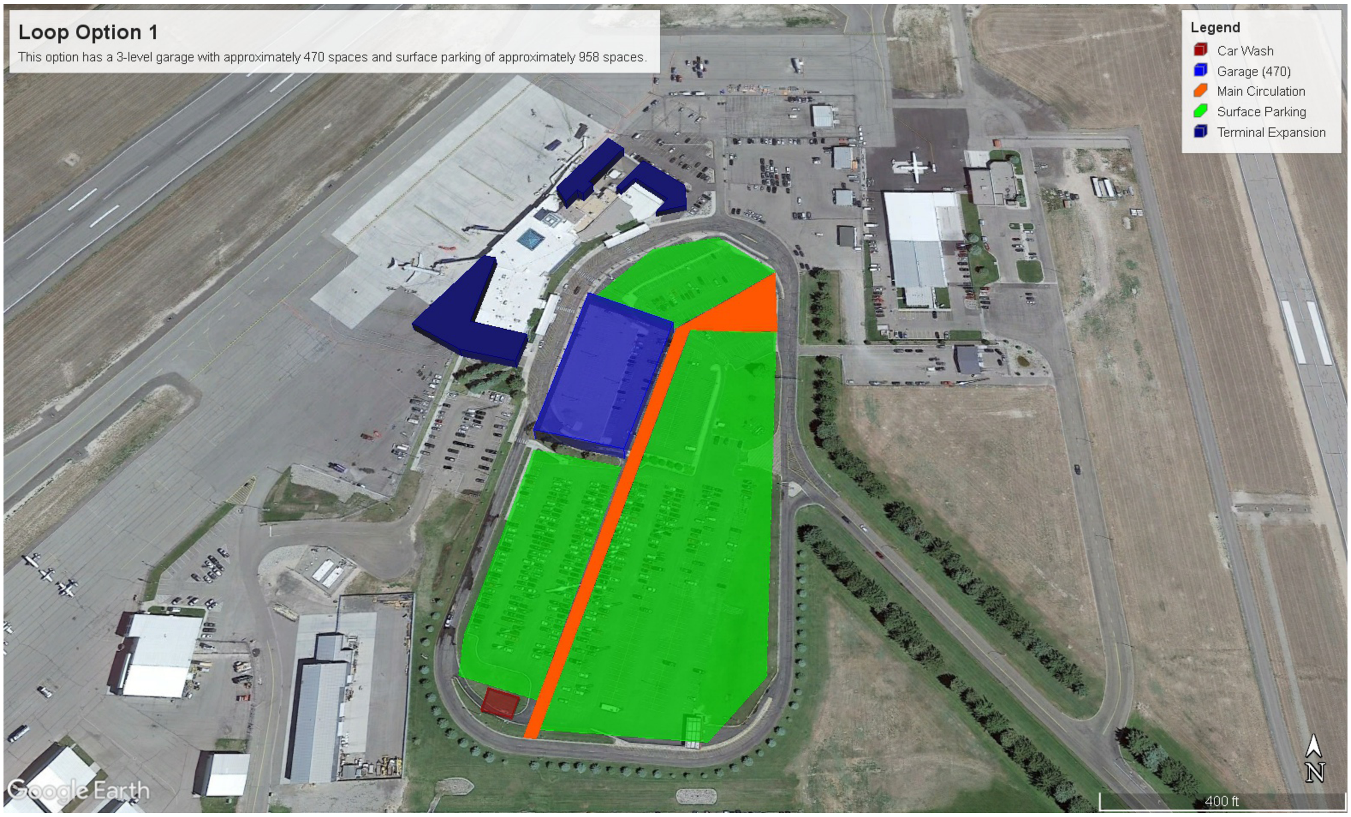



Terminal Option 1
This option maximizes the existing roadway configuration.
Legend
Apron Expansion
ARFF
ATCT
Car Wash
Cell Lot (65)
Deicing Pad
Employee (510)
Expanded SRE/FedEx Parking
Garage (634)
QTA (500)
Road Extension
Surface Parking
Building Expansion
Transit Station
35
Google Earth
800 ft
N

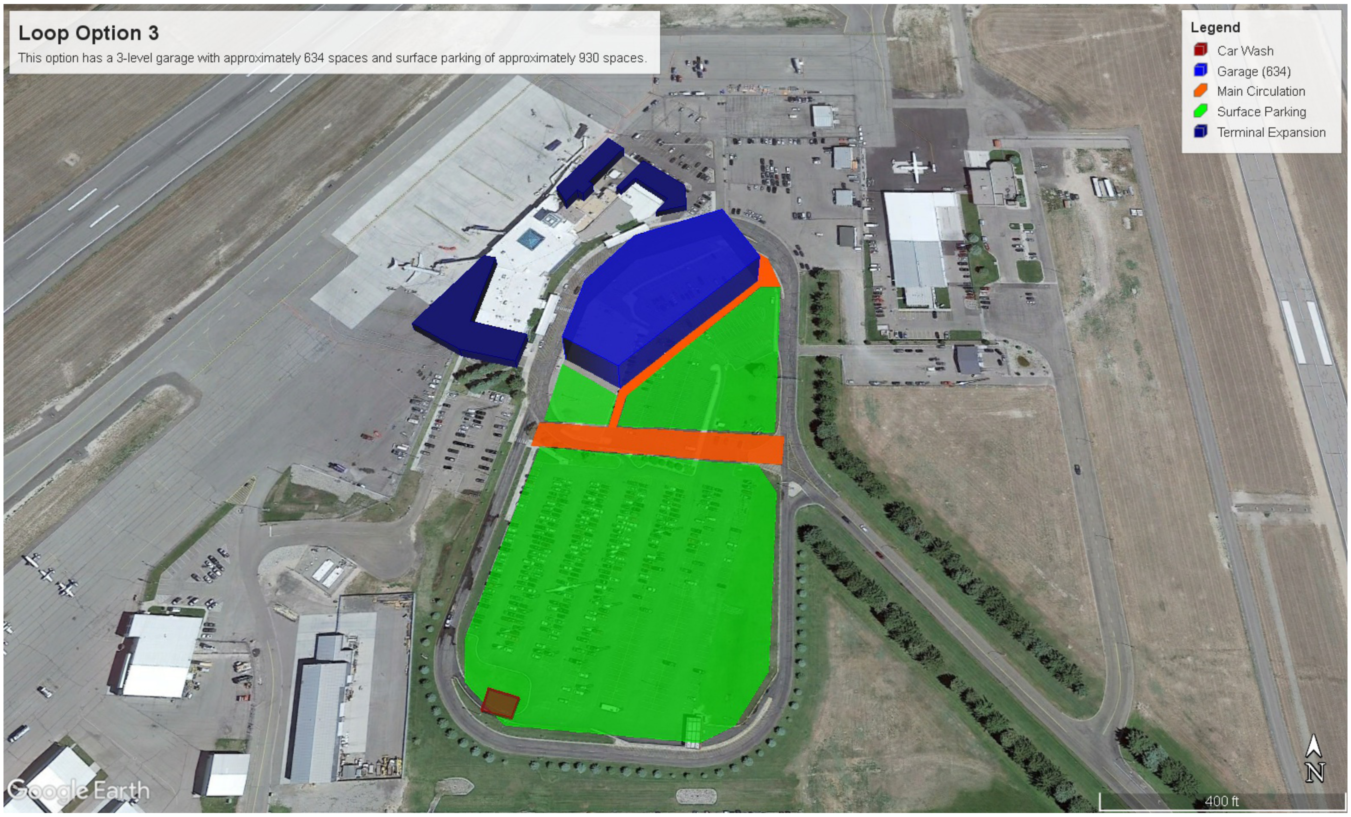

Terminal Option 2
This option eliminates the diagonal section of Skyline and replaces it with surface parking. The main entrance to the terminal is relocated.
Legend
Apron Expansion
ARFF
ATCT
Building Expansion
Car Wash
Cell Lot (57)
Deicing Pad
Expanded SRE/FedEx Parking
Garage (630)
QTA (360)
Road Extension
Surface Parking
Transit Station
35
Google Earth
800 ft
N


Terminal Option 3
This option assumes FedEx has been relocated elsewhere on the airport.
Legend
Apron Expansion
ARFF
ATCT
Building Expansion
Cell (68)
Deicing Pad
Employee (400)
Garage (634)
Main Parking (2857)
QTA (415)
SRE Expansion parking
Terminal Roadway
Transit Station/Deliveries
1000 ft
Google Earth

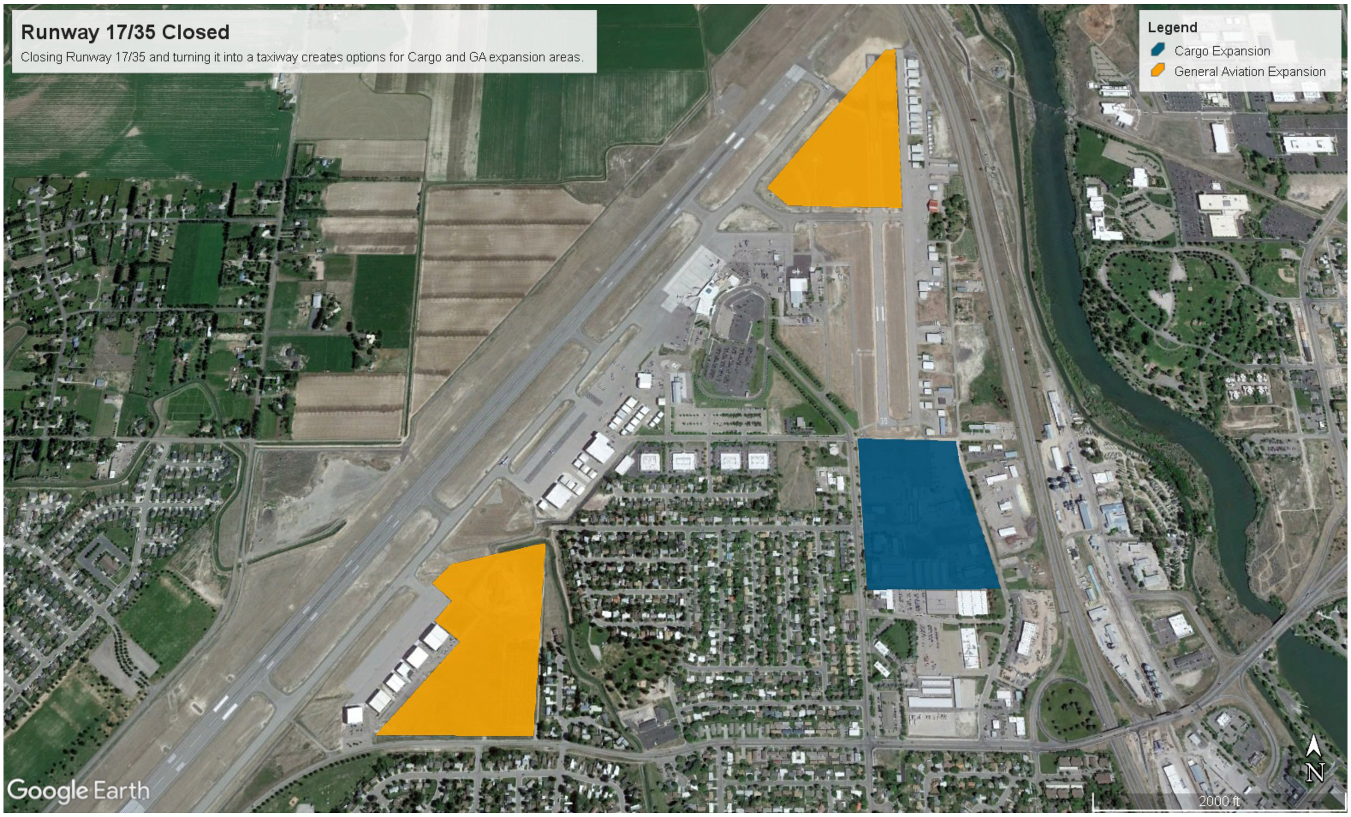

Terminal Option 4
This is a hybrid of options 1 and 3. It assumes FedEx has been relocated elsewhere on the airport.
Legend
Apron Expansion
Building Expansion
Car Wash
Cell (73)
Deicing Pad
Employee (400)
Garage
QTA (390)
SRE Expansion parking
Surface Parking
Terminal Roadway
Transit Station
900 ft
Google Earth


Loop Option 1
This option has a 3-level garage with approximately 470 spaces and surface parking of approximately 958 spaces.
Legend
Car Wash
Garage (470)
Main Circulation
Surface Parking
Terminal Expansion
N
400 ft
Google Earth

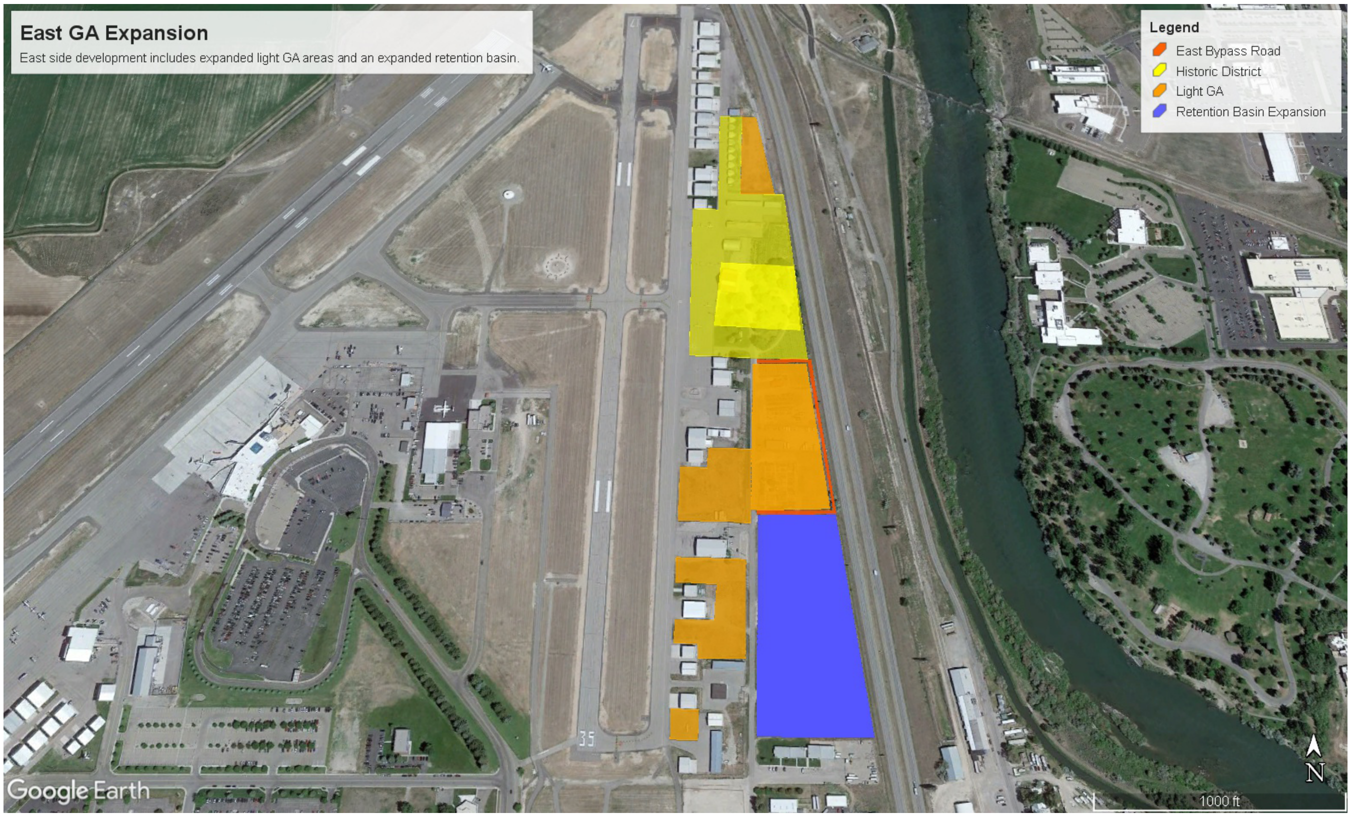

Loop Option 2
This option has a 3-level garage with approximately 985 spaces and surface parking of approximately 816 spaces.
Legend
Car Wash
Garage (985)
Terminal Expansion
Main Circulation
N
400 ft
Google Earth

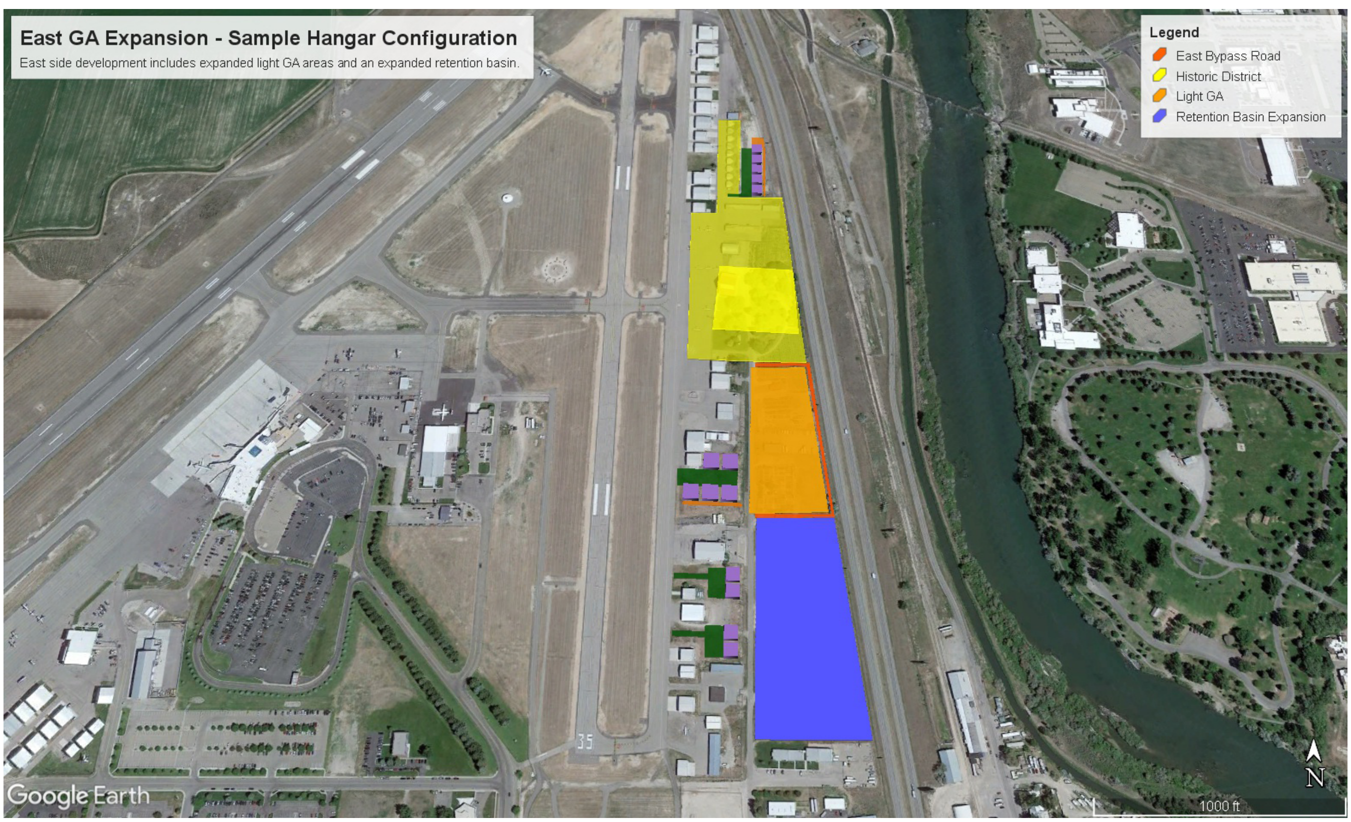

Loop Option 3
This option has a 3-level garage with approximately 634 spaces and surface parking of approximately 930 spaces.
Legend
Car Wash
Garage (634)
Main Circulation
Surface Parking
Terminal Expansion
Google Earth
400 ft
N

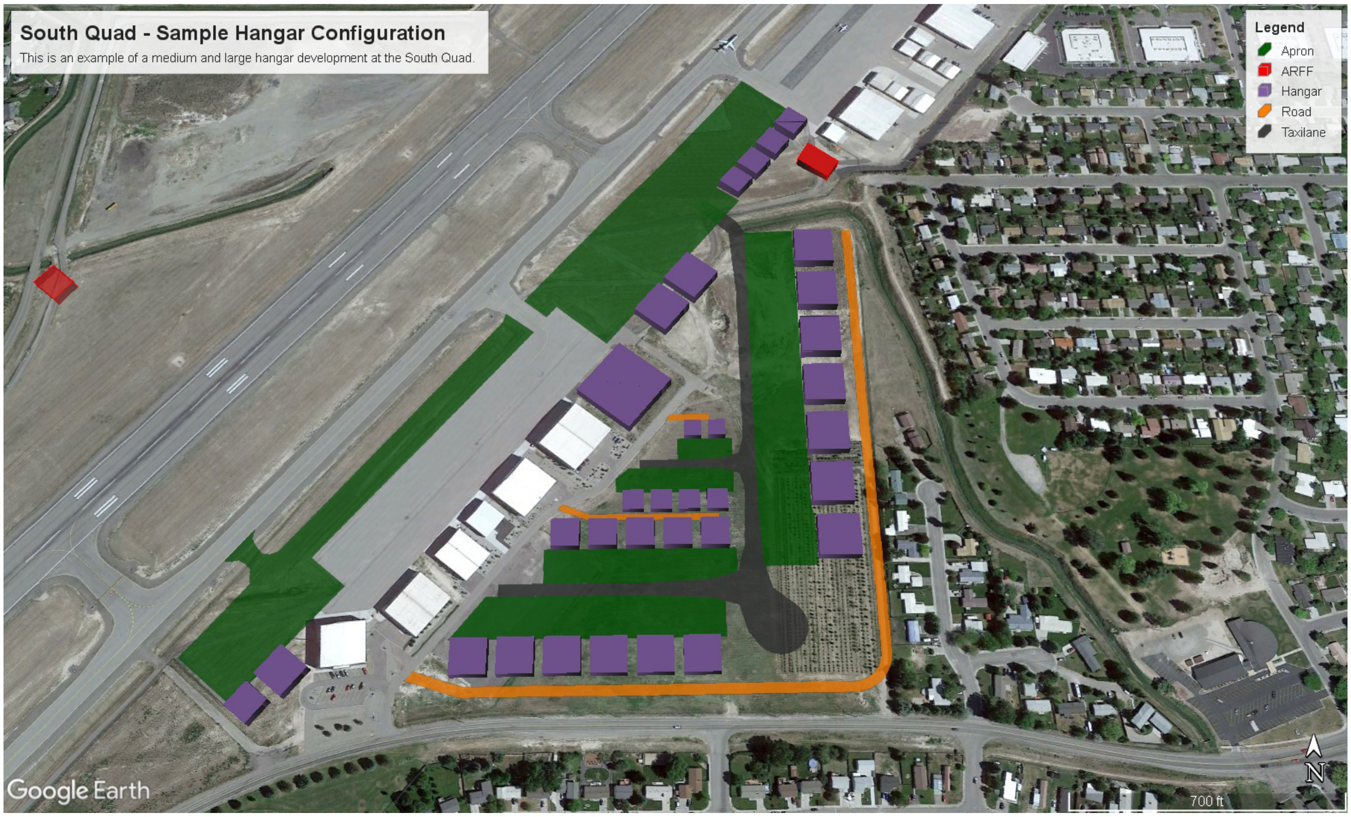

Additional Rental Car QTA Options
This shows two additional options for a rental car QTA.
Legend
QTA
Google Earth
1000 ft
N


Runway 17/35 Closed
Closing Runway 17/35 and turning it into a taxiway creates options for Cargo and GA expansion areas.
Legend
Cargo Expansion
General Aviation Expansion
Google Earth
2000 ft
N

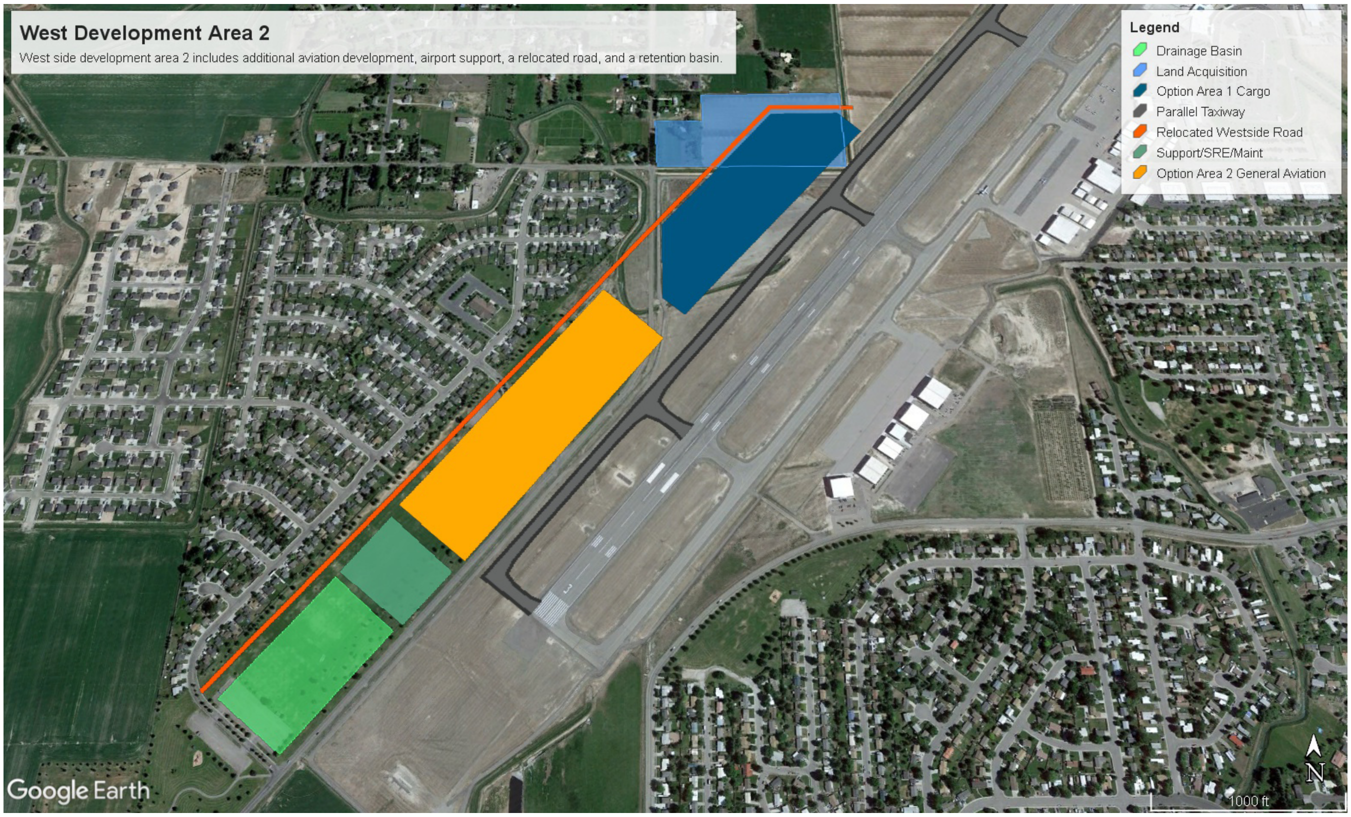

Runway 17/35 Open
Keeping Runway 17/35 open will allow expansion of light GA.
Legend
General Aviation Expansion
Taxiway Extension
Google Earth
2000 ft
N

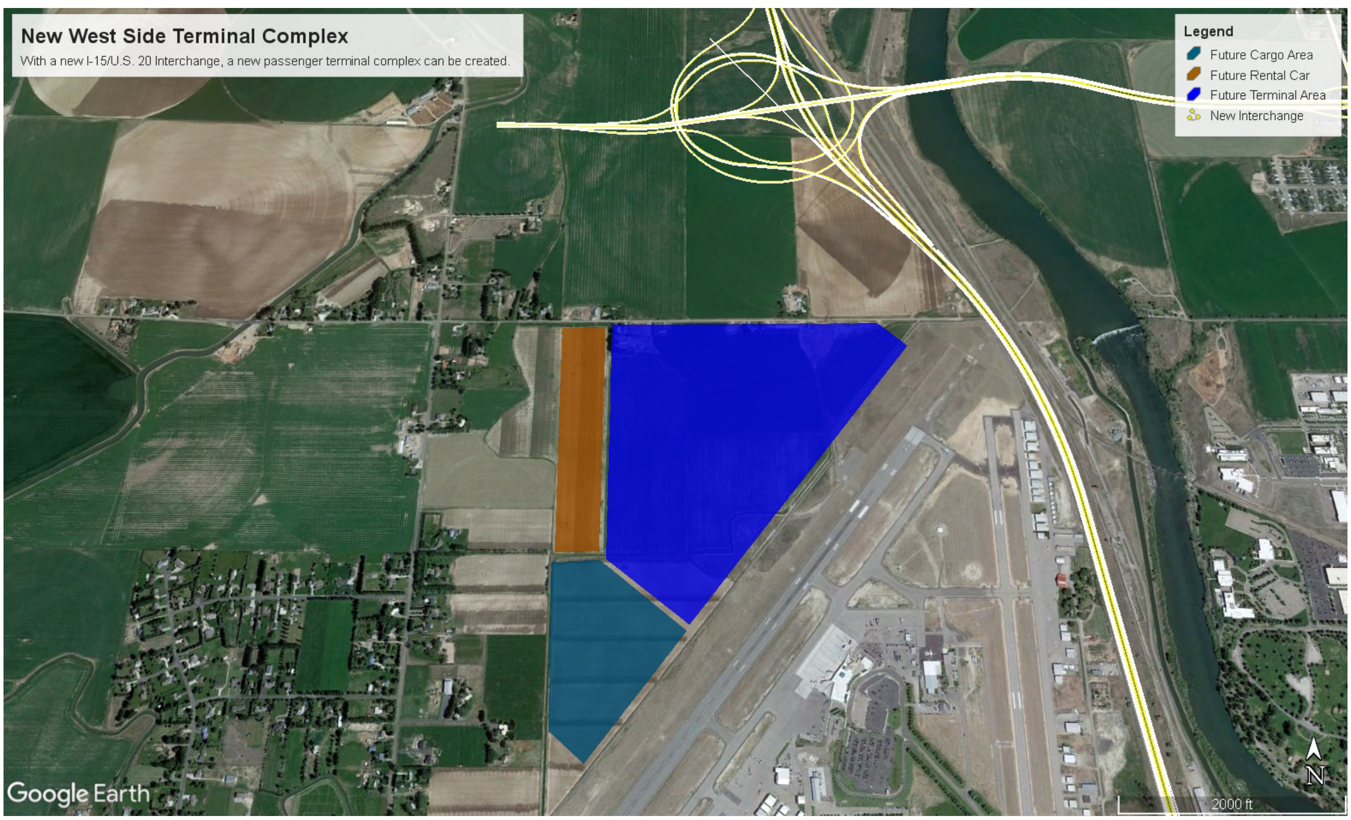

East GA Expansion
East side development includes expanded light GA areas and an expanded retention basin.
Legend
East Bypass Road
Historic District
Light GA
Retention Basin Expansion
Google Earth
1000 ft
N


East GA Expansion - Sample Hangar Configuration
East side development includes expanded light GA areas and an expanded retention basin.
Legend
East Bypass Road
Historic District
Light GA
Retention Basin Expansion
Google Earth
1000 ft
N


South Quad - Sample Hangar Configuration
This is an example of a medium and large hangar development at the South Quad.
Legend
Apron
ARFF
Hangar
Road
Taxilane
Google Earth
700 ft
N


West Development Option Area 1
West side development area 1 includes a parallel taxiway, land acquisition, and a new cargo area. Access is maintained with existing roads.
Legend
Land Acquisition
Parallel Taxiway
Cargo
Google Earth
1000 ft
N


West Development Area 2
West side development area 2 includes additional aviation development, airport support, a relocated road, and a retention basin.
Legend
Drainage Basin
Land Acquisition
Option Area 1 Cargo
Parallel Taxiway
Relocated Westside Road
Support/SRE/Maint
Option Area 2 General Aviation
Google Earth
1000 ft
N


New West Side Terminal Complex
With a new I-15/U.S. 20 Interchange, a new passenger terminal complex can be created.
Legend
Future Cargo Area
Future Rental Car
Future Terminal Area
New Interchange
Google Earth
2000 ft
N

# c. Initial Alternatives Assessment

## Initial Alternatives Assessment

First Round Evaluation Criteria:

1. Does this resolve one or more of the facility requirements?
2. Does this improve safety?
3. Does this improve efficiency?
4. Does this improve compliance with Grant Assurances?
5. Does this impact the environment?

Terminal Area Requirements Review:

- Terminal building expansion with 2 additional gates.
- Expand the economy parking lot – 1,267 economy, 1,471 overall.
- Expand the employee parking lot – 305.
- Expand the rental car facility – 143 ready return, 274 QTA spaces, 8 fuel, 8 wash bays, 6 maint. bays.
- Expand the cargo apron and processing building.
- Expand the SRE building.
- Expand the terminal access road and move the parking entry points before curbside.
- Move the ARFF station and air traffic control tower.
- Relocate deicing pad.

### Terminal Area Options

#### Option 1

- Builds upon existing roadway configuration.
- The existing loop has 3 separate options described later. Each option allows entrance to the lots before the terminal curbside.
- Assumes ARFF has been relocated.
- Assumes rental car ready return and quick turnaround area (QTA) have been relocated.
- FedEx expansion, including a building, apron, and parking lot. A dedicated cargo access road extends from the intersection of Skyline and International Way, removing cargo traffic from the main passenger area.
- Aircraft apron is expanded on the old rental car ready return and QTA.
- A transit station allowing drop off and pick up takes up the rest of the old QTA. It has a dedicated access road from Federal Way.
- The QTA has been relocated to the triangle between Federal Way and Skyline. It has room for approximately 500 spaces.
- A cell lot is placed along Federal Way across from the QTA. It has approximately 65 spaces.
- An extension from the southeast corner of the Skyline loop directs exit traffic straight to Skyline. This removes the sharp right turn from the existing exit.
- A triangular overflow lot is placed between the loop and Skyline diagonal. It has approximately 214 spaces but requires a pedestrian crossing across the Skyline loop or shuttle service.
- An employee lot replaces Economy 2. It can accommodate up to 510 spaces.
- The SRE building is expanded to the south, as well as the maintenance yard.


1. Does this resolve one or more of the facility requirements? Yes: Terminal, cargo, rental car, employee, SRE, circulation, ARFF, ATCT, deicing pad.
2. Does this improve safety? Yes: It will reduce pedestrian-vehicle interactions at the curbside.
3. Does this improve efficiency? Yes: It will remove non-passenger traffic from the terminal loop. It will improve traffic flow by having parking traffic exit before the terminal loop.
4. Does this improve compliance with Grant Assurances? Yes: Financial sustainability.
5. Does this impact the environment? No, all of the areas are previously disturbed. EV charging stations will be included. Transit station will reduce vehicle trips.

#### Option 2

- Variation of Option 1.
- Eliminates the diagonal section of Skyline and the Stukent facility and replaces them with a large parking area of approximately 1,800 spaces. The employee lot can be incorporated into this lot.
- Relocates the main terminal entrance and exit point on International Drive.
- The transit station branches off the cargo road.
- The QTA moves to the current Economy 2 lot. It has approximately 360 spaces.


1. Does this resolve one or more of the facility requirements? Same as Option 1.
2. Does this improve safety? Same as Option 1.
3. Does this improve efficiency? Same as Option 1.
4. Does this improve compliance with Grant Assurances? Same as Option 1.
5. Does this impact the environment? Same as Option 1.

#### Option 3

- Requires FedEx to be relocated elsewhere on the airport.
- Creates a simple traffic flow with large parking areas for passengers (3,500), employees (400), and rental cars (415).
- Allows further expansion of the terminal to the east.
- This is a longer term option.


1. Does this resolve one or more of the facility requirements? Yes: Same as Option 1 but requires a new cargo facility elsewhere.
2. Does this improve safety? Yes: Fewer decision points for drivers.
3. Does this improve efficiency? Yes: Much simpler circulation.
4. Does this improve compliance with Grant Assurances? Same as Option 1.
5. Does this impact the environment? Same as Option 1 as long as Cargo facility location does not have significant impacts.

#### Option 4

- Keeps the existing Skyline diagonal and terminal loop.
- Assumes FedEx has been relocated elsewhere on the airport.
- Separate road for transit and terminal deliveries.
- This is a longer term option.


6. Does this resolve one or more of the facility requirements? Yes: Parking, terminal, rental car, employee parking, SRE expansion.
7. Does this improve safety? Yes: Less vehicle traffic interacting with passengers at the curbside.
8. Does this improve efficiency? Yes: Reduces traffic at the curbside.
9. Does this improve compliance with Grant Assurances? Yes: Financial sustainability.
10. Does this impact the environment? Same as Option 1 as long as Cargo facility location does not have significant impacts.

### Skyline Loop Options

#### Option 1

- Modest parking garage at curbside departures with single pedestrian bridge crossing Skyline. Three level, 470 spaces.
- Hourly lot with 134 spaces, surface parking with 826 spaces.
- Total parking spaces 1,430.
- Simple traffic flow with one lane.
- Entrance before curbside, exit at south end.


1. Does this resolve one or more of the facility requirements? Yes: ready return incorporated into garage.
2. Does this improve safety? Yes: It reduces traffic passing through the curbside. Less vehicular interaction with pedestrians at curbside.
3. Does this improve efficiency? Yes: Fewer decision points.
4. Does this improve compliance with Grant Assurances? Yes: Financial sustainability.
5. Does this impact the environment? No: All previously disturbed. EV charging stations to be included.

#### Option 2

- Large garage with access to the terminal via one pedestrian bridge at departures. Three level with 985 spaces.
- One pass-through lane bisecting the loop.
- Hourly and curbside arrivals, 102 spaces.
- Main surface parking with 714 spaces.
- Total parking spaces 1,800.


1. Does this resolve one or more of the facility requirements? Yes: Passenger parking and ready return.
2. Does this improve safety? Same as Option 1.
3. Does this improve efficiency? Same as Option 1.
4. Does this improve compliance with Grant Assurances? Same as Option 1.
5. Does this impact the environment? Same as Option 1.

#### Option 3

- Large garage front and center to the terminal with access via two pedestrian bridges. Three level with 634 spaces.
- One main entrance to surface lots with a second entry to the garage.
- Small hourly lot with 34 spaces.
- Medium premium lot with 182 spaces.
- Economy parking with 714 spaces.
- Total spaces 1,564.


1. Does this resolve one or more of the facility requirements? Yes: ready return.
2. Does this improve safety? Same as Option 1.
3. Does this improve efficiency? Same as Option 1.
4. Does this improve compliance with Grant Assurances? Same as Option 1.
5. Does this impact the environment? Same as Option 1.

### Additional QTA Options


#### Option 1

- Requires land acquisition of parcels at the intersection of International Way and Skyline Drive. This would provide close access to the terminal and free up space for passenger and employee parking.

1. Does this resolve one or more of the facility requirements? Yes: QTA
2. Does this improve safety? Not necessarily.
3. Does this improve efficiency? Yes: Removes QTA from the passenger circulation area.
4. Does this improve compliance with Grant Assurances? Yes: Financial sustainability.
5. Does this impact the environment? No: The parcel is previously disturbed and there are no known resources on the parcel. A QTA would prevent residential encroachment.

#### Option 2

- The second area is in the South Quad. Does not require land acquisition but is farther from the terminal and reduces aeronautical use of the South Quad. This could be converted to a CONRAC.

1. Does this resolve one or more of the facility requirements? Yes: QTA
2. Does this improve safety? Not necessarily.
3. Does this improve efficiency? No: The travel distance is considerably farther to the terminal.
4. Does this improve compliance with Grant Assurances? Yes: Financial sustainability.
5. Does this impact the environment? Partially: The parcel is previously disturbed and on airport property. There are no known resources on the parcel. Vehicle trips are farther.

## Airfield Alternatives

Airfield Requirements Review:

- Relocate Runway 3 windcone outside of the RSA. (Not an option, it will be shown relocated).
- Expand runway shoulders and blast pads. (Not an option, will be shown expanded).
- Expand taxiway width and shoulders. (Not an option, will be shown expanded).
- Eliminate direct access to Runway 17/35 at Taxiway C from the GA apron.
- Relocate VOR-DME. (Not an option, it will be shown relocated).
- Add 41 hangars.
- Reconfigure GA parking spaces.

### Runway 17/35 Options

#### Closed Runway

- Converts Runway 17/35 into a taxiway.


1. Does this resolve one or more of the facility requirements? Yes: Cargo, hangars, GA parking spaces, eliminates direct access from the GA apron.
2. Does this improve safety? Partially. Yes: Runway incursion mitigation, runway and tower line of sight, converging air traffic, eliminates existing obstructions to that runway. No: Dissimilar traffic forced to use one runway.
3. Does this improve efficiency? Partially. Yes: Eliminates overlapping traffic patterns. No: Longer taxi routes from the east GA area and dissimilar aircraft using one runway.
4. Does this improve compliance with Grant Assurances? Yes: Financial sustainability – would not have to self-fund runway maintenance. Financial resources can be used elsewhere. Taxiway maintenance costs would be eligible for FAA funding. Eliminates existing obstructions.
5. Does this impact the environment? No.

#### Runway Open

- Runway 17/35 remains open.


1. Does this resolve one or more of the facility requirements? No.
2. Does this improve safety? No: Maintains the status quo.
3. Does this improve efficiency? No: Maintains the status quo.
4. Does this improve compliance with Grant Assurances? No: Maintains the status quo.
5. Does this impact the environment? No: Maintains the status quo.

### East Side GA Options

- Expands the existing retention basin to accommodate new development.
- Protects the historic and historic-eligible districts.
- Infills existing space with light GA.
- Converts the garden to aviation use with a relocated road around it.


1. Does this resolve one or more of the facility requirements? Yes: Drainage.
2. Does this improve safety? Yes: Drainage (reduces standing water on the airfield).
3. Does this improve efficiency? Not necessarily.
4. Does this improve compliance with Grant Assurances? Yes: Converts non-aeronautical to aeronautical use of airport property.
5. Does this impact the environment? Possibly: It avoids the historic district but may impact a water resource in the retention basin.

### South Quad GA Hangar Complex

- Can be built for GA hangars, large and medium, or all cargo, or shared with a rental car QTA or CONRAC.


1. Does this resolve one or more of the facility requirements? Yes: Hangars or cargo, possible QTA.
2. Does this improve safety? Yes: Keeps large aircraft mixed with large aircraft.
3. Does this improve efficiency? Not necessarily.
4. Does this improve compliance with Grant Assurances? Yes: Converts non-aeronautical to aeronautical use of airport property.
5. Does this impact the environment? Possibly: It is on airport property that is previously disturbed but encroaches on a canal.

### West Side Development

#### Option Area 1

- Requires a new parallel taxiway and land acquisition.
- Aeronautical development could be cargo or GA.
- Affords additional ARFF and ATCT options.
- Can be accessed with existing roadways.


1. Does this resolve one or more of the facility requirements? Yes: Cargo or GA hangars, ARFF, ATCT.
2. Does this improve safety? Yes: Full length parallel taxiway would reduce runway crossings.
3. Does this improve efficiency? Yes: Separates surface traffic from airlines.
4. Does this improve compliance with Grant Assurances? Yes: Converts non-aeronautical to aeronautical use of airport property.
5. Does this impact the environment? Yes: Proximity to residential and canal system.

#### Option Area 2

- Expands aeronautical development to the south to meet demand.
- Requires relocation of 26th.
- Additional space reserved for airport support (SRE, maintenance) and drainage.


1. Does this resolve one or more of the facility requirements? Yes: Hangars or cargo, SRE, drainage.
2. Does this improve safety? Yes: Aeronautical access to Runway 3/21, drainage.
3. Does this improve efficiency? Yes: Separates surface traffic from airlines.
4. Does this improve compliance with Grant Assurances? Yes: Converts non-aeronautical to aeronautical use of airport property.
5. Does this impact the environment? Yes: Proximity to residential and canal system.

### West Terminal Concept

- If the north alternative for the U.S. 20/I-I5 interchange comes to fruition, it presents a possibility of a north access to the airport.
- A brand new, purpose-built terminal area would be built to the needs and desires of the airport.
- Includes parking, rental cars, and cargo area.
- Existing terminal area would be converted to GA, cargo, or aviation industrial uses.


1. Does this resolve one or more of the facility requirements? Yes: Terminal, parking, rental car, cargo, hangars.
2. Does this improve safety? Yes: Circulation would be built to current standards.
3. Does this improve efficiency? Yes: Reduces traffic through busy residential area.
4. Does this improve compliance with Grant Assurances? Yes: Converts non-aeronautical to aeronautical use of airport property.
5. Does this impact the environment? Partially: Farmland and canal system. Requires land acquisition. New terminal facilities would be built to current environmental sustainability standards. Moves passenger traffic from a more populated area to a less populated area.

# d. Comments and Feedback

May 18th, 2023

Wayne J. Reiter, A.A.E., ACE
Aviation Planner
Ardurra

Wayne,

Thank you for your efforts. We look forward to working with you further on the Idaho Falls Regional Airport Master Plan.

As a representative of Aero Mark, Inc., IDA's Fixed Base Operator, I have the following observations per the Idaho Falls Regional Airport Master Plan TAC Meeting 3 on May 3rd, 2023.

Of the options provided by Ardurra in the Initial Alternatives Assessment for the IDA commercial air service terminal, and as noted in the Idaho Falls Regional Airport Master Plan TAC Meeting 3 Summary, I believe that Terminal Area Option 3 is best. This option provides the most property for the commercial air service terminal, ramp, and associated concerns to grow. It is also much simpler for traffic, and a more elegant solution. It does, however, require the opening up of the west side of the airport for the development of a commercial air freight services area. I believe that the sooner the Idaho Falls Regional Airport opens this area of the airport's property for aviation development the better.

The South Quad GA Hangar Complex, as roughly described, fits our needs. But, it should preclude any non-aviation presence, such as rental car storage.

Per the possibility of shutting down Runway 17-35: Shutting down Runway 17-35 has the potential to significantly financially harm Aero Mark, Inc., and other airport businesses.

First, when IDA's primary runway, Runway 3-21, has been shut down for periodic maintenance, including repainting, resurfacing, and reconstruction, we have been able to rely on the secondary runway, Runway 17-35, which remained open, to continue business as usual. The majority of Aero Mark's customers have been able to operate their aircraft in and out of IDA during the primary runway's shutdowns because of the availability of the secondary runway.

For instance, during the last shut down of IDA's primary runway, 3-21, from September 6th through September 10th, 2018, the secondary runway, 17-35, remained open. Commercial air freight services, including Federal Express and United Parcel Service, air medical services, including locally based AirMethods, Air St. Luke's, Intermountain Life Flight, and Life Flight Network, business aviation, general aviation, and military aviation continued to operate in and out of IDA normally. Only commercial passenger air service was affected. During that time, Aero Mark dispensed more than 5300 gallons of Jet-A product, and roughly 1300 gallons of 100LL product. That's an average of more than 1300 gallons per day. We were also able to generate revenue from all of our other non-fuel services as well.

From April 11th to June 27th, 2022, the Jackson Hole airport was shut down for the reconstruction of their solitary runway. The entire airport was shut down for 77 days. Not only was there no commercial air service, but there was no commercial air freight service, no air medical services, no business aviation, no general aviation, and no military aviation. This is because there was no secondary runway for the aircraft to use. Hence, the businesses on that airport, including the Fixed Base Operator, were unable to generate any revenue during the shutdown, and they were forced to lay off employees and take other measures to keep their business afloat.

It is inevitable that IDA's primary runway, 3-21, will require significant repairs within the time-frame of this Master Plan, with the possibility of a shutdown of similar duration to Jackson Hole's. Without the secondary runway, Aero Mark, and other airport businesses, will be unable to generate revenue for the duration of the shutdown, and we will also need to take unfortunate measures in an attempt to keep our business afloat.

Second, shutting down our secondary runway will engender a significant increase in mixed aircraft traffic. There are several concerns with this – most importantly with safety, but also with financial harm to Aero Mark, and other airport businesses. Additional mixed aircraft traffic will discourage flight training, as a single runway will be considerably less attractive to local and regional flight schools. AvCenter, one of our tenants, operates a flight school at IDA. With the shutdown of the secondary runway they would be forced to move all of their flight training operations to the primary runway, and to the detriment of their students. The long-term implications of doing so, as the airport continues to grow, are likely to prove unsustainable for that business. AvCenter is but one of the half-dozen commercial flight schools that Aero Mark services daily.

Third, Aero Mark, per the requests of our "east side," Runway 17-35 based customers, made a significant investment to provide them with reliable, twenty-four hour 100LL fuel service. At considerable cost we built the Beacon Self Service fuel system. Closing the secondary runway would likely curtail the use of this fuel system, through loss of flight training operations, and eventually all others adverse to the significant increase in mixed aircraft traffic.

Fourth, shutting down our secondary runway will make IDA less attractive to business aviation, general aviation, and other private parties looking to invest in the airport. IDA will suffer continued attrition as private parties either leave the airport, or dismiss the airport as a viable option for their investment. As above, this will be due to the significant increase in mixed aircraft traffic.

Last, and perhaps most importantly, shutting down our secondary runway will significantly negatively impact life saving flight operations at IDA. Air medical services are one of the primary users of the airport. Aero Mark assists a half-dozen, or often more, life saving flight operations every day. During the last shutdown of IDA's primary runway, air medical services were able to continue business as usual, as our secondary runway remained open. If there ever is a significant casualty incident on our primary runway, our secondary runway can remain open to save lives. We can't put a price on that.

It has been stated that the Federal Aviation Administration is "likely," at some point in the future, to stop funding IDA's secondary runway. Hence, the Idaho Falls Regional Airport will be financially liable for the runway. It was also stated during the meeting that "funding will have to come from airport funds, specifically non-airline revenue since they don't use that runway." Why is that? Are funds split by user/runway currently? As the cost of upkeep of the secondary runway is a fraction of the cost of upkeep of the primary runway, is that necessary? I'd love to see some clarification, and hard numbers. I'd like to more deeply explore our options in keeping our secondary runway open, and viable.

Sincerely,

Thomas Hoff
Aero Mark, Inc.

May 19, 2023

Wayne Reiter
Airport Planner
Ardurra Group Inc.

Subject: Comments On The Initial Alternative Assessment Document

Dear Wayne,

As a member of the Technical Advisory Committee (TAC) for the review and update of the Idaho Falls airport Master Plan I am providing you my comments on the Initial Alternatives Assessment document. I appreciate being an invited participant of the TAC and having this opportunity to provide you with my comments.

Terminal Area Options

I think that Option 3 is the best overall alternative. This alternative does impact and require relocation of cargo. However, the future expected growth in cargo coupled with potential additional future expansions of the terminal are likely to create future conflicts for space on the airport grounds. It would be best, I believe, to start taking the difficult steps now to relocate cargo facilities to better support the future overall growth of the airport and eliminating additional future conflicts.

In option 3 there needs to be special consideration of the expected increase in pedestrian traffic from the expanded main ground parking area. The pedestrian crossings in front of the terminal are fairly well marked and average traffic speeds are somewhat reduced. However, there is currently only a single pedestrian crossing south of the terminal and it is both poorly marked and poorly lit. To make matters worse, vehicle speeds are higher in this area after passenger drop offs. As airport pedestrian traffic increases the potential for vehicle pedestrian accidents in this area will also increase.

All three of the Terminal Area options reflect the tower in two possible new locations. I believe the best option would be in/near the current employee parking area. Locating the tower east of the parking garage could cause line of sight issues with ground traffic and the tower location itself would likely be in conflict with the surface parking areas.

All terminal area options clearly will improve the flow of traffic to and around the terminal area itself. However, the increased vehicle traffic associated with increases in passengers and parking will inevitably result in increased traffic on Skyline, Grandview, Broadway, and the existing I-15 – US 20 interchange. Is the Idaho DOT considering the impact of the forecasted growth at IDA in the planning of the impacted surrounding roadways to be consistent with, and in support of, the preferred alternatives selected in the Master Plan?

Airfield Alternatives

I think that the alternative of closing 17-35 has many immediate and long-term disadvantages and is not in the best interest of the airport, general aviation, or the Idaho Falls community. Some specific reasons I believe this to be the case are as follows:

It would reduce safety of both commercial and general aviation by forcing all aircraft (large and small) onto a single use runway. This presents additional safety challenges for taxing aircraft and creates greater air traffic control challenges for a non-radar equipped tower to maintain adequate separation of a growing number of aircraft with a wide range of airspeeds. There is also the matter of increased likelihood of wake turbulence and delays caused the tower's responsibility to space landing/departing aircraft to reduce that risk. These potential safety concerns would increase in potential as the airport experiences growth.

Elimination of runway 17-35 would reduce the overall operational reliability of the airport. In the past there have been multiple occasions for temporary or long-term maintenance closure of runway 3-21. Having an operational runway 17-35 as an alternative during those times prevented the complete closure of the airport. In the past year runway 3-21 was temporarily closed on nine occasions due to various events such as aircraft with collapsed landing gear or blown tires. During all those event's runway 17-35 remained open and available for landing and departing aircraft.

Another factor related to safety, closing Runway 17/35 would result in the removal of an important runway to mitigate the need for small aircraft crosswind landings on runway 3-21. While the wind data today does not support continued FAA funding of 17-35, it does point out that severe wind conditions do still occasionally exist and at times 17-35 is the safer option for small GA aircraft. Also, given our changing climatic conditions it is possible that wind data in the next 10 years could once again support FAA funding of that alternate runway.

Closing runway 17-35 reduces general aviation access to the east side of the airport which would impact access to the self-serve fuel station and eliminate a natural gathering location for general aviation events. It also would increase the taxing distance for all GA aircraft located on the east side of the airport.

Closing runway 17-35 would have a negative impact on flight training and instruction. Having an opportunity for narrower, shorter runway landings as well as practicing cross wind landings are an important part of pilot training and proficiency. Pilot training is important to the continued growth of the industry and the continued growing demand for commercial and GA pilots.

The airfield alternative document notes that closing runway 17-35 improves safety because of "runway incursion mitigation". I do not think this is a valid comment. If our concern was to eliminate the possibility of all runway incursions through runway closure, we would be closing runway 3-21 as well. Obviously, this is not a justifiable reason to close 17-35.

Closing 17-35 is an irreversible decision. Not only would it immediately eliminate GA utilization of an important runway there is essentially no realistic scenario in which the FAA approves, or the city agrees to fund the construction of a new runway. Considering the vigorous growth anticipated in Idaho Falls in both commercial and general aviation it seems wisest to keep all our options open, even if it is necessary to develop additional funding alternatives to support the runway in the near term.

In the "runway open" alternative it shows expanded GA parking on both the east side and south quadrant. I think this is an excellent choice for supporting GA growth at the airport. The south quadrant obviously has ample space to install a significant number of hangars. Perhaps the lease revenue from all additional hangars could be earmarked in the airport's budget to support (at least partially) the annual maintenance costs of runway 17-35. In addition, the east side GA expansion could be consistent with future development plans to enhance the historic district to be even more compatible with GA interests.

The runway 17-35 closure option includes a new area of GA parking and hangars that would likely require the removal or relocation of the VOR. Also considering FAA's inclination to reduce the number of these types of Navaids there is a possibility that the VOR would be lost permanently if FAA would not support relocation.

One safety consideration listed under the closed runway options states that it improves runway and tower line of sight. I think this option ignores the terminal alternatives, which include relocating the control tower. Whatever location is chosen for the new control tower, adequate line of sight to both runways should be a major consideration. This would eliminate the line-of-sight issue as a safety benefit of closing 17-35.

Additional QTA Options

I think both QTA Options 1 and 2, are more likely to cause problems than provide solutions. The proximity to residential neighborhoods, increased traffic near residential areas, and the need for a rental car shuttle service could all be problematic.

West Side Development

This is clearly the best long-range plan for the continued growth of IDA. While it may be premature to start construction projects on the west side, I think the time is right to begin planning and start land acquisition to support that future option. If plans change, any purchased land could be liquidated or put to other uses by the city. Continued delay, however, will likely only increase conflicts with residential areas and increase the cost of relocating the terminal and related facilities.

Once again, thank you for providing the opportunity to make these comments.

Sincerely,

Steve Laflin
International Isotopes Inc
Angel Flight West Idaho Wing Leader
Idaho Falls Airport Association President

## 02.4. Technical Advisory Committee Meeting #4

### a. Meeting Summary

Date: January 29, 2025

Time: 10–11 a.m.

The following were present at the beginning of the meeting:

- Steve Laflin, President, Idaho Falls Airport Association
- Ian Turner, Airport Director, Idaho Falls Regional Airport
- Margaret Wimborne, City of Idaho Falls Office of the Mayor
- Jodi Mantoya, Envoy
- Jen Astaldi, Skywest
- Nathan Cuvala, Ardurra
- Mike Kirkham, City of Idaho Falls Attorney

- W. Reiter opened the meeting then dropped offline due to IT issues.
- I. Turner gave an update on the project beginning with the last open house in February 2024. Discussion included the development on the west side of the airport, the alterations in how a potential Old Butte Road would be depicted considering it was ultimately outside the scope of the Airport Master Plan. Additionally, the development in the South Quad area, the Terminal area, and East GA areas were highlighted as these areas received very few comments and few of consequence. N. Cuvala discussed the ALP and Master Plan approvals until W. Reiter returned. S. Laflin asked about the I-15/U.S. 20 connector project. I. Turner provided an update that the project was still moving forward and ITD would be releasing the draft Environmental Impact Statement (EIS) soon. It was noted that right now, the I-15/US-20 Connector EIS process, the Airport Master Plan, and the ongoing Bonneville Metropolitan Planning Organization's High Capacity Roadway Study are all in alignment. It will be challenging to keep them this way.
- W. Reiter provided a brief background of the project and went over the meeting materials for the scheduled February 20, 2025 Open House. The meeting materials include the draft ALP, master plan, and meeting supplement.
- W. Reiter summarized the preferred alternatives and highlighted the key elements of the future ALP sheet.
- M. Wimborne asked about the timing of future development of the soccer fields. W. Reiter replied it will be dependent on demand, but there is no projected need to develop the soccer fields with anything specific during this master plan horizon, which is 2041.
- S. Laflin brought up funding eligibility of 17/35 per the FAA Reauthorization Act of 2024 and an article from AOPA. It remains to be seen if the FAA will fund improvements to 17/35, but as long as it's shown on the ALP, it remains a possibility.

- W. Reiter described the next steps following the Open House – the draft master plan and ALP will be converted to final documents ready to take to City Council for approval. This is targeted for April 2025. The conversion of documents from draft to final will be a chance to make any final revisions, such as replacing the cover photo, adding an executive summary, and adding content to the appendices. The Exhibit A also needs to be finalized.
- It was suggested that additional visuals be available at the Open House beyond the hardcopy master plan, ALP, and meeting supplement.


# APPENDIX B

# FAA Forecast Approval

Idaho Falls
Regional Airport
2025 Airport Master Plan

October 2022

IDA
IDAHO FALLS
REGIONAL AIRPORT

# CONTENTS


2025 Airport Master Plan
Kick-Off Meeting

# Appendix B Forecast Approval

U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado · Idaho · Montana · Oregon · Utah
Washington · Wyoming

Helena Airports District Office
2725 Skyway Dr., Suite 2
Helena, MT 59602

October 14, 2022

Rick Cloutier, C.M.
Airport Director
Idaho Falls Regional Airport
2140 N. Skyline Dr.
Idaho Falls, ID 83402

Idaho Falls Regional Airport
Idaho Falls, ID
Forecast Approval

Dear Mr. Cloutier:

The Federal Aviation Administration (FAA) reviewed forecast information for the subject airport. The forecast was received July 6, 2022. FAA approves the below forecast as presented in the on-going Master Plan's Chapter 5 – Forecast of Aviation Demand:

Table 5.1: Forecast Summary

| | Base Year | Forecast Years | | | Compound Annual Growth Rate | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2041 | 5-Year | 10-Year | 20-Year |
| **Operations** | | | | | | | |
| Passenger Aircraft | 7,856 | 9,468 | 9,484 | 9,570 | 3.80% | 1.90% | 0.99% |
| All-Cargo Aircraft | 676 | 843 | 918 | 1,071 | 4.51% | 3.11% | 2.33% |
| **Total Commercial** | **8,532** | **10,311** | **10,402** | **10,641** | **3.86%** | **2.00%** | **1.11%** |
| Itinerant GA | 17,228 | 18,017 | 18,843 | 20,610 | 0.90% | 0.90% | 0.90% |
| Local GA | 7,402 | 7,604 | 7,812 | 8,244 | 0.54% | 0.54% | 0.54% |
| **Total GA** | **24,630** | **25,621** | **26,655** | **28,854** | **0.79%** | **0.79%** | **0.79%** |
| Itinerant Military | 259 | 286 | 319 | 389 | 2.00% | 2.11% | 2.05% |
| Local Military | 235 | 235 | 235 | 235 | 0.00% | 0.00% | 0.00% |
| **Total Military** | **494** | **521** | **554** | **624** | **1.07%** | **1.15%** | **1.17%** |
| **Total Operations** | **33,656** | **36,453** | **37,611** | **40,119** | **1.61%** | **1.12%** | **0.88%** |
| **Passengers** | | | | | | | |
| **Total Enplanements** | **223,741** | **289,508** | **300,869** | **326,041** | **5.29%** | **3.01%** | **1.90%** |
| **Cargo** | | | | | | | |
| **Total Weight** | **6,288,882** | **9,952,995** | **11,072,550** | **13,488,226** | **9.62%** | **5.82%** | **3.89%** |
| **Based Aircraft** | | | | | | | |
| Single-Engine | 93 | 101 | 109 | 123 | 1.66% | 1.60% | 1.41% |
| Multi-Engine | 20 | 22 | 24 | 28 | 1.92% | 1.84% | 1.70% |
| Jet | 5 | 5 | 5 | 6 | 0.00% | 0.00% | 0.92% |
| Helicopter | 4 | 4 | 4 | 5 | 0.00% | 0.00% | 1.12% |
| Glider | 3 | 3 | 3 | 3 | 0.00% | 0.00% | 0.00% |
| **Total Based Aircraft** | **125** | **135** | **145** | **165** | **1.55%** | **1.50%** | **1.39%** |

Source: IDA, U.S. Department of Transportation, FAA, Ricondo & Associates, Inc., T-O Engineers

U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado · Idaho · Montana · Oregon · Utah
Washington · Wyoming

Helena Airports District Office
2725 Skyway Dr., Suite 2
Helena, MT 59602

The FAA also approves the following aircraft for the existing and future critical aircraft:

| | |
|---|---|
| Air Carrier: | Airbus A319/A320 |
| Air Cargo: | ATR 72 |
| General Aviation: | Bombardier Challenger 300 (CL30) |

We found the forecast to be supported by reasonable planning assumptions and current data. Your forecast appears to be developed using acceptable forecasting methodologies.

The approval of the forecast and critical aircraft does not constitute a commitment on the part of the United States to participate in any development recommended in the master plan or shown on the ALP.

All future development will need to be justified by current activity levels at the time of proposed implementation. The approval of the forecast and critical aircraft does not automatically constitute a commitment on the part of the United States to participate in any development recommended in the master plan or shown on the ALP. Further, the approved forecasts may be subject to additional analysis or the FAA may request a sensitivity analysis if this data is to be used for environmental or Part 150 noise planning purposes.

If you have questions, please call me at 406-441-5233.

Sincerely,

Jared Wingo
Community Planner
Helena ADO

Cc: Nathan Cuvala, T-O Engineers
Wayne Reiter, T-O Engineers

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APPENDIX C

# Terminal Expansion Planning Study

Idaho Falls Regional Airport
2025 Airport Master Plan

July 2022

IDA IDAHO FALLS REGIONAL AIRPORT


2025 Airport Master Plan
Kick-Off Meeting

# CONTENTS

## Terminal Expansion Planning Study

ALLIIANCE

in association with

T·O ENGINEERS

TERMINAL EXPANSION PLANNING STUDY REPORT

20 May 2022

# IDAHO FALLS REGIONAL AIRPORT

## IDAHO FALLS, IDAHO

Alliiance Commission No.: 2022029

**Alliiance** | 400 Clifton Avenue Minneapolis, Minnesota 55403 USA | 612.874.4100 | www.alliiance.us

This Planning Study Report has been prepared for the **Idaho Falls Regional Airport** by the following team members

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612.874.4100
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## BAGGAGE HANDLING SYSTEMS CONSULTANT

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1120 Lincoln St., Suite 1200
Denver, CO 80203
303.832.2666
www.swansonrink.com

## IT/SECURITY CONSULTANT

**Faith Group**
3101 S. Hanley Rd
St. Louis, MO 63143
314.991.2228
www.faithgroupllc.com

## MECHANICAL, ELECTRICAL, PLUMBING ENGINEERING

**Michaud, Cooley, Erickson**
333 S. Seventh St., Suite 1200
Minneapolis, MN 55402
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www.michaudcooley.com

## COST ESTIMATING CONSULTANT

**Connico**
2594 N. Mount Juliet Rd
Mount Juliet, TN 37122
615.758.7474
www.connico.com

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## ISSUE HISTORY

| Rev | Date | Description |
|---|---|---|
| 1 | 05.20.2022 | Issued to Owner |

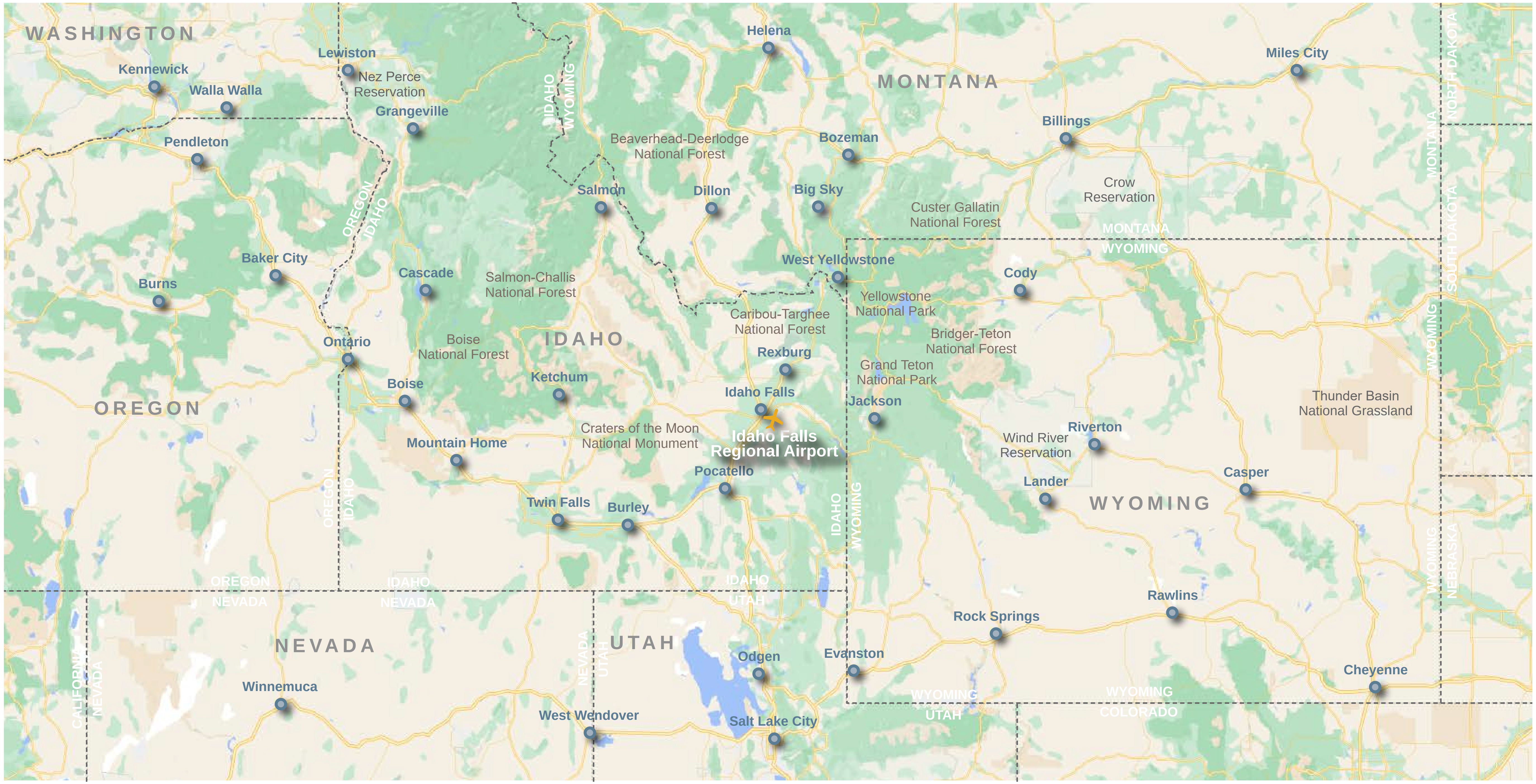
## ABBREVIATIONS, ACRONYMS, AND INITIALISMS

| | |
|---|---|
| ACRP | Airport Cooperative Research Program |
| ACS | Access Control System |
| ADG | Aircraft Design Group |
| ADO | Airport District Office (FAA) |
| AIT | Advanced Imaging Technology |
| ARFF | Aircraft Rescue and Fire Fighting |
| ATCT | Air Traffic Control Tower |
| ATS | Automatic Transfer Switches |
| BHS | Baggage Handling System |
| BIDS | Baggage Information Display System |
| BIM | Building Information Model |
| BRS | Baggage Reconciliation System |
| CAGR | Compound Annual Growth Rate |
| CMa | Construction Manager as Agent |
| CMAR | Construction Manager as Agent |
| CMc | Construction Manager as Constructor |
| CM/GC | Construction Manager / General Contractor |
| CMU | Concrete Masonry Unit |
| CPSS | Checkpoint Property Screening System |
| CR | Communications Room |
| CRPG | Checkpoint Requirements and Planning Guide (TSA) |
| CT | Computed Tomography |
| CUSS | Common Use Self Service |
| CUTE | Common Use Terminal Equipment |
| DAS | Distributed Antenna System |
| D-B | Design-Build |
| D-B-B | Design-Bid-Build |
| DDFS | Design Day Flight Schedule |
| EDS | Explosive Detection System |
| EQA | Equivalent Aircraft |
| EVIDS | Electronic Visual Information Display System |
| FAA | Federal Aviation Administration |
| FIDS | Flight Information Display System |
| GA | General Aviation |
| GC/CM | General Contractor / Construction Manager |
| GIDS | Gate Information Display System |
| GMP | Guaranteed Maximum Price |
| GPU | Ground Power Units |
| GSE | Ground Service Equipment |
| IATA | International Air Transport Association |
| ICAO | International Civil Aviation Organization |
| IDA | Idaho Falls Regional Airport |
| IDF | Intermediate Distribution Frame |
| ILS | Instrument Landing System |
| IFP | Intelligent Field Panels |
| LAN | Local Area Network |
| LEO | Law Enforcement Office |
| LoS | Level of Service (IATA) |
| MCP | Motor Control Panels |
| MPOE | Main Point of Entry |
| MTR | Main Telecommunications Room |
| MUVIDS | Multi-User Visual Information Display System |
| NAVAIDS | Navigation Aids |
| O&D | Origination And Destination |
| PA | Public Address |
| PAL | Planning Activity Levels |
| PBB | Passenger Boarding Bridge |
| PCA | Pre-Conditioned Air |
| PDB | Progressive Design-Build |
| PGDS | Planning Guidelines and Design Standards (TSA) |
| PHP | Peak Hour Passenger |
| PMAD | Peak Month's Average Day |
| PSR | Private Screening Room |
| RMS | Resource Management System |
| RON | Remain Overnight |
| SPL | Sound Protection Level |
| SOC | Security Operations Center |
| SSCP | Security Screening Checkpoint |
| SIDA | Secure Identification Display Area |
| TAF | Terminal Area Forecast |
| TBD | To Be Determined |
| TDC | Travel Document Checker (TSA) |
| TOFA | Taxiway Object Free Area |
| TRB | Transportation Research Board |
| TSA | Transportation Security Administration |
| VSR | Vehicle Service Road |
| VSS | Video Surveillance System |
| WTMD | Walk-Through Metal Detector |

# 01 PROJECT OVERVIEW

## 01 PROJECT OVERVIEW

### AIRPORT CONTEXT




REGIONAL CONTEXT

Not to Scale

N

## PROJECT INTRODUCTION

Given significant sustained growth in regional population and passenger traffic at Idaho Falls Regional Airport (IDA), Alliiance worked with T-O Engineers, the prime consultant, to develop conceptual planning alternatives for expansions and renovations of the existing terminal. Alliiance assessed high-level conceptual terminal expansion options based on the results from the Terminal Facilities Demand/Capacity analysis. This study also included an inventory and tabulation of the existing facility's spaces, including both public and non-public areas, in order to compare the demand associated with the future facility requirements.

Based on historical aviation statistics; an existing representative design day schedule; information relevant from the draft Master Plan forecast; and input from the Airport for near-term future flight activity; a 20-year design day and peak-hour forecast was developed by the consultant team to project future facility demand. It is important to understand the design day and peak hour forecast completed as part of this report differs significantly from a forecast of annual enplanements typically completed as part of an airport master plan. The starting point of this forecast was the average day of the peak month. The flight schedule of this day was used as the starting point and additional operations and destinations by both existing and potential carriers were added to the flight schedule to determine daily and peak hour operations. The facility demand was projected in 5-year increments which also served to provide "trigger points" or the point at which future demand would exceed current facility capacity. Priority areas for the studies included: Ticketing/ATOs/Baggage Makeup; Security Screening Checkpoint and Queueing; Restrooms, particularly Landside; Gate Holdrooms; and Baggage Laydown and Claim Hall.

## PROJECT LOCATION

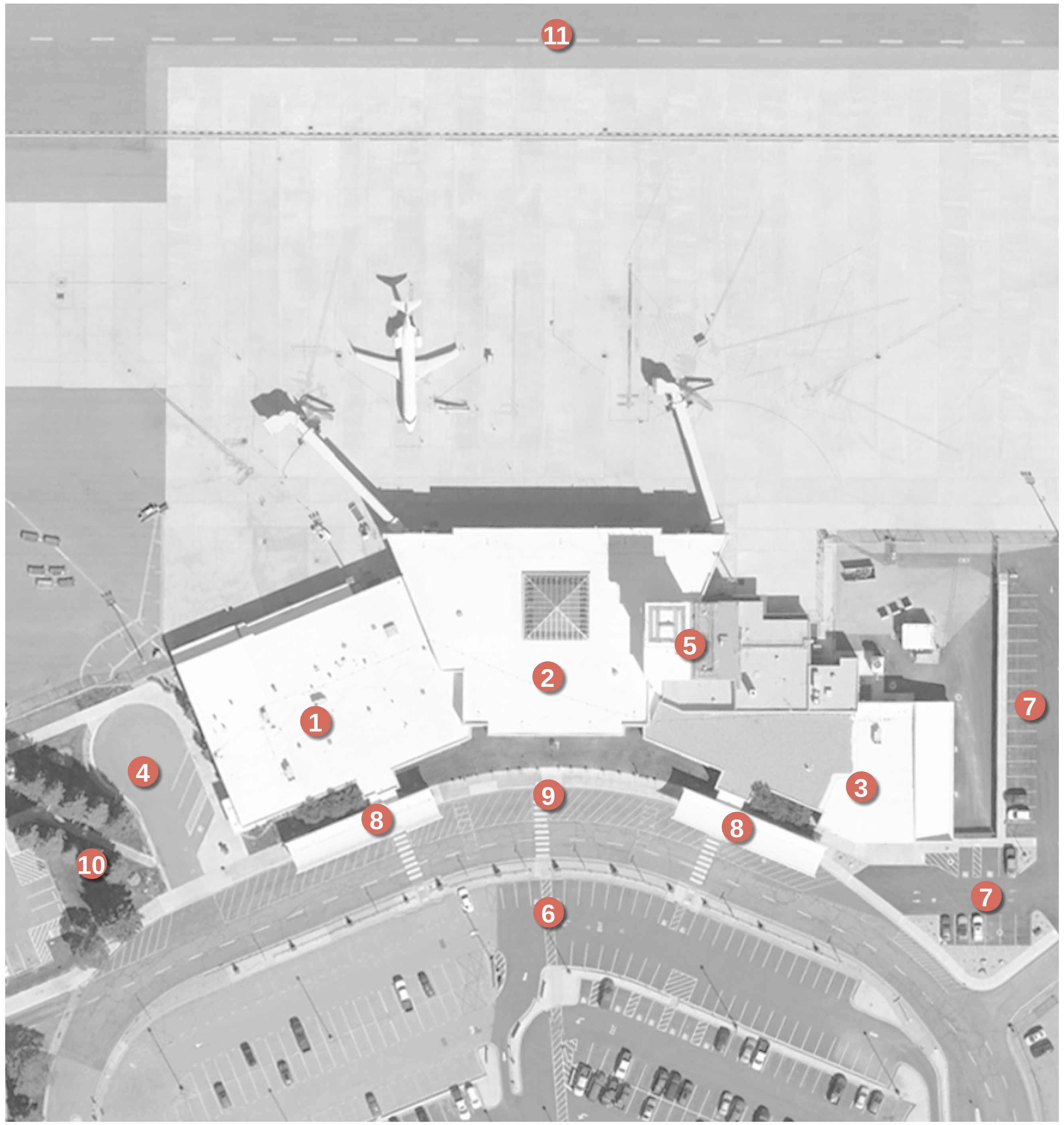
Idaho Falls Regional Airport (IDA), located in Idaho Falls, Idaho, is the state's second-busiest airport and is currently served by five airlines: Delta, Alaska, American, Allegiant, and United. Located in eastern Idaho, IDA serves as a gateway into the region and the surrounding states of Wyoming and Montana. Idaho Falls is a hotspot for outdoor tourism, located on the Snake River with convenient access to the Jackson Hole area, Grand Teton National Park, Yellowstone National Park, and several other recreational areas. Idaho Falls and the surrounding areas have been experiencing rapid population growth recently, particularly since 2020 and the start of the COVID-19 pandemic. As such, the airport has seen a corresponding increase in passenger traffic, taxing the existing facility's capacity.

# 02 EXISTING FACILITIES ANALYSIS

# 02 EXISTING FACILITIES ANALYSIS
## SITE



EXISTING CONTEXT BIRDSEYE
Not to Scale




EXISTING SITE AERIAL

Not to Scale

N

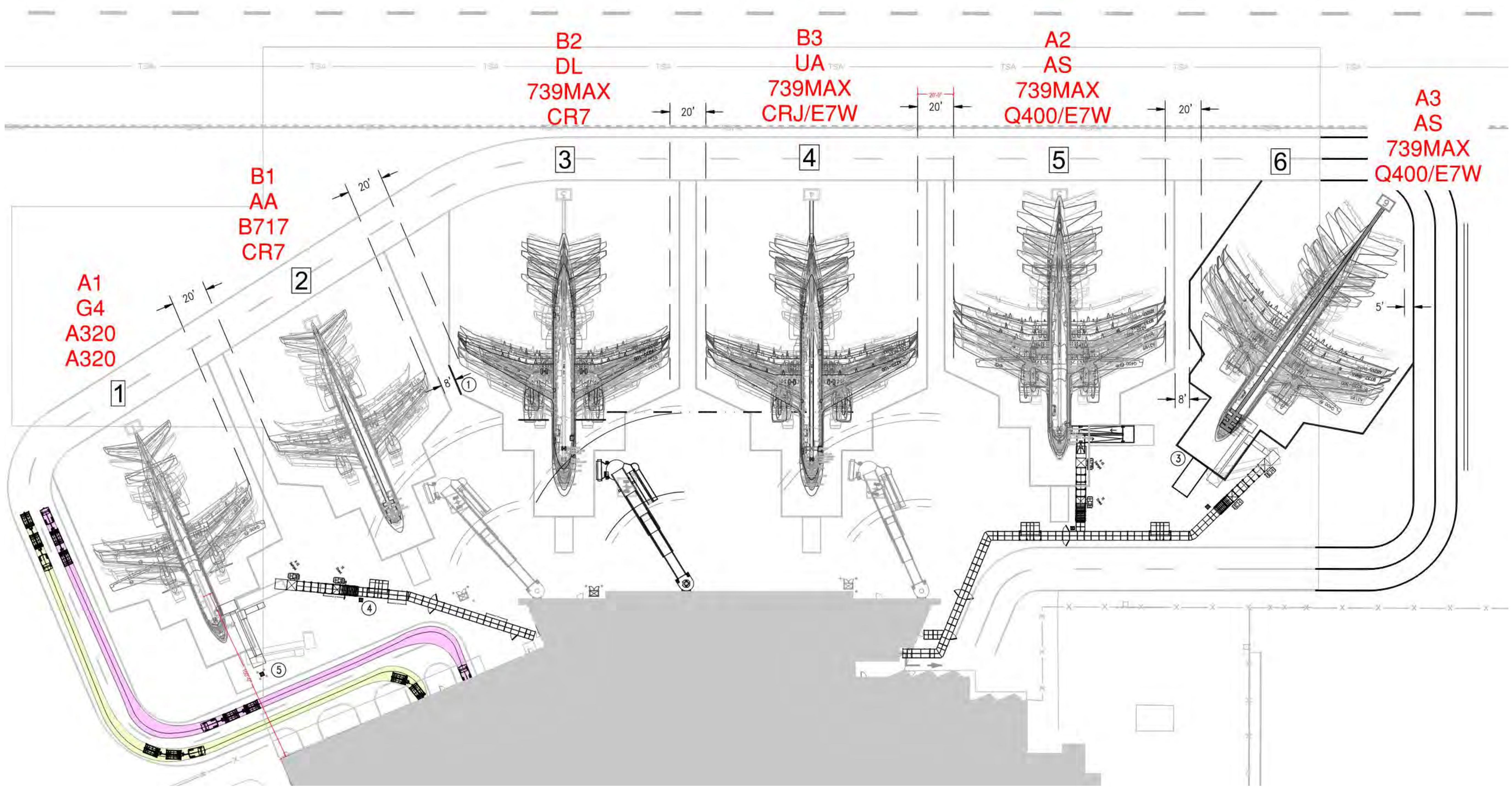
## SITE CONFIGURATION

The terminal is positioned on the site such that the axis of its central portion containing the Great Hall, Checkpoint, and Gate Holdrooms is oriented slightly counterclockwise from due north-south. To the east of the terminal is the existing drive and curbside between the building and passenger parking lots. To the south of the terminal adjacent to the Ticketing Hall is a small cargo parking lot. To the north, adjacent to Baggage Laydown and the Baggage Claim Hall, are rental car parking lots.

### DIAGRAM KEY NOTES

1. Terminal South: Ticketing, ATOs, Baggage Screening & Makeup
2. Terminal Central: Holdrooms, Checkpoint, Restrooms, Concessions, Airport Administration
3. Terminal North: Baggage Laydown and Claim, TSA, Building Support
4. Air Traffic Control Tower (ATCT)
5. Cargo Lot
6. Passenger / Guest Parking
7. Rental Car Lot
8. Curbside Canopy
9. Drop-off / Pickup Lane
10. Employee Break Area
11. Taxiway Alpha

Note: One passenger boarding bridge (PBB) and two ground boarding enclosed walkways are not shown.




EXISTING AIRCRAFT PARKING

Not to Scale

EXISTING AIRCRAFT PARKING AND APRON

## AIRCRAFT PARKING, PASSENGER BOARDING BRIDGES, AND ENCLOSED WALKWAYS

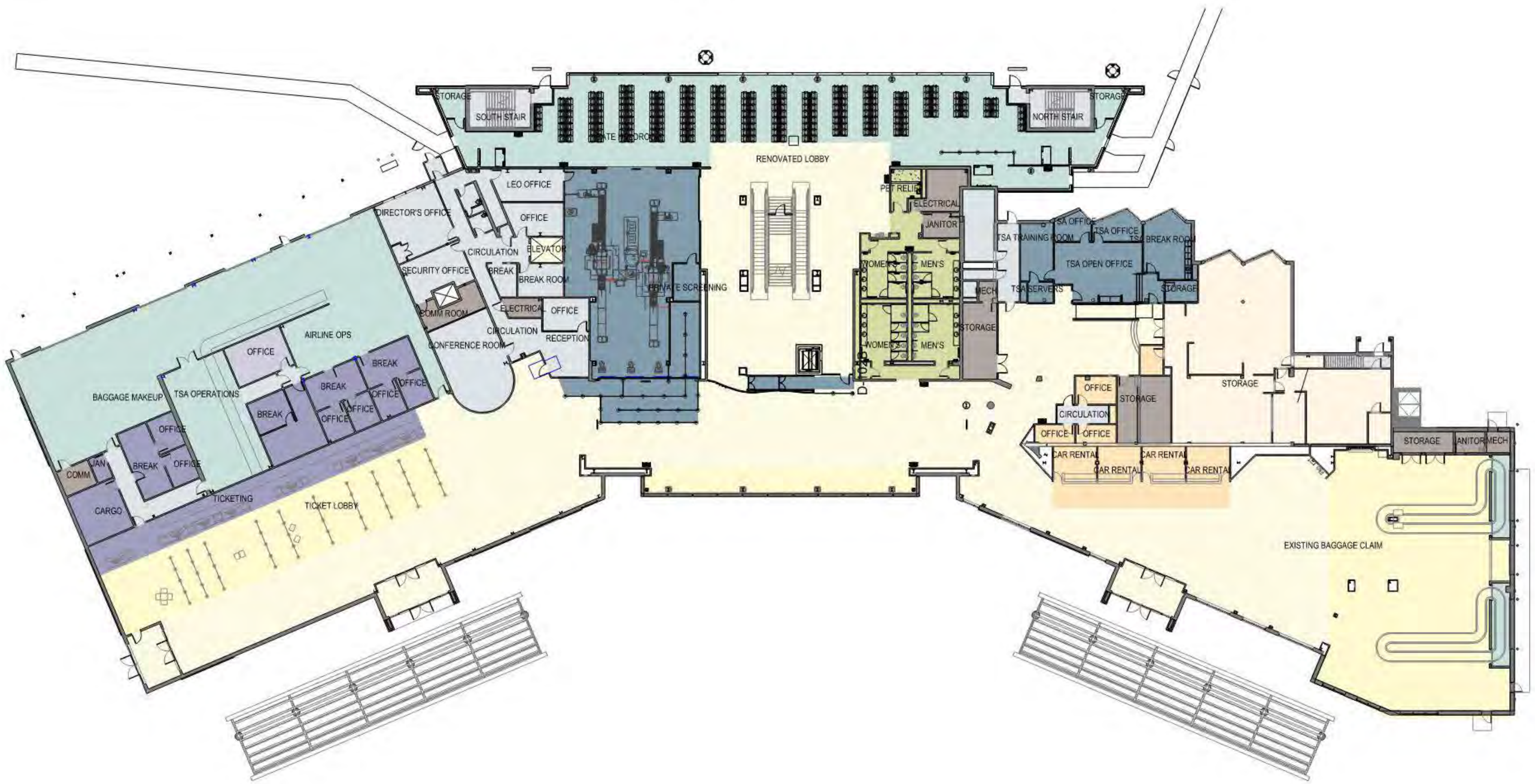
Commercial service aircraft currently park at one of the six gates in front of the terminal. The current aircraft fleet mix includes the CRJ 200/700/900; Q400; EMB 175; A220; A319/A320; and B737. The gates on the main/ground level are A gates while the gates on the upper level are B gates. There are currently three gates on each level labeled from one to three from south to north (i.e., A1, A2, A3, B1, B2, B3).

On the ground level, Gate A1 is currently marked to serve regional jet aircraft while Gates A2 and A3 will serve regional jet aircraft and up to A319/320 and 737 aircraft. The ground level parking positions are accessed by enclosed walkways and adjustable aircraft boarding ramps. Each aircraft parking position currently has 110V and 240V power. In addition, parking positions at A2 and A3 have aircraft ground power units (GPU).

On the upper level, Gate B1 is currently marked to serve regional jet aircraft while Gates B2 and B3 will serve up to the A319/A320 and 737 aircraft. Each upper-level gate has a passenger boarding bridge (PBB) along with GPU and pre-conditioned air (PCA) capable of serving the current aircraft fleet mix except for the Q400. There are currently two potable water cabinets along the west face of the terminal building and one additional cabinet along the ground walkway to Gate A1. The airline lavatory dump is currently located approximately 300 feet south of parking position A1.

The terminal apron is a combination of both asphalt and concrete pavement. All gates except for A1 and portion of A3 are on concrete pavement. There is also an aircraft deicing pad located behind Gate A1; however this pad is unusable when Gate A1 is in use.

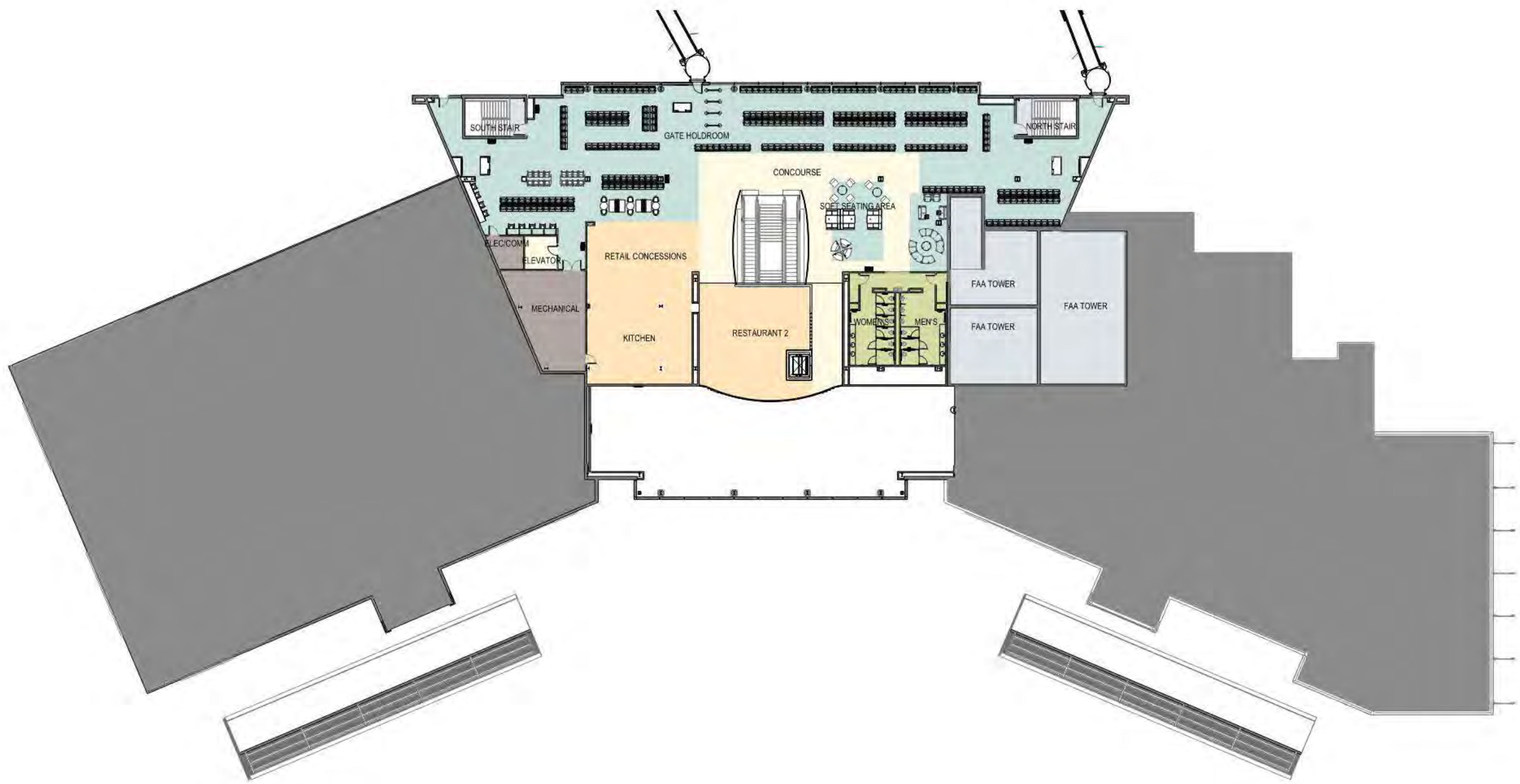
## EXISTING FLOOR PLANS




EXISTING GROUND LEVEL FLOOR PLAN

N

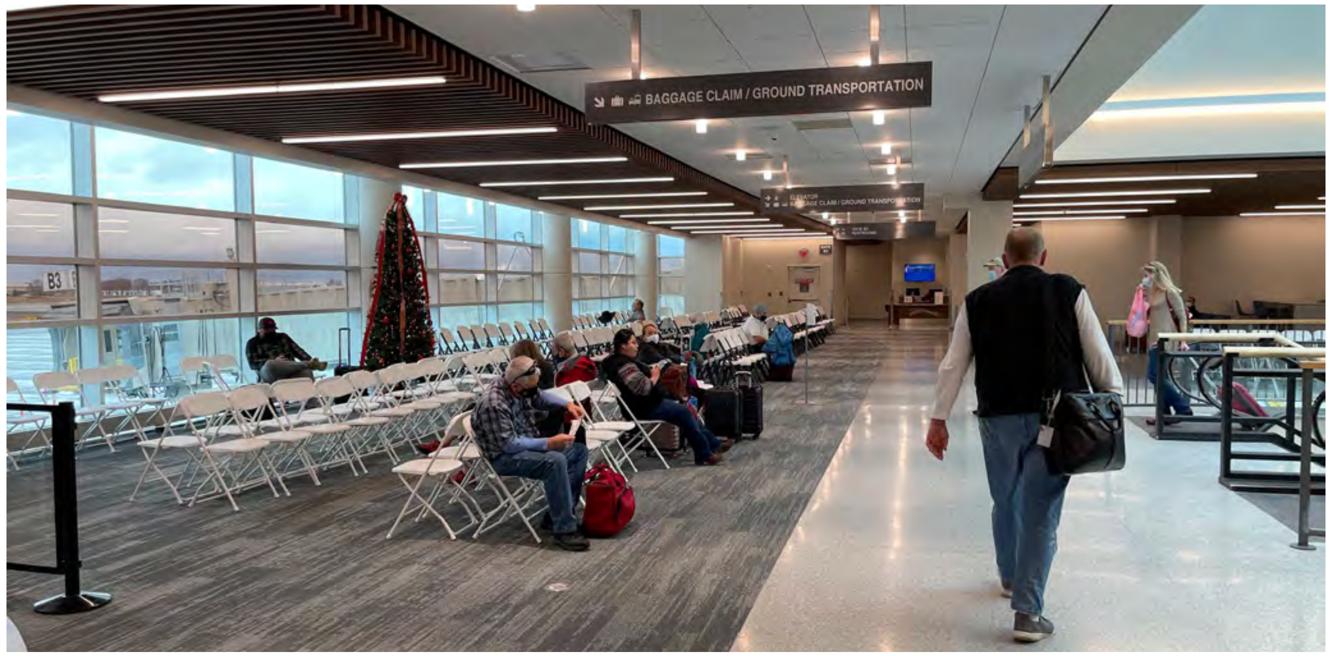
0' 16' 32' 64'




EXISTING UPPER LEVEL FLOOR PLAN

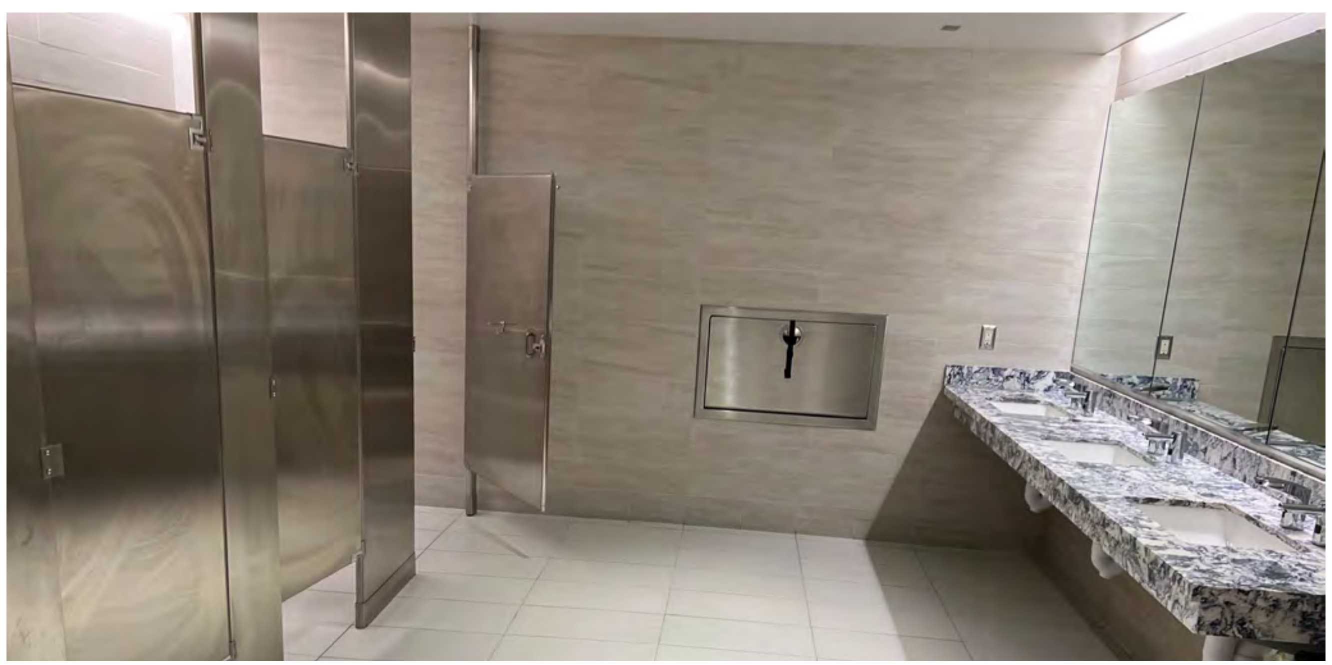

# 02 EXISTING FACILITIES ANALYSIS

## BUILDING — AIRSIDE

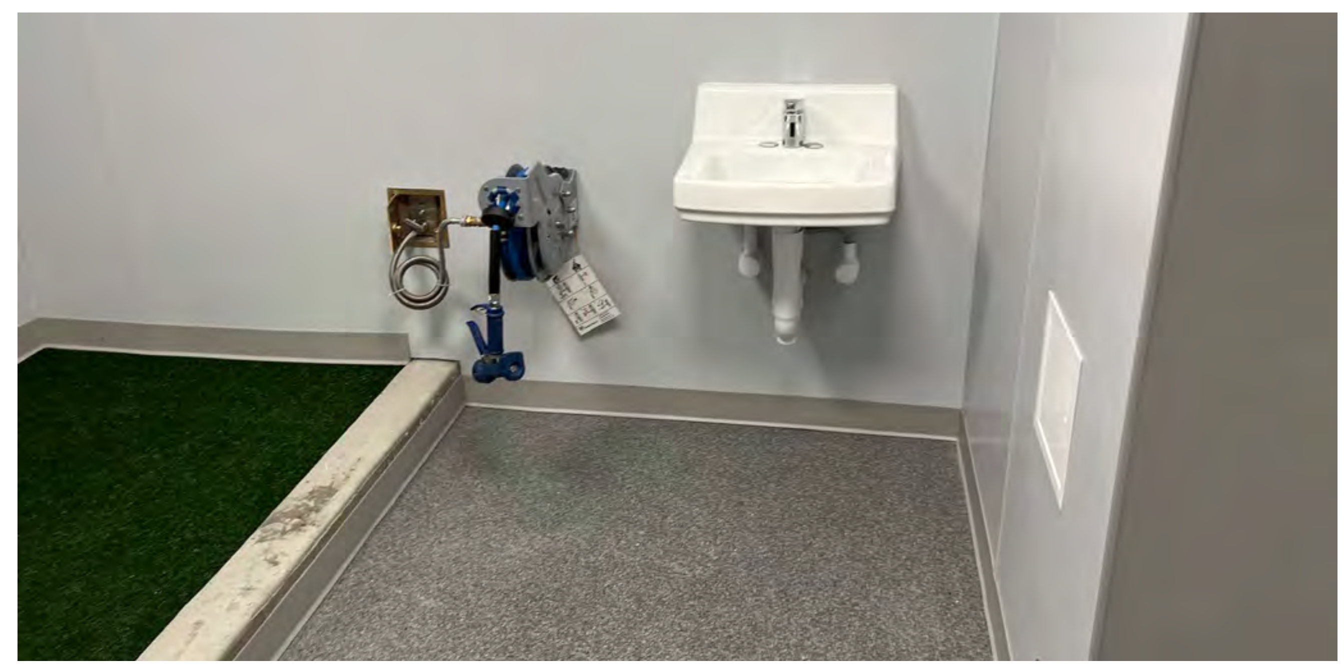



EXISTING UPPER LEVEL HOLDROOM

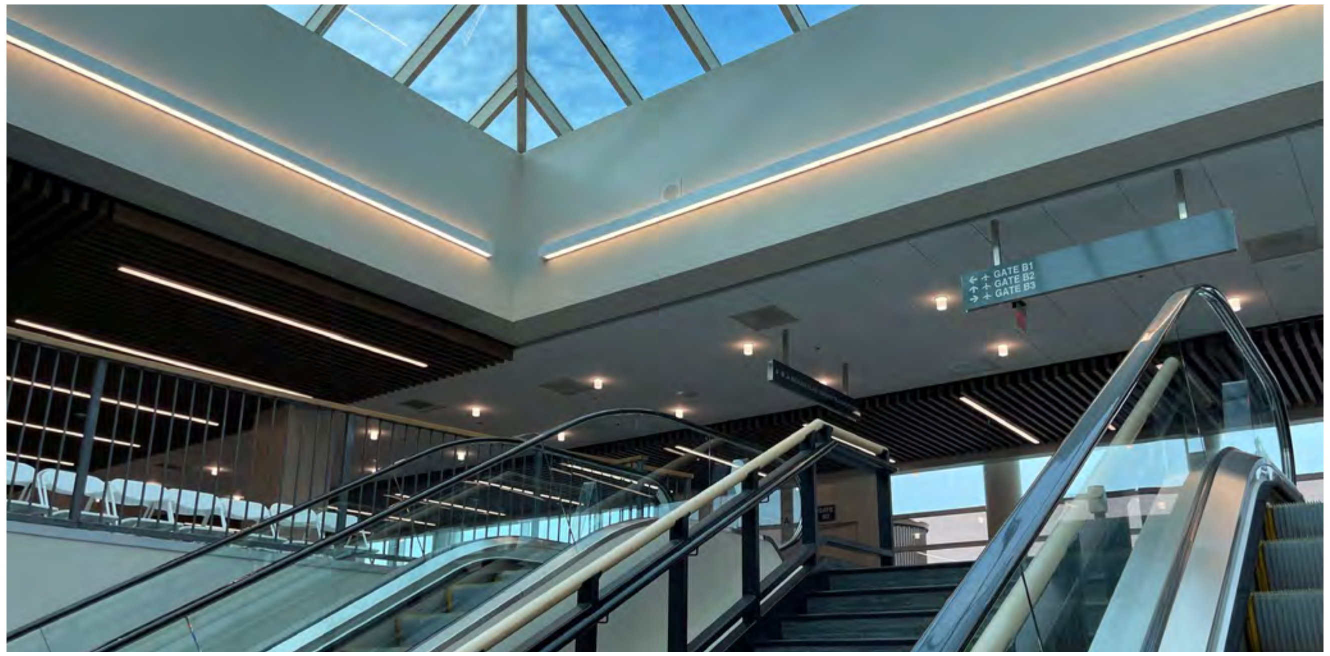
EXISTING GROUND LEVEL HOLDROOM



EXISTING AIRSIDE RESTROOMS



EXISTING SERVICE ANIMAL RELIEF AREA



EXISTING VERTICAL CIRCULATION ATRIUM

EXISTING AIRSIDE CONCESSIONS

## INTERIOR CONDITIONS — AIRSIDE

Much of the airside areas at IDA have been recently renovated including the gate holdrooms, restrooms, and concessions areas. The airside areas consist primarily of gate holdrooms on both levels. On the ground level, approximately 4,940 SF serves Allegiant and Alaska Airlines. On the upper level, approximately 7,700 SF is shared by United, American, and Delta. A range of seating types exists on the upper level including soft seating, while the ground level seating is limited to conventional beam seating. Refer to page 26, Gate Holdroom Planning, for additional information about the existing gate holdrooms. A large central atrium over the two escalators and stairs is daylit by a large skylight overhead. A landside elevator is located nearby adjacent to the new restaurant/bar area.

Accompanying the gate holdrooms are men's and women's restroom facilities on both levels, plus a Service Animal Relief Area (SARA) on the ground level. There are no facilities for Nursing Mothers currently. Refer to page 27, Restrooms Planning, for additional information about the existing airside restrooms.

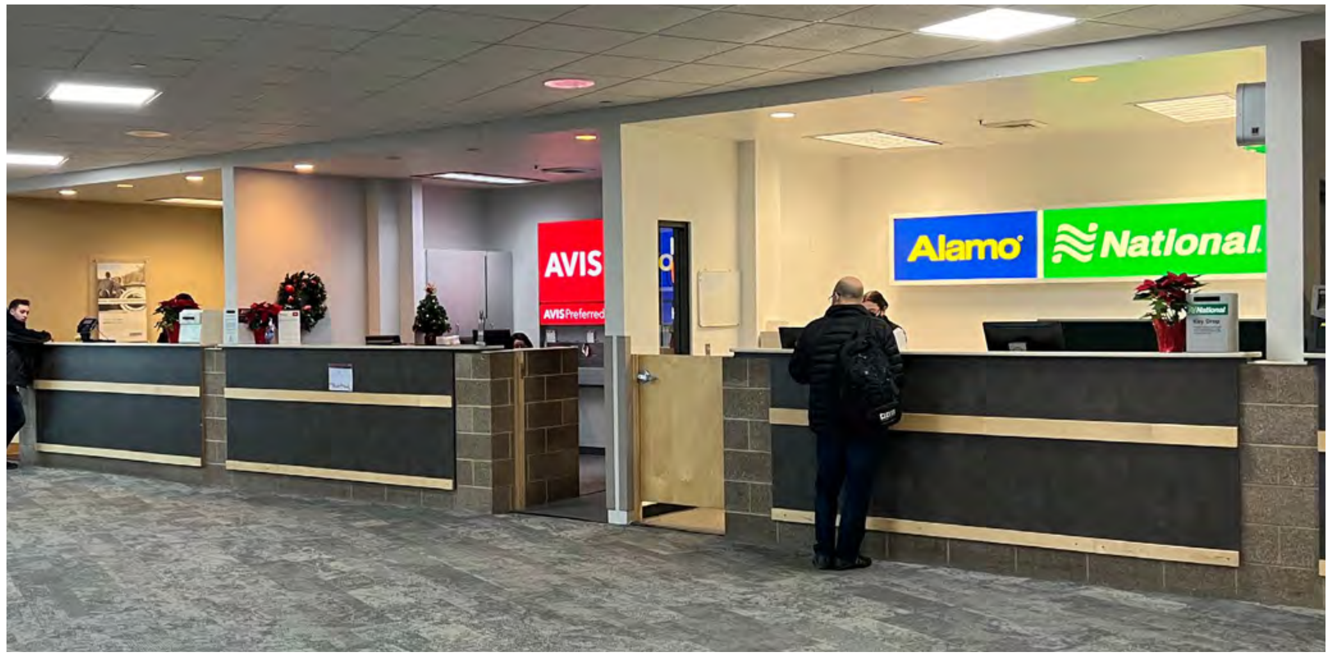
The airside concessions areas are currently located solely on the upper level; there are none on the ground level. A restaurant/bar and a grab-and-go retail space have been recently added or recreated as part of recent airside renovations at the airport.

The existing outbound baggage system is operating at, or near, its full capacity with significant limitations on the number of baggage carts that can be staged along the existing makeup pier. The single explosive detection system (EDS) machine serves current throughput needs but is anticipated to exceed capacity in coming years as described later in this report. The current baggage handling system configuration cannot be comfortably expanded to handle significant system load growth from additional flights or upgauging of current aircraft.

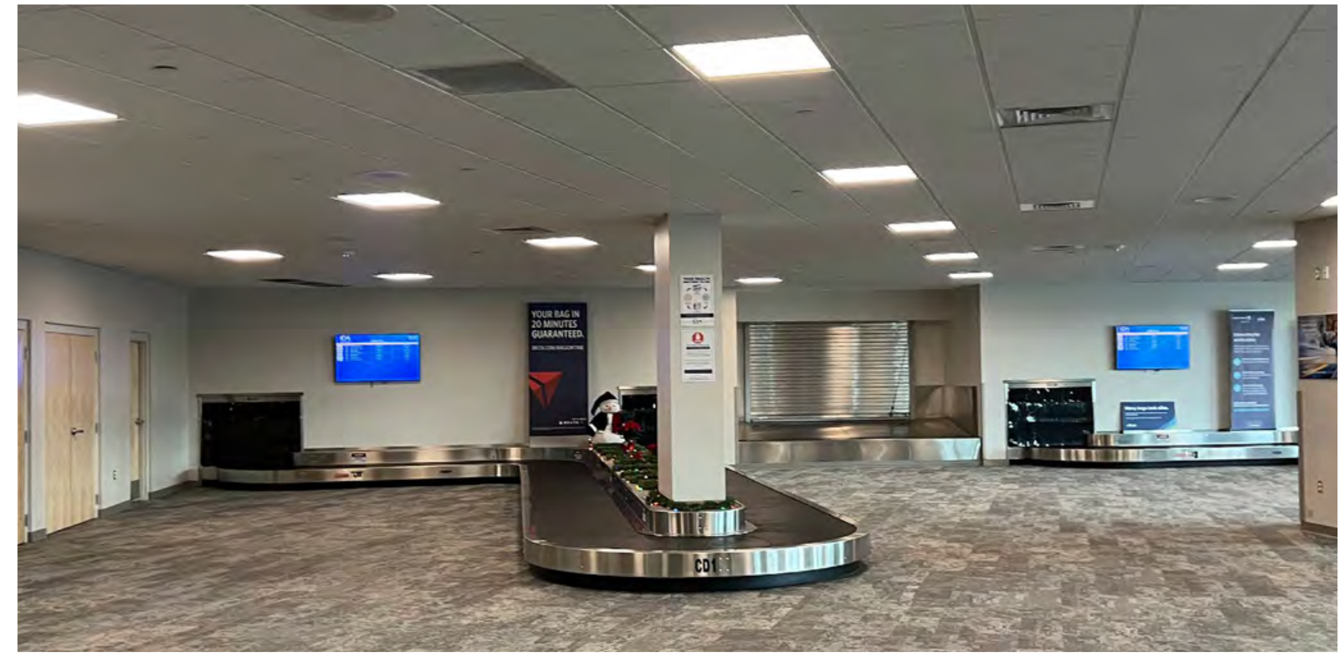
Other airside functions contained in the current configuration include mechanical, electrical, and plumbing infrastructure and support space. Additionally, there are two existing stair towers flanking either end of the gate holdrooms that link the two levels and serve for emergency egress. Finally, two small storage rooms on the ground level, one near each stair tower, are used by the airlines.

# 02 EXISTING FACILITIES ANALYSIS

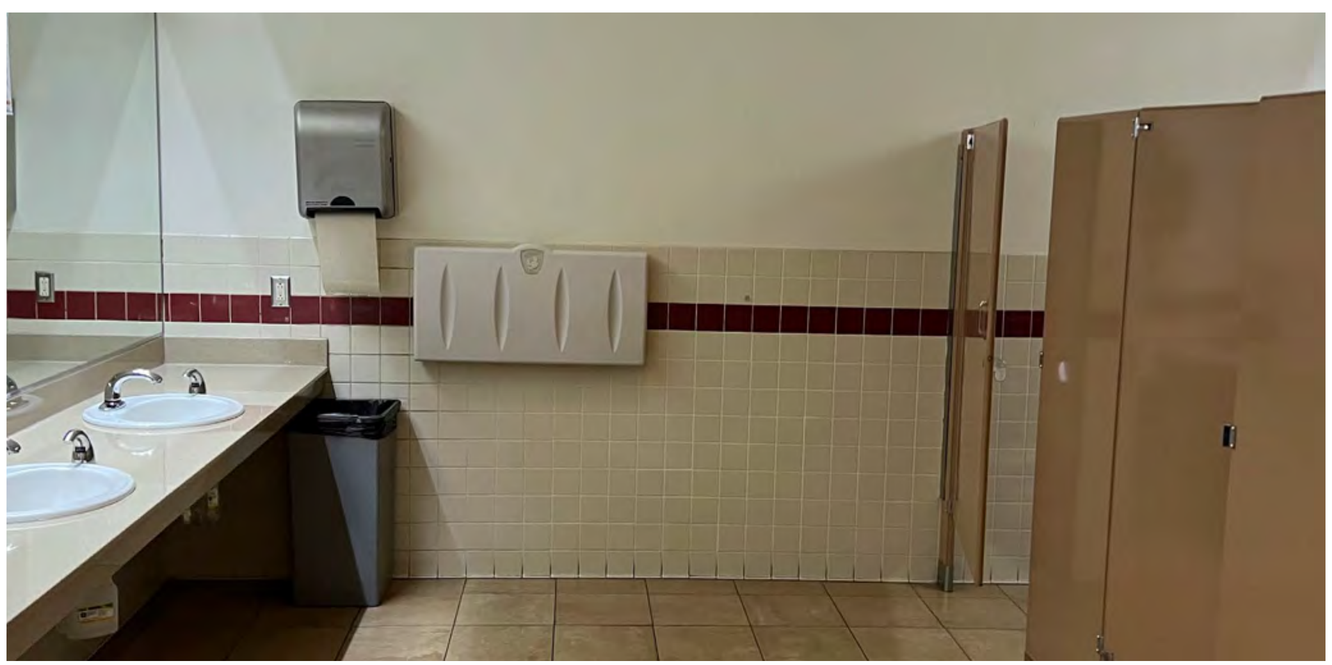
## BUILDING — LANDSIDE



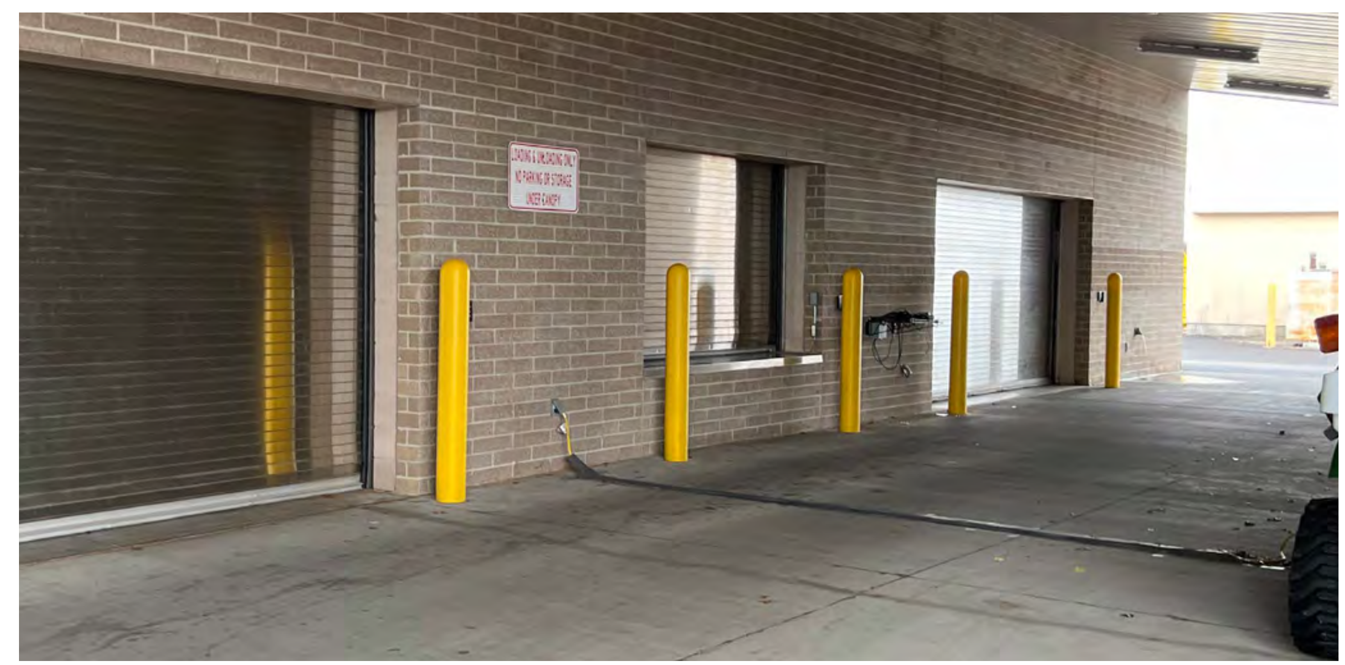

EXISTING RENTAL CARS



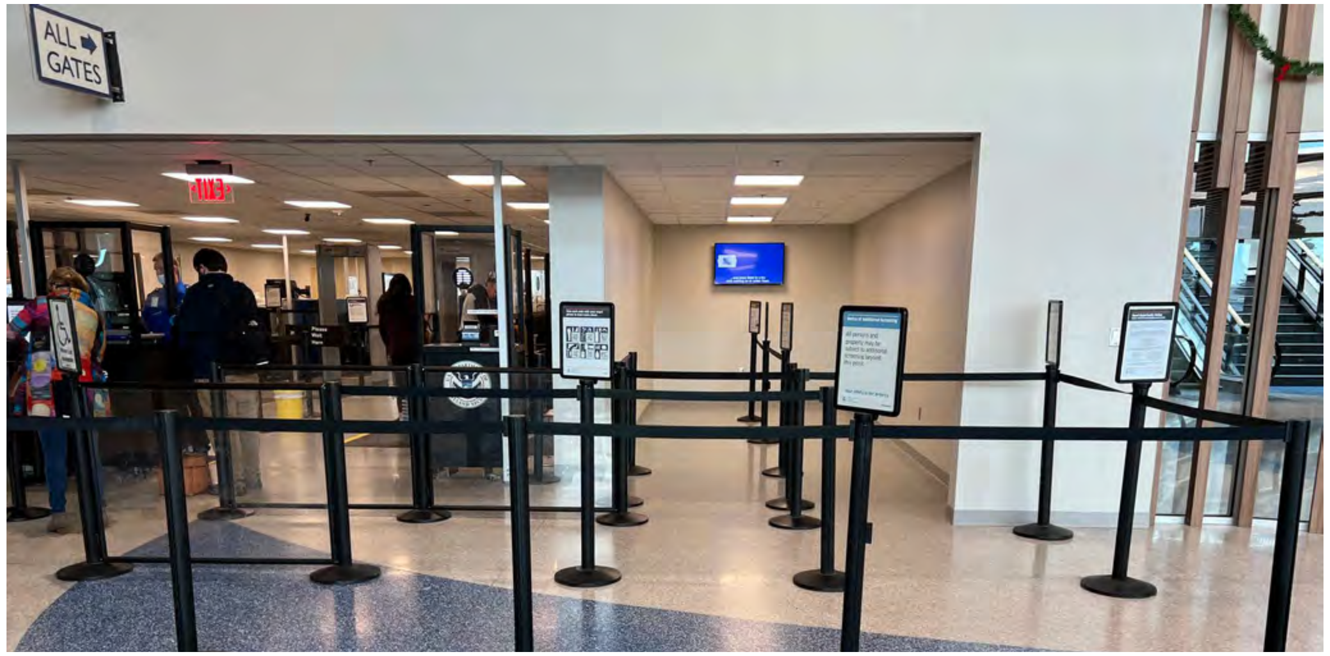
EXISTING BAGGAGE CLAIM



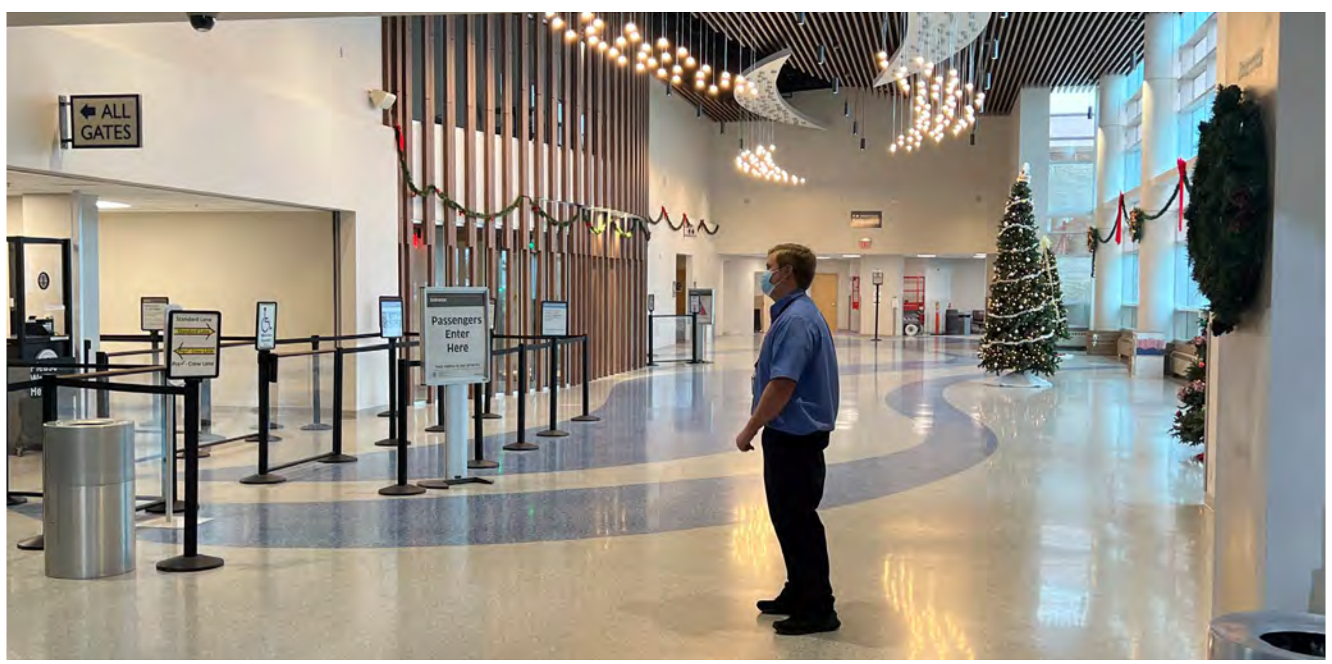
EXISTING LANDSIDE RESTROOMS



EXISTING BAGGAGE LAYDOWN




EXISTING CHECKPOINT




EXISTING GREAT HALL AND CHECKPOINT QUEUING AREA

## INTERIOR CONDITIONS — LANDSIDE

Presently, the airport is facing operational challenges in several of the landside areas of the terminal. At the Ticketing Hall, the insufficient depth of the space and the inefficient layout of the queue causes frequent issues with the queue backing up into the main circulation area within the Ticketing Hall. The front of the queue's stanchions are located within five feet of the ticket counters, constraining cross circulation and limiting access for passengers with mobility limitations in front of the counters (typical planning parameters recommend eight to ten feet for cross circulation). The Ticketing Hall and associated back-of-house functions (airline ticket offices (ATOs), storage, and baggage makeup) were last updated and expanded in 2012.

In the central portion of the building at the security screening checkpoint (SSCP), two screening lanes currently serve the airport's passenger traffic. The square footages allocated for queueing and recomposure for the checkpoint in the current configuration is insufficient. Currently, checkpoint queuing often spills out of the formal stanchioned queue areas and into the primary circulation throughfare of the Great Hall. Combined with the similar challenges at the adjacent ticketing queue, during peak periods of traffic, circulation throughout the Ticketing Hall and Great Hall is difficult. The screening lanes are cramped, smaller than planning guidelines recommend to serve two lanes, and the space limitations pose challenges to checkpoint operations by Transportation Security Administration (TSA) personnel.

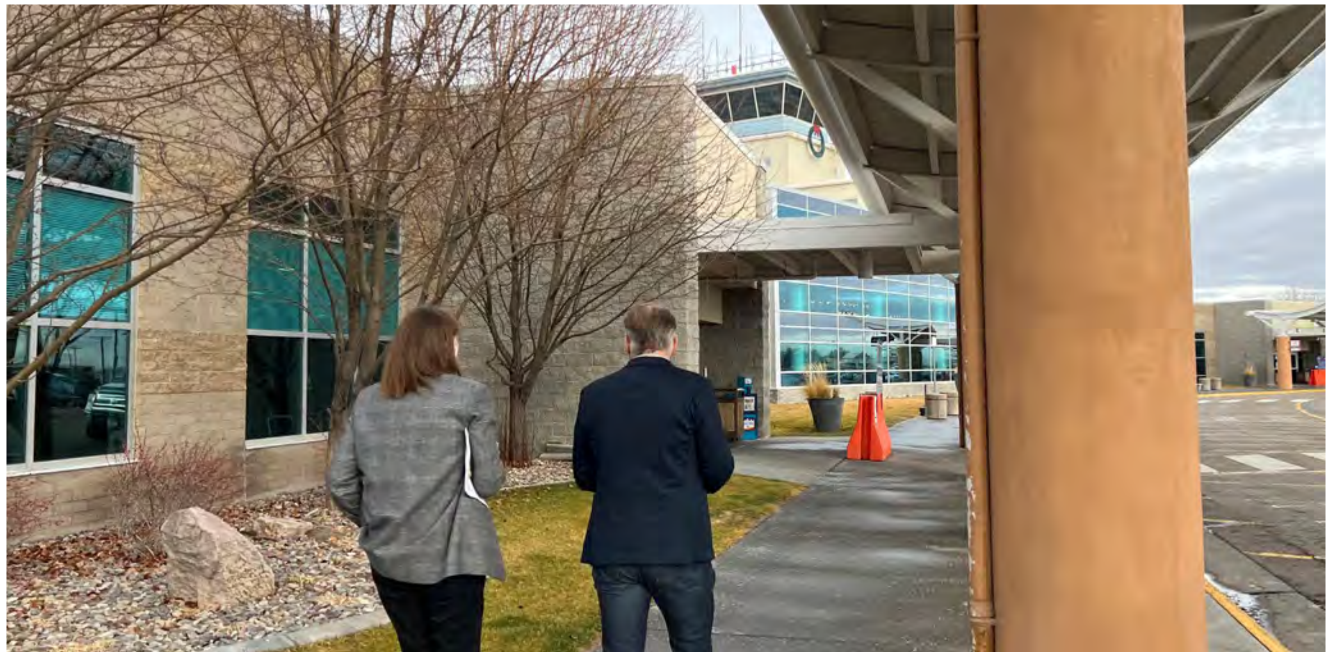
One set of public restrooms serves the entirety of the landside area of the terminal, located near the security checkpoint queue in the Great Hall. These restrooms have not been updated in more than twenty years, and they could greatly benefit from updated finishes, systems, and amenities to improve the experience and comfort for passengers. Furthermore, having a single landside restroom block creates challenges during maintenance shutdowns, in that any time the restrooms need to be closed for regular or emergency maintenance, there are no other landside facilities available for passengers or staff. There is currently no airside family/changing table restroom; adding one would be highly recommended.

Currently, two L-shaped flat plate baggage carousels serve the Baggage Claim Hall. Combined, these two devices generally allow sufficient presentation length within the Hall for passengers to collect their bags. However, challenges arise when there are more than two near-simultaneous arriving flights needing to unload bags onto the carousels, due to limitations of the current laydown length. Under these circumstances, the claim hall may get congested as a third flight's passengers need to wait for their bags to be unloaded while the other two flights are using the carousels.

The rental car counters are located between the Great Hall and the Baggage Claim Hall, and the rental car queue protrudes into the circulation path impeding access and sight lines to the claim hall during peak periods. Today, a passenger picking up a rental car traverses the claim hall to the opposite corner of the building to a single opaque door which exits toward the rental car lots. Wayfinding to the rental car lot from inside the terminal seems to be a challenge, as evidenced by paper signs taped to the door. This exit does not have a vestibule nor a canopy, requiring passengers and their luggage to discharge directly into the elements en route to the rental car lot.

# 02 EXISTING FACILITIES ANALYSIS

## BUILDING/SITE — EXTERIOR



EXISTING CURBSIDE, LANDSCAPING, AND CANOPY — SOUTH


EXISTING BAGGAGE MAKEUP EXTERIOR — SOUTH

EXISTING CURTAINWALL AT CURBSIDE / GREAT HALL — CENTRAL


EXISTING SITE AREA, GENERATOR BUILDING — NORTH

# 03 FACILITY DEMAND/CAPACITY ANALYSIS

## PLANNING ASSUMPTIONS

The overall terminal facility requirements were developed through the application of a variety of industry accepted planning standards and guidelines including: ACRP Report 25, Airport Passenger Terminal Planning and Design; FAA AC 150/5360-13A, Airport Terminal Planning; FAA AC 150/5300-13A, Airport Planning; the TSA Checkpoint Requirements and Planning Guide (CRPG); the TSA Planning Guidelines and Design Standards (PGDS) for Checked Baggage Inspection Systems Version 7.0; ACRP Report 226, Planning and Design of Airport Terminal Restrooms and Ancillary Spaces and the International Air Transport Association (IATA) Airport Development Reference Manual (ADRM), 11th Edition. Additionally, planning factors from comparable airports around the United States, communication with airport and local TSA staff, and knowledge of industry trends were also utilized.

IATA's Level of Service (LoS) standards are typically utilized by airport planners to qualitatively or quantitatively provide a LoS standard at various processing functions within the terminal building. An "Optimum" LoS was utilized when validating the functional passenger spaces and is often referred to as LoS "C" and defined by IATA as providing "Good LoS; condition of stable flow; acceptable brief delays; good level of comfort." Current area utilization ratios were determined using a 3D building information model (BIM) of the existing facility provided by T-O and the airport and the July 2021 Design Day Flight Schedule (DDFS), which serves to establish a baseline condition of demand compared to current facility capacities.

Airport terminal facilities are typically programmed using demand associated with future projections of annual and peak hour passengers and operations. Although annual activity is a good indicator of overall airport size, peak hour volumes more accurately reflect demand for specific passenger processing functions within the terminal facilities. It is important to understand the design day and peak hour forecasts completed as part of this report may differ significantly from a peak hour forecast derived from annual enplanements which is typically completed as part of a Master Plan. A Master Plan takes a top down approach where the level of annual enplanents is forecast and then ratios of existing activity levels are used to determine the peak hour. The forecast used for this study was a bottom up forecast with the starting point being the actual flight schedule of the average day of the peak month. This flight schedule was used as a base and through discussions with airport, additional operations by both existing and potential carriers were added to the flight schedule to determine peak hour activity levels. These operations were based on new service that has been announced as well a potential service this is still under development. At a facility like IDA, the peak hour activity level is extremely sensitive to the addition of any activity in the peak hour as the aircraft could range from a 70-seat regional jet up to a narrowbody 180+ seat aircraft. These peak hours are typically calculated from the peak month's average day (PMAD) and are commonly referred to as Design Hour passengers. A total of four DDFSs (2026, 2031, 2036, and 2041) were utilized for future calculations. Demand year 2031 represents the demand requirements to which all conceptual alternatives were developed to meet.

This analysis used two types of peak passenger levels based on Preferential Use and Common Use. Preferential Use passenger levels refer to the peak activity for each carrier that occurs over a "rolling" 60-minute period based on that airline's flight schedule. As a result, these Preferential Use peaks may happen at different times of the day and therefore do not typically coincide in the same clock hour. The assumption is that this peak demand is appropriate to use when determining the facility requirements for individual airlines that are operating under a Preferential Use agreement with the airport. These areas may include individual airlines' ticket counters, gates/holdrooms, and baggage claim facilities. Common use peak passenger levels refer to the cumulative peak passenger volume in a given "rolling" hour for all airlines at the airport. These common use peak demand levels are typically used for calculating non-airline specific functions such as passenger security screening, baggage screening, and public areas including general seating, meeter/greeter lobbies, and restroom facilities. For IDA, individual airline peak hours were utilized for ticketing requirements whereas the airport's common use peak hour was utilized for explosive detection system (EDS) baggage screening, baggage makeup, SSCP, and baggage claim facilities.

Other functional area projections are typically determined by their relationship to the number and type of aircraft or the number of gates/seats serving the terminal area. The relationship of area projections relative to aircraft operations or to gates/seats is also a typical way to compare airport building component requirements. These areas of the terminal can include airline operations space, inbound/outbound baggage operations, and secure public restrooms.

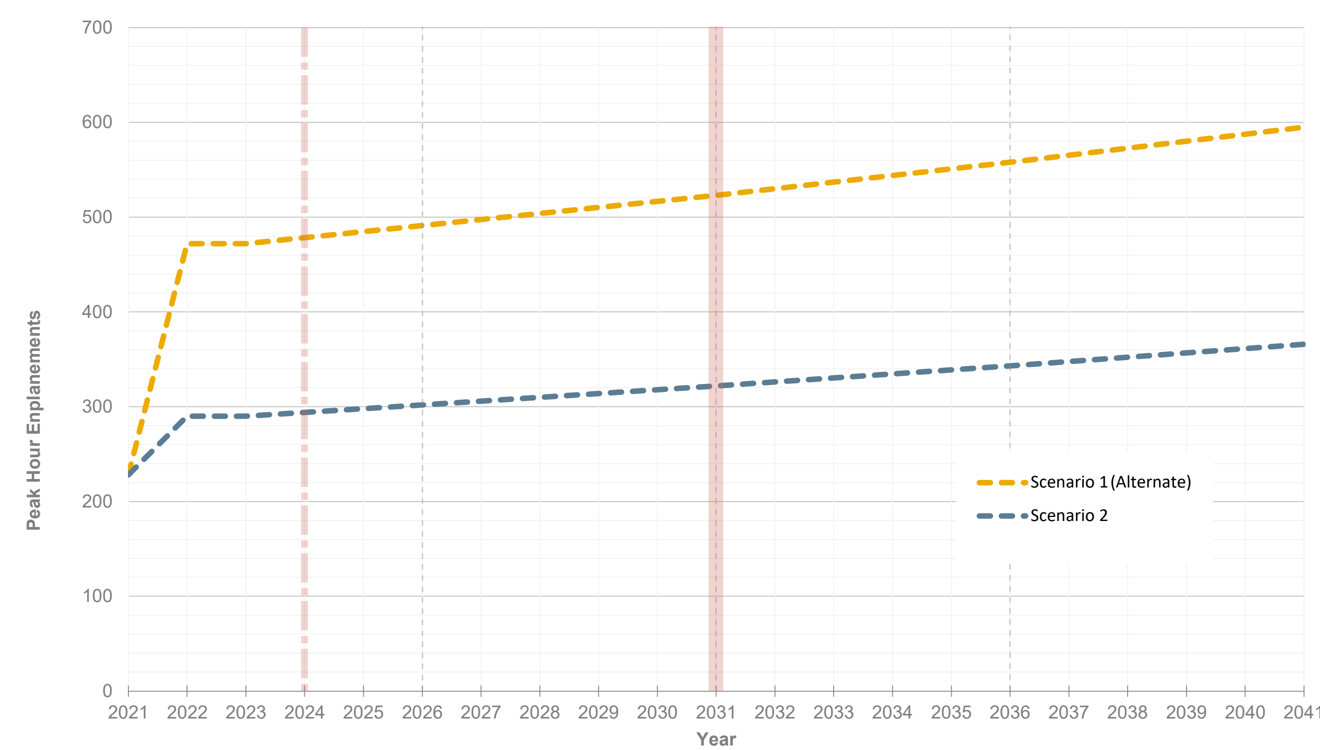



TABLE 3.1 FUTURE PEAK HOUR ENPLANEMENTS BY SCENARIO

| Scenario 2 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| YEAR | PEAK HOUR | | AVG LOAD FACTOR | PK MONTH AVG DAY | | PEAK MONTH[1] | ANNUAL ENPLANED PASSENGERS | CAGR[2] |
| | ENPL | DEP OPS | | ENPL | DEP OPS | | | |
| Historical | 21.7% | | | 27 | | 12.6% | | |
| 2021 | 228 | 3 | 75.9% | 1,052 | 16 | 28,178 | 223,741 | |
| Forecast | 19.1% | | | | | 11.1% | | |
| 2022 | 290 | 4 | 76.0% | 1,357 | 20 | 42,067 | 378,982 | 69.4% |
| 2023 | 290 | 4 | 76.0% | 1,521 | 23 | 47,151 | 424,784 | 12.1% |
| 2026 | 302 | 4 | 79.0% | 1,581 | 23 | 49,011 | 441,541 | 1.3% |
| 2031 | 322 | 4 | 84.0% | 1,686 | 23 | 52,266 | 470,865 | 1.3% |
| 2036 | 343 | 4 | 90.0% | 1,799 | 23 | 55,769 | 502,423 | 1.3% |
| 2041 | 366 | 4 | 95.0% | 1,919 | 23 | 59,489 | 535,937 | 1.3% |

TABLE 3.2 SCENARIO 2 — BASELINE (ADDITIONAL NARROWBODY AND REGIONAL JET OUTSIDE OF PEAK HOUR)

*Notes:*

*1/Peak Month = 11.1% of Year (Master Plan)*

*2/Seats were grown at 1.3% CAGR*

| Scenario 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| YEAR | PEAK HOUR | | AVG LOAD FACTOR | PK MONTH AVG DAY | | PEAK MONTH[1] | ANNUAL ENPLANED PASSENGERS | CAGR[2] |
| | ENPL | DEP OPS | | ENPL | DEP OPS | | | |
| Historical | 21.7% | | | 27 | | 12.6% | | |
| 2021 | 228 | 3 | 75.9% | 1,052 | 16 | 28,178 | 223,741 | |
| Forecast | 31.0% | | | | | 11.1% | | |
| 2022 | 472 | 6 | 76.0% | 1,357 | 20 | 42,067 | 378,982 | 69.4% |
| 2023 | 472 | 6 | 76.0% | 1,521 | 23 | 47,151 | 424,784 | 12.1% |
| 2026 | 491 | 6 | 79.0% | 1,581 | 23 | 49,011 | 441,541 | 1.3% |
| 2031 | 523 | 6 | 84.0% | 1,686 | 23 | 52,266 | 470,865 | 1.3% |
| 2036 | 558 | 6 | 90.0% | 1,799 | 23 | 55,769 | 502,423 | 1.3% |
| 2041 | 595 | 6 | 95.0% | 1,919 | 23 | 59,489 | 535,937 | 1.3% |

TABLE 3.3 SCENARIO 1 — ALTERNATE (ADDITIONAL NARROWBODY AND REGIONAL JET WITHIN PEAK HOUR)

*Notes:*

*1/Peak Month = 11.1% of Year (Master Plan)*

*2/Seats were grown at 1.3% CAGR*

## FORECAST PLANNING SCENARIOS

Two forecast planning scenarios were developed to gauge the effects of the potential for two new airlines starting service to IDA, one airline flying next generation 737-700 aircraft and another airline utilizing Embraer ERJ145 regional jet aircraft. Scenario 1 (Sc1) analyzed the effects of both airlines operating flights within the airport's peak hour while Scenario 2 (Sc2) placed them operating outside the peak hour. These airlines represent potential service expansion opportunities and the aircraft types projected to use the airport in the future. Sc2 was chosen by the airport to serve as the baseline for future programmatic requirements representing the most realistic activity moving forward in the near-term.

Factors obtained from the Draft Master Plan forecast, such as aircraft load factors, peak month percentage of the year, and compound average annual growth rates (CAGR), were applied to the Sc2 representative 2022 DDFS in order determine overall annual enplanement activity. Additional flights were then added to the 2023 DDFS at the direction of the airport and then grown at a 1.3 percent CAGR in order to project the future 20-year demand. Table 3.1 and Table 3.2 tabulate this demand by passenger activity levels (PAL) in five-year increments. This same approach was applied to Sc1 (Table 3.3) and utilized in order to gauge the effects on certain areas of the terminal where adding additional flights in the peak hour could affect peak hour processing capacity. Each scenarios peak hours were developed utilizing a "rolling" 60-minute method applied to the DDFS to calculate peaking activity throughout the day. Table 3.4 (Sc2), and Table 3.5 (Sc1) graphs represent departing passengers with a TSA "Early Arrival Profile" applied which results in a more realistic account for how early passengers arrive to the terminal before their scheduled departure time. This results in a "distributed" peak which is approximately 61% of the peak departure hour.

# 03 FACILITY DEMAND / CAPACITY ANALYSIS

## OVERALL PROJECT DEMAND

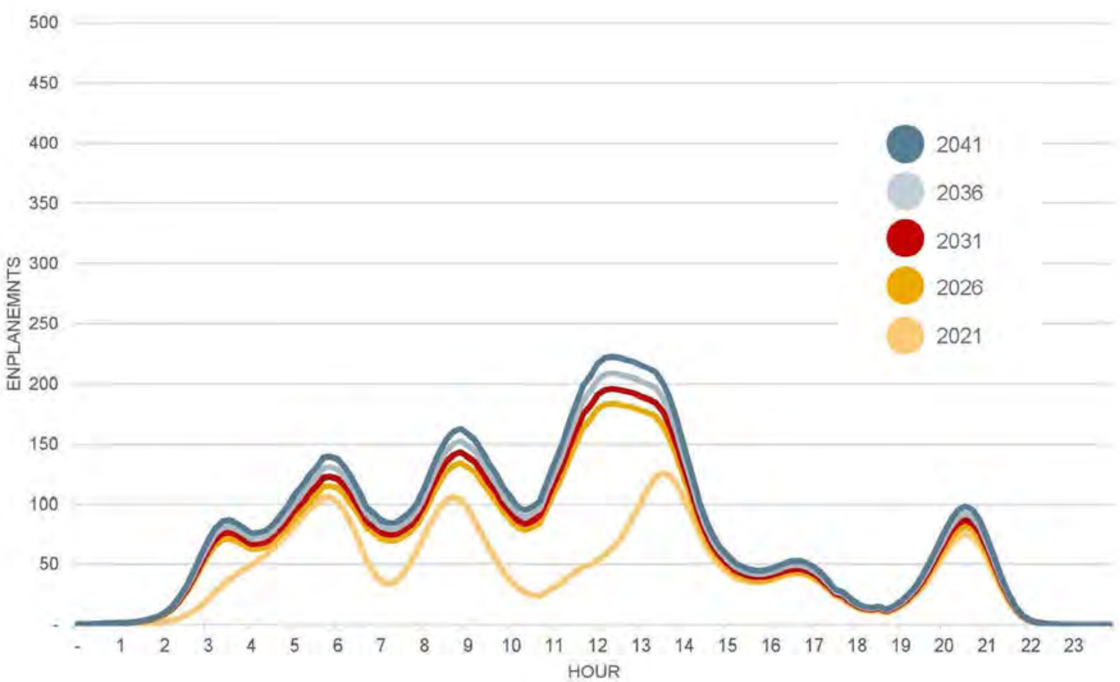



TABLE 3.4 SCENARIO 2 EARLY ARRIVALS PROFILE — BASELINE (ADDITIONAL NARROWBODY AND REGIONAL JET OUTSIDE OF PEAK HOUR)

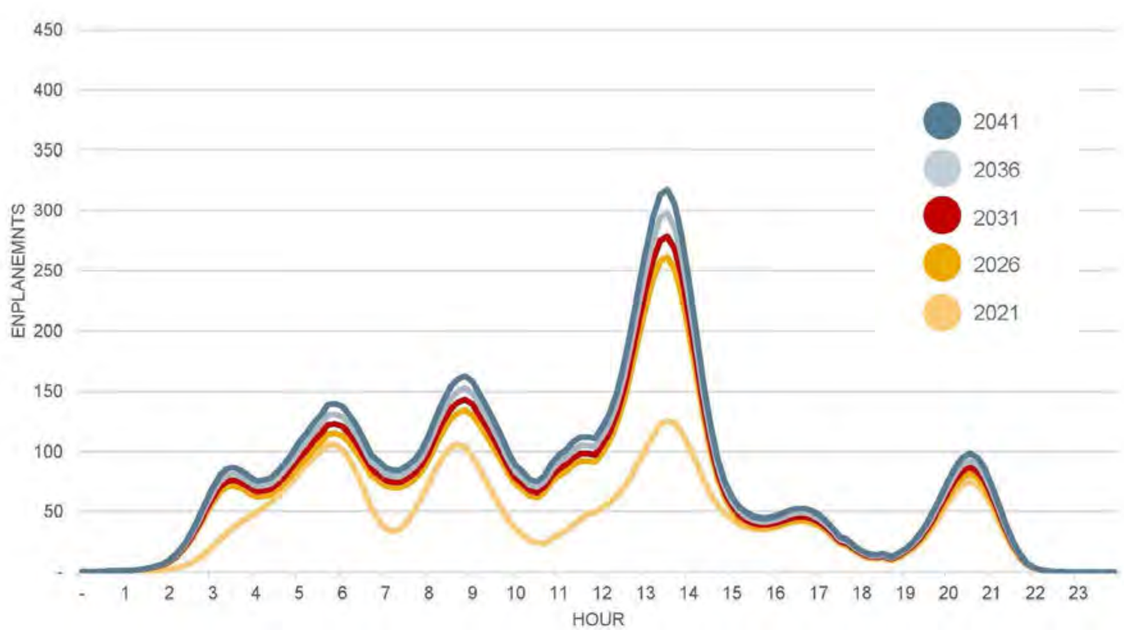



TABLE 3.5 SCENARIO 1EARLY ARRIVALS PROFILE — ALTERNATE (ADDITIONAL NARROWBODY AND REGIONAL JET WITHIN PEAK HOUR)

| IDA Scenario 2 Trigger Point Summary | 2021 | | | Forecast | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Existing | Recommended | Capacity Threshold | 2026 | 2031 | | 2036 | 2041 | |
| **General** | | | | | | | | | |
| Peak Hour Enplanements | 228 | | | 302 | 322 | | 343 | 366 | |
| Aircraft Gates/PBB | 6 | 6 | | 6 | 7 | | 7 | 8 | |
| Aircraft Positions | 6 | 6 | | 8 | 8 | | 8 | 8 | |
| **Public Space** | | | | | | | | | |
| Circulation (public seating, ticketing, concourse, bag claim, general circ) | 21,086 s.f. | 22,050 s.f. | ✖ | ✖ | 27,630 s.f. | ✖ | ✖ | 30,440 s.f. | ✖ |
| Ticket Lobby Queue | 2,558 s.f. | 2,010 s.f. | ✔ | ✖ | 3,180 s.f. | ✖ | ✖ | 3,510 s.f. | ✖ |
| Passenger Security Screening & TSA Offices | 4,909 s.f. | 5,190 s.f. | ✖ | ✖ | 7,390 s.f. | ✖ | ✖ | 7,390 s.f. | ✖ |
| # of Screening Lanes | 2 | 1 | ✔ | ! | 2 | ! | ! | 2 | ! |
| Passenger Gate Holdrooms | 12,642 s.f. | 10,900 s.f. | ! | ! | 13,900 s.f. | ✖ | ✖ | 15,480 s.f. | ✖ |
| Baggage Claim (retrieval/device/meeter&greeter) | 4,410 s.f. | 5,010 s.f. | ✖ | ✖ | 5,140 s.f. | ✖ | ✖ | 5,230 s.f. | ✖ |
| # of Devices | 2 | 2 | ! | ! | 2 | ! | ! | 2 | ! |
| Linear Frontage | 182 l.f. | 81 l.f. | ✔ | ✔ | 96 l.f. | ✔ | ✔ | 109 l.f. | ✔ |
| Restrooms (pre/post security) | 2,781 s.f. | 5,330 s.f. | ✖ | ✖ | 6,260 s.f. | ✖ | ✖ | 6,730 s.f. | ✖ |
| **Airline Space** | | | | | | | | | |
| Ticketing (counter, ATO) | 3,379 s.f. | 2,730 s.f. | ✔ | ✖ | 4,330 s.f. | ✖ | ✖ | 4,780 s.f. | ✖ |
| # of Agent Positions (excludes Kiosks) | 16 | 12 | ✔ | ✖ | 19 | ✖ | ✖ | 21 | ✖ |
| Outbound Baggage Screening | 931 s.f. | 1,800 s.f. | ✖ | ✖ | 1,800 s.f. | ✖ | ✖ | 1,800 s.f. | ✖ |
| # of EDS Machines | 1 | 1 | ! | ! | 1 | ! | ! | 1 | ! |
| Outbound Baggage Makeup | 1,481 s.f. | 1,790 s.f. | ✖ | ✖ | 2,880 s.f. | ✖ | ✖ | 2,940 s.f. | ✖ |
| Airside Ops/Storage | 1,137 s.f. | 1,330 s.f. | ✖ | ✖ | 1,790 s.f. | ✖ | ✖ | 1,960 s.f. | ✖ |
| Inbound Bag Claim Laydown | 341 s.f. | 2,200 s.f. | ✖ | ✖ | 2,200 s.f. | ✖ | ✖ | 2,200 s.f. | ✖ |
| Inbound/Outbound Baggage Circulation & Cart Staging | 2,030 s.f. | 760 s.f. | ✔ | ✔ | 1,080 s.f. | ✔ | ✔ | 1,100 s.f. | ✔ |
| Other Offices/Support Space | 0 s.f. | 200 s.f. | ✔ | ✔ | 270 s.f. | ✔ | ✔ | 290 s.f. | ✔ |
| **Concessions** | | | | | | | | | |
| Landside/Storage (includes Rental Cars) | 4,641 s.f. | 2,070 s.f. | ✔ | ✔ | 2,710 s.f. | ✔ | ✔ | 2,880 s.f. | ✔ |
| Airside/Storage | 3,157 s.f. | 2,330 s.f. | ✔ | ✖ | 4,900 s.f. | ✖ | ✖ | 5,580 s.f. | ✖ |
| **Non-Public Space** | | | | | | | | | |
| Non-Airline Tenant Space | 3,035 s.f. | 950 s.f. | ✔ | ✔ | 950 s.f. | ✔ | ✔ | 950 s.f. | ✔ |
| Airport Administration | 2,882 s.f. | 3,110 s.f. | ✖ | ✖ | 3,110 s.f. | ✖ | ✖ | 3,110 s.f. | ✖ |
| Restrooms/Circulation | 1,570 s.f. | 1,720 s.f. | ✖ | ✖ | 2,150 s.f. | ✖ | ✖ | 2,210 s.f. | ✖ |
| Airport Operations (Maintenance,Janitorial,Storage,Shops) | 3,545 s.f. | 1,430 s.f. | ✔ | ✔ | 1,830 s.f. | ✔ | ✔ | 1,970 s.f. | ✔ |
| Building Systems (MEP,Communications/IT,Loading Docks,Structure) | 12,357 s.f. | 10,350 s.f. | ✔ | ! | 13,280 s.f. | ✖ | ✖ | 14,280 s.f. | ✖ |
| **TOTAL GROSS (sq ft)** | **88,871 s.f.** | **83,260 s.f.** | ! | ✖ | **106,780 s.f.** | ✖ | ✖ | **114,830 s.f.** | ✖ |

TABLE 3.6 SCENARIO 2 TRIGGER POINTS — BASELINE (ADDITIONAL NARROWBODY AND REGIONAL JET OUTSIDE OF PEAK HOUR)

**Legend**

- ✔ Programmed area is less than existing
- ! Programmed area is at or over 85% of capacity
- ✖ Programmed area is greater than existing

| IDA Scenario 1 (Alternate) Trigger Point Summary | 2021 | | | Forecast | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Existing | Recommended | Capacity Threshold | 2026 | 2031 | 2031 | 2036 | 2041 | 2041 |
| **General** | | | | | | | | | |
| Peak Hour Enplanements | 228 | | | 491 | 523 | | 558 | 595 | |
| Aircraft Gates/PBB | 6 | 6 | | 6 | 7 | | 7 | 8 | |
| Aircraft Positions | 6 | 6 | | 8 | 8 | | 8 | 8 | |
| **Public Space** | | | | | | | | | |
| Circulation (public seating, ticketing, concourse, bag claim, general circ) | 21,086 s.f. | 22,050 s.f. | ✗ | ✗ | 28,880 s.f. | ✗ | ✗ | 33,140 s.f. | ✗ |
| Ticket Lobby Queue | 2,558 s.f. | 2,010 s.f. | ✓ | ✗ | 3,180 s.f. | ✗ | ✗ | 3,510 s.f. | ✗ |
| Passenger Security Screening & TSA Offices | 4,909 s.f. | 5,190 s.f. | ✗ | ✗ | 7,390 s.f. | ✗ | ✗ | 9,590 s.f. | ✗ |
| # of Screening Lanes | 2 | 1 | ✓ | ! | 2 | ! | ! | 3 | ✗ |
| Passenger Gate Holdrooms | 12,642 s.f. | 10,900 s.f. | ! | ✗ | 15,340 s.f. | ✗ | ✗ | 18,530 s.f. | ✗ |
| Baggage Claim (retrieval/device/meeter&greeter) | 4,410 s.f. | 5,010 s.f. | ✗ | ✗ | 5,520 s.f. | ✗ | ✗ | 5,670 s.f. | ✗ |
| # of Devices | 2 | 2 | ! | ! | 2 | ! | ! | 2 | ! |
| Linear Frontage | 183 l.f. | 81 l.f. | ✓ | ✓ | 104 l.f. | ✓ | ✓ | 119 l.f. | ✓ |
| Restrooms (pre/post security) | 2,781 s.f. | 5,330 s.f. | ✗ | ✗ | 6,970 s.f. | ✗ | ✗ | 8,040 s.f. | ✗ |
| **Airline Space** | | | | | | | | | |
| Ticketing (counter, ATO) | 3,379 s.f. | 2,730 s.f. | ✓ | ✗ | 4,330 s.f. | ✗ | ✗ | 4,780 s.f. | ✗ |
| # of Agent Positions (excludes Kiosks) | 16 | 12 | ✓ | ✗ | 19 | ✗ | ✗ | 21 | ✗ |
| Outbound Baggage Screening | 931 s.f. | 1,140 s.f. | ✗ | ✗ | 2,240 s.f. | ✗ | ✗ | 2,240 s.f. | ✗ |
| Outbound Baggage Makeup | 1,481 s.f. | 1,790 s.f. | ✗ | ✗ | 7,490 s.f. | ✗ | ✗ | 8,640 s.f. | ✗ |
| # of EDS Machines | 1 | 1 | ! | ! | 2 | ✗ | ✗ | 2 | ✗ |
| Airside Ops/Storage | 1,137 s.f. | 1,330 s.f. | ✗ | ✗ | 2,070 s.f. | ✗ | ✗ | 2,520 s.f. | ✗ |
| Inbound Bag Claim Laydown | 341 s.f. | 2,200 s.f. | ✗ | ✗ | 2,200 s.f. | ✗ | ✗ | 2,200 s.f. | ✗ |
| Inbound/Outbound Baggage Circulation & Cart Staging | 2,030 s.f. | 760 s.f. | ✓ | ✗ | 2,470 s.f. | ✗ | ✗ | 2,810 s.f. | ✗ |
| Other Offices/Support Space | 0 s.f. | 200 s.f. | ✓ | ✓ | 310 s.f. | ✓ | ✓ | 380 s.f. | ✓ |
| **Concessions** | | | | | | | | | |
| Landside/Storage (includes Rental Cars) | 4,641 s.f. | 2,070 s.f. | ✓ | ✓ | 2,710 s.f. | ✓ | ✓ | 2,880 s.f. | ✓ |
| Airside/Storage | 3,157 s.f. | 2,330 s.f. | ✓ | ✗ | 4,900 s.f. | ✗ | ✗ | 5,580 s.f. | ✗ |
| **Non-Public Space** | | | | | | | | | |
| Non-Airline Tenant Space | 3,035 s.f. | 950 s.f. | ✓ | ✓ | 950 s.f. | ✓ | ✓ | 950 s.f. | ✓ |
| Airport Administration | 2,882 s.f. | 3,110 s.f. | ✗ | ✗ | 3,110 s.f. | ✗ | ✗ | 3,110 s.f. | ✗ |
| Restrooms/Circulation | 1,570 s.f. | 1,660 s.f. | ✗ | ✗ | 2,820 s.f. | ✗ | ✗ | 3,060 s.f. | ✗ |
| Airport Operations (Maintenance,Janitorial,Storage,Shops) | 3,545 s.f. | 1,420 s.f. | ✓ | ✓ | 2,060 s.f. | ✓ | ✓ | 2,350 s.f. | ✓ |
| Building Systems (MEP,Communications/IT,Loading Docks,Structure) | 12,357 s.f. | 10,250 s.f. | ✓ | ✗ | 14,900 s.f. | ✗ | ✗ | 17,030 s.f. | ✗ |
| **TOTAL GROSS (sq ft)** | **88,871 s.f.** | **82,430 s.f.** | ! | ✗ | **119,840 s.f.** | ✗ | ✗ | **137,010 s.f.** | ✗ |

**Legend**
- ✓ Programmed area is less than existing
- ! Programmed area is at or over 85% of capacity
- ✗ Programmed area is greater than existing

TABLE 3.7 SCENARIO 1 TRIGGER POINTS — ALTERNATE (ADDITIONAL NARROWBODY AND REGIONAL JET WITHIN PEAK HOUR)

## OVERALL PROJECT DEMAND

The programmatic approach to sizing facility areas as previously described is commonly used as the first step during the planning and preliminary design of any expansion project. As a project proceeds through the design process functions such as ticketing, baggage areas, gate holdrooms, circulation areas, concessions, and other space-based requirements will often change as a result of the physical configuration of the design and cost considerations. For any project it is recommended to build in additional capacity beyond opening day. This typically equates to an opening day plus five to ten years' worth of additional capacity. As such a peak hour activity level of 322 enplanements (2031) was used for the layout of the conceptual planning options. Industry best practice is to start planning for additional space which serves the public and baggage processing functions when demand reaches approximately 85% of existing capacity within the various areas of the terminal and related concourse areas. Crossing this capacity threshold triggers the need to begin planning, design, and the construction process to replace facilities in time to meet the growing passenger demand levels. Table 3.6 indicates the point at which this trigger point will be met by the various programmatic areas of the terminal by year. The demand requirements contained in this table is considered a minimum generic facilities requirement program that is recommended to support the design aircraft and their associated peak hour passenger activity levels. Overall total building projected demand is expected to exceed current facility capacity around a peak hour activity level of 300 enplanements. However, individual spaces should be reviewed for determining the time at which their capacity shortfalls will occur. A more detailed building program by area for Sc2 can be found in the Appendix.

For each scenario, gate requirements were also calculated using the enplanement per gate ratio approach. This assumed the airports future 2023 annual enplanements per their existing six gates would remain constant throughout the forecast horizon. Results indicate one additional gate would be required by 2031 with an additional gate by 2041 for a total of eight potential gates. As mentioned previously the apron will be able to accommodate ADG III type aircraft at every gate parking position. However, the base year flight schedule indicated the use of five large regional required gates and one narrowbody gate. Sc1 as indicated in Table 3.8 on the next page included a mix of four large regional and three narrowbody for a total of seven gates by 2031. This assumed one of the mainline carriers would upgauge from their use of large regional aircraft to a narrowbody type aircraft along with an additional narrowbody gate. Sc2 assumed the use of the existing five large regional gates and an additional narrowbody gate by 2031 as also shown in Table 3.8.

| ADG | Seats | Existing 2021* | Existing Flight Schedule | Forecast 2026 | Forecast 2031 | Forecast 2036 | Forecast 2041 |
|---|---|---|---|---|---|---|---|
| **SCENARIO 2 – Baseline** | | 223,741 | | 391,242 | 417,309 | 445,113 | 474,903 |
| II - Medium Regional (CRJ,ERJ) | 50 | - | - | - | - | - | - |
| III - Large Regional (Q400,CR7,E70/75,CR9) | 70-76 | - | 5 | 5 | 5 | 5 | 6 |
| III – Narrowbody (319/320,717/738) | 110-189 | 6 | 1 | 1 | 2 | 2 | 2 |
| **Total Gates** | | **6** | **6** | **6** | **7** | **7** | **8** |
| *% Regional* | | *0%* | *83%* | *83%* | *71%* | *71%* | *75%* |
| *% Narrowbody* | | *100%* | *17%* | *17%* | *29%* | *29%* | *25%* |
| **SCENARIO 1 - Alternate** | | | | | | | |
| II - Medium Regional (CRJ,ERJ) | 50 | - | - | - | - | - | - |
| III - Large Regional (Q400,CR7,E70/75,CR9) | 70-76 | - | 5 | 3 | 4 | 4 | 4 |
| III – Narrowbody (319/320,717/738) | 110-189 | 6 | 1 | 3 | 3 | 3 | 4 |
| **Total Gates** | | **6** | **6** | **6** | **7** | **7** | **8** |
| *% Regional* | | *0%* | *83%* | *50%* | *57%* | *57%* | *50%* |
| *% Narrowbody* | | *100%* | *17%* | *50%* | *43%* | *43%* | *50%* |

TABLE 3.8 SCENARIOS 2 & 1, GATE REQUIREMENTS BY SCENARIO AND YEAR

## GATE HOLDROOM PLANNING

Gate holdroom sizes are based on the required mix of aircraft gates and the average seating capacity of each aircraft design group (ADG). These areas generally consist of the passenger seating area, the airlines podium and associated queue space, the loading bridge egress corridor, circulation and standing areas, and any additional square footage allowances for areas such as soft seating or charging stations. With the airlines at IDA currently operating on a Preferential Use lease agreement, the gate holdroom area requirements are based on the largest aircraft gauge per airline identified in the flight schedules. The mix of aircraft types can be found in the detailed space program found in the Appendix. Additional factors and assumptions include the following:

- An 85% aircraft load factor
- An IATA LoS C with 70% of the passengers seated at 18 SF per passenger and the other 30% standing at 13 SF
- A gate holdroom depth of 35 feet allows space to provide soft seating areas and a deeper queue area at the gate podiums.
- A ten percent seat increase or “seat inefficiency” factor for passengers who take up more than one seat with baggage or for those single party passengers who prefer to sit every other seat.

Whenever possible holdrooms are suggested to be configured in “shared” or “paired” layouts in order to take advantage of the adjacent gate holdroom’s seating area. However, this is only achievable when no near simultaneous departures occur at the adjacent holdroom which is very dependent on airline scheduling patterns. For this analysis, a ten percent reduction factor for gates in a “paired” layout was utilized.

Based on the aircraft mix identified in the base and future DDFS the existing holdroom area cannot meet a peak hour activity level of 322 enplanements and will require a total of approximately 13,900 SF of gate holdroom area between the two levels, an increase of ten percent over what is currently available. The additional square feet will provide capacity for three large regionals and one narrowbody aircraft on the ground level and two large regionals and one narrowbody on the upper level.

## RESTROOMS PLANNING

The program has been divided between the landside pre-security and airside post-security portions of the terminal and related concourse.

The rationale for calculating the number of restroom locations, fixtures, and associated area by landside and airside followed ACRP Report 226, Planning and Design of Airport Terminal Restrooms and Ancillary Spaces. It is recommended that restroom locations should provide, at a minimum, as many fixtures for women as are provided for men which is the case for both the pre- and post-security locations within the existing terminal. Currently the ground level of the terminal provides a single restroom location for men's and women's facilities. The post-security portions of the terminal provide one location on each level along with a Service Animal Relief Area (SARA) on the ground level. Existing pre-security square foot per fixture ratios averaged 86 SF while the post-security locations averaged 78 SF. For this analysis the following assumptions and guidelines were utilized for the pre-security portions of the terminal:

- A 25% female increase factor
- The O&D peak hour volume and their visitors (0.6)
- Approximately 118 SF per fixture plus 100 SF for a companion care restroom

For the post-security locations, the following assumptions were utilized:

- One restroom location for each level
- 50% peak 20-minute percent of peak hour
- 60% restroom utilization
- 50% men
- 25% female increase factor
- Approximately 118 SF per fixture plus 100 SF for each companion care restroom
- 140 SF SARA
- 128 SF Nursing Mother's Room per location

Based on the above factors and the calculation methods from ACRP Report 226, future demand for restrooms exceeds current facility capacity for both the pre- and post-security portions of the terminal in both total area and number of fixtures per gender (see Table 3.6). Each location would also benefit from additional women's fixtures and associated area.

## BAGGAGE HANDLING SYSTEM (BHS) PLANNING & ASSUMPTIONS

The BHS load models constructed for the IDA planning study are based on the following parameters and assumptions:

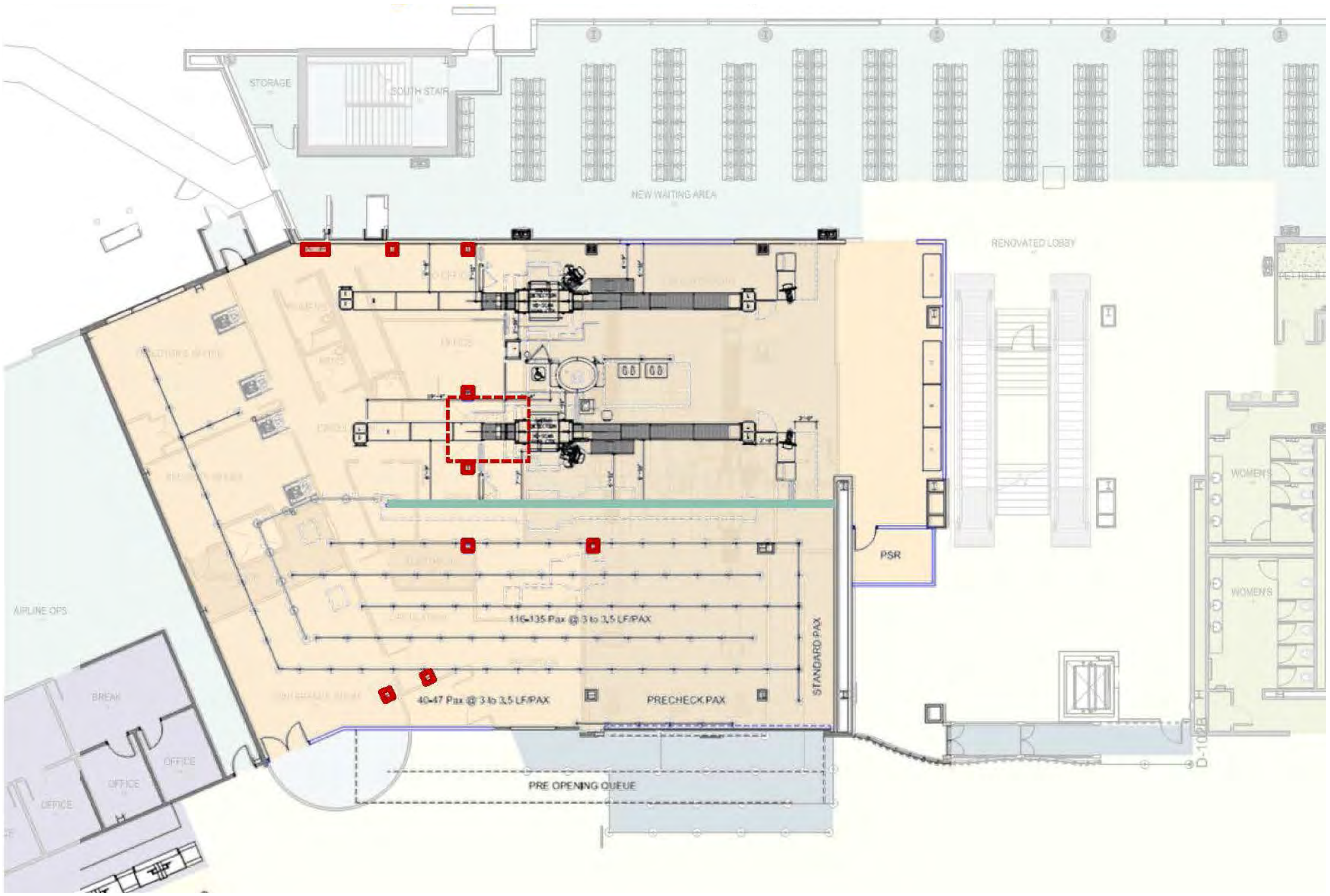
- 0.6 checked bags per enplaned passenger
- Passenger arrival curve as defined by TSA PGDS
- Aircraft load factor set by year to approximate anticipated growth in enplanements:

### OUTBOUND BAGGAGE OPERATIONS

- Bags for each flight depart the makeup area at thirty minutes prior to scheduled departure.
- The Explosive Detection System (EDS) machine throughput used for BHS modeling is 180 BPH. This coincides with the reported throughput indicated in a letter to Rick Cloutier, IDA Airport Director from local TSA leadership.
- Active tug/cart trains (for outbound flights departing in less than sixty minutes) are parked parallel (connected for towing) along the makeup device.

### INBOUND BAGGAGE OPERATIONS

- Inbound bags are loaded onto the inbound system starting twenty minutes after scheduled arrival; complete offloading takes twenty minutes.
- One-third of inbound bags are removed from the claim device in the same ten-minute interval they are loaded into the inbound system; the remainder are removed from the claim device in the following ten-minute interval.
- Passenger staging is 10'-0" deep measured directly out from the claim device presentation frontage.
- Acceptable LoS per IATA standard is 16.1 – 18.3 SF per passenger.




PROPOSED TWO-LANE CHECKPOINT LAYOUT

Not to Scale

## SECURITY SCREENING CHECKPOINT PLANNING

The existing checkpoint has two standard lanes, updated in 2021, with approximately 2,500 SF provided for security screening (equipment and circulation), or 1,250 SF per lane. Current TSA checkpoint design and planning standards indicate a need for around 1,600 sf for a single lane, excluding the required queue space and any TSA office requirements. Additionally, the lack of sufficient queuing area in the current layout negatively impacts adjacent programmatic areas, such as circulation through and between the Ticketing Hall and the Great Hall. Current queue space is approximately 780 SF compared to the TSA recommended 1,200 SF for two lanes.

Future planning requirements and layouts were based on the previously mentioned TSA CRPG published September 2021. This includes space for the implementation of Computed Tomography (CT) x-ray equipment which is part of TSA's Checkpoint Property Screening System (CPSS) program as well as the potential use of Automated Security Lane (ASL) systems in use today throughout the country. Demand calculations were based on applying TSA early arrival profiles to the peak departure hour along with the following planning guidelines and communication with the Airport and local TSA:

- A peak 30-minute demand of approximately 31% of the peak hour was calculated from the baseline design day flight schedule and utilized for future planning years
- Average throughput of 150 passengers per lane per hour
- An additional 10% of the daily enplanement activity was added for employee and crew screening
- To calculate lane requirements an industry acceptable maximum waiting time of ten minutes in the queue was assumed
- A TSA queue recommendation of 600 SF per lane was utilized which equates to an IATA average LoS C of 12 SF per passenger
- Two Travel Document Checkers (TDC) per lane to provide stable passenger flow to the screening lanes
- Screening area includes one required Private Screening Room (PSR) at 110 SF

Utilizing the planning assumptions outlined above, no additional screening lanes would be required during the planning horizon. However, the existing condition is unable to meet the baseline scenario square footage demands and demonstrates the need for additional space for passenger security screening for the two lanes., and eventually, an additional screening lane. The Alternative Scenario (Sc1) was then analyzed to understand the impact of additional flights added to the peak hour. Results indicated a third lane would be required to support the additional demand by a peak hour activity level of 596 enplanements (2031) using a more aggressive 3% CAGR.

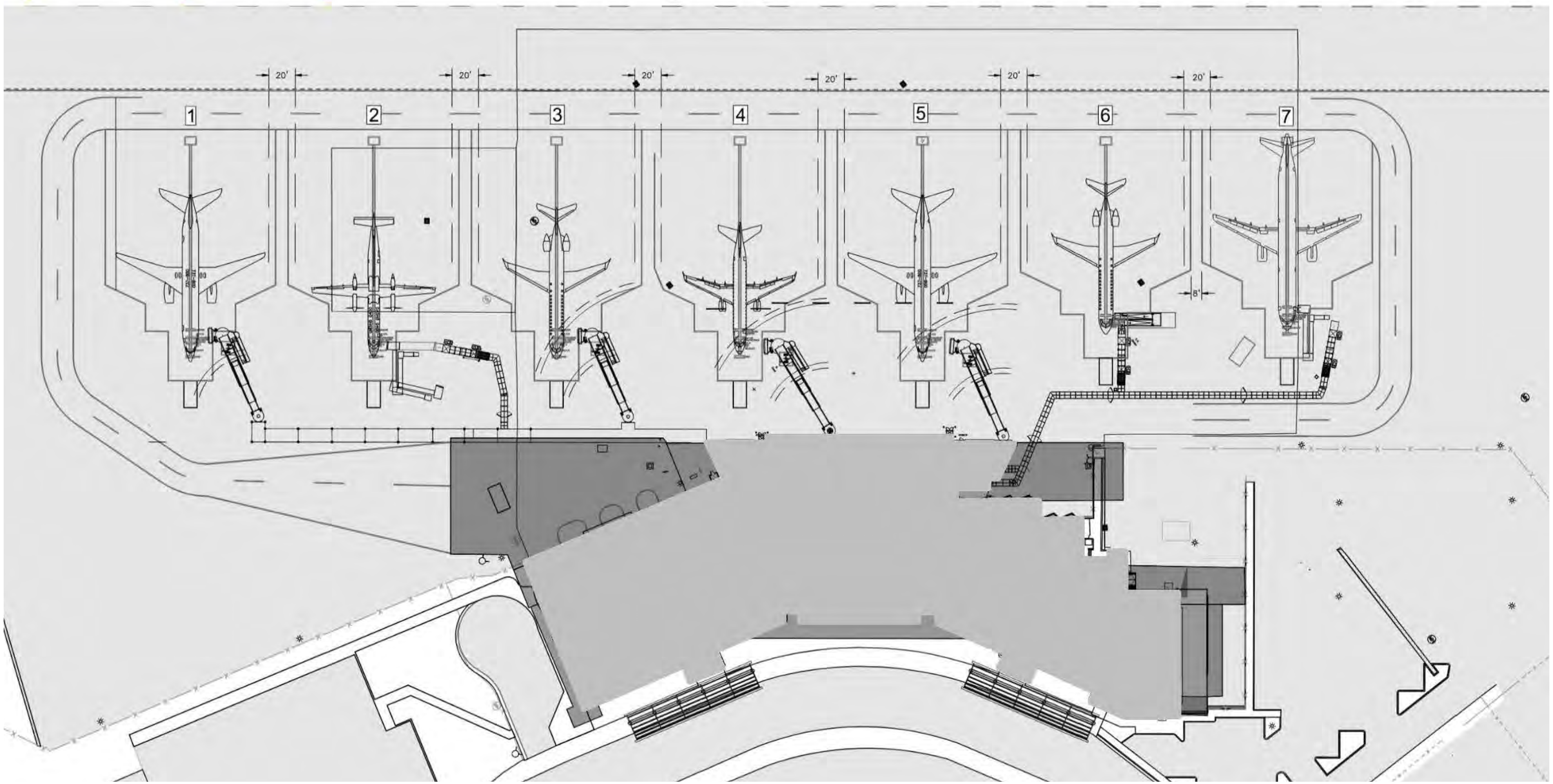
The recommended layout rotates the existing layout clockwise. To achieve this the Airport Administration offices would be relocated in an initial phase giving the checkpoint not only greater length and recomposure area, but a much-needed expanded queue space for peak periods of activity. Once the offices are relocated, the existing two lanes would be temporarily relocated within the same general area to allow for construction to begin on the space where the reoriented lanes would be installed.

The temporary queue would be located in the area vacated by a portion of the screening lanes with overflow extending to the existing secure concourse exit portal. Once the new area is complete, either the existing lanes would be relocated during a potential overnight operation, or new lanes would be installed prior to the opening of the new checkpoint. All required queues would be contained within the existing overhead door area with a separate queue for PreCheck passengers as depicted on the opposite page. The future third lane would bring overall screening capacity to 450 passengers per hour with queue capacity of up to nearly 200 passengers. See the Appendix for the proposed layout incorporating the third screening lane.

# 04 PREFERRED OPTION — EXTERIOR DEVELOPMENT

# 04 PREFERRED OPTION — EXTERIOR

## AIRSIDE CIVIL PLANNING




PROPOSED NEW AIRCRAFT PARKING LAYOUT

Not to Scale

## AIRCRAFT PARKING MODIFICATIONS

The expansion of the bag makeup area will necessitate the reconfiguration of the aircraft parking by pushing the parking positions at A1 and B1 back towards Taxiway B. These positions can be aligned with the parking positions at B2, B3 and A2. It is recommended the aircraft parking layout be reconfigured to accommodate the full airport fleet mix at each aircraft parking position. The reconfiguration of the parking position at B2 may require relocation of the PBB and associated rotunda column along with the addition of a fixed walkway section as this parking position will not be accessible within the limits of the current PBB. The ground loading walkway associated with A1 will need to be reconfigured and potentially extended to the new parking location.
When reconfiguring aircraft parking positions, consideration should be given to the potential of accommodating Aircraft Design Group (ADG) IV Taxiway Object Free Area (TOFA) along Taxiway B in the future. It is assumed tug access will be from the south end of the expanded area and will not conflict with passengers ground boarding at Gate A1.

The limits of the concrete at the apron should also be expanded so all aircraft parking is on concrete pavement. The deicing pad should be moved to a new location that can accommodate aircraft at any time, including the potential for general aviation (GA) and cargo aircraft. At the time additional gates are required, additional aircraft parking positions are available to the south of the existing apron and could be accessed from an expansion of the upper level gate holdroom over the bag makeup expansion area with an additional PBB. Future PBBs should include PCA and GPU units and be capable of accommodating the full aircraft fleet mix except for the Q400. Depending on the location of future cargo operations, additional aircraft parking positions may also be available to the north. Any new parking position should be designed for the full aircraft fleet mix with access to power and water.

## PART 77 REVIEW

Title 14 Part 77 (Safe, Efficient Use and Preservation of the Navigable Airspace) is a federal regulation which protects the navigable airspace surrounding an airport. As the Idaho Falls Regional Airport has accepted Airport Improvement Program (AIP) grants in the past, protection of Part 77 airspace is required by the grant assurances associated with each grant. These grant assurances exist for the life of the project funded with the grant except for grants for land acquisition which exist in perpetuity. As IDA has accepted multiple grants for land acquisition, their grant assurances exist in perpetuity. The City of Idaho Falls and Bonneville County both protect the Part 77 airspace through local zoning code.

Currently, most of the terminal building is clear of the Part 77 airspace with the exceptions of the Air Traffic Control Tower (ATCT) and apron lights, both of which penetrate the Part 77 Transitional Surface. The ATCT was originally constructed in 1960 and is considered fixed by function. The tower currently has an obstruction light at its highest point, and it is also the location of the airport beacon. The apron lights were last rehabilitated in 2021, and a FAA Form 7460 was filed for replacement of the apron light fixtures. A No Hazard determination was issued for rehabilitation of the apron lighting even though they penetrate the Part 77 Transitional Surface. The closest point of the terminal building is approximately 750’ from the Runway 3-21 centerline. Runway 3-21 has a Category I Instrument Landing System (ILS) and is classified as a Precision Instrument Runway serving aircraft more than 12,500 pounds maximum gross weight.

Determining the allowable building height needs to take into consideration in both the primary and transitional surfaces. Runway 3-21 has a 1,000 foot wide primary surface centered on the runway. This surface would extend from the runway centerline towards the terminal building for a distance of 500 feet at the same elevation as the runway centerline. The transitional surface begins at the edge of the primary surface and slopes outward and upward at a 7:1 (H:V) slope until it reaches a height of 150 feet above the runway. In this case, the transitional surface is approximately 35.7 feet above the runway at the face of the terminal building.

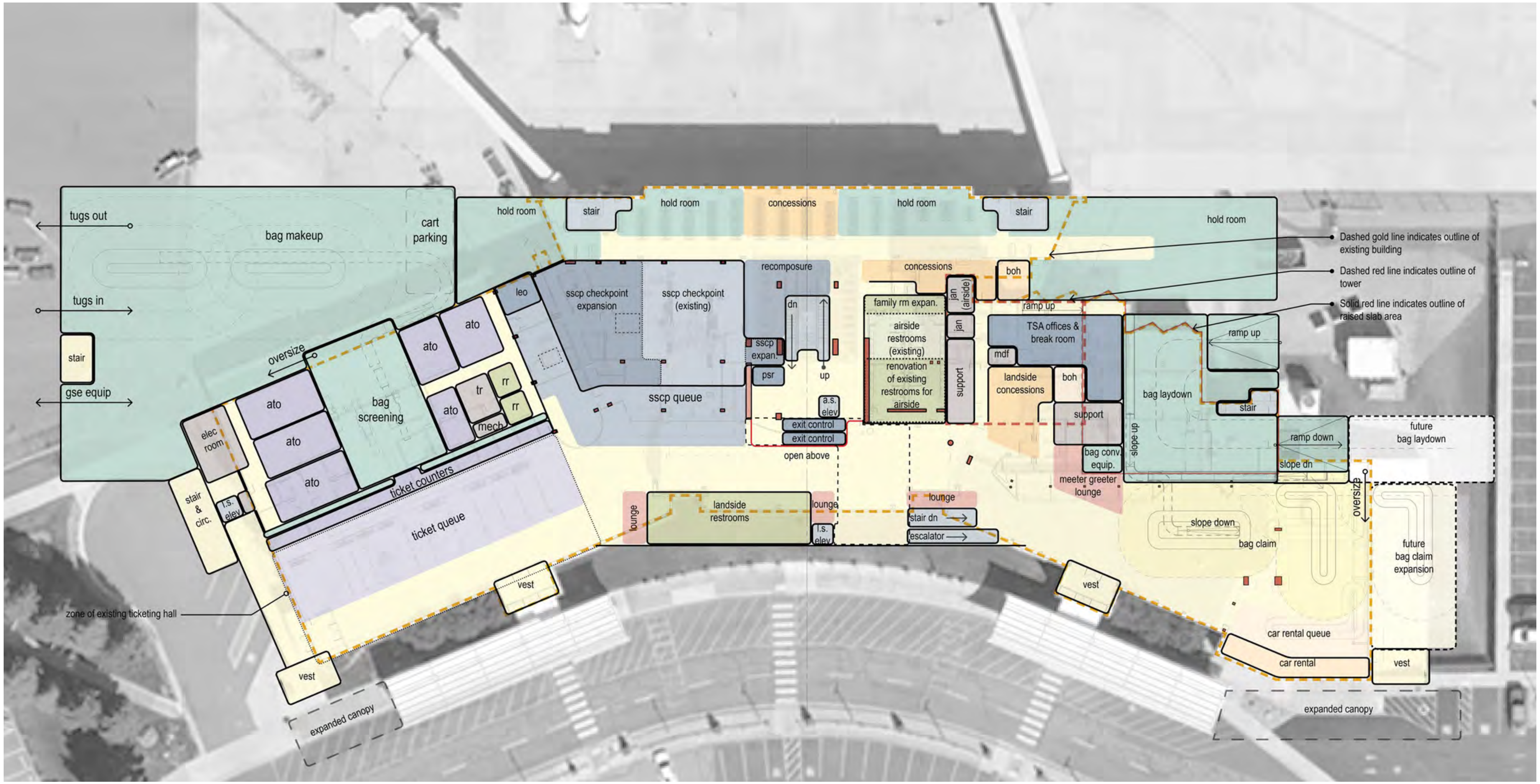
Any expansion of the building will require the filing of an FAA Form 7460 for on-airport construction. A building height of less than 35.7’ above the runway centerline will likely receive a No Hazard determination. As the apron lights currently penetrate the Part 77 Transitional Surface by several feet, it is likely that additional building height is possible in this location. If additional building height beyond the height of the existing apron lights is required, an additional aeronautical study may be required.

## CURBSIDE IMPROVEMENTS

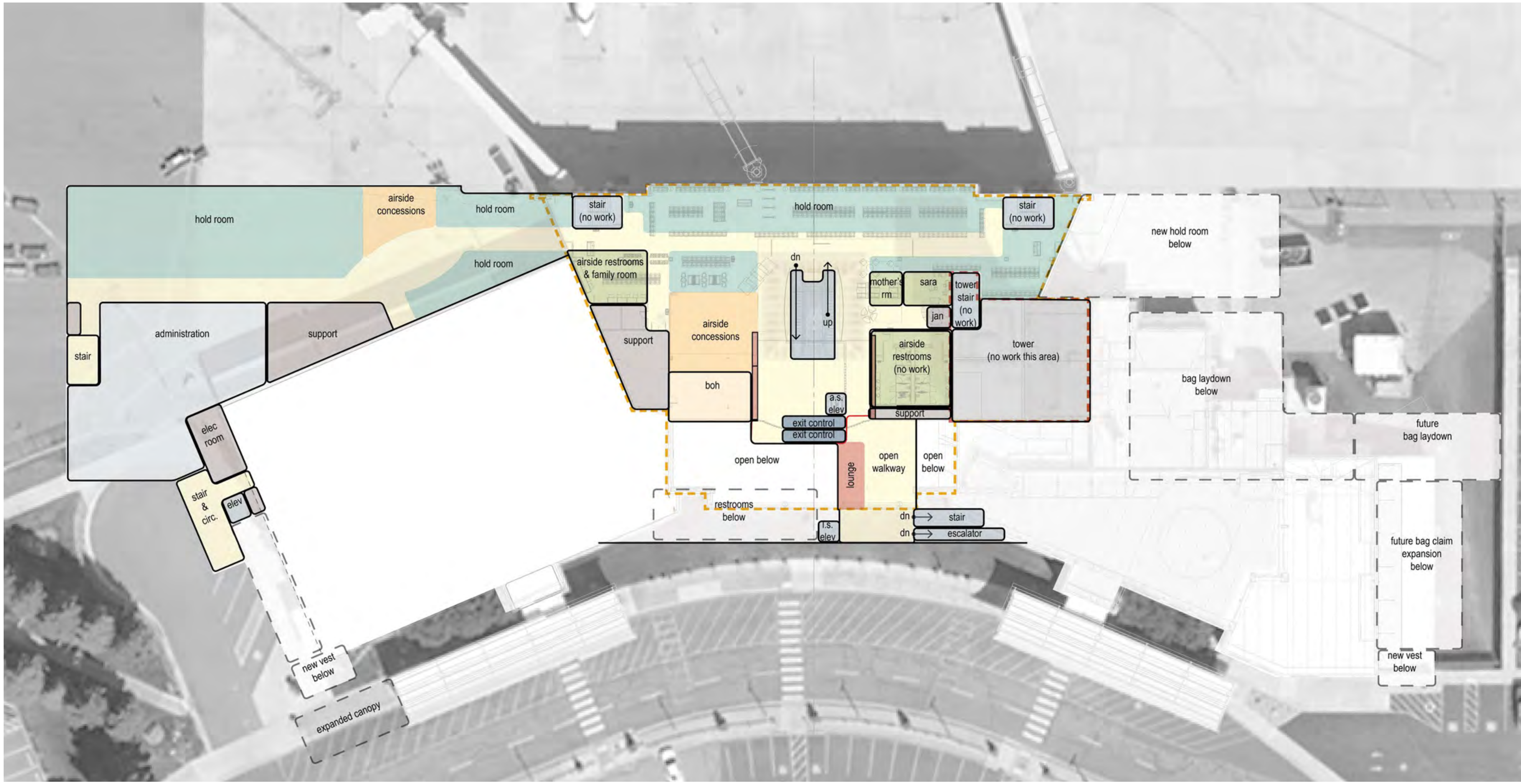
The building expansions alongside the curbside, including the new vestibules, have been located to not conflict with the existing sidewalk and road/curb alignments. Planned building expansions in this area will infill the existing open turf grass areas between the face of the existing terminal and the sidewalk. In conjunction with the building expansion at the curbside, new vestibules are added in the Ticketing Hall and in the Baggage Claim, providing convenient access to the curbside for passengers. New extensions to the existing curbside canopies serve the new vestibules and provide increased passenger protection over the sidewalk.

# 05 PREFERRED OPTION — INTERIOR DEVELOPMENT

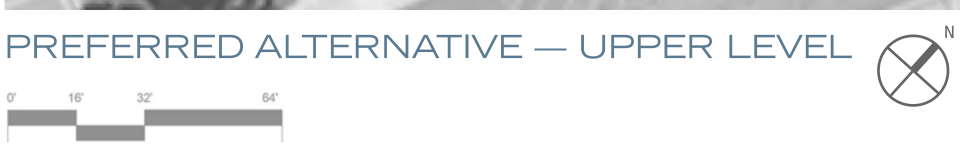
PREFERRED OPTION CONCEPT PLAN




PREFERRED ALTERNATIVE — GROUND LEVEL

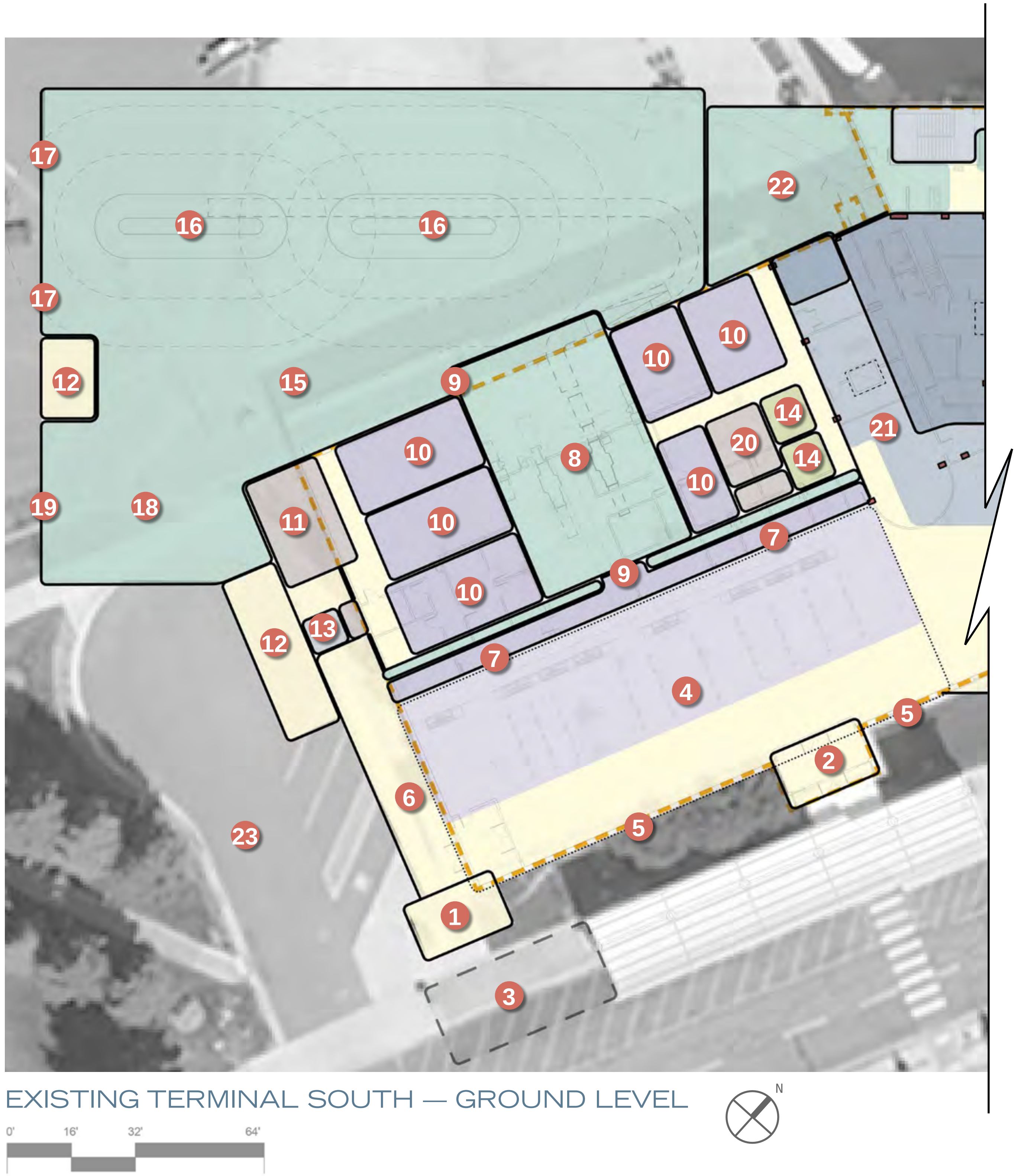



PREFERRED ALTERNATIVE — UPPER LEVEL



# 05 PREFERRED OPTION — INTERIOR

## TERMINAL SOUTH — GROUND LEVEL




EXISTING TERMINAL SOUTH — GROUND LEVEL

### DIAGRAM KEY NOTES

1. New vestibule
2. Existing vestibule to remain
3. New extension to existing curbside canopy
4. Renovated ticketing hall
5. Existing curtainwall to remain
6. Expanded ticketing hall — building expansion
7. New, repositioned ticketing counters
8. Expanded baggage screening room with possible second explosive detection system (EDS) machine
9. Oversize baggage access
10. New airline ticket office (ATO)
11. New electrical room at location of existing main feed
12. New stair (access to upper level)
13. New landside elevator
14. New non-public restrooms
15. New baggage makeup room — building expansion
16. New baggage makeup carousel
17. Overhead door — tugs/carts
18. New ground service equipment (GSE) parking — building expansion
19. Overhead door — GSE
20. New main telecommunications room (MTR)
21. Expanded security checkpoint and queue
22. Expanded gate holdroom
23. Redesigned cargo parking lot

## TICKETING HALL — COUNTERS, QUEUEING, CIRCULATION

The proposed Ticketing Hall redesign reconfigures the space to allow improved circulation and adequate queuing space for the ticket counters and check-in kiosks. The existing front building façade in this area can remain in place, with minor modifications to extend the façade along the building expansion toward the south and create a new, expanded vestibule. The front of the ticket counters moves back to occupy the position of existing back wall at ticketing. This shift opens up more space in front of the counters for a reconfigured, deeper queue and additional space for kiosks. Furthermore, greater depth is provided for circulation, both between the queue and the counters and at the back of the queue along the front façade.

## AIRLINE TICKET OFFICES AND SUPPORT SPACES

The renovated and expanded areas for airline ticket offices (ATOs) flank the enlarged baggage screening room and are accessed via corridors at each end of the ticket counters. The space has been sized to accommodate not only the existing airlines serving the airport (Delta, United, American, Alaska, and Allegiant), but also the additional airlines expected to add service to IDA. Additional support spaces in this area include non-public restrooms, airport maintenance and janitorial space, IT rooms (MDF/MTR/TR), and an electrical room.

## CHECKED BAGGAGE SCREENING

The checked baggage screening room has been expanded both in length and width to provide increased functionality and ease of use by TSA agents. The larger footprint accommodates not only the single explosive detection system (EDS) screening machine on site today but also a second unit, whether the second unit is installed initially or at a later date. In the “Scenario 2 (baseline)” modeling, a second EDS does not become necessary within the 2041 planning horizon. By contrast, the “Scenario 1” modeling shows the single EDS used to full capacity immediately, with a second device required by 2031.

Take-back belts run along the back wall behind the ticket counters and carry the bags to the screening room as in the existing configuration. Oversized bags enter the screening room through a set of double doors in the back wall between the ticket counters and take-back belts that lead directly into the screening room. The size and positioning of the newly expanded screening room allows existing masonry bearing walls to remain in place.

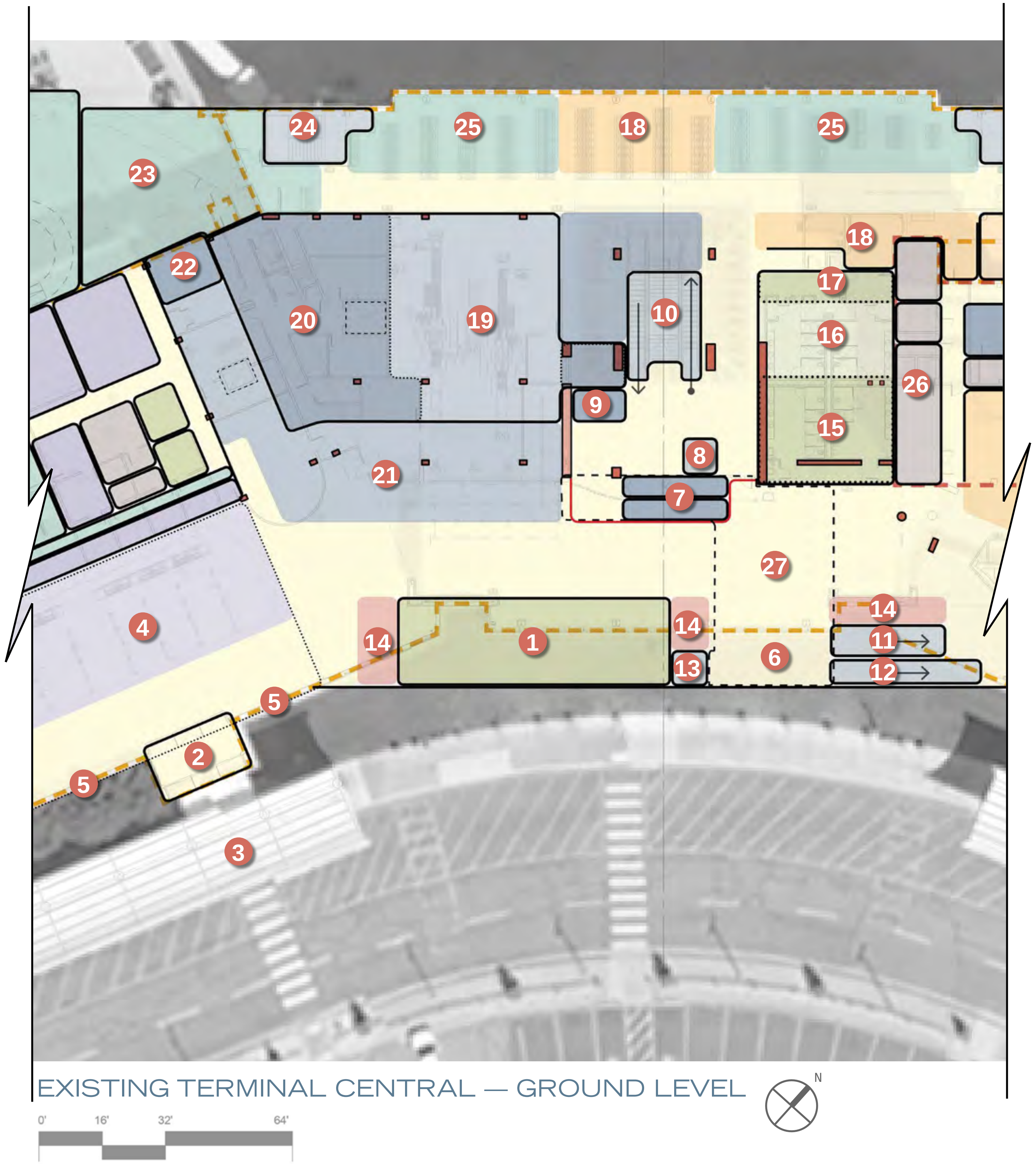
## BAGGAGE MAKEUP, AIRLINE OPERATIONS, EQUIPMENT STORAGE

The new baggage makeup room is housed in a building expansion off the back of the existing building near the existing baggage makeup area. As cart parking, loading, and maneuvering present the greatest issues in the current configuration, these arrangements are improved in the new layout. Two recirculating makeup carousels allow cart approach and parallel parking on both sides of the carousel, more than doubling the presentation length of the current setup. Using two carousels instead of a single unit grants the baggage handling system redundancy, allowing one carousel to operate even if the other is offline.

Bypass lanes outside of the cart parking lane are also provided to increase flexibility of operations. Instead of the perpendicular arrangement today, the parallel approach allows the carts to be parked alongside the carousel without needing to detach the carts from the tug or train, greatly increasing operational efficiency. Doors that lead directly from the baggage screening room to the baggage makeup area allow transport of oversized items to a designated pickup location. The remainder of the space available in this expansion can be used for airline operations, luggage cart parking and staging, as well as storage of ground service equipment (GSE), similar to areas provided today. This allows the storage functions to remain in place as long as possible during operations, versus today’s operations where items are parked under the exterior canopy at baggage makeup adjacent to the overhead doors during periods of low traffic. The items parked under the canopy in the current configuration then need to be relocated to allow access into and out of the adjacent overhead doors.

# 05 PREFERRED OPTION — INTERIOR

## TERMINAL CENTRAL — GROUND LEVEL




EXISTING TERMINAL CENTRAL — GROUND LEVEL

### DIAGRAM KEY NOTES

1. New landside restrooms — building expansion
2. Existing vestibule to remain
3. Existing canopy to remain
4. Renovated ticketing hall
5. Existing curtainwall to remain
6. Expanded Great Hall — building expansion
7. Existing and new exit breach control device
8. Existing airside elevator to remain
9. New private screening room (PSR)
10. Existing stair and escalator to remain
11. New down escalator (access from upper level) — building expansion
12. New stair (access to/from upper level) — building expansion
13. New landside elevator — building expansion
14. New meeter-greeter/lounge seating — building expansion
15. Renovated restrooms — converted from landside to airside
16. Existing airside restrooms
17. Expanded airside restrooms
18. New airside concessions
19. Renovated existing checkpoint
20. New expanded security checkpoint
21. New expanded security checkpoint queue
22. New law enforcement office (LEO)
23. Expanded gate holdroom
24. Existing stair tower to remain
25. Existing holdroom to remain
26. Expanded building support
27. New elevated arrivals exit lane overhead

## LANDSIDE RESTROOMS

The area currently occupied by the sole landside restroom block will be converted to airside restrooms. A new restroom block across the Great Hall from the security checkpoint and queue provides convenience to passengers before they begin the screening process and is directly accessible from both the ticketing and claim halls. Restroom layout and design will be further refined during the project's design phases, with passenger comfort and access, coupled with long-term design value, as top priorities.

## AIRSIDE RESTROOMS, SARA, NURSING MOTHERS

The existing airside restrooms on both the ground level and the upper level have been recently renovated. These are expected to remain in place with limited modification as needed to tie new finishes and construction into existing finishes and construction. On the ground level, the existing airside restrooms will expand into the space currently occupied by the (unrenovated) landside restrooms, and the fixtures, partitions, systems, and finishes will be updated. Further opportunities to enhance passenger access and comfort, long-term durability, and ease of maintenance can be studied and incorporated as the design progresses.

On the upper level, additional restrooms, including a companion care restroom, and a nursing mothers' room are added within the existing building footprint in areas currently utilized for gate holdroom and lounge seating.

## GATE HOLDROOMS

Both the ground level and the upper level gate holdrooms are planned to be expanded to accommodate larger aircraft, including simultaneous or near-simultaneous arrivals. At the time of this writing, the anticipated new airlines are planned to use gate holdrooms on the ground level, joining Allegiant and Alaska. Delta, American, and United are anticipated to remain on the upper level. The lower level gate holdrooms have been sized to accommodate three large regional aircraft and one narrowbody, while the upper level gate holdrooms have been sized for two large regionals and one narrowbody, for a combined total of seven gate areas. (Refer to page 26 for Gate Holdroom Planning requirements and page 32 for Proposed Apron Layout.)

The layout of the gate holdroom expansion allows preservation of the existing curtainwall overlooking the apron, the stair towers on the north and south ends, and the existing PBB locations. Additional circulation width increases passenger level of comfort by easing congestion and especially aids those with roller bags or mobility devices during periods of peak traffic. Passengers waiting to board their plane can lounge in the gate holdrooms overlooking the apron and airfield. Areas of soft, lounge seating are provided among the more conventional beam seating to meet a wide range of passenger needs and expectations.

## GREAT HALL, ELEVATED EXIT LANE, NEW VERTICAL CIRCULATION

A new elevated exit lane allows arriving passengers to exit from the upper level secure area of the terminal and traverse the Great Hall before descending directly to the Baggage Claim Hall. New vertical circulation at the expansion to the central curbside façade serves arriving passengers providing access across the Great Hall and down to the baggage claim hall. To open up space for expansion of the existing security screening checkpoint and associated queueing, the offices and space for airport administration functions will need to relocated and could be relocated to the upper level of the terminal above the new baggage makeup area.

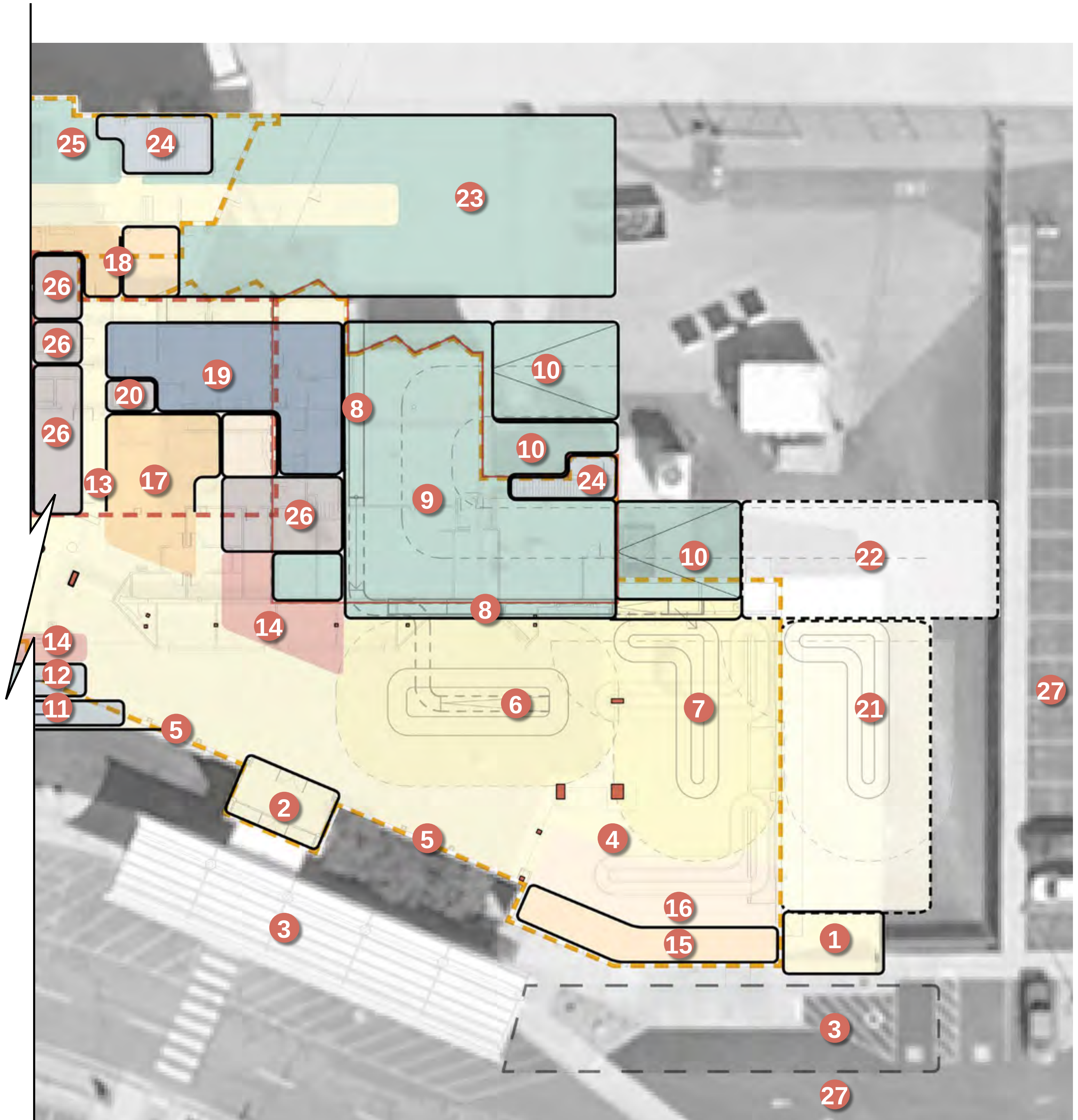
## SECURITY SCREENING CHECKPOINT, QUEUEING, RECOMPOSURE

Given the space limitations at the current checkpoint, a priority in the new design will be providing additional capacity in the screening area for TSA operations and queuing area for passengers. Additionally, as TSA has been in the process of updating their checkpoint screening equipment across the nation, the design standards for screening lanes have evolved, and the new checkpoint at IDA should be designed to accommodate updated operating procedures and equipment per TSA communication received throughout this planning study and per best practice.

Several checkpoint layout options were studied to improve the operational efficiencies of the checkpoint, update systems and technologies, and to accommodate the future addition of a third screening lane with minimal disruption. The eventual full build checkpoint option anticipates rotating the long axis of the screening lanes ninety degrees, taking over the area currently occupied by airport administration functions, and increasing the areas dedicated to screening, queueing, and recomposure.

# 05 PREFERRED OPTION — INTERIOR

## TERMINAL NORTH — GROUND LEVEL




EXISTING TERMINAL NORTH — GROUND LEVEL

0' 16' 32' 64'

N

### DIAGRAM KEY NOTES

1. New vestibule
2. Existing vestibule to remain
3. Existing canopy to remain — new extension to existing canopy shown dashed
4. Renovated baggage claim hall
5. Existing curtainwall to remain
6. New slope-plate baggage claim carousel
7. Relocated or new flat-plate baggage claim carousel
8. Inbound baggage feed belts to claim carousels
9. Relocated baggage laydown within existing footprint
10. New baggage laydown elevated slab /ramp
11. New down escalator (access from upper level) — building expansion
12. New stair (access to/from upper level) — building expansion
13. New egress circulation as required and access to support spaces
14. New meeter-greeter/lounge seating
15. Relocated rental car counters
16. Relocated rental car queue
17. New landside concessions and back-of-house spaces
18. New airside concessions and back-of-house spaces
19. Renovated TSA office space (as needed)
20. Existing TSA IT room to remain
21. Future baggage claim hall and carousel — building expansion
22. Future baggage laydown — building expansion
23. Expanded gate holdroom — building expansion
24. Existing stair to remain
25. Existing holdroom to remain
26. Expanded building support
27. Rental parking area (redesigned as needed to accomodate current or future building expansion)

## AIRSIDE CONCESSIONS

On the ground level, new airside concessions can be integrated in the central portion of the terminal within the area that is currently gate holdroom. This provides passengers with easy access to concessions in close proximity to their gates and also increases customer exposure to enhance concessions revenue opportunities. Additional concessions can be integrated opposite the main circulation within the gatehold. As this area is already served by plumbing for the existing SARA in this location, concessions plumbing can be tied into the current plumbing layout.

On the upper level, the existing concessions space can remain in place though with a slightly reduced footprint. The overall concessions footprint is now balanced between the first and second levels providing access to the new upper level arrivals exit lane. Additional concessions space is proposed on the west side of the building overlooking the airfield in the addition over the new baggage makeup area.

Additional airside restroom space, including a companion care restroom, are located on the west side of the concourse, with easy access from the existing holdrooms, concessions and the new holdroom space added over the new baggage makeup expansion.

## LANDSIDE CONCESSIONS, MEETER-GREETER

The existing landside concessions areas in the terminal have been vacated, either for the long term as is the case in the former restaurant area, or due to pandemic-related issues in the case of retail alcoves in the baggage claim hall. The existing vacated restaurant area could be renovated with updates to finishes and systems to serve as a temporary home for airport administration, storage, or other support functions (such as baggage laydown in one of the planning options).

New landside concessions space within the existing building footprint is located in a position to provide convenient access from both the claim hall and the new meeter-greeter seating area for arriving passengers and their guests. Meeter-greeter seating is also provided on both levels near the new vertical circulation in the Great Hall.

## BAGGAGE CLAIM

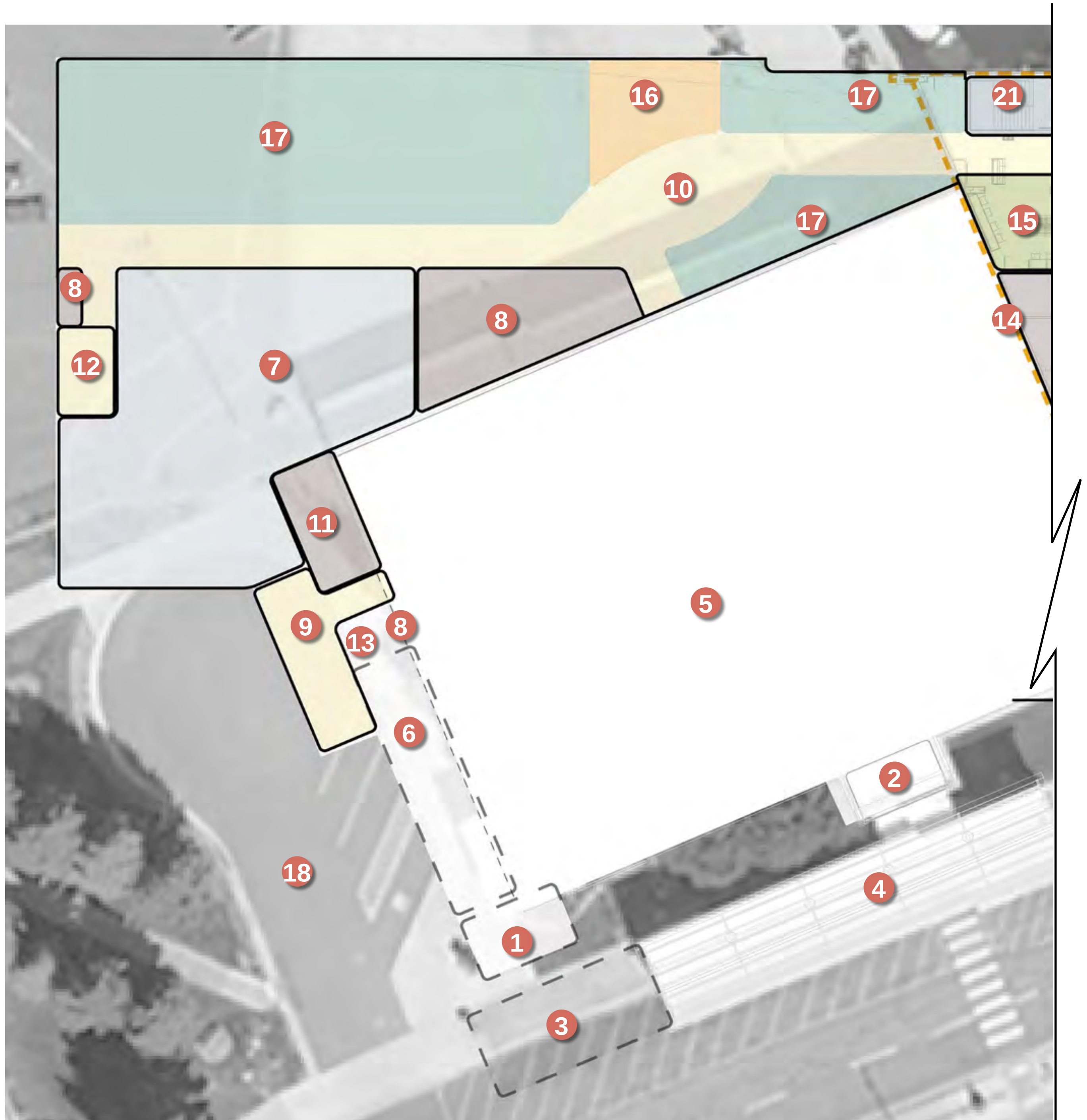
The existing baggage claim hall footprint is largely planned to be retained in the new design; however, the orientation of the carousels relative to each other will be rotated ninety degrees from the current configuration. This rotation brings multiple benefits, including creating opportunity in the claim hall for adding a third carousel in line with the other two as part of an expansion to the north in the future. Additionally, the rotation opens up the claim hall to be more wholly visible as a continuous space upon approach from the Great Hall, even once the third carousel comes online.

Depending on their condition at the time of construction, as well as the final configuration of the inbound baggage laydown system, portions of the existing carousels may be eligible for reuse in the new design. The size, shape, and type of claim carousel to be utilized in the design for construction will be affected in part by the location and arrangement of the baggage laydown area.

Refer to page 64 for the Baggage Handling System Narrative, a technical description of the BHS.

# 05 PREFERRED ALTERNATIVES — INTERIOR

## TERMINAL SOUTH — UPPER LEVEL, TERMINAL NORTH — GROUND LEVEL




EXISTING TERMINAL SOUTH — UPPER LEVEL

N

0' 16' 32' 64'

### DIAGRAM KEY NOTES

1. New vestibule below
2. Existing vestibule to remain below
3. New extension to existing curbside canopy below
4. Existing curbside canopy to remain below
5. Existing building roof to remain below
6. New ticketing hall expansion below
7. New airport administration suite
8. New building support
9. New landside stairs and circulation serving the airport administration suite
10. New airside circulation
11. New electrical room
12. New egress stair
13. New landside elevator
14. Face of existing building
15. New airside restrooms
16. New airside concessions
17. Expanded gate holdroom
18. Redesigned cargo parking lot

## BAGGAGE LAYDOWN

A variety of options were studied relative to the configuration of the baggage laydown area to meet current and projected future needs. Currently, baggage laydown length and layout parameters are significant limiting factors to the airport's inbound baggage operations. Therefore, options studied for the layout of the laydown area focused on increasing laydown capacity by incorporating stripping pier belts that lead to the claim carousels. Another goal was long-term flexibility and planned improvements not impeding future expansions to the claim hall. The reorientation of the claim devices allows them to be positioned to maximize passenger access to the devices. From the stripping piers, the carousels can then recirculate the bags until they are collected by passengers; the volume of stored bags on the carousel does not interfere with or limit the stripping capacity as is the case in the current arrangement. The existing basement and its access in this area are anticipated to remain in place in both options.

In one option, the area of the former landside concessions/restaurant space is repurposed to become part of the laydown area. Infill to the existing elevated slab creates a level surface for bag unloading and tug/cart maneuvering, served by new tug ramps located outside of the existing building footprint. The existing slab elevation of the former restaurant space places the new primary laydown area in the range of 1'-6" – 2'-0" above the existing claim hall elevation. To accommodate this elevation differential, one of the existing flat plate claim carousels would need to be replaced with a slope plate device due to the need to deliver the bags from above. The exterior grade elevation around the new elevated slabs and ramps is expected to remain as is, less than 6 inches or so below the interior claim hall slab elevation. No additional modifications would be necessary to either carousel nor the stripping conveyors to allow the expansion of the claim hall to the north.

In an alternate baggage laydown option, the former concessions area can remain as is or be repurposed to serve another function besides baggage laydown operations. In this arrangement, the new laydown area occurs at the existing grade elevation outside the existing building footprint, close to the interior slab elevation. In this case, both carousels can remain the flat plate type. A new stripping pier feeds one of them, while the second carousel is fed directly through the exterior wall without stripping piers, similar to the arrangement today. Given the rotation of the carousels, the carousel's long leg would be adjacent to the exterior wall and a larger loading door could be implemented, effectively increasing the unloading/laydown length of the carousel. Although this configuration has less presentation length of the carousel in the initial build, more frontage will be opened up on the second carousel when the building is expanded in the future to accommodate the third carousel. Modifications to the second carousel would be required at the time of building expansion due to the initial method of feeding the carousel. This alternate baggage laydown option is shown in the Appendix.

Refer to page 64 for the Baggage Handling System Narrative.

## RENTAL CARS, NORTH VESTIBULE

In the new layout, rental car counters and queueing have been relocated to the northwest corner of the claim hall within the existing building footprint, an area which is currently open circulation space. This moves the queue and its overflow out of the main path of circulation from the Great Hall to the Claim Hall, providing greater ease of flow during peak traffic periods and places the counters directly adjacent to the rental car parking lot. A new vestibule is added adjacent to the counter zone, replacing the existing unmarked door without a vestibule, providing customer access to the rental car parking lot immediately adjacent outside. The existing canopy is extended to and beyond the new vestibule, providing covered access to the rental car lot.

## TSA OFFICES, SUPPORT SPACES

The existing TSA offices, break room, and support spaces are located to the north of the Great Hall, adjacent to the vacated restaurant space. The area will be largely untouched with the exception of general updates related to the addition of a egress corridor out of the Great Hall. Additionally, new airport support spaces such as janitorial/maintenance rooms, IT, and electrical rooms to support the function of the overall terminal will be added as required in this area.

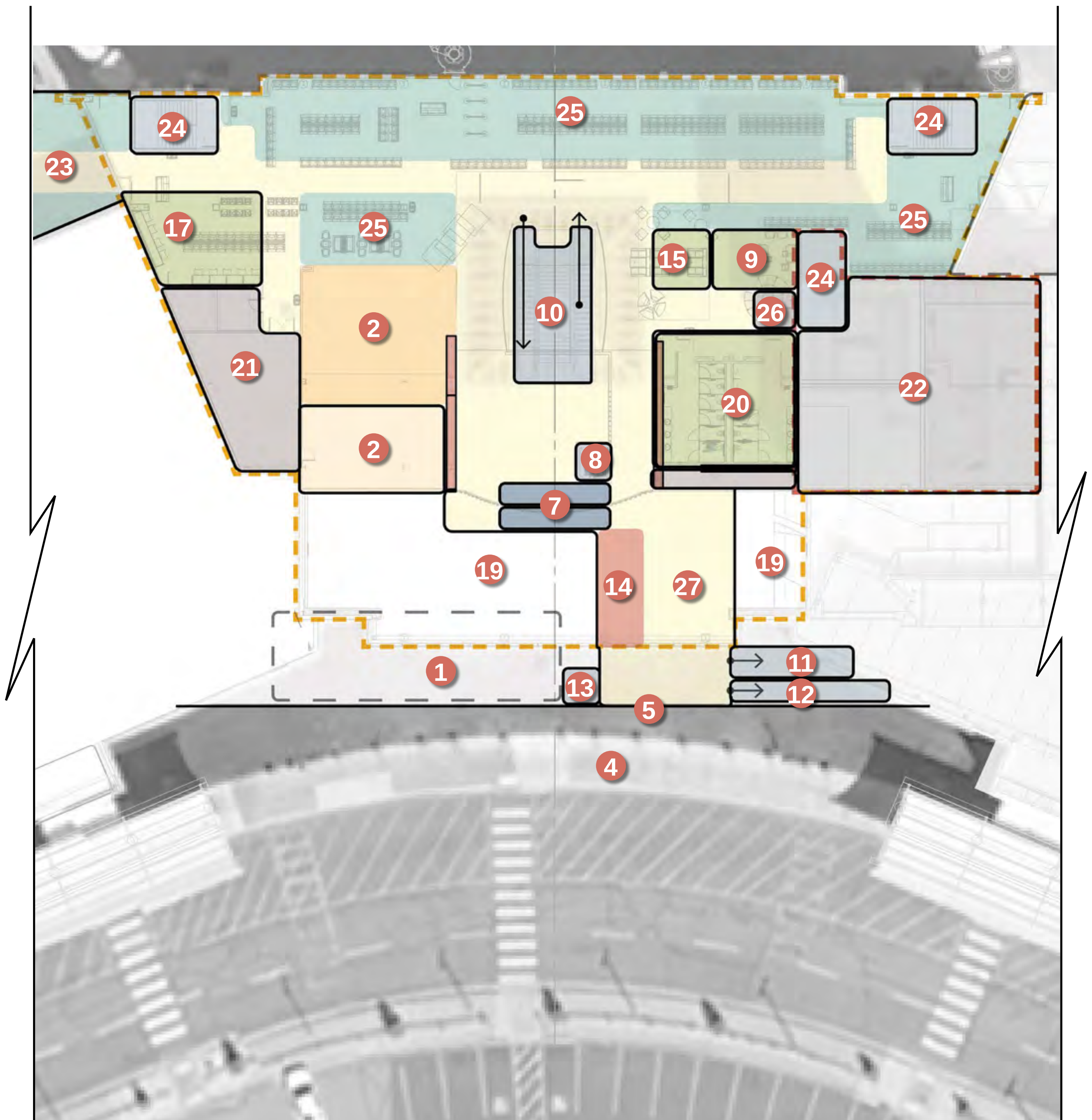
## AIRPORT ADMINISTRATION

The existing airport administration offices, currently located on the ground level adjacent to the constrained SSCP, have been relocated to accommodate the necessary expansions to the SSCP. Review of the anticipated overall terminal long-term growth identified the area on the north end of the upper level, above the ground level gate holdroom expansion, to be the best location for the relocated administration offices given the expected future airfield expansion to the south. The airport administration offices could also be relocated to other locations including a facility separate from the terminal building. The impacts of relocation of the administration offices on project eligibility should be a consideration of future projects.

The new administration offices are sized to accommodate the anticipated office and support functions as well as training and airport board meeting rooms. Access to administration offices will be via the new upper level landside circulation at the west end of the Ticketing Hall.

# 05 PREFERRED ALTERNATIVES — INTERIOR

## TERMINAL CENTRAL — UPPER LEVEL



EXISTING TERMINAL CENTRAL — UPPER LEVEL

### DIAGRAM KEY NOTES

1. New landside restrooms below — building expansion
2. Existing airside concessions
3. Existing canopy to remain
4. Existing sidewalk to remain
5. New curbside curtainwall
6. Expanded Great Hall — building expansion
7. New exit breach control device(s)
8. Existing landside elevator to remain
9. New nursing mothers' suite
10. Existing stair and escalator to remain
11. New down escalator — building expansion
12. New stair (access to/from upper level) — building expansion
13. New landside elevator — building expansion
14. New meeter-greeter/lounge seating
15. New service animal relief area (SARA)
16. Not used
17. New airside restrooms
18. New airside concessions
19. Open to Great Hall below
20. Existing airside restrooms
21. Building support to remain
22. Air traffic control tower (ATCT) and FAA space to remain
23. Expanded gate holdroom
24. Existing stair tower to remain
25. Existing holdroom to remain
26. New janitor's closet
27. New elevated walkway arrivals exit lane

## AIR TRAFFIC CONTROL TOWER

The space currently occupied by the FAA Air Traffic Control Tower (ATCT), as well as the second level footprint directly below it, is expected to remain as is in the preferred planning option. While FAA currently occupies the top level space, it is anticipated the control tower functions and space will be relocated elsewhere, outside of the main terminal. That said, it is not clear at the time of this writing when that relocation will occur, so the preferred alternatives do not propose repurposing that space. The portion of the FAA space that is currently mothballed may require significant rehabilitation and/or remediation to become usable space.

If the tower functions are relocated and the space is renovated as required, there may be possibilities to repurpose the space. This can be considered in further detail when the specific timing of the tower relocation is known.

## BASEMENT MODIFICATIONS

No significant architectural scope is expected in the basement; most scope will involve replacement of MEP, IT, and security systems and equipment. (Refer to page 56, MEP Systems Narratives and page 58, Technology and Security Systems Narrative.) Where possible, storage and maintenance functions will be consolidated, and more floor area may become available for additional equipment as needed. At the south end, new basement access will likely need to be provided to replace the stair that will be demolished as part of the security checkpoint expansion.

Modifications to the basement Main Point of Entry (MPOE), technology infrastructure, and equipment will also be required to support construction phasing and system enhancements scopes of work. This includes modifications to backbone cabling and infrastructure to support construction and transition to the new main telecommunications room (MTR).

Additionally, architectural, conditioning, and electrical enhancements are recommended to the MPOE area within the basement to support greater system resilience.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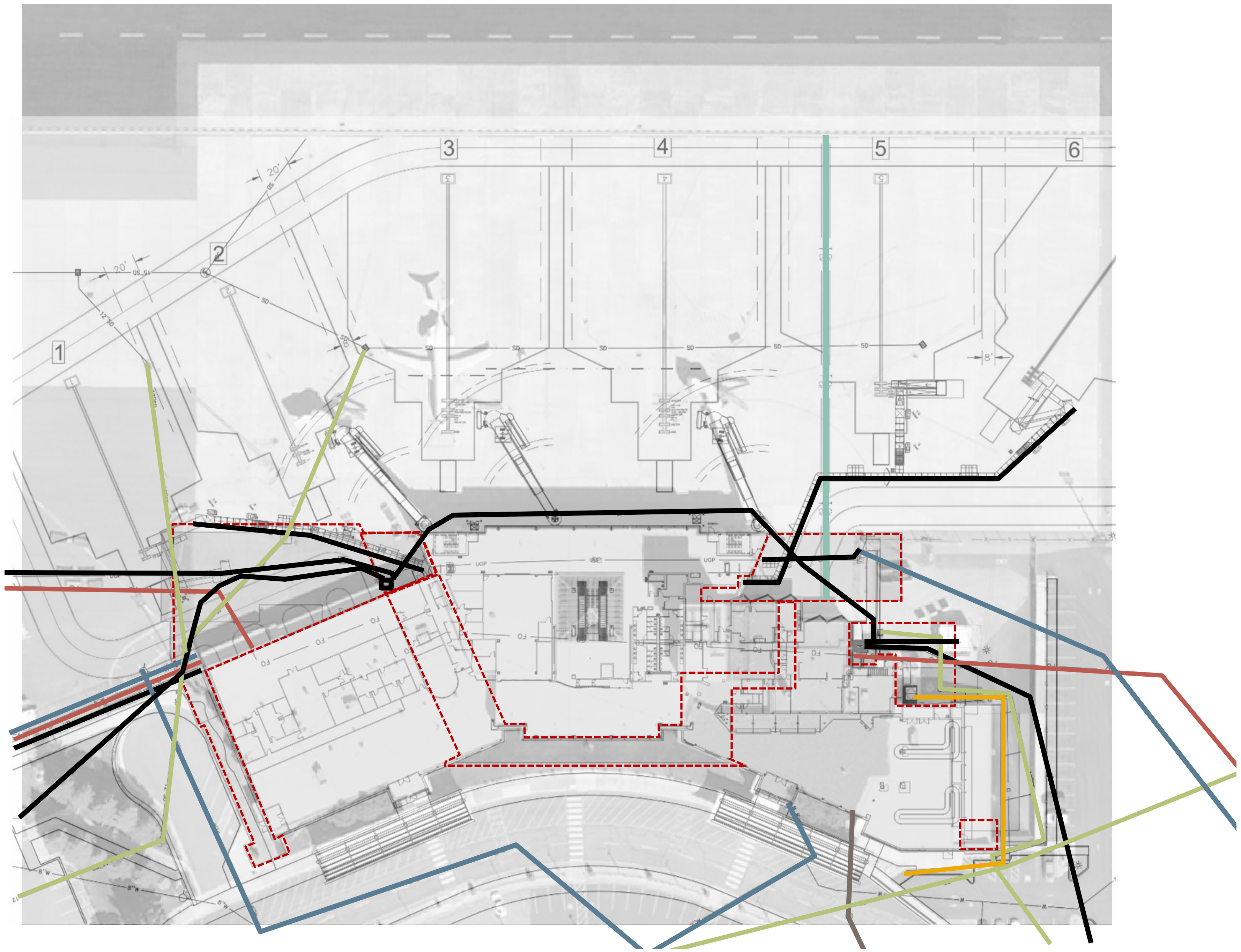
# 06 SYSTEMS NARRATIVES

## CIVIL SITE UTILITIES




- Power
- Natural Gas
- Storm Drain
- Sanitary Sewer
- Water
- Fiber Optic
- FAA
- Building Expansion Areas

EXISTING SITE UTILITIES

Not to Scale

## CIVIL SITE UTILITES

As the terminal building has been expanded over time, utility services have been relocated or expanded with the various projects. Below is a summary of the various utilities that currently serve the terminal building. (Refer to page 59 for the IT/Security Systems Narrative.)

### WATER

**Existing Systems**
The terminal is served by multiple water mains from three directions: south, east and north. The water main from the south is an 8” main from Borah Avenue that provides water to the hydrants on the south side of the building. This main loops in front of the terminal and joins another 8” main that comes across the airport parking lot from Skyline Drive. The main service to the building enters the basement near the entrance to baggage claim. The 8” main continues north and intercepts another 8” main line from Federal Way. This 8” line serves the fire hydrants on north side of the building and is a redundant loop for the main terminal service.

**Potential Impacts**
The hydrants on the south side of the building may be impacted by the potential expansion of the ticketing and bag makeup area. The hydrants on the north side of the building may be impacted by the expansion of the hold rooms to the north and reconfiguration and expansion of the baggage claim area.

### SEWER

**Existing System**
There is one main sewer service to the building. The main sewer line parallels Skyline Drive and enters the building in roughly the same location as the water service, in the basement below the baggage claim entrance.

**Potential Impacts**
No impacts to the existing sewer service are anticipated by expansion of the building footprint, however consideration of the routing of new sewer services to the additional restroom space will need to be addressed during design.

### STORM DRAIN

**Existing System**
There are two storm drainage systems near the terminal building, one that handles stormwater and one that handles runoff from the deicing of aircraft. The main stormwater drainage system consists of a series of inlets in the terminal aircraft apron on the west side of the building that flow to the south and intercept the main storm drainage line for the airfield along with another series of inlets, pipes and manholes on the east side of the building. The system on the east side also drains the area along Taxiway C and Taxiway G to the north. The roof drains for the terminal building also discharge to these systems either via direct connection or overland flow. The system of inlets and pipes in front of the terminal was installed in the early 2000s while the age of the system on the east side varies. The main these systems connect to near the airport operations budling is believed to have been installed in the 1940s and drains to a detention basin on the east side of the airfield behind the Red Baron Hangar. The overall stormwater drainage system for the airport appears to surcharge at the point the pipes from the terminal apron meet the pipes from the runway and taxiway system.
The second stormwater drainage system is associated with the deicing pad to the southwest of the existing terminal building. This pad is drained by an inlet in the center that leads to a holding tank just south of the terminal building. The stormwater drainage from this holding tank is pumped into a truck and treated by the city as part of their municipal system.

**Potential Impacts**
The expansion of the bag makeup will impact the several storm drainage lines including the stormwater drainage for the apron and the drainage for the deicing pad. These lines will need to be relocated. As the existing apron is currently impervious surface, the expansion of the building will likely have a minimal impact if any on the volume of stormwater runoff.

### NATURAL GAS

**Existing System**
The terminal building has one service for natural gas that enters the building near the existing cooling tower on the north end. This is the only natural gas service for the building.

**Potential Impacts**
The expansion of the baggage claim area will impact the existing natural gas service and it will likely require relocation. Consideration should also be given to adding an additional natural gas service for redundancy.

### TELECOMMUNICATIONS

**Existing System**
Various telecommunications companies serve the terminal building include City of Idaho Falls Fiber, CenturyLink (Lumen), Sparklight, and Syringa. The precise location of specific telecommunication utilities is unknown, but City of Idaho Falls utility maps show fiber optic services from both the south and north.

**Potential Impacts**
The expansion of the building to either the south or north will impact the existing telecommunication services. Depending on the depth of new foundations, these utilities may need to be relocated.

## CIVIL SITE UTILITES (CONTINUED)

### AIRFIELD LIGHTING

**Existing System**
The lighting regulators for the runway and taxiway lighting systems are located in the basement of the terminal building near the northwest corner.

**Potential Impacts**
The expansion of the hold rooms to the north may impact the airfield lighting homeruns. Depending on the depth of the required building foundation, these lines may need to be relocated. The airport is considering relocation of the airfield regulators from the basement to a standalone electrical vault building, but there is currently no timeline for the relocation.

### FAA COMMUNICATION SYSTEMS

**Existing Systems**
As the Air Traffic Control Tower (ATCT) is currently located inside the terminal, various FAA communication lines from Navigation Aids (NAVAIDS) on the airfield are routed to the tower along with the Crash Alarm System that serves the ARFF station. The location of these communication lines is believed to be on the north side of the building, but exact locations are unknown.

**Potential Impacts**
Expansion of either the hold rooms to the north or the baggage claim has the potential to impact FAA communication systems. The potential relocation of these systems will need to be considered in the design of either projects. The airport is pursuing the relocation of the ATCT outside of the terminal building. If this relocation is accomplished prior to any expansion to the north, relocation of these systems may no longer be necessary.

### MISCELLANEOUS UTILITIES

**Existing Systems**
There are numerous building utilities such as access control systems (ACS), parking lot lighting, and irrigation lines located around the perimeter of the building. (Refer to page 59 for the IT/Security Systems Narrative.)

**Potential Impacts**
Any building expansion will impact these systems and relocation will need to be addressed during design.

## STRUCTURAL SYSTEMS

The terminal building's current configuration and structural system is the result of a series of renovations that have occurred since its original construction. While the terminal building has been expanded and renovated overtime, the overall footprint and structural system has remained relatively unchanged since a significant project in 1978 expanded the north wing, added the south wing, and added a second level in the center of the building. Additional projects in 2001, 2012, and 2019 have refined and expanded the structure to the current arrangement.

In general, the vertical structural system consists of either reinforced masonry shear walls or steel braced frames with cold-formed steel, non-load bearing partitions and aluminum storefront separating functional areas. Horizontal structural systems are generally composed of structural steel beams and girders supporting open-web steel floor and roof joists. The substructure is composed of cast-in-place concrete stem walls and piers supported by spread footings.

### EXISTING SOUTH WING – TICKETING HALL, AIRLINE TICKET OFFICES, AIRLINE SUPPORT AREAS, AND BAGGAGE SCREENING

**Existing System**
The proposed ticketing hall, ATOs, airline support areas, and baggage screening areas are located in the south wing. In 2012, the south wing was significantly remodeled, and two additional bays were added extending the footprint roughly forty feet to the south. The south wing is a single-story structure supported by either wide flange steel columns and girders arranged on a rectangular grid spanning approximately 20-foot in each direction, or by concrete masonry units in the southernmost, post-2012 bays. The structure is primarily enclosed by concrete masonry unit (CMU) infill. The roof of the structure is composed of open-web steel joists, galvanized steel decking, and membrane roofing over rigid insulation. The roof spans from east to west with slopes of 0.5:12, draining to the approximate center of the structure. The top of masonry on both the east and west elevations is 18'-8" above finished floor.

**Potential Impacts**
The potential impacts proposed by the preferred alternative in the south wing are relatively low. Most of the impacts to the existing construction will be to non-load bearing partitions. Care will need to be taken to account for existing structural columns and CMU walls in the pre-2012 portion of the structure. The proposed expansion to the south and west will require the foundation and CMU bearing walls be expanded accordingly.

**Additional Considerations**
Adding a second level to the existing portion of the south wing would likely be an invasive undertaking. There is no indication to suggest that the structural system in this area was provisioned for the loads imposed by such an undertaking. That said, adding a second level to the portion of the south wing anticipated to be expanded under the scope of this work should be included in the structural design of the expansion, whether that level is added as part of initial scope or as a later phase.

## EXISTING NORTH WING – LANDSIDE CONCESSIONS, TSA OFFICES, BAG CLAIM HALL, AND BAGGAGE LAYDOWN

**Existing System**
The proposed landside concessions, TSA offices, bag claim hall, and baggage laydown are located in the north wing. The north wing was originally constructed in 1978 and expanded in 2019. This wing encompasses the original building and includes two items that warrant additional consideration. First, portions of the original foundation are roughly two feet higher than the rest of the building. Second, the FAA air traffic control tower (ATCT) occurs above the first floor. Because both of these elements were constructed prior to 1978, only limited information is available regarding their construction and structural details.

The north wing, with the exception of the FAA ATCT, is a single-story structure supported by either wide flange steel columns and girders arranged on a rectangular grid, CMU, or reinforced concrete. The structure is enclosed by precast concrete panels or CMU infill. The roof of the structure is composed of open-web steel joists supporting two inches of concrete over steel deck.

**Potential Impacts**
The potential impacts proposed by the preferred alternative in the north wing are generally related to the lack of flexibility associated with the existing elevated slab and control tower. The relocated bag laydown area will need to be able to accommodate the existing finished floor elevation, approximately two feet above the claim hall floor elevation. Impacts beneath the control tower appears to be primarily related to non-load bearing partitions. With that said, structural plans of the pre-1978 structure are not available, so confirmation of the primary structural components will be required during design phases. It appears that the control tower is supported by cast-in-place concrete walls which stop at the second level. Again, attention should be given during design refinement to accommodate existing columns and shear walls to the extent possible.

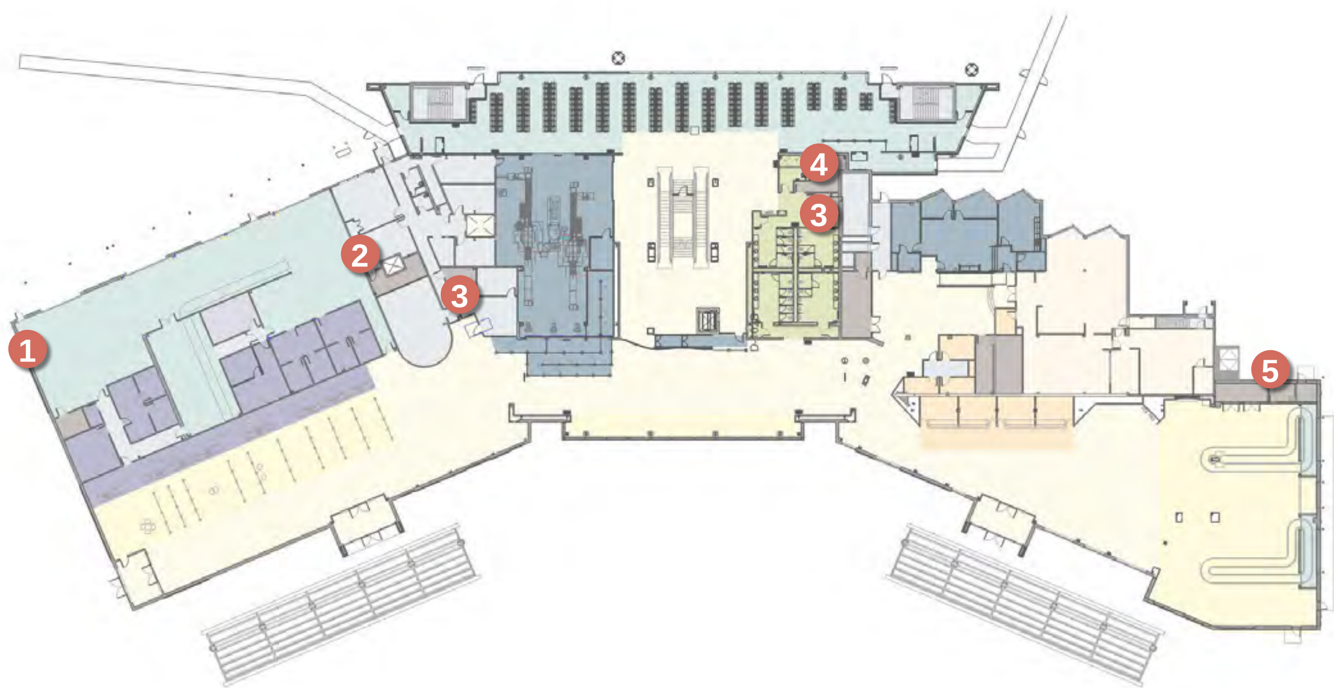
**Additional Considerations**
Access to the administration offices from the central portion of the structure is planned to occur as an open walkway on the second level. Careful consideration will be given to using existing roof structure over the north wing to support the new administration access while minimizing the disruption of the first level.

## PROPOSED NORTH WING EXPANSION – GATE HOLDROOM AND AIRPORT ADMINISTRATION

**Potential Impacts**
The proposed holdroom on the first floor and airport administrative offices on the second floor would extend the north wing to the west. Since this region is currently used for aircraft parking and baggage handling, there are no anticipated conflicts with existing structural systems. With that said, careful consideration should be given to utilities and other services that could be interrupted by the required foundation.

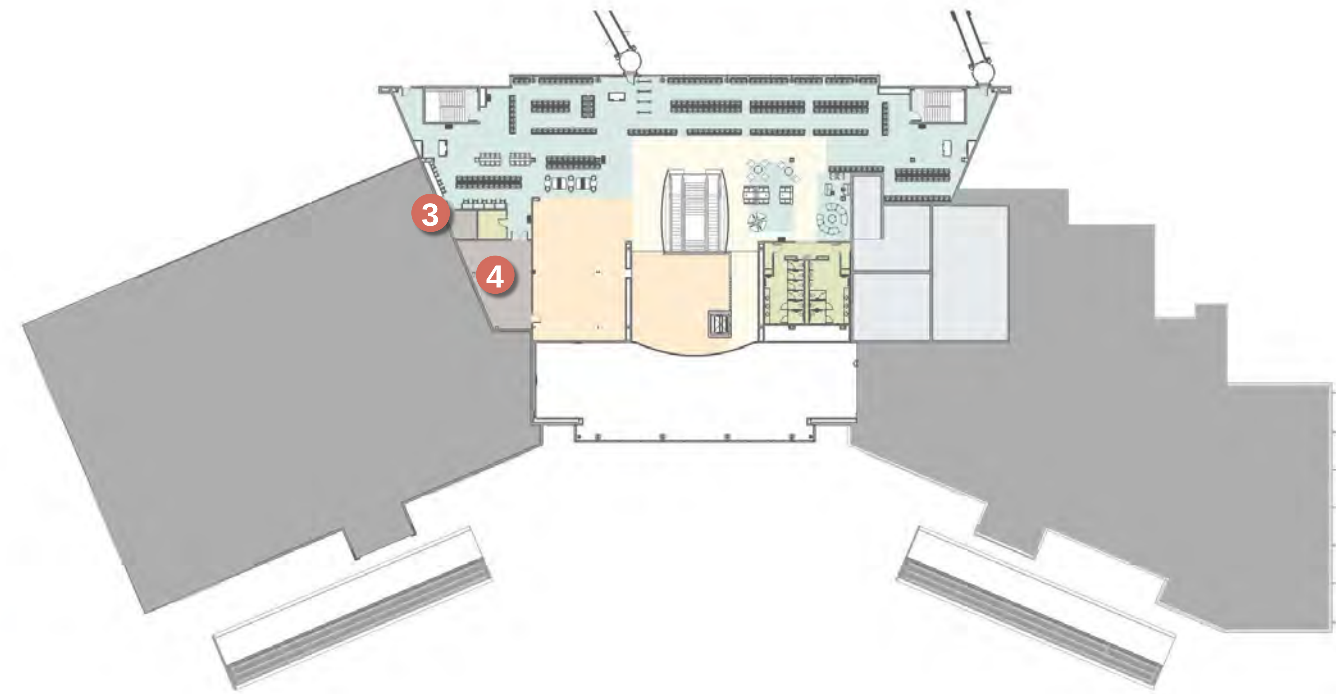
**Additional Considerations**
Access to the administration offices from the central portion of the structure would occur as an open walkway on the second level. Such an option would inevitably include the addition of columns in the Great Hall. Careful consideration will be given to using existing roof structure over the north wing to accommodate the new walkway while minimizing disruption to the first level.

## MECHANICAL, PLUMBING, ELECTRICAL




EXISTING MEP INFRASTRUCTURE — GROUND LEVEL

Not to Scale




EXISTING MEP INFRASTRUCTURE — UPPER LEVEL

Not to Scale

### DIAGRAM KEY NOTES

1. Existing main electrical feed
2. Existing mechanical shaft
3. Existing electrical room
4. Existing mechanical room
5. Existing baggage handling system (BHS) motor control panel (MCP)

Note: Basement areas serving MEP functions are not shown.

## MECHANICAL AND PLUMBING SYSTEMS

### EXISTING MECHANICAL INFRASTRUCTURE

1. Existing Chiller
   - A. 135 ton chiller is twenty years old, nearing end of useful life
   - B. Current size is adequate only for current building. Any expansion would require more capacity.
   - C. No redundancy. Single point of failure.
2. Existing Boiler
   - A. Over twenty years old, nearing end of useful life
   - B. Current size is adequate only for current building. Any expansion would require more capacity.
   - C. No redundancy. Single point of failure.
3. Existing HVAC
   - A. There are five indoor air handlers and at least four rooftop units currently serving the facility. The indoor air handlers are on the building chilled water and heating water systems. The rooftop units are natural gas heat and DX cooling.
   - B. Many of the units are smaller and serve adjacent areas. This causes both temperature and pressure differences in the spaces.
4. Existing plumbing
   - A. Majority of plumbing is original to the building.
   - B. Multiple repairs were observed to sanitary system during site visit and facility staff noted that it is difficult to repair and tie into the fragile existing cast iron system.

### NEW MECHANICAL INFRASTRUCTURE

1. Chillers
   - A. A new chilled water system with redundancy will be provided with the expansion. System to include:
     - 1) Two or more screw chillers. Estimated at 75 tons each. Final sizing based on extent of expansion.
     - 2) Pumps and associated valving and components necessary for complete system
2. Boilers
   - A. A new heating water system with redundancy will be provided with the expansion. System to include:
     - 1) Two or more boilers. System will need further evaluation to determine if condensing boilers are an option.
     - 2) Pumps and associated valving and components necessary for complete system
3. Air Handlers
   - A. Existing air handlers in the building will be consolidated to provide better temperature and pressure control.
   - B. Existing rooftop air handlers will be consolidated to provide better temperature and pressure control. These units will be connected to the building heating and chilled water systems.
4. Plumbing System
   - A. With the renovations and floor plan changes of the building the plumbing system will be allowed to be upgraded. System improvements anticipated:
     - 1) New sanitary waste system
       - a. PVC piping below grade
       - b. Cast iron above grade
     - 2) New domestic water system
       - a. Copper with brazed/sweat joints
       - b. High efficiency natural gas water heating plant with circulators

## ELECTRICAL SYSTEMS

### EXISTING ELECTRICAL INFRASTRUCTURE

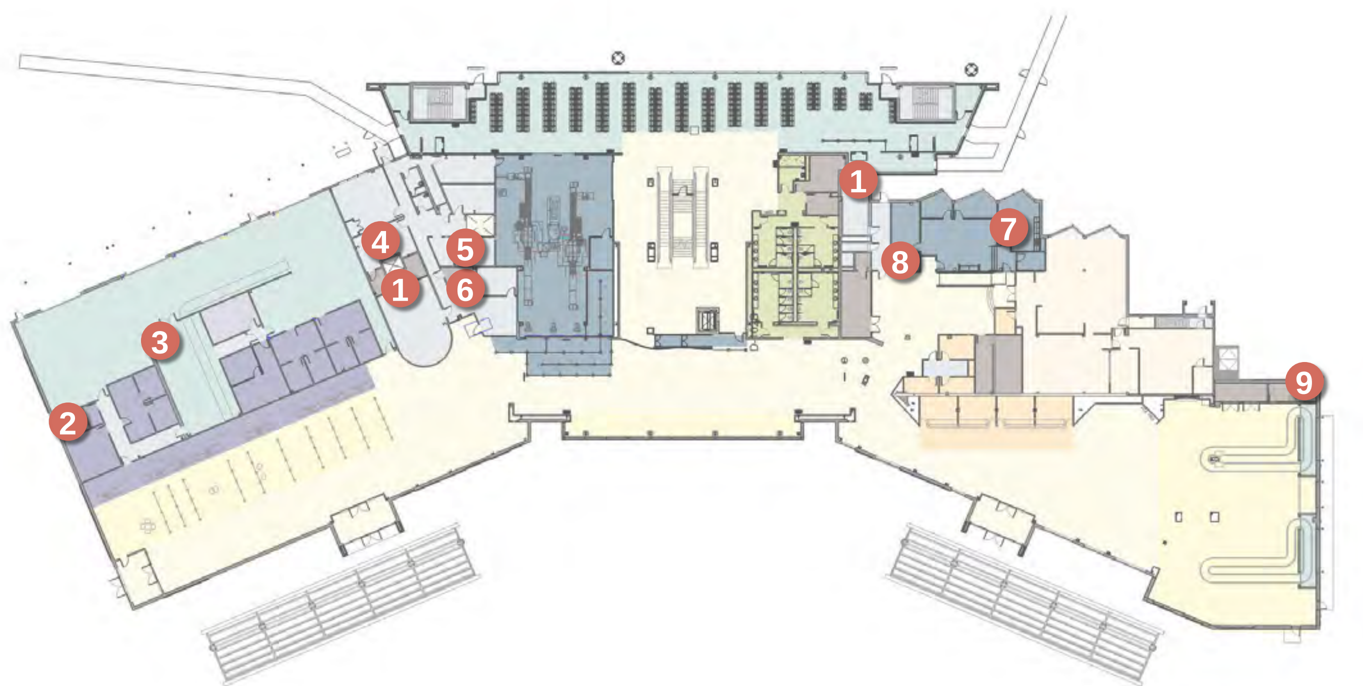
1. Existing Terminal is fed from three electrical services.
   - A. 4000amp 208/120v service located in the basement on the north side of the terminal. Installed 1979. (fused switches)
   - B. 800amp 480/277v service located in basement under Administration Department. Installed 1979. (fused switches)
   - C. 800amp 480/277v service located on south wall of outbound bag room. Installed 2012. (circuit breakers)
   - D. Both of the electrical services installed in 1979 are at the end of their useful life. The manufacturer is no longer making replacement parts for this gear.
   - E. Both 480/277v services conflict with new growth. Specifically, the utility padmount transformers and feeder placement are a concern, depending on which Terminal Expansion scheme is selected.
2. Existing Generator
   - A. Existing 265kW/313kVA generator is twenty years old, nearing end of useful life.
   - B. With new planned Terminal expansion, a larger generator will be required to support growth. The size of the generator may vary, depending on what level of service is desired for the terminal while on generator.

### NEW ELECTRICAL INFRASTRUCTURE

1. Electrical service
   - A. A new main electrical room will be required at the south end of the terminal (Approximately 12'x 20') this room could incorporate the existing 2012 service.
   - B. A new utility service will be required. This will include a new padmount transformer and utility connection cabinet for new electrical service.
   - C. A new 3000amp, 480/277v, 3-phase, 4-wire electrical service will be installed adjacent to the 2012 electrical service on the south end of the terminal. This service could be 100% backed up by generator power.

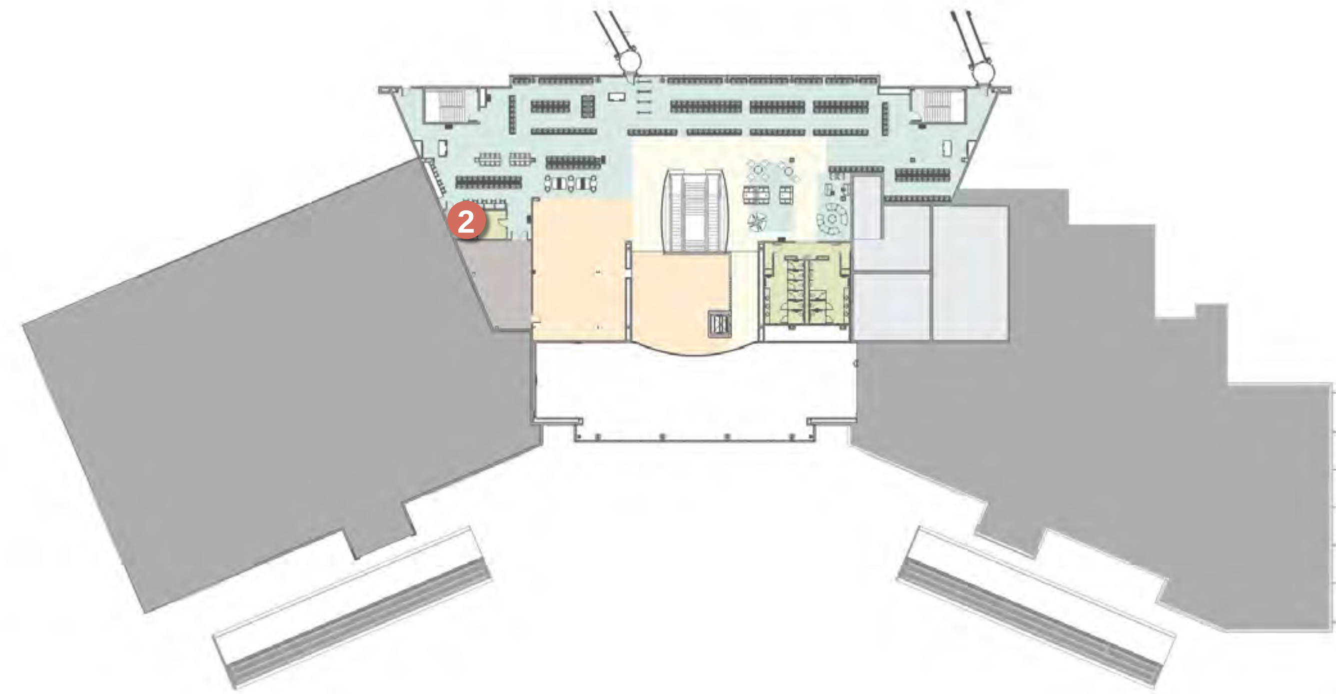
# 06 SYSTEMS NARRATIVES

## IT/SECURITY




### EXISTING IT/SECURITY INFRASTRUCTURE — GROUND LEVEL

Not to Scale




### EXISTING IT/SECURITY INFRASTRUCTURE — UPPER LEVEL

Not to Scale

### DIAGRAM KEY NOTES

1. Existing security equipment room
2. Existing airport telecommunications room (TR) and security equipment room
3. Existing TSA IT cabinet
4. Existing security monitoring room and badging office
5. Existing main communications room (MCR)
6. Existing main point of entry (MPOE) in basement below
7. Existing security panels in basement below
8. Existing TSA IT room
9. Existing security equipment closet

## TECHNOLOGY AND SECURITY SYSTEMS

### EXISTING CONDITIONS

**Site-wide Communications Infrastructure**
Main Point of Entry (MPOE) for analog copper cabling from utilities and fiber optic cable from Idaho Falls 911 Center is in the Terminal Basement.

**Terminal Backbone Cabling**
The fiber optic backbone system consists of multimode and single mode cables from the Level 1 Main Telecommunications Room to Communications Rooms (CRs) throughout the existing terminal and concourse. The cables are routed in a variety of cable trays and conduits. The strand count to each CR varies and is connected to the LAN network to operate the current data network and other special systems.

**Terminal Horizontal Cabling**
Horizontal cabling (the portion of the telecommunications infrastructure that extends from CRs to individual data outlets)has been installed as needed over time, consisting of Category 5e and 6 cables. In addition to the Airport's horizontal cabling, the terminal contains cabling that belongs to Telecom and airlines. These cables provide telephone, television, and data services.

**Telecommunication Room Facilities**
The existing Main Telecommunication Room (TR) is on the main level of the existing terminal and is fed from the MPOE room in the basement. Various other telecom rooms serve the voice, data, and security equipment.

**Network/Wi-Fi**
Idaho Falls City IT manages the airport's network switches, a part of City environment with one overall network with separate VLANs for airport systems. The network equipment is based upon Cisco products.
Lumen and Syringa are the current internet service providers (ISPs) at IDA. The airport Wi-Fi access points are managed by Silver Star, local ISP.

**Voice Communications System**
Idaho Falls City IT manages the airport's phones, currently Shoretel (Mitel).

**Electronic Visual Information Display System (EVIDSs)**
The existing system is Prodigiq, a cloud-based system for the FIDS / BIDS software. The EVIDS contains display devices throughout the existing terminal, concourse, gate podiums, and baggage claim areas. Flight Information Display System (FIDS) banks typically show arrivals and departures for the entire airport. Baggage Information Display Systems (BIDS) screens display flight baggage information at the baggage claim belts. A Gate Information Display System (GIDS) screen is located at each gate back wall to show information about the departing flight. The typical display device is a LCD flat panel with an attached PC. The FIDS has data feeds from the cloud hosted Prodigiq service to obtain flight schedule information and flight status updates.

**Paging System**
The existing multi-vendor paging system provides informational and regulatory announcements to passengers and the public. Most of the existing terminal and concourse are served by an outdated system. The PA head end equipment and amplifiers are located in the Basement MPOE room. Speaker coverage is provided in the terminal public spaces and hold rooms. Messages are initiated by paging microphones located at the gate agent positions.

**Access Control System (ACS)**
Existing Genetec Access Control Panels are provided in various TRs and other equipment rooms serve ACS portals in the Terminal. Genetec Security Center software is provided at the Video Surveillance System (VSS) control and monitoring workstations at the Terminal Security Operations Center. The ACS server is hosted by the City Data Center with Genetec Cloud Link device at the airport.

The ACS ID Badging computer is located in the Security Monitoring Room / Security Operations Center (SOC). ACS portals in the existing terminal typically consist of ACS readers, magnetic locks, balanced magnetic switches, and audio/visual devices.

**Video Surveillance System/Storage**
A combination of 3X Logic and HIK Vision IP fixed and pan-tilt-zoom (PTZ) cameras provide video surveillance in the Terminal and concourse. A 3X Logic network video recorder is provided in the Level 1 Security Equipment Room. Video control and monitoring workstations are provided in the SOC and utilize 3X Logic Video Management Software. Video is viewed on the large format SOC video monitors.

**Tower Crash Phone System**
Existing tower crash phones are located in the SOC, ARFF and City 911 Center. Dedicated ring down lines are having audio quality issues.

**Radio / Distributed Antenna System (DAS)**
The Radio system is part of the Idaho Falls City Radio system. The City 911 system dispatches to local police. Airport does have a dedicated radio channel.
There is no current DAS. Local cellular signal coverage is adequate for current needs.

**Shared Use Passenger Processing System**
There is no current Shared Use system at the airport. The Airlines use proprietary passenger processing systems.

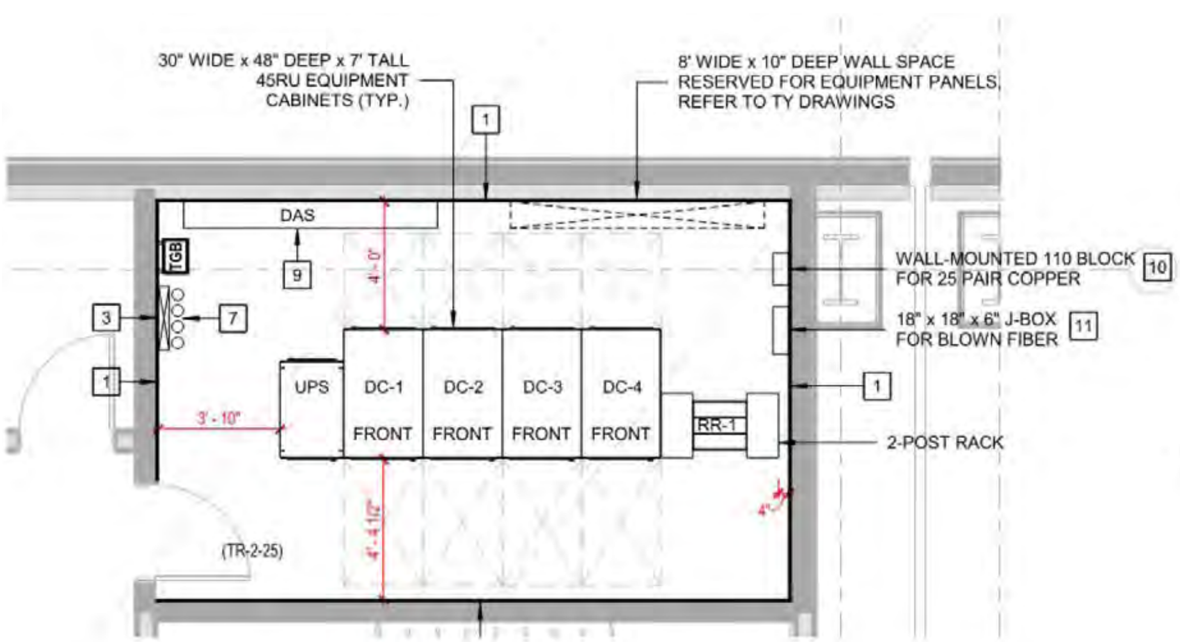
## TECHNOLOGY AND SECURITY SYSTEMS (CONTINUED)

### RECOMMENDATIONS & SCOPE OF WORK

**Telecommunications Rooms (TRs)**
TRs shall consist of equipment cabinets, cable tray, ladder rack and conduit for IT and Communications Systems equipment and devices. The nature and complexity of the IT and Communications Systems within the TRs shall be dependent upon the types and locations of the rooms. TR space shall be required for different uses – airport systems, airline systems, tenant systems, and TSA systems. Locations for TRs shall be driven by the need for communications systems, and the requirement to provide coverage for all parts of the terminal and concourse within limitations of ethernet distance and other system cabling. It is anticipated the existing main telecommunication room (MTR) and the SOC in the Terminal shall be demolished based upon the new architectural layouts and a new MTR and SOC (20' x 20') will be required to be built in the terminal renovation.

**TR Requirements**
Communications Room locations shall depend on architecture and spacing required by maximum TIA/EIA cable length. It is anticipated the existing TRs in the Terminal may be impacted by the new architectural layouts and that new TR(s) (12' x 18') shall be required to be built in the terminal renovation.

**Main Telecommunications Room (MTR) Locations**
The MTR shall be located in the Main Level of the terminal. It shall contain core/distribution LAN equipment and head-end equipment for telephone, security, airport operations and other communications systems. The MTR shall serve as the primary hub for backbone cabling. Backbone cabling shall be provided from the MTR to all other TRs. The minimum room dimensions shall be 12' x 24'.




### PROPOSED TYPICAL TR DIAGRAM
Not to Scale

**TR Locations**
TRs, also referred to as Intermediate Distribution Frames (IDFs), shall be located throughout the terminal and concourse to provide ubiquitous coverage within ethernet distance limitations. TR locations shall enable all areas of the terminal to be reached with horizontal data cabling less than 260 ft long, when routed parallel and perpendicular to the building structure. Horizontal data cabling for voice, data, wireless, security systems and other IT and Communications systems shall terminate in TRs. Each TR shall connect to the MTR using fiber optic and copper backbone cables. The minimum room dimensions shall be 12' x 18' for shared use TRs.

**Space and Mounting**
Equipment racks and cabinets shall be located to maintain approximately three feet between rows of cabinets or racks and walls or protruding edges of wall-mounted equipment. Sufficient space for HVAC equipment required to serve IT and Communications Rooms, either floor- or ceiling-mounted, shall be required.

Cabling in the MTR and TRs shall be supported by cable ladder rack above equipment cabinets and along the walls. Fire rated plywood or fire-retardant painted AC grade plywood shall be provided on MTR and TR walls for attachment of wall-mounted equipment. Anti-static flooring is recommended in the MTR and TRs.

**Power and Environmental**
All critical communications systems equipment shall require access to power backed up by emergency standby generators and Uninterruptible Power Supplies (UPS). The UPS shall be sized to support a minimum of twenty minutes of operation or until the emergency stand-by generators take over.

All TRs shall require year-round cooling average 72 degrees F.

**Future Expansion Capability**
The MTR and TRs shall be designed to facilitate changes and growth in the airport's operations. The intent shall be to provide rooms that have space allocated for future additional equipment cabinets. This shall require mechanical and electrical systems to have similar spare capacity or the capability to expand in the future.

**Passive Infrastructure**
The passive communications infrastructure shall include conduits, cable trays, fiber optic cabling, copper cabling and termination hardware. The passive infrastructure shall be designed with flexibility and sufficient capacity to act as the foundation for all communications and security systems.

**Terminal Pathway Infrastructure, Backbone and Horizontal Cabling**
Cable raceways shall consist of the conduit, cable tray or other similar pathways, and the termination boxes that carry low voltage cables.

The in-building backbone cables shall be OS2 9/125-micron single mode fiber optic cables to each TR from the MTR. The fiber optic backbone cabling system shall support high bandwidth requirements. Fiber optic cabling shall be terminated on LC connectors in patch panels at the MTR and TR equipment cabinets.

## TECHNOLOGY AND SECURITY SYSTEMS (CONTINUED)

Copper backbone cabling shall be provided from the MTR to each TR as needed for Tenant voice and data communications. It shall consist of 100 ohm 25 multi-pair cable in compliance with ANSI/TIA/EIA-568-B.2. The copper cabling shall support analog and digital telephone requirements as needed.

The horizontal cabling shall consist of Category 6A Unshielded Twisted Pair (UTP) cables extending from each TR to each telecom outlet. Single mode or multimode fiber optic cabling may be terminated in telecom outlets where required for high bandwidth needs or exterior mounting. Horizontal fiber optic cabling shall be OM4 50/125-micron multimode on an as needed basis. Outlets shall be configured with a quantity of cables and types appropriate for the location. Pathways shall meet code requirements and conform to ANSI/TIA-569. The cabling shall be planned to accommodate future equipment needs, diverse and increasing user applications, ongoing maintenance, relocation, sustainability, flexibility and service changes. In TRs, all cables shall be terminated on rack mounted modular terminating patch panels.

The maximum horizontal cable length shall not exceed 260 ft for Category 6A cables. The additional length of patch cords and service loops within CRs shall not cause the total channel length to be more than 325 ft. In most areas of the terminal, wall-mounted RJ-45 outlets shall be used, cabled via metal conduit installed in the walls. Floor boxes shall be required in some areas.

**Voice Communication Service**
Existing Shoretel (Mitel) VOIP phones provided by the City IT department are expected to be utilized.

**Local Area Network (LAN) / Wi-Fi**
The LAN is a collection of communication equipment that connects computers, servers and peripherals, and allows them to communicate with one another. LAN switches shall be installed inside TRs that are interconnected using the fiber optic backbone. Connectivity from LAN switches to end user equipment is accomplished using the horizontal cable system.

All IP-based devices shall share the common physical LAN infrastructure and shall include video, voice and data services, wireless networks, building automation, overhead paging, airline VLANs, advertising system VLAN, and airport operating systems.

Core/Distribution Layer routing and switching shall be provided by equipment located within the MTR. Access Layer switching shall be provided by 48-port Power over Ethernet (PoE) and PoE+ switches configured in a stack topology with two connections to the MTR via the redundant backbone topology.

Any new network switches or wireless access points shall be Cisco and provided by the Idaho Falls City IT Department.

**Electronic Visual Information Display System (EVIDS)**
The Electronic Visual Information Display System shall be an extension of the Prodigiq system. The EVIDS is a set of client-server and web-based applications that manage and disseminate important flight information such as flight times and gate and baggage information to the traveling public, operational personnel, and airport administration. EVIDS shall encompass a number of sub-systems, including:

- Flight Information Display System (FIDS)
- Baggage Information Display System (BIDS)
- Gate Information Display System (GIDS)
- Counter Information Display System (CIDS)

Information shall be displayed to passengers and the public throughout the airport using banks of screens. Displays shall be positioned to minimize glare from exterior glass walls or skylights. Operational personnel may access flight information in airline offices and ramp operation spaces using displays or workstations.

**System Design Guidelines, Hardware and Equipment Locations**
Display screen quantities and orientation shall vary by location. The use of 55” LCD screens shall be the typical standard. Display screens shall be located at gate podium back walls, hold rooms, ticketing hall, baggage claim, concourse and security checkpoint. Display devices shall have display controllers connected to the airport network.

FIDS shall be located at several points in the terminal at landside and airside areas.

BIDS shall be located at baggage claim areas for the public and passengers. Outbound baggage make up areas shall be provided with baggage information displays for airline personnel. Baggage claim input stations shall be provided to allow airline ramp personnel to update flight information for baggage claim displays.

GIDS shall be provided at each gate podium back wall to display information for passengers as they wait in the hold room. The screens shall show updated flight status information in a format customizable per each operating airline.

CIDS shall be provided at each ticket counter to display airline information.

**Space and Mounting Requirements**
Casework design and millwork requirements shall be coordinated with Architect.

## TECHNOLOGY AND SECURITY SYSTEMS (CONTINUED)

**Common Use / Shared Use Systems**

Common Use Systems are integrated systems for sharing of passenger processing systems to maximize airport facility access and allocation through non-dedicated resources. It is a viable alternative to the traditional approach, which uses proprietary/exclusive-use models. Common Use Systems are airport-operator-provided hardware and software systems that provide an interface through which airline-proprietary systems as well as common resources can operate with increased facility utilization and flexibility. The concept development of Common Use Systems shall be based on International Civil Aviation Association (ICAO) and International Air Transport Association (IATA) standards.

Common Use Systems encompass Common Use Terminal Equipment (CUTE), Common Use Self Service (CUSS), Baggage Reconciliation System (BRS), and Resource Management System (RMS). The Common Use Systems utilize common workstations and peripherals among the various operating airlines of which, upon authentication, the system connects the airline agent to the requested airline host system. The system provides full access to airline host applications (or local departure control for non-hosted or charter airlines) including searching flight information and passenger records, updating travel information, and printing boarding passes, baggage tags and flight manifests.

Common Use Systems may be utilized for specific gates as deemed by the airport in coordination with the airlines. Common Use Self Service kiosks may be utilized by customers of multiple airlines.

**System Design Guidelines, Hardware, Equipment Locations**

CUPPS workstations shall be provided with a computer workstation, flat screen monitor, multifunction keyboard, pointing device, automated ticketing and boarding pass printer, baggage tag printer, dot matrix printer (for printing manifests and passenger lists), and 2D bar code boarding gate reader (for scanning boarding passes at boarding gate locations).

CUSS kiosks shall be provided with a computer workstation, 2D bar code reader; credit card reader, optical and e-passport reader, touch screen, automated ticketing and boarding pass printer and baggage tag printer (or space for future implementation of baggage tag printer).

Deployment of common use systems shall require equipment at TBD gates, TBD check-in counters, TBD common-use self-service areas.

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**Public Address (PA) System**

The PA system shall provide the ability to distribute intelligible and uniform audio signals with the proper Sound Pressure Level (SPL) to specific groups of speakers or zones in public areas of the terminal. The system shall consist of field equipment, including speakers, cabling, paging microphones; and head end equipment, including overall paging control system, digital signal processor, and amplifiers.

The system shall provide “zoned” and “all call” paging as required. The PA system shall be an IP based system that utilizes the network for distribution of audio programming from the head end to the distributed PA amplifiers and field equipment. The ability to page from individual microphones/paging stations or the delivery of automated messages to specific zones shall be fully programmable. The system shall provide for the ability to page from the telephone system by authorized users, as required. The system shall record messages and queue the playback in order to avoid different messages at adjacent zones playing simultaneously.

**PA System Design Guidelines**

The terminal shall be zoned with the following functional areas grouped together. Large spaces shall be divided into multiple zones so that amplifier loading is not exceeded.

- Ticketing Lobbies
- Security Screening Checkpoint Queuing Areas
- Baggage Claim Areas
- Meeter/Greeter Lobbies
- Security Screening Checkpoint Post-Screening Areas
- Circulation Spaces / Common Concessions Areas
- Gate Hold Rooms

The PA system shall include the following typical equipment:

- Control System Units: These devices shall contain programming information for the system, direct announcements to be played on available channels, and shall store pre-recorded messages for playback.

They shall use the LAN to communicate with amplifiers and other devices

- Background Music Sources: These devices shall provide music signals for the system to play in selected areas while announcements are not being made
- Control Interface Modules: These devices interface with other systems, i.e. Fire Alarm System, to initiate action in the Public Address System or to allow the Public Address System to initiate action in another system
- Amplifiers: These devices shall amplify audio from the network and distribution to Public Address zones
- Ambient Noise Sensor Control Units: These devices receive and analyze ambient noise sensor signals and connect to the LAN to communicate with the amplifiers and system head-end
- Speakers: Ceiling and wall mounted speakers shall be utilized, depending on the architectural design and environment. Ceiling speakers shall be utilized wherever possible. Wall mounted speakers shall be utilized in areas where ceilings are too high or inaccessible for cable access.
- Ambient Noise Sensors: These devices shall be located in each Public Address zone to sense ambient noise levels so that volume levels can be adjusted automatically on a per-zone basis
- Microphones: These devices shall be located at in the SSCP, Ticketing and Gate Agent positions.

The system shall have servers located in the MTR. Amplifiers shall be distributed throughout the TRs. Amplifiers and microphone stations shall use the airport network to communicate with the paging system controllers.

**Space and Mounting Requirements, Systems Integration**
PA System head-end equipment amplifiers shall be housed inside TRs. Equipment shall be mounted inside lockable cabinets. Microphones shall require coordination with casework and airline service counters.
The PA system shall have interfaces with several systems including the following:

- Fire Alarm System
- EVIDS
- Telephone System

**Access Control System (ACS)**
The existing Genetec ACS System shall be extended to serve any new or renovated areas of the terminal or concourse.

The ACS shall provide the Airport with a CFR 1542 standards compliant and secure system for controlling and/or monitoring access of people crossing areas of differing security levels. The airport shall utilize the ACS in conjunction with the Video Surveillance System (VSS) to provide security and operational personnel with the information needed to securely operate, enforce and review safe airport operations. ACS design criteria has been formulated based on regulatory requirements, to provide a design basis for consistent security treatment between all security zones adhering to the Airport Security Plan.

The system shall control and monitor portals per current federal and local codes and regulations as well as airport operational requirements. Monitoring and control hardware and the associated system programming, integration, and configurations to support this operational model shall be provided.

**ACS Architecture and Portal Locations**
The server shall transmit ACS information for portals (doors, gates, etc.) throughout the Airport via intelligent field panels (IFPs). The ACS system topology shall provide IFP panels as necessary for the coverage of the terminal. The ACS system coverage shall provide protection for all security zone access points, critical infrastructure areas, airport defined restricted areas and airport operational and user requirements in the new facility.

Many of the portals that shall require access control treatment consist of doors and other openings that provide passage from the public areas (both public and sterile – post checkpoint) of the airport to the secure area of the airport.

Doors shall be grouped by types based on security and operational needs, as well as construction and architectural requirements. ACS controlled and monitored portal types and their respective locations include:

- Public to secure door
- Public to sterile door
- Sterile to secure doors
- Baggage belt opening
- Public to airline operations area/SIDA
- Public to sterile elevator
- Telecommunication room doors
- Jet bridge sterile to secure doors

**Video Surveillance System (VSS)**
The new VSS shall replace the 3X Logic system and provide surveillance per current federal, state, local and airport regulations and operational requirements. The VSS shall utilize the Genetec Security Center software for a unified security software interface with the ACS. All VSS servers and storage shall be commercial off-the-shelf, non-proprietary technology that shall support a wide variety of system architectures.
All new cameras shall be native IP cameras providing high resolution, high frame rate video feeds with the ability to stream live video to any authorized workstation connected to the network. High mega-pixel cameras shall be used to enhance surveillance capabilities and coverage by increasing resolution and field of views provided by each camera.

The VSS shall add video analytics capability to the system to enhance situational awareness. All devices shall be IP-based and leverage power over ethernet (PoE) for power.

Typical VSS camera locations are listed below:

- Terminal Perimeter Security
- Terminal Airport Operations Areas
- Security Screening Checkpoint, Queuing, Equipment and Passengers
- Baggage Belt Openings
- Outbound and Iinbound baggage conveyors
- Public to sterile doors – both sides
- Public to secure doors – both sides
- Airport and airline operations secured doors
- Public ticketing areas
- Public baggage claim areas
- Public lobby areas
- Public curbside areas
- Elevators and escalators entrances

**Workstations, Monitoring, Video Storage, Infrastructure**
VSS monitoring shall be located in the SOC. Additional workstations to expand existing monitoring shall be required based on expanded Airport Operational Model requirements and functions.

The storage requirements and hardware of the VSS shall be provided to support airport and VSS operational requirements for thirty days at full resolution and high-quality video.
Camera cabling: CAT 6A UTP cable shall be standardized for the horizontal run to cameras.

**Tower Crash Phone System**
A new crash phone system, compliant with FAA standards, shall be provided to replace the existing system. Speakers, strobes, and crash phones shall be provided in the SOC. New communication backbone cabling will be provided from the air traffic control tower (ATCT) to the SOC.

## BAGGAGE HANDLING SYSTEMS

### CHECKED BAGGAGE SCREENING ROOM AND INSPECTION SYSTEM

The bag screening room will be configured for two parallel CT-80DR screening machines. If only one CT-80DR is initially provided, the space reserved for the second screening machine will be filled with a roller conveyor connecting the second ticketing load belt with the second outbound makeup location. Additional roller tables will be used to transfer bags between the two screening lines until a second CT-80DR is installed, or during times when one screening machine has a significantly higher load than the other.

Ticket counter belts will be designed such that separate load belts feed each screening line. Transfer of baggage between the two lines (if any) will occur manually within the bag screening room.

### OUTBOUND BAGGAGE MAKEUP ROOM

The outbound baggage make-up room will replace the existing conveyor pier with two flat-plate carousels providing, in total, at least 80 linear feet of tug and cart parking, to accommodate the anticipated number of 30-min concurrent outbound flights. A separate carousel for each screening line is preferred for redundancy and ease of access between the bag screening room and the make-up area. However, a single large carousel accepting bags from both screening lines is also an option.

### INBOUND BAGGAGE LAYDOWN AND CLAIM CAROUSELS

The claim hall will be reconfigured to include one flat-plate claim device and one slope-plate device. The presentation frontage of these carousels will be comparable to the existing frontage. New stripping piers connecting to each carousel will provide, in total, at least 80 linear feet of tug and cart parking, sufficient for the anticipated number of inbound flights. This system configuration enables future expansion to the claim hall, including one or more future flat plate claim devices.

# 07 PROJECT PRIORITIES

# 07 PROJECT PRIORITIES

OVERVIEW, PRIORITY 1

## OVERVIEW

Throughout the course of this planning study, a variety of project priorities were discussed based on airport needs; pinch points in the current facilities; construction phasing; and funding possibilities. Portions of the terminal that have the greatest operational challenges, such as Ticketing/Baggage Makeup/Baggage Screening, Landside Restrooms, and the Security Checkpoint and queue are targeted for the first implementation. Other portions of the terminal that have been recently updated or modified, such as the Gate Holdrooms and Baggage Claim, were lower priorities in the immediate future as their operational trigger points will be exceeded further into the future than the earlier priority areas.

## PRIORITY 1

As described above, the first priority is largely focused on Terminal South and Terminal Central (Landside). It is anticipated to occur as two projects, phases of construction, and/or bid packages. These are referred to as Priority 1A and Priority 1B as follows:

### PRIORITY 1A

A new building expansion will be built to the west off the airside portion of the current facility to create a new baggage makeup area. The existing baggage screening room will be renovated and expanded into areas currently occupied by ATOs. The ticket counter positions will move back and west to the location of the current backwall behind the counters. As the existing ATOs will be affected by the ticket counter relocation, the expansion of the baggage screening room, and addition of building support functions, the ATOs will be reconfigured and expanded to include space for anticipated new airlines.

Priority 1A includes a modest building expansion to accommodate new gate holdroom space on both levels to the south of the existing gate holdrooms. This gate holdroom expansion should aid in accommodating additional flights by larger aircraft that are anticipated to be part of future flight activity. Additionally, on the upper level, the shell (structure and exterior envelope) of a larger gate holdroom and building support expansion over baggage makeup is anticipated to occur as part of Priority 1 work, while the finishes of these areas will not occur until a later priority, Priority 2.

Landside, Priority 1A includes work in the Great Hall, incorporating a new elevated arrivals exit lane on the upper level that spans the Great Hall overhead. Consequently, the new vertical circulation at the curbside façade will be part of Priority 1A, as well as the addition of up to two new exit breach control devices on the upper level. New landside restrooms, meeter-greeter/lounge seating, and landside concessions will be also incorporated in this vicinity as part of Priority 1A. To accommodate the building expansion for these functions as well as needed increased circulation width, the existing curtainwall at Terminal Central will be demolished and a new façade will be built closer to the existing curbside sidewalk.

Extensions to the existing curbside façades and canopies will be constructed as part of Priority 1A, to connect to the new south vestibule at Ticketing as well as the new north vestibule off the Baggage Claim Hall in Priority 3. Associated with these building expansions and curbside modifications, adjacent parking lots, curbs, and sidewalks will have updates. Site utilities such as electrical services will be reconfigured/refed.

Of note is that the special systems work anticipated to occur as part of the terminal renovation and expansion has been categorized as part of Priority 1A work. This grouping was determined due to the fact that any critical infrastructure or special systems work performed in earlier phases should also be in place to serve later phases of construction or renovation. Additionally, multiple components of critical building systems are at their end-of-life for useful service, and there is currently no redundancy in place. Thus, the design team recommends replacing these systems at the soonest possible time. That said, there is the possibility that some of the special systems work and costs could possibly be delayed to later phases if required to meet the airport's project needs. Finally, given the preliminary nature of this planning study, and without the full design of the systems completed at this stage, the special systems have been estimated on a per-square-foot basis. At the design progresses, these can be estimated with a greater degree of precision and accuracy.

### PRIORITY 1B

In Terminal Central, Priority 1B scope will include the renovation and expansion of the security checkpoint and associated queuing space. Initially, in Priority 1B, two screening lanes are anticipated to be deployed, with adequate footprint reserved for future implementation of the third screening lane in a later priority. Recomposure will expand and the law enforcement office (LEO) will be relocated. As the security checkpoint expansion is to occur in the current location of airport administration offices, the administration suite will be relocated within Priority 1B's new construction on the upper level over the baggage makeup building expansion, served by a new set of stairs and an elevator on the southwest end of the ticketing hall expansion.

## PRIORITY 2

Priority 2 is anticipated to include the interior finishes of the upper level gate holdroom expansion, the shell of which will have been constructed during Priority 1. By the time Priority 2 is implemented, air traffic is likely to have outgrown the existing gate holdroom areas including the additional finished areas on both levels, and the upper level holdroom area that had been shelled out in Priority 1 will be completed with interior finishes. This concourse expansion will also likely include additional concessions and building support spaces as may be needed to support the expanded gate holdroom, which will be studied in further detail as the planning and building design progresses.

Airside restrooms will be expanded in Priority 2, including taking over the footprint currently occupied by the landside restrooms. Additional amenities such as a SARA, nursing mothers' facilities, and a companion care restroom will also be provided as part of the airside construction during Priority 2.

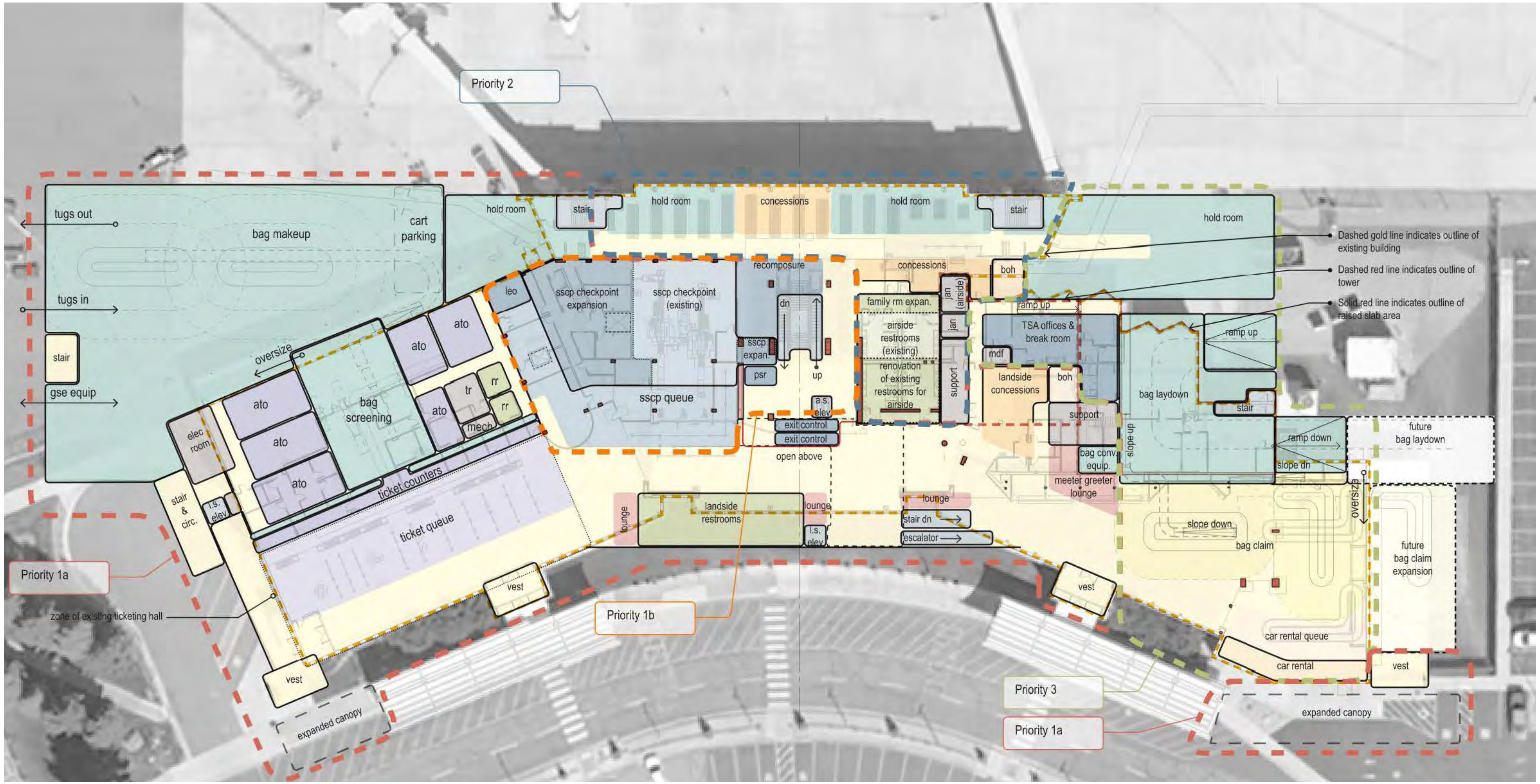
## PRIORITY 3

Priority 3 primarily targets Terminal North. A new single-story building expansion built to the north of the existing concourse will accommodate additional gate holdroom space on the ground level. Baggage Claim will be renovated to allow the reorientation of the claim carousels' main axis by ninety degrees, and a new baggage laydown area will be constructed largely within the existing building footprint in the currently decommissioned landside concession area.

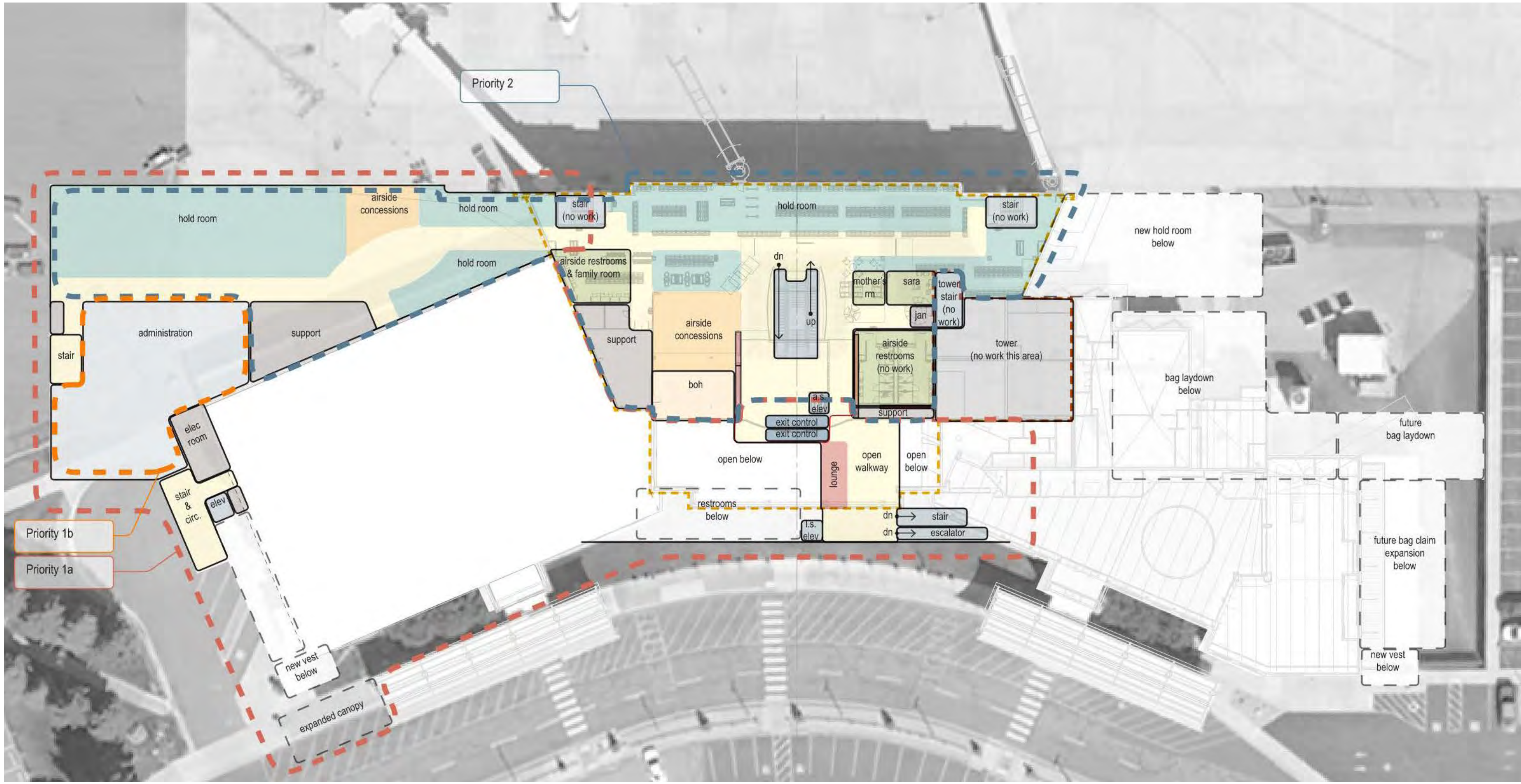
During Priority 3, rental car counters and associated queuing area will be relocated to the existing northeast corner of the Baggage Claim Hall.

Priority 3 will also include new egress circulation and limited renovation/expansion of the existing TSA office space in Terminal North, to be determined as needed at a later date.

## PRIORITIES DIAGRAM — LEVEL 1




PREFERRED OPTION PRIORITIES — GROUND LEVEL




PREFERRED OPTION PRIORITIES — UPPER LEVEL

## FUTURE PRIORITIES

Initial and future priorities' scopes will continue to evolve as the building design and planning progresses. At this time, it is anticipated that a future priority will include building expansions to the Baggage Claim Hall and baggage laydown to accommodate a third claim carousel and associated laydown space and belts.

# 08 ROUGH ORDER OF MAGNITUDE (ROM) COSTS & ANTICIPATED FUNDING ELIGIBILITY

## ROM COST SUMMARY

To the right is a summary of project anticipated rough-order-of-magnitude costs based on the preferred planning option and priorities shown in this terminal expansion study and documents. Given the preliminary nature of the planning study, and prior to development of more complete design and documentation, the estimated costs shown here are expected to be further refined and validated as the project moves into design. As construction systems and finishes, plus accompanying building special systems, have not yet been designed or determined at this early stage of planning, the numbers included here are rough estimate placeholders and may not reflect the actual costs. Furthermore, there is the option to shift portions of work from one priority to another or to a separate project. For example, in the cost estimate at right, special systems and building support equipment have been largely included in Priority 1, but some of that work might be able to be deferred until later phases.

The following are direct construction costs, or “hard costs” for the project. A more detailed breakdown of estimated costs can be found in the full cost report included as part of the Appendix.

Estimating design evolution has been included at 15% in the numbers under the column labeled “High.” This represents changes to, or further development of, the base assumptions for building components included here, providing some leeway for changes in scope or design that may arise through design phases.

While not shown in the chart, general contractor overhead has been included in the full cost estimate report at 19% (refer to the full cost estimate starting on page 105 in the Appendix). Given possible efficiencies between project phasing and the benefits gained in a CM/GC or other alternative project delivery methods arrangements, this percentage may be able to be reduced.

The values shown represent 2022 dollars and are not inclusive of escalation. Contingencies (owner’s contingency and project contingency) and owner’s soft costs are also not included. Owner’s soft costs might include but are not limited to design fees, construction manager fees, airport project staff, cost estimating, and other miscellaneous costs.

| | Unit Cost | | Estimate | |
|---|---|---|---|---|
| PROJECT | Low | High [1] | Low | High [1] |
| **PRIORITY 1A** | | | | |
| · Terminal South: Ticketing expansion/renovation -- vestibules and canopy extension, ATOs, airline storage, IT/building support, landside circulation, non-public restrooms, baggage screening and makeup expansion/renovation, upper level shell space (future gate holdroom, building support, admin)<br>· Terminal Central (Airside): Ground level gatehold room expansion<br>· Terminal Central (Landside): Great Hall renovation/expansion -- landside restrooms, janitor/support, baggage MCP room, meeter-greeter/public seating, vertical circulation, landside concessions, general circulation; elevated arrivals exit lane | | | | |
| Substructure | $12.04 | $13.85 | $ 835,318 | $ 960,616 |
| Shell | $120.00 | $138.00 | $ 8,327,686 | $ 9,576,838 |
| Interiors | $73.90 | $84.99 | $ 5,128,704 | $ 5,898,010 |
| Services | $208.49 | $239.76 | $ 14,469,010 | $ 16,639,362 |
| Equipment & Furnishings | $8.18 | $9.41 | $ 567,591 | $ 652,730 |
| Special Construction & Demolition | $5.42 | $6.23 | $ 376,106 | $ 432,522 |
| Building Sitework | $37.56 | $43.19 | $ 2,606,341 | $ 2,997,292 |
| *Subtotal Direct Costs* | | | *$ 32,310,757* | *$ 37,157,370* |
| **PRIORITY 1B** | | | | |
| · Terminal South (Upper Level): Airport adminstration suite interior fit-out<br>· Terminal Central (Ground Level): Checkpoint renovation/expansion into existing admin area | | | | |
| Substructure | $0.00 | $0.00 | $ - | $ - |
| Shell | $0.00 | $0.00 | $ - | $ - |
| Interiors | $72.97 | $83.92 | $ 1,133,616 | $ 1,303,658 |
| Services | $132.11 | $151.93 | $ 2,052,512 | $ 2,360,389 |
| Equipment & Furnishings | $4.00 | $4.60 | $ 62,144 | $ 71,466 |
| Special Construction & Demolition | $3.32 | $3.82 | $ 51,573 | $ 59,309 |
| Building Sitework | $0.00 | $0.00 | $ - | $ - |
| *Subtotal Direct Costs* | | | *$ 3,299,845* | *$ 3,794,822* |
| **PRIORITY 2** | | | | |
| · Terminal Central (Airside): Gate holdrooms renovation/expansion - holdrooms circulation, airside concessions, airside restrooms and amenities, vertical circulation, general circulation, arrivals secure exits, janitor/building support | | | | |
| Substructure | $5.08 | $5.84 | $ 189,648 | $ 218,095 |
| Shell | $0.00 | $0.00 | $ - | $ - |
| Interiors | $84.82 | $97.54 | $ 3,164,915 | $ 3,639,652 |
| Services | $147.76 | $169.92 | $ 5,513,317 | $ 6,340,315 |
| Equipment & Furnishings | $30.80 | $35.42 | $ 1,149,252 | $ 1,321,640 |
| Special Construction & Demolition | $3.60 | $4.14 | $ 134,370 | $ 154,526 |
| Building Sitework | $1.19 | $1.37 | $ 44,450 | $ 51,118 |
| *Subtotal Direct Costs* | | | *$ 10,195,953* | *$ 11,725,346* |
| **PRIORITY 3** | | | | |
| · Terminal North: Baggage Claim renovation - rental cars counters and queue, vestibules; Baggage Laydown expansion; TSA offices/building support renovation | | | | |
| Substructure | $9.74 | $11.20 | $ 184,560 | $ 212,244 |
| Shell | $54.78 | $63.00 | $ 1,037,654 | $ 1,193,302 |
| Interiors | $73.70 | $84.76 | $ 1,396,052 | $ 1,605,460 |
| Services | $225.76 | $259.62 | $ 4,276,556 | $ 4,918,039 |
| Equipment & Furnishings | $4.00 | $4.60 | $ 75,772 | $ 87,138 |
| Special Construction & Demolition | $8.76 | $10.07 | $ 165,912 | $ 190,799 |
| Building Sitework | $47.30 | $54.40 | $ 896,061 | $ 1,030,470 |
| *Subtotal Direct Costs* | | | *$ 8,032,566* | *$ 9,237,451* |
| **TOTAL PROBABLE DIRECT COST [2]** | | | **$ 53,839,121** | **$ 61,914,989** |

*Notes:*

*[1] Prices designated "High" include 15% estimating design evolution.*

*[2] Not included: general contractor's markups and overhead, owner's soft costs, owner's contingencies, escalation.*

## FUNDING INTRODUCTION

Idaho Falls Regional Airport (IDA) is included in the National Plan of Integrated Airport Systems (NPIAS), and it is eligible to receive Airport Improvement Program (AIP) and Passenger Facility Charge (PFC) funding through the Federal Aviation Administration (FAA) for projects that meet requirements stipulated by the FAA. Generally, costs for construction, reconstruction, or rehabilitation may be eligible for funding, while maintenance is considered ineligible. The AIP Handbook defines spaces' eligibility as "public use areas that are directly related to the movement of passengers and baggage in terminal facilities."

Projects to improve and expand the terminal building will be funded by a combination of AIP grants, PFCs, and local funds. The eligibility of each project will vary in accordance with the specific elements and scope of work, based on FAA criteria. These criteria are described in the FAA's AIP Handbook and FAA Order 5500.1, Passenger Facility Charge. For the elements that remodel or expand the terminal building, the eligibility will be based on the use of the individual spaces that make up each project. For the replacement of MEP systems that serve the entire building, the eligibility will be based on the overall eligibility of the entire terminal building at the conclusion of the project. Items such as passenger boarding bridges and walkways would be 100% eligible.

For projects funded under the AIP program, the $20 million cap for discretionary funding at Nonhub airports will need to be considered in the funding of future projects. AIP 44 and AIP 47 both used AIP discretionary funding totaling approximately $10.9 million. This would leave approximately $9.1 million in remaining discretionary funding unless the $20 million cap is increased or lifted. Bipartisan Infrastructure Law (BIL) terminal funding is also available for FY22-25. This funding is administered under the AIP program but does not count towards the $20 million discretionary cap. The match on BIL funds, 95%, is also slightly higher than normal match of 93.75% at IDA.

## ANTICIPATED ELIGIBLE AREAS

The charts on the following pages represents areas of the project currently anticipated to be eligible to receive funding through AIP or other federal funding sources. The FAA Airport District Office (ADO) serving IDA based in Helena, MT will be responsible for reviewing and determining the project's actual eligibility for AIP/PFC funding.

Currently IDA is designated as a Nonhub commercial service airport according to the FAA. As enplanements continue to increase, the airport may move from Nonhub to Small Hub. The eligibility of projects at small hub airports is more restrictive than the eligibility at non hub airports. The analysis below was completed assuming the airport remains a non-hub airport when these projects are implemented.

### PRIORITY 1A

The elements associated with this project are estimated at an overall eligibility of 83%. This eligibility assumes both that the airport administration offices will be relocated to the new second level over the new baggage makeup area, and that the ATO remodel is included as part of the project. If the airport administration offices were relocated to a different area inside the terminal or to a new facility outside the terminal, the eligibility of the project would increase to 90%. If the ATO offices were completed as a separate project the eligibility would increase to 93%.

### PRIORITY 1B

The elements associated with this project are estimated at an overall eligibility of 83%. This eligibility assumes the airport administration offices are relocated as part of the project. If the administration offices were completed as a separate project, the overall eligibility would increase to 98%.

### PRIORITY 2

The elements associated with this project are estimated at an overall eligibility of 89%. This eligibility assumes the concessions are included as part of the project. If the concessions were completed as a separate project, the overall eligibility would increase to 94%.

### PRIORITY 3

The elements associated with this project are estimated at an overall eligibility of 88%. This eligibility assumes the TSA break room is included as part of the project. If the TSA break room were completed as a separate project, the overall eligibility would increase to 96%.

# 09 PROJECT DELIVERY METHODS

# 09 PROJECT DELIVERY METHODS

## OVERVIEW


PROJECT DELIVERY METHODS BASED ON RELATIONSHIPS BETWEEN PROJECT TEAM MEMBERS

## INTRODUCTION

The success of a large-scale project such as a terminal renovation and expansion depends on the contributions of the various team members, including the owner, the design team, and the contractor, as well as the strength of the arrangement of relationships between these players.

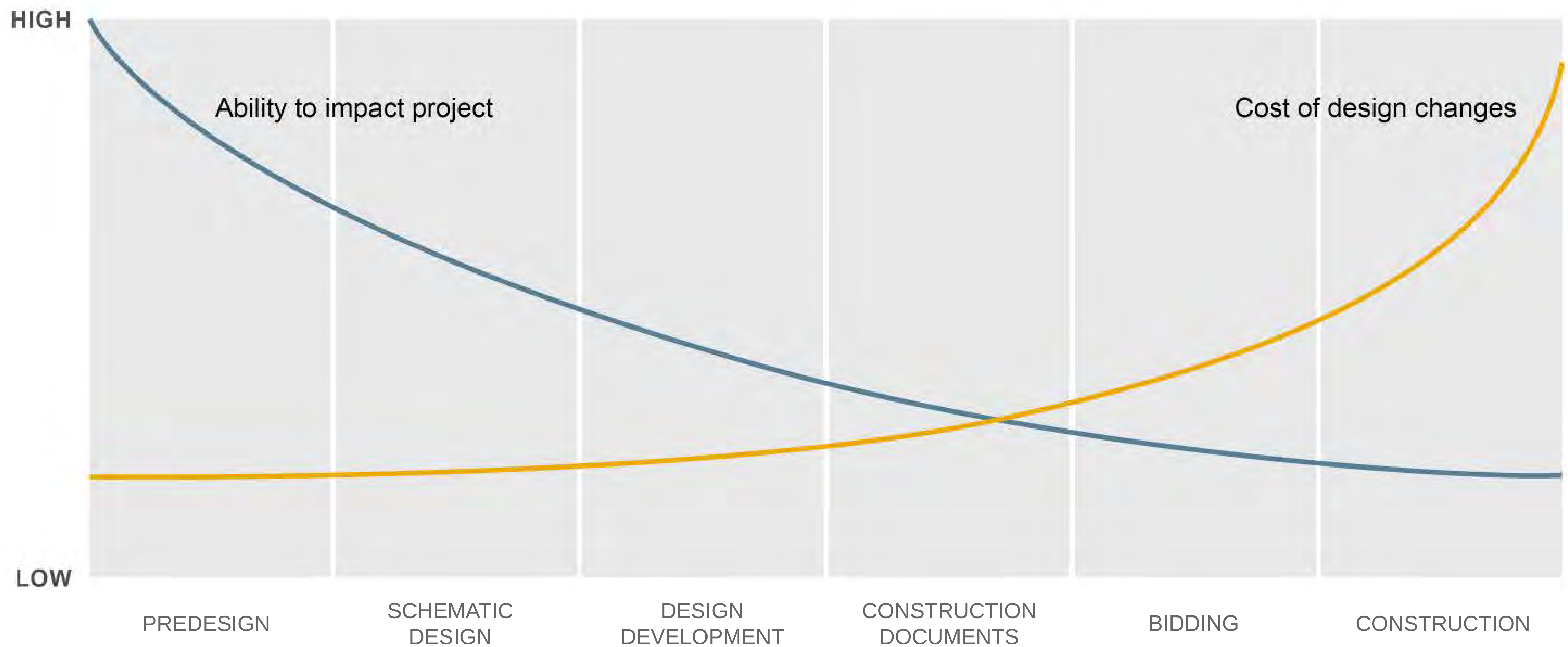
While historically projects of all types and scales have typically utilized “conventional” project delivery, or design-bid-build, increasingly owners are choosing to consider alternative project delivery methods to leverage the efficiencies and strengths of other methods.

The cost of design changes is inversely proportional to the level of development of the design, or more specifically the project design phases. Early in the project, such as during planning studies or concept/ schematic design phases, changes to the design will have relatively small direct cost impact to the project, both in time and financial expense. As the project progresses through design, more aspects are further resolved and coordinated, and a seemingly small change may have more significant impact on cost and time. Once a project is bid out, or other contractual cost relationships with the contractor are established, design changes become more costly to implement.

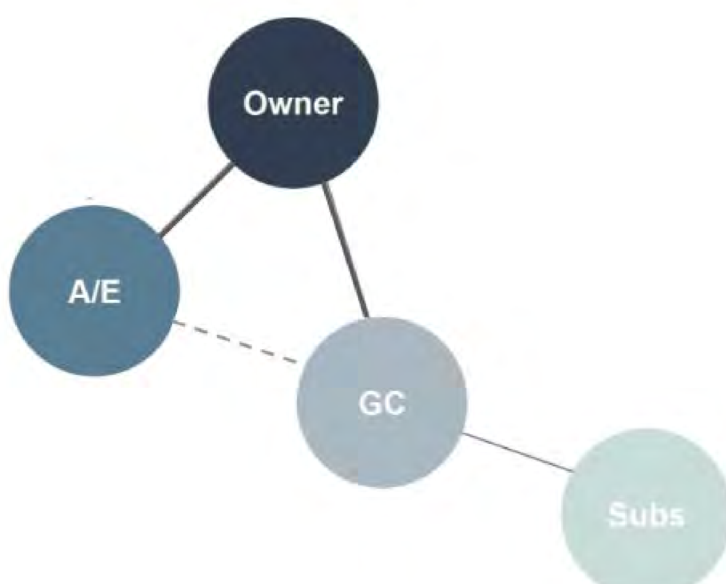
As the owner’s chosen delivery method for a project has considerable influence on subsequent design, planning, and coordination, it is ideal to establish a path forward as early as possible in the design process. If a contractor partner is to be brought aboard the project team during the design phases ahead of construction, significant benefits and efficiencies can be gained through the relationship.

Regardless of the particular delivery method a project utilizes, ultimately, the biggest factor in the project’s success is the presence of the right partners. Having prior airport experience is critical. This background allows team members on the design and construction teams to understand the nuances of airline/airport operations, to effectively guide stakeholders, and to appreciate the challenges and importance of keeping the airport up and running during construction with minimal impacts to passengers.

At IDA, as a part of the terminal planning study process, the design team has discussed with the airport and the design team a variety of alternative project delivery methods; they are as follows:




PROJECT COST RELATIVE TO CHANGES AND PHASE OF DESIGN




CONVENTIONAL; DESIGN-BID-BUILD STRUCTURE

## CONVENTIONAL; DESIGN-BID-BUILD

In a “Conventional” or Design-Bid-Build (D-B-B) arrangement, the owner enters a relationship with the design team at the start of the project. The owner and the design team work together through all design phases until the project is ready to bid out to a general contractor (GC). Upon successful bid, the general contractor enters a direct relationship with the owner, while the design team remains an active partner in coordinating and communicating between the owner and the GC. The GC also has direct relationships with their subcontractors who perform various portions of the construction work. The owner is contracted separately with the GC and with the design team.

### ADVANTAGES

The Conventional or Design-Build-Build delivery method has many advantages for project owners and other team members:

- As it is the “traditional” delivery method with which people are likely most familiar, there is generally comfort of the familiar for the owner and for the design and construction teams’ members.
- It can be a simpler process to manage compared to others as it is a more linear process with clear-cut contractual relationships and expectations of roles and responsibilities.
- The project scope is very clearly defined and documented in the construction contract documents.
- Both the design team and the contractor remain contracted with, and accountable to, the owner.
- Lowest price (bid) generally wins the construction contract. Pricing by contractors is usually developed to be cost-competitive.
- This method offers can offer greater bidding opportunities for GCs and subcontractors.

### DISADVANTAGES

Conversely, there are also several disadvantages associated with the Conventional, or Design-Build-Build, delivery method.

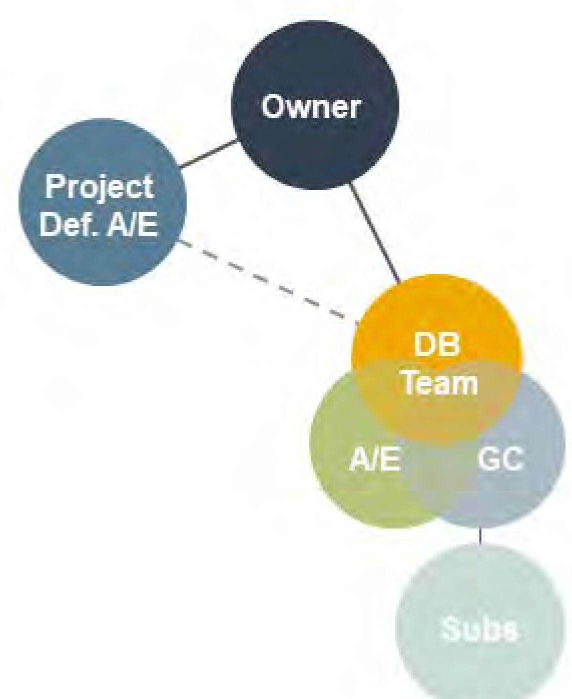
- The delivery method may result in a longer project schedule duration.
- In this arrangement, prices are not established until bids are received; this means redesign and/or rebid may be required if bids received exceed the project budget.
- Quality of contractors and subcontractors is not assured; depending on whether the bidding process involves a qualification-based selection process, some contractors or their subcontractors may not be fully qualified in the type of work and work environment (i.e. a busy airport operating around the clock).
- This set-up can foster adversarial relationships between all parties, increasing the probability of disputes.
- As the contractor is not engaged until bidding, there is no design phase input from the contractor team.
- Given the formality of the bidding process and subsequent relationship with the successful bidder, this method is less optimal for projects that are sensitive to sequencing, scheduling, or changes during construction.
- Change orders or other claims may increase the owner’s final project cost; the owner ‘owns’ the project’s financial risk.

## DESIGN-BUILD

In general, Design-Build (D-B) means that the owner has a contract with one entity. The Design-Builder is typically a general contractor, and the architect, engineers, and other consultants responsible for the design are under contract to the contractor. The contractor then constructs the project. Often, the engineering of mechanical, HVAC, and electrical systems is performed by subcontractors in lieu of design engineers.

The **Design-Build** model means that the owner hires the design and construction teams under a single contract. In this way, the design and construction teams act cooperatively to achieve the best result for the owner, often with the goal of fast-tracking design and construction timelines. The owner generally provides performance standards to the team, who then work to find the best means and methods to achieve those standards within a given budget.

Working closely together, both the designer and contractor can ensure that what is designed is feasible from both a cost and constructability standpoint. The contractor is involved before designs even begin, helping to develop clear expectations and analyze building structure types, components, and finishes with the design teams.




DESIGN-BUILD STRUCTURE

The **Progressive Design-Build (PDB)** method is almost a hybrid between Design-Build and CM/GC. In this case, the general contractor and design teams are still under a single contract, but they are brought into the development process even earlier than is typical. Importantly, this method usually involves awarding the contract to the contractor and design teams based solely on qualifications. As designs progress to a set of drawings that is 50 – 75% complete, the team establishes a Guaranteed Maximum Price for the work. The advantage of this option for delivery method is that the owner has the team involved very early in the process, and still takes on the lowered risk of contracting with a single entity.

The **Design-Build with Bridging Documents**, a third method, the owner typically contracts with a project definition consultant, which could be or would include an architect, to define the scope and conceptual/ schematic design of the project which are reflected in the bridging documents. The owner also contracts later with an entity comprised of a design-build team (architectural, engineering, and construction consultants) who submit proposals based upon the bridging documents. The bridging documents developed by the owner in conjunction with the project definition consultant serve as a guide for the design-build team to further develop the design and construction details and complete the construction documents. The builder then constructs the project.

### ADVANTAGES

Some possible advantages gained through the Design-Build method include:

- The efficiency of the collaborative, non-combative relationship between the design team and the contractor assists in achieving a schedule that is generally more compressed, or quicker, than conventional Design-Bid-Build.
- This collaboration can frequently lead to innovative solutions.
- The Design-Build method can reduce risk and costs to the owner.

### DISADVANTAGES

Conversely, the disadvantages that may be associated with a Design-Build project include the following:

- The nature of contractual agreements in Design-Build projects may result in an increased risk of loss of control of project in terms of functionality, features, or quality. The owner may have more limited input in final product, risk/cost, or feature/cost evaluation.
- The Design-Build arrangement may result in diminished continuity in design and quality across other projects occurring before or after the project, with possibly diminished cohesion of design across the facility or from project to project.
- The design may be less creative or innovative than one where the designer is more independent of the construction considerations.
- There may end to to be a gap of accountability between the project definition consultant and the design-build team.

## CONSTRUCTION MANAGER AS AGENT (CM AS AGENT)

In a Construction Manager as Agent (also known as CM as Agent or CMa) arrangement, the construction manager agent (CMa) acts as the owner's agent and manages the construction process performed by another contractor and their subcontractors. The owner is separately contracted with the design team, the CMa, and the contractors who construct the project. Most often, there are muliple contractors under direct contract to the owner, though the scope of work can be packaged by specification sections to reduce the quantity of direct contracts. The design team works closely with the CMa, though their relationship is not directly contracted, and together they closely coordinate the work of the contractors on behalf of the owner.

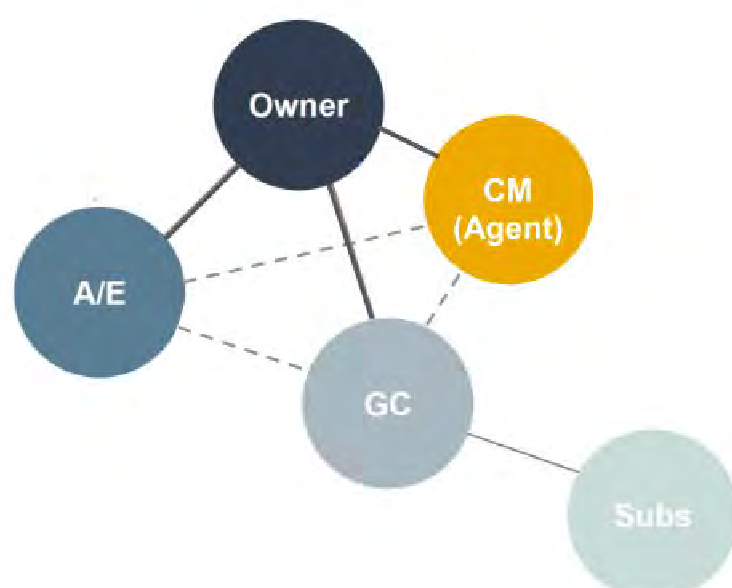
### ADVANTAGES

The CMa or Construction Manager as Agent delivery method offers the following advantages for project owners and other team members:

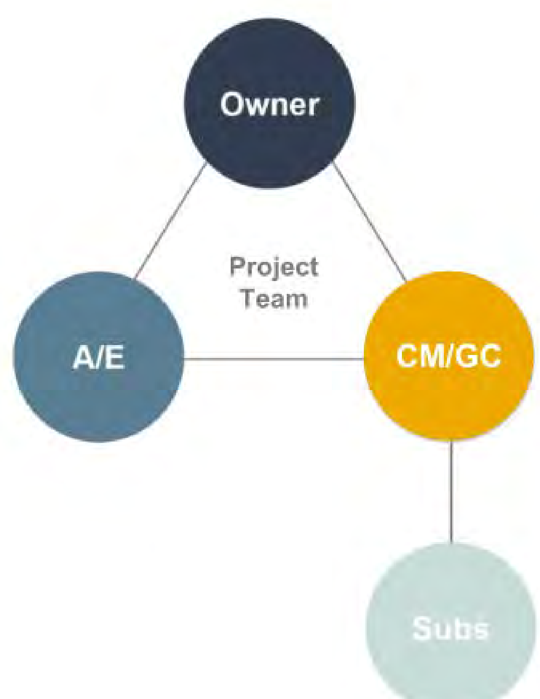
- The CM's expertise can be leveraged during the design phases to assist with budgeting, planning, and constructability.
- The CMa assists with many project management tasks, acting as an extension to airport staff.

### DISADVANTAGES

On the other hand, the primary disadvantage of the CMa method includes the possible duplication of some administrative/coordination tasks.




CONSTRUCTION MANAGER AS AGENT STRUCTURE




CONSTRUCTION MANAGER / GENERAL CONTRACTOR STRUCTURE

## CONSTRUCTION MANAGER / GENERAL CONTRACTOR (CM/GC)

The Construction Manager / General Contractor (GC/CM) delivery method is also known as Construction Manager at Risk (CMAR), Construction Manager as Constructor (CMc), or General Contractor / Construction Manager (GC/CM). In a project utilizing a Construction Manager / General Contractor (CM/GC) structure (as it is called in Idaho), the owner contracts with the design team similarly to the other project delivery methods. However, unlike the other methods, the owner contracts directly with the contractor (CM/GC) during the design phase. The CM/GC serves as an active partner during the design phases, sharing insights on cost and construction efficiencies. As the design progresses, a guaranteed maximum price (GMP) is determined, the maximum cost to the owner regardless of any changes to actual construction costs. The CM/GC transitions from a consulting role during design to become the active constructor contracting with subcontractors and trade partners during construction.

### ADVANTAGES

There are a variety of advantages associated with the CM/GC project delivery method, including the following:

- This process allows the selection of a contractor based upon qualifications, experience, and the strength of their anticipated team.
- Based on the qualifications-based process above, subcontractors can be more effectively vetted.
- The CM/GC's and their subcontractors' expertise can be leveraged during the design phases to assist with budgeting, planning, and constructability.
- This method allows continuous budget control due to the GMP.
- CM/GC projects can be brought to completion quicker than traditionally-delivered projects with a more compressed design and construction schedule.
- Given the collaborative nature of the contractual relationships between the owner, the design team, and the CM/GC, this delivery method leverages the ability to develop a responsive, flexible project or set of projects.

### DISADVANTAGES

On the other hand, below are some possible disadvantages that may arise from a CM/GC arrangement:

- It may be difficult for the owner (without a CM as owner's agent) to evaluate the GMP set by the CM/GC or to determine whether the best price has been achieved for the work.
- Because of the lack of competition between contractors on overhead, fee, and subcontractor costs, a project of this type may result in higher costs than one utilizing conventional design-bid-build methods.
- Due to "details" not included in the GMP, additional owner costs may arise during construction, though these can often be covered through owner contingencies.

## "LESSONS LEARNED" — CM/GC AND OTHER ALTERNATIVE DELIVERY METHODS IN FAA PROJECTS

Given Alliance and T-O's previous work, including in Idaho, for projects utilizing CM/GC or other alternative delivery methods, the design team shared some 'lessons learned' to help ensure a smoother process for all stakeholders.

First, getting buy-in from the FAA is critical for any project requiring FAA approval or receiving FAA funding, and the sooner this mutual agreement can be reached, the sooner the benefits of this delivery method can be leveraged. Although alternative delivery methods are becoming more common, the FAA is most familiar with traditional design-bid-build project delivery method and thus will have the most comfort with that method, though as an organization they are starting to engage more frequently in alternative project delivery methods. Similarly, it is important to get the support of other funding sources or operational entities, such as the local city or county governing authority.

The CM/GC should be selected through qualifications. Minimum qualification requirements should include prior work with the FAA and a demonstrated understanding of FAA funding and documentation processes.
This project delivery method is to be coordinated early through the front end specifications for the project. The front-end specifications should include FAA requirements and airport-specific preferences for the work.

In Idaho, the CM/GC process for public projects is governed by Idaho State Statute – Title 54: Professions, Vocations, and Businesses, Chapter 45: Public Works Construction Management Licensing Act.

# APPENDIX

## DETAILED SPACE PROGRAM — SCENARIO 2 (BASELINE)

### GENERAL STATISTICS

The table to the right reflects the estimated passengers, enplanements, and aircraft positions for Scenario 2 (Baseline), accomodating the service of an additional narrowbody and an additional large regional jet outside of the peak hour.

| IDA-Idaho Falls Regional Airport - SC2 | Existing Terminal Space (sf) Full Capacity | 2021 Recommended Facilities | 2026 Recommended Facilities | 2031 Recommended Facilities | 2036 Recommended Facilities | 2041 Recommended Facilities |
|---|---|---|---|---|---|---|
| **GENERAL STATISTICS** | | | | | | |
| **General [1]** | | | | | | |
| **Overall Airport Statistics** | | | | | | |
| Annual Passengers | **447,482** | **447,482** | **883,082** | **941,730** | **1,004,846** | **1,071,874** |
| Annual Enplanements | 223,741 | 223,741 | 441,541 | 470,865 | 502,423 | 535,937 |
| **Peak Hour Passenger Statistics** | | | | | | |
| **Peak Hour Enplaned** | **228** | **228** | **302** | **322** | **343** | **366** |
| **Peak Hour Deplaned** | **240** | **240** | **285** | **303** | **324** | **345** |
| **Total Peak Hour[2]** | **364** | **364** | **451** | **481** | **513** | **548** |
| **Gates/Positions(International)** | | | | | | |
| **Aircraft Gates/Positions** | | | | | | |
| I Small Regional (Cessna/Metro) | - | - | - | - | - | - |
| II Medium Regional (BE1/CRJ,CR7/ERJ/SF340) | - | - | - | - | - | - |
| III Large Regional (Q400/CR9/E170,175,190) | - | 5 | 5 | 5 | 5 | 6 |
| III Narrowbody (A320/B737w) | 6 | 1 | 1 | 2 | 2 | 2 |
| **Total Gates/Total Passenger Boarding Bridges:** | **6** | **6** | **6** | **7** | **7** | **8** |
| **Total EQA[2]:** | **5.9** | **3.8** | **3.8** | **5.1** | **5.1** | **5.6** |
| **Total NBEG[3]:** | **6.0** | **6.0** | **6.0** | **7.0** | **7.0** | **8.0** |
| **Total Aircraft Positions:** | **6** | **6** | **8** | **8** | **8** | **8** |

[1] Annual Passenger numbers are taken from the TO/Alliiance Forecast based on future Airport activity

[2] EQA (Equivalent Aircraft) normalizes gate based on seating capacity of accommodated aircraft.

[3] NBEG (Narrow Body Equivalent Gate): Used to normalize the apron frontage demand and capacity to that of a typical narrowbody aircraft gate.

*Sources: TO and Alliiance Analysis*

TABLE A.1 SCENARIO 2 GENERAL STATISTICS — BASELINE (ADDITIONAL NARROWBODY AND REGIONAL JET OUTSIDE OF PEAK HOUR)

## DETAILED SPACE PROGRAM — SCENARIO 2 (BASELINE) (CONTINUED)

### SUMMARY

The table to the right summarizes the space requirements by year for all areas of the terminal (public, airline, concessions, non-public).

| IDA-Idaho Falls Regional Airport - SC2 | | Existing Terminal Space (sf) Full Capacity | 2021 Recommended Facilities | 2026 Recommended Facilities | 2031 Recommended Facilities | 2036 Recommended Facilities | 2041 Recommended Facilities |
|---|---|---|---|---|---|---|---|
| **SUMMARY** | | | | | | | |
| **General** (2021-2041) | | | | | | | |
| Annual Enplanements | | 223,741 | 223,741 | 441,541 | 470,865 | 502,423 | 535,937 |
| Annual O&D Enplanements (%) | | 223,741 (100.%) | 223,741 (100.%) | 441,541 (100.%) | 470,865 (100.%) | 502,423 (100.%) | 535,937 (100.%) |
| Peak Hour Enplaned Domestic | | 228 | 228 | 302 | 322 | 343 | 366 |
| Peak Hour Deplaned Domestic | | 240 | 240 | 285 | 303 | 324 | 345 |
| Gates/Contact Aircraft Positions | | 6 | 6 | 6 | 7 | 7 | 8 |
| **Public Space** | | | | | | | |
| Circulation (Ticketing,Baggage Claim,Seating,General Circ,Airside Post Security) | sf | 20,431 | 21,570 | 24,280 | 26,980 | 27,420 | 29,720 |
| TSA Security Screening Area (queue, screening, offices) | sf | 4,909 | 5,190 | 7,390 | 7,390 | 7,390 | 7,390 |
| Queuing/Waiting Areas (Public Seating, Ticket Lobby, Baggage Claim Hall, Meeter/Greeter) | sf | 7,623 | 7,500 | 8,900 | 8,970 | 9,230 | 9,460 |
| Gate Holdrooms | sf | 12,642 | 10,900 | 10,900 | 13,900 | 13,900 | 15,480 |
| Restrooms (Pre/Post Security) | sf | 2,781 | 5,330 | 5,660 | 6,260 | 6,730 | 6,730 |
| Other Space/Amenity (Misc Tenant, Displays, Information counters, etc.) | sf | - | - | - | - | - | - |
| **Subtotal:** | | **48,386** | **50,490** | **57,130** | **63,500** | **64,670** | **68,780** |
| **Airline Space** | Units | | | | | | |
| Domestic Airline Space (Queue, Counter, ATO, BSO) | sf | 3,379 | 2,730 | 4,330 | 4,330 | 4,550 | 4,780 |
| Other Airline Space (Bag Makeup, Laydown, Bag Screening, Airside Ops/Offices, Misc) | sf | 5,920 | 8,080 | 9,000 | 10,020 | 10,020 | 10,290 |
| **Subtotal:** | | **9,299** | **10,810** | **13,330** | **14,350** | **14,570** | **15,070** |
| **Concessions** | | | | | | | |
| Landside Concessions (pre-Security) | sf | 4,641 | 2,070 | 2,630 | 2,710 | 2,790 | 2,880 |
| Airside Concessions (post-Security) | sf | 3,157 | 2,330 | 4,590 | 4,900 | 5,230 | 5,580 |
| **Subtotal:** | | **7,798** | **4,400** | **7,220** | **7,610** | **8,020** | **8,460** |
| **Non-Public Space** | | | | | | | |
| Non-Airline Tenant Space (Airport Admin/Support, Storage, Misc. Tenants) | sf | 5,917 | 4,060 | 4,060 | 4,060 | 4,060 | 4,060 |
| Restrooms/Circulation | sf | 1,570 | 1,720 | 2,040 | 2,150 | 2,160 | 2,210 |
| Airport Operations (Maintenance,Janitorial,Storage,Shops) | sf | 3,545 | 1,430 | 1,700 | 1,830 | 1,870 | 1,970 |
| Building Systems (MEP,Communications/IT,Loading Docks,Structure) | sf | 12,357 | 10,350 | 12,130 | 13,280 | 13,540 | 14,280 |
| **Subtotal:** | | **23,388** | **17,560** | **19,930** | **21,320** | **21,630** | **22,520** |
| **Total** | | | | | | | |
| **Total Functional & Support Terminal Area:** | | **85,600** [2] | **80,060** | **93,860** | **102,670** | **104,700** | **110,410** |
| **Total Gross Terminal Area:** | | **88,871** [2] | **83,260** | **97,610** | **106,780** | **108,890** | **114,830** |

[1] Areas based on exiting airline allocations

[2] Represents the total available functional and gross terminal square footage (leased, non-leased, airport owned, and any vacant areas) and totals may not sum due to rounding

TABLE A.2 SCENARIO 2 FACILITY REQUIREMENTS BY YEAR — BASELINE (ADDITIONAL NARROWBODY AND REGIONAL JET OUTSIDE OF PEAK HOUR)

## DETAILED SPACE PROGRAM — SCENARIO 2 (BASELINE) (CONTINUED)

### PUBLIC AREAS

The table to the right details the space requirements by year for the public areas of the terminal.

| IDA-Idaho Falls Regional Airport - SC2 | | Existing Terminal Space (sf) Full Capacity | 2021 Recommended Facilities | 2026 Recommended Facilities | 2031 Recommended Facilities | 2036 Recommended Facilities | 2041 Recommended Facilities |
|---|---|---|---|---|---|---|---|
| **PUBLIC SPACE** | | | | | | | |
| **Circulation** | | | | | | | |
| Ticket Lobby Circulation | sf | 1,727 | 1,170 | 1,850 | 1,850 | 1,950 | 2,050 |
| Baggage Claim Circulation | sf | 3,323 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| Airside Concourse Circulation (Incl. Fire/Service Stairs to Apron) | sf | 3,247 | 6,970 | 6,970 | 8,130 | 8,130 | 9,300 |
| General Public Circulation (Includes Vestibules, Vert Circ, Corridors) | sf | 12,134 | 11,930 | 13,960 | 15,500 | 15,840 | 16,870 |
| | **Subtotal:** | **20,431** | **21,570** | **24,280** | **26,980** | **27,420** | **29,720** |
| **Security Screening Checkpoint (SSCP)** | Units | | | | | | |
| Number of Lanes | pos | 2 | 1 | 2 | 2 | 2 | 2 |
| Security Screening Area (includes exit corridor) | sf | 2,638 | 3,090 | 4,690 | 4,690 | 4,690 | 4,690 |
| Queuing Area | sf | 777 | 600 | 1,200 | 1,200 | 1,200 | 1,200 |
| TSA Offices | sf | 1,494 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| | **Subtotal:** | **4,909** | **5,190** | **7,390** | **7,390** | **7,390** | **7,390** |
| **Queuing/Waiting Areas** | Units | | | | | | |
| Public Seating | sf | 655 | 480 | 610 | 650 | 690 | 720 |
| Ticket Lobby/Queue (including any free standing kiosks) | sf | 2,558 | 2,010 | 3,180 | 3,180 | 3,350 | 3,510 |
| Baggage Claim Area | | | | | | | |
| Claim Devices (Flat Plate) | no | 2 | 2 | 2 | 2 | 2 | 2 |
| Linear Frontage Required (Public Side) | lf | 182 | 81 | 90 | 96 | 102 | 109 |
| Linear Frontage Programmed (Public Side) | lf | - | 180 | 180 | 180 | 180 | 180 |
| Baggage Claim Hall (Includes Device, Queues & Circulation w/in Positive Claim area ) | sf | 4,410 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 |
| Domestic Meeter/Greeter Lobby | sf | - | 510 | 610 | 640 | 690 | 730 |
| | **Subtotal:** | **7,623** | **7,500** | **8,900** | **8,970** | **9,230** | **9,460** |
| **Gate Lounges/Holdrooms** | | | | | | | |
| Gates | | | | | | | |
| Medium Regional (BE1/CRJ,CR7/ERJ/SF340) | sf | - | - | - | - | - | - |
| Large Regional (Q400/CR9/E170,175,190) | sf | - | 7,890 | 7,890 | 7,890 | 7,890 | 9,470 |
| Narrowbody (A320/B737w) | sf | - | 3,010 | 3,010 | 6,010 | 6,010 | 6,010 |
| | **Subtotal:** | **12,642** | **10,900** | **10,900** | **13,900** | **13,900** | **15,480** |
| **Restrooms** | | | | | | | |
| Restrooms - Airside (post-Security) | sf | 1,786 | 3,400 | 3,400 | 4,000 | 4,470 | 4,470 |
| Restrooms - Landside (pre-Security) | sf | 855 | 1,530 | 1,860 | 1,860 | 1,860 | 1,860 |
| SARA | sf | 140 | 140 | 140 | 140 | 140 | 140 |
| Nursing Mothers Room | sf | - | 260 | 260 | 260 | 260 | 260 |
| | **Subtotal:** | **2,781** | **5,330** | **5,660** | **6,260** | **6,730** | **6,730** |

TABLE A.3 SCENARIO 2 FACILITY REQUIREMENTS BY YEAR — BASELINE (ADDITIONAL NARROWBODY AND REGIONAL JET OUTSIDE OF PEAK HOUR)

## DETAILED SPACE PROGRAM — SCENARIO 2 (BASELINE) (CONTINUED)

## AIRLINE, CONCESSIONS, NON-PUBLIC AREAS

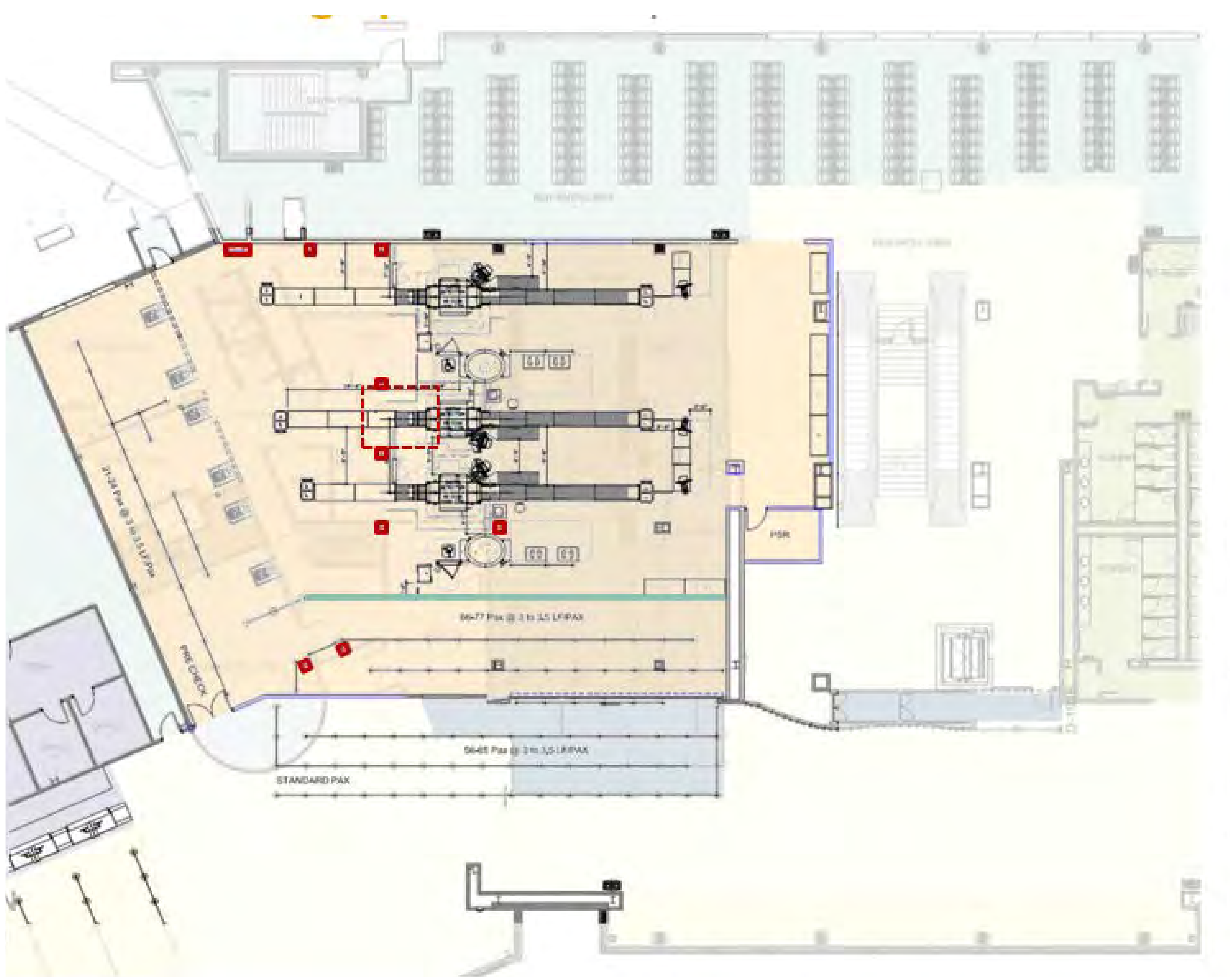
The table to the right details the space requirements by year for airline, concessions, and non-public areas of the terminal.

| IDA-Idaho Falls Regional Airport - SC2 | | Existing Terminal Space (sf) Full Capacity | 2021 Recommended Facilities | 2026 Recommended Facilities | 2031 Recommended Facilities | 2036 Recommended Facilities | 2041 Recommended Facilities |
|---|---|---|---|---|---|---|---|
| **AIRLINE SPACE** | | | | | | | |
| **Domestic Airline Space** | Units | | | | | | |
| Ticket Counter | | | | | | | |
| Linear Counter Check-in Positions (Kiosk) | pos | 16 | 12(0) | 19(0) | 19(0) | 20(0) | 21(0) |
| Total Check-in Positions (Kiosk) | pos | 28(12) | 15(3) | 24(5) | 24(5) | 26(6) | 27(6) |
| Total Linear Position Length | lf | 114 | 78 | 124 | 124 | 130 | 137 |
| Counter Area (Includes any curb check) | sf | 1,052 | 780 | 1,240 | 1,240 | 1,300 | 1,370 |
| Airline Ticket Offices (ATO) | sf | 2,327 | 1,950 | 3,090 | 3,090 | 3,250 | 3,410 |
| | **Subtotal:** | **3,379** | **2,730** | **4,330** | **4,330** | **4,550** | **4,780** |
| **Other Airline Space** | | | | | | | |
| Outbound Bag Make-Up[1] | sf | 1,481 | 1,790 | 2,500 | 2,880 | 2,880 | 2,940 |
| Checked Baggage Screening (TSA Space)[1] | sf | 931 | 1,800 | 1,800 | 1,800 | 1,800 | 1,800 |
| Level 1 Inspection Units | no | 1 | 1 | 1 | 1 | 1 | 1 |
| Airside Operations/Storage (IT,Offices,etc.) | sf | 1,137 | 1,330 | 1,330 | 1,790 | 1,790 | 1,960 |
| Inbound Baggage Claim Laydown (secure)[1] | sf | 341 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 |
| Inbound/Outbound Baggage Circulation & Storage | sf | 2,030 | 760 | 970 | 1,080 | 1,080 | 1,100 |
| Other Airline Offices/Systems & Support, Misc | sf | - | 200 | 200 | 270 | 270 | 290 |
| | **Subtotal:** | **5,920** | **8,080** | **9,000** | **10,020** | **10,020** | **10,290** |
| **CONCESSIONS SPACE** | | | | | | | |
| **Landside Concessions (pre-Security)** | Units | | | | | | |
| Rental Car | | | | | | | |
| Number of Counters | pos | 4 | 4 | 4 | 4 | 4 | 4 |
| Counter Area/Offices | sf | 1,028 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 |
| Queue | sf | 458 | 460 | 460 | 460 | 460 | 460 |
| Landside Concessions | sf | 2,137 | 450 | 880 | 940 | 1,000 | 1,070 |
| Support/Storage (Prep Areas,Offices, etc) | sf | 1,018 | 130 | 260 | 280 | 300 | 320 |
| | **Subtotal:** | **4,641** | **2,070** | **2,630** | **2,710** | **2,790** | **2,880** |
| **Airside Concessions (post Security)** | | | | | | | |
| Airside Concessions | sf | 2,213 | 1,790 | 3,530 | 3,770 | 4,020 | 4,290 |
| Support/Storage (Prep Areas,Offices, etc) | sf | 944 | 540 | 1,060 | 1,130 | 1,210 | 1,290 |
| | **Subtotal:** | **3,157** | **2,330** | **4,590** | **4,900** | **5,230** | **5,580** |
| **NON-PUBLIC SPACE** | | | | | | | |
| **Non-Airline Tenant Space** | Units | | | | | | |
| Airport Administration | | | | | | | |
| Offices/Support/Storage | sf | 2,882 | 3,110 | 3,110 | 3,110 | 3,110 | 3,110 |
| Airport Police (Includes Locker Facilities) | sf | 248 | 250 | 250 | 250 | 250 | 250 |
| Misc Tenant (FAA Tower) | sf | 2,787 | 700 | 700 | 700 | 700 | 700 |
| | **Subtotal:** | **5,917** | **4,060** | **4,060** | **4,060** | **4,060** | **4,060** |
| **Restrooms/Circulation** | | | | | | | |
| Non-Public Restrooms | sf | 114 | 110 | 220 | 220 | 220 | 220 |
| Non-Public Circulation (Includes Vertical Circ) | sf | 1,456 | 1,610 | 1,820 | 1,930 | 1,940 | 1,990 |
| | **Subtotal:** | **1,570** | **1,720** | **2,040** | **2,150** | **2,160** | **2,210** |
| **Building Systems** | | | | | | | |
| Airport Operations (Maintenance,Janitorial,Storage,Shops) | sf | 3,545 | 1,430 | 1,700 | 1,830 | 1,870 | 1,970 |
| Mechanical/Electrical/Plumbing(MEP)/Communications/IT | sf | 9,086 | 7,150 | 8,380 | 9,170 | 9,350 | 9,860 |
| Building Structure/Non-net/Void | sf | 3,271 | 3,200 | 3,750 | 4,110 | 4,190 | 4,420 |
| | **Subtotal:** | **15,901** | **11,780** | **13,830** | **15,110** | **15,410** | **16,250** |

TABLE A.3 (CONTINUED) SCENARIO 2 FACILITY REQUIREMENTS BY ENPLANEMENTS — BASELINE (ADDITIONAL NARROWBODY AND REGIONAL JET OUTSIDE OF PEAK HOUR)

# APPENDIX

## SECURITY CHECKPOINT PLANNING, PREFERRED OPTION AREAS




THREE-LANE SECURITY CHECKPOINT

Not to Scale

### THREE-LANE SECURITY CHECKPOINT

The diagram to the left depicts the possible addition of a third screening lane at the security screening checkpoint. A third lane can be incorporated into the area initially used for checkpoint queuing during the two-lane arrangement. The queue then expands into the Great Hall, maintaining adequate clear circulation width between the queue and the front building façade.

### PREFERRED OPTION AREA BREAKDOWN

The tables to the right indicate the approximate areas shown in the preferred planning option. The areas are broken down by location within the building as well as categorized based on the project priorities. For more information on planned project priorities, refer to Section 7.

| Priority 1a | Length | Remodel Area | New Construction | Area Totals | Notes |
|---|---|---|---|---|---|
| Ticketing: | | | | | |
| Ticketing Counters | 130' | 1,233 | | 1,233 | Full Ticketing Hall area to be renovated as part of the expansion |
| Ticketing Queue + Cross Circulation | | 5,784 | | 5,784 | |
| Ticketing Circulation | | 1,034 | 905 | 1,939 | |
| ATO's | | 3,033 | | 3,033 | |
| Stair & circulation to 2nd level Admin space | | | 586 | | |
| elevator | | | 102 | | |
| elevator equipment room | | | 53 | | |
| Bag Screening and Makeup: | | | | 0 | |
| Bag Screening | | 2,197 | 0 | 2,197 | |
| Bag Makeup | | | 14,403 | 14,403 | |
| Secure Circulation | | 825 | 130 | 955 | |
| Level 1 Holdroom Additon | | | 1,520 | 1,520 | |
| Level 2 Shell Space | | | 16,168 | 16,168 | |
| Central Commons, level 1: | | | | 0 | |
| Landside Restrooms | | 1,815 | | 1,815 | |
| Janitor/Support | | 114 | | 114 | |
| Airport/Support | | 425 | | 425 | |
| Bag Conveyor Equipment Room | | 287 | | 287 | shell out for future equip relocation |
| Landside Concessions - FOH | | 915 | | 915 | |
| Landside Concessions - BOH | | 341 | | 341 | |
| General Circulation | | 6,892 | 462 | 7,354 | Remodel includes new ramp to raised floor zone |
| Meeter Greeter/Seating | | 449 | 639 | 1,087 | |
| Vertical Circulation | | 670 | | 670 | New inlcudes open stair, escalator, elevator + elevator equipment room. |
| Central Commons, level 2: | | | | 0 | |
| General Circulation | | 393 | 480 | 873 | |
| New open walkway/balcony | | | 1,987 | 1,987 | vertical circulatin elements included on level 1 |
| Additional Level 1 Spaces: | | | | | |
| enclosed stair (from Admin) | | | 284 | 284 | |
| Non-Public Restrooms | | 221 | | 221 | |
| TR/IT/DATA | | 314 | | 314 | |
| Electrical | | | 603 | 603 | |
| Mechanical/Chase | | 87 | | 87 | |
| Support Spaces/Airport | | | 211 | 211 | |
| Vestibules | | 360 | 360 | 720 | |
| Level 2 Additional Spaces | | | | | |
| Electrical Room | | | 450 | 450 | |
| Stair & circulation to 2nd level Admin space | | | 586 | 586 | |
| elevator | | | 102 | 102 | |
| support | | | 53 | 53 | |
| Sub-Total | | 27,388 | 40,085 | | |
| **Priority 1a Total SF** | | | | **67,473** | |

| Priority 1b | Remodel Area | New Construction | Area Totals | Notes |
|---|---|---|---|---|
| Security Checkpoint: | | | | |
| SSCP Passenger Screening | 4,344 | | 4,344 | Existing portion of SSCP recently renovated. SSCP expansion to match existing (+ 2146 sf existing space) |
| Private Screening Room | 112 | | 112 | |
| Law Enforcement Office | 221 | | 221 | |
| SSCP Queue | 2,500 | | 2,500 | |
| Recomposure | 844 | | 844 | |
| Arrivals Secure Exits | 107 | 107 | 215 | |
| General Circulation/Arrivals Exit | 1,298 | | 1,298 | *moved from Priority 2* |
| *Level 2* | | | | |
| Administration | | 4,771 | 4,771 | Interior buildout of shell space construcited in Priority 1 |
| Sub-Total | 9,425 | 4,878 | | |
| **Priority 2 Total SF** | | | **14,304** | |

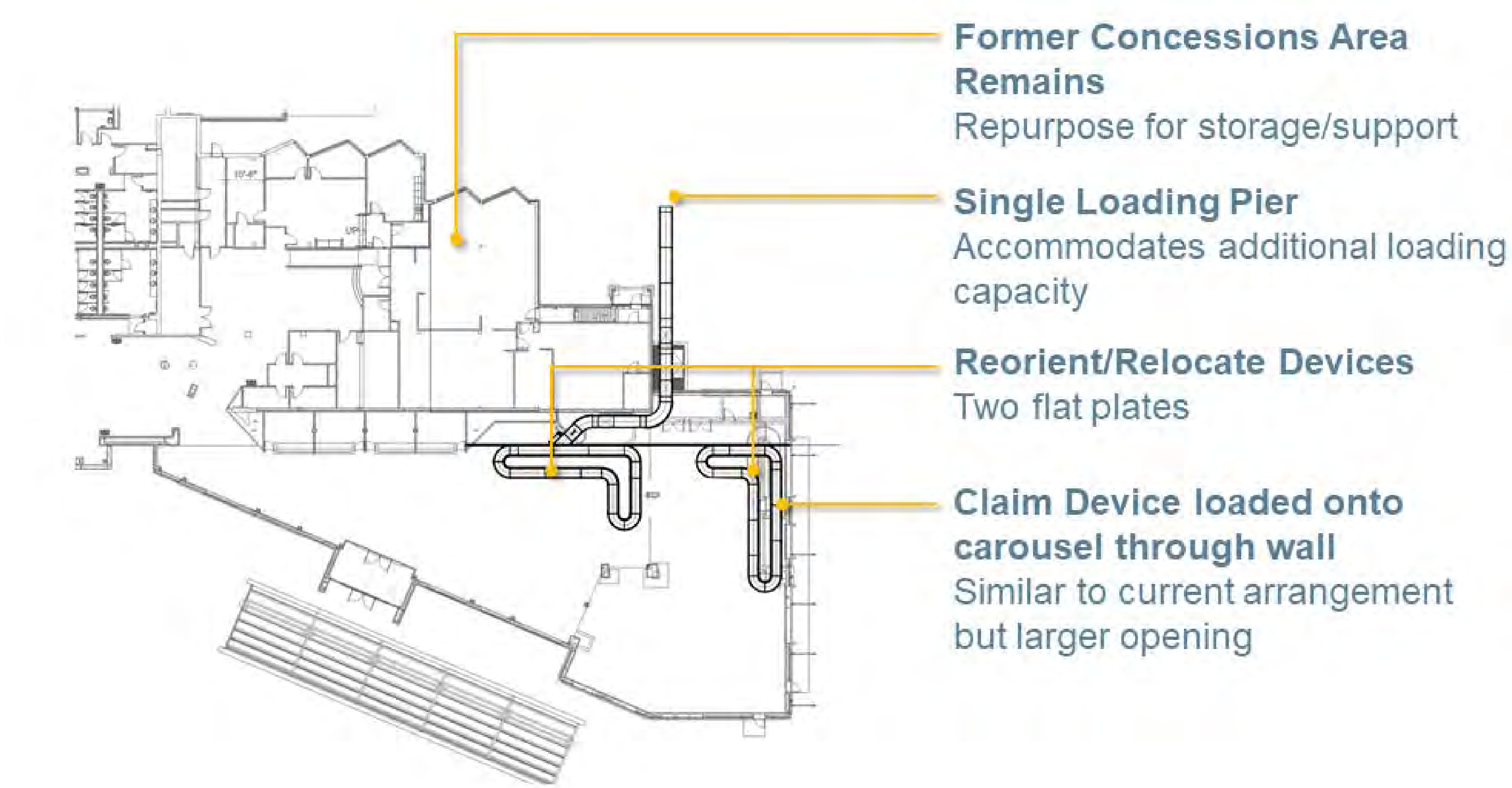
| Priority 2 | Remodel Area | New Construction | Area Totals | Notes |
|---|---|---|---|---|
| Gatehold | | | | |
| Level 1 - Airside | | | | |
| Gate Hold Rooms | 2,431 | 1,843 | 4,274 | Hold rooms recently renovated. Renovation to hold rooms only as impacted by addition of new concessions. *North Holdroom Addition moved to Priority 3* |
| Hold Room Circulation | 1,831 | 0 | 1,831 | *Holdroom Addition circulation moved to Priority 3* |
| Airside Concessions - FOH | 1,346 | | 1,346 | |
| Airside Concessions - BOH | 245 | | 245 | |
| Airside Restrooms + Amenities | 1,914 | | 1,914 | Renovation of the current landside restooms, addition of new family restroom, and opening up to the existing (recently renovated airside restrooms, +630 sf) |
| Janitor/Support | 146 | | 146 | |
| Airport/Support | | | | |
| Vertical Circulation | 1,322 | | 1,322 | Remodel includes existing egress stairs, open stair, escalators and elevator |
| Arrivals Secure Exits | | 214 | 214 | |
| Level 2 - Airside | | | 0 | |
| Gate Hold Rooms - Level 2 | 4,860 | | 4,860 | Hold rooms recently renovated. Renovation only as impacted by new work |
| Hold Room Circulation - Level 2 | 2,435 | | 2,435 | |
| Level 2 Shell Space Buildout: | | | | 11,113 |
| Holdroom | | 6,345 | | |
| Concessions | | 668 | | |
| Support | | 1,272 | | |
| circulation | | 2,828 | | |
| Airside Concessions - FOH | 1,231 | | 1,231 | |
| Airside Concessions - BOH | 697 | | 697 | |
| Airside Restrooms | 1,710 | | 1,710 | Existing airside restroom were recently renovaged (+ 1,093 sf) |
| Airside Mother's Room, SARA | 498 | | 498 | |
| Janitor/Support | 97 | | 97 | |
| Airport/Support | 941 | | 941 | |
| Mechanical/Chase | 196 | | 196 | |
| General Circulation | 2,019 | | 2,019 | |
| Sub-Total | 23,919 | 13,170 | | |
| **Priority 2 Total SF** | | | **37,089** | |

| Priority 3 | Remodel Area | New Construction | Area Totals | Notes |
|---|---|---|---|---|
| TSA Break Area | 1,277 | | 1,277 | |
| TR/IT/DATA (MDF) | 80 | | 80 | |
| Bag Claim | | | | |
| Bag Claim and Claim Circulation | 5,645 | | 5,645 | includes 1 new sloped plate device and reuse of 1 existing flateplate device |
| Conveyor Equipment Room | | | | shelled out in priority 1 |
| Rental Car Counters | 1,045 | | 1,045 | |
| Rental Car Queue | 480 | | 480 | |
| Vestibules | 360 | 360 | 720 | |
| Baggage Laydown | | | 0 | |
| Bag Laydown Area | 2,846 | 966 | 3,812 | At raised slab level. New includes new slab at raised slab level. |
| ramps from grade to raised level | | 1,440 | 1,440 | |
| existing stair to basement | 186 | | 186 | |
| Level 1 Hold Room addition: | | | | |
| Hold room | | 3,749 | | *moved from Priority 2* |
| circulation | | 411.26 | | *moved from Priority 2* |
| Sub-Total | 11,919 | 6,926 | | |
| **Priority 3 Total SF** | | | **18,845** | |

| **Summary** | **0** | **0** | **0** |
|---|---|---|---|
| Priority 1a | 27,388 | 40,085 | 67,473 |
| Priority 1b | 9,425 | 4,878 | 14,304 |
| Priority 2 | 23,919 | 13,170 | 37,089 |
| Priority 3 | 11,919 | 6,926 | 18,845 |
| **Total Area** | | | **137,711** |

## INBOUND BAGGAGE ALTERNATIVE

To the right is an alternative inbound baggage handling system arrangement. This option is described in detail on page 45.




ALTERNATIVE INBOUND BAGGAGE ARRANGEMENT

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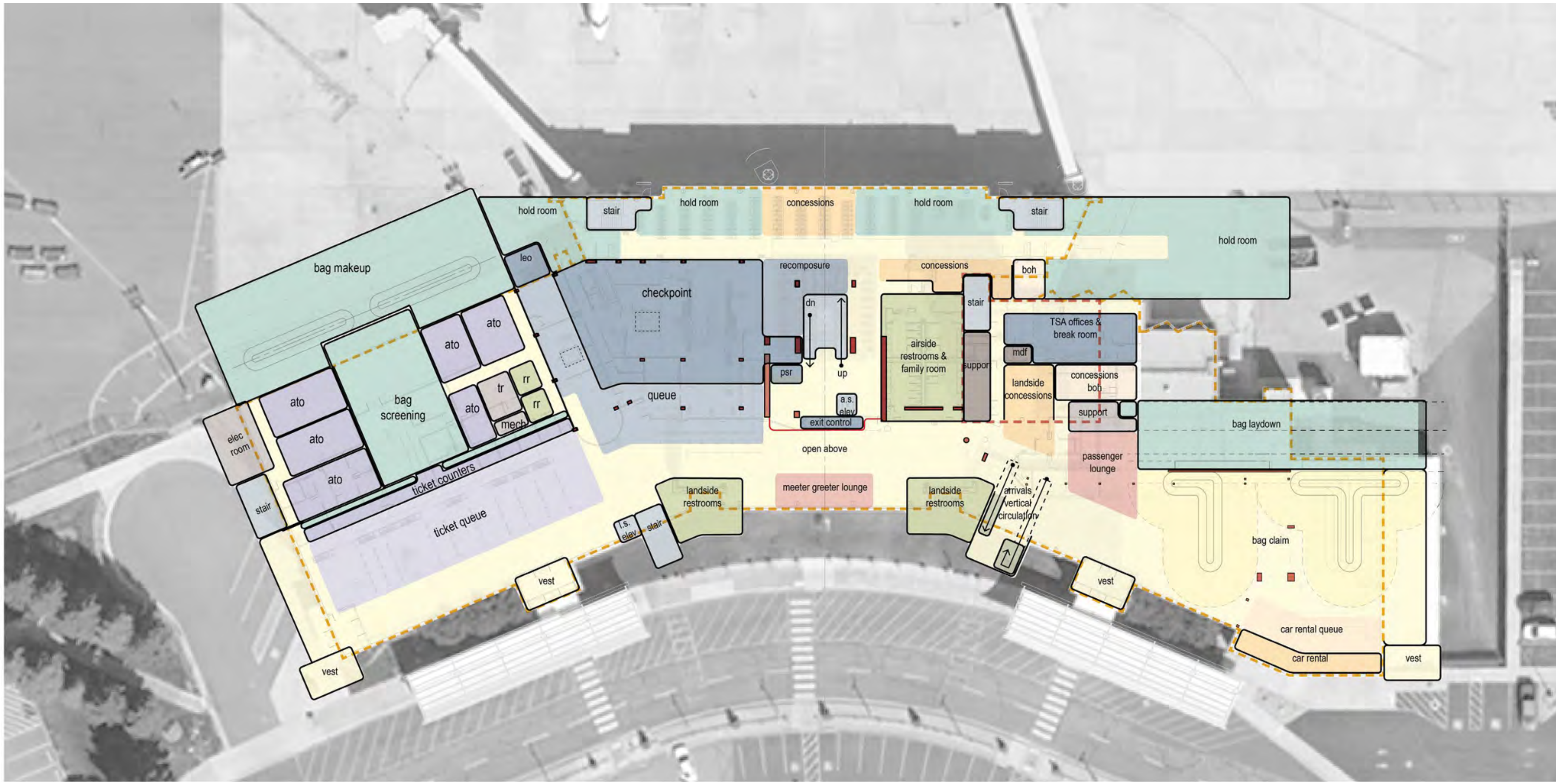
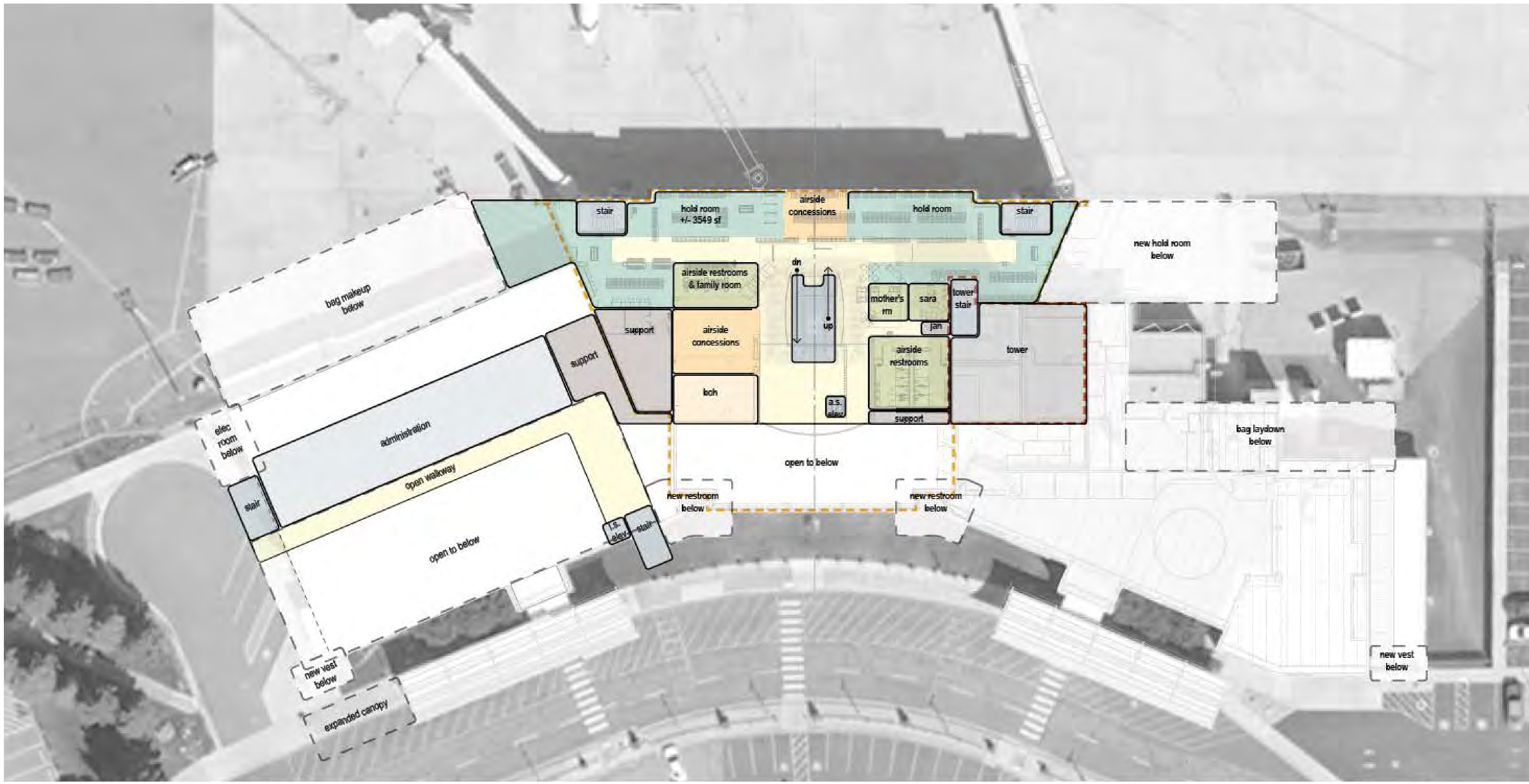
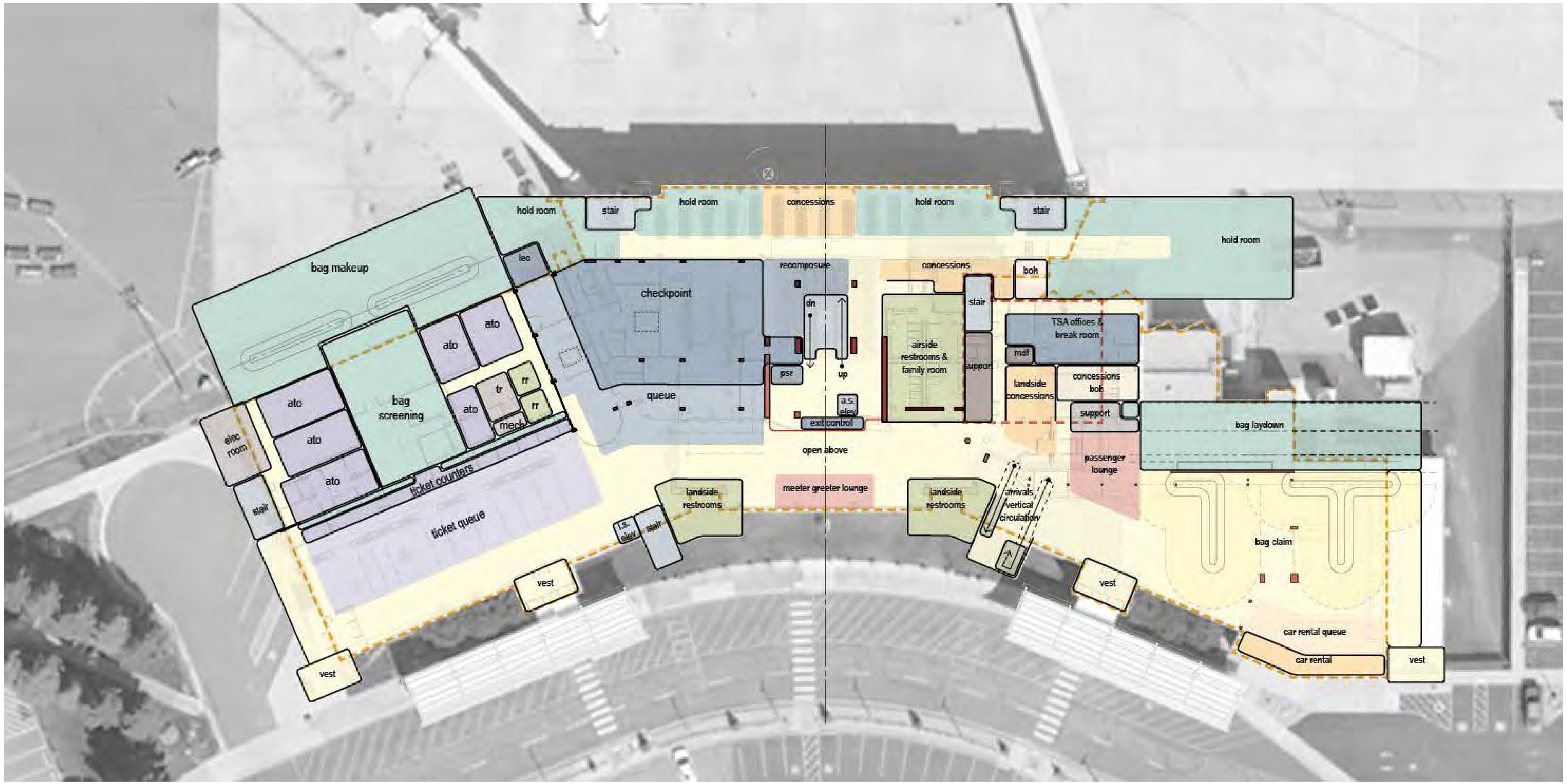



## INITIAL OPTION 1A — GROUND LEVEL



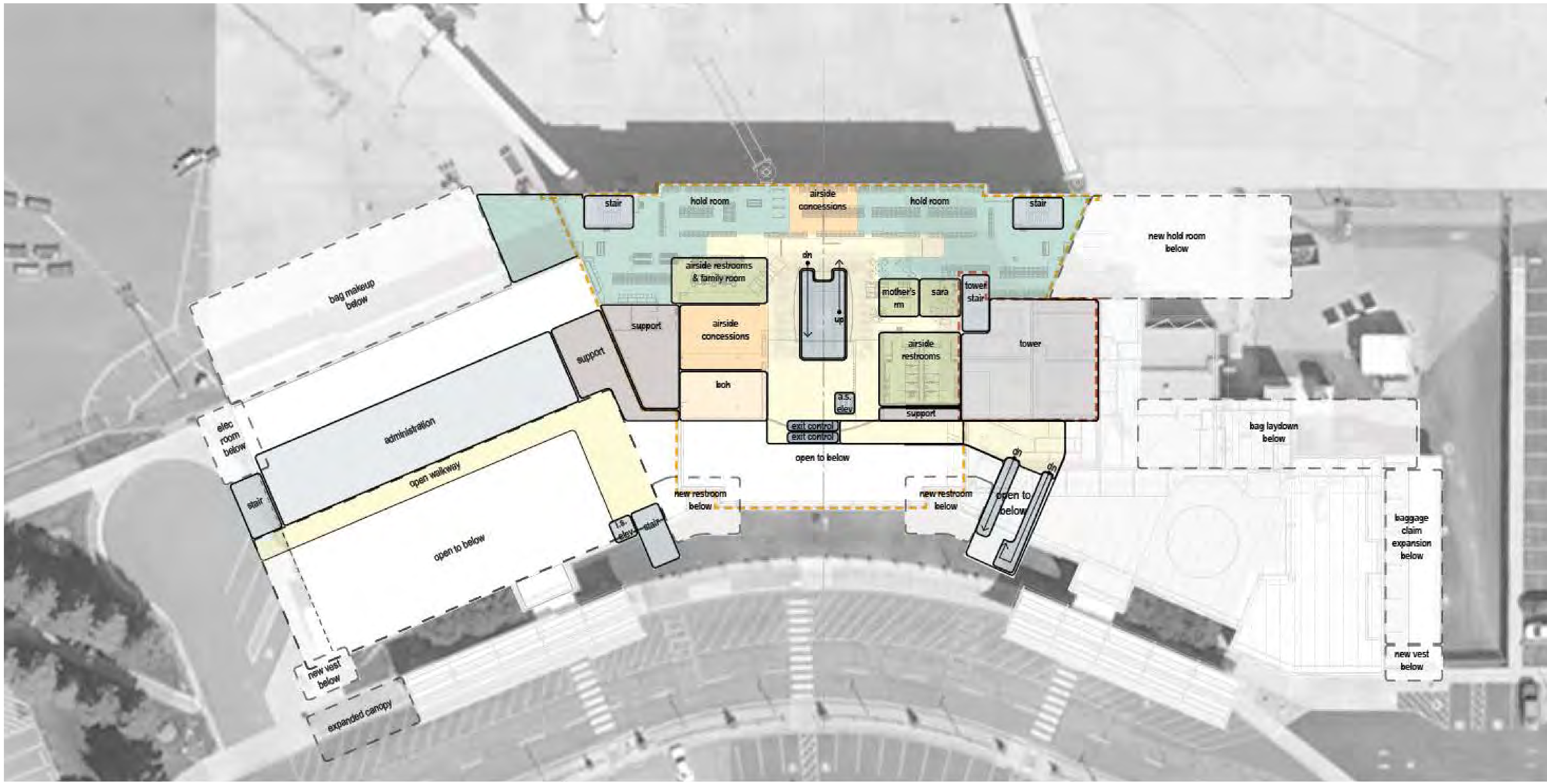

INITIAL OPTION 1A — UPPER LEVEL



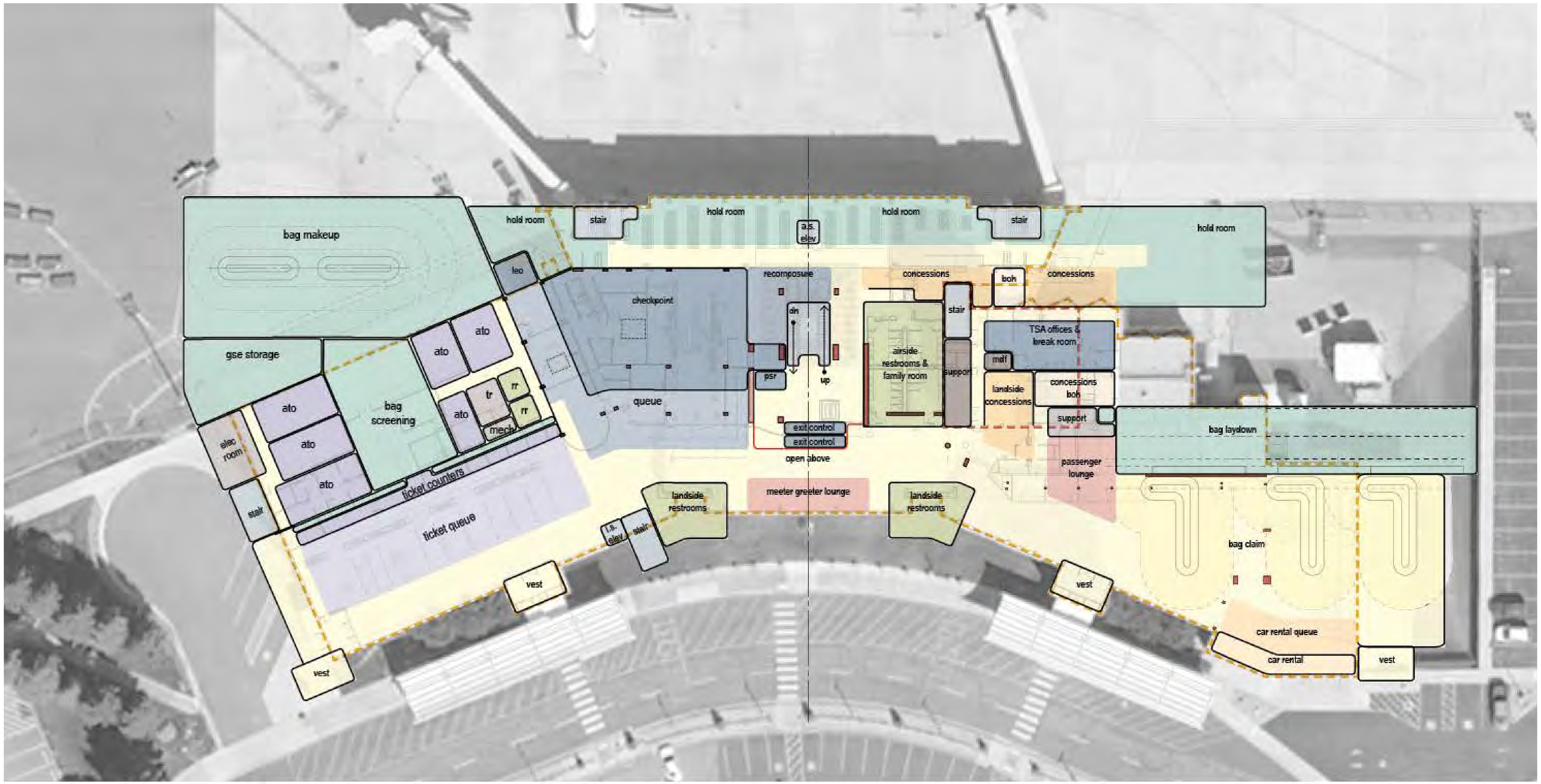

INITIAL OPTION 1B — GROUND LEVEL

N

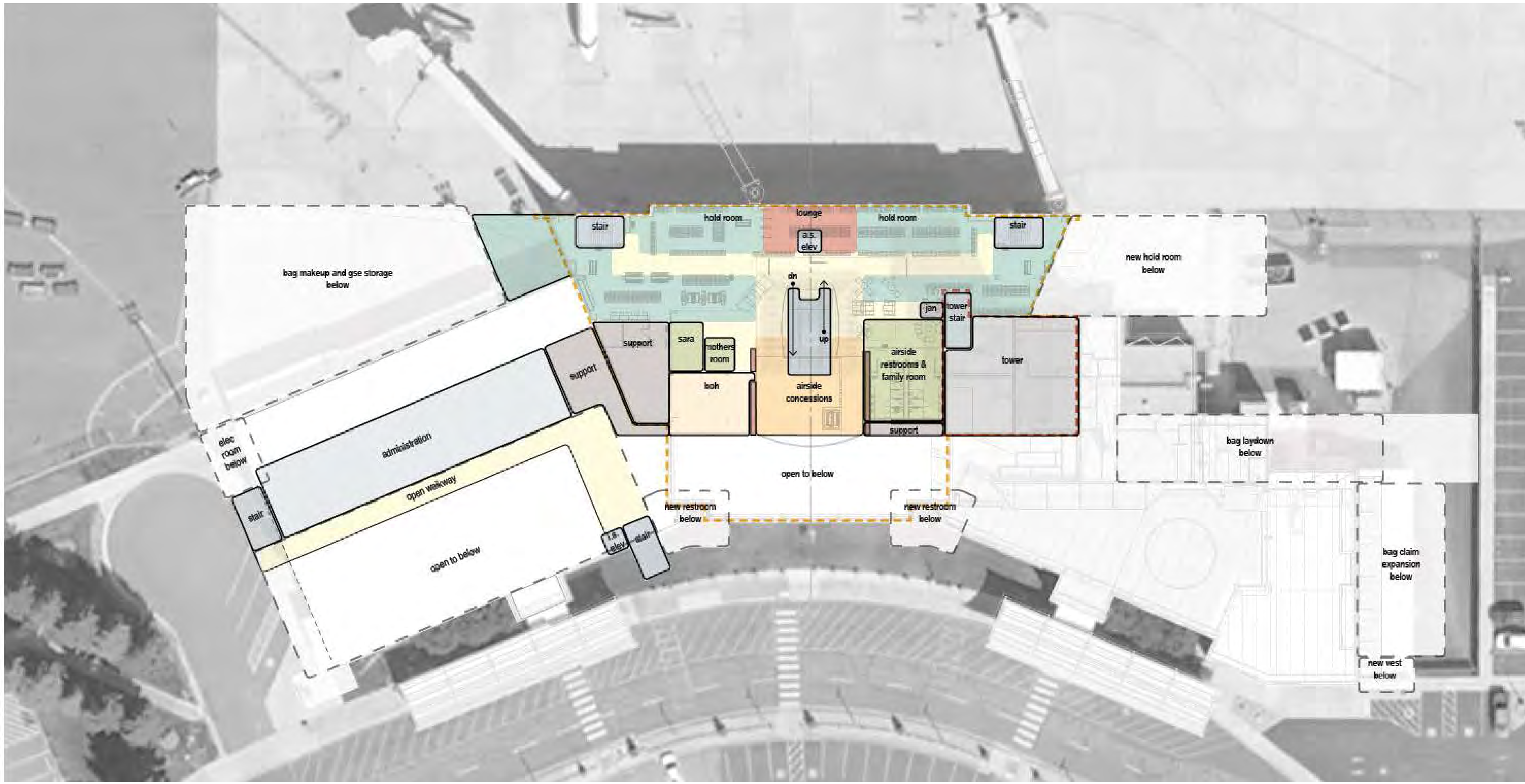
0' 16' 32' 64'



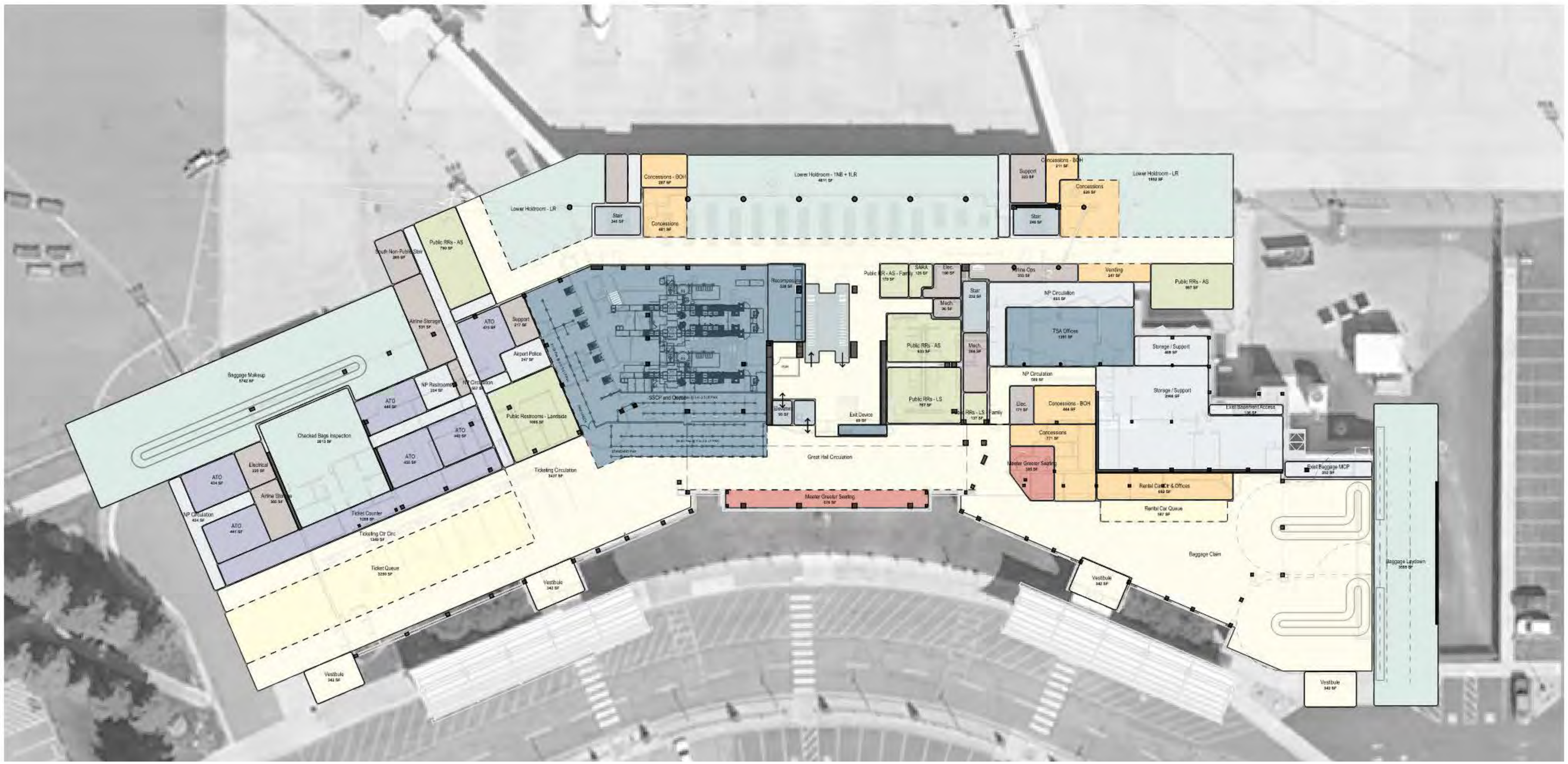

INITIAL OPTION 1B — UPPER LEVEL



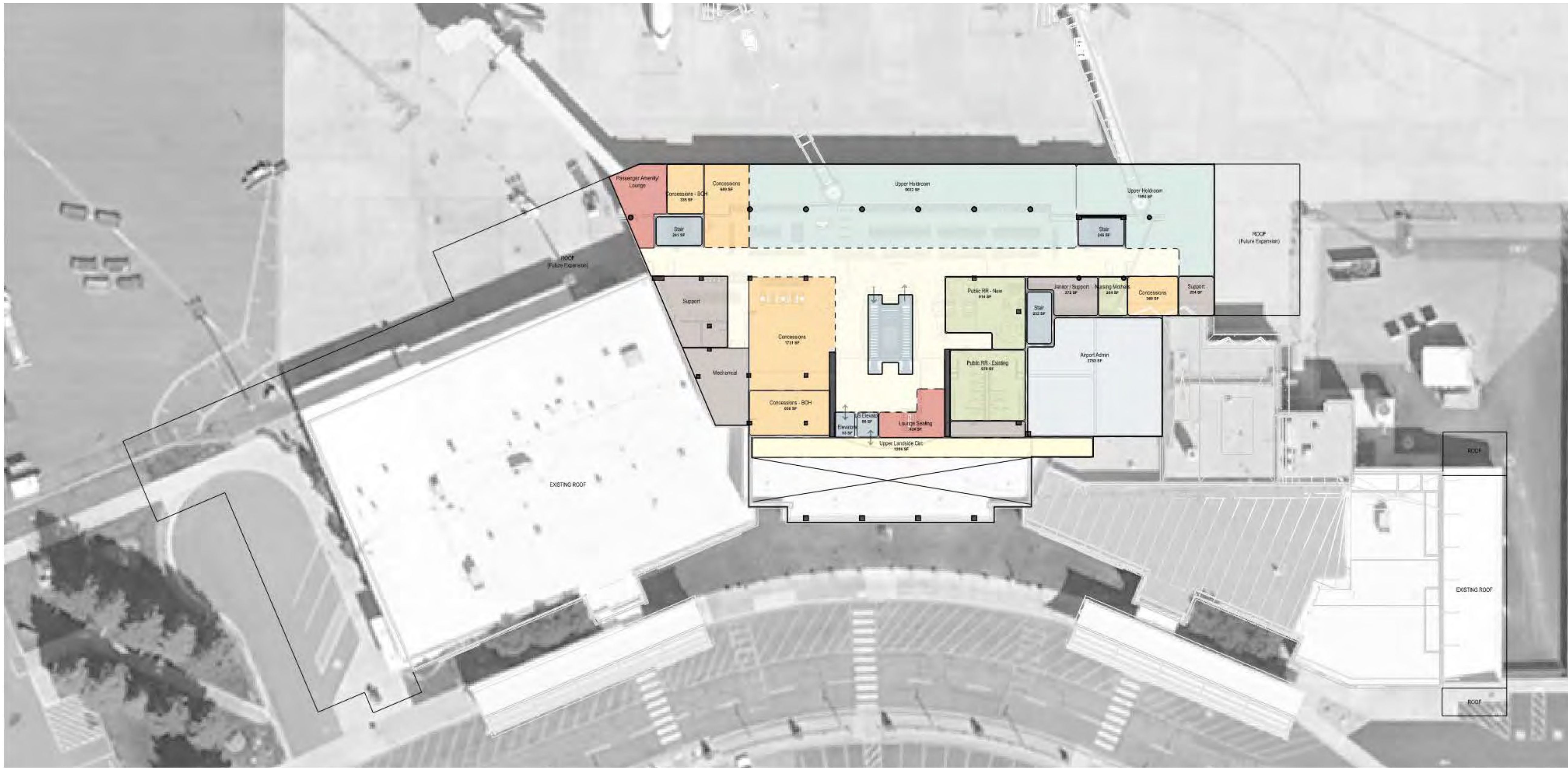

INITIAL OPTION 1C — GROUND LEVEL




INITIAL OPTION 1C — UPPER LEVEL



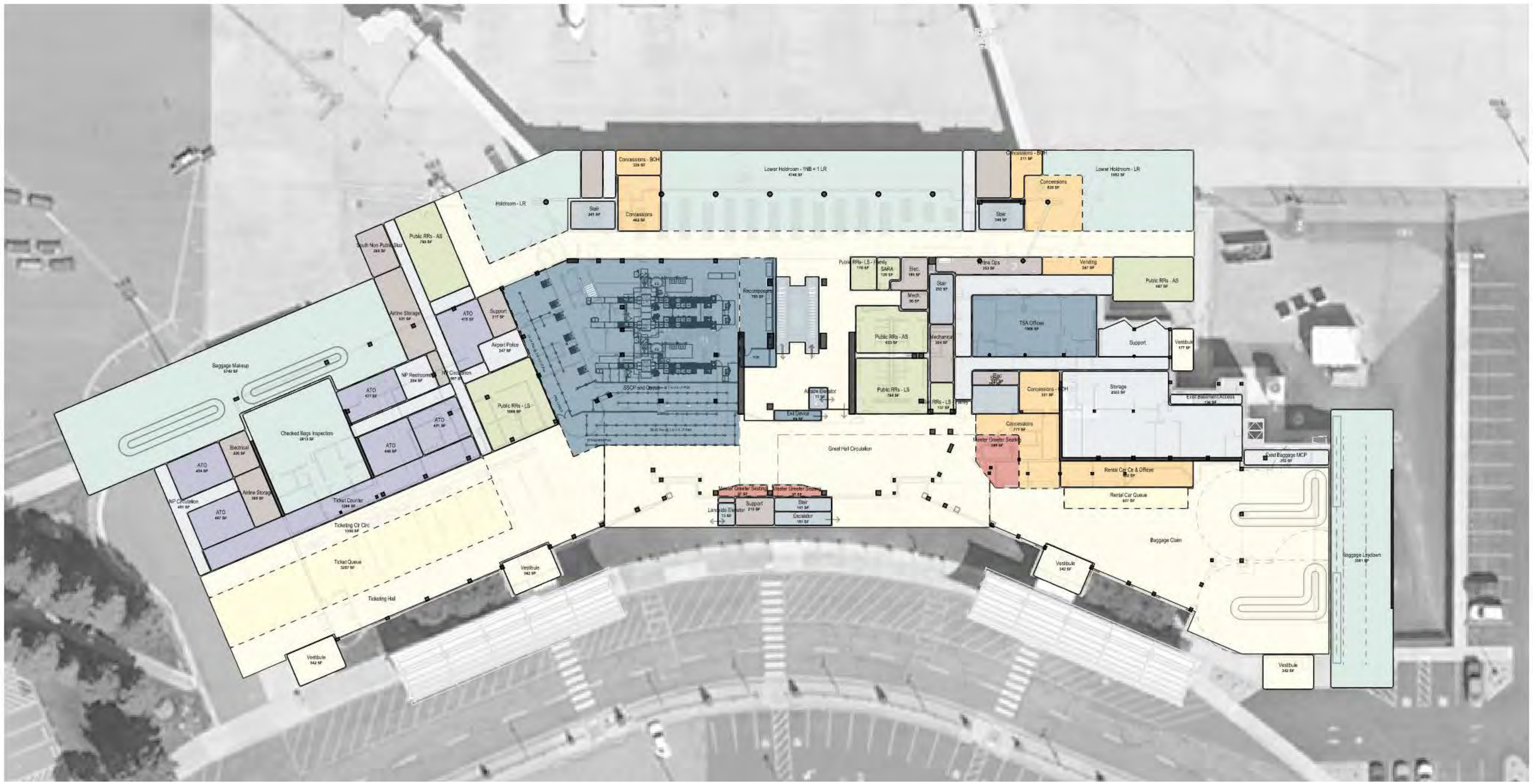
INITIAL OPTION 2A — GROUND LEVEL




INITIAL OPTION 2A — UPPER LEVEL

N

0' 20' 40' 80'

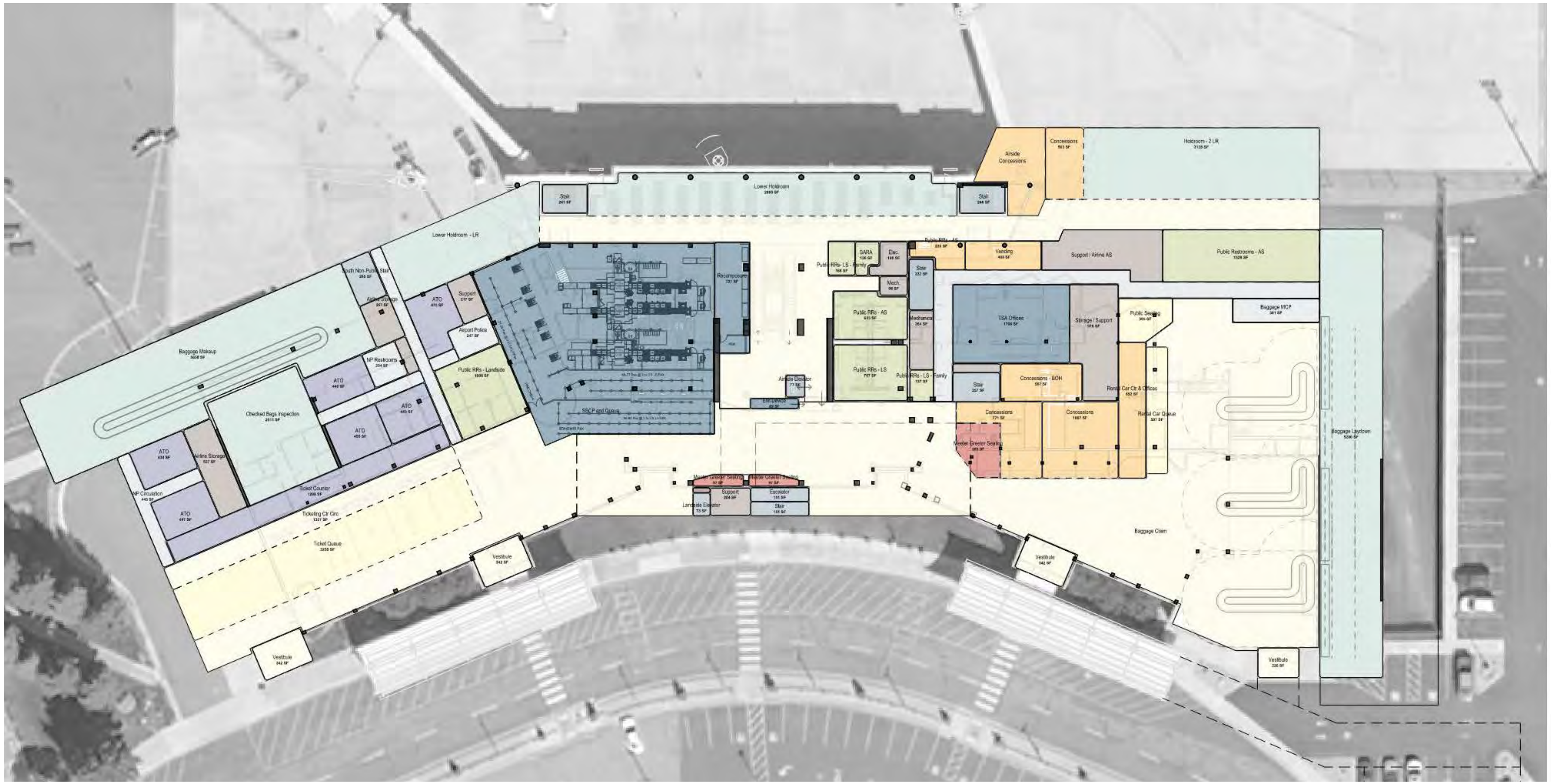


INITIAL OPTION 2B — GROUND LEVEL

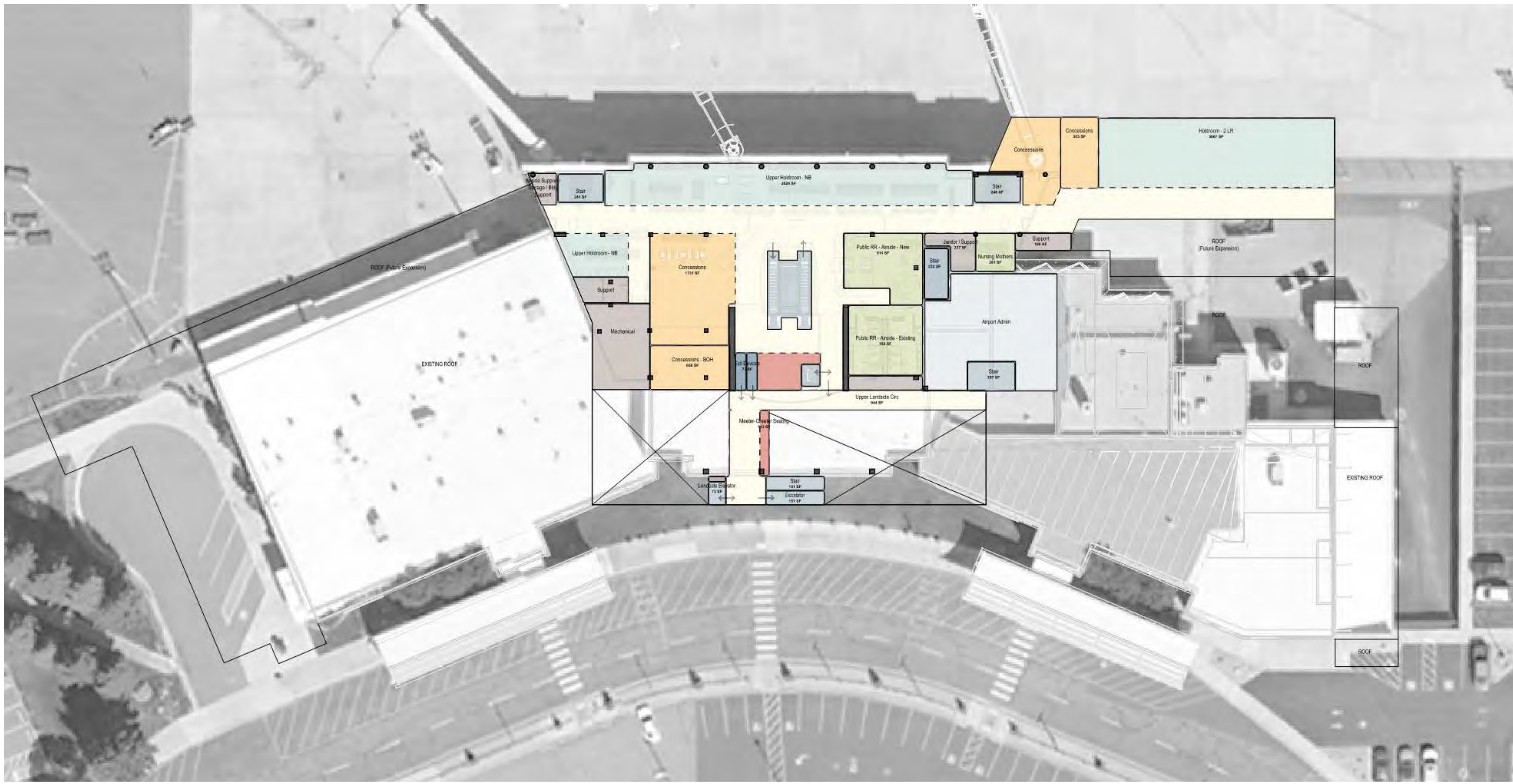

INITIAL OPTION 2B — UPPER LEVEL

N

0' 20' 40' 80'



INITIAL OPTION 2C — GROUND LEVEL



## INITIAL OPTION 2C — UPPER LEVEL

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## FULL ROM COST ESTIMATE & REPORT

On the following pages is the full ROM Cost Estimate and Report prepared by Connico, Inc. A summary of project direct costs can be found on page 73.

**Idaho Falls Regional Airport**

**Idaho Falls, Idaho**

# Terminal Expansion Project

Concept Design Estimate

**Report Date:**

March 21, 2022

**Revision Date:**

April 28, 2022

**Revision No.:**

4

Prepared for:

Alliiance
400 Clifton Avenue
Minneapolis, MN 55403

CONNICO

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CONNICO

2594 N. Mount Juliet Road
Mount Juliet, TN 37122
(615) 758-7474

April 28, 2022

Eric Peterson
Alliiance
400 Clifton Avenue
Minneapolis, MN 55403

RE: Terminal Expansion Project
Idaho Falls Regional Airport
Idaho Falls, Idaho
Concept Design Estimate - Revision 4

Dear Eric:

We are pleased to present the draft Concept Design Estimate for the referenced project. The Estimate has been drawn from the information noted in Exhibit A.

Included within the report are our Estimate Notes, which outline the criteria and allowances that were used to produce the estimate.

We appreciate the opportunity to work with you on this project. Should you have any questions or need additional information, please contact us at your convenience.

Sincerely,

The Connico Team

Charl J. Neser, MRICS, CCP
Director
cjneser@connico.com

Connico File No. 4886.21

## Table of Contents



CONNICO

*Terminal Expansion Project*
*Idaho Falls Regional Airport*
*April 28, 2022*

## INTRODUCTION

**TASK OUTLINE**

- Alliiance retained Connico as cost consultants to provide an estimate of probable cost for the Terminal Expansion Project project at Idaho Falls Regional Airport in Idaho Falls, Idaho. The estimate was based on plans, specifications, and other information, as noted in Exhibit A of this report.

- In providing estimates of probable construction cost, the client understands that Connico has no control over the cost or availability of labor, equipment, or materials, or over market conditions or the contractor's method of pricing, and that Connico's estimates of probable construction costs are made based on Connico's professional judgment and experience. Connico makes no warranty, express or implied, that the bids or the negotiated cost of the work will not vary from Connico's estimate of probable construction cost.

- The estimate of probable cost has been prepared based on information prepared/provided by others. Connico has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions that may be incorporated because of erroneous information provided by others.

**PROJECT DESCRIPTION**

The project includes the expansion and renovation of the existing airport: Ticket Lobby, Bag Screening, Outbound Bag Makeup, Airline Ticket Offices, GSE Storage and landside restrooms.

**MARKET INFORMATION**

- The United States commercial construction sector showed growth in 2021 as it continues to recover from the COVID-19 pandemic. The construction industry is anticipated to continue this growth in 2022 and should incur a significant boost as it is augmented by legislation passed in late 2021. However, as new projects come online and contractor backlog increases, contractors may become more selective in the projects they pursue.

- Construction projects continue to experience significant shortages of skilled labor, supply chain disruptions, and increases in basic construction material prices. It does not appear that these factors will be alleviated in the near term when coupled with recent inflationary pressures. Consequently, the culmination of all these factors has resulted in bid day pricing inconsistencies that are difficult to forecast.

- While the construction industry looks to continue its growth, lingering impacts of the COVID-19 pandemic remain due to the evolution of additional variants. If this continues, the possibility of local, regional, or global shutdowns could further strain the supply chain market and construction industry recovery.

CONNICO

*Terminal Expansion Project*
*Idaho Falls Regional Airport*
*April 28, 2022*

- The estimate attempts to incorporate known impacts due to market conditions, material pricing and labor impacts existing in the current market. However, the estimate cannot, and does not, reflect all potential economic impacts that may affect the construction market or the cost of the work. The impacts on material and labor availability have not been fully realized and the bidding and construction environment is in active flux as we continue to face uncertainty. Construction costs or durations may be impacted by any of these conditions. We would recommend that the Owner carry a contingency fund in their project budget to address market volatility.

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*Terminal Expansion Project*
*Idaho Falls Regional Airport*
*April 28, 2022*

## ESTIMATE NOTES

**GENERAL**

- Connico did not perform a site observation in preparing this estimate.

- The Conceptual Design Estimate has been developed using "cost per square foot" models based on other similar projects.

**MARKUPS AND SOFT COSTS**

- The following "direct" markups on the cost of work are included in the estimate, based on traditional design, bid, build:

**General Contractor Markups**

| | |
|---|---|
| Project Logistics & Labor Factor | 3.0% |
| General Requirements, Phasing & Temporary Construction | 2.0% |
| General Conditions | 8.0% |
| General Contractor's Overhead & Profit | 3.0% |
| Insurance | 2.0% |
| Payment & Performance Bonds | 1.0% |
| Sustainability Requirements | 0.0% |
| Escalation | 0.0% |

- The "indirect" markups (also known as 'Owner's Soft Costs') has not been included in the estimate.

- A fifteen percent (15%) estimating design evolution has been included in the estimate for unforeseen work and final detailing that may be necessary to accomplish the project scope of work. The design evolution is not intended to be used for additions to the general scope of work.

- A project logistics & labor factor allowance has been included in the estimate to account for the loss of productivity resulting from (1) staging of labor from the staging / parking area to the project site (2) working at an occupied airport (3) working in a congested site / challenging conditions. This item is included as an allowance as it is subject to the vagaries of "market and bidding conditions" at the time the project is bid.

- An allowance for insurance is included in the estimate. There are many variables that will impact the cost of insurance including, but not limited to, the contractor's performance history, project size, complexity, location, and phasing. Additionally, insurance costs will change if the owner selects an owner- or contractor controlled insurance program.

- An allowance for payment and performance bonds is included in the estimate. There are many variables that will impact the cost of payment and performance bonds including, but not limited to, the contractor's performance history, project size, complexity, location, and phasing.

CONNICO

*Terminal Expansion Project*
*Idaho Falls Regional Airport*
*April 28, 2022*

- The estimate is costed on the understanding that there will be free and open competition at all levels of contracting, that there will not be a restricted bidders list either for general or trade contractors, that there will be a minimum three general contract bidders and at minimum three sub bids will be available for each trade involved. The owner can facilitate these conditions by ensuring that the project is publicly advertised for bids in general circulation as well as trade publications where advertisements for bid are regularly posted, that prequalification requirements, if prequalification of either general or sub bidders is contemplated, are not unduly restrictive, and by maintaining good industry relations.
- The estimate does not include an owner's construction contingency to be utilized for changes or additions to the scope of work during construction.
- The estimate does not include a project contingency.
- The estimate is based on commodity and labor pricing as of the date of this estimate with no adjustment for escalation.
- The estimate is costed on the understanding that there will be a requirement to utilize "prevailing wages" on the project.
- Temporary site storage and parking for contractor is assumed to be remote from the site and will necessitate bussing construction personnel to the jobsite.
- Allowances included in the estimate are amounts the owner should expect to spend.



IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| Project Title | Terminal Expansion Project | | |
| Location | Idaho Falls Regional Airport | | |
| Submittal Stage | Concept Design | | |
| Client Name | Alliiance | | |
| Client Project No. | | Revision | 4 |
| Original Date | 2022-03-21 | Revision Date | 2022-04-28 |
| Assumed Bid Opening Date | | Connico PN | 4886.21 |
| Project Lead | CJN | Checked by | IDK |

**Terminal Expansion Project**

**SUMMARY**

| DESCRIPTION | | TOTAL |
|---|---|---|
| PRIORITY 1a - TICKETING & BAGGAGE HANDLING | $ | 44,736,800 |
| PRIORITY 1b - SECURITY CHECKPOINT | $ | 4,568,895 |
| PRIORITY 2 - AIRSIDE HOLDROOM AREA | $ | 14,117,101 |
| PRIORITY 3 - BAGGAGE HANDLING. | $ | 11,121,721 |
| ***Opinion of Probable Project Cost*** | **$** | **74,544,517** |

***The following markups are included in the project costs:***

| | |
|---|---|
| Estimating Design Evolution | 15.0% |
| ***General Contractors Markups*** | |
| Project Logistics & Labor Factor | 3.0% |
| General Requirements, Phasing & Temporary Construction | 2.0% |
| General Conditions | 8.0% |
| General Contractors Overhead & Profit | 3.0% |
| Insurance | 2.0% |
| Payment & Performance Bonds | 1.0% |
| Sustainability Requirements | 0.0% |
| Escalation | 0.0% |

CONNICO

*Terminal Expansion Project*
*Idaho Falls Regional Airport*
*April 28, 2022*

**ESTIMATE DETAIL**

IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| **Project Title** | Terminal Expansion Project | | |
| **Location** | Idaho Falls Regional Airport | | |
| **Submittal Stage** | Concept Design | | |
| **Client Name** | Alliiance | | |
| **Client Project No.** | | **Revision** | 4 |
| **Original Date** | 2022-03-21 | **Revision Date** | 2022-04-28 |
| **Assumed Bid Opening Date** | | **Connico PN** | 4886.21 |
| **Project Lead** | CJN | **Checked by** | IDK |

**PRIORITY 1a - TICKETING & BAGGAGE HANDLING**

**SUMMARY**

| | DESCRIPTION | | COST PER SQUARE FOOT | TOTAL |
|---|---|---|---|---|
| A | **Substructure** | | $ 12.04 | $ 835,318 |
| | Standard Foundations | $ 490,974 | | |
| | Special Foundations | $ 90,000 | | |
| | Slab on Grade | $ 254,344 | | |
| B | **Shell** | | $ 120.00 | $ 8,327,687 |
| | Superstructure | $ 3,326,510 | | |
| | Exterior Closure | $ 4,467,670 | | |
| | Roofing | $ 533,508 | | |
| C | **Interiors** | | $ 73.90 | $ 5,128,705 |
| | Interior Construction | $ 801,547 | | |
| | Stairs | $ 255,200 | | |
| | Interior Finishes | $ 4,071,958 | | |
| D | **Services** | | $ 208.49 | $ 14,469,011 |
| | Conveying | $ 480,000 | | |
| | Baggage Handling System | $ 1,759,000 | | |
| | Plumbing | $ 936,019 | | |
| | HVAC | $ 3,806,480 | | |
| | Fire Protection | $ 419,132 | | |
| | Electrical | $ 5,164,900 | | |
| | Communications | $ 1,084,101 | | |
| | Electronic Safety & Security | $ 819,378 | | |
| E | **Equipment & Furnishings** | | $ 8.18 | $ 567,592 |
| | Equipment | $ 173,495 | | |
| | Passenger Boarding Bridges | $ 290,000 | | |
| | Furnishings | $ 104,097 | | |
| F | **Special Construction & Demolition** | | $ 5.42 | $ 376,106 |
| | Special Construction | $ 50,000 | | |
| | Selective Building Demolition | $ 326,106 | | |
| | Hazardous Material Abatement | $ - | | |
| G | **Building Sitework** | | $ 37.56 | $ 2,606,340 |
| | Site Preparation | $ 276,090 | | |
| | Site Improvements | $ 1,400,250 | | |
| | Site Mechanical Utilities | $ 10,000 | | |
| | Site Electrical Utilities | $ 920,000 | | |
| | ***Subtotal*** | | ***$ 465.59*** | ***$ 32,310,758*** |
| 15.0% | Estimating Design Evolution | | | $ 4,846,614 |

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## PRIORITY 1a - TICKETING & BAGGAGE HANDLING

### SUMMARY

| DESCRIPTION | | COST PER SQUARE FOOT | | TOTAL |
|---|---|---|---|---|
| ***Subtotal - Cost of Work*** | ***$*** | ***535.42*** | ***$*** | ***37,157,372*** |
| ***General Contractors Markups*** | | | | |
| 3.0% Project Logistics & Labor Factor | | | $ | 1,114,721 |
| 2.0% General Requirements, Phasing & Temporary Construction | | | $ | 765,442 |
| 8.0% General Conditions | | | $ | 3,123,003 |
| 3.0% General Contractors Overhead & Profit | | | $ | 1,264,816 |
| 2.0% Insurance | | | $ | 868,507 |
| 1.0% Payment & Performance Bonds | | | $ | 442,939 |
| 0.0% Sustainability Requirements | | | $ | - |
| ***Opinion of Probable Construction Cost*** | ***$*** | ***644.64*** | ***$*** | ***44,736,800*** |
| 0.0% Escalation | | | $ | - |
| ***Opinion of Probable Project Cost*** | ***$*** | ***644.64*** | ***$*** | ***44,736,800*** |

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4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| **Project Title** | Terminal Expansion Project | | |
| **Location** | Idaho Falls Regional Airport | | |
| **Submittal Stage** | Concept Design | | |
| **Client Name** | Alliiance | | |
| **Client Project No.** | | **Revision** | 4 |
| **Original Date** | 2022-03-21 | **Revision Date** | 2022-04-28 |
| **Assumed Bid Opening Date** | | **Connico PN** | 4886.21 |
| **Project Lead** | CJN | **Checked by** | IDK |

## PRIORITY 1a - TICKETING & BAGGAGE HANDLING

### DETAIL

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| ***Terminal Renovation & Expansion*** | | | | |
| *Level 1* | | | | |
| Ticketing: | | | | |
| Ticketing Counters | 1,234 | | 1,234 | sf |
| Ticketing Queue + Cross Circulation | 5,785 | | 5,785 | sf |
| Ticketing Circulation | 1,034 | 905 | 1,939 | sf |
| ATO'S | 3,034 | | 3,034 | sf |
| Stair & Circulation To 2nd Level Admin Space | | 587 | 587 | sf |
| Elevator | | 103 | 103 | sf |
| Elevator Equipment Room | | 53 | 53 | sf |
| Bag Screening And Makeup: | | | | |
| Bag Screening | 2,550 | | 2,550 | sf |
| Bag Makeup | | 14,403 | 14,403 | sf |
| Secure Circulation | 826 | 131 | 957 | sf |
| Holdroom Addition | | 1,521 | 1,521 | sf |
| Central Commons | | | | |
| Landside Restrooms | 1,815 | | 1,815 | sf |
| Janitor/Support | 114 | | 114 | sf |
| Airport/Support | 425 | | 425 | sf |
| Bag Conveyor Equipment Room | 287 | | 287 | sf |
| Landside Concessions - FOH | 915 | | 915 | sf |
| Landside Concessions - BOH | 342 | | 342 | sf |
| General Circulation | 7,466 | 463 | 7,929 | sf |
| Meeter Greeter/Seating | 449 | 639 | 1,088 | sf |
| Vertical Circulation | 671 | | 671 | sf |
| Additional Level 1 Spaces: | | | | |
| Enclosed Stair (From Admin) | | 285 | 285 | sf |
| Non-Public Restrooms | 221 | | 221 | sf |
| TR/IT/Data | 315 | | 315 | sf |
| Electrical | | 604 | 604 | sf |
| Mechanical/Chase | 87 | | 87 | sf |
| Support Spaces/Airport | | 211 | 211 | sf |
| Vestibules | 360 | 360 | 720 | sf |
| *Level 2* | | | | |
| Shell Space (Hold Room; Admin; Stairs) | | 17,542 | 17,542 | sf |
| Central Commons | | | | |
| General Circulation | | 481 | 481 | sf |
| New Open Walkway/Balcony | | 1,987 | 1,987 | sf |
| Additional Spaces | | | | |
| Electrical Room | | 450 | 450 | sf |
| Stair & Circulation To 2nd Level Admin Space | | 587 | 587 | sf |

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4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

## PRIORITY 1a - TICKETING & BAGGAGE HANDLING

### SUMMARY

| DESCRIPTION | COST PER SQUARE FOOT | TOTAL |
|---|---|---|
| *Subtotal - Cost of Work* | *$ 535.42* | *$ 37,157,372* |
| *General Contractors Markups* | | |
| 3.0% Project Logistics & Labor Factor | | $ 1,114,721 |
| 2.0% General Requirements, Phasing & Temporary Construction | | $ 765,442 |
| 8.0% General Conditions | | $ 3,123,003 |
| 3.0% General Contractors Overhead & Profit | | $ 1,264,816 |
| 2.0% Insurance | | $ 868,507 |
| 1.0% Payment & Performance Bonds | | $ 442,939 |
| 0.0% Sustainability Requirements | | $ - |
| *Opinion of Probable Construction Cost* | *$ 644.64* | *$ 44,736,800* |
| 0.0% Escalation | | $ - |
| *Opinion of Probable Project Cost* | *$ 644.64* | *$ 44,736,800* |

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4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
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| Assumed Bid Opening Date | | Connico PN | 4886.21 |
| Project Lead | CJN | Checked by | IDK |

## PRIORITY 1a - TICKETING & BAGGAGE HANDLING

### DETAIL

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| ***Terminal Renovation & Expansion*** | | | | |
| *Level 1* | | | | |
| Ticketing: | | | | |
| Ticketing Counters | 1,234 | | 1,234 | sf |
| Ticketing Queue + Cross Circulation | 5,785 | | 5,785 | sf |
| Ticketing Circulation | 1,034 | 905 | 1,939 | sf |
| ATO'S | 3,034 | | 3,034 | sf |
| Stair & Circulation To 2nd Level Admin Space | | 587 | 587 | sf |
| Elevator | | 103 | 103 | sf |
| Elevator Equipment Room | | 53 | 53 | sf |
| Bag Screening And Makeup: | | | | |
| Bag Screening | 2,550 | | 2,550 | sf |
| Bag Makeup | | 14,403 | 14,403 | sf |
| Secure Circulation | 826 | 131 | 957 | sf |
| Holdroom Addition | | 1,521 | 1,521 | sf |
| Central Commons | | | | |
| Landside Restrooms | 1,815 | | 1,815 | sf |
| Janitor/Support | 114 | | 114 | sf |
| Airport/Support | 425 | | 425 | sf |
| Bag Conveyor Equipment Room | 287 | | 287 | sf |
| Landside Concessions - FOH | 915 | | 915 | sf |
| Landside Concessions - BOH | 342 | | 342 | sf |
| General Circulation | 7,466 | 463 | 7,929 | sf |
| Meeter Greeter/Seating | 449 | 639 | 1,088 | sf |
| Vertical Circulation | 671 | | 671 | sf |
| Additional Level 1 Spaces: | | | | |
| Enclosed Stair (From Admin) | | 285 | 285 | sf |
| Non-Public Restrooms | 221 | | 221 | sf |
| TR/IT/Data | 315 | | 315 | sf |
| Electrical | | 604 | 604 | sf |
| Mechanical/Chase | 87 | | 87 | sf |
| Support Spaces/Airport | | 211 | 211 | sf |
| Vestibules | 360 | 360 | 720 | sf |
| *Level 2* | | | | |
| Shell Space (Hold Room; Admin; Stairs) | | 17,542 | 17,542 | sf |
| Central Commons | | | | |
| General Circulation | | 481 | 481 | sf |
| New Open Walkway/Balcony | | 1,987 | 1,987 | sf |
| Additional Spaces | | | | |
| Electrical Room | | 450 | 450 | sf |
| Stair & Circulation To 2nd Level Admin Space | | 587 | 587 | sf |

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4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

**PRIORITY 1a - TICKETING & BAGGAGE HANDLING**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| Elevator | | 103 | 103 | sf |
| Support | | 53 | 53 | sf |
| **Total Area** | **27,930** | **41,468** | **69,398** | **sf** |

| | DESCRIPTION | QUANTITY | UNIT | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| ***A*** | ***SUBSTRUCTURE*** | | | | |
| **A10** | **Foundations** | | | | |
| A1010 | Standard Foundations | | | | |
| A1011 | Column Foundations, Wall Foundations, Grade Beams, Foundation Wall | 21,267 | sf | $ 20.00 | $ 425,340 |
| A1012 | Perimeter Drainage | 21,267 | sf | $ 0.50 | $ 10,634 |
| A1013 | Dewatering | 1 | ls | $ 5,000.00 | $ 5,000 |
| A1014 | Allowance for New Foundation in Existing Interior of Building | 1 | ls | $ 50,000.00 | $ 50,000 |
| A1030 | Special Foundations | | | | |
| A1031 | New PBB Foundation | 1 | ea | $ 65,000.00 | $ 65,000 |
| A1032 | New Fixed Bridge Foundation | 1 | ea | $ 25,000.00 | $ 25,000 |
| A1050 | Slab on Grade | | | | |
| A1051 | 5" Slab on Grade | 6,864 | sf | $ 6.50 | $ 44,616 |
| A1052 | 8" Slab on Grade | 14,403 | sf | $ 8.50 | $ 122,426 |
| A1053 | Elevator and Escalator Pits | 2 | ea | $ 15,000.00 | $ 30,000 |
| A1054 | Misc. Trenches, Pits & Bases | 20 | cy | $ 750.00 | $ 14,769 |
| A1055 | Under-slab Drainage & Insulation | 21,267 | sf | $ 2.00 | $ 42,534 |
| | ***Subtotal - Substructure*** | | | | ***$ 835,318*** |
| ***B*** | ***SHELL*** | | | | |
| **B10** | **Superstructure** | | | | |
| B1010 | Floor Construction | | | | |
| B1011 | Steel Floor Structure (Allowance 23 lb/sf) | 230 | tns | $ 5,800.00 | $ 1,333,333 |
| B1012 | Steel Floor Deck | 19,990 | sf | $ 6.00 | $ 119,940 |
| B1013 | Miscellaneous Steel (5%) | 11 | tns | $ 6,200.00 | $ 71,264 |
| B1014 | Concrete Fill to Steel Floor Deck | 19,990 | sf | $ 7.75 | $ 154,923 |
| B1015 | Elevated Floor Slab Fireproofing | 19,990 | sf | $ 7.00 | $ 139,930 |
| B1016 | Add Allowance for Misc. Steel Framing at Junction to Existing Floor Structure | 1 | alw | $ 25,000.00 | $ 25,000 |

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4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

**PRIORITY 1a - TICKETING & BAGGAGE HANDLING**

**DETAIL**

| | DESCRIPTION | QUANTITY | UNIT | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| B1030 | Roof Construction | | | | |
| B1031 | Steel Roof Structure (Allowance 18 lb/sf) | 191 | tns | $ 5,800.00 | $ 1,110,137 |
| B1032 | Steel Roof Deck | 21,267 | sf | $ 5.35 | $ 113,778 |
| B1033 | Miscellaneous Steel (5%) | 10 | tns | $ 6,200.00 | $ 59,335 |
| B1034 | Roof Fireproofing | 21,267 | sf | $ 7.00 | $ 148,869 |
| B1035 | Add Allowance for Misc. Steel Framing at Junction to Existing Floor Structure | 1 | alw | $ 50,000.00 | $ 50,000 |
| B1036 | Allowance for Blast Protection | | | | Excluded |
| **B20** | **Exterior Closure** | | | | |
| B2010 | Exterior Walls | | | | |
| B2011 | Metal Panel | 1,370 | sf | $ 45.00 | $ 61,650 |
| B2012 | Back-up System to Metal Panel | 1,370 | sf | $ 20.00 | $ 27,400 |
| B2013 | CMU | 7,754 | sf | $ 20.00 | $ 155,080 |
| B2014 | Back-up System to CMU | 7,754 | sf | $ 10.00 | $ 77,540 |
| B2015 | Parapet Detail | 700 | lf | $ 55.00 | $ 38,500 |
| B2030 | Exterior Windows | | | | |
| B2031 | Curtain Wall | 24,500 | sf | $ 165.00 | $ 4,042,500 |
| B2050 | Exterior Doors | | | | |
| B2051 | Exterior Doors | 1 | alw | $ 15,000.00 | $ 15,000 |
| B2052 | Glass Door - Double (Vestibule) | 4 | pr | $ 12,500.00 | $ 50,000 |
| **B30** | **Roofing** | | | | |
| B3010 | Roof Coverings | | | | |
| B3011 | Membrane Roof Assembly | 21,267 | sf | $ 22.50 | $ 478,508 |
| B3012 | Parapet Detail | 700 | lf | $ 50.00 | $ 35,000 |
| B3013 | Patch & Repair Existing Roof Assembly | 1 | alw | $ 15,000.00 | $ 15,000 |
| B3030 | Roof Openings | | | | |
| B3031 | Roof Hatch | 2 | alw | $ 2,500.00 | $ 5,000 |
| | ***Subtotal - Shell*** | | | | ***$ 8,327,687*** |
| ***C*** | ***INTERIORS*** | | | | |
| **C10** | **Interior Construction** | | | | |
| C1010 | Partitions | | | | |
| C1011 | Interior Partitions | 69,398 | sf | $ 2.50 | $ 173,495 |
| C1012 | Rough Carpentry & Blocking | 69,398 | sf | $ 1.00 | $ 69,398 |
| C1013 | Caulking, Sealants & Firestopping | 69,398 | sf | $ 1.25 | $ 86,748 |

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**PRIORITY 1a - TICKETING & BAGGAGE HANDLING**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| C1014 Misc. Metals, Bracing, Countertop Supports, Equipment Supports, etc. | 69,398 sf | | $ 1.00 | $ 69,398 |
| C1030 Interior Doors | | | | |
| C1031 Interior Doors - Allowance | | | | Incl. see C3010 |
| C1050 Specialties | | | | |
| C1051 Fire Extinguishers & Cabinets | 69,398 sf | | $ 0.05 | $ 3,470 |
| C1052 Code Signage | 69,398 sf | | $ 0.25 | $ 17,350 |
| C1053 Interior Wayfinding Signage | 69,398 sf | | $ 3.50 | $ 242,893 |
| C1054 Miscellaneous Specialties | 69,398 sf | | $ 2.00 | $ 138,796 |
| **C20 Stairs** | | | | |
| C2010 Stair Construction | | | | |
| C2011 Stair - Public | | 4 flts | $ 45,000.00 | $ 180,000 |
| C2030 Stair Finishes | | | | |
| C2031 Stair Tread & Landing Finishes - Public | | 4 flts | $ 15,000.00 | $ 60,000 |
| C2032 Stair Handrail & Balustrade Finishes - Public | | 4 flts | $ 3,800.00 | $ 15,200 |
| **C30 Interior Finishes** | | | | |
| C3010 Interior Finishes | | | | |
| C2011 *Level 1* | | | | |
| C2012 Ticketing: | | | | |
| C2013 Ticketing Counters | 1,234 sf | | $ 707.00 | $ 872,438 |
| C2014 Ticketing Queue + Cross Circulation | 5,785 sf | | $ 70.00 | $ 404,950 |
| C2015 Ticketing Circulation | 1,939 sf | | $ 70.00 | $ 135,730 |
| C2016 ATO'S | 3,034 sf | | $ 55.00 | $ 166,870 |
| C2017 Stair & Circulation To 2nd Level Admin Space | 587 sf | | $ 55.00 | $ 32,285 |
| C2018 Elevator | 103 sf | | $ 55.00 | $ 5,665 |
| C2019 Elevator Equipment Room | 53 sf | | $ 55.00 | $ 2,915 |
| C2020 Bag Screening And Makeup: | | | | $ - |
| C2021 Bag Screening | 2,550 sf | | $ 35.00 | $ 89,250 |
| C2022 Bag Makeup | 14,403 sf | | $ 25.00 | $ 360,075 |
| C2023 Secure Circulation | 957 sf | | $ 75.00 | $ 71,775 |
| C2024 Holdroom Addition | 1,521 sf | | $ 85.00 | $ 129,285 |
| C2025 Central Commons | | | | |
| C2026 Landside Restrooms | 1,815 sf | | $ 125.00 | $ 226,875 |
| C2027 Janitor/Support | 114 sf | | $ 45.00 | $ 5,130 |
| C2028 Airport/Support | 425 sf | | $ 55.00 | $ 23,375 |
| C2029 Bag Conveyor Equipment Room | 287 sf | | $ 45.00 | $ 12,915 |
| C2030 Landside Concessions - FOH | 915 sf | | $ 25.00 | $ 22,875 |
| C2031 Landside Concessions - BOH | 342 sf | | $ 25.00 | $ 8,550 |

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**PRIORITY 1a - TICKETING & BAGGAGE HANDLING**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| C2032 General Circulation | 7,929 sf | | $ 70.00 | $ 555,030 |
| C2033 Meeter Greeter/Seating | 1,088 sf | | $ 75.00 | $ 81,600 |
| C2034 Vertical Circulation | 671 sf | | $ 55.00 | $ 36,905 |
| C2035 Additional Level 1 Spaces: | | | | |
| C2036 Enclosed Stair (From Admin) | 285 sf | | $ 55.00 | $ 15,675 |
| C2037 Non-Public Restrooms | 221 sf | | $ 125.00 | $ 27,625 |
| C2038 TR/IT/Data | 315 sf | | $ 45.00 | $ 14,175 |
| C2039 Electrical | 604 sf | | $ 45.00 | $ 27,180 |
| C2040 Mechanical/Chase | 87 sf | | $ 45.00 | $ 3,915 |
| C2041 Support Spaces/Airport | 211 sf | | $ 55.00 | $ 11,605 |
| C2042 Vestibules | 720 sf | | $ 90.00 | $ 64,800 |
| C2043 *Level 2* | | | | |
| C2044 Shell Space (Hold Room; Admin; Stairs) | 17,542 sf | | $ 25.00 | $ 438,550 |
| C2045 Central Commons | | | | |
| C2046 General Circulation | 481 sf | | $ 70.00 | $ 33,670 |
| C2047 New Open Walkway/Balcony | 1,987 sf | | $ 65.00 | $ 129,155 |
| C2048 Additional Spaces | | | | |
| C2049 Electrical Room | 450 sf | | $ 45.00 | $ 20,250 |
| C2050 Stair & Circulation To 2nd Level Admin Spac | 587 sf | | $ 55.00 | $ 32,285 |
| C2051 Elevator | 103 sf | | $ 55.00 | $ 5,665 |
| C2052 Support | 53 sf | | $ 55.00 | $ 2,915 |
| ***Subtotal - Interiors*** | | | | ***$ 5,128,705*** |
| ***D SERVICES*** | | | | |
| **D10 Conveying System** | | | | |
| D1010 Elevators & Lifts | | | | |
| D1011 Elevators & Lifts | | 2 stp | $ 65,000.00 | $ 130,000 |
| D1020 Escalators & Moving Walks | | | | |
| D1021 Escalators | | 1 ea | $ 350,000.00 | $ 350,000 |
| D1030 Baggage Handling Equipment | | | | |
| D1031 Baggage Handling Equipment - Outbound (Swanson Link Estimated Costs) | | 1 ls | $ 1,759,000.00 | $ 1,759,000 |
| **D20 Plumbing** | | | | |
| D2010 Plumbing Systems | | | | |
| D2011 *Priority 1* | | | | |
| D2012 Remolded Spaces | 27,930 sf | | $ 10.50 | $ 293,265 |
| D2013 New Construction | 41,468 sf | | $ 15.50 | $ 642,754 |
| **D30 HVAC** | | | | |
| D3010 HVAC Systems | | | | |

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**PRIORITY 1a - TICKETING & BAGGAGE HANDLING**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| D3011 Priority 1 | | | | |
| D3012 Remolded Spaces | 27,930 sf | | $ 38.00 | $ 1,061,340 |
| D3013 New Construction | 41,468 sf | | $ 38.00 | $ 1,575,784 |
| D3014 Air Handling Unit & RTU Upgrades | 69,398 sf | | $ 7.50 | $ 520,485 |
| D3110 Controls and Instrumentation | | | | |
| D3111 Controls and Instrumentation | 69,398 sf | | $ 7.50 | $ 520,485 |
| D3210 Systems Testing & Balancing | | | | |
| D3211 Systems Testing & Balancing | 69,398 sf | | $ 1.85 | $ 128,386 |
| **D40 Fire Protection** | | | | |
| D4010 Sprinkler Systems | | | | |
| D4011 Priority 1 | | | | |
| D4012 Remolded Spaces | 27,930 sf | | $ 3.50 | $ 97,755 |
| D4013 New Construction | 41,468 sf | | $ 7.75 | $ 321,377 |
| **D50 Electrical** | | | | |
| D5010 Electrical Systems | | | | |
| D5011 Electrical Infrastructure | | | | |
| D5012 3000 Amp Service | 1 ea | | $ 1,025,500.00 | $ 1,025,500 |
| D5013 800 Amp Service | 1 ea | | $ 152,970.00 | $ 152,970 |
| D5014 2000kw Generator / Transfer Switch | 1 ea | | $ 1,610,000.00 | $ 1,610,000 |
| D5015 Electrical Demo, Existing Terminal | 27,930 sf | | $ 2.00 | $ 55,860 |
| D5016 Distribution Equipment | 69,398 sf | | $ 3.75 | $ 260,243 |
| D5017 Feeder Conduit & Wire | 69,398 sf | | $ 5.70 | $ 395,569 |
| D5018 Wiring Devices | 69,398 sf | | $ 6.25 | $ 433,738 |
| D5019 Equipment Power and Connection | 69,398 sf | | $ 2.25 | $ 156,146 |
| D5020 Exit Corridor Power | 2 ea | | $ 3,415.00 | $ 6,830 |
| D5021 Lighting and Controls | 69,398 sf | | $ 13.00 | $ 902,174 |
| D5022 Grounding and Lightning Protection | 41,468 sf | | $ 4.00 | $ 165,872 |
| D6010 Communications | | | | |
| D6011 IDF Rooms | 1 ea | | $ 65,000.00 | $ 65,000 |
| D6012 Backbone Cabling IDF to Existing MTR | 1 alw | | $ 16,300.00 | $ 16,300 |
| D6013 Telephone, Radio, Wi-Fi | 69,398 sf | | $ 3.25 | $ 225,544 |
| D6014 EVIDS | 69,398 sf | | $ 5.50 | $ 381,689 |
| D6015 Public Address Systems | 69,398 sf | | $ 3.00 | $ 208,194 |
| D6016 Common Use System | 69,398 sf | | $ 2.70 | $ 187,375 |
| D7010 Electronic Safety & Security | | | | |
| D7011 Access Control | 69,398 sf | | $ 4.00 | $ 277,592 |
| D7012 Video Surveillance System | | | | |
| D7013 Cameras | 69,398 sf | | $ 3.00 | $ 208,194 |
| D7014 Workstations | 2 ea | | $ 10,500.00 | $ 21,000 |

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**PRIORITY 1a - TICKETING & BAGGAGE HANDLING**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| D7015 Video Storage | 1 alw | | $ 35,000.00 | $ 35,000 |
| D7016 Fire Alarm | 69,398 sf | | $ 4.00 | $ 277,592 |
| ***Subtotal - Services*** | | | | ***$ 14,469,011*** |
| ***E EQUIPMENT & FURNISHINGS*** | | | | |
| **E10 Equipment** | | | | |
| E1010 Equipment | | | | |
| E1011 Concessions Equipment - Not in Scope | | | | Excluded |
| E1012 Security Equipment - Not in Scope | | | | Excluded |
| E1013 FIS Equipment - Not in Scope | | | | Excluded |
| E1014 FIDS, BIDS, MUFIDS | 69,398 sf | | $ 2.00 | $ 138,796 |
| E1015 Dynamic Signage | | | | Excluded |
| E1016 Misc. Equipment Allowance | 69,398 sf | | $ 0.50 | $ 34,699 |
| E1030 Passenger Boarding Bridges | | | | |
| E1031 Relocate Existing PBB | 1 ea | | $ 150,000.00 | $ 150,000 |
| E1032 New Fix Passenger Boarding Bridge Extension | 35 lf | | $ 4,000.00 | $ 140,000 |
| **E20 Furnishings** | | | | |
| E2010 Fixed Furnishings | | | | |
| E2011 Misc. Casework Allowance | 69,398 sf | | $ 1.50 | $ 104,097 |
| ***Subtotal - Equipment & Furnishings*** | | | | ***$ 567,592*** |
| ***F SPECIAL CONSTRUCTION & DEMOLITION*** | | | | |
| **F10 Special Construction** | | | | |
| F1010 Special Construction | | | | |
| F1011 Basement Level MEP Rooms Allowance | 1 alw | | $ 50,000.00 | $ 50,000 |
| **F20 Selective Building Demolition** | | | | |
| F2010 Building Elements Demolition | | | | |
| F2011 Demolish Exterior Closure at Existing Building | 11,301 sf | | $ 15.00 | $ 169,515 |
| F2012 Selective Interiors Demolish - Existing Building | 27,930 sf | | $ 3.50 | $ 97,755 |
| F2013 Misc. Demolition | 1 alw | | $ 15,000.00 | $ 15,000 |
| F2014 Remove Debris to Dumpster | 468 cy | | $ 32.00 | $ 14,976 |
| F2015 Dumpster Pulls | 16 ea | | $ 350.00 | $ 5,460 |
| F2016 Dump Fees | 468 cy | | $ 50.00 | $ 23,400 |

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## PRIORITY 1a - TICKETING & BAGGAGE HANDLING

### DETAIL

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| **F30 Hazardous Material Abatement** | | | | | |
| F3010 Hazardous Material Abatement | | | | | |
| F3011 Hazardous Material Abatement | | | | | Excluded |
| ***Subtotal - Special Construction & Demolition*** | | | | | ***$ 376,106*** |
| ***G BUILDING SITEWORK*** | | | | | |
| **G10 Site Preparation** | | | | | |
| G1010 Civil General Requirements | | | | | |
| G1011 Safety and Security | 1 ls | | | $ 76,000.00 | $ 76,000 |
| Temporary Construction Items & Erosion | 1 ls | | | $ 49,700.00 | $ 49,700 |
| G1012 Control | | | | | |
| G1013 Drainage and Utility Allowance | 1 ls | | | $ 36,700.00 | $ 36,700 |
| G1020 Site Demolition | | | | | |
| G1021 Demo Existing Apron Paving | 1,682 sy | | | $ 20.00 | $ 33,640 |
| G1022 Demo Existing Concrete Walkway | 1,720 sf | | | $ 1.50 | $ 2,580 |
| G1023 Demo Existing Security Fencing | 150 lf | | | $ 10.00 | $ 1,500 |
| G1024 Demo Existing PBB | 1 ea | | | $ 15,000.00 | $ 15,000 |
| G1030 Site Earthwork | | | | | |
| G1031 Grading Building Footprint | 0.6 ace | | | $ 3,500.00 | $ 2,100 |
| G1032 Backfill - Apron Paving Areas to Make up Levels | 1,682 cy | | | $ 35.00 | $ 58,870 |
| **G20 Site Improvements** | | | | | |
| G2010 Pavement | | | | | |
| G2011 New Security Fencing | 150 lf | | | $ 85.00 | $ 12,750 |
| G2012 Allowance for Road and Parking, Walkway Alterations | 1 ls | | | $ 15,000.00 | $ 15,000 |
| G2030 Site Development | | | | | |
| G2031 New Sidewalk Canopy Expansion | 3,050 sf | | | $ 450.00 | $ 1,372,500 |
| **G30 Site Mechanical Utilities** | | | | | |
| G3010 Site Mechanical Utilities | | | | | |
| G3011 Site Mechanical Utilities - Allowance | 1 alw | | | $ 10,000.00 | $ 10,000 |
| **G40 Site Electrical Utilities** | | | | | |
| G4010 Site Electrical Utilities | | | | | |
| G4011 Site Electrical Utilities Allowance | 1 alw | | | $ 765,000.00 | $ 765,000 |

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## PRIORITY 1a - TICKETING & BAGGAGE HANDLING

### DETAIL

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| G4030 Site Lighting | | | | | |
| G4031 Relocate Apron Lighting | 2 ea | | | $ 25,000.00 | $ 50,000 |
| G4032 Wall Packs, Canopy and Pole Lighting | 1 alw | | | $ 105,000.00 | $ 105,000 |
| ***Subtotal - Building Sitework*** | | | | | ***$ 2,606,340*** |
| ***Subtotal*** | | | | ***$ 465.59*** | ***$ 32,310,758*** |
| Estimating Design Evolution | 15.0% | | | | $ 4,846,614 |
| ***Subtotal - Cost of Work*** | | | | ***$ 535.42*** | ***$ 37,157,372*** |
| ***General Contractors Markups*** | | | | | |
| Project Logistics & Labor Factor | 3.0% | | | | $ 1,114,721 |
| General Requirements, Phasing & Temporary Construction | 2.0% | | | | $ 765,442 |
| General Conditions | 8.0% | | | | $ 3,123,003 |
| General Contractors Overhead & Profit | 3.0% | | | | $ 1,264,816 |
| Insurance | 2.0% | | | | $ 868,507 |
| Payment & Performance Bonds | 1.0% | | | | $ 442,939 |
| Sustainability Requirements | 0.0% | | | | $ - |
| ***Opinion of Probable Construction Cost*** | | | | ***$ 644.64*** | ***$ 44,736,800*** |
| Escalation | 0.0% | | | | $ - |
| ***Opinion of Probable Project Cost*** | | | | ***$ 644.64*** | ***$ 44,736,800*** |

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IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| Project Title | Terminal Expansion Project | | |
| Location | Idaho Falls Regional Airport | | |
| Submittal Stage | Concept Design | | |
| Client Name | Alliiance | | |
| Client Project No. | | Revision | 4 |
| Original Date | 2022-03-21 | Revision Date | 2022-04-28 |
| Assumed Bid Opening Date | | Connico PN | 4886.21 |
| Project Lead | CJN | Checked by | IDK |

## PRIORITY 1b - SECURITY CHECKPOINT

### SUMMARY

| | DESCRIPTION | | COST PER SQUARE FOOT | TOTAL |
|---|---|---|---|---|
| A | **Substructure** | | $ - | $ - |
| | Standard Foundations | $ - | | |
| | Slab on Grade | $ - | | |
| B | **Shell** | | $ - | $ - |
| | Superstructure | $ - | | |
| | Exterior Closure | $ - | | |
| | Roofing | $ - | | |
| C | **Interiors** | | $ 72.97 | $ 1,133,616 |
| | Interior Construction | $ 179,441 | | |
| | Stairs | $ - | | |
| | Interior Finishes | $ 954,175 | | |
| D | **Services** | | $ 132.11 | $ 2,052,512 |
| | Conveying | $ - | | |
| | Baggage Handling System | $ - | | |
| | Plumbing | $ 114,195 | | |
| | HVAC | $ 852,150 | | |
| | Fire Protection | $ 85,448 | | |
| | Electrical | $ 515,328 | | |
| | Communications | $ 423,247 | | |
| | Electronic Safety & Security | $ 62,144 | | |
| E | **Equipment & Furnishings** | | $ 4.00 | $ 62,144 |
| | Equipment | $ 38,840 | | |
| | Passenger Boarding Bridges | $ - | | |
| | Furnishings | $ 23,304 | | |
| F | **Special Construction & Demolition** | | $ 3.32 | $ 51,573 |
| | Special Construction | $ - | | |
| | Selective Building Demolition | $ 51,573 | | |
| | Hazardous Material Abatement | $ - | | |
| G | **Building Sitework** | | $ - | $ - |
| | Site Preparation | $ - | | |
| | Site Improvements | $ - | | |
| | Site Mechanical Utilities | $ - | | |
| | Site Electrical Utilities | $ - | | |
| | ***Subtotal*** | | ***$ 212.40*** | ***$ 3,299,844*** |
| 15.0% | Estimating Design Evolution | | | $ 494,977 |

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## PRIORITY 1b - SECURITY CHECKPOINT

### SUMMARY

| | DESCRIPTION | COST PER SQUARE FOOT | TOTAL |
|---|---|---|---|
| | ***Subtotal - Cost of Work*** | ***$ 244.26*** | ***$ 3,794,821*** |
| | ***General Contractors Markups*** | | |
| 3.0% | Project Logistics & Labor Factor | | $ 113,845 |
| 2.0% | General Requirements, Phasing & Temporary Construction | | $ 78,173 |
| 8.0% | General Conditions | | $ 318,947 |
| 3.0% | General Contractors Overhead & Profit | | $ 129,174 |
| 2.0% | Insurance | | $ 88,699 |
| 1.0% | Payment & Performance Bonds | | $ 45,237 |
| 0.0% | Sustainability Requirements | | $ - |
| | ***Opinion of Probable Construction Cost*** | ***$ 294.08*** | ***$ 4,568,895*** |
| 0.0% | Escalation | | $ - |
| | ***Opinion of Probable Project Cost*** | ***$ 294.08*** | ***$ 4,568,895*** |

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IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| Project Title | Terminal Expansion Project | | |
| Location | Idaho Falls Regional Airport | | |
| Submittal Stage | Concept Design | | |
| Client Name | Alliiance | | |
| Client Project No. | | Revision | 4 |
| Original Date | 2022-03-21 | Revision Date | 2022-04-28 |
| Assumed Bid Opening Date | | Connico PN | 4886.21 |
| Project Lead | CJN | Checked by | IDK |

**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| ***Terminal Renovation & Expansion*** | | | | |
| *Level 1* | | | | |
| Security Checkpoint | | | | |
| SSCP Passenger Screening | 4,475 | | 4,475 | sf |
| Private Screening Room | 150 | | 150 | sf |
| Law Enforcement Office | 221 | | 221 | sf |
| SSCP Queue | 2,501 | | 2,501 | sf |
| Recomposure | 910 | | 910 | sf |
| Arrivals Secure Exits / Circulation | 1,650 | 108 | 1,758 | sf |
| Vertical Circulation | 750 | | 750 | sf |
| *Level 2* | | | | |
| Administration (Finishes Only) | | 4,771 | 4,771 | sf |
| **Total Area** | **10,657** | **4,879** | **15,536** | **sf** |

| DESCRIPTION | QUANTITY | UNIT | UNIT COST | TOTAL |
|---|---|---|---|---|
| ***A SUBSTRUCTURE*** | | | | |
| **A10 Foundations** | | | | |
| A1010 Standard Foundations | | | | |
| A1011 Standard Foundations | | | | Not Required |
| A1050 Slab on Grade | | | | |
| A1051 Slab on Grade | | | | Not Required |
| ***Subtotal - Substructure*** | | | | $ - |
| ***B SHELL*** | | | | |
| **B10 Superstructure** | | | | |
| B1010 Floor Construction | | | | |
| B1011 Floor Construction | | | | Not Required |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| B1030 Roof Construction | | | | |
| B1031 Roof Construction | | | | Not Required |
| **B20 Exterior Closure** | | | | |
| B2010 Exterior Walls | | | | |
| B2011 Exterior Walls | | | | Not Required |
| B2030 Exterior Windows | | | | |
| B2031 Curtain Wall | | | | Not Required |
| B2050 Exterior Doors | | | | |
| B2051 Exterior Doors | | | | Not Required |
| **B30 Roofing** | | | | |
| B3010 Roof Coverings | | | | |
| B3011 Membrane Roof Assembly | | | | Not Required |
| ***Subtotal - Shell*** | | | | $ - |
| ***C INTERIORS*** | | | | |
| **C10 Interior Construction** | | | | |
| C1010 Partitions | | | | |
| C1011 Interior Partitions | 15,536 | sf | $ 2.50 | $ 38,840 |
| C1012 Rough Carpentry & Blocking | 15,536 | sf | $ 1.00 | $ 15,536 |
| C1013 Caulking, Sealants & Firestopping | 15,536 | sf | $ 1.25 | $ 19,420 |
| C1014 Misc. Metals, Bracing, Countertop Supports, Equipment Supports, etc. | 15,536 | sf | $ 1.00 | $ 15,536 |
| C1030 Interior Doors | | | | |
| C1031 Interior Doors - Allowance | | | | Incl. see C3010 |
| C1050 Specialties | | | | |
| C1051 Fire Extinguishers & Cabinets | 15,536 | sf | $ 0.05 | $ 777 |
| C1052 Code Signage | 15,536 | sf | $ 0.25 | $ 3,884 |
| C1053 Interior Wayfinding Signage | 15,536 | sf | $ 3.50 | $ 54,376 |
| C1054 Miscellaneous Specialties | 15,536 | sf | $ 2.00 | $ 31,072 |
| **C20 Stairs** | | | | |
| C2010 Stair Construction | | | | |
| C2011 Stair Construction | | | | Not Required |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| | DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| **C30** | **Interior Finishes** | | | | |
| C3010 | Interior Finishes | | | | |
| C3011 | *Level 1* | | | | |
| C3012 | Security Checkpoint | | | | |
| C3013 | SSCP Passenger Screening | 4,475 sf | | $ 55.00 | $ 246,125 |
| C3014 | Private Screening Room | 150 sf | | $ 65.00 | $ 9,750 |
| C3015 | Law Enforcement Office | 221 sf | | $ 55.00 | $ 12,155 |
| C3016 | SSCP Queue | 2,501 sf | | $ 70.00 | $ 175,070 |
| C3017 | Recomposure | 910 sf | | $ 65.00 | $ 59,150 |
| C3018 | Arrivals Secure Exits / Circulation | 1,758 sf | | $ 70.00 | $ 123,060 |
| C3019 | Vertical Circulation | 750 sf | | $ 25.00 | 18750 |
| C3020 | *Level 2* | | | | |
| C3021 | Administration (Finishes Only) | 4,771 sf | | $ 65.00 | $ 310,115 |
| | ***Subtotal - Interiors*** | | | | ***$ 1,133,616*** |
| ***D*** | ***SERVICES*** | | | | |
| **D10** | **Conveying System** | | | | |
| D1010 | Elevators & Lifts | | | | |
| D1011 | Elevators & Lifts | | | | Not Required |
| D1020 | Escalators & Moving Walks | | | | |
| D1021 | Escalators & Moving Walks | | | | Not Required |
| D1030 | Baggage Handling Equipment | | | | |
| D1031 | Baggage Handling Equipment | | | | Not Required |
| **D20** | **Plumbing** | | | | |
| D2010 | Plumbing Systems | | | | |
| D2011 | *Level 1* | | | | |
| D2012 | Remodel Area | 10,765 sf | | $ 9.50 | $ 102,268 |
| D2013 | *Level 2* | | | | |
| D2014 | Remodel Area | 4,771 sf | | $ 2.50 | $ 11,928 |
| **D30** | **HVAC** | | | | |
| D3010 | HVAC Systems | | | | |
| D3011 | *Level 1* | | | | |
| D3012 | Remodel Area | 10,765 sf | | $ 38.00 | $ 409,070 |
| D3013 | *Level 2* | | | | |
| D3014 | Remodel Area | 4,771 sf | | $ 38.00 | $ 181,298 |
| D3015 | Air Handling Unit & RTU Upgrades | 15,536 sf | | $ 7.50 | $ 116,520 |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| | DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| D3110 | Controls and Instrumentation | | | | |
| D3111 | Controls and Instrumentation | 15,536 sf | | $ 7.50 | $ 116,520 |
| D3210 | Systems Testing & Balancing | | | | |
| D3211 | Systems Testing & Balancing | 15,536 sf | | $ 1.85 | $ 28,742 |
| **D40** | **Fire Protection** | | | | |
| D4010 | Sprinkler Systems | | | | |
| D4011 | *Level 1* | | | | |
| D4012 | Remodel Area | 10,765 sf | | $ 5.50 | $ 59,208 |
| D4013 | *Level 2* | | | | |
| D4014 | Remodel Area | 4,771 sf | | $ 5.50 | $ 26,241 |
| **D50** | **Electrical** | | | | |
| D5010 | Electrical Systems | | | | |
| D5011 | Electrical Demo, Existing Terminal | 10,657 sf | | $ 2.00 | $ 21,314 |
| D5012 | Distribution Equipment | 15,536 sf | | $ 3.75 | $ 58,260 |
| D5013 | Feeder Conduit & Wire | 15,536 sf | | $ 5.70 | $ 88,555 |
| D5014 | Wiring Devices | 15,536 sf | | $ 6.25 | $ 97,100 |
| D5015 | Equipment Power and Connection | 15,536 sf | | $ 2.25 | $ 34,956 |
| D5016 | SSCP Equipment Power | 1 ea | | $ 13,175.00 | $ 13,175 |
| D5017 | Lighting | 15,536 sf | | $ 13.00 | $ 201,968 |
| D6010 | Communications | | | | |
| D6011 | TSA IDF Room | 1 ea | | $ 30,000.00 | $ 30,000 |
| D6012 | Backbone Cabling TSA IDF to MTR | 1 alw | | $ 25,000.00 | $ 25,000 |
| D6013 | Telephone, Radio, Wi-Fi | 15,536 sf | | $ 3.25 | $ 50,492 |
| D6014 | EVIDS | 15,536 sf | | $ 5.50 | $ 85,448 |
| D6015 | Public Address Systems | 15,536 sf | | $ 3.00 | $ 46,608 |
| D6016 | SSCP Equipment Data Cabling | 1 alw | | $ 35,000.00 | $ 35,000 |
| D6017 | Common Use System | 15,536 sf | | $ 2.70 | $ 41,947 |
| D7010 | Electronic Safety & Security | | | | |
| D7011 | Access Control | 15,536 sf | | $ 4.00 | $ 62,144 |
| D7012 | Video Surveillance System | 15,536 sf | | $ 3.00 | $ 46,608 |
| D7013 | Fire Alarm | 15,536 sf | | $ 4.00 | $ 62,144 |
| | ***Subtotal - Services*** | | | | ***$ 2,052,512*** |
| ***E*** | ***EQUIPMENT & FURNISHINGS*** | | | | |
| **E10** | **Equipment** | | | | |
| E1010 | Equipment | | | | |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| **C30 Interior Finishes** | | | | |
| C3010 Interior Finishes | | | | |
| C3011 *Level 1* | | | | |
| C3012 Security Checkpoint | | | | |
| C3013 SSCP Passenger Screening | 4,475 sf | | $ 55.00 | $ 246,125 |
| C3014 Private Screening Room | 150 sf | | $ 65.00 | $ 9,750 |
| C3015 Law Enforcement Office | 221 sf | | $ 55.00 | $ 12,155 |
| C3016 SSCP Queue | 2,501 sf | | $ 70.00 | $ 175,070 |
| C3017 Recomposure | 910 sf | | $ 65.00 | $ 59,150 |
| C3018 Arrivals Secure Exits / Circulation | 1,758 sf | | $ 70.00 | $ 123,060 |
| C3019 Vertical Circulation | 750 sf | | $ 25.00 | 18750 |
| C3020 *Level 2* | | | | |
| C3021 Administration (Finishes Only) | 4,771 sf | | $ 65.00 | $ 310,115 |
| ***Subtotal - Interiors*** | | | | ***$ 1,133,616*** |
| ***D SERVICES*** | | | | |
| **D10 Conveying System** | | | | |
| D1010 Elevators & Lifts | | | | |
| D1011 Elevators & Lifts | | | | Not Required |
| D1020 Escalators & Moving Walks | | | | |
| D1021 Escalators & Moving Walks | | | | Not Required |
| D1030 Baggage Handling Equipment | | | | |
| D1031 Baggage Handling Equipment | | | | Not Required |
| **D20 Plumbing** | | | | |
| D2010 Plumbing Systems | | | | |
| D2011 *Level 1* | | | | |
| D2012 Remodel Area | 10,765 sf | | $ 9.50 | $ 102,268 |
| D2013 *Level 2* | | | | |
| D2014 Remodel Area | 4,771 sf | | $ 2.50 | $ 11,928 |
| **D30 HVAC** | | | | |
| D3010 HVAC Systems | | | | |
| D3011 *Level 1* | | | | |
| D3012 Remodel Area | 10,765 sf | | $ 38.00 | $ 409,070 |
| D3013 *Level 2* | | | | |
| D3014 Remodel Area | 4,771 sf | | $ 38.00 | $ 181,298 |
| D3015 Air Handling Unit & RTU Upgrades | 15,536 sf | | $ 7.50 | $ 116,520 |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| D3110 Controls and Instrumentation | | | | |
| D3111 Controls and Instrumentation | 15,536 sf | | $ 7.50 | $ 116,520 |
| D3210 Systems Testing & Balancing | | | | |
| D3211 Systems Testing & Balancing | 15,536 sf | | $ 1.85 | $ 28,742 |
| **D40 Fire Protection** | | | | |
| D4010 Sprinkler Systems | | | | |
| D4011 *Level 1* | | | | |
| D4012 Remodel Area | 10,765 sf | | $ 5.50 | $ 59,208 |
| D4013 *Level 2* | | | | |
| D4014 Remodel Area | 4,771 sf | | $ 5.50 | $ 26,241 |
| **D50 Electrical** | | | | |
| D5010 Electrical Systems | | | | |
| D5011 Electrical Demo, Existing Terminal | 10,657 sf | | $ 2.00 | $ 21,314 |
| D5012 Distribution Equipment | 15,536 sf | | $ 3.75 | $ 58,260 |
| D5013 Feeder Conduit & Wire | 15,536 sf | | $ 5.70 | $ 88,555 |
| D5014 Wiring Devices | 15,536 sf | | $ 6.25 | $ 97,100 |
| D5015 Equipment Power and Connection | 15,536 sf | | $ 2.25 | $ 34,956 |
| D5016 SSCP Equipment Power | 1 ea | | $ 13,175.00 | $ 13,175 |
| D5017 Lighting | 15,536 sf | | $ 13.00 | $ 201,968 |
| D6010 Communications | | | | |
| D6011 TSA IDF Room | 1 ea | | $ 30,000.00 | $ 30,000 |
| D6012 Backbone Cabling TSA IDF to MTR | 1 alw | | $ 25,000.00 | $ 25,000 |
| D6013 Telephone, Radio, Wi-Fi | 15,536 sf | | $ 3.25 | $ 50,492 |
| D6014 EVIDS | 15,536 sf | | $ 5.50 | $ 85,448 |
| D6015 Public Address Systems | 15,536 sf | | $ 3.00 | $ 46,608 |
| D6016 SSCP Equipment Data Cabling | 1 alw | | $ 35,000.00 | $ 35,000 |
| D6017 Common Use System | 15,536 sf | | $ 2.70 | $ 41,947 |
| D7010 Electronic Safety & Security | | | | |
| D7011 Access Control | 15,536 sf | | $ 4.00 | $ 62,144 |
| D7012 Video Surveillance System | 15,536 sf | | $ 3.00 | $ 46,608 |
| D7013 Fire Alarm | 15,536 sf | | $ 4.00 | $ 62,144 |
| ***Subtotal - Services*** | | | | ***$ 2,052,512*** |
| ***E EQUIPMENT & FURNISHINGS*** | | | | |
| **E10 Equipment** | | | | |
| E1010 Equipment | | | | |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| E1011 Concessions Equipment - Not in Scope | | | | Excluded |
| E1012 Security Equipment - Not in Scope | | | | Excluded |
| E1013 FIS Equipment - Not in Scope | | | | Excluded |
| E1014 FIDS, BIDS, MUFIDS | 15,536 sf | | $ 2.00 | $ 31,072 |
| E1015 Dynamic Signage | | | | Excluded |
| E1016 Misc. Equipment Allowance | 15,536 sf | | $ 0.50 | $ 7,768 |
| E1030 Passenger Boarding Bridges | | | | |
| E1031 New Passenger Boarding Bridge | | | | Not Required |
| **E20 Furnishings** | | | | |
| E2010 Fixed Furnishings | | | | |
| E2011 Misc. Casework Allowance | 15,536 sf | | $ 1.50 | $ 23,304 |
| ***Subtotal - Equipment & Furnishings*** | | | | ***$ 62,144*** |
| ***F SPECIAL CONSTRUCTION & DEMOLITION*** | | | | |
| **F10 Special Construction** | | | | |
| F1010 Special Construction | | | | |
| F1011 Special Construction | | | | Not Required |
| **F20 Selective Building Demolition** | | | | |
| F2010 Building Elements Demolition | | | | |
| F2011 Selective Interiors Demolish - Existing Building | 10,657 sf | | $ 3.50 | $ 37,300 |
| F2012 Misc. Demolition | 1 alw | | $ 5,000.00 | $ 5,000 |
| F2013 Remove Debris to Dumpster | 99 cy | | $ 32.00 | $ 3,168 |
| F2014 Dumpster Pulls | 3 ea | | $ 350.00 | $ 1,155 |
| F2015 Dump Fees | 99 cy | | $ 50.00 | $ 4,950 |
| **F30 Hazardous Material Abatement** | | | | |
| F3010 Hazardous Material Abatement | | | | |
| F3011 Hazardous Material Abatement | | | | Excluded |
| ***Subtotal - Special Construction & Demolition*** | | | | ***$ 51,573*** |
| ***G BUILDING SITEWORK*** | | | | |
| **G10 Site Preparation** | | | | |
| G1010 Civil General Requirements | | | | |
| G1011 Civil General Requirements | | | | Not Required |
| G1020 Site Demolition | | | | |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| G1021 Site Demolition | | | | Not Required |
| G1030 Site Earthwork | | | | |
| G1031 Site Earthwork | | | | Not Required |
| **G20 Site Improvements** | | | | |
| G2010 Pavement | | | | |
| G2011 Pavement | | | | Not Required |
| G2030 Site Development | | | | |
| G2031 Site Development | | | | Not Required |
| **G30 Site Mechanical Utilities** | | | | |
| G3010 Site Mechanical Utilities | | | | |
| G3011 Site Mechanical Utilities | | | | None Required |
| **G40 Site Electrical Utilities** | | | | |
| G4010 Site Electrical Utilities | | | | |
| G4011 Site Electrical Utilities | | | | None Required |
| G4030 Site Lighting | | | | |
| G4031 Site Lighting | | | | None Required |
| ***Subtotal - Building Sitework*** | | | | ***$ -*** |
| ***Subtotal*** | | | ***$ 212.40*** | ***$ 3,299,844*** |
| 15.0% Estimating Design Evolution | | | | $ 494,977 |
| ***Subtotal - Cost of Work*** | | | ***$ 244.26*** | ***$ 3,794,821*** |

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**PRIORITY 1b - SECURITY CHECKPOINT**

**DETAIL**

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| *General Contractors Markups* | | | | | |
| 3.0% | Project Logistics & Labor Factor | | | | $ 113,845 |
| 2.0% | General Requirements, Phasing & Temporary Construction | | | | $ 78,173 |
| 8.0% | General Conditions | | | | $ 318,947 |
| 3.0% | General Contractors Overhead & Profit | | | | $ 129,174 |
| 2.0% | Insurance | | | | $ 88,699 |
| 1.0% | Payment & Performance Bonds | | | | $ 45,237 |
| 0.0% | Sustainability Requirements | | | | $ - |
| *Opinion of Probable Construction Cost* | | | | *$ 294.08* | *$ 4,568,895* |
| 0.0% | Escalation | | | | $ - |
| *Opinion of Probable Project Cost* | | | | *$ 294.08* | *$ 4,568,895* |

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IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| Project Title | Terminal Expansion Project | | |
| Location | Idaho Falls Regional Airport | | |
| Submittal Stage | Concept Design | | |
| Client Name | Alliiance | | |
| Client Project No. | | Revision | 4 |
| Original Date | 2022-03-21 | Revision Date | 2022-04-28 |
| Assumed Bid | | Connico PN | 4886.21 |
| Opening Date | | | |
| Project Lead | CJN | Checked by | IDK |

**PRIORITY 2 - AIRSIDE HOLDROOM AREA**

**SUMMARY**

| | DESCRIPTION | | COST PER SQUARE FOOT | TOTAL |
|---|---|---|---|---|
| A | **Substructure** | | $ 5.08 | $ 189,648 |
| | Standard Foundations | $ 86,362 | | |
| | Special Foundations | $ 65,000 | | |
| | Slab on Grade | $ 38,286 | | |
| B | **Shell** | | $ - | $ - |
| | Superstructure | $ - | | |
| | Exterior Closure | $ - | | |
| | Roofing | $ - | | |
| C | **Interiors** | | $ 84.82 | $ 3,164,915 |
| | Interior Construction | $ 430,965 | | |
| | Stairs | $ - | | |
| | Interior Finishes | $ 2,733,950 | | |
| D | **Services** | | $ 147.76 | $ 5,513,317 |
| | Conveying | $ - | | |
| | Baggage Handling System | $ - | | |
| | Plumbing | $ 556,710 | | |
| | HVAC | $ 2,528,866 | | |
| | Fire Protection | $ 205,222 | | |
| | Electrical | $ 1,272,903 | | |
| | Communications | $ 539,173 | | |
| | Electronic Safety & Security | $ 410,443 | | |
| E | **Equipment & Furnishings** | | $ 30.80 | $ 1,149,252 |
| | Equipment | $ 93,283 | | |
| | Passenger Boarding Bridges | $ 1,000,000 | | |
| | Furnishings | $ 55,970 | | |
| F | **Special Construction & Demolition** | | $ 3.60 | $ 134,370 |
| | Special Construction | $ - | | |
| | Selective Building Demolition | $ 134,370 | | |
| | Hazardous Material Abatement | $ - | | |
| G | **Building Sitework** | | $ 1.19 | $ 44,450 |
| | Site Preparation | $ 41,950 | | |
| | Site Improvements | $ - | | |
| | Site Mechanical Utilities | $ 2,500 | | |
| | Site Electrical Utilities | $ - | | |
| | ***Subtotal*** | | *$ 273.25* | *$ 10,195,951* |
| 15.0% | Estimating Design Evolution | | | $ 1,529,393 |

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PRIORITY 2 - AIRSIDE HOLDROOM AREA

SUMMARY

| DESCRIPTION | COST PER SQUARE FOOT | TOTAL |
|---|---|---|
| ***Subtotal - Cost of Work*** | ***$ 314.24*** | ***$ 11,725,344*** |
| ***General Contractors Markups*** | | |
| 3.0% Project Logistics & Labor Factor | | $ 351,760 |
| 2.0% General Requirements, Phasing & Temporary Construction | | $ 241,542 |
| 8.0% General Conditions | | $ 985,492 |
| 3.0% General Contractors Overhead & Profit | | $ 399,124 |
| 2.0% Insurance | | $ 274,065 |
| 1.0% Payment & Performance Bonds | | $ 139,773 |
| 0.0% Sustainability Requirements | | $ - |
| ***Opinion of Probable Construction Cost*** | ***$ 378.34*** | ***$ 14,117,101*** |
| 0.0% Escalation | | $ - |
| ***Opinion of Probable Project Cost*** | ***$ 378.34*** | ***$ 14,117,101*** |

Connico
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IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| Project Title | Terminal Expansion Project | | |
| Location | Idaho Falls Regional Airport | | |
| Submittal Stage | Concept Design | | |
| Client Name | Alliiance | | |
| Client Project No. | | Revision | 4 |
| Original Date | 2022-03-21 | Revision Date | 2022-04-28 |
| Assumed Bid Opening Date | | Connico PN | 4886.21 |
| Project Lead | CJN | Checked by | IDK |

PRIORITY 2 - AIRSIDE HOLDROOM AREA

DETAIL

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| ***Terminal Renovation & Expansion*** | | | | |
| *Level 1* | | | | |
| Gate Hold Rooms | 2,594 | 367 | 2,961 | sf |
| Hold Room Circulation | 1,779 | | 1,779 | sf |
| Airside Concessions - FOH | 1,531 | | 1,531 | sf |
| Airside Concessions - BOH | 264 | | 264 | sf |
| Airside Restrooms + Amenities | 1,887 | | 1,887 | sf |
| Janitor/Support | 773 | | 773 | sf |
| Vertical Circulation | 335 | | 335 | sf |
| *Level 2* | | | | |
| Gate Hold Rooms | 7,345 | 4,532 | 11,877 | sf |
| Hold Room Circulation | 2,056 | 5,702 | 7,758 | sf |
| Concessions | | 1,938 | 1,938 | sf |
| Support | | 2,442 | 2,442 | sf |
| Vertical Circulation | | 612 | 612 | sf |
| Airside Concessions - BOH | 769 | | 769 | sf |
| Airside Restrooms | 1,790 | | 1,790 | sf |
| Airside Mother's Room, SARA | 489 | | 489 | sf |
| Janitor/Support | 108 | | 108 | sf |
| **Total Area** | **21,720** | **15,593** | **37,313** | **sf** |

| DESCRIPTION | QUANTITY | UNIT | UNIT COST | TOTAL |
|---|---|---|---|---|
| ***A SUBSTRUCTURE*** | | | | |
| **A10 Foundations** | | | | |
| A1010 Standard Foundations | | | | |
| A1011 Column Foundations, Wall Foundations, Grade Beams, Foundation Wall | 4,164 | sf | $ 20.00 | $ 83,280 |
| A1012 Perimeter Drainage | 4,164 | sf | $ 0.50 | $ 2,082 |
| A1013 Dewatering | 1 | ls | $ 1,000.00 | $ 1,000 |
| A1030 Special Foundations | | | | |
| A1031 PBB Foundation | 1 | ea | $ 65,000.00 | $ 65,000 |

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**PRIORITY 2 - AIRSIDE HOLDROOM AREA**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| A1050 Slab on Grade | | | | |
| A1051 5" Slab on Grade | 4,164 sf | $ | 6.50 | $ 27,066 |
| A1052 Elevator and Escalator Pits | | | | Not Required |
| A1053 Misc. Trenches, Pits & Bases | 4 cy | $ | 750.00 | $ 2,892 |
| A1054 Under-slab Drainage & Insulation | 4,164 sf | $ | 2.00 | $ 8,328 |
| *Subtotal - Substructure* | | | | *$ 189,648* |
| *B SHELL* | | | | |
| B10 Superstructure | | | | |
| B1010 Floor Construction | | | | |
| B1011 Floor Construction | | | | Not Required |
| B1030 Roof Construction | | | | |
| B1031 Roof Construction | | | | Not Required |
| B20 Exterior Closure | | | | |
| B2010 Exterior Walls | | | | |
| B2011 Metal Panel - Walkway | | | | Not Required |
| B2030 Exterior Windows | | | | |
| B2031 Exterior Windows | | | | Not Required |
| B2050 Exterior Doors | | | | |
| B2051 Exterior Doors | | | | Not Required |
| B30 Roofing | | | | |
| B3010 Roof Coverings | | | | |
| B3011 Roof Coverings | | | | Not Required |
| B3030 Roof Openings | | | | |
| B3031 Roof Hatch | | | | Not Required |
| *Subtotal - Shell* | | | | *$ -* |
| *C INTERIORS* | | | | |
| C10 Interior Construction | | | | |
| C1010 Partitions | | | | |
| C1011 Interior Partitions | 37,313 sf | $ | 2.50 | $ 93,283 |

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**PRIORITY 2 - AIRSIDE HOLDROOM AREA**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| C1012 Rough Carpentry & Blocking | 37,313 sf | $ | 1.00 | $ 37,313 |
| C1013 Caulking, Sealants & Firestopping | 37,313 sf | $ | 1.25 | $ 46,641 |
| C1014 Misc. Metals, Bracing, Countertop Supports, Equipment Supports, etc. | 37,313 sf | $ | 1.00 | $ 37,313 |
| C1030 Interior Doors | | | | |
| C1031 Interior Doors - Allowance | | | | Incl. see C3010 |
| C1050 Specialties | | | | |
| C1051 Fire Extinguishers & Cabinets | 37,313 sf | $ | 0.05 | $ 1,866 |
| C1052 Code Signage | 37,313 sf | $ | 0.25 | $ 9,328 |
| C1053 Interior Wayfinding Signage | 37,313 sf | $ | 3.50 | $ 130,596 |
| C1054 Miscellaneous Specialties | 37,313 sf | $ | 2.00 | $ 74,626 |
| C20 Stairs | | | | |
| C2010 Stair Construction | | | | |
| C2011 Stair - Public | | | | Not Required |
| C30 Interior Finishes | | | | |
| C3010 Interior Finishes | | | | |
| C3011 *Level 1* | | | | |
| C3012 Gate Hold Rooms | 2,961 sf | $ | 85.00 | $ 251,685 |
| C3013 Hold Room Circulation | 1,779 sf | $ | 80.00 | $ 142,320 |
| C3014 Airside Concessions - FOH | 1,531 sf | $ | 25.00 | $ 38,275 |
| C3015 Airside Concessions - BOH | 264 sf | $ | 45.00 | $ 11,880 |
| C3016 Airside Restrooms + Amenities | 1,887 sf | $ | 125.00 | $ 235,875 |
| C3017 Janitor/Support | 773 sf | $ | 45.00 | $ 34,785 |
| C3018 Vertical Circulation | 335 sf | $ | 25.00 | $ 8,375 |
| C3019 *Level 2* | | | | |
| C3020 Gate Hold Rooms | 11,877 sf | $ | 85.00 | $ 1,009,545 |
| C3021 Hold Room Circulation | 7,758 sf | $ | 70.00 | $ 543,060 |
| C3022 Concessions | 1,938 sf | $ | 25.00 | $ 48,450 |
| C3023 Support | 2,442 sf | $ | 45.00 | $ 109,890 |
| C3024 Vertical Circulation | 612 sf | $ | 25.00 | $ 15,300 |
| C3025 Airside Concessions - BOH | 769 sf | $ | 25.00 | $ 19,225 |
| C3026 Airside Restrooms | 1,790 sf | $ | 125.00 | $ 223,750 |
| C3027 Airside Mother's Room, SARA | 489 sf | $ | 75.00 | $ 36,675 |
| C3028 Janitor/Support | 108 sf | $ | 45.00 | $ 4,860 |
| *Subtotal - Interiors* | | | | *$ 3,164,915* |
| *D SERVICES* | | | | |
| D10 Conveying System | | | | |
| D1010 Elevators & Lifts | | | | |

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## PRIORITY 2 - AIRSIDE HOLDROOM AREA

### DETAIL

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| D1011 | Elevators & Lifts | | | | Existing |
| D1020 | Escalators & Moving Walks | | | | |
| D1021 | Escalators | | | | Existing |
| D1030 | Baggage Handling Equipment | | | | |
| D1031 | Baggage Handling Equipment | | | | Not Required |
| **D20** | **Plumbing** | | | | |
| D2010 | Plumbing Systems | | | | |
| D2011 | *Level 1* | | | | |
| D2012 | Remodel Area | 9,530 sf | | $ 14.25 | $ 135,803 |
| D2013 | *Level 2* | | | | |
| D2014 | Remodel Area | 27,783 sf | | $ 14.25 | $ 395,908 |
| D2015 | *Central Plant Upgrades* | | | | |
| D2016 | Domestic Hot Water Boilers and Accessories; Nat Gas | 1 ls | | $ 25,000.00 | $ 25,000 |
| **D30** | **HVAC** | | | | |
| D3010 | HVAC Systems | | | | |
| D3011 | *Level 1* | | | | |
| D3012 | Remodel Area | 9,530 sf | | $ 38.00 | $ 362,140 |
| D3013 | *Level 2* | | | | |
| D3014 | Remodel Area | 27,783 sf | | $ 38.00 | $ 1,055,754 |
| D3015 | Air Handling Unit & RTU Upgrades | 37,313 sf | | $ 9.50 | $ 354,474 |
| D3016 | *Central Plant Demo* | | | | |
| D3017 | Disconnect and Remove Existing Boiler, Chiller & Accessories | 1 ea | | $ 17,000.00 | $ 17,000 |
| D3018 | Extract and Dispose of Chiller Refrigerant | 1 ls | | $ 5,000.00 | $ 5,000 |
| D3019 | Demo Existing Piping, Valves etc in Central Mechanical Room | 1 ls | | $ 7,500.00 | $ 7,500 |
| D3020 | *Central Plant Upgrades* | | | | |
| D3021 | New Screw Chillers; 75 tons | 2 ea | | $ 66,375.00 | $ 132,750 |
| D3022 | Chiller Accessories; Expansion Tanks, Air Separator etc. | 1 ls | | $ 25,000.00 | $ 25,000 |
| D3023 | Heating Hot Water Boilers; 1500MBH | 2 ea | | $ 27,500.00 | $ 55,000 |
| D3024 | Boiler Accessories; Expansion Tanks, Chemical Treatment etc. | 1 ls | | $ 15,000.00 | $ 15,000 |
| D3025 | Piping Modifications in Mechanical Rm | 1 ls | | $ 75,000.00 | $ 75,000 |
| D3110 | Controls and Instrumentation | | | | |
| D3111 | Controls and Instrumentation | 37,313 sf | | $ 9.52 | $ 355,220 |
| D3210 | Systems Testing & Balancing | | | | |
| D3211 | Systems Testing & Balancing | 37,313 sf | | $ 1.85 | $ 69,029 |

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## PRIORITY 2 - AIRSIDE HOLDROOM AREA

### DETAIL

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| **D40** | **Fire Protection** | | | | |
| D4010 | Sprinkler Systems | | | | |
| D4011 | *Level 1* | | | | |
| D4012 | Remodel Area | 9,530 sf | | $ 5.50 | $ 52,415 |
| D4013 | *Level 2* | | | | |
| D4014 | Remodel Area | 27,783 sf | | $ 5.50 | $ 152,807 |
| **D50** | **Electrical** | | | | |
| D5010 | Electrical Systems | | | | |
| D5011 | Electrical Demo, Existing Terminal | 21,720 sf | | $ 2.00 | $ 43,440 |
| D5012 | Distribution Equipment | 37,313 sf | | $ 3.75 | $ 139,924 |
| D5013 | Feeder Conduit & Wire | 37,313 sf | | $ 5.70 | $ 212,684 |
| D5014 | Wiring Devices | 37,313 sf | | $ 6.25 | $ 233,206 |
| D5015 | Equipment Power and Connection | 37,313 sf | | $ 4.25 | $ 158,580 |
| D5016 | Lighting | 37,313 sf | | $ 13.00 | $ 485,069 |
| D6010 | Communications | | | | |
| D6011 | MDF/IDF Rooms | | | | Not Required |
| D6012 | Backbone Cabling | | | | Not Required |
| D6013 | Telephone, Radio, Wi-Fi | 37,313 sf | | $ 3.25 | $ 121,267 |
| D6014 | EVIDS | 37,313 sf | | $ 5.50 | $ 205,222 |
| D6015 | Public Address Systems | 37,313 sf | | $ 3.00 | $ 111,939 |
| D6016 | Common Use System | 37,313 sf | | $ 2.70 | $ 100,745 |
| D7010 | Electronic Safety & Security | | | | |
| D7011 | Access Control | 37,313 sf | | $ 4.00 | $ 149,252 |
| D7012 | Video Surveillance System | 37,313 sf | | $ 3.00 | $ 111,939 |
| D7013 | Fire Alarm | 37,313 sf | | $ 4.00 | $ 149,252 |
| ***Subtotal - Services*** | | | | | ***$ 5,513,317*** |
| ***E*** | ***EQUIPMENT & FURNISHINGS*** | | | | |
| **E10** | **Equipment** | | | | |
| E1010 | Equipment | | | | |
| E1011 | Concessions Equipment - Not in Scope | | | | Excluded |
| E1012 | Security Equipment - Not in Scope | | | | Excluded |
| E1013 | FIS Equipment - Not in Scope | | | | Excluded |
| E1014 | FIDS, BIDS, MUFIDS | 37,313 sf | | $ 2.00 | $ 74,626 |
| E1015 | Dynamic Signage | | | | Excluded |
| E1016 | Misc. Equipment Allowance | 37,313 sf | | $ 0.50 | $ 18,657 |
| E1030 | Passenger Boarding Bridges | | | | |

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**PRIORITY 2 - AIRSIDE HOLDROOM AREA**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| E1031 New Passenger Boarding Bridge | 1 ea | | $ 1,000,000.00 | $ 1,000,000 |
| **E20 Furnishings** | | | | |
| E2010 Fixed Furnishings | | | | |
| E2011 Misc. Casework Allowance | 37,313 sf | | $ 1.50 | $ 55,970 |
| *Subtotal - Equipment & Furnishings* | | | | *$ 1,149,252* |
| ***F SPECIAL CONSTRUCTION & DEMOLITION*** | | | | |
| **F10 Special Construction** | | | | |
| F1010 Special Construction | | | | |
| F1011 Special Construction | | | | Not Required |
| **F20 Selective Building Demolition** | | | | |
| F2010 Building Elements Demolition | | | | |
| F2011 Demolish Exterior Closure at Existing Building | 1,460 sf | | $ 15.00 | $ 21,900 |
| F2012 Selective Interiors Demolish - Existing Building | 21,720 sf | | $ 3.50 | $ 76,020 |
| F2013 Misc. Demolition | 1 alw | | $ 15,000.00 | $ 15,000 |
| F2014 Remove Debris to Dumpster | 229 cy | | $ 32.00 | $ 7,328 |
| F2015 Dumpster Pulls | 8 ea | | $ 350.00 | $ 2,672 |
| F2016 Dump Fees | 229 cy | | $ 50.00 | $ 11,450 |
| **F30 Hazardous Material Abatement** | | | | |
| F3010 Hazardous Material Abatement | | | | |
| F3011 Hazardous Material Abatement | | | | Excluded |
| *Subtotal - Special Construction & Demolition* | | | | *$ 134,370* |
| ***G BUILDING SITEWORK*** | | | | |
| **G10 Site Preparation** | | | | |
| G1010 Civil General Requirements | | | | |
| G1011 Safety and Security | 1 ls | | $ 1,300.00 | $ 1,300 |
| G1012 Temporary Construction Items & Erosion | 1 ls | | $ 900.00 | $ 900 |
| G1013 Drainage and Utility Allowance | 1 ls | | $ 700.00 | $ 700 |
| G1020 Site Demolition | | | | |
| G1021 Demo Existing Apron Paving | 463 sy | | $ 20.00 | $ 9,253 |
| G1022 Demo Existing Asphalt Paving | 2,850 sf | | $ 1.50 | $ 4,275 |
| G1023 Demo Existing Security Fencing | 100 lf | | $ 10.00 | $ 1,000 |

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**PRIORITY 2 - AIRSIDE HOLDROOM AREA**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| G1030 Site Earthwork | | | | |
| G1031 Grading Building Footprint | 4,164 sf | | $ 2.00 | $ 8,328 |
| G1032 Backfill - Apron Paving Areas to Make up Levels | 463 cy | | $ 35.00 | $ 16,193 |
| **G20 Site Improvements** | | | | |
| G2010 Pavement | | | | |
| G2011 Pavement | | | | Not Required |
| G2030 Site Development | | | | |
| G2031 Site Development | | | | Not Required |
| **G30 Site Mechanical Utilities** | | | | |
| G3010 Site Mechanical Utilities | | | | |
| G3011 Site Mechanical Utilities - Allowance | 1 alw | | $ 2,500.00 | $ 2,500 |
| **G40 Site Electrical Utilities** | | | | |
| G4010 Site Electrical Utilities | | | | |
| G4011 Site Electrical Utilities | | | | Not Required |
| G4030 Site Lighting | | | | |
| G4031 Site Lighting | | | | Not Required |
| *Subtotal - Building Sitework* | | | | *$ 44,450* |
| *Subtotal* | | | *$ 273.25* | *$ 10,195,951* |
| 15.0% Estimating Design Evolution | | | | $ 1,529,393 |
| *Subtotal - Cost of Work* | | | *$ 314.24* | *$ 11,725,344* |

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PRIORITY 2 - AIRSIDE HOLDROOM AREA

DETAIL

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| ***General Contractors Markups*** | | | | | |
| 3.0% | Project Logistics & Labor Factor | | | | $ 351,760 |
| 2.0% | General Requirements, Phasing & Temporary Construction | | | | $ 241,542 |
| 8.0% | General Conditions | | | | $ 985,492 |
| 3.0% | General Contractors Overhead & Profit | | | | $ 399,124 |
| 2.0% | Insurance | | | | $ 274,065 |
| 1.0% | Payment & Performance Bonds | | | | $ 139,773 |
| 0.0% | Sustainability Requirements | | | | $ - |
| ***Opinion of Probable Construction Cost*** | | | | *$ 378.34* | *$ 14,117,101* |
| 0.0% | Escalation | | | | $ - |
| ***Opinion of Probable Project Cost*** | | | | *$ 378.34* | *$ 14,117,101* |

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IDA
IDAHO FALLS
REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| **Project Title** | Terminal Expansion Project | | |
| **Location** | Idaho Falls Regional Airport | | |
| **Submittal Stage** | Concept Design | | |
| **Client Name** | Alliiance | | |
| **Client Project No.** | | **Revision** | 4 |
| **Original Date** | 2022-03-21 | **Revision Date** | 2022-04-28 |
| **Assumed Bid Opening Date** | | **Connico PN** | 4886.21 |
| **Project Lead** | CJN | **Checked by** | IDK |

PRIORITY 3 - BAGGAGE HANDLING.

SUMMARY

| | DESCRIPTION | | COST PER SQUARE FOOT | TOTAL |
|---|---|---|---|---|
| A | **Substructure** | | $ 9.74 | $ 184,560 |
| | Standard Foundations | $ 120,080 | | |
| | Slab on Grade | $ 64,480 | | |
| B | **Shell** | | $ 54.78 | $ 1,037,653 |
| | Superstructure | $ 387,878 | | |
| | Exterior Closure | $ 454,825 | | |
| | Roofing | $ 194,950 | | |
| C | **Interiors** | | $ 73.70 | $ 1,396,052 |
| | Interior Construction | $ 218,792 | | |
| | Stairs | $ - | | |
| | Interior Finishes | $ 1,177,260 | | |
| D | **Services** | | $ 225.76 | $ 4,276,556 |
| | Conveying | $ - | | |
| | Baggage Handling System | $ 1,150,000 | | |
| | Plumbing | $ 179,959 | | |
| | HVAC | $ 1,001,138 | | |
| | Fire Protection | $ 104,187 | | |
| | Electrical | $ 1,159,174 | | |
| | Communications | $ 473,726 | | |
| | Electronic Safety & Security | $ 208,373 | | |
| E | **Equipment & Furnishings** | | $ 4.00 | $ 75,772 |
| | Equipment | $ 47,358 | | |
| | Passenger Boarding Bridges | $ - | | |
| | Furnishings | $ 28,415 | | |
| F | **Special Construction & Demolition** | | $ 8.76 | $ 165,912 |
| | Special Construction | $ - | | |
| | Selective Building Demolition | $ 165,912 | | |
| | Hazardous Material Abatement | $ - | | |
| G | **Building Sitework** | | $ 47.30 | $ 896,060 |
| | Site Preparation | $ 76,060 | | |
| | Site Improvements | $ - | | |
| | Site Mechanical Utilities | $ 10,000 | | |
| | Site Electrical Utilities | $ 810,000 | | |
| | ***Subtotal*** | | *$ 424.04* | *$ 8,032,565* |
| 15.0% | Estimating Design Evolution | | | $ 1,204,885 |

Connico
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**PRIORITY 3 - BAGGAGE HANDLING.**

**SUMMARY**

| DESCRIPTION | | COST PER SQUARE FOOT | | TOTAL |
|---|---|---|---|---|
| *Subtotal - Cost of Work* | $ | 487.64 | $ | 9,237,450 |
| *General Contractors Markups* | | | | |
| 3.0% Project Logistics & Labor Factor | | | $ | 277,123 |
| 2.0% General Requirements, Phasing & Temporary Construction | | | $ | 190,291 |
| 8.0% General Conditions | | | $ | 776,389 |
| 3.0% General Contractors Overhead & Profit | | | $ | 314,438 |
| 2.0% Insurance | | | $ | 215,914 |
| 1.0% Payment & Performance Bonds | | | $ | 110,116 |
| 0.0% Sustainability Requirements | | | $ | - |
| *Opinion of Probable Construction Cost* | $ | 587.12 | $ | 11,121,721 |
| 0.0% Escalation | | | $ | - |
| *Opinion of Probable Project Cost* | $ | 587.12 | $ | 11,121,721 |

Connico
4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

IDA IDAHO FALLS REGIONAL AIRPORT

| | | | |
|---|---|---|---|
| Project Title | Terminal Expansion Project | | |
| Location | Idaho Falls Regional Airport | | |
| Submittal Stage | Concept Design | | |
| Client Name | Alliance | | |
| Client Project No. | | Revision | 4 |
| Original Date | 2022-03-21 | Revision Date | 2022-04-28 |
| Assumed Bid Opening Date | | Connico PN | 4886.21 |
| Project Lead | CJN | Checked by | IDK |

**PRIORITY 3 - BAGGAGE HANDLING.**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| *Terminal Renovation & Expansion* | | | | |
| *Level 1* | | | | |
| Hold Rooms | | 4,167 | 4,167 | sf |
| TSA Break Area | 1,465 | | 1,465 | sf |
| Bag Claim | | | | |
| Bag Claim And Claim Circulation | 6,340 | | 6,340 | sf |
| Rental Car Counters | 562 | | 562 | sf |
| Rental Car Queue | 481 | | 481 | sf |
| MDF | | 107 | 107 | sf |
| Baggage Laydown | | | | |
| Bag Laydown Area | 4,148 | 966 | 5,114 | sf |
| Ramps From Grade To Raised Level | | 520 | 520 | sf |
| Existing Stair To Basement | 187 | | 187 | sf |
| **Total Area** | **13,183** | **5,760** | **18,943** | **sf** |

| DESCRIPTION | QUANTITY | UNIT | UNIT COST | TOTAL |
|---|---|---|---|---|
| *A SUBSTRUCTURE* | | | | |
| A10 Foundations | | | | |
| A1010 Standard Foundations | | | | |
| A1011 Column Foundations, Wall Foundations, Grade Beams, Foundation Wall | 5,760 | sf | $ 20.00 | $ 115,200 |
| A1012 Perimeter Drainage | 5,760 | sf | $ 0.50 | $ 2,880 |
| A1013 Dewatering | 1 | ls | $ 2,000.00 | $ 2,000 |
| A1050 Slab on Grade | | | | |
| A1051 8" Slab on Grade | 5,760 | sf | $ 8.50 | $ 48,960 |
| A1052 Elevator and Escalator Pits | | | | Not Required |
| A1053 Misc. Trenches, Pits & Bases | 5 | cy | $ 750.00 | $ 4,000 |
| A1054 Under-slab Drainage & Insulation | 5,760 | sf | $ 2.00 | $ 11,520 |
| *Subtotal - Substructure* | | | | *$ 184,560* |
| *B SHELL* | | | | |

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**PRIORITY 3 - BAGGAGE HANDLING.**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| **B10 Superstructure** | | | | |
| B1030 Roof Construction | | | | |
| B1031 Steel Roof Structure (Allowance 18 lb/sf) | 52 tns | | $ 5,800.00 | $ 300,672 |
| B1032 Steel Roof Deck | 5,760 sf | | $ 5.35 | $ 30,816 |
| B1033 Miscellaneous Steel (5%) | 3 tns | | $ 6,200.00 | $ 16,070 |
| B1034 Roof Fireproofing | 5,760 sf | | $ 7.00 | $ 40,320 |
| B1035 Allowance for Blast Protection | | | | Excluded |
| **B20 Exterior Closure** | | | | |
| B2010 Exterior Walls | | | | |
| B2011 CMU | 3,593 sf | | $ 20.00 | $ 71,860 |
| B2012 Back-up System to CMU | 3,593 sf | | $ 10.00 | $ 35,930 |
| B2013 Parapet Detail | 307 lf | | $ 55.00 | $ 16,885 |
| B2030 Exterior Windows | | | | |
| B2031 Curtain Wall | 1,910 sf | | $ 165.00 | $ 315,150 |
| B2050 Exterior Doors | | | | |
| B2051 Exterior Doors | 1 alw | | $ 15,000.00 | $ 15,000 |
| **B30 Roofing** | | | | |
| B3010 Roof Coverings | | | | |
| B3011 Membrane Roof Assembly | 5,760 sf | | $ 22.50 | $ 129,600 |
| B3012 Parapet Detail | 307 lf | | $ 50.00 | $ 15,350 |
| B3013 Patch & Repair Existing Roof Assembly | 1 alw | | $ 50,000.00 | $ 50,000 |
| B3030 Roof Openings | | | | |
| B3031 Roof Hatch | | | | Not Required |
| ***Subtotal - Shell*** | | | | ***$ 1,037,653*** |
| ***C INTERIORS*** | | | | |
| **C10 Interior Construction** | | | | |
| C1010 Partitions | | | | |
| C1011 Interior Partitions | 18,943 sf | | $ 2.50 | $ 47,358 |
| C1012 Rough Carpentry & Blocking | 18,943 sf | | $ 1.00 | $ 18,943 |
| C1013 Caulking, Sealants & Firestopping | 18,943 sf | | $ 1.25 | $ 23,679 |
| C1014 Misc. Metals, Bracing, Countertop Supports, Equipment Supports, etc. | 18,943 sf | | $ 1.00 | $ 18,943 |
| C1030 Interior Doors | | | | |
| C1031 Interior Doors - Allowance | | | | Incl. see C3010 |



**PRIORITY 3 - BAGGAGE HANDLING.**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| C1050 Specialties | | | | |
| C1051 Fire Extinguishers & Cabinets | 18,943 sf | | $ 0.05 | $ 947 |
| C1052 Code Signage | 18,943 sf | | $ 0.25 | $ 4,736 |
| C1053 Interior Wayfinding Signage | 18,943 sf | | $ 3.50 | $ 66,301 |
| C1054 Miscellaneous Specialties | 18,943 sf | | $ 2.00 | $ 37,886 |
| **C20 Stairs** | | | | |
| C2010 Stair Construction | | | | |
| C2011 Stairs | | | | Existing |
| **C30 Interior Finishes** | | | | |
| C3010 Interior Finishes | | | | |
| C3011 *Level 1* | | | | |
| C3012 Hold Rooms | 4,167 sf | | $ 85.00 | $ 354,195 |
| C3013 TSA Break Area | 1,465 sf | | $ 65.00 | $ 95,225 |
| C3014 Bag Claim | | | | |
| C3015 Bag Claim And Claim Circulation | 6,340 sf | | $ 65.00 | $ 412,100 |
| C3016 Rental Car Counters | 562 sf | | $ 65.00 | $ 36,530 |
| C3017 Rental Car Queue | 481 sf | | $ 65.00 | $ 31,265 |
| C3018 MDF | 107 sf | | $ 45.00 | $ 4,815 |
| C3019 Baggage Laydown | | | | |
| C3020 Bag Laydown Area | 5,114 sf | | $ 45.00 | 230130 |
| C3021 Ramps From Grade To Raised Level | 520 sf | | $ 25.00 | $ 13,000 |
| C3022 Existing Stair To Basement | 187 sf | | | Existing |
| ***Subtotal - Interiors*** | | | | ***$ 1,396,052*** |
| ***D SERVICES*** | | | | |
| **D10 Conveying System** | | | | |
| D1010 Elevators & Lifts | | | | |
| D1011 Elevators & Lifts | | | | Existing |
| D1020 Escalators & Moving Walks | | | | |
| D1021 Escalators | | | | Existing |
| D1030 Baggage Handling Equipment | | | | |
| D1031 Baggage Handling Equipment - Inbound (Swanson Link Estimated Costs) | 1 ls | | $ 1,150,000.00 | $ 1,150,000 |
| **D20 Plumbing** | | | | |
| D2010 Plumbing Systems | | | | |

**PRIORITY 3 - BAGGAGE HANDLING.**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| D2011 *Level 1* | | | | |
| D2012 New & Remodel Areas | 18,943 sf | | $ 9.50 | $ 179,959 |
| **D30 HVAC** | | | | |
| D3010 HVAC Systems | | | | |
| D3011 *Level 1* | | | | |
| D3012 New & Remodel Areas | 18,943 sf | | $ 38.00 | $ 719,834 |
| D3013 Air Handling Unit & RTU Upgrades | 18,943 sf | | $ 5.50 | $ 104,187 |
| D3110 Controls and Instrumentation | | | | |
| D3111 Controls and Instrumentation | 18,943 sf | | $ 7.50 | $ 142,073 |
| D3210 Systems Testing & Balancing | | | | |
| D3211 Systems Testing & Balancing | 18,943 sf | | $ 1.85 | $ 35,045 |
| **D40 Fire Protection** | | | | |
| D4010 Sprinkler Systems | | | | |
| D4011 *Level 1* | | | | |
| D4012 New & Remodel Areas | 18,943 sf | | $ 5.50 | $ 104,187 |
| **D50 Electrical** | | | | |
| D5010 Electrical Systems | | | | |
| D5011 Electrical Infrastructure | | | | |
| D5012 2000 Amp Service | 1 ea | | $ 650,400.00 | $ 650,400 |
| D5013 Electrical Demo, Existing Terminal | 13,183 sf | | $ 2.00 | $ 26,366 |
| D5014 Wiring Devices | 18,943 sf | | $ 9.00 | $ 170,487 |
| D5015 Equipment Power and Connection | 18,943 sf | | $ 2.25 | $ 42,622 |
| D5016 Lighting | 18,943 sf | | $ 13.00 | $ 246,259 |
| D5017 Grounding and Lightning Protection | 5,760 sf | | $ 4.00 | $ 23,040 |
| D6010 Communications | | | | |
| D6011 MDF Room | 1 ea | | $ 65,000.00 | $ 65,000 |
| D6012 Backbone Cabling TSA IDF to MTR | 1 alw | | $ 135,000.00 | $ 135,000 |
| D6013 Telephone, Radio, Wi-Fi | 18,943 sf | | $ 3.25 | $ 61,565 |
| D6014 EVIDS | 18,943 sf | | $ 5.50 | $ 104,187 |
| D6015 Public Address Systems | 18,943 sf | | $ 3.00 | $ 56,829 |
| D6016 Common Use System | 18,943 sf | | $ 2.70 | $ 51,146 |
| D7010 Electronic Safety & Security | | | | |
| D7011 Access Control | 18,943 sf | | $ 4.00 | $ 75,772 |
| D7012 Video Surveillance System | 18,943 sf | | $ 3.00 | $ 56,829 |
| D7013 Fire Alarm | 18,943 sf | | $ 4.00 | $ 75,772 |

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4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

**PRIORITY 3 - BAGGAGE HANDLING.**

**DETAIL**

| DESCRIPTION | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|
| ***Subtotal - Services*** | | | | ***$ 4,276,556*** |
| ***E EQUIPMENT & FURNISHINGS*** | | | | |
| **E10 Equipment** | | | | |
| E1010 Equipment | | | | |
| E1011 Concessions Equipment - Not in Scope | | | | Excluded |
| E1012 Security Equipment - Not in Scope | | | | Excluded |
| E1013 FIS Equipment - Not in Scope | | | | Excluded |
| E1014 FIDS, BIDS, MUFIDS | 18,943 sf | | $ 2.00 | $ 37,886 |
| E1015 Dynamic Signage | | | | Excluded |
| E1016 Misc. Equipment Allowance | 18,943 sf | | $ 0.50 | $ 9,472 |
| E1030 Passenger Boarding Bridges | | | | |
| E1031 New Passenger Boarding Bridge | | | | Not Required |
| **E20 Furnishings** | | | | |
| E2010 Fixed Furnishings | | | | |
| E2011 Misc. Casework Allowance | 18,943 sf | | $ 1.50 | $ 28,415 |
| ***Subtotal - Equipment & Furnishings*** | | | | ***$ 75,772*** |
| ***F SPECIAL CONSTRUCTION & DEMOLITION*** | | | | |
| **F10 Special Construction** | | | | |
| F1010 Special Construction | | | | |
| F1011 Special Construction | | | | Not Required |
| **F20 Selective Building Demolition** | | | | |
| F2010 Building Elements Demolition | | | | |
| F2011 Demolish Exterior Closure at Existing Building | 5,261 sf | | $ 15.00 | $ 78,915 |
| F2012 Selective Interiors Demolish - Existing Building | 13,183 sf | | $ 3.50 | $ 46,141 |
| F2013 Demolish Portion of Existing Building | 105 sf | | $ 50.00 | $ 5,250 |
| F2014 Misc. Demolition | 1 alw | | $ 15,000.00 | $ 15,000 |
| F2015 Remove Debris to Dumpster | 220 cy | | $ 32.00 | $ 7,040 |
| F2016 Dumpster Pulls | 7 ea | | $ 350.00 | $ 2,567 |
| F2017 Dump Fees | 220 cy | | $ 50.00 | $ 11,000 |
| **F30 Hazardous Material Abatement** | | | | |
| F3010 Hazardous Material Abatement | | | | |
| F3011 Hazardous Material Abatement | | | | Excluded |
| ***Subtotal - Special Construction & Demolition*** | | | | ***$ 165,912*** |

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**PRIORITY 3 - BAGGAGE HANDLING.**

**DETAIL**

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| ***G BUILDING SITEWORK*** | | | | | |
| **G10 Site Preparation** | | | | | |
| G1010 Civil General Requirements | | | | | |
| G1011 Safety and Security | | 1 ls | | $ 26,100.00 | $ 26,100 |
| G1012 Temporary Construction Items & Erosion | | 1 ls | | $ 17,100.00 | $ 17,100 |
| G1013 Drainage and Utility Allowance | | 1 ls | | $ 12,700.00 | $ 12,700 |
| G1020 Site Demolition | | | | | |
| G1021 Demo Existing Asphalt Paving | | 5,760 sf | | $ 1.50 | $ 8,640 |
| G1030 Site Earthwork | | | | | |
| G1031 Grading Building Footprint | | 5,760.0 sf | | $ 2.00 | $ 11,520 |
| **G20 Site Improvements** | | | | | |
| G2010 Pavement | | | | | |
| G2011 Pavement | | | | | Not Required |
| **G30 Site Mechanical Utilities** | | | | | |
| G3010 Site Mechanical Utilities | | | | | |
| G3011 Site Mechanical Utilities - Allowance | | 1 alw | | $ 10,000.00 | $ 10,000 |
| **G40 Site Electrical Utilities** | | | | | |
| G4010 Site Electrical Utilities | | | | | |
| G4011 Site Electrical Utilities Allowance | | 1 alw | | $ 765,000.00 | $ 765,000 |
| G4030 Site Lighting | | | | | |
| G4031 Relocate Apron Lighting | | 1 ea | | $ 25,000.00 | $ 25,000 |
| G4032 Wall Packs and Pole Lighting | | 1 alw | | $ 20,000.00 | $ 20,000 |
| ***Subtotal - Building Sitework*** | | | | | ***$ 896,060*** |
| ***Subtotal*** | | | | ***$ 424.04*** | ***$ 8,032,565*** |
| 15.0% | Estimating Design Evolution | | | | $ 1,204,885 |
| ***Subtotal - Cost of Work*** | | | | ***$ 487.64*** | ***$ 9,237,450*** |

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4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

**PRIORITY 3 - BAGGAGE HANDLING.**

**DETAIL**

| DESCRIPTION | | REMODEL AREA | NEW CONSTR. | TOTAL | UNIT |
|---|---|---|---|---|---|
| ***General Contractors Markups*** | | | | | |
| 3.0% | Project Logistics & Labor Factor | | | | $ 277,123 |
| 2.0% | General Requirements, Phasing & Temporary Construction | | | | $ 190,291 |
| 8.0% | General Conditions | | | | $ 776,389 |
| 3.0% | General Contractors Overhead & Profit | | | | $ 314,438 |
| 2.0% | Insurance | | | | $ 215,914 |
| 1.0% | Payment & Performance Bonds | | | | $ 110,116 |
| 0.0% | Sustainability Requirements | | | | $ - |
| ***Opinion of Probable Construction Cost*** | | | | ***$ 587.12*** | ***$ 11,121,721*** |
| 0.0% | Escalation | | | | $ - |
| ***Opinion of Probable Project Cost*** | | | | ***$ 587.12*** | ***$ 11,121,721*** |

Connico
4886.21 IDA Term. Exp. ROM Est. 2022-04-26 rev 4 cjn

CONNICO

*Terminal Expansion Project*
*Idaho Falls Regional Airport*
*April 28, 2022*

## EXHIBITS

**Exhibit A**
Document List

CONNICO

*Terminal Expansion Project*
*Idaho Falls Regional Airport*
*April 28, 2022*

## Exhibit A – Document List

- The Estimate reflects the information listed herein:

| Drawing or File | Date |
|---|---|
| 2022.03.01 IDA MTG-04_FINAL | March 07, 2022 |
| 2018-04-11 - Airport Utilities | March 07, 2022 |
| 2022.03.04 Hybrid Concept c1 | March 07, 2022 |
| 2022.03.10_Hybrid Concept c3 | March 07, 2022 |
| 2022.03.10_Hybrid Concept c3_IT-Security | March 07, 2022 |
| 2022.03.11 Hybrid c3 Areas | March 07, 2022 |
| 2022.03.11 IDA Inbound BHS Sketch | March 07, 2022 |
| 2022.03.11_IDA Comb Sys Narratives_toConnico | March 07, 2022 |
| 2022.03.11_IDA Existing Plans | March 07, 2022 |
| 2022.03.11_IDA Hybrid Concept c3 plans | March 07, 2022 |
| 2022.03.14 Hybrid c3 Areas_UPDATED | March 07, 2022 |
| 2022.03.14_IDA Hybrid Concept c3 plans_UPDATE | March 07, 2022 |
| 2022.03.14_IDA ROM Areas Description | March 07, 2022 |
| 2022.03.15 Hybrid c3 Areas | March 07, 2022 |
| 2022.03.15_IDA Hybrid Concept c3 plans_UPDATE | March 07, 2022 |
| RE_ IDA ROM Costing Materials | March 07, 2022 |
| Utilities West Side of Terminal | March 07, 2022 |


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APPENDIX D

# Environmental Site Assessment

Idaho Falls
Regional Airport
2025 Airport Master Plan

July 2022

IDA
IDAHO FALLS
REGIONAL AIRPORT

# CONTENTS


2025 Airport Master Plan
Kick-Off Meeting

# Phase I Environmental Site Assessment

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# Phase I
# Environmental Site Assessment

# Idaho Falls Airport
# Master Plan Update

## Foote Drive,

## Idaho Falls, Bonneville County, Idaho

Prepared by:
North Wind Environmental Consulting Services

1425 Higham St.

Idaho Falls, Idaho 83402

July 2023

# Phase I Environmental Site Assessment
# Idaho Falls Airport
# Master Plan Update
# Foote Drive,
# Idaho Falls, Bonneville County, Idaho

**July 2023**


**Prepared by:**
**North Wind Environmental Consulting Services**
**1425 Higham St.**
**Idaho Falls, Idaho 83402**

# EXECUTIVE SUMMARY

North Wind Environmental Consulting Services, LLC (NWECS) performed a Phase I Environmental Site Assessment (ESA) to examine the current recognized environmental conditions on a parcel of privately owned land located along the east side of Foote Drive (between Foote Drive and I-15), in Idaho Falls, Idaho. The parcel encompasses approximately 15 acres, and is hereafter referred to as the subject property. NWECS performed the Phase I ESA in conformance with the scope and limitations of American Society of Testing Materials (ASTM) Standard E 1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. This standard is consistent with the U.S. Environmental Protection Agency's (EPA) 40 CFR Part 312, "Standards and Practices for All Appropriate Inquiries; Final Rule."

Portions of the subject property have been developed and contain structures and a tree farm and community gardens, which are currently leased to private individuals and groups by the Idaho Falls Regional Airport. NWECS completed the site reconnaissance for the Phase I ESA of the subject property on June 28, 2023.

Recognized environmental conditions are the presence, or likely presence, of any hazardous substances or petroleum products on the property under conditions that indicate an existing release, a past release, or a material threat of a release on the property or into the ground, groundwater, or surface water of the property. *De minimis* (small or insignificant) conditions are excluded as they do not generally present a material risk or harm to public health or the environment and would not be the subject of enforcement actions by appropriate government agencies.

Due to the type of operations which occur at the subject property, materials which have the risk of causing recognized environmental conditions are present. However, these materials have been stored and handled properly by the current lessee and only one *De minimis* recognized environmental condition was observed during the site assessment. No further surveys are recommended for the subject property.

## General Information

| | |
|---|---|
| Consultant: North Wind Environmental Consulting Services, LLC<br>1425 Higham Street<br>Idaho Falls, Idaho 83402<br>Phone: 208-528-8718<br>Fax: 208-528-8714 | Lat.: 43.5133360<br>Long.: -112.0587310<br>Client: Wayne J. Reiter (of Ardurra, a representative for the Idaho Falls Airport)<br>7950 N Meadowlark Way Suite A<br>Coeur d'Alene, Idaho |
| Site Survey Date: June 28, 2023<br>Report Date: July 10, 2023<br>Owner: Idaho Falls Regional Airport | Site Rep.: Ms. Jayme Verish, C.M., ASC<br>Assistant Airport Director – Operations & Maintenance<br>2140 N. Skyline Drive<br>Idaho Falls, Idaho |

Environmental Professional: Scott Webster

Senior Reviewer: Kelly Green

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in EPA's 40 CFR 312.10. I have performed a Phase I ESA in conformance with the scope and limitations of ASTM E 1527-21 and EPA's 40 CFR 312 of the subject property. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have reviewed this all appropriate inquiry in conformance with the standards and practices set forth in ASTM E 1527-21 and 40 CFR Part 312.

Scott Webster
Biologist

7/7/2023
Date

## CONTENTS

# ACRONYMS AND ABREVIATIONS

| | |
|---|---|
| AST | aboveground storage tank |
| ASTM | American Society of Testing Materials |
| CFR | Code of Federal Regulations |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| EDR | Environmental Data Resources, Inc. |
| EPA | U. S. Environmental Protection Agency |
| ESA | Environmental Site Assessment |
| FINDS | Facility Index System/Facility Registry System |
| FIRM | Federal Insurance Rate Map |
| ft | feet |
| LUST | leaking underground storage tank |
| NOAA | National Oceanic and Atmospheric Administration |
| NWECS | North Wind Environmental Consulting Services |
| PADS | PCB Activity Database Systems |
| PCB | polychlorinated biphenyl |
| RCRA | Resource Conservation and Recovery Act |
| USGS | U.S. Geological Survey |

# Phase I Environmental Site Assessment

## 1. INTRODUCTION

### 1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) is to identify and list any recognized environmental conditions associated with the subject property, and to report historical use information for the subject property. The subject property is located along the eastern side of Foote Drive on property owned by the Idaho Falls Regional Airport in Idaho Falls, Idaho. Similar information was gathered and reported for nearby properties that may affect surface or subsurface conditions at the subject property.

### 1.2 Detailed Scope of Services

This ESA was prepared in accordance with the American Society of Testing Materials (ASTM) E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,* which is consistent with the final rule for the U.S. Environmental Protection Agency's (EPA) Standard Code of Federal Regulation (CFR) 40 CFR 312, "Standards and Practices for All Appropriate Inquiries." This ESA included a site reconnaissance, interviews with people knowledgeable about the use and conditions of the subject property, assimilation of property records, reviews of environmental databases for information regarding chemical or hazardous waste releases on the subject property or surrounding area, and preparation of a report detailing the ESA. Data contained in this report was collected on-site on June 28, 2023.

A Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials. These activities would be carried out in a Phase II ESA, if required. Additions to the ASTM standard were not made.

### 1.3 Significant Assumptions

North Wind Environmental Consulting Services, LLC (NWECS) assumes that conditions observed during the site reconnaissance, and noted within reasonably ascertainable historical documentation, are representative of the history of the subject property.

### 1.4 Limitations and Exceptions

To develop the history of the property, NWECS examined reasonably ascertainable historical sources likely to be useful to identify recognized environmental conditions. This assessment did not address ASTM E1527-21 non-scope considerations, such as asbestos-containing materials, radon, lead-based paint, lead in drinking water, and wetlands. However, due to the professional knowledge of NWECS personnel conducting the site survey, these items were included in the general scan, where possible, and wetlands were noted within the subject property.

### 1.5 Special Terms and Conditions

The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluation. The conclusions presented in the report are based solely on the services described therein and not of scientific tasks or procedures beyond the scope of agreed-upon services, or the time and budgeting constraints imposed by the client. No subsurface exploratory drilling or sampling was done under this scope of work. No chemical analyses have been performed during the course of this ESA.

Some of the information provided is based on personal interviews and research of available documents, records, and maps held by the appropriate government and private agencies. This is subject to the limitations of historical documentation, availability and accuracy of pertinent records, and the personal recollection of those persons interviewed.

## 1.6 User Reliance

This report is based on the agreed upon Scope of Services between NWECS and Ardurra and is subject to the limitations and restrictions defined therein. It has been prepared for the exclusive use of the Client. No other person or organization is entitled to use or rely upon any part of it without written consent of NWECS, except that the Client may release or authorize the release of all or part(s) of this report to third parties on the condition that such third party agrees that it shall have no legal recourse against NWECS or its parent or subsidiaries, and that it shall indemnify and defend NWECS or its parent or subsidiaries from and against all claims arising out of or in conjunction with such use or reliance. Furthermore, the ESA may only be relied upon for 180 days. After that time period, the ESA may be updated by site reconnaissance to determine whether conditions at the subject property have changed, and by re-examining updated regulatory agency lists to determine whether newly listed sites may affect the subject property.

This ESA was conducted in accordance with ASTM E 1527-21 standard. This practice does not address whether requirements, in addition to appropriate inquiry, have been met in order to qualify for Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA) (42 USC § 9601) innocent landowner defense. This practice does not address requirements of any state, local, or federal laws other than the appropriate inquiry provisions of CERCLA's innocent landowner defense. Users are cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on property that are not addressed in this practice, and that may pose risks of civil and/or criminal sanctions for non-compliance.

It should be noted that this investigation did not include subsurface sampling and analysis but was limited to the observation of surface conditions at the time of the site reconnaissance. The conclusions of NWECS regarding the property are based solely on the observations of existing conditions, review of existing reports, personal interviews, and interpretations of the property history.

# 2. LOCATION AND LEGAL DESCRIPTION

The subject property is composed of a parcel of land comprising approximately 15 acres. The subject property is located between Foote Drive and I-15 on the northwest side of the City of Idaho Falls in Bonneville County, Idaho.

## 2.1 Site and Vicinity General Characteristics

The subject property is located in the City of Idaho Falls and the topography of the subject property is relatively flat with small depressions associated with historic use as a gravel pit. The subject property and the adjoining properties are zoned as Light Manufacturing and Heavy Commercial by the City of Idaho Falls Planning and Zoning Office. An aerial image of the property location and U.S. Geological Survey (USGS) Topographic maps are included in Appendix B along with site photos.

## 2.2 Description of Structures, Roads, and Other Improvements on the Subject Property

The subject property consists of a single parcel of land which has been divided into multiple plots all of which are owned by the Idaho Falls Regional Airport; therefore, they are discussed as a single parcel of land which comprises approximately 15 acres. There are two structures on the parcel; a storage structure owned by the airport and a second structure which acts as a maintenance shop and RV storage area within the plot rented by Holley Tree Farm. Within the fenced area associated with the Holley Tree Farm there is one 500-gallon aboveground storage tank (AST) which contains red diesel for off road use.

Power to the subject property is supplied by Idaho Falls Power, and water is provided by the City of Idaho Falls. There is currently no septic or sewer system installed on the subject property.

## 2.3 Current Uses of the Adjoining and Neighboring Properties

Current uses of the adjoining properties were observed during the site reconnaissance. The subject property is bounded to the west by Foote Drive and to the east by the highway right of way associated with Interstate 15. The subject property is bounded to the north by property owned by the Idaho Falls Regional Airport and is operated through a lease to Holley Tree Farm. The subject property is bounded to the south by a parcel owned and operated by National Oceanic and Atmospheric Administration (NOAA) Air Resources Laboratory Field Research Division.

# 3. USER PROVIDED INFORMATION

## 3.1 Title Records

A title search was prepared for the subject property exclusively. The title search is not a guarantee of title, a commitment to insure, or a policy of title insurance. NWECS does not guarantee nor include any warranty of any kind, whether expressed or implied, about the validity of all information included in this title search. This information is retrieved as it is recorded from the various agencies that make it available and is designed to aid in determining previous land use only. The total liability is limited to the fee paid for this report.

The subject property is currently owned by the City of Idaho Falls. Table 1 has a record of the transfer of title for the subject property back to 1973. Section 4.4.1 describes historical land use based upon personal interviews and a title search.

**Table 1**. Results of title search for subject property.

| Instrument No. | Description | Date | Seller | Buyer |
|---|---|---|---|---|
| 449361 | Plat/Deed | May 17, 1973 | City of Idaho Falls | Airport Industrial Park Addition, Division 3 |

## 3.2 Environmental Liens or Activity and Use Limitations

No indications of environmental liens or other limitations were provided to NWECS. Legal records and information collected from current and previous owners who were interviewed have indicated that no environmental liens or concerns are active at this time.

## 3.3 Reason for Performing Phase I

The purpose of this Phase I ESA is for a renewal of the airport master plan and to identify any potential environmental concerns and to meet the requirements necessary to qualify for the landowner liability protections (LLPs) under CERCLA.

# 4. RECORDS REVIEW

## 4.1 Standard Environmental Record Sources

As part of this assessment, NWECS reviewed the most recently available standard environmental databases provided by EPA, Idaho Department of Environmental Quality (IDEQ), and the EDR database search (Appendix D). A customized area search was performed to ASTM's recommended distances radiating out from the subject property. Table 2 contains a detailed summary of the database research findings.

**Table 2.** Summary of environmental database results.

| **FOCUS MAP SUMMARY** | | | | | |
|---|---|---|---|---|---|
| **DATABASE** | **TOTAL PLOTTED** | **DATABASE** | **TOTAL PLOTTED** | **DATABASE** | **TOTAL PLOTTED** |
| **Federal Records** | | | | | |
| NPL | 1 | RCRA NONGEN / NLR | 0 | RADINFO | 0 |
| Proposed NPL | 0 | US ENG Controls | 0 | FINDS | 0 |
| Delisted NPL | 0 | US INST Control | 0 | RAATS | 0 |
| NPL Liens | 0 | ERNS | 0 | RMP | 0 |
| CERCLIS | 0 | DOT OPS | 0 | PCB Transformer | 0 |
| CERC-NFRAP | 0 | US CDL | 0 | Federal Facility | 0 |
| Liens 2 | 0 | US Brownfields | 0 | EPA Watch List | 0 |
| RCRA CORRACTS | 2 | DOD | 0 | FEMA UST | 0 |
| RCRA-TSDF | 0 | FUDS | 0 | SEMS | 0 |
| RCRA-LQG | 0 | CONSENT | 0 | | 0 |
| RCRA-SQG | 0 | ROD | 1 | | 0 |
| RCRA-VSQG | 1 | PADS | 0 | | 0 |
| **State and Local Records** | | | | | |
| UIC | 0 | UST | 7 | MINES | 1 |
| LUST | 1 | SPILLS | 0 | Brownfields | 0 |
| **Additional Environmental Records** | | | | | |
| **Local Lists of Hazardous Waste /Contaminated Sites** | | | | | |
| US HIST CDL | 0 | ID CDL | 0 | | |
| ID ALLSITES | 23 | US CDL | 0 | | |
| **Records of Emergency Release Reports** | | | | | |
| HMIRS | | ID SPILLS | 0 | ID SPILLS 90 | 0 |
| **Records of Emergency Release Reports** | | | | | |
| RCRA NonGen / NLR | 2 | FINDS | | ID TIER 2 | |
| SCRD DRYCLEANERS | 0 | ID Financial Assurance | | EPA WATCH LIST | 0 |

| FOCUS MAP SUMMARY | | | | | |
|---|---|---|---|---|---|
| **DATABASE** | **TOTAL PLOTTED** | **DATABASE** | **TOTAL PLOTTED** | **DATABASE** | **TOTAL PLOTTED** |
| **Federal Records** | | | | | |
| ROD | | ECHO | | | |

Notes:
Sites may be listed in more than one database

A partial listing of environmental databases searched is provided below. A total of 39 sites with multiple records were found during the database search within one mile of the subject property:

- National Priority List (NPL),
- Proposed NPL Proposed National Priority List Sites,
- Delisted NPL National Priority List Deletions,
- NPL LIENS Federal Superfund Liens,
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS),
- CERC-NFRAP CERCLIS No Further Remedial Action Planned,
- LIENS 2 CERCLA Lien Information,
- Corrective Action Report (CORRACTS),
- Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal Facility (TSDF) - Treatment, Storage and Disposal,
- RCRA-Large Quantity Generators (LQGs),
- RCRA-Small Quantity Generators (SQGs),
- RCRA- Conditionally Exempt Small Quantity Generator (CESQG),
- RCRA NonGen / NLR RCRA - Non Generators,
- US ENG CONTROLS Engineering Controls Sites List,
- US INST CONTROL Sites with Institutional Controls,
- Emergency Response Notification System (ERNS),
- Department of Transportation (DOT) OPS Incident and Accident Data,
- US Clandestine Drug Labs (CDLs),
- US BROWNFIELDS A Listing of Brownfields Sites,
- Department of Defense (DOD) Sites,
- Formerly Used Defense Sites (FUDS),
- CONSENT Superfund (CERCLA) Consent Decrees,
- Polychlorinated Biphenyl (PCB) Activity Database System (PADS),
- Radiation Information Database (RADINFO),
- Facility Index System (FINDS)/Facility Registry System,
- RCRA Administrative Action Tracking System (RAATS),
- Risk Management Plans (RMPs),
- PCB TRANSFORMER PCB Transformer Registration Database,
- FEDERAL FACILITY Site Information listing,
- EPA WATCH LIST EPA WATCH LIST,
- Federal Emergency Management Agency (FEMA) Underground Storage Tank (UST) Listing,
- Aboveground Storage Tanks (AST),
- BROWNFIELDS Brownfields Sites Listing,
- MINES Mine Locations Listing,

- INDIAN RESERV Indian Reservations,

It should be noted that the computerized geo-coding technology used in the database search is based on available census data and is only accurate to approximately plus or minus 300 feet.

Maps showing retrieved data are included in Appendix B and meet the government records search requirements of ASTM standards. Sites identified within the study radius were evaluated to determine if they were likely to have had an adverse impact on the subject property. The criteria used to evaluate sites located within the study radius include:

- Distance from the subject property,
- Expected direction of groundwater flow,
- Presence/absence of large, constructed features that may influence groundwater flow direction,
- Likely stormwater flow direction, and
- Presence/absence of documented contaminant releases at the identified sites.

The sites which were identified within the search radius are included in Table 3.

**Table 3**. Sites identified in the radius search.

| Site Name | Address | Database Acronyms | Relative Elevation | Distance Direction (ft & mi) |
|---|---|---|---|---|
| Gravel Pit | Bonneville County, ID | MINES MRDS | On Site | 0/NA |
| Kingston Aviation | 2115 Foote Dr | UST (Active), ALLSITES: ID Financial Assurance 2: | Higher | 57 ft., SW |
| Pacific Fighters | 2013 Foote Dr | RCRA VSQC, FINDS, ECHO, ALLSITES, | Higher | 59 ft., SSW |
| NOAA Idaho Falls Laboratory | 1750 Foote Dr | RCRA NonGen/NLR, ALLSITES | Higher | 404 ft., S |
| Southland Produce Co | 1705 N Lindsay Blvd | UST (Closed), ALLSITE | Higher | 437 ft., SE |
| Idaho Falls Maintenance Yard | 1540 Foote Dr | LUST (Clean up 1994), UST (Closed), ALLSITES, Spills | Higher | 912 ft., S |
| Delta Industries | 1490 Lindsay Blvd | ALLSITES | Higher | 1045 ft., SSE |
| Hertz Used Car Sales | 1520 Skyline Dr | UST (closed), ALLSITES, Financial Assurance | Higher | 1142 ft., SW |
| Fedex Express IDAA | 2087 Federal Way | RCRA NonGen/NLR, FINDS, ECHO, ALLSITES | Higher | 1204 ft., W |
| Southfork Electronics Inc | 1405 Foote Dr | ALLSITES | Higher | 1225 ft., S |
| Triangle Recreational Sales & Service | 1470 N Skyline Dr | UST (Closed) ALLSITES | Higher | 1242 ft., SW |
| Fire Dept Training Tower | Foote Drive | UST (Closed), ALLSITES | Lower | 1269 ft., S |
| City Of Idaho Falls Fire Department 3 | 2125 Federal Way | UST (Closed), ALLSITES | Higher | 1287 ft., WNW |

| Site Name | Address | Database Acronyms | Relative Elevation | Distance Direction (ft & mi) |
|---|---|---|---|---|
| Western Transmission | 1410 N Skyline Dr | ALLSITES | Higher | 1391 ft., SW |
| US DOE BPA Idaho Falls Maint. HDQS Linds | 1350 Lindsay Blvd | ALLSITES | Lower | 1479 ft., SSE |
| Teton Stage Lines | 1425 Lindsay Blvd | ALLSITES | Lower | 1546 ft., SSE |
| ID ISU Ctr For Higher Ed | 1776 Science Ctr Dr | ALLSITES | Higher | 1584 ft., NE |
| Sierra Properties, LLC | 2835 Foote Dr | UST (Active), ALLSITES, Financial Assurance | Higher | 1760 ft., N |
| Western States Equipment | 1200 Foote Dr | UST (Active), ALLSITES, Financial Assurance | Higher | 1791 ft., S |
| Budget Rent A Car | 2120 N Skyline | UST (Closed), ALLSITES | Higher | 1973 ft., WSW |
| ID ISU Center For Advanced Energy Studies | 995 Mk Simpson Blvd | ALLSITES | Higher | 2316 ft., NNE |
| Cargill Inc | 1155 Lindsay Blvd | ALLSITES | Lower | 2383 ft., SSE |
| Shaka’s | 1520 Grandview Dr | UST (Active), ALLSITES, Financial Assurance | Higher | 2607 ft., S |
| ID Trans Dept IF Area Hwy 20 Bridge Key 12478 | Rigby Hwy 20 0.3 Mi E Of I-15 Veterans Memorial Hwy | ALLSITES | Lower | 2626 ft., SE |
| USDOE Idaho Nat’l Engineering Lab | INEL Reservation | NPL, SEMS, CORRACTS, RCRA-TSDF, RCRA-LQG, US ENG CONTROLS, US INST CONTROLS, EPA WATCH LIST, ROD, RAATS | Lower | 3842 ft., ENE |
| Waste-Tech Services Inc | 1 Energy Dr | CORRATS, RCRA-TSDF, RCRA NonGen/NLR, FINDS, ECHO | Higher | 4814 ft., ENE |

## 4.2 Additional Environmental Record Sources

In addition to the Standard Record Sources, the following additional sources were reviewed:

- Superfund (CERCLA) Consent Decrees (CONSENT)
- Records of Decision (RODs)
- National Priority List Deletions (DELISTED NPL)
- Hazardous Materials Information Reporting System (HMIRS)
- Material Licensing Tracking System (MLTS)
- Mines Master Index File (MINES)

- PCB Activity Database Systems (PADS)
- Department of Defense Sites (DOD)
- RCRA Administrative Action Tracking System (RAATS)
- Facility Index System/Facility Registry System (FINDS).

None of these sources yielded any sites known to be associated with the subject property.

## 4.3 Physical Setting Sources

### 4.3.1 U.S. Geological Survey Topographic Maps

The USGS topographic map of the subject property and the surrounding area is included in Appendix A and B. The subject property is located on the Idaho Falls North, ID USGS 7.5 min Quadrangle Map published in 2020 and Idaho Falls South, ID USGS 7.5 min Quadrangle Map published in 2020. The map indicates that the subject property is at an elevation of approximately 4,720 ft above mean sea level. The land surrounding the subject property is generally flat, slightly sloping to the east.

### 4.3.2 Geologic Setting and Soils

Dominant soils within the subject property are identified as Map Unit 20-Packham gravely loam. These soils are derived from a parent material of mixed alluvium and occur on floodplains. Packham soils are classified as deep and moderately deep with moderate infiltration rates.

### 4.3.3 Groundwater and Surface Water

Groundwater table is located at a depth of approximately 168.06 feet below the ground surface and flows to the east. The nearest natural surface water is Snake River which is located approximately 0.25 miles to the east of the subject property. The Federal Insurance Rate Map (FIRM) included in Appendix A shows the parcel location within a Zone C area which is defined as an area of minimal flooding.

## 4.4 Historical Use Information on the Subject Property

To determine past uses of the subject property and surrounding properties, NWECS staff reviewed historical sources of information as outlined in Table 4. Historical information was obtained from a variety of sources, including topographical maps, interviews with people knowledgeable about the recent and past use of the property, and historic aerial photographs (see Appendices).

**Table 4.** Summary of historical records reviewed.

| | **YEARS REVIEWED** | |
|---|---|---|
| **SOURCE OF INFORMATION** | **SUBJECT PROPERTY** | **ADJACENT PROPERTIES** |
| USGS Topographic Map(s)(Appendix B) | 1948, 1949, 1950, 1979, 2013, 2017, 2020 | 1948, 1949, 1950, 1979, 2013, 2017, 2020 |
| Title Search (Appendix B) | 1970-current | Not requested or provided |
| Aerial Photograph(s) (Appendix B) | 2019, 2015, 2011, 2006, 1998, 1992, 1987, 1980, 1976, 1974, 1954, 1946 | 2019, 2015, 2011, 2006, 1998, 1992, 1987, 1980, 1976, 1974, 1954, 1946 |
| Sanborn Fire Insurance Company Map(s) | Unavailable | Unavailable |

#### 4.4.1 Subject Property

Section 8.3.2 of the ASTM standard specifies that all uses of the subject property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. A review of available aerial photographs back to 1946 for the subject property was conducted to determine use. On the 1946 aerial photographs, it shows the site had limited development associated with airport operations which include minor roadways. Other development of the subject property was determined to begin between 1954 and 1974 and is anticipated to have occurred in 1970. Prior to the 1970 disturbance it appears that the subject property is relatively undeveloped minus roads which are present in the 1946 aerial photograph. Sanborn maps were requested but were not available.

# 5. SITE RECONNAISSANCE

## 5.1 Methodology and Limiting Condition

A site reconnaissance was conducted on June 28, 2023 to observe potential hazardous materials, staining, distressed vegetation, and any other conditions that might indicate concern. During the site visit, NWECS staff inspected the subject property by physically walking the subject property and looking throughout the structures located on the subject property. During the field survey, photographs of the subject property were taken. Photographs of the site and surrounding areas can be found in Appendix A. The following sections describe any observed hazardous substances, evidence of storage tanks, PCB-containing equipment, water/wastewater management practices, potential land disposal areas, and other information.

## 5.2 General Site Setting and Observations

Several maps and photographs of the subject property are included in Appendix A. The subject property appears to be mostly undeveloped except for the northern third of the property which has been developed as a community garden, tree farm, and RV storage area. The subject property was historically used as a gravel pit where material was extracted for development of the airport. The subject property is connected to the City of Idaho Falls water system, and electricity is supplied by Idaho Falls Power. City sewer and natural gas are available on site; however, the location is not currently connected to either. There are above ground electrical wires present along the west and north boundaries of the property. The vegetation within the subject property was dominated by weedy species such as kochia, cheat grass, tumble mustard, and pepper weed. There are two areas containing wetland characteristics on the southern end of the subject property.

# 6. FINDINGS

This ESA was prepared to meet the standards for ESAs for real estate transactions promulgated by EPA's 40 CFR 312 and ASTM Standard E 1527-21. This Phase I ESA included a review of readily available public records and documents, observations of adjacent land uses, a site reconnaissance, interviews, and a review of publicly available and readily reviewable environmental databases.

## 6.1 Evidence of Hazardous Substances

During the initial review of database information there was no evidence of hazardous substance present. During the field survey, there were multiple *de minims* hazardous substances observed on site which include an AST, small area of stained soil, and small quantity containers of petroleum products. The small area of stained soil is located adjacent to the AST adjacent to the structure within the RV storage area. There were also multiple bags of herbicide and carbon-based fertilizer present at this location that are not considered as a hazardous material concern at the quantity observed. There were no stormwater control systems present on site.

## 6.2 Indication of Polychlorinated Biphenyls (PCBs)

NWECS inspected the property for types of equipment that have been historically associated with the use of PCBs as a dielectric fluid coolant and stabilizer. There was one pole mounted electrical transformer present adjacent to the western boundary of the subject property along Foote Drive. This transformer was labeled as No PCBs.

## 6.3 Indication of On-Site Land Disposal and Other Information

There was no sign of on-site land disposal present on the subject property.

## 6.4 Water and Wastewater Management

NWECS surveyed the entire area and found no wastewater discharges, pits, or lagoons, or on-site disposal wells. There are two locations on the southern portion of the subject property which show evidence of ponding and have wetland characteristics. There is a drainage ditch which is located along the eastern boundary of the subject property. There is one small area of stained soil, but no stressed vegetation was observed on the subject property. There is no large-scale stormwater control system in place on the subject property.

## 6.5 Evidence of Storage Tanks, Drums, and Other Containers

There is one AST located on the subject property that is a 500-gallon tank used for off-road diesel storage. There is one empty storage tote located on site which does not contain any hazardous materials. There are also four 2.5-gallon containers of Declo 15W-40 motor oil. There are also multiple other small containers of grease, power steering fluid, window cleaner, brake fluid, and lubricants present within the structure managed by Holley Tree Farm; all are less than one half gallon.

# 7. CONCLUSIONS AND RECOMMENDATIONS

NWECS performed a Phase I ESA in conformance with the scope and limitations ASTM E 1527-21 for the subject property. This assessment has determined that even though the petroleum products present and small soil staining on the subject property have the potential to be become a recognized environmental condition, there is currently no recognized environmental conditions within the subject property. No further sampling is recommended for the subject property.

# 8. REFERENCES

ASTM, 2021, *Test Method E1527-21,* Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, American Society for Testing and Materials, Conshohocken, Pennsylvania, November 2021.

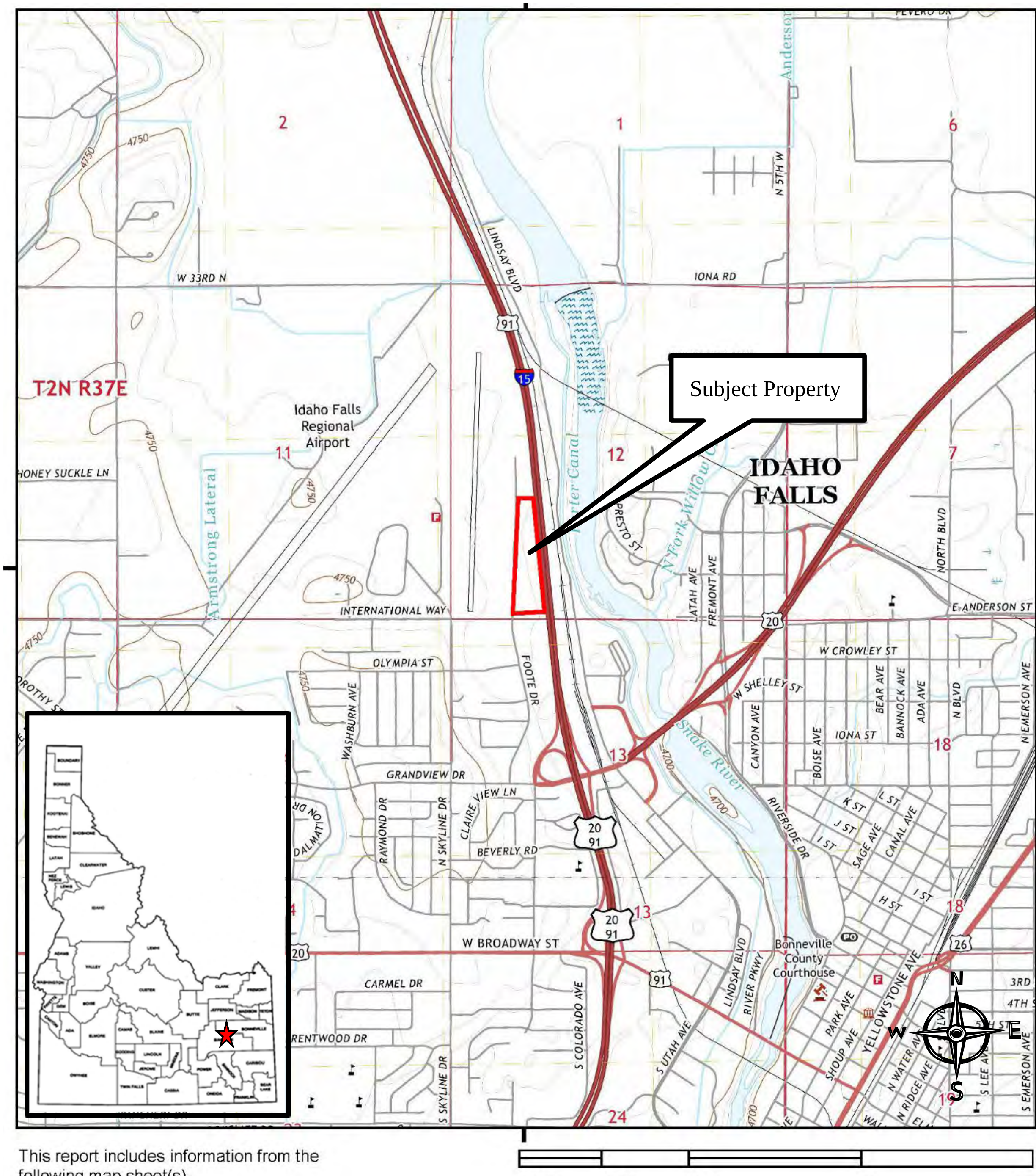
40 CFR 312, Title 40, “Protection of Environment,” Part 312, “Standards and Practices for All Appropriate Inquiries; Final Rule,” Code of Federal Regulations, Office of the Federal Register, November 1, 2005.

42 USC § 9601 et seq., 1980, “Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA/Superfund),” United States Code, December 11, 1980.

# Appendix A

# Site Maps and Photographs


Subject Property Location Map



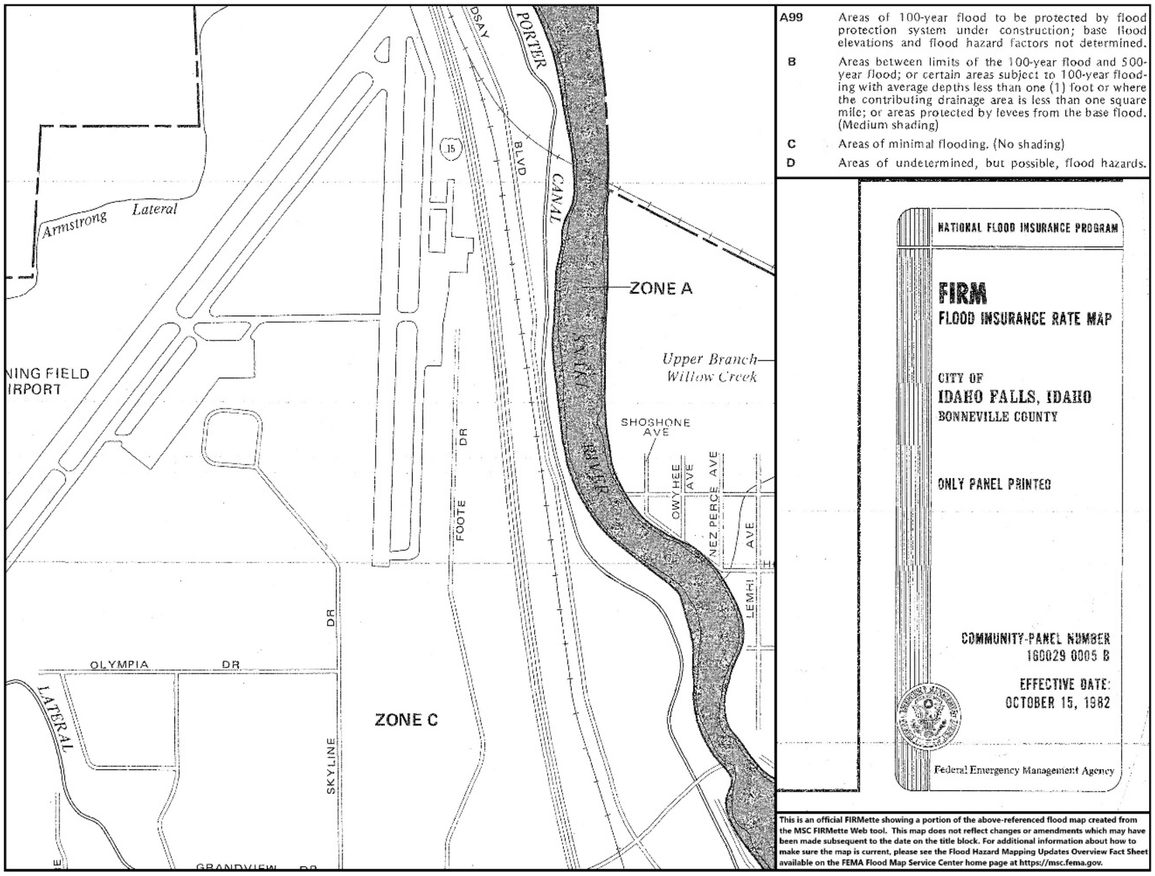

This report includes information from the following map sheet(s).

NW N NE
W E

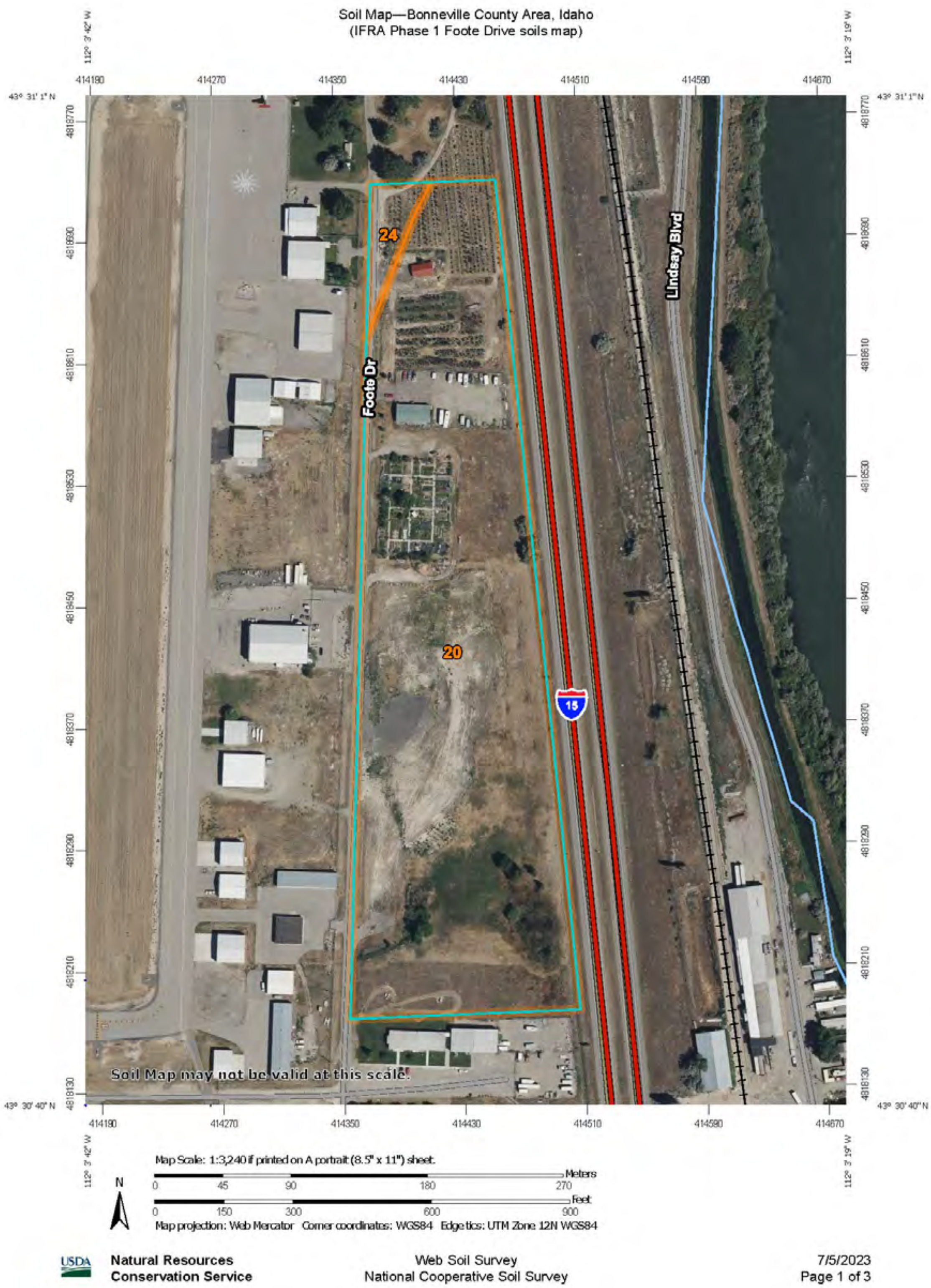
TP, Idaho Falls North, 2020, 7.5-minute
S, Idaho Falls South, 2020, 7.5-minute

SITE NAME: Idaho Falls Regional Airport
ADDRESS: Foote Drive
Idaho Falls, ID 83402
CLIENT: North Wind Environmental

USGS Topographic map and site location of subject parcel.




FIRM of subject property.


Soil Map—Bonneville County Area, Idaho
(IFRA Phase 1 Foote Drive soils map)
Foote Dr
Lindsay Blvd
24
20
15
Soil Map may not be valid at this scale.
Map Scale: 1:3,240 if printed on A portrait (8.5" x 11") sheet.
Meters
0 45 90 180 270
Feet
0 150 300 600 900
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84
USDA
Natural Resources Conservation Service
Web Soil Survey
National Cooperative Soil Survey
7/5/2023
Page 1 of 3

Soils Map

| | |
|---|---|
|  |  |
| Overview of subject property, facing south along Foote Drive. | Overview of subject property, facing north along Foote Drive. |
|  |  |
| Overview of community gardens located in the center of the subject property. | Overview of the subject property, facing north from the center of the parcel. |

| | |
|---|---|
|  |  |
| Overview of wetland habitat located on the west side of the southern portion of the subject property. | Overview of wetland habitat located on the east side of the southern portion of the subject property. |
|  |  |
| Overview of the southern boundary of the subject property, facing west from SE corner. | Overview of the eastern boundary of the subject property, facing north from SE corner. Wetland habitat present on the left of photo and drainage ditch on the right of photo. |

| | |
|---|---|
|  |  |
| Overview of northern boundary of the project area, facing east from NW corner. Holley Tree Farm on both sides of the boundary. | Overview of structure on the northern portion of the subject property owned by the airport. |
|  |  |
| Overview of structure on the northern portion of the subject property owned by the airport. | Overview of the interior of the structure owned by the airport. Shows storage of tires, signs, and maintenance materials for the airport. |

Overview of the interior of the structure owned by the airport. Shows storage of tires, signs, and maintenance materials for the airport.

Overview of the interior of the structure owned by the airport. Shows storage of tires, signs, office furniture, and maintenance materials for the airport.

Overview of structure within the area used for RV storage and by Holley Tree Farm facing South.

Overview of structure within the area used for RV storage and by Holley Tree Farm, facing Northwest.

| | |
|---|---|
|  |  |
| Automotive maintenance chemicals located within the Holley Tree Farm structure. | Granular herbicide located within the Holley Tree Farm structure. |
|  |  |
| 500 Gallon Diesel AST within the area leased by Holley Tree Farm. | Small area of stained soil below the AST. |

| | |
|---|---|
|  |  |
| Empty chemical tote within the RV storage area. | Pole mounted transformer adjacent to the subject property to the west. |
|  |  |
| Overview of storage area within the structure leased by Holley Tree Farm. | Carbon based fertilizer within the area leased by Holley Tree Farm. |

.

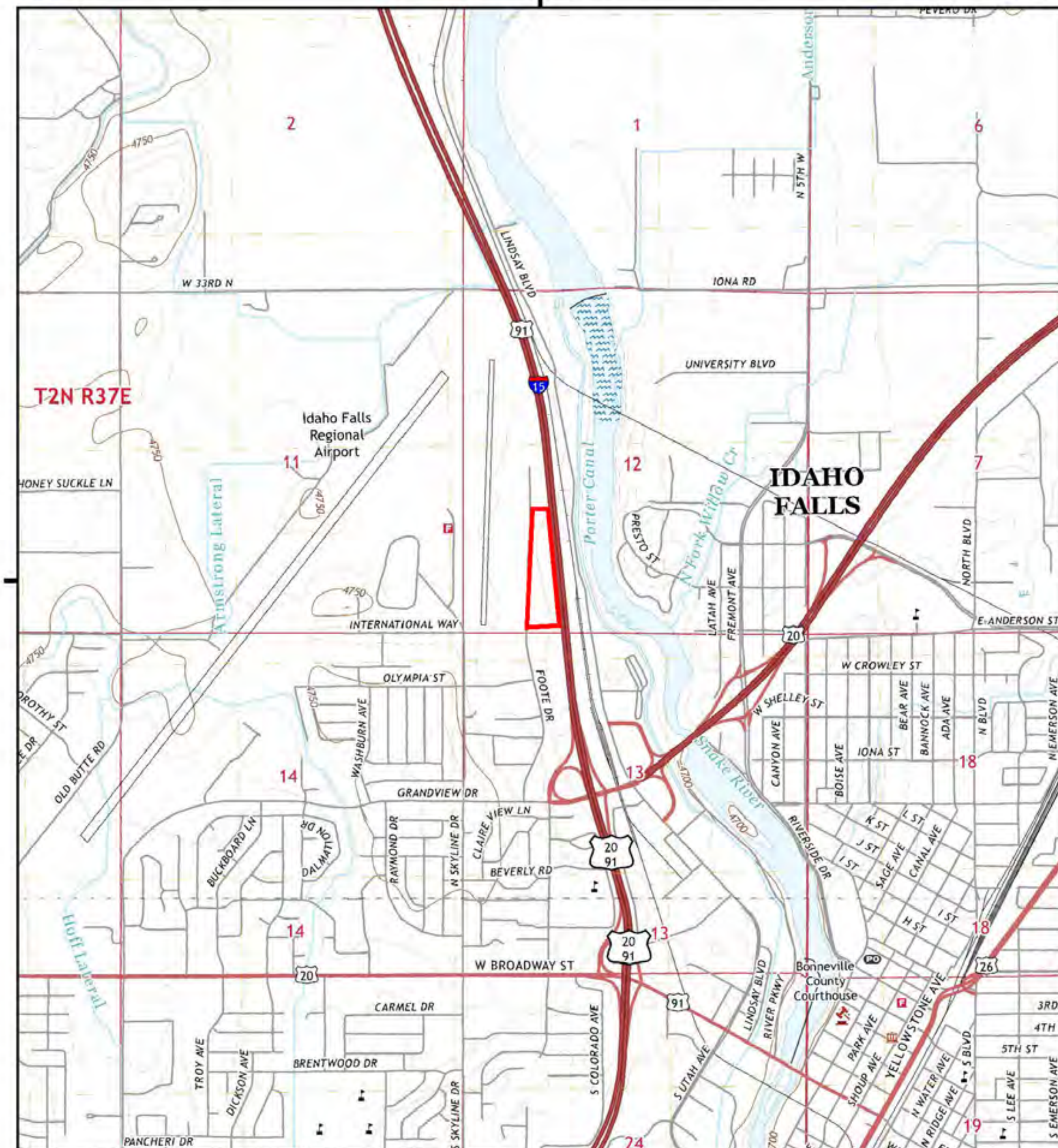
# Appendix B

# Historic Topo Maps and Aerial Photographs

EDR

# Historical Topo Map

2020




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE W E SW S SE

TP, Idaho Falls North, 2020, 7.5-minute
S, Idaho Falls South, 2020, 7.5-minute

SITE NAME: Idaho Falls Regional Airport
ADDRESS: Foote Drive
Idaho Falls, ID 83402
CLIENT: North Wind Environmental

N

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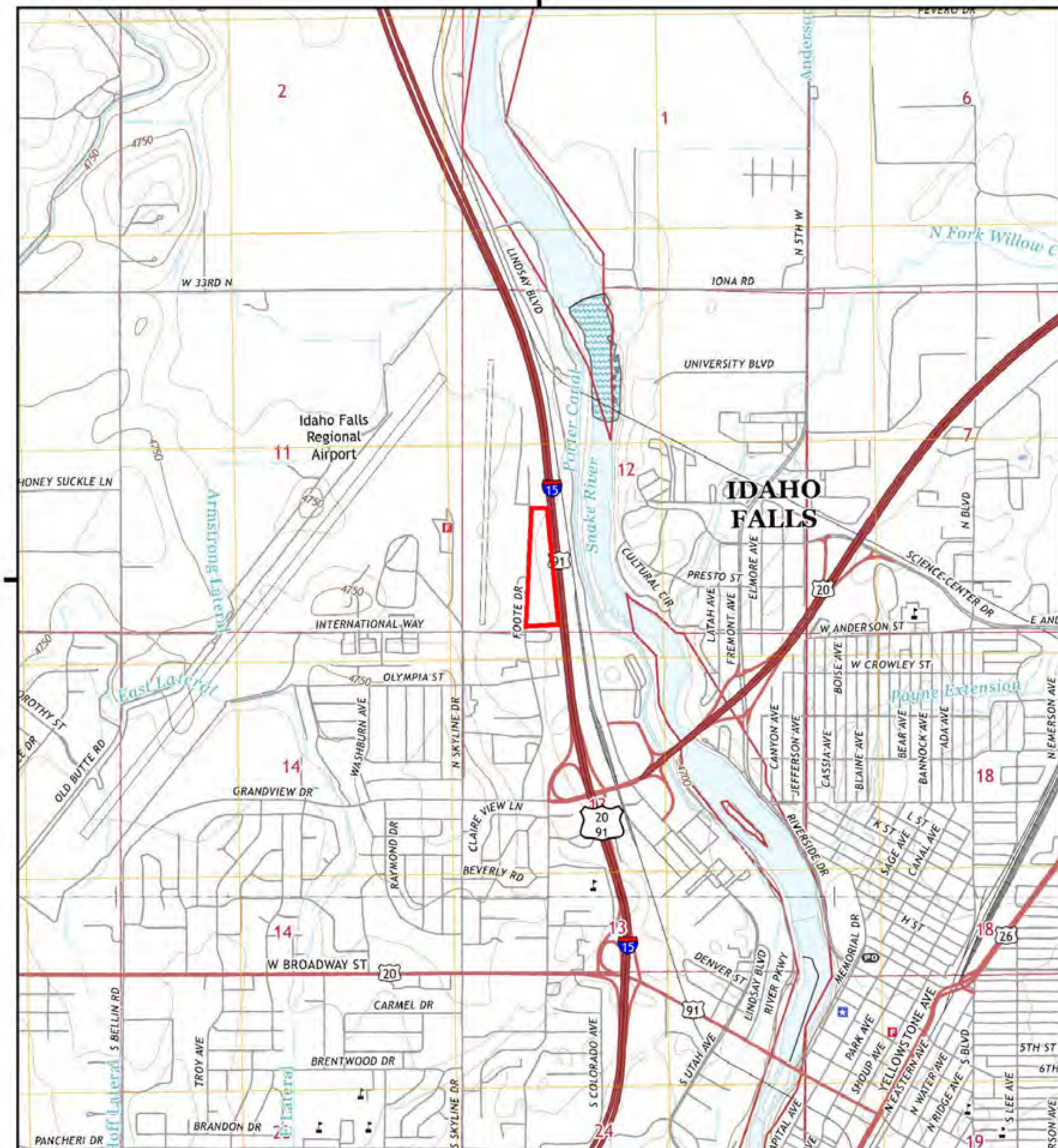
EDR

# Historical Topo Map

2017




This report includes information from the following map sheet(s).

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NW N NE W E SW S SE

TP, Idaho Falls North, 2017, 7.5-minute
S, Idaho Falls South, 2017, 7.5-minute

SITE NAME: Idaho Falls Regional Airport
ADDRESS: Foote Drive
Idaho Falls, ID 83402
CLIENT: North Wind Environmental

N

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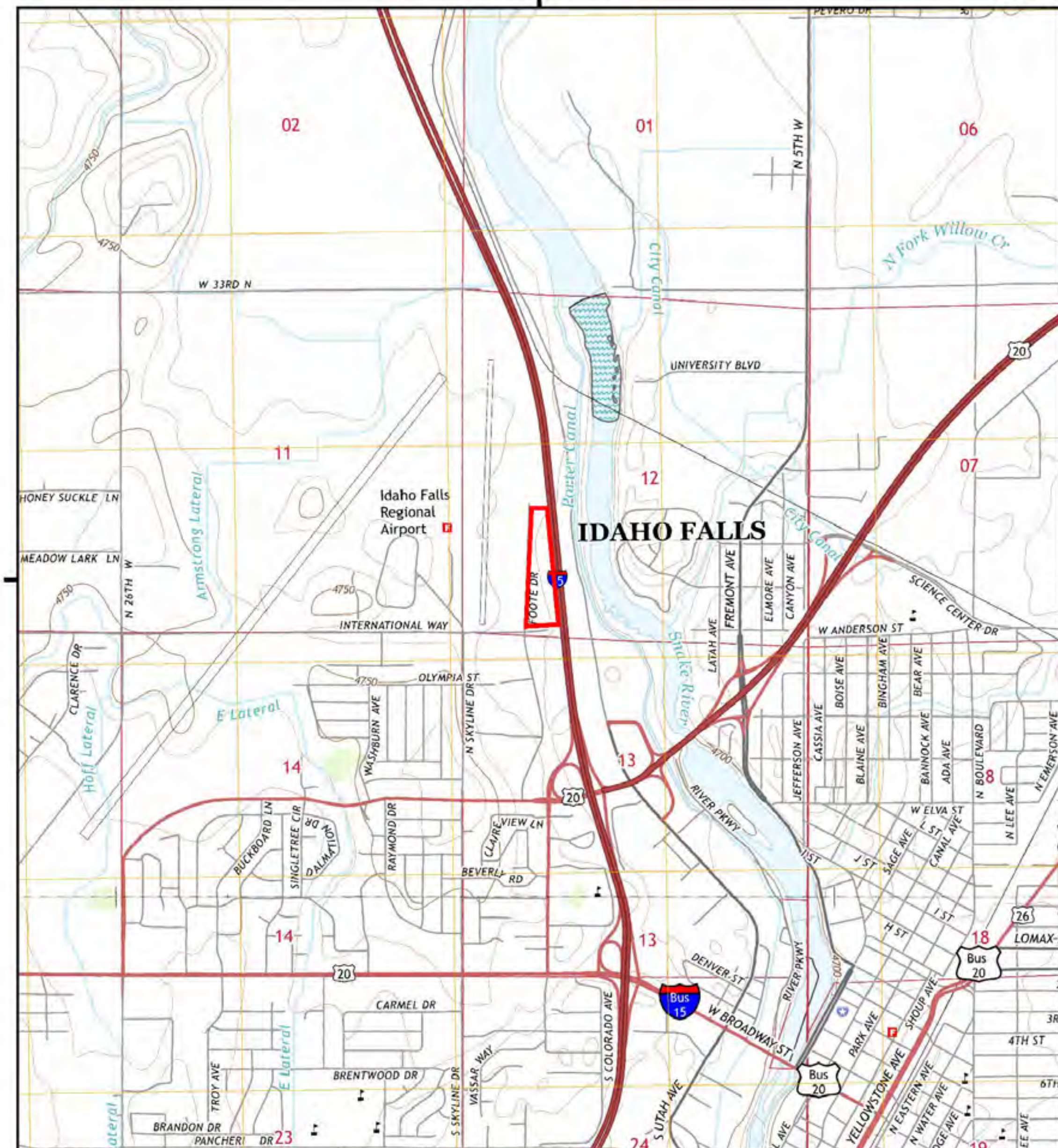
## Historical Topo Map

2013




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE W E SW S SE

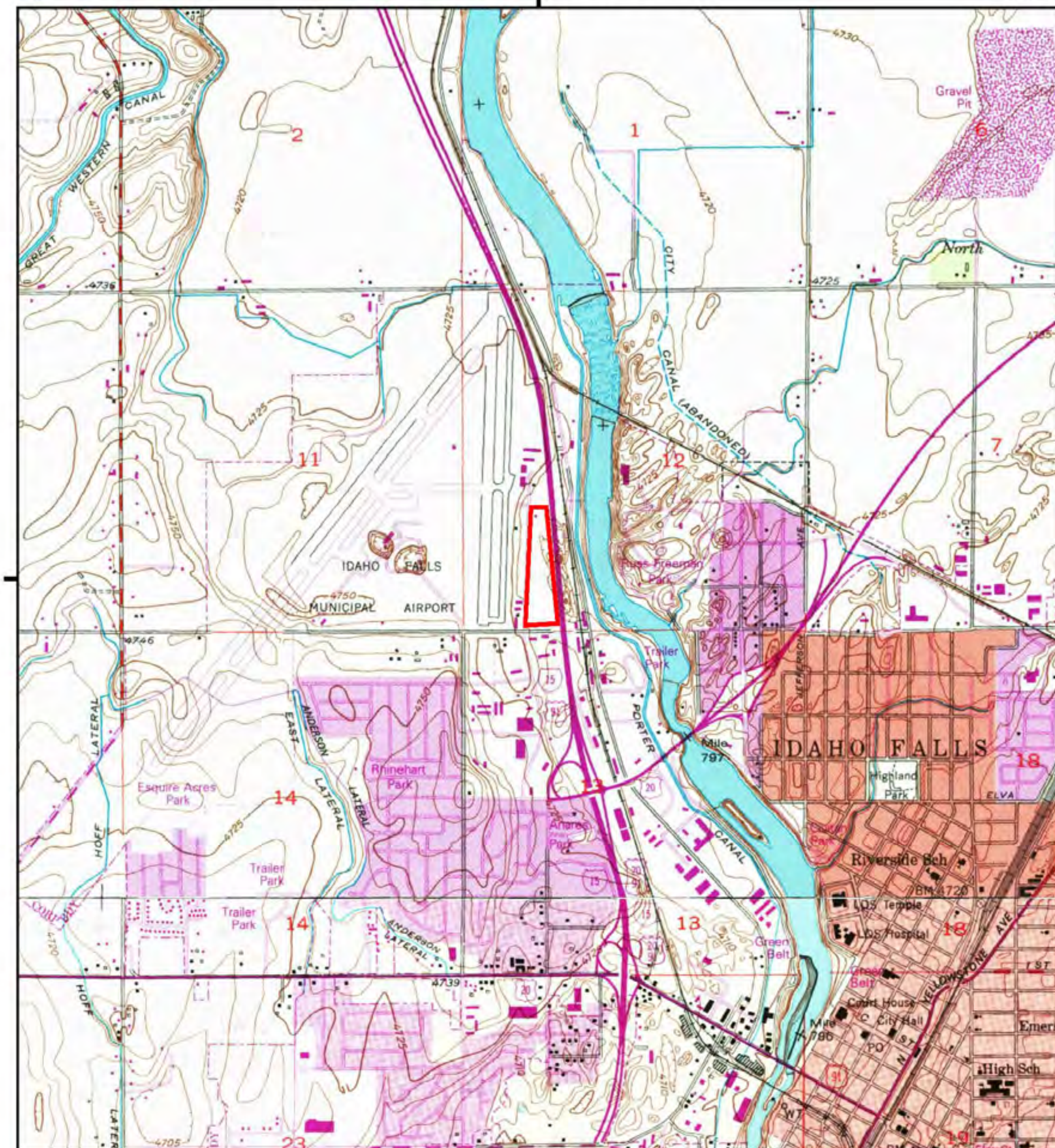
TP, Idaho Falls North, 2013, 7.5-minute
S, Idaho Falls South, 2013, 7.5-minute

SITE NAME: Idaho Falls Regional Airport
ADDRESS: Foote Drive
Idaho Falls, ID 83402
CLIENT: North Wind Environmental

7376242 - 4 page 7

Historical Topo Map

1979




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

TP, Idaho Falls North, 1979, 7.5-minute
S, Idaho Falls South, 1979, 7.5-minute

SITE NAME: Idaho Falls Regional Airport
ADDRESS: Foote Drive
Idaho Falls, ID 83402
CLIENT: North Wind Environmental

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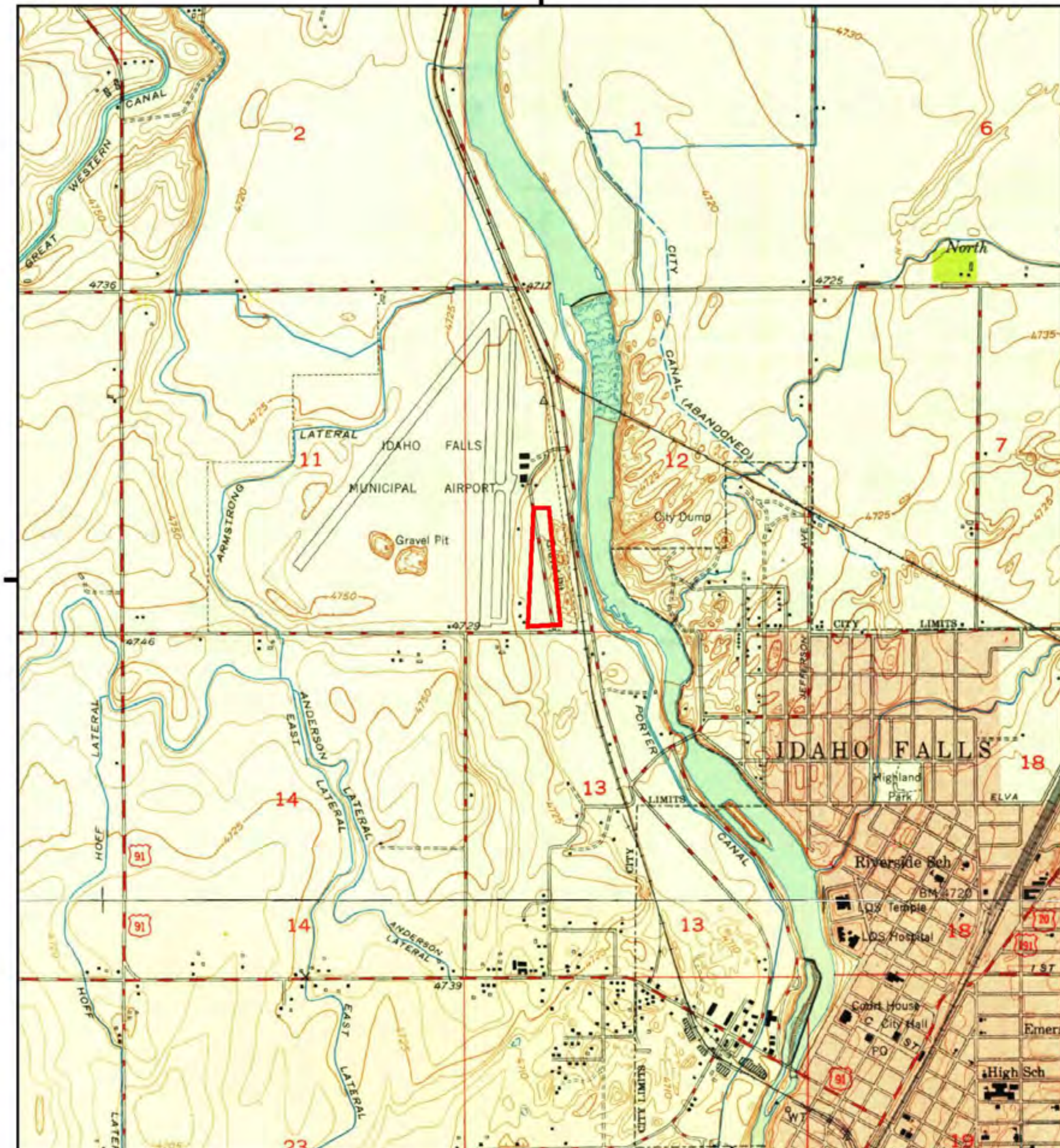
EDR

# Historical Topo Map

1949, 1950




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE W E SW S SE

TP, Idaho Falls North, 1949, 7.5-minute
S, Idaho Falls South, 1950, 7.5-minute

SITE NAME: Idaho Falls Regional Airport
ADDRESS: Foote Drive
Idaho Falls, ID 83402
CLIENT: North Wind Environmental

N

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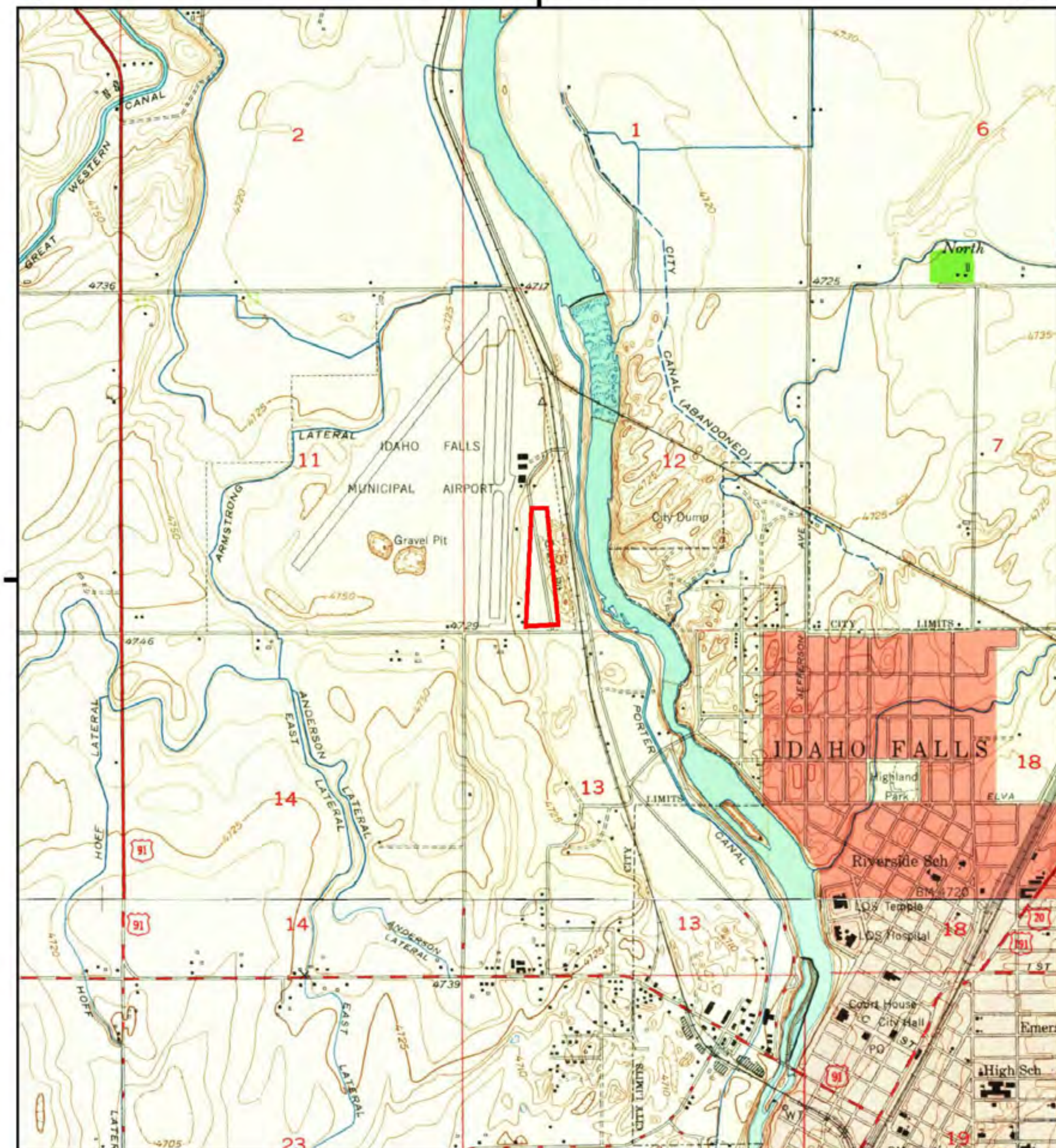
![EDR]

# Historical Topo Map

1948




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE W E SW S SE

TP, Idaho Falls North, 1948, 7.5-minute
S, Idaho Falls South, 1948, 7.5-minute

SITE NAME: Idaho Falls Regional Airport
ADDRESS: Foote Drive
Idaho Falls, ID 83402
CLIENT: North Wind Environmental

N

7376242 - 4 page 10

35
INQUIRY #: 7376242.8
YEAR: 2019
= 500'
N
EDR


INQUIRY #: 7376242.8
YEAR: 2015
= 500'
N
EDR
35


35
INQUIRY #: 7376242.8
YEAR: 2011
= 500'
N
EDR


INQUIRY #: 7376242.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 7376242.8
YEAR: 1998
= 500'
N
EDR
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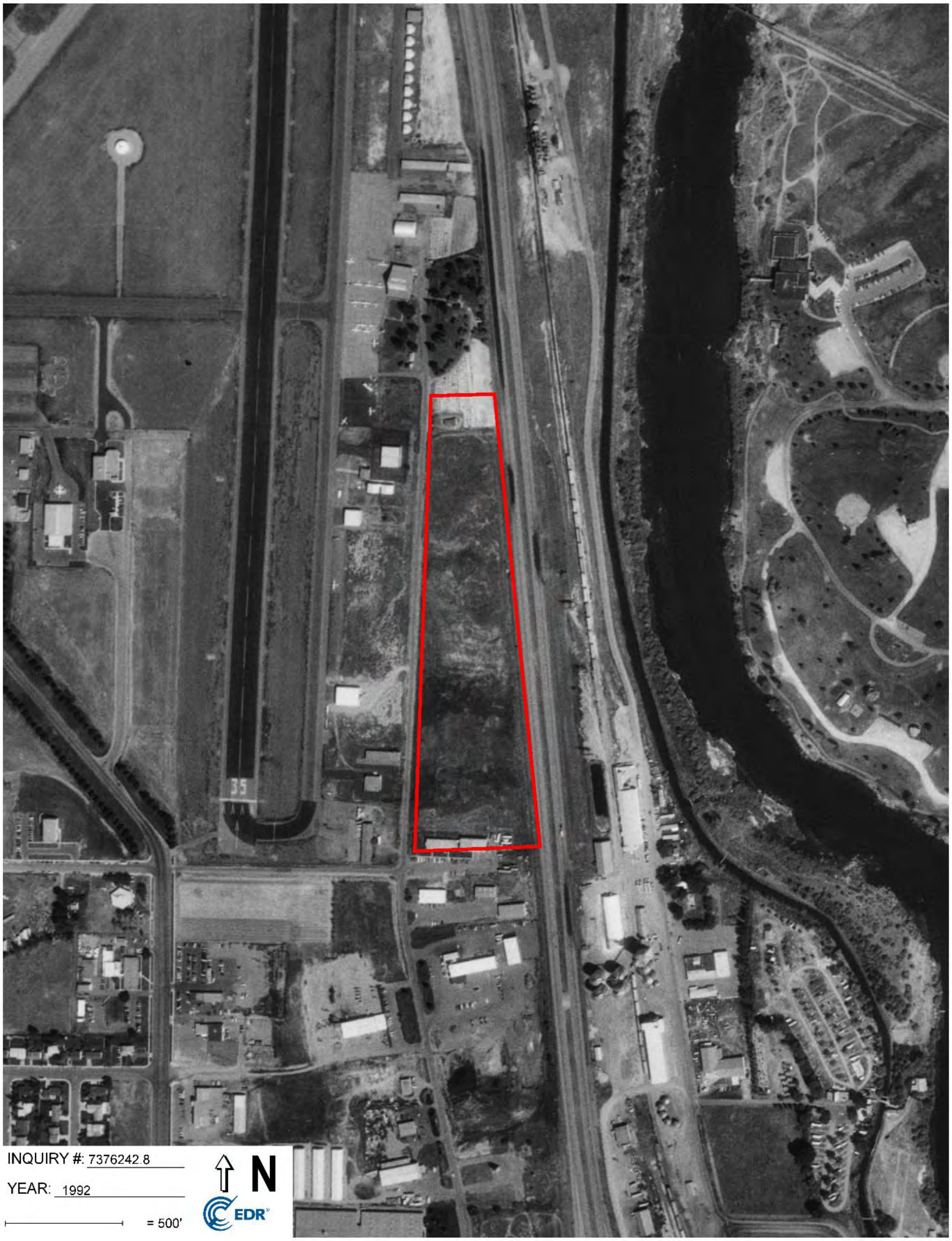
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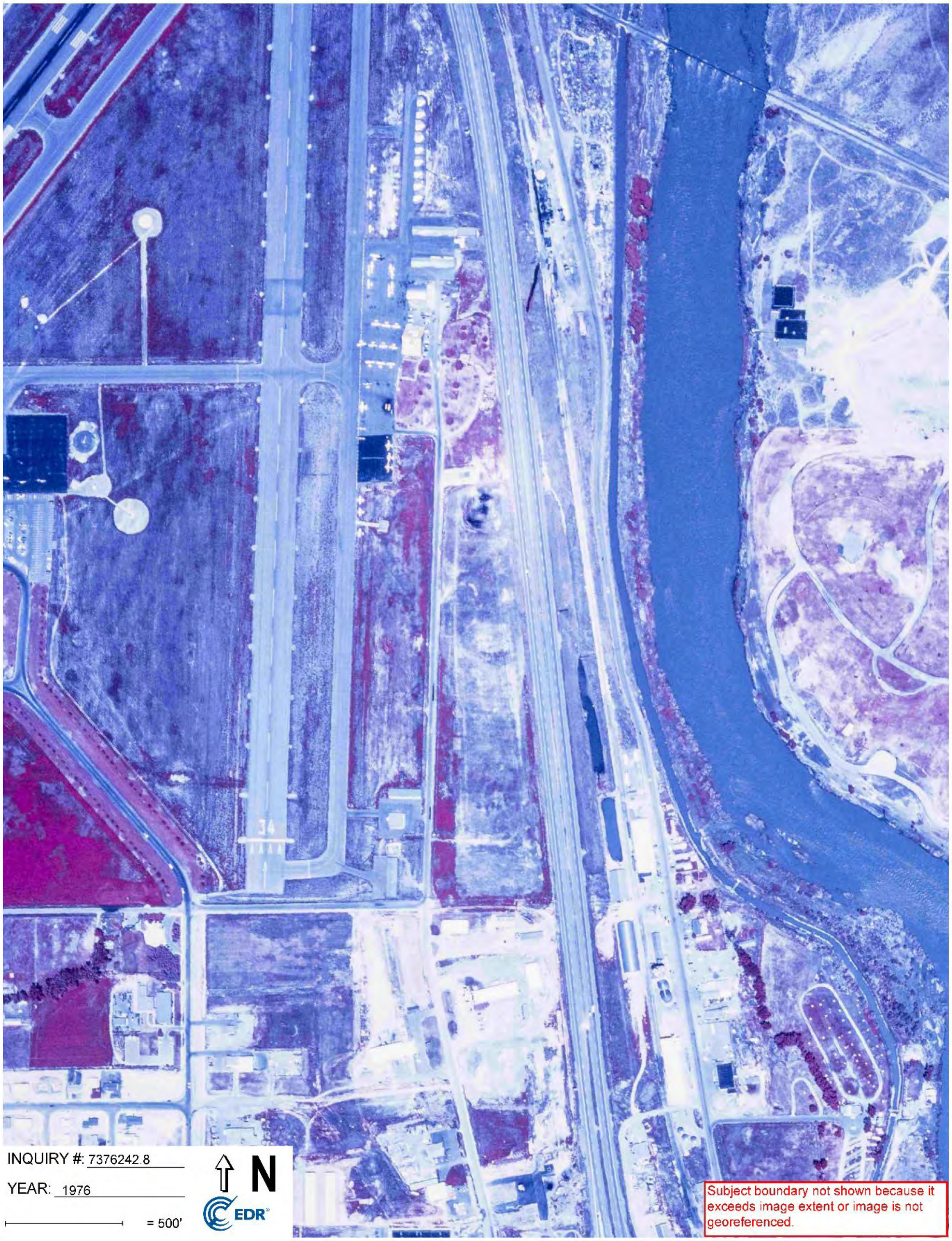
INQUIRY #: 7376242.8
YEAR: 1992
= 500'
N
EDR

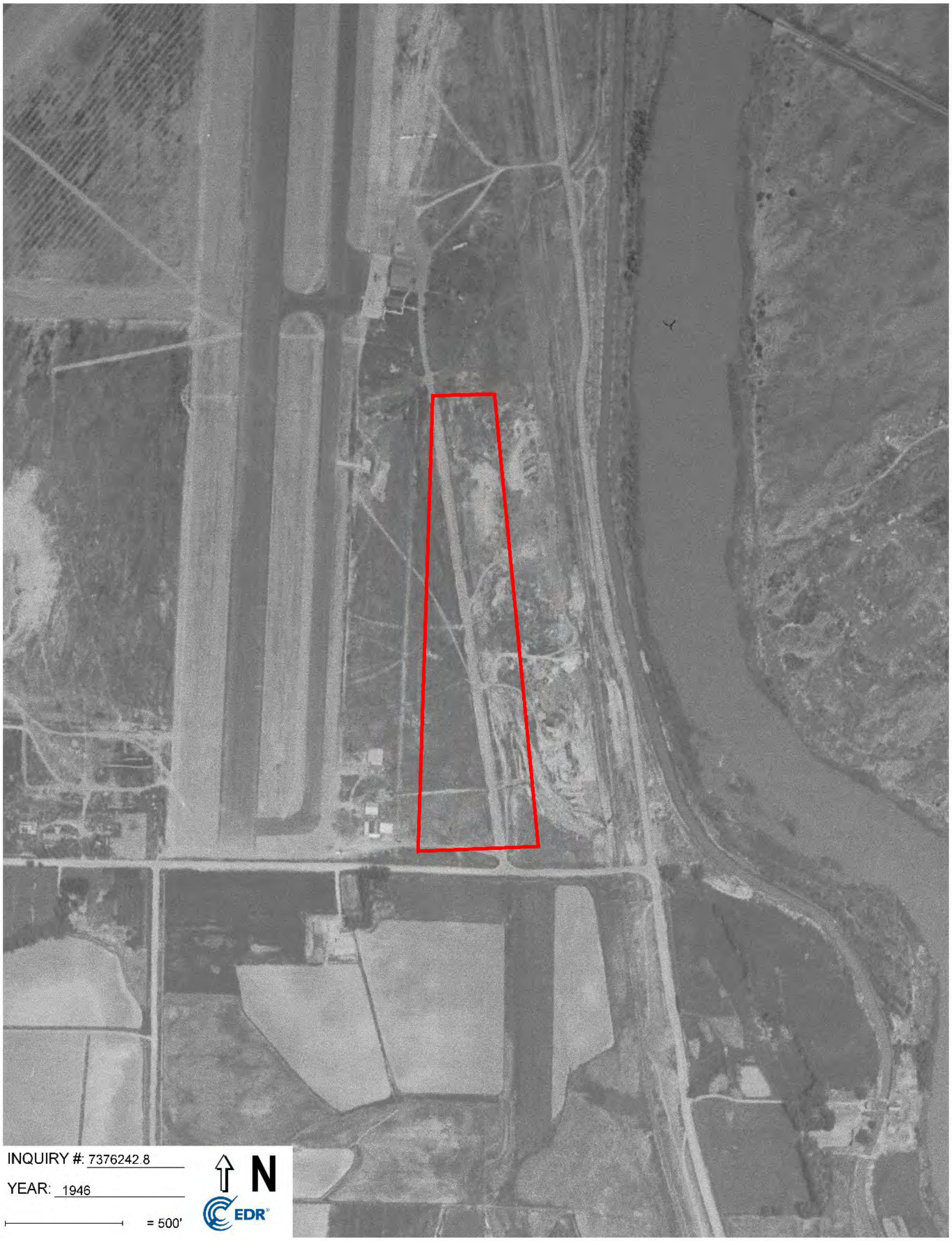

INQUIRY #: 7376242.8
YEAR: 1987
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


34
INQUIRY #: 7376242.8
YEAR: 1980
= 500'
N
EDR


34
INQUIRY #: 7376242.8
YEAR: 1976
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 7376242.8
YEAR: 1974
= 500'
N
EDR


IDAHO FALLS
INQUIRY #: 7376242.8
YEAR: 1954
= 500'
N
EDR


INQUIRY #: 7376242.8
YEAR: 1946
= 500'
N
EDR

# Appendix C

# Qualifications of Environmental Professional and Reviewer

Environmental Professional

Scott Webster, Biologist

Mr. Webster has 21 years of experience with a diverse background in hazardous materials identification, vegetation and wildlife assessments, data collection and analysis, and environmental science. Experience includes biological assessments, wetland delineations, wetland delineation and determination, biological assessment development, environmental regulatory compliance, water quality sampling, NEPA compliance (environmental assessments/evaluations), Public Outreach, Regulatory Agency consultation/data compilation, geographical information system (GIS) mapping, mapping, hazardous materials assessments, comprehensive environmental documents preparation, potential roadway alignment alternatives development and analysis, ASTM Phase I and II environmental site assessments, cultural resource surveys, forestry inventories, and noxious and invasive seed survey. Mr. Webster is skilled in identifying information sources, gathering and verifying information and data, and applying quality assurance concepts. He has performed multiple Phase I Environmental Site Assessments for commercial real estate transactions including agriculture lands, gas stations, and numerous commercial retail offices in Idaho. He has also assisted with Environmental Site Assessment Phase II soil and groundwater sampling.

40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training in accordance with 29 CFR 1910.120(e)(8).

# Appendix D

# EDR Report Findings

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# APPENDIX E

# Airport Layout Plan

Idaho Falls
Regional Airport
2025 Airport Master Plan

March 2025


2025 Airport Master Plan
Kick-Off Meeting

# CONTENTS

## Airport Layout Plan

# IDAHO FALLS REGIONAL AIRPORT (IDA)

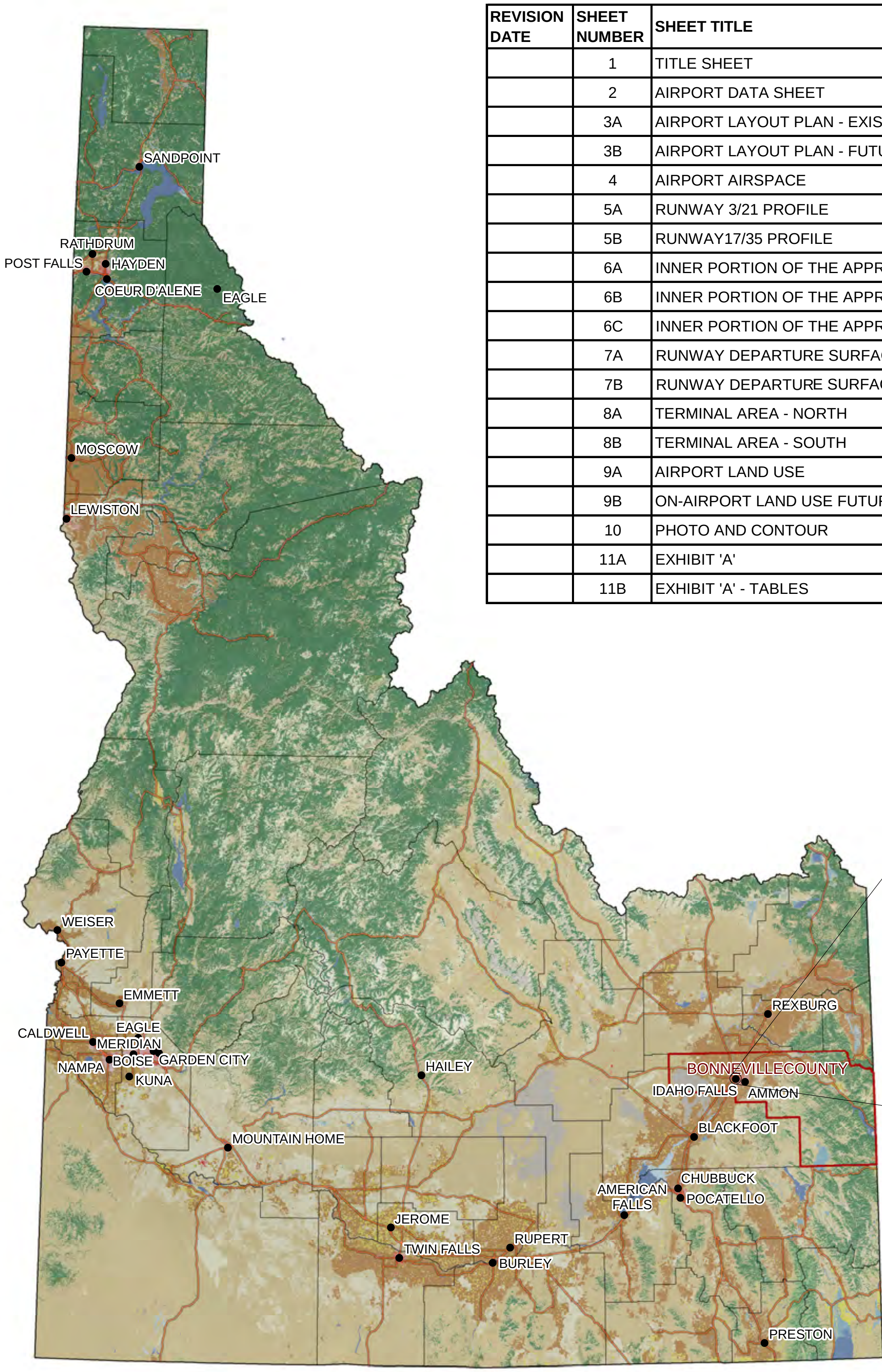
## IDAHO FALLS, IDAHO

# AIRPORT LAYOUT PLAN

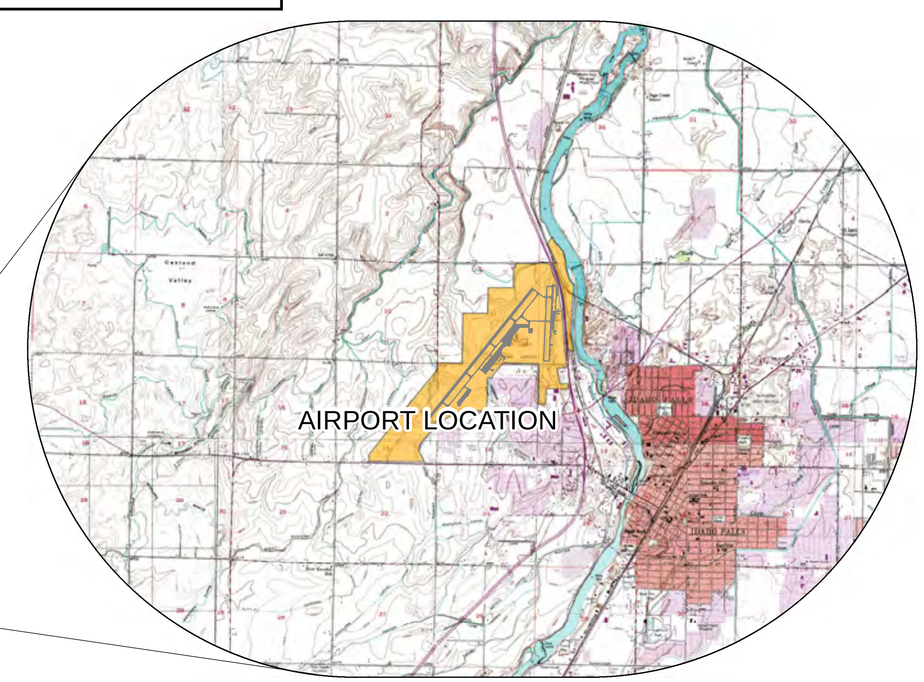
## DRAWING INDEX:

| REVISION DATE | SHEET NUMBER | SHEET TITLE |
|---|---|---|
| | 1 | TITLE SHEET |
| | 2 | AIRPORT DATA SHEET |
| | 3A | AIRPORT LAYOUT PLAN - EXISTING |
| | 3B | AIRPORT LAYOUT PLAN - FUTURE |
| | 4 | AIRPORT AIRSPACE |
| | 5A | RUNWAY 3/21 PROFILE |
| | 5B | RUNWAY17/35 PROFILE |
| | 6A | INNER PORTION OF THE APPROACH SURFACE - RUNWAY 3 |
| | 6B | INNER PORTION OF THE APPROACH SURFACE - RUNWAY 21 |
| | 6C | INNER PORTION OF THE APPROACH SURFACE - RUNWAY 17/35 |
| | 7A | RUNWAY DEPARTURE SURFACE - RUNWAY 3/21 |
| | 7B | RUNWAY DEPARTURE SURFACE - RUNWAY 17 |
| | 8A | TERMINAL AREA - NORTH |
| | 8B | TERMINAL AREA - SOUTH |
| | 9A | AIRPORT LAND USE |
| | 9B | ON-AIRPORT LAND USE FUTURE |
| | 10 | PHOTO AND CONTOUR |
| | 11A | EXHIBIT 'A' |
| | 11B | EXHIBIT 'A' - TABLES |

## A.I.P. NO: 3-16-0018-050-2021
## ACCEPTED: APRIL 2025
## AIRSPACE CASE NO: 2025-ANM-141-NRA




LOCATION MAP




VICINITY MAP

**Federal Aviation Administration**

March 11, 2025

TO:
City of Idaho Falls
Attn: Ian Turner
2140 N Skyline Drive
Idaho Falls, ID 83402
iturner@idahofalls.gov

RE: *(See attached Table 1 for referenced case(s))*
ALP 7460 No Objection Letter
**FINAL DETERMINATION**

Table 1 - Letter Referenced Case(s)

| ASN | Prior ASN | Location | Latitude (NAD83) | Longitude (NAD83) | AGL (Feet) | AMSL (Feet) |
|---|---|---|---|---|---|---|
| 2025-ANM-141-NRA | | IDAHO FALLS,ID | 43-30-49.22N | 112-04-14.95W | 0 | 0 |

Description: The following are key changes in the proposed airport layout plan: * ATCT Relocation * Additional Hangar Development Areas * Potential VOR Relocation * Potential Parking Garage * Terminal Building Expansion

The proposed change to your currently approved Airport Layout Plan (ALP) submitted, 2025-01-13 12:32:37.0 has been reviewed under the authority of Part 77 and under the requirements of the Terms and Conditions of Accepting Airport Improvement Program Grants dated September 1, 1999. This review has considered the safety and utility of aircraft operations and planned navigational aids as related to this proposal.

The proposal does not exceed any federal obstruction standard and has no effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, we have no objection to this proposal.

The proposal received two provisions of note for future reference:

"2025-ANM-141-NRA at Idaho Falls Rgnl (IDA), Idaho Falls, ID, any Equipment, Vehicles, or Structure Modification / Construction identified during ultimate airport development must be submitted and reviewed separately. Additionally, runway and taxiway construction / closures should be completely described in CSPP to ensure their impact on procedures is evaluated."

"No objection to proposed ALP. Airport Layout Plans (ALPs) are long term planning initiatives and limited in scope, therefore conceptual in nature. ALP approval does not constitute blanket approval of new structures given the absence of detailed structure information required for comprehensive review. All new structures require separate aeronautical study submissions with detailed building plans for independent study. Ensure appropriate Notice of Construction/Alteration, FAA 7460-1, is filed for review of all permanent and temporary structures."

It should be noted that this study did not consider the height of construction equipment. This information needs to be coordinated with this office via an "Airspace Study Checklist" before construction begins.

This study did not evaluate the plans for operational safety during construction. Those plans should be submitted to this office for coordination and review prior to construction.

This determination does not include any environmental analysis or environmental approval for this proposal. All local and state requirements and/or permits must be obtained to prior to construction of this proposal.

This determination does not include approval of any lease, does not release any surplus or grant agreement acquired airport property, nor does it relieve the airport owner or the proponent of compliance with Part 155, or any other law, ordinance, or regulation of federal, state, or local government body or organization. Furthermore, the design and location of any stormwater retention/detention facilities on or near the airport must comply with FAA Advisory Circular 150/5200-33 "Hazardous Wildlife Attractants on or Near Airports", and must be approved on the ALP prior to construction.

We look forward to working with you in the continued development of your airport. If you have any questions, please contact me at (406) 441-5233, jared.l.wingo@faa.gov.

Digitally signed by JARED LEE WINGO
Date: 2025.03.11 16:24:54 -06'00'

Jared L. Wingo
Specialist
**Signature Control No: 643980313-DRAFT**


The preparation of this document was supported, in part, through the Airport Improvement Program that provides financial assistance from the Federal Aviation Administration (Project Number AIP 3-16-0018-050-2021) as provided under title 49 U.S.C., section 47104. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws.


Document Path: K:\200419-CDY5_GIS\IDA_Sheet_1_Title_Sheet.mxd

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR
DATE:

REVISIONS
DESCRIPTION
NO.


ARDURRA
1144 SOUTH SILVERSTONE WAY, SUITE 320
MERIDIAN, ID 83642
PHONE: 208.323.2288
WWW.ARDURRA.COM

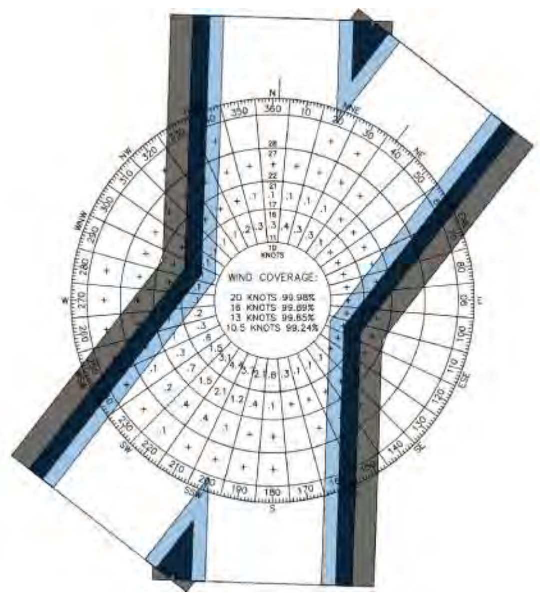

A.I.P. PROJECT # 3-16-0018-050-2021

TITLE SHEET
IDAHO FALLS REGIONAL AIRPORT

DATE: APR 10, 2025
PROJECT # 200419
SHEET: 1
1 OF 19

## ALL WEATHER WIND COVERAGE

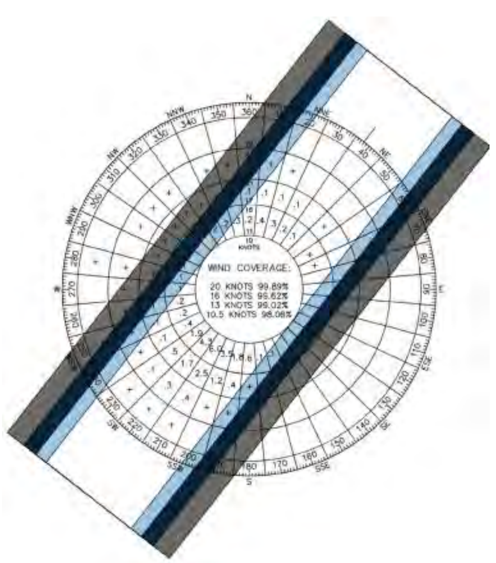
| CROSSWIND COMPONENT | PERCENT COVERAGE | | |
|---|---|---|---|
| | RUNWAY 3/21 | RUNWAY17/35 | COMBINED |
| 10.5 KNOTS | 97.94% | 93.78% | 99.24% |
| 13 KNOTS | 99.05% | 97.03% | 99.65% |
| 16 KNOTS | 99.70% | 98.91% | 99.89% |
| 20 KNOTS | 99.93% | 99.72% | 99.98% |
| OBSERVATION | 92,858 | | |
| TIME PERIOD | 2011-2020 | | |
| DATA SOURCE | ON-SITE ASOS | | |



ALL WEATHER COMBINED RWYS

## IFR WIND COVERAGE

| CROSSWIND COMPONENT | PERCENT COVERAGE |
|---|---|
| | RUNWAY 3/21 |
| 10.5 KNOTS | 98.06% |
| 13 KNOTS | 99.02% |
| 16 KNOTS | 99.62% |
| 20 KNOTS | 99.89% |
| OBSERVATION | 13,962 |
| TIME PERIOD | 2011-2020 |
| DATA SOURCE | ON-SITE ASOS |



RWY 3/21 IFR

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## ABBREVIATIONS

| | |
|---|---|
| AP | AIRPORT |
| ARP | AIRPORT REFERENCE POINT |
| BRL | BUILDING RESTRICTION LINE |
| CL | CENTER LINE |
| ELEV | ELEVATION |
| (E) | EXISTING |
| (F) | FUTURE (MID-PHASE) |
| FAA | FEDERAL AVIATION ADMINISTRATION |
| HP | HIGH POINT |
| LP | LOW POINT |
| NPI | NONPRECISION INSTRUMENT |
| ROFA | RUNWAY OBJECT FREE AREA |
| ROFZ | RUNWAY OBSTACLE FREE ZONE |
| RPZ | RUNWAY PROTECTION ZONE |
| RSA | RUNWAY SAFETY AREA |
| RVZ | RUNWAY VISIBILITY ZONE |
| RWY | RUNWAY |
| STA | STATION |
| TESM | TAXIWAY EDGE SAFETY MARGIN |
| TOFA | TAXIWAY OBJECT FREE AREA |
| TSA | TAXIWAY SAFETY AREA |
| TDZ | TOUCH DOWN ZONE |
| TYP | TYPICAL |
| (U) | ULTIMATE (LONG-TERM) |
| VIS | VISUAL |

## DECLARED DISTANCE

| RUNWAY 3/21 (PRIMARY) | EXISTING | FUTURE |
|---|---|---|
| TAKE-OFF RUN AVAILABLE (TORA) | 9,002' | 9,002' |
| TAKE-OFF DISTANCE AVAILABLE (TODA) | 9,002' | 9,002' |
| ACCELERATED STOP DISTANCE (ASDA) | 9,002' | 9,002' |
| LANDING DISTANCE AVAILABLE (LDA) | 9,002' | 9,002' |

## DECLARED DISTANCE

| RUNWAY 17/35 | EXISTING | FUTURE |
|---|---|---|
| TAKE-OFF RUN AVAILABLE (TORA) | 3,964' | 3,964' |
| TAKE-OFF DISTANCE AVAILABLE (TODA) | 3,964' | 3,964' |
| ACCELERATED STOP DISTANCE (ASDA) | 3,964' | 3,964' |
| LANDING DISTANCE AVAILABLE (LDA) | 3,964' | 3,964' |

## AIRPORT NON-STANDARDS CONDITION TABLE

| | ITEM OR SURFACE NOT MEETING STANDARD | ACTUAL | STANDARD | FAA APPROVED DATE |
|---|---|---|---|---|
| 1 | TAXIWAY A AND CONNECTOR DOESN'T MEET AIRPORT DESIGN AC TDG-5 | 60' | 75' | NONE |

## AIRPORT DATA TABLE

| | | EXISTING | FUTURE |
|---|---|---|---|
| AIRPORT REFERENCE CODE (ARC) | | C-III | C-III |
| MEAN MAX TEMPERATURE HOTTEST MONTH | | 86° F (JULY) | 86° F (JULY) |
| AIRPORT ELEVATION | | 4743.8' | 4743.8' |
| AIRPORT NAVIGATIONAL AIDS | | BEACON, PAPI, REILS, MALSR, LOCALIZER, GLIDE SLOPE, DME, VOR | BEACON, PAPI, REILS, MALSR, LOCALIZER, GLIDE SLOPE, DME, VOR |
| AIRPORT REFERENCE POINT | LAT: | 43° 30' 49.22" N | 43° 30' 49.22" N |
| | LONG: | 112° 04' 14.95" W | 112° 04' 14.95" W |
| MISCELLANEOUS FACILITIES | | ASOS , LIGHTED WIND CONES | ASOS , LIGHTED WIND CONES |
| CRITICAL AIRCRAFT | | A320/321 | A320/321 |
| AIRPORT MAGNETIC VARIATION | | 11°38' E 2021 | 11°38' E 2021 |
| NPIAS SERVICE LEVEL | | COMMERICAL SERVICE - PRIMARY NON-HUB | COMMERICAL SERVICE - PRIMARY NON-HUB |
| IDAHO STATE SERVICE ROLE | | NPIAS - PRIMARY | NPIAS - PRIMARY |

## RUNWAY DATA TABLE

| RUNWAY CODIFICATION | | RUNWAY 3/21 | | | | RUNWAY 17/35 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | EXISTING | FUTURE | EXISTING | FUTURE | EXISTING | FUTURE | EXISTING | FUTURE |
| RUNWAY IDENTIFICATION | | 3 | 3 | 21 | 21 | 17 | 17 | 35 | 35 |
| RUNWAY DESIGN CODE (RDC) | | C-III-2400 | | | | A-I (SMALL AIRCRAFT)-5000 | | | |
| APPROACH REFERENCE CODE (APRC) | | D/IV/2400 / D/V/2400 | | | | B/I(S)/4000 | | | |
| DEPARTURE REFERENCE CODE (DPRC) | | D/IV AND D/V | | | | B/I(S) | | | |
| CRITICAL AIRCRAFT | | A320/321 | | | | C-182 | | | |
| **PAVEMENT** | | | | | | | | | |
| PAVEMENT TYPE | | ASPHALT | | | | ASPHALT | | | |
| PAVEMENT STRENGTH BY WHEEL LOAD (LBS * 1,000) | | 140 (SW) / 175 (DW) / 270 (DT) | | | | 43 (SW) / 58 (DW) | | | |
| PAVEMENT CLASSIFICATION (PCR) | | 70/F/B/X/T | | | | 160/F/D/X/T | | | |
| EFFECTIVE RUNWAY GRADIENT (%) | | 0.12% | | | | 0.013% | | | |
| MAXIMUM GRADIENT WITHIN RUNWAY | | 1.5% - 3.0% | | | | 1.5% - 5.0% | | | |
| ALL WEATHER WIND COVERAGE (10.5/13/16) IN KTS | | 97.94% / 99.05% / 99.70% / 99.93% | | | | 93.78% / 97.03% / 98.91% / 99.72% | | | |
| RUNWAY DIMENSIONS | | 9,002' X 150' | | | | 3,964' X 75' | 3,964' X 60' | 3,964' X 75' | 3,964' X 60' |
| **RUNWAY DATA** | | | | | | | | | |
| RUNWAY END COORDINATES | LAT: | N 43° 30' 09.06" | | N 43° 31' 19.08" | | N 43° 31' 20.48" | | N 43° 30' 41.36" | |
| | LONG: | W 112°05' 06.77" | | W 112° 03' 51.56" | | W 112° 03' 41.77" | | W 112° 03' 43.57" | |
| RUNWAY END ELEVATION | | 4742.0' | | 4731.3' | | 4731.1' | | 4731.2' | |
| RUNWAY TOUCHDOWN ZONE ELEVATION | | 3743.8' | | 4734.6' | | 4735.9' | | | |
| RUNWAY LIGHTING TYPE | | HIRL | | | | MIRL | | | |
| RUNWAY MARKING TYPE | | PRECISION | | | | VISUAL | | | |
| DISPLACED THRESHOLD | | NONE | | | | NONE | | | |
| **RUNWAY AREAS / ZONES** | | | | | | | | | |
| RUNWAY SAFETY AREA (RSA) WIDTH (ACTUAL / STANDARD) | | 500' | | | | 120' | | | |
| RUNWAY SAFETY AREA (RSA) LENGTH OFF ENDS (ACTUAL / STANDARD) | | 1,000' | | | | 240' | | | |
| RUNWAY OBJECT FREE AREA (ROFA) WIDTH (ACTUAL / STANDARD) | | 800' | | | | 250' | | | |
| RUNWAY OBJECT FREE AREA (ROFA) LENGTH BEYOND RUNWAY END | | 1,000' | | | | 240' | | | |
| RUNWAY OBSTACLE FREE ZONE (ROFZ) WIDTH (ACTUAL / STANDARD) | | 400' | | | | 250' | | | |
| RUNWAY OBSTACLE FREE ZONE (ROFZ) LENGTH BEYOND RUNWAY END | | 200' | | | | 200' | | | |
| RUNWAY PROTECTION ZONE DIMENSIONS (RPZ) (LENGTH/IN/OUT) | | 1,700' / 1,000' / 1,510' | | 2,500' / 1,000' / 1,750' | | 1,000' / 250' / 450' | | | |
| **CRITICAL AIRSPACE SURFACES** | | | | | | | | | |
| APPROACH TYPE | | NON-PRECISION | | PRECISION | | VISUAL | | | |
| CFR PART 77 APPROACH CATEGORY | | 34:1 | | 50:1 FOR 10,000' THEN 40:1 | | 20:1 | | | |
| CFR PART 77 APPROACH DIMENSION (IN/OUT/LENGTH) | | 1,000' / 4,000' /10,000' | | 1,000' / 16,000' / 10,000' + 40,000' | | 250' / 1,250' / 5,000' | | | |
| VISIBILITY MINIMUMS | | 3/4 STATUTE MILE | 1/2 STATUTE MILE (ADDITIONAL MALSR) | 1/2 STATUTE MILE | | VISUAL | | | |
| APPROACH SURFACE (BEYOND RWY/IN/OUT/LENGTH/SLOPE) | | SURFACE # 5 (200' / 400' / 3,500' / 10,000' / 20:1) | | SURFACE # 5 (200' / 400' / 3,500' / 10,000' / 34:1) | | SURFACE #2 (0' / 250' / 700' / 2,250 + 2,750 / 20:1) | | | |
| TYPE OF AERONAUTICAL SURVEY | | VERTICALLY GUIDED | | | | NON-VERTICALLY GUIDED | | | |
| RUNWAY DEPARTURE SURFACE SURFACE #7 (APPLIED?) | | YES | | | | NO | | YES | |
| APPROACH SURFACE #6 (APPLIED?) (IN/OUT/LENGTH/SLOPE) | | YES (350' / 1,520' / 10,200' / 30:1) | | | | NO | | | |
| VISUAL AND INSTRUMENT NAVAIDS | | BEACON, PAPI, REILS, LOC | | BEACON, PAPI, MALSR, LOC, GS, ILS CAT I | | BEACON, PAPI | | | |
| VERTICAL DATUM | | NAVD 88 (US FEET) | | | | | | | |
| HORIZONTAL DATUM | | NAD83(2011)(EPOCH:2010:0000) | | | | | | | |

## TAXIWAY/TAXILANE DATA TABLE - RUNWAY 17/35

| TAXIWAY IDENTIFICATION | B | B1, B3 | C |
|---|---|---|---|
| TAXIWAY DESIGN GROUP | 3 | 3 | 3 |
| AIRPLANE DESIGN GROUP | II | II | II |
| TAXIWAY AND TAXILANE WIDTH | 50' | 50' | 60' |
| TAXIWAY EDGE SAFETY MARGIN (TESM) | 10' | 10' | 10' |
| TAXIWAY AND TAXILANE SAFETY AREA (TSA) WIDTH | 79' | 79' | 79' |
| TAXIWAY OBJECT FREE AREA (TOFA) WIDTH | 124' | 124' | 124' |
| TAXILANE OBJECT FREE AREA (TLOFA) WIDTH | 110' | 110' | 110' |
| TAXIWAY CENTERLINE TO RUNWAY CENTERLINE SEPARATION | 240' | N/A | N/A |
| TAXIWAY LIGHTING | Reflectors | Reflectors | Reflectors |

## TAXIWAY/TAXILANE DATA TABLE - RUNWAY 3/21

| TAXIWAY IDENTIFICATION | A | A1-A6 | B2 | C | D, E, F | G* | K** |
|---|---|---|---|---|---|---|---|
| TAXIWAY DESIGN GROUP | 5 | 5 | 3 | 5 | 3 | 3 | 5 |
| AIRPLANE DESIGN GROUP | III | III | II | III | II | II | IV |
| TAXIWAY AND TAXILANE WIDTH | 60' | 60' | 60' | 60' | 50' | 50' | 75' |
| TAXIWAY EDGE SAFETY MARGIN (TESM) | 14' | 14' | 5' | 14' | 5' | 5' | 14' |
| TAXIWAY AND TAXILANE SAFETY AREA (TSA) WIDTH | 118' | 118' | 79' | 118' | 79' | 79' | 171' |
| TAXIWAY OBJECT FREE AREA (TOFA) WIDTH | 171' | 171' | 124' | 171' | 124' | 124' | 243' |
| TAXILANE OBJECT FREE AREA (TLOFA) WIDTH | 158' | 158' | 110' | 158' | 110' | 110' | 224' |
| TAXIWAY CENTERLINE TO RUNWAY CENTERLINE SEPARATION | 400' | N/A | N/A | N/A | N/A | N/A | 400' |
| TAXIWAY LIGHTING | MITL | MITL | MITL | MITL | MITL | MITL | MITL |

*Future **Existing G, Future K

BORDER SIZE 11"X17"
DESIGNED DRAFT
DRAWN BRC
CHECKED BWC
APPROVED WR

| NO. | REVISIONS DESCRIPTION | DATE: |
|---|---|---|
| | | |


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A.I.P. PROJECT # 3-16-0018-050-2021

AIRPORT DATA SHEET
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX XX, XXXX
PROJECT # 200419
SHEET: 2

CITY OF IDAHO FALLS DATE
MAYOR

## A.L.P. APPROVALS

FEDERAL AVIATION ADMINISTRATION

CONDITIONALLY APPROVED

PER LETTER DATE:______________

NAME:______________

SIGNATURE:______________

TITLE:______________

DATE:______________

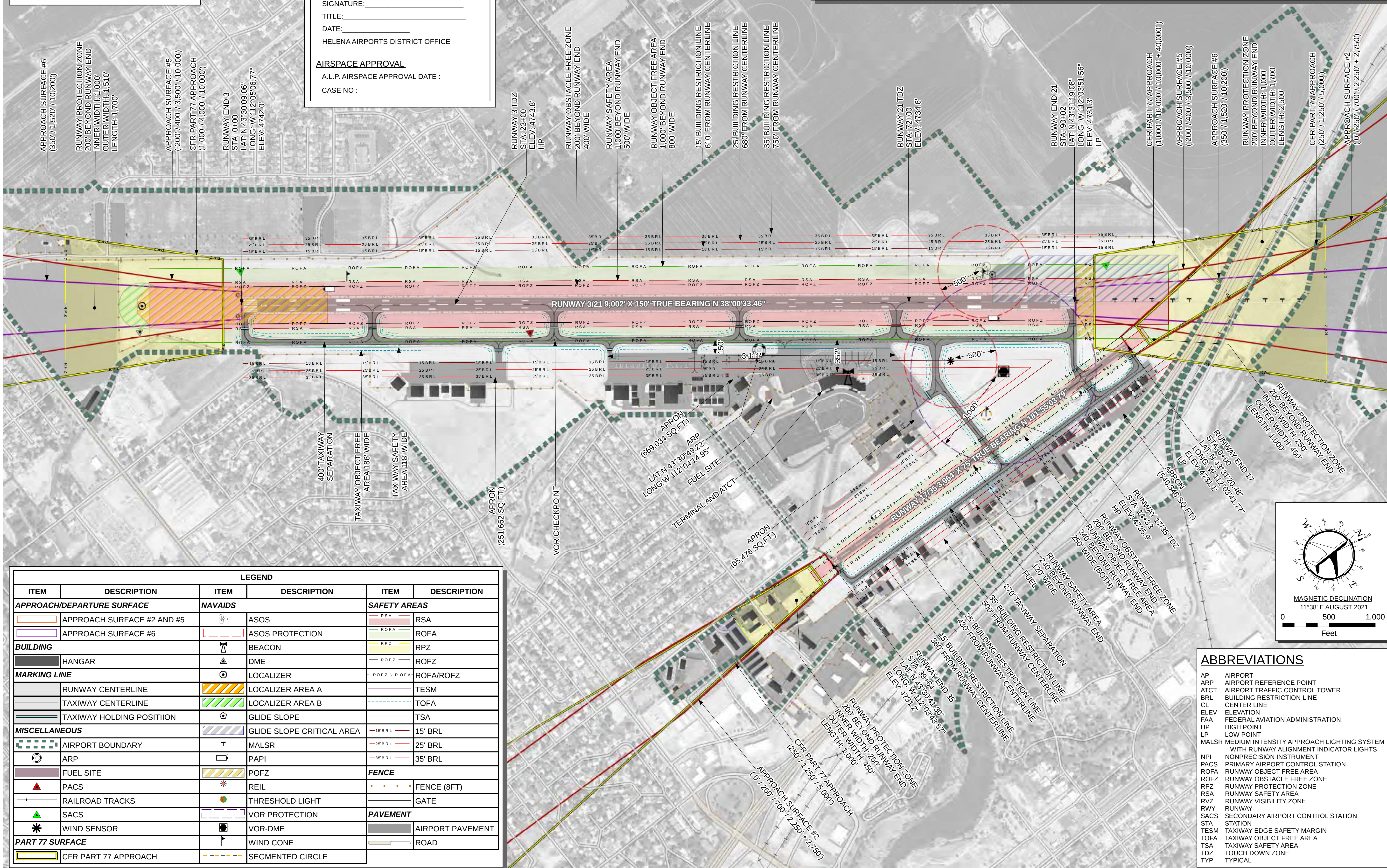
HELENA AIRPORTS DISTRICT OFFICE

AIRSPACE APPROVAL

A.L.P. AIRSPACE APPROVAL DATE : ______________

CASE NO : ______________

The preparation of this document was supported, in part, through the Airport Improvement Program that provides financial assistance from the Federal Aviation Administration (Project Number AIP 3-16-0018-050-2021) as provided under title 49 U.S.C., section 47104. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws.




| LEGEND | | | | | |
|---|---|---|---|---|---|
| ITEM | DESCRIPTION | ITEM | DESCRIPTION | ITEM | DESCRIPTION |
| ***APPROACH/DEPARTURE SURFACE*** | | ***NAVAIDS*** | | ***SAFETY AREAS*** | |
| | APPROACH SURFACE #2 AND #5 | | ASOS | RSA | RSA |
| | APPROACH SURFACE #6 | | ASOS PROTECTION | ROFA | ROFA |
| ***BUILDING*** | | | BEACON | RPZ | RPZ |
| | HANGAR | | DME | ROFZ | ROFZ |
| ***MARKING LINE*** | | | LOCALIZER | ROFZ \ ROFA | ROFA/ROFZ |
| | RUNWAY CENTERLINE | | LOCALIZER AREA A | | TESM |
| | TAXIWAY CENTERLINE | | LOCALIZER AREA B | | TOFA |
| | TAXIWAY HOLDING POSITIION | | GLIDE SLOPE | | TSA |
| ***MISCELLANEOUS*** | | | GLIDE SLOPE CRITICAL AREA | 15'BRL | 15' BRL |
| | AIRPORT BOUNDARY | | MALSR | 25'BRL | 25' BRL |
| | ARP | | PAPI | 35'BRL | 35' BRL |
| | FUEL SITE | | POFZ | ***FENCE*** | |
| | PACS | | REIL | | FENCE (8FT) |
| | RAILROAD TRACKS | | THRESHOLD LIGHT | | GATE |
| | SACS | | VOR PROTECTION | ***PAVEMENT*** | |
| | WIND SENSOR | | VOR-DME | | AIRPORT PAVEMENT |
| ***PART 77 SURFACE*** | | | WIND CONE | | ROAD |
| | CFR PART 77 APPROACH | | SEGMENTED CIRCLE | | |

## ABBREVIATIONS

| | |
|---|---|
| AP | AIRPORT |
| ARP | AIRPORT REFERENCE POINT |
| ATCT | AIRPORT TRAFFIC CONTROL TOWER |
| BRL | BUILDING RESTRICTION LINE |
| CL | CENTER LINE |
| ELEV | ELEVATION |
| FAA | FEDERAL AVIATION ADMINISTRATION |
| HP | HIGH POINT |
| LP | LOW POINT |
| MALSR | MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS |
| NPI | NONPRECISION INSTRUMENT |
| PACS | PRIMARY AIRPORT CONTROL STATION |
| ROFA | RUNWAY OBJECT FREE AREA |
| ROFZ | RUNWAY OBSTACLE FREE ZONE |
| RPZ | RUNWAY PROTECTION ZONE |
| RSA | RUNWAY SAFETY AREA |
| RVZ | RUNWAY VISIBILITY ZONE |
| RWY | RUNWAY |
| SACS | SECONDARY AIRPORT CONTROL STATION |
| STA | STATION |
| TESM | TAXIWAY EDGE SAFETY MARGIN |
| TOFA | TAXIWAY OBJECT FREE AREA |
| TSA | TAXIWAY SAFETY AREA |
| TDZ | TOUCH DOWN ZONE |
| TYP | TYPICAL |

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BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

| REVISIONS | | |
|---|---|---|
| NO. | DESCRIPTION | DATE: |

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MERIDIAN, ID 83642
PHONE: 208.323.2288 WWW.ARDURRA.COM

A.I.P. PROJECT # 3-16-0018-050-2021

# AIRPORT LAYOUT PLAN EXISTING
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 3A

## LEGEND

| ITEM EXISTING | ITEM FUTURE | DESCRIPTION |
|---|---|---|
| **APPROACH/DEPARTURE SURFACE** | | |
| | | APPROACH SURFACE #2 AND #5 |
| | | APPROACH SURFACE #6 |
| | | CFR PART 77 APPROACH |
| **BUILDING** | | |
| | | HANGAR |
| X | | ARFF |
| X | | ATCT |
| X | | CARGO TRUCK DOCK |
| X | | TRANSIT BUILDING |
| X | | STRUCTURES |
| X | | PARKING GARAGE |
| **FENCE** | | |
| | | FENCE (8FT) |
| | | GATE |

| ITEM EXISTING | ITEM FUTURE | DESCRIPTION |
|---|---|---|
| **NAVAIDS** | | |
| | | ASOS |
| | | ASOS PROTECTION |
| | | BEACON |
| | | DME |
| | | LOCALIZER |
| | | LOCALIZER AREA A |
| | | LOCALIZER AREA B |
| | | GLIDE SLOPE |
| | | GLIDE SLOPE CRITICAL AREA |
| | | MALSR |
| | | PAPI |
| | | POFZ |
| | | REIL |
| | | THRESHOLD LIGHT |

| ITEM EXISTING | ITEM FUTURE | DESCRIPTION |
|---|---|---|
| **NAVAIDS (CONTINUED)** | | |
| | | WIND CONE |
| | | SEGMENTED CIRCLE |
| **SAFETY AREAS** | | |
| RSA | | RSA |
| ROFA | | ROFA |
| RPZ | | RPZ |
| ROFZ | | ROFZ |
| ROFZ \ ROFA | | ROFA/ROFZ |
| | | TESM |
| | | TOFA |
| | | TSA |
| 15' BRL | | 15' BRL |
| 25' BRL | | 25' BRL |
| 35' BRL | | 35' BRL |

| ITEM EXISTING | ITEM FUTURE | DESCRIPTION |
|---|---|---|
| **PAVEMENT** | | |
| | X | AIRPORT PAVEMENT |
| | | ROAD |
| X | | ROAD TO BE RELOCATED |
| | | APRON |
| X | | EMP PARKING |
| X | | NON-AERONAUTICAL USE |
| X | | SIDEWALK |
| | | TAXIWAY |
| **MARKING LINE** | | |
| | | RUNWAY CENTERLINE |
| | | TAXIWAY CENTERLINE |
| | | TAXIWAY HOLDING POSITIION |
| X | | PARKING LOT LINE |

| ITEM EXISTING | ITEM FUTURE | DESCRIPTION |
|---|---|---|
| **MISCELLANEOUS** | | |
| | | AIRPORT BOUNDARY |
| | | ARP |
| | | FUEL SITE |
| | | PACS |
| | | RAILROAD TRACKS |
| | | SACS |
| | | WIND SENSOR |
| X | | NO-TAXI ISLAND |
| X | | HISTORIC DISTRICT |
| X | | GROUND SUPPORT |
| X | | FUTURE AVIATION |
| X | | RETENTION BASIN |
| X | | GRASS |

## ABBREVIATIONS

| | |
|---|---|
| AP | AIRPORT |
| ARP | AIRPORT REFERENCE POINT |
| ATCT | AIRPORT TRAFFIC CONTROL TOWER |
| BRL | BUILDING RESTRICTION LINE |
| CL | CENTER LINE |
| ELEV | ELEVATION |
| (F) | FUTURE (MID-PHASE) |
| FAA | FEDERAL AVIATION ADMINISTRATION |
| HP | HIGH POINT |
| LP | LOW POINT |
| MALSR | MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS |
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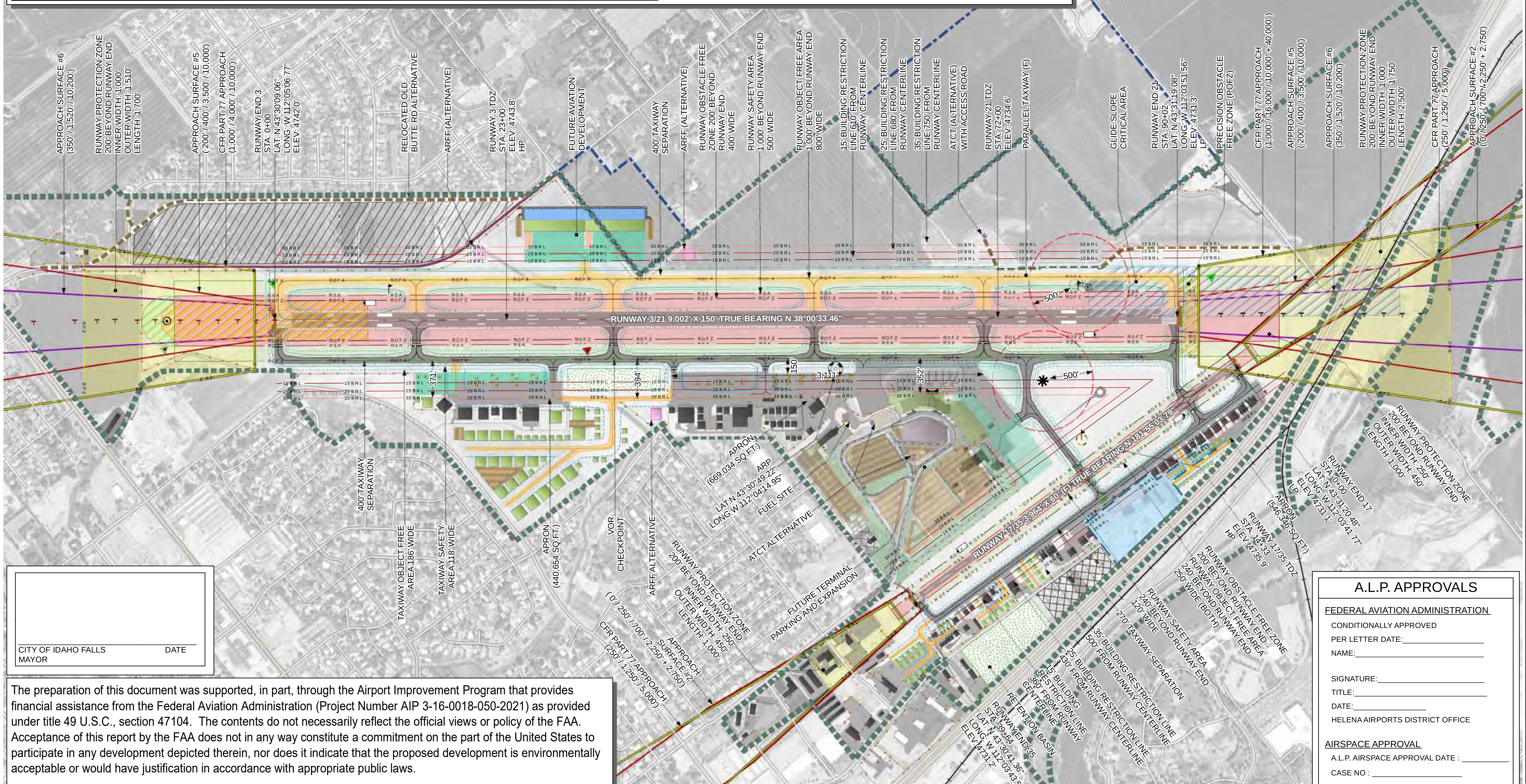
| RWY | RUNWAY |
| SACS | SECONDARY AIRPORT CONTROL STATION |
| STA | STATION |
| TESM | TAXIWAY EDGE SAFETY MARGIN |
| TOFA | TAXIWAY OBJECT FREE AREA |
| TSA | TAXIWAY SAFETY AREA |
| TDZ | TOUCH DOWN ZONE |
| TYP | TYPICAL |

MAGNETIC DECLINATION
11°38' E AUGUST 2021
0 500 1,000
Feet




CITY OF IDAHO FALLS MAYOR DATE

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## A.L.P. APPROVALS

FEDERAL AVIATION ADMINISTRATION

CONDITIONALLY APPROVED

PER LETTER DATE:__________________

NAME:__________________

SIGNATURE:__________________

TITLE:__________________

DATE:__________________

HELENA AIRPORTS DISTRICT OFFICE

AIRSPACE APPROVAL

A.L.P. AIRSPACE APPROVAL DATE : __________

CASE NO : __________________

BORDER SIZE 11"X17"
DESIGNED: DESIGN
DRAWN: BRC
CHECKED: BWC
APPROVED: WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|

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MERIDIAN, ID 83642
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A.I.P. PROJECT # 3-16-0018-050-2021

# AIRPORT LAYOUT PLAN FUTURE
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 3B
4 OF 19

14 CFR PART 77 VERTICAL BUFFERS

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

HIGHWAY - 17 FEET

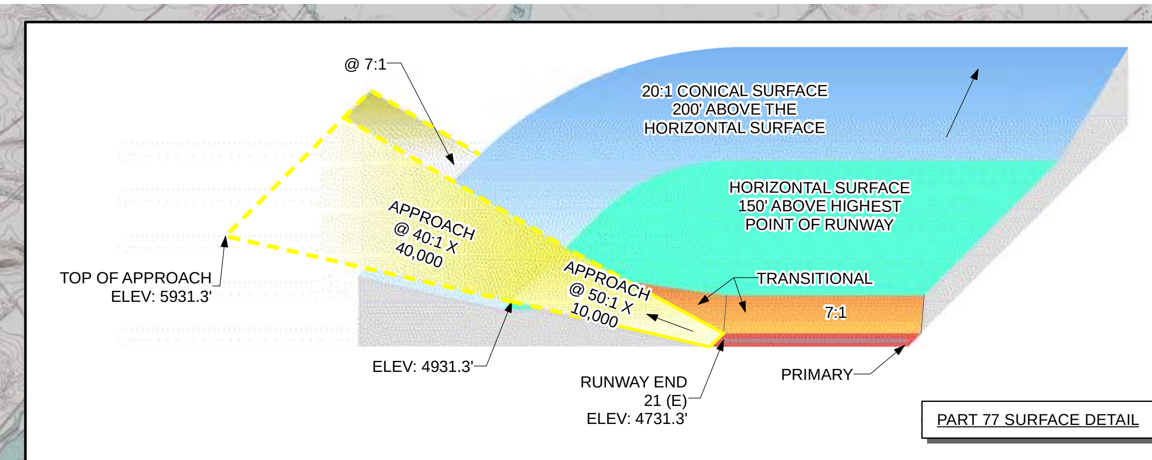
PUBLIC ROADWAY - 15 FEET

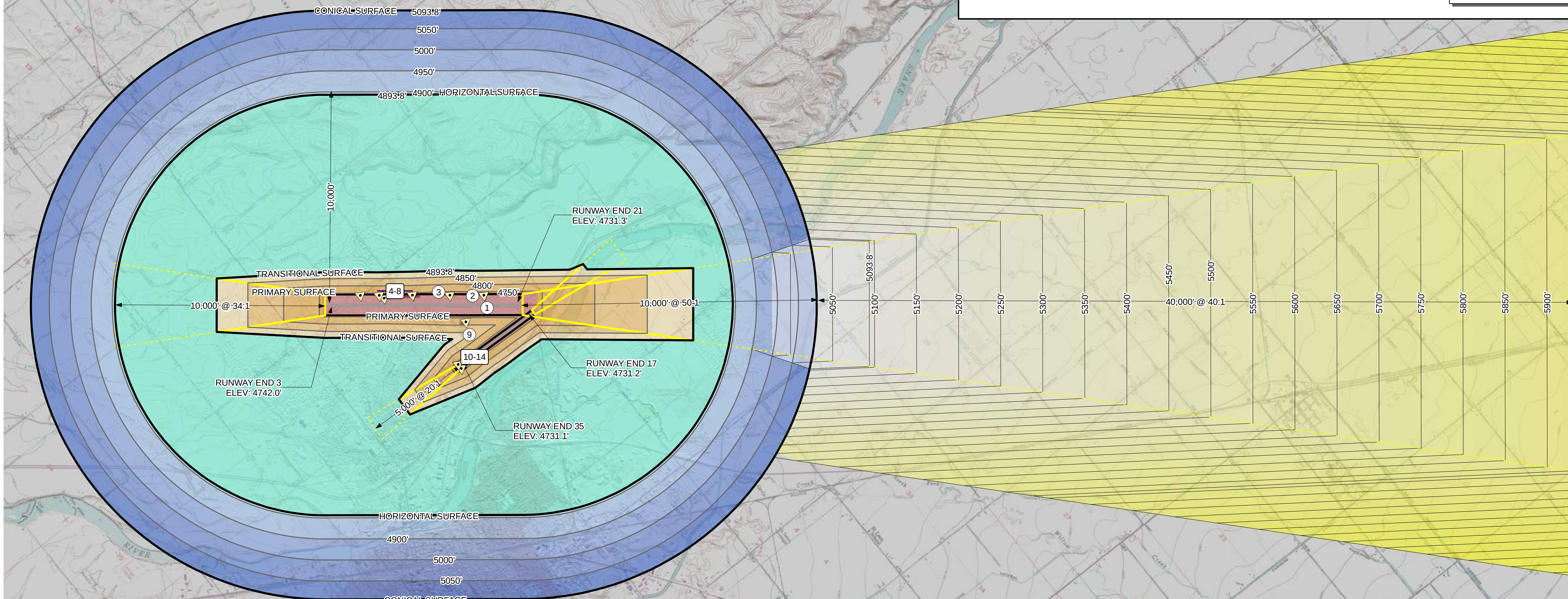
RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

MAGNETIC DECLINATION
11°38' E AUGUST 2021

0 2,500 5,000
Feet




OBSTRUCTION TABLE

| REF | OBJECT DESCRIPTION | SURFACE AFFECTED | MAX OBJECT ELEVATION (FT.) | AREA PENETRATION IN (SQ.FT.) | MAX PENETRATION HEIGHT (FT.) | DISPOSITION |
|---|---|---|---|---|---|---|
| 1 | TERRAIN | PRIMARY | 4,746.8 | 25,700 | 12.2 | TO BE REMOVED |
| 2 | ACCESS ROAD | TRANSITIONAL | 4,746.9 | 7,000 | 9.9 | TO BE REMOVED |
| 3 | ACCESS ROAD | TRANSITIONAL | 4,736.8 | 1,500 | 4.0 | TO BE REMOVED |
| 4 | TERRAIN | PRIMARY | 4,758.5 | 131,025 | 18.2 | TO BE REMOVED |
| 5 | TERRAIN | TRANSITIONAL | 4,759.3 | 37,400 | 18.0 | TO BE REMOVED |
| 6 | TERRAIN | PRIMARY | 4,755.2 | 76,675 | 12.0 | TO BE REMOVED |
| 7 | TERRAIN | TRANSITIONAL | 4,750.0 | 1,650 | 5.8 | TO BE REMOVED |
| 8 | ACCESS ROAD | TRANSITIONAL | 4,745.9 | 375 | 3.1 | TO BE REMOVED |
| 9 | ATCT TOWER | TRANSITIONAL | 4,816.3 | 980 | 46.4 | NO ACTION |
| 10 | ACCESS ROAD | TRANSITIONAL | 4,744.5 | 1,625 | 7.8 | TO BE REMOVED |
| 11 | ACCESS ROAD | PRIMARY | 4,743.9 | 5,625 | 7.9 | TO BE REMOVED |
| 12 | ACCESS ROAD | TRANSITIONAL | 4,743.0 | 1,750 | 6.9 | TO BE REMOVED |
| 13 | ACCESS ROAD | APPROACH | 4,743.2 | 1,975 | 6.4 | TO BE REMOVED |
| 14 | ACCESS ROAD | APPROACH | 4,743.1 | 1,275 | 5.7 | TO BE REMOVED |

ELEVATION DATA BASED ON OLC SNAKE RIVER LIDAR SURVEY ACQUIRED 4/22/2015 - 6/2/2015, 10 METER NATIONAL ELEVATION DATASET AND UAV SURVEY COMPLETED OCT 2020

IDAHO FALLS AIRSPACE IS DEFINED BY 14 CFR PART 77 OBSTRUCTION SURFACE AND PROTECTED BY THE FOLLOWING ZONING REGULATIONS:

IDAHO FALLS CITY CODE TITLE 11 AND THE IDAHO FALLS COMPREHENSIVE PLAN.

PART 77 SURFACE ELEVATION (MSL)

| PRIMARY | TRANSITIONAL | | | | HORIZONTAL | CONICAL | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4730.8' - 4742' | 4742.1' - 4750' | 4750.1' - 4800' | 4800.1' - 4850' | 4850.1' - 4893.7' | 4893.8' | 4893.9' - 4900' | 4900.1' - 4950' | 4950.1' - 5000' | 5000.1' - 5050' | 5050.1 - 5093.8' |

MAXIMUM PART 77 PENETRATION — RUNWAY — PART 77 OBSTRUCTIONS

Document Path: K:\200419-CDY15_GIS\IDA_Sheet_4_AIRSPACE.mxd

| BORDER SIZE | 11"X17" |
|---|---|
| DESIGNED | DESIGN |
| DRAWN | BRC |
| CHECKED | BWC |
| APPROVED | WR |

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|
| | | |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MERIDIAN, ID 83642
PHONE: 208.323.2288 WWW.ARDURRA.COM


A.I.P. PROJECT # 3-16-0018-050-2021

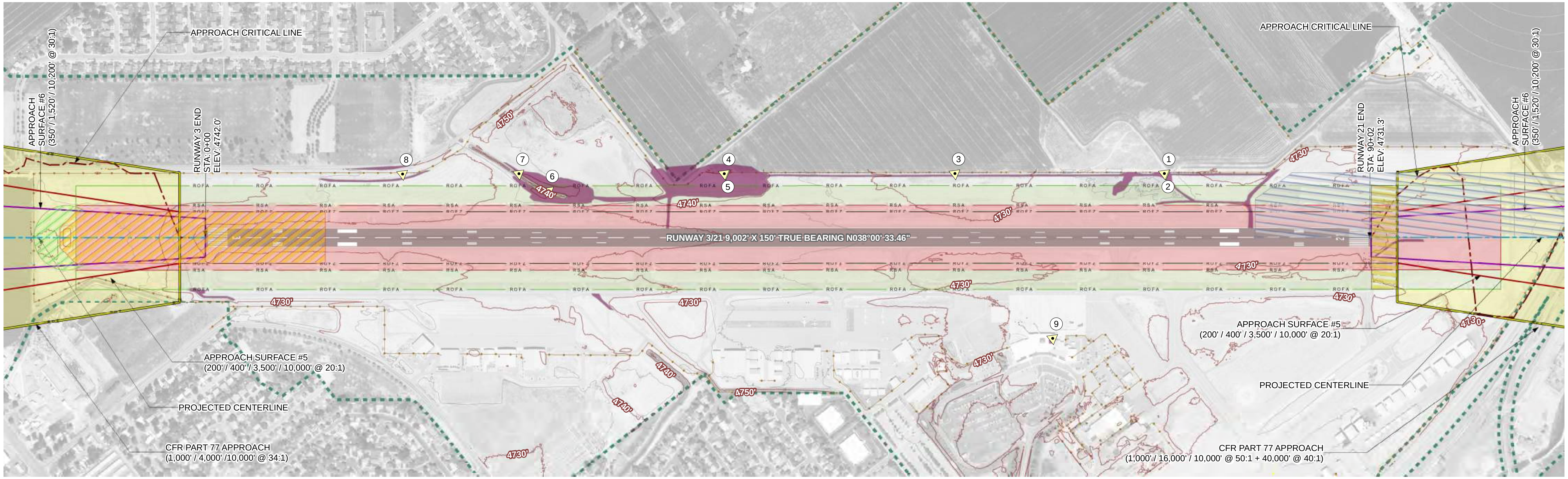
# AIRPORT AIRSPACE

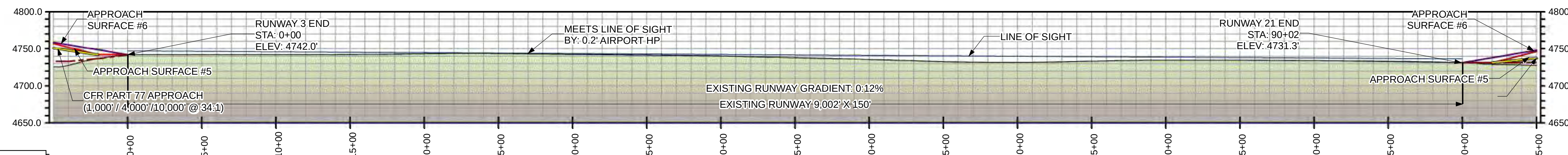
IDAHO FALLS REGIONAL AIRPORT

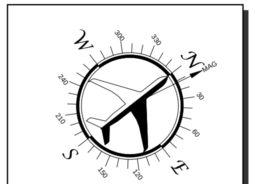
DATE: XXX X, XXXX

PROJECT # 200419

SHEET: 4



MAGNETIC DECLINATION
11°38' E AUGUST 2021

0 400 800
Feet

**LEGEND**

| ITEM | DESCRIPTION | ITEM | DESCRIPTION |
|---|---|---|---|
| ***APPROACH/DEPARTURE SURFACE*** | | ***MISCELLANEOUS*** | |
| | APPROACH CRITICAL LINE | | AIRPORT BOUNDARY |
| | PROJECTED RUNWAY CENTERLINE | | GLIDE SLOPE CRITICAL AREA |
| | APPROACH SURFACE #5 | | LOCALIZER AREA A |
| | OBSTRUCTIONS | | LOCALIZER AREA B |
| | OBSTRUCTIONS HIGH POINT | | RAILROAD TRACKS |
| | APPROACH SURFACE #6 | | POFZ |
| ***PAVEMENT*** | | ***FENCE*** | |
| | AIRPORT PAVEMENT | | FENCE (8FT) |
| | ROAD | ***SAFETY AREAS*** | |
| ***PART 77 SURFACE*** | | RSA | RSA |
| | CFR PART 77 APPROACH | ROFA | ROFA |
| ***5FT CONTOURS*** | | RPZ | RPZ |
| | MAJOR CONTOUR | ROFZ | ROFZ |
| | MINOR CONTOUR | | |

Document Path: K:\200419-CDY15_GIS\IDA_Sheet_5A_3_21_Profile.mxd

**OBSTRUCTION TABLE**

| REF | OBJECT DESCRIPTION | SURFACE AFFECTED | MAX OBJECT ELEVATION (FT.) | AREA PENETRATION IN (SQ.FT.) | MAX PENETRATION HEIGHT (FT.) | DISPOSITION |
|---|---|---|---|---|---|---|
| 1 | TERRAIN | PRIMARY | 4,746.8 | 25,700 | 12.2 | TO BE REMOVED |
| 2 | ACCESS ROAD | TRANSITIONAL | 4,746.9 | 7,000 | 9.9 | TO BE REMOVED |
| 3 | ACCESS ROAD | TRANSITIONAL | 4,736.8 | 1,500 | 4.0 | TO BE REMOVED |
| 4 | TERRAIN | PRIMARY | 4,758.5 | 131,025 | 18.2 | TO BE REMOVED |
| 5 | TERRAIN | TRANSITIONAL | 4,759.3 | 37,400 | 18.0 | TO BE REMOVED |
| 6 | TERRAIN | PRIMARY | 4,755.2 | 76,675 | 12.0 | TO BE REMOVED |
| 7 | TERRAIN | TRANSITIONAL | 4,750.0 | 1,650 | 5.8 | TO BE REMOVED |
| 8 | ACCESS ROAD | TRANSITIONAL | 4,745.9 | 375 | 3.1 | TO BE REMOVED |
| 9 | ATCT TOWER | TRANSITIONAL | 4,816.3 | 980 | 46.4 | NO ACTION |

**14 CFR PART 77 VERTICAL BUFFERS**

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

HIGHWAY - 17 FEET

PUBLIC ROADWAY - 15 FEET

RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

ELEVATION DATA BASED ON OLC SNAKE RIVER LIDAR SURVEY ACQUIRED 4/22/2015 - 6/2/2015, 10 METER NATIONAL ELEVATION DATASET AND UAV SURVEY COMPLETED OCT 2020

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|
| | | |

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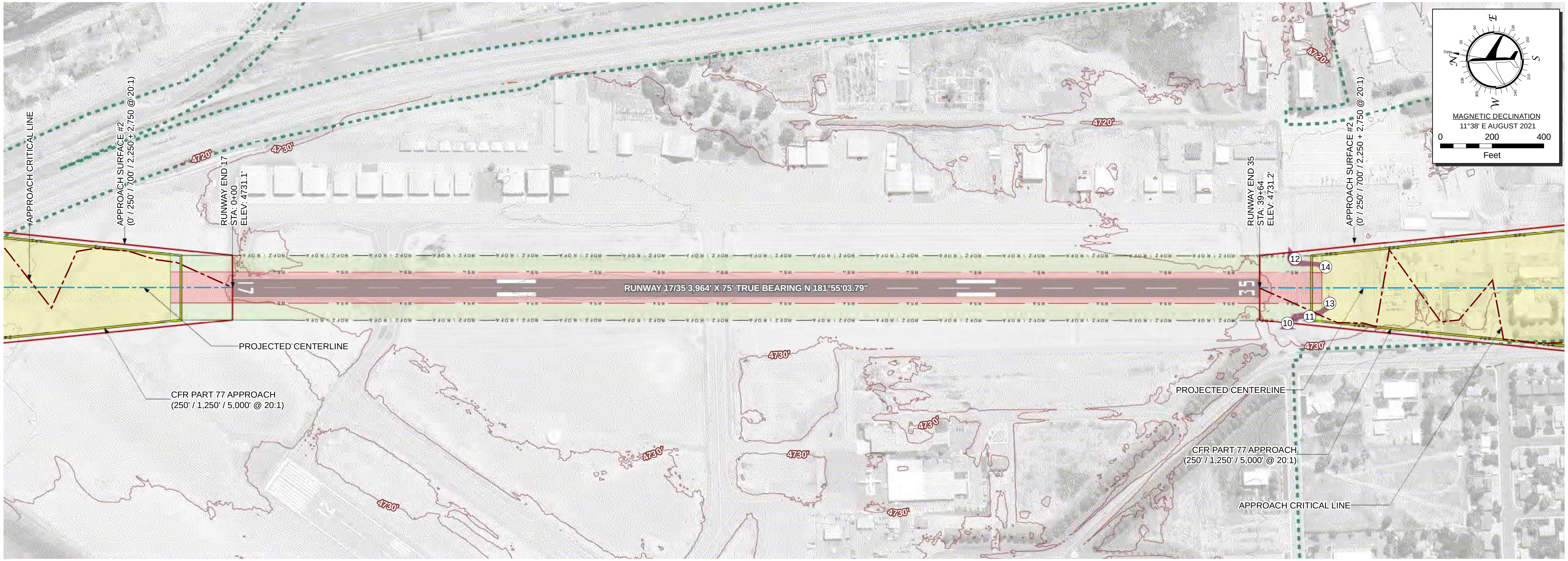
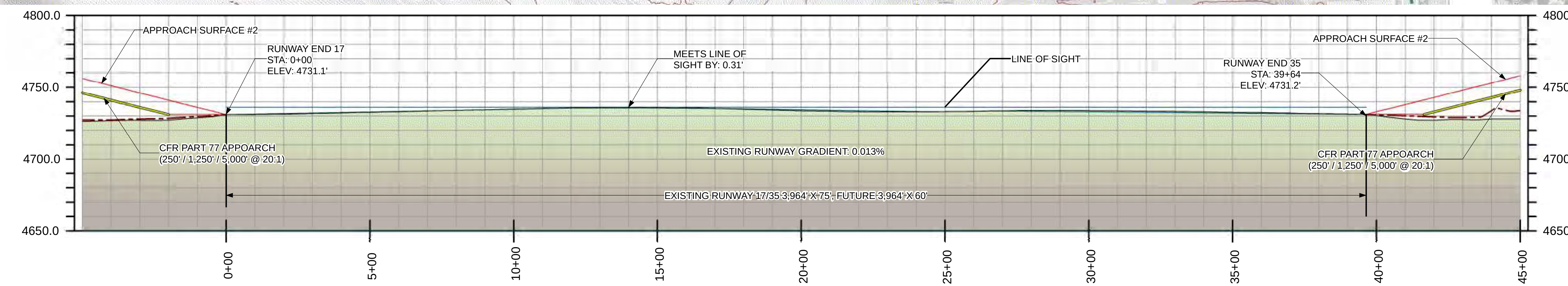
MERIDIAN, ID 83642
PHONE: 208.323.2288 WWW.ARDURRA.COM

A.I.P. PROJECT # 3-16-0018-050-2021

# RUNWAY 3/21 PROFILE
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 5A




Document Path: K:\200419-CDY5_GIS\IDA_Sheet_5B_17_35_Profile.mxd

**LEGEND**

| ITEM | DESCRIPTION | ITEM | DESCRIPTION |
|---|---|---|---|
| ***APPROACH/DEPARTURE SURFACE*** | | ***MISCELLANEOUS*** | |
| | APPROACH CRITICAL LINE | | AIRPORT BOUNDARY |
| | PROJECTED RUNWAY CENTERLINE | ***PART 77 SURFACE*** | |
| | APPROACH SURFACE #2 | | CFR PART 77 APPROACH |
| | OBSTRUCTIONS | ***5FT CONTOURS*** | |
| | OBSTRUCTIONS HIGH POINT | | MAJOR CONTOUR |
| ***FENCE*** | | | MINOR CONTOUR |
| | FENCE (8FT) | ***SAFETY AREAS*** | |
| ***PAVEMENT*** | | RSA | RSA |
| | AIRPORT PAVEMENT | ROFZ \ ROFA | ROFA/ROFZ |
| | ROAD | RPZ | RPZ |

**OBSTRUCTION TABLE**

| REF | OBJECT DESCRIPTION | SURFACE AFFECTED | MAX OBJECT ELEVATION (FT.) | AREA PENETRATION IN (SQ.FT.) | MAX PENETRATION HEIGHT (FT.) | DISPOSITION |
|---|---|---|---|---|---|---|
| 10 | ACCESS ROAD | TRANSITIONAL | 4,744.5 | 1,625 | 7.8 | TO BE REMOVED |
| 11 | ACCESS ROAD | PRIMARY | 4,743.9 | 5,625 | 7.9 | TO BE REMOVED |
| 12 | ACCESS ROAD | TRANSITIONAL | 4,743.0 | 1,750 | 6.9 | TO BE REMOVED |
| 13 | ACCESS ROAD | APPROACH | 4,743.2 | 1,975 | 6.4 | TO BE REMOVED |
| 14 | ACCESS ROAD | APPROACH | 4,743.1 | 1,275 | 5.7 | TO BE REMOVED |

**14 CFR PART 77 VERTICAL BUFFERS**

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

HIGHWAY - 17 FEET

PUBLIC ROADWAY - 15 FEET

RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

ELEVATION DATA BASED ON OLC SNAKE RIVER LIDAR SURVEY ACQUIRED 4/22/2015 - 6/2/2015, 10 METER NATIONAL ELEVATION DATASET AND UAV SURVEY COMPLETED OCT 2020

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|

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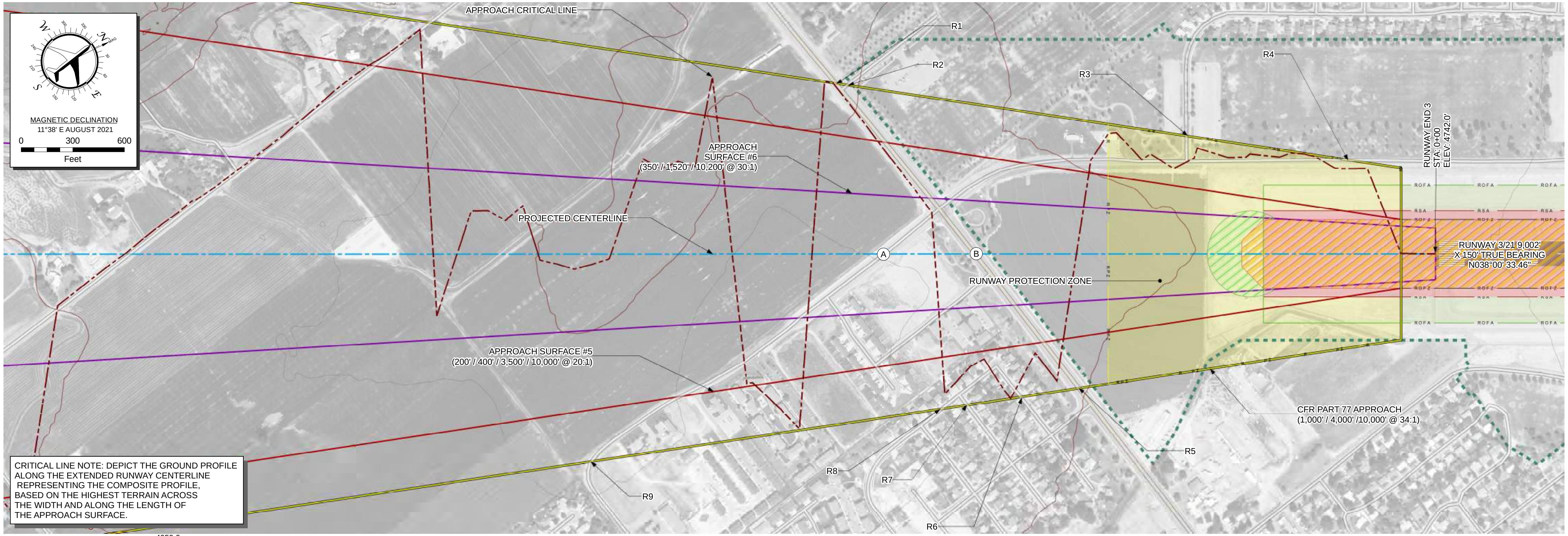
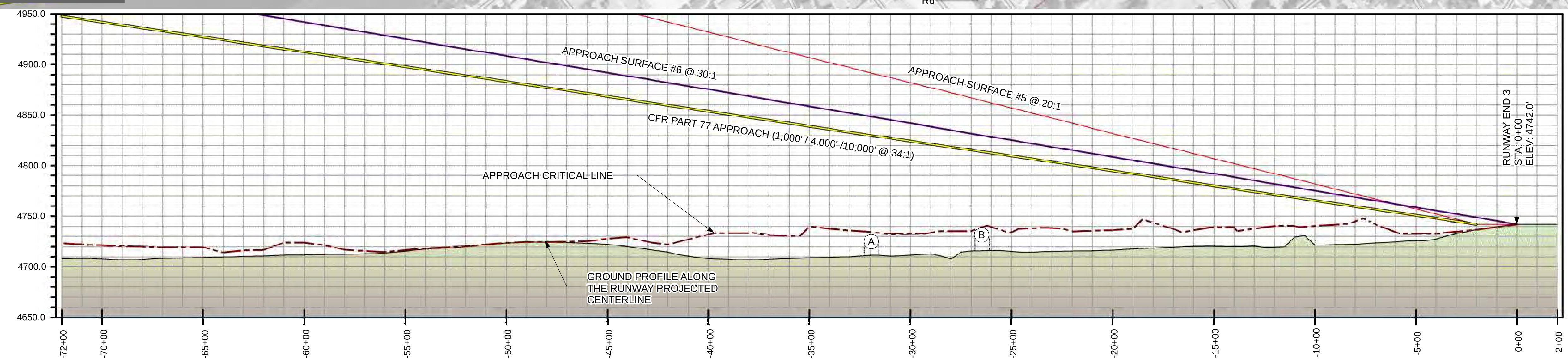
A.I.P. PROJECT # 3-16-0018-050-2021

# RUNWAY 17/35 PROFILE
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 5B
7 OF 19

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**ROAD CROSSING**

| REF | DESCRIPTION | ELEVATION | CLEARS/PENETRATION |
|---|---|---|---|
| R1 | HWY CROSSING | 4740.4 | CLEARS: 99.3' |
| R2 | ROAD CROSSING | 4736.7 | CLEARS: 100.3' |
| R3 | ROAD CROSSING | 4741.5 | CLEARS: 35.3' |
| R4 | ROAD CROSSING | 4744.6 | CLEARS: 11.2' |
| R5 | HWY CROSSING | 4738.0 | CLEARS: 60.7' |
| R6 | ROAD CROSSING | 4724.5 | CLEARS: 80.4' |
| R7 | ROAD CROSSING | 4723.9 | CLEARS: 92.1' |
| R8 | ROAD CROSSING | 4723.4 | CLEARS: 96.8' |
| R9 | ROAD CROSSING | 4727.2 | CLEARS: 152.8' |

**SIGNIFICANT OBJECTS**

| REF | DESCRIPTIONS | BUFFER | APPROACH SURFACE IMPACT | DISPOSITION |
|---|---|---|---|---|
| A | S OLD BUTTE RD | 15' | CLEARS: 110.1' | NO ACTION |
| B | W BROADWAY ST | 17' | CLEARS: 86.0' | NO ACTION |

**LEGEND**

| ITEM | DESCRIPTION | ITEM | DESCRIPTION | ITEM | DESCRIPTION |
|---|---|---|---|---|---|
| *APPROACH/DEPARTURE SURFACE* | | *FENCE* | | *MISCELLANEOUS* | |
| | APPROACH CRITICAL LINE | | WIRE FENCE (8FT) | | AIRPORT BOUNDARY |
| | PROJECTED RUNWAY CENTERLINE | *PART 77 SURFACE* | | | LOCALIZER AREA A |
| | APPROACH SURFACE #5 | | CFR PART 77 APPROACH | | LOCALIZER AREA B |
| | APPROACH SURFACE #6 | *SAFETY AREAS* | | *PAVEMENT* | |
| *10FT CONTOURS* | | RSA | RSA | | AIRPORT PAVEMENT |
| | MAJOR CONTOUR | ROFA | ROFA | | ROAD |
| | MINOR CONTOUR | RPZ | RPZ | | |
| | | ROFZ | ROFZ | | |

ELEVATION DATA
BASED ON OLC
SNAKE RIVER LIDAR
SURVEY ACQUIRED
4/22/2015 - 6/2/2015,
10 METER NATIONAL
ELEVATION DATASET
AND UAV SURVEY
COMPLETED OCT 2020

**14 CFR PART 77 VERTICAL BUFFERS**

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

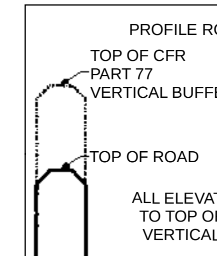
HIGHWAY - 17 FEET

PUBLIC ROADWAY - 15 FEET

RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

PROFILE ROAD




ALL ELEVATIONS ARE
TO TOP OF PART 77
VERTICAL BUFFER

NOT TO SCALE

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|
| | | |

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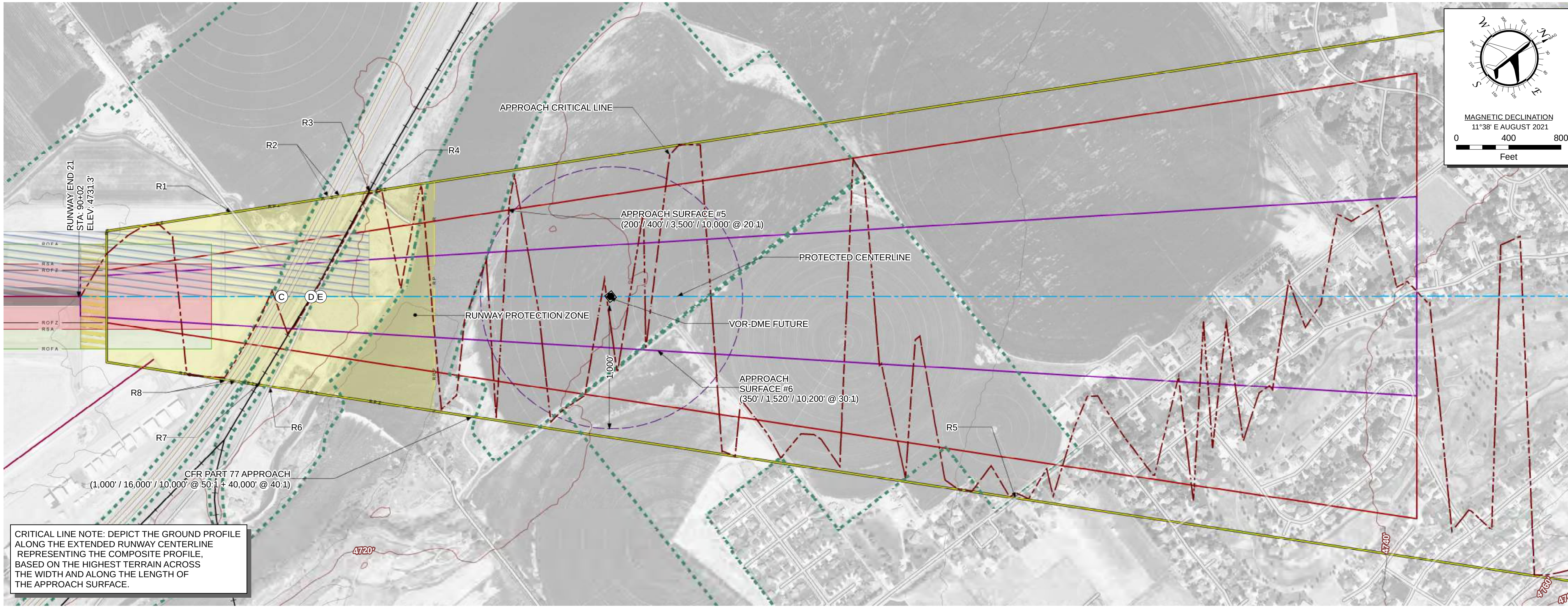
A.I.P. PROJECT # 3-16-0018-050-2021

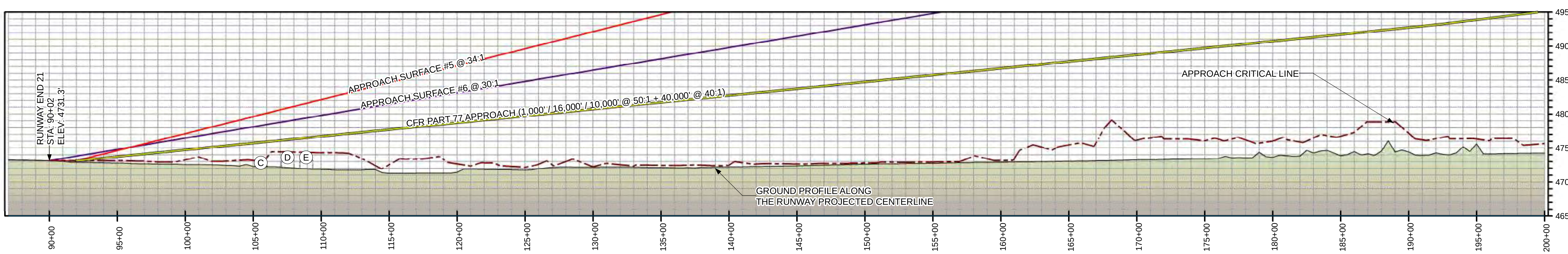
# INNER PORTION OF THE RUNWAY APPROACH RUNWAY END 3

IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 6A




CRITICAL LINE NOTE: DEPICT THE GROUND PROFILE ALONG THE EXTENDED RUNWAY CENTERLINE REPRESENTING THE COMPOSITE PROFILE, BASED ON THE HIGHEST TERRAIN ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.

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**LEGEND**

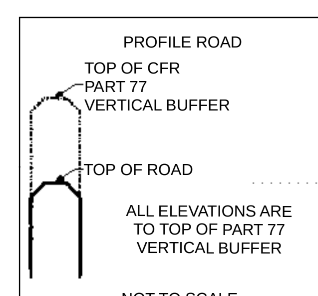
| ITEM | DESCRIPTION | ITEM | DESCRIPTION |
|---|---|---|---|
| *10FT CONTOURS* | | *SAFETY AREAS* | |
| | MAJOR CONTOUR | RSA | RSA |
| | MINOR CONTOUR | ROFA | ROFA |
| *MISCELLANEOUS* | | RPZ | RPZ |
| | AIRPORT BOUNDARY | ROFZ | ROFZ |
| | GLIDE SLOPE CRITICAL AREA | *APPROACH/DEPARTURE SURFACE* | |
| | RAILROAD TRACKS | | APPROACH CRITICAL LINE |
| | POFZ | | PROJECTED RUNWAY CENTERLINE |
| *FENCE* | | | APPROACH SURFACE #5 |
| | WIRE FENCE (8FT) | | APPROACH SURFACE #6 |
| *PART 77 SURFACE* | | *PAVEMENT* | |
| | CFR PART 77 APPROACH | | AIRPORT PAVEMENT |
| | PRIMARY | | ROAD |

**ROAD CROSSING**

| REF | DESCRIPTION | ELEVATION | CLEAR/PENETRATION |
|---|---|---|---|
| R1 | ROAD CROSSING | 4738.8 | CLEARS: 11.6' |
| R2 | HWY CROSSING | 4739.8 | CLEARS: 24.7' |
| R3 | RAILROAD | 4733.4 | CLEARS: 38.2' |
| R4 | ROAD CROSSING | 4734.4 | CLEARS: 38.8' |
| R5 | ROAD CROSSING | 4747.8 | CLEARS: 121.1' |
| R6 | ROAD CROSSING | 4734.5 | CLEARS: 21.7' |
| R7 | RAILROAD | 4741.0 | CLEARS: 13.4' |
| R8 | HWY CROSSING | 4738.7 | CLEARS: 10.7' |

**SIGNIFICANT OBJECTS**

| REF | DESCRIPTIONS | BUFFER | APPROACH SURFACE IMPACT | DISPOSITION |
|---|---|---|---|---|
| C | INTERSTATE 15 | 17' | CLEARS: 16.9' | NO ACTION |
| D | RAILROAD | 23' | CLEARS: 18.3' | NO ACTION |
| E | LINDSAY | 15' | CLEARS: 28.9' | NO ACTION |




ELEVATION DATA BASED ON OLC SNAKE RIVER LIDAR SURVEY ACQUIRED 4/22/2015 - 6/2/2015, 10 METER NATIONAL ELEVATION DATASET AND UAV SURVEY COMPLETED OCT 2020

**14 CFR PART 77 VERTICAL BUFFERS**

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

HIGHWAY - 17 FEET

PUBLIC ROADWAY - 15 FEET

RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

| NO. | DESCRIPTION | DATE: |
|---|---|---|
| | REVISIONS | |

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MERIDIAN, ID 83642
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A.I.P. PROJECT # 3-16-0018-050-2021

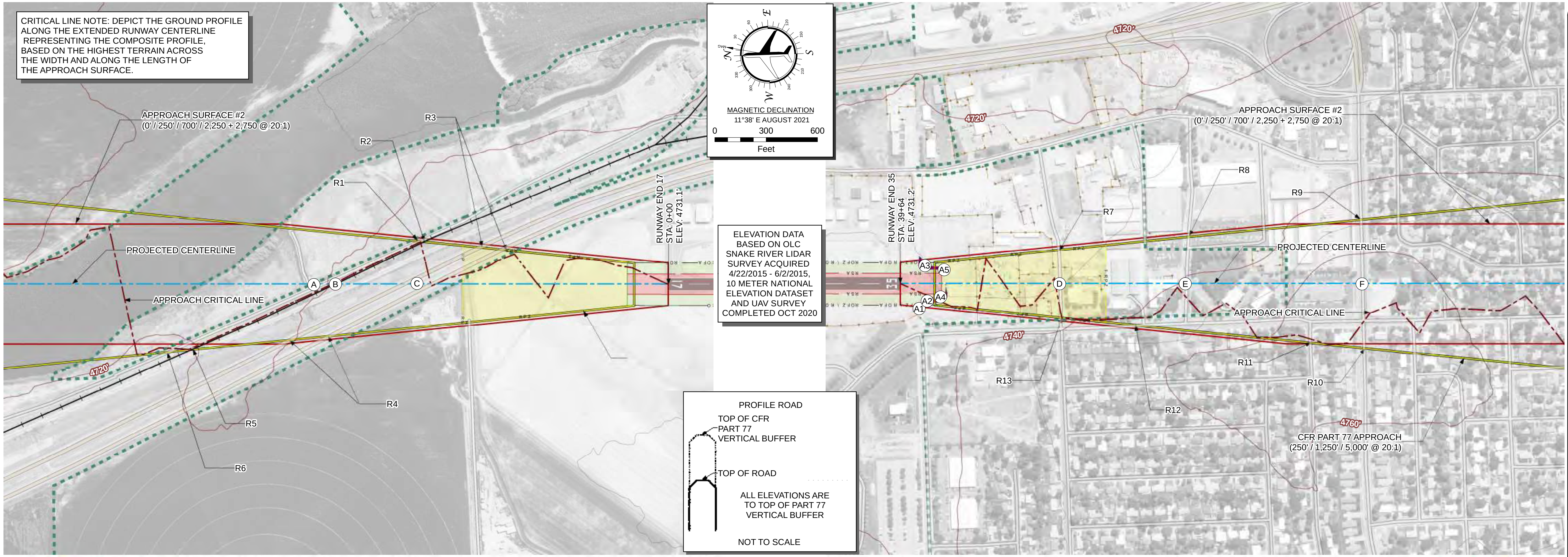
# INNER PORTION OF THE RUNWAY APPROACH RUNWAY END 21

IDAHO FALLS REGIONAL AIRPORT

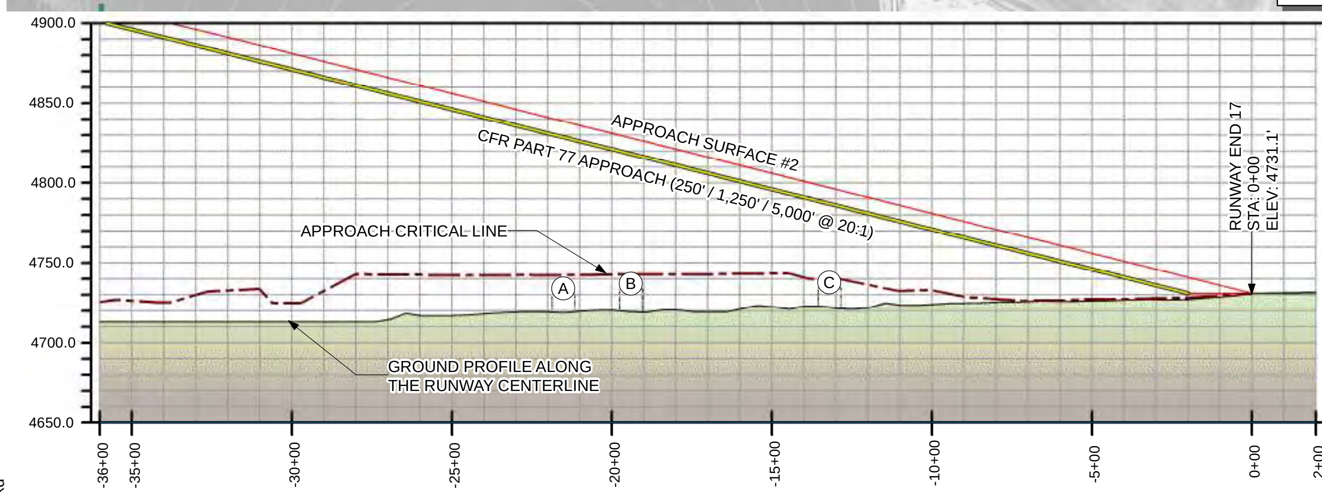
DATE: XXX X, XXXX

PROJECT # 200419

SHEET: 6B




4800





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**LEGEND**

| ITEM | DESCRIPTION | ITEM | DESCRIPTION |
|---|---|---|---|
| ***MISCELLANEOUS*** | | ***APPROACH/DEPARTURE SURFACE*** | |
| | AIRPORT BOUNDARY | | APPROACH CRITICAL LINE |
| | RAILROAD TRACKS | | PROJECTED RUNWAY CENTERLINE |
| ***PAVEMENT*** | | | THRESHOLD SITING SURFACE |
| | AIRPORT PAVEMENT | | OBSTRUCTIONS |
| | ROAD | | OBSTRUCTIONS HIGH POINT |
| ***PART 77 SURFACE*** | | ***SAFETY AREAS*** | |
| | CFR PART 77 APPROACH | RSA | RSA |
| | PRIMARY | ROFZ \ ROFA | ROFA/ROFZ |
| ***10FT CONTOURS*** | | RPZ | RPZ |
| | MAJOR CONTOUR | ***FENCE*** | |
| | MINOR CONTOUR | | WIRE FENCE (8FT) |

**SIGNIFICANT OBJECTS**

| REF | DESCRIPTIONS | BUFFER | APPROACH SURFACE IMPACT | DISPOSITION |
|---|---|---|---|---|
| A | LINDSAY RD | 15' | CLEARS: 93.6' | NO ACTION |
| B | RAILROAD | 23' | CLEARS: 75.6' | NO ACTION |
| C | INTERSTATE 15 | 17' | CLEARS: 47.4' | NO ACTION |
| D | OLYMPIA RD | 15' | CLEARS: 22.5' | NO ACTION |
| E | SAWTELLE RD | 15' | CLEARS: 52.0' | NO ACTION |
| F | GRANDVIEW RD | 15' | CLEARS: 76.4' | NO ACTION |

**ROAD CROSSING**

| REF | DESCRIPTION | ELEVATION | CLEARS/PENETRATION |
|---|---|---|---|
| R1 | ROAD CROSSING | 4733.6 | CLEARS: 65.7' |
| R2 | RAILROAD | 4743.5 | CLEARS: 48.7' |
| R3 | HWY CROSSING | 4739.7 | CLEARS: 28.5' |
| R4 | HWY CROSSING | 4739.6 | CLEARS: 76.8' |
| R5 | RAILROAD | 4742.5 | CLEARS: 116.8' |
| R6 | ROAD CROSSING | 4733.6 | CLEARS: 141.8' |
| R7 | ROAD CROSSING | 4742.5 | CLEARS: 23.7' |
| R8 | ROAD CROSSING | 4748.3 | CLEARS: 57.6' |
| R9 | ROAD CROSSING | 4762.8 | CLEARS: 93.2' |
| R10 | ROAD CROSSING | 4781.7 | CLEARS: 74.5' |
| R11 | ROAD CROSSING | 4785.9 | CLEARS: 54.8' |
| R12 | ROAD CROSSING | 4762.3 | CLEARS: 24.7' |
| R13 | ROAD CROSSING | 4753.4 | CLEARS: 14.7' |

**14 CFR PART 77 VERTICAL BUFFERS**

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

HIGHWAY - 17 FEET

PUBLIC ROADWAY - 15 FEET

RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

**OBSTRUCTION TABLE**

| REF | OBJECT DESCRIPTION | SURFACE AFFECTED | MAX OBJECT ELEVATION (FT.) | AREA PENETRATION IN (SQ.FT.) | MAX PENETRATION HEIGHT (FT.) | DISPOSITION |
|---|---|---|---|---|---|---|
| A1 | ACCESS ROAD | TRANSITIONAL | 4,744.5 | 1,625 | 11.3 | TO BE REMOVED |
| A2 | ACCESS ROAD | PRIMARY | 4,743.9 | 5,625 | 12.7 | TO BE REMOVED |
| A3 | ACCESS ROAD | TRANSITIONAL | 4,743.0 | 1,750 | 11.8 | TO BE REMOVED |
| A4 | ACCESS ROAD | APPROACH | 4,743.2 | 1,975 | 6.4 | TO BE REMOVED |
| A5 | ACCESS ROAD | APPROACH | 4,743.1 | 1,275 | 5.7 | TO BE REMOVED |

| BORDER SIZE 11"X17" | | |
|---|---|---|
| DESIGNED | DESIGN | |
| DRAWN | BRC | |
| CHECKED | BWC | |
| APPROVED | WR | |

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|


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PHONE: 208.323.2288 WWW.ARDURRA.COM


A.I.P. PROJECT # 3-16-0018-050-2021

INNER PORTION OF THE RUNWAY APPROACH RUNWAY17/35

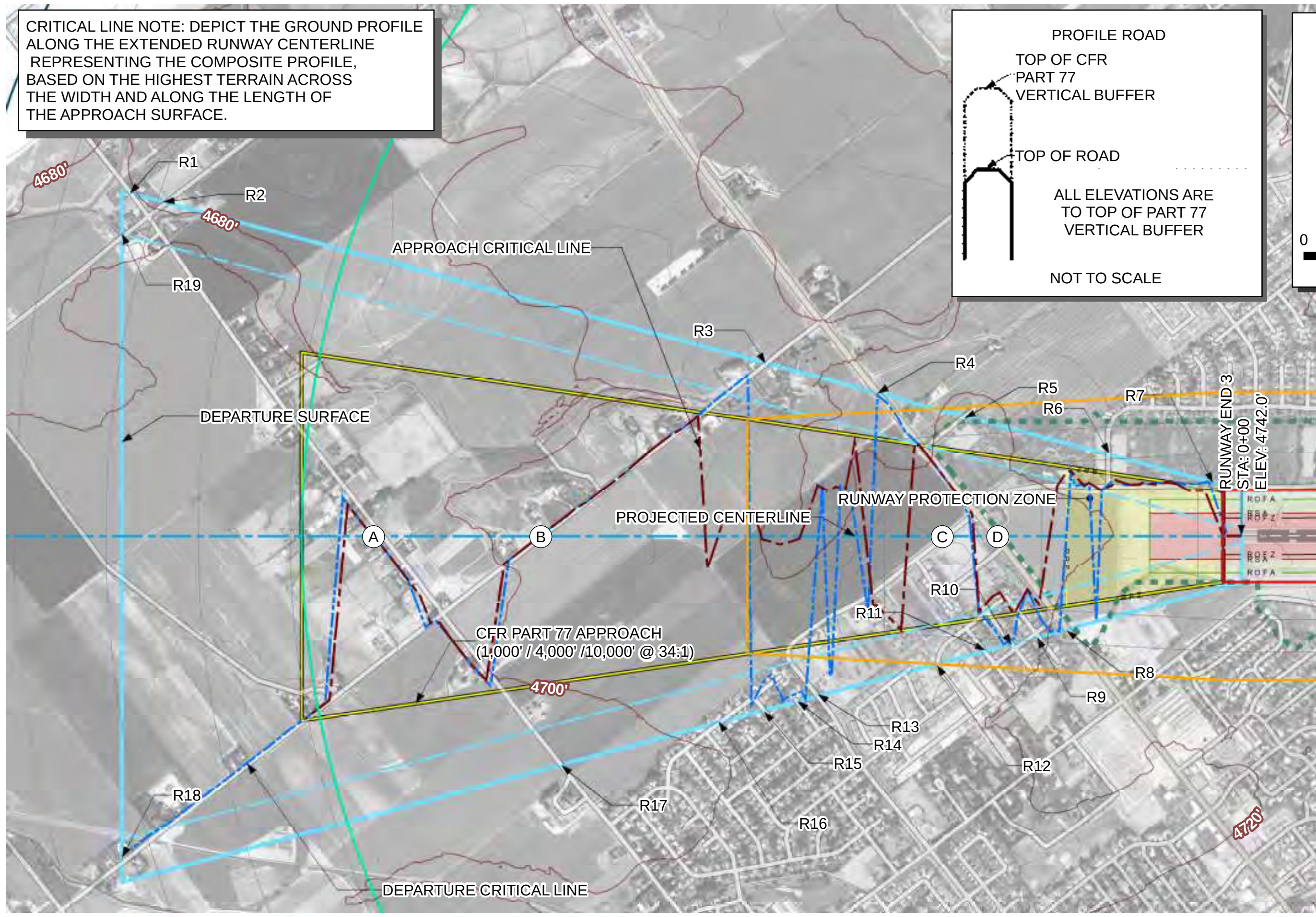
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX

PROJECT # 200419

SHEET: 6C

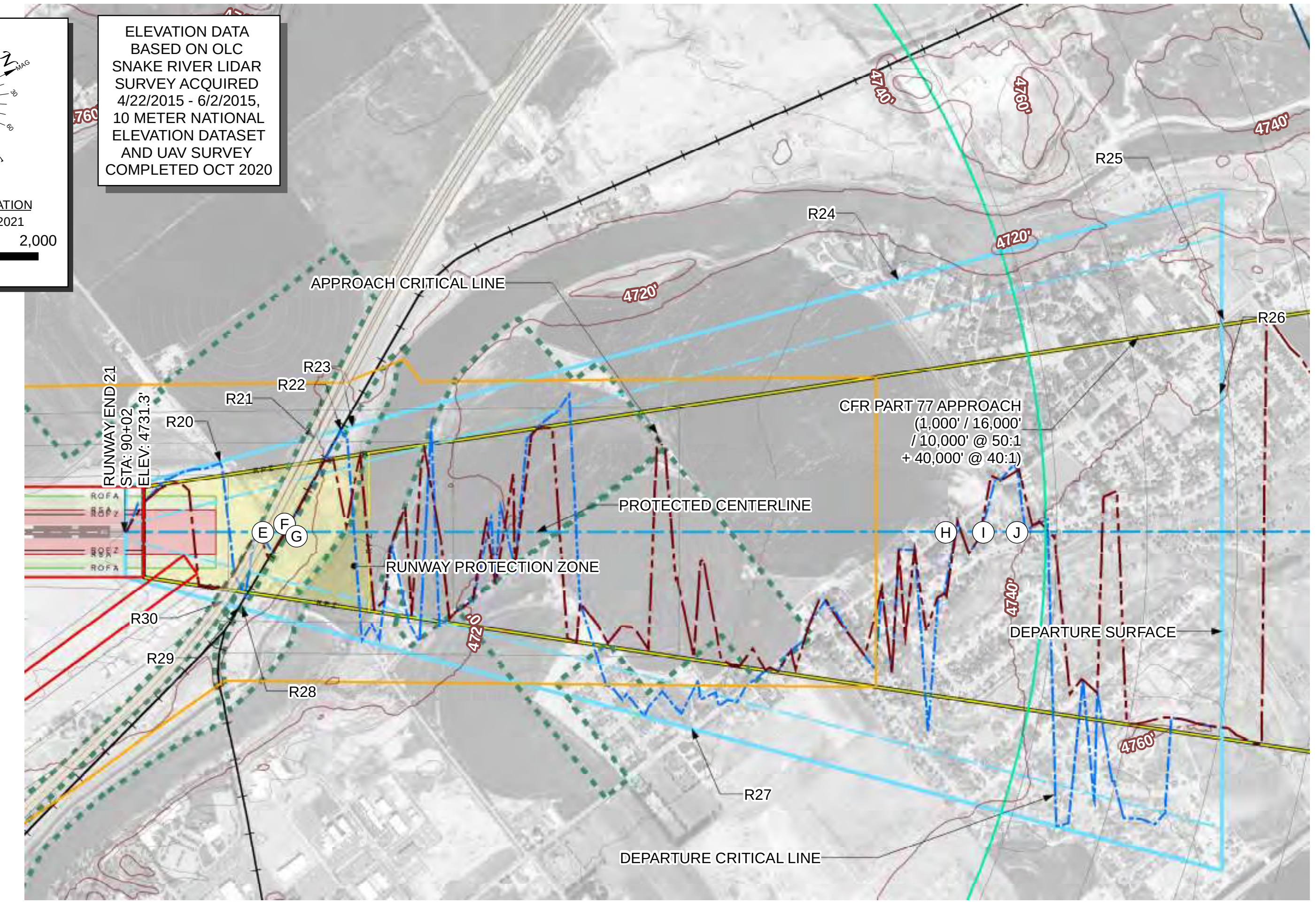
CRITICAL LINE NOTE: DEPICT THE GROUND PROFILE ALONG THE EXTENDED RUNWAY CENTERLINE REPRESENTING THE COMPOSITE PROFILE, BASED ON THE HIGHEST TERRAIN ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.

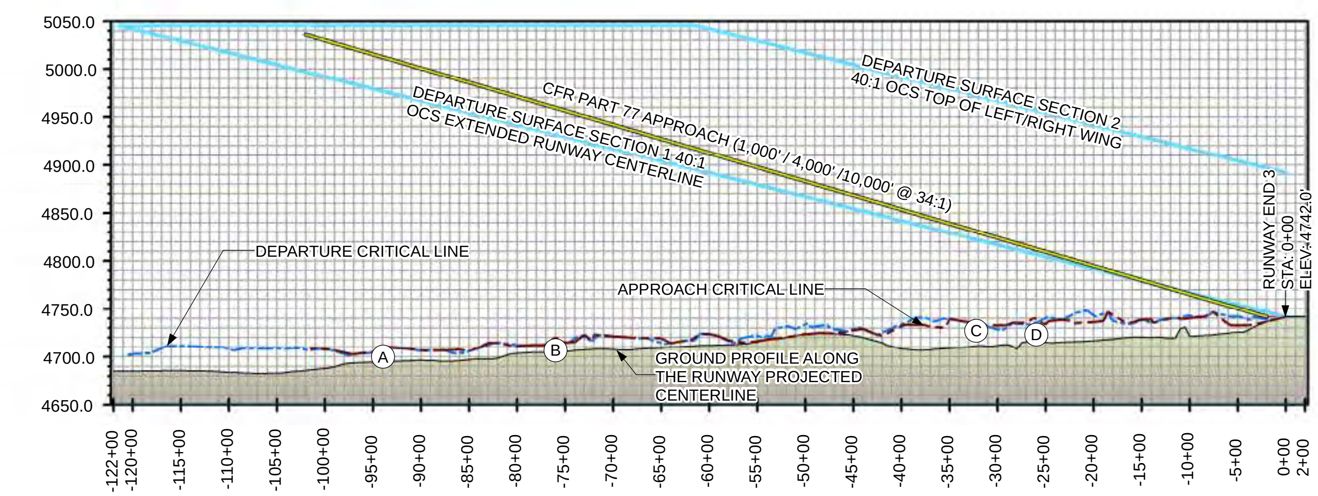


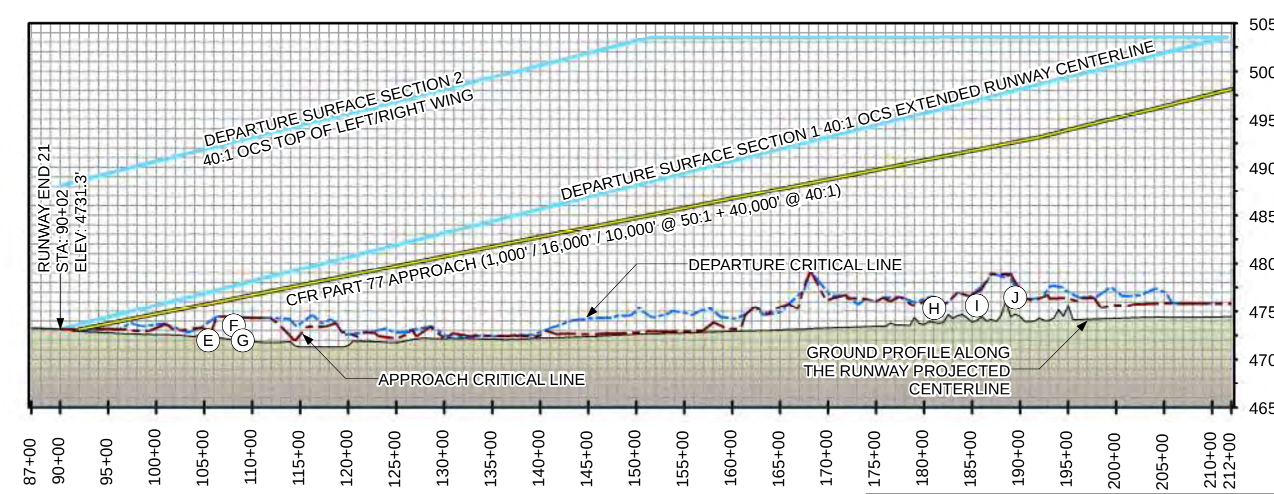

PROFILE ROAD
TOP OF CFR PART 77 VERTICAL BUFFER
TOP OF ROAD
ALL ELEVATIONS ARE TO TOP OF PART 77 VERTICAL BUFFER
NOT TO SCALE

MAGNETIC DECLINATION
11°38' E AUGUST 2021
0 1,000 2,000
Feet

ELEVATION DATA BASED ON OLC SNAKE RIVER LIDAR SURVEY ACQUIRED 4/22/2015 - 6/2/2015, 10 METER NATIONAL ELEVATION DATASET AND UAV SURVEY COMPLETED OCT 2020




14 CFR PART 77 VERTICAL BUFFERS

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

HIGHWAY - 17 FEET

PUBLIC ROADWAY - 15 FEET

RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

## DEPARTURE SURFACE DIMENSION

| INSTRUMENT DEPARTURE SURFACE TYPE | | DIMENSION STANDARDS FEET | | | | | SLOPE |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | |
| 7 | RUNWAY PROVIDING INSTRUMENT DEPARTURE OPERATIONS | RUNWAY WIDTH (RW) 150' | 500' -1/2 RW 425' | 7,512' | 12,152' | 6,160' | 40:1 |

## ROAD CROSSING

| REF | DESCRIPTION | GROUND ELEVATION | CLEARS/ PENETRATION | REF | DESCRIPTION | GROUND ELEVATION | CLEARS/ PENETRATION |
|---|---|---|---|---|---|---|---|
| R1 | ROAD CROSSING | 4691.9 | CLEARS: 354.1' | R16 | ROAD CROSSING | 4708.3 | CLEARS: 337.6' |
| R2 | ROAD CROSSING | 4696.6 | CLEARS: 349.4' | R17 | ROAD CROSSING | 4689.2 | CLEARS: 356.6' |
| R3 | ROAD CROSSING | 4728.0 | CLEARS: 292.9' | R18 | ROAD CROSSING | 4708.3 | CLEARS: 337.6' |
| R4 | HWY CROSSING | 4740.5 | CLEARS: 248.9' | R19 | ROAD CROSSING | 4689.2 | CLEARS: 356.6' |
| R5 | ROAD CROSSING | 4734.2 | CLEARS: 237.0' | R20 | ROAD CROSSING | 4739.5 | CLEARS: 166.9' |
| R6 | ROAD CROSSING | 4742.4 | CLEARS: 183.7' | R21 | HWY CROSSING | 4738.1 | CLEARS: 192.5' |
| R7 | ROAD CROSSING | 4741.4 | CLEARS: 157.7' | R22 | RAILROAD | 4741.2 | CLEARS: 198.4' |
| R8 | HWY CROSSING | 4738.3 | CLEARS: 201.8' | R23 | ROAD CROSSING | 4734.0 | CLEARS: 209.9' |
| R9 | ROAD CROSSING | 4729.8 | CLEARS: 217.2' | R24 | ROAD CROSSING | 4755.2 | CLEARS: 279.7' |
| R10 | ROAD CROSSING | 4727.1 | CLEARS: 226.9' | R25 | ROAD CROSSING | 4746.0 | CLEARS: 289.3' |
| R11 | ROAD CROSSING | 4729.2 | CLEARS: 227.3' | R26 | ROAD CROSSING | 4742.4 | CLEARS: 203.5' |
| R12 | ROAD CROSSING | 4723.8 | CLEARS: 290.9' | R27 | ROAD CROSSING | 4734.7 | CLEARS: 179.1' |
| R13 | ROAD CROSSING | 4720.9 | CLEARS: 300.7' | R28 | RAILROAD | 4739.9 | CLEARS: 172.1' |
| R14 | ROAD CROSSING | 4717.2 | CLEARS: 317.5' | R29 | HWY CROSSING | 4738.4 | CLEARS: 167.4' |
| R15 | ROAD CROSSING | 4709.0 | CLEARS: 337.0' | R30 | ROAD CROSSING | 4757.0 | CLEARS: 221.6' |

## LEGEND

| ITEM | DESCRIPTION | ITEM | DESCRIPTION | ITEM | DESCRIPTION |
|---|---|---|---|---|---|
| *APPROACH/DEPARTURE SURFACE* | | *MISCELLANEOUS* | | *PAVEMENT* | |
| | APPROACH CRITICAL LINE | | AIRPORT BOUNDARY | | AIRPORT PAVEMENT |
| | DEPARTURE CRITICAL LINE | | RAILROAD TRACKS | | ROAD |
| | DEPARTURE SURFACE | *PART 77 SURFACE* | | *SAFETY AREAS* | |
| | PROJECTED RUNWAY CENTERLINE | | CFR PART 77 APPROACH | RSA | RSA |
| *10FT CONTOURS* | | | PRIMARY | ROFA | ROFA |
| | MAJOR CONTOUR | | TRANSITIONAL | RPZ | RPZ |
| | MINOR CONTOUR | | HORIZONTAL | ROFZ | ROFZ |
| | | | 50' CONTOURS | | |

## SIGNIFICANT OBJECTS

| REF | DESCRIPTION | BUFFER | DEPARTURE SURFACE IMPACT | DISPOSITION |
|---|---|---|---|---|
| A | W 17TH ST | 15' | CLEARS: 267.9' | NO ACTION |
| B | S 35TH W | 15' | CLEARS: 211.9' | NO ACTION |
| C | S OLD BUTTE RD | 15' | CLEARS: 101.2' | NO ACTION |
| D | BROADWAY | 17' | CLEARS: 79.7' | NO ACTION |
| E | INTERSTATE 15 | 17' | CLEARS: 28.2' | NO ACTION |
| F | RAILROAD | 23' | CLEARS: 31.1' | NO ACTION |
| G | LINDSAY | 15' | CLEARS: 42.1' | NO ACTION |
| H | N 5TH W | 15' | CLEARS: 213.7' | NO ACTION |
| I | FAIRWAY BLVD | 15' | CLEARS: 205.3' | NO ACTION |
| J | GLENEAGLE DR | 15' | CLEARS: 215.1' | NO ACTION |

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BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS
| NO. | DESCRIPTION | DATE: |
|---|---|---|


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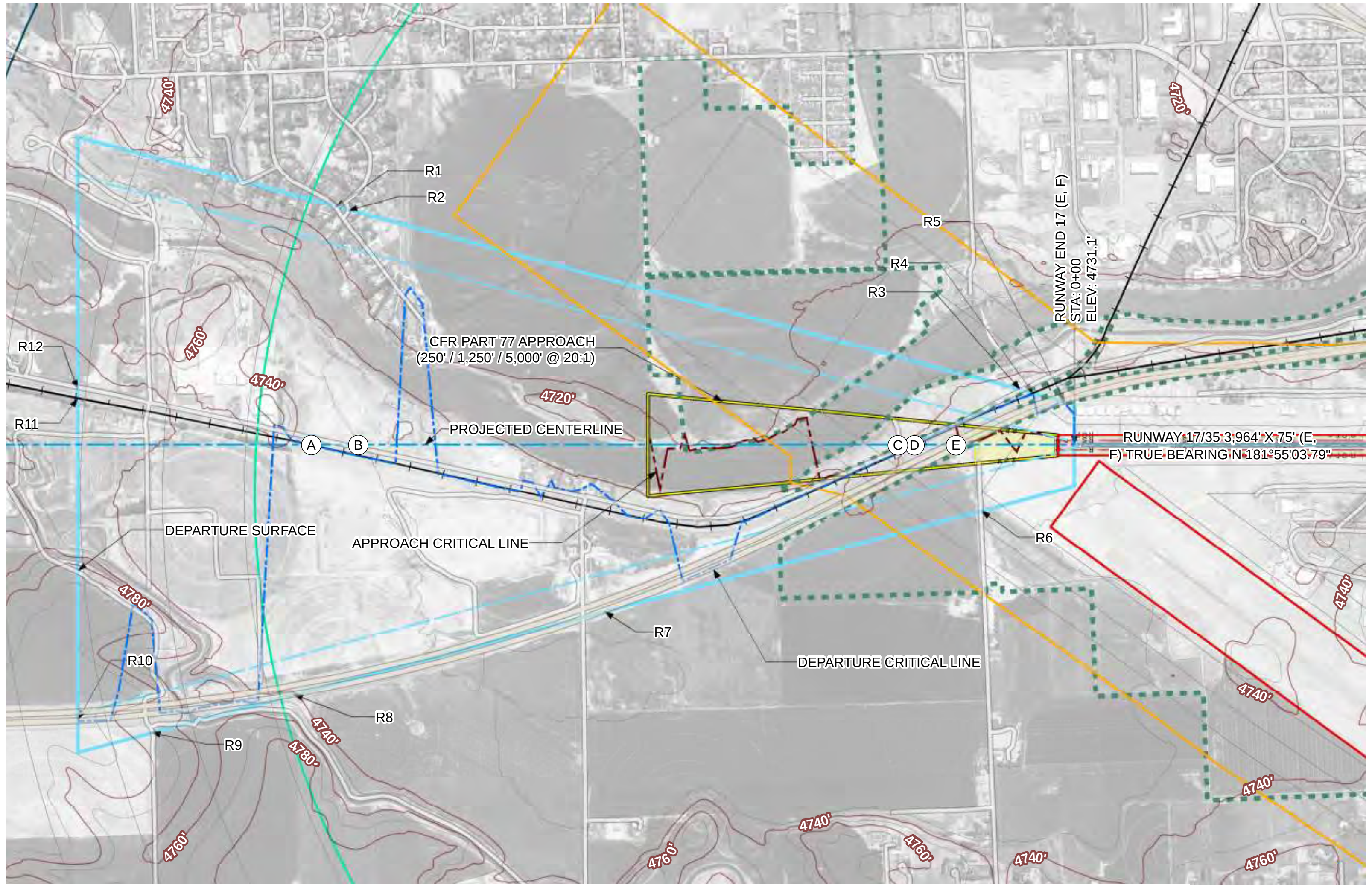
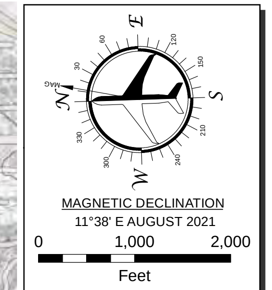
PHONE: 208.323.2288 WWW.ARDURRA.COM

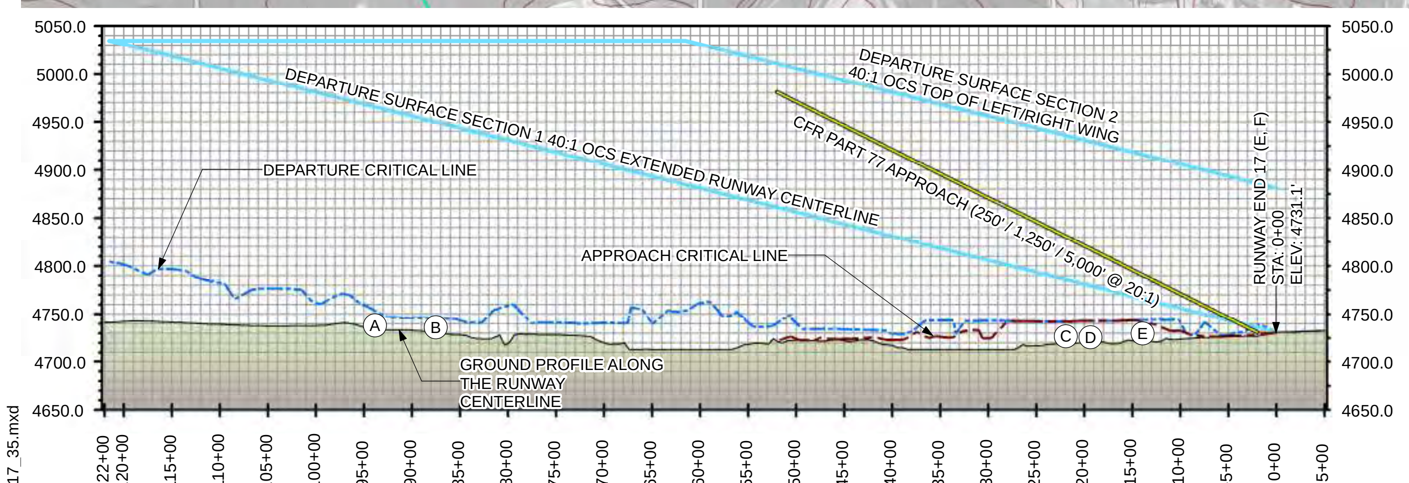

A.I.P. PROJECT # 3-16-0018-050-2021

DEPARTURE SURFACE RUNWAY 3/21
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 7A




ELEVATION DATA BASED ON OLC SNAKE RIVER LIDAR SURVEY ACQUIRED 4/22/2015 - 6/2/2015, 10 METER NATIONAL ELEVATION DATASET AND UAV SURVEY COMPLETED OCT 2020

CRITICAL LINE NOTE: DEPICT THE GROUND PROFILE ALONG THE EXTENDED RUNWAY CENTERLINE REPRESENTING THE COMPOSITE PROFILE, BASED ON THE HIGHEST TERRAIN ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.

14 CFR PART 77 VERTICAL BUFFERS

THE VERTICAL HEIGHT OF TRAVERSE WAYS HAS BEEN INCREASED BY THE FOLLOWING:

HIGHWAY - 17 FEET

PUBLIC ROADWAY - 15 FEET

RAILROAD - 23 FEET

ACCESS CONTROLLED ROADS - 10 FEET

## ROAD CROSSING

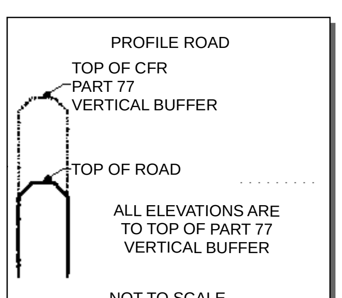
| REF | DESCRIPTION | GROUND ELEVATION | CLEARS/ PENETRATION |
|---|---|---|---|
| R1 | ROAD CROSSING | 4728.3 | CLEARS: 291.8' |
| R2 | ROAD CROSSING | 4734.6 | CLEARS: 285.5' |
| R3 | ROAD CROSSING | 4719.8 | CLEARS: 161.4' |
| R4 | RAILROAD | 4718.0 | CLEARS: 151.5' |
| R5 | HWY CROSSING | 4721.9 | CLEARS: 144.1' |
| R6 | ROAD CROSSING | 4723.4 | CLEARS: 169.7' |
| R7 | HWY CROSSING | 4727.8 | CLEARS: 279.1' |
| R8 | HWY CROSSING | 4741.6 | CLEARS: 276.5' |
| R9 | ROAD CROSSING | 4773.1 | CLEARS: 247.0' |
| R10 | HWY CROSSING | 4795.4 | CLEARS: 222.6' |
| R11 | RAILROAD | 4744.4 | CLEARS: 267.4' |
| R12 | ROAD CROSSING | 4742.6 | CLEARS: 277.2' |

## SIGNIFICANT OBJECTS

| REF | DESCRIPTION | BUFFER | DEPARTURE SURFACE IMPACT | DISPOSITION |
|---|---|---|---|---|
| A | RAILROAD | 23' | CLEARS: 207.1' | NO ACTION |
| B | LINDSAY | 15' | CLEARS: 203.3' | NO ACTION |
| C | LINDSAY | 15' | CLEARS: 50.0' | NO ACTION |
| D | RAILROAD | 23' | CLEARS: 37.1' | NO ACTION |
| E | INTERSTATE 15 | 17' | CLEARS: 24.6' | NO ACTION |

## DEPARTURE SURFACE DIMENSION

| INSTRUMENT DEPARTURE SURFACE TYPE | | DIMENSION STANDARDS FEET | | | | | SLOPE |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | |
| 7 | RUNWAY PROVIDING INSTRUMENT DEPARTURE OPERATIONS | RUNWAY WIDTH (RW) | 500' -1/2 RW | 7,512' | 12,152' | 6,160' | 40:1 |
| | | 75' (E) 60' (F) | 462.5' | | | | |




## LEGEND

| ITEM | DESCRIPTION | ITEM | DESCRIPTION | ITEM | DESCRIPTION |
|---|---|---|---|---|---|
| ***APPROACH/DEPARTURE SURFACE*** | | ***MISCELLANEOUS*** | | ***PAVEMENT*** | |
| | APPROACH CRITICAL LINE | | AIRPORT BOUNDARY | | AIRPORT PAVEMENT |
| | DEPARTURE CRITICAL LINE | | RAILROAD TRACKS | | ROAD |
| | DEPARTURE SURFACE | ***PART 77 SURFACE*** | | ***SAFETY AREAS*** | |
| | PROJECTED RUNWAY CENTERLINE | | CFR PART 77 APPROACH | RSA | RSA |
| ***10FT CONTOURS*** | | | PRIMARY | ROFZ \ ROFA | ROFA/ROFZ |
| | MAJOR CONTOUR | | TRANSITIONAL | RPZ | RPZ |
| | MINOR CONTOUR | | HORIZONTAL | | |
| | | | 50' CONTOURS | | |

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| BORDER SIZE | 11"X17" |
|---|---|
| DESIGNED | DESIGN |
| DRAWN | BRC |
| CHECKED | BWC |
| APPROVED | WR |

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|

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A.I.P. PROJECT # 3-16-0018-050-2021

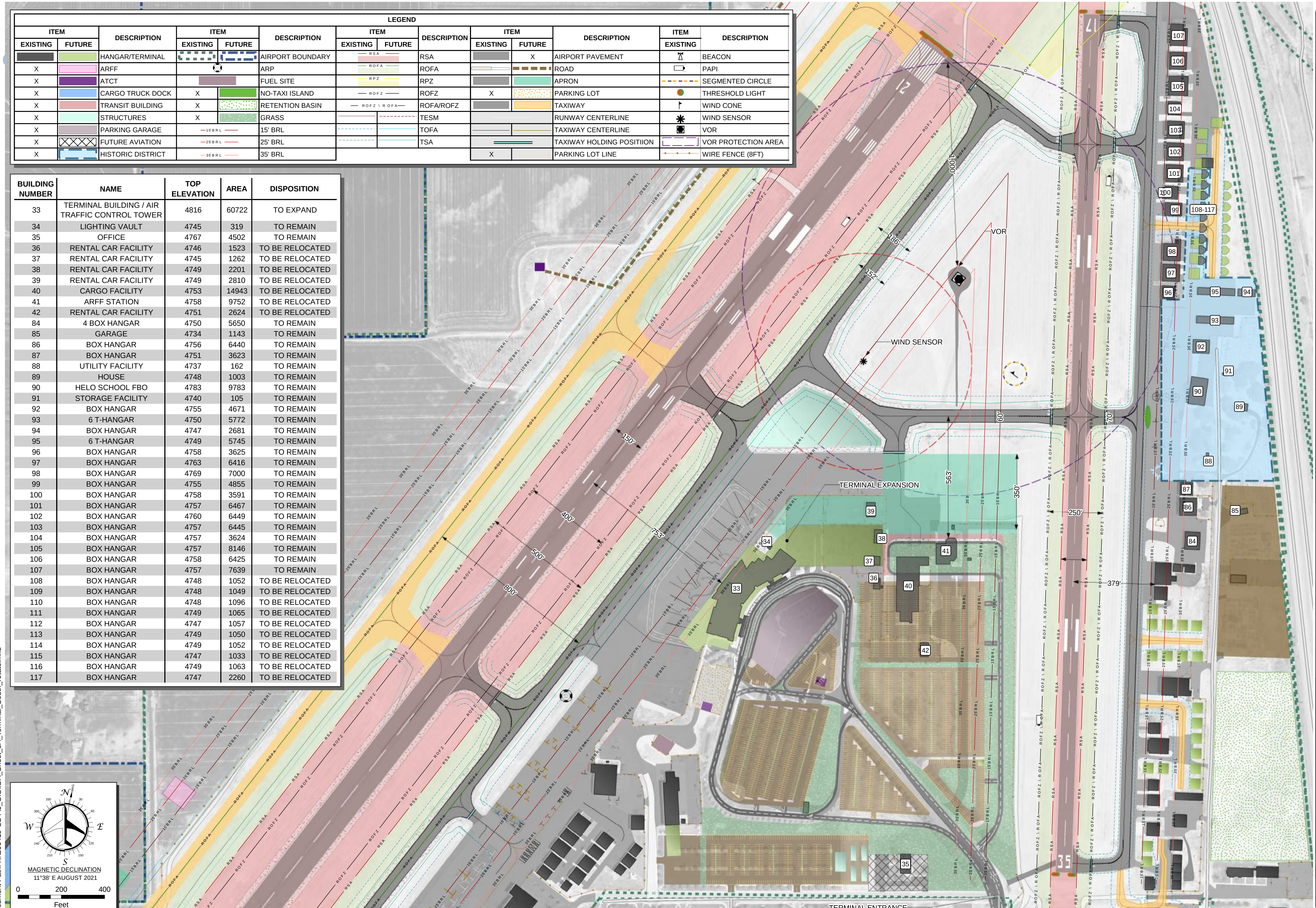
# DEPARTURE SURFACE RUNWAY 35

IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX

PROJECT # 200419

SHEET: 7B




| LEGEND | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | | DESCRIPTION | ITEM | | DESCRIPTION | ITEM | | DESCRIPTION | ITEM | | DESCRIPTION | ITEM | DESCRIPTION |
| EXISTING | FUTURE | | EXISTING | FUTURE | | EXISTING | FUTURE | | EXISTING | FUTURE | | EXISTING | |
| | | HANGAR/TERMINAL | | | AIRPORT BOUNDARY | | | RSA | | X | AIRPORT PAVEMENT | | BEACON |
| X | | ARFF | | | ARP | | | ROFA | | | ROAD | | PAPI |
| X | | ATCT | | | FUEL SITE | | | RPZ | | | APRON | | SEGMENTED CIRCLE |
| X | | CARGO TRUCK DOCK | X | | NO-TAXI ISLAND | | | ROFZ | X | | PARKING LOT | | THRESHOLD LIGHT |
| X | | TRANSIT BUILDING | X | | RETENTION BASIN | | | ROFA/ROFZ | | | TAXIWAY | | WIND CONE |
| X | | STRUCTURES | X | | GRASS | | | TESM | | | RUNWAY CENTERLINE | | WIND SENSOR |
| X | | PARKING GARAGE | | | 15' BRL | | | TOFA | | | TAXIWAY CENTERLINE | | VOR |
| X | | FUTURE AVIATION | | | 25' BRL | | | TSA | | | TAXIWAY HOLDING POSITIION | | VOR PROTECTION AREA |
| X | | HISTORIC DISTRICT | | | 35' BRL | | | | X | | PARKING LOT LINE | | WIRE FENCE (8FT) |

| BUILDING NUMBER | NAME | TOP ELEVATION | AREA | DISPOSITION |
|---|---|---|---|---|
| 33 | TERMINAL BUILDING / AIR TRAFFIC CONTROL TOWER | 4816 | 60722 | TO EXPAND |
| 34 | LIGHTING VAULT | 4745 | 319 | TO REMAIN |
| 35 | OFFICE | 4767 | 4502 | TO REMAIN |
| 36 | RENTAL CAR FACILITY | 4746 | 1523 | TO BE RELOCATED |
| 37 | RENTAL CAR FACILITY | 4745 | 1262 | TO BE RELOCATED |
| 38 | RENTAL CAR FACILITY | 4749 | 2201 | TO BE RELOCATED |
| 39 | RENTAL CAR FACILITY | 4749 | 2810 | TO BE RELOCATED |
| 40 | CARGO FACILITY | 4753 | 14943 | TO BE RELOCATED |
| 41 | ARFF STATION | 4758 | 9752 | TO BE RELOCATED |
| 42 | RENTAL CAR FACILITY | 4751 | 2624 | TO BE RELOCATED |
| 84 | 4 BOX HANGAR | 4750 | 5650 | TO REMAIN |
| 85 | GARAGE | 4734 | 1143 | TO REMAIN |
| 86 | BOX HANGAR | 4756 | 6440 | TO REMAIN |
| 87 | BOX HANGAR | 4751 | 3623 | TO REMAIN |
| 88 | UTILITY FACILITY | 4737 | 162 | TO REMAIN |
| 89 | HOUSE | 4748 | 1003 | TO REMAIN |
| 90 | HELO SCHOOL FBO | 4783 | 9783 | TO REMAIN |
| 91 | STORAGE FACILITY | 4740 | 105 | TO REMAIN |
| 92 | BOX HANGAR | 4755 | 4671 | TO REMAIN |
| 93 | 6 T-HANGAR | 4750 | 5772 | TO REMAIN |
| 94 | BOX HANGAR | 4747 | 2681 | TO REMAIN |
| 95 | 6 T-HANGAR | 4749 | 5745 | TO REMAIN |
| 96 | BOX HANGAR | 4758 | 3625 | TO REMAIN |
| 97 | BOX HANGAR | 4763 | 6416 | TO REMAIN |
| 98 | BOX HANGAR | 4769 | 7000 | TO REMAIN |
| 99 | BOX HANGAR | 4755 | 4855 | TO REMAIN |
| 100 | BOX HANGAR | 4758 | 3591 | TO REMAIN |
| 101 | BOX HANGAR | 4757 | 6467 | TO REMAIN |
| 102 | BOX HANGAR | 4760 | 6449 | TO REMAIN |
| 103 | BOX HANGAR | 4757 | 6445 | TO REMAIN |
| 104 | BOX HANGAR | 4757 | 3624 | TO REMAIN |
| 105 | BOX HANGAR | 4757 | 8146 | TO REMAIN |
| 106 | BOX HANGAR | 4758 | 6425 | TO REMAIN |
| 107 | BOX HANGAR | 4757 | 7639 | TO REMAIN |
| 108 | BOX HANGAR | 4748 | 1052 | TO BE RELOCATED |
| 109 | BOX HANGAR | 4748 | 1049 | TO BE RELOCATED |
| 110 | BOX HANGAR | 4748 | 1096 | TO BE RELOCATED |
| 111 | BOX HANGAR | 4749 | 1065 | TO BE RELOCATED |
| 112 | BOX HANGAR | 4747 | 1057 | TO BE RELOCATED |
| 113 | BOX HANGAR | 4749 | 1050 | TO BE RELOCATED |
| 114 | BOX HANGAR | 4749 | 1052 | TO BE RELOCATED |
| 115 | BOX HANGAR | 4747 | 1033 | TO BE RELOCATED |
| 116 | BOX HANGAR | 4749 | 1063 | TO BE RELOCATED |
| 117 | BOX HANGAR | 4747 | 2260 | TO BE RELOCATED |

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BORDER SIZE 11"X17"
DESIGNED DESIGN
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CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|

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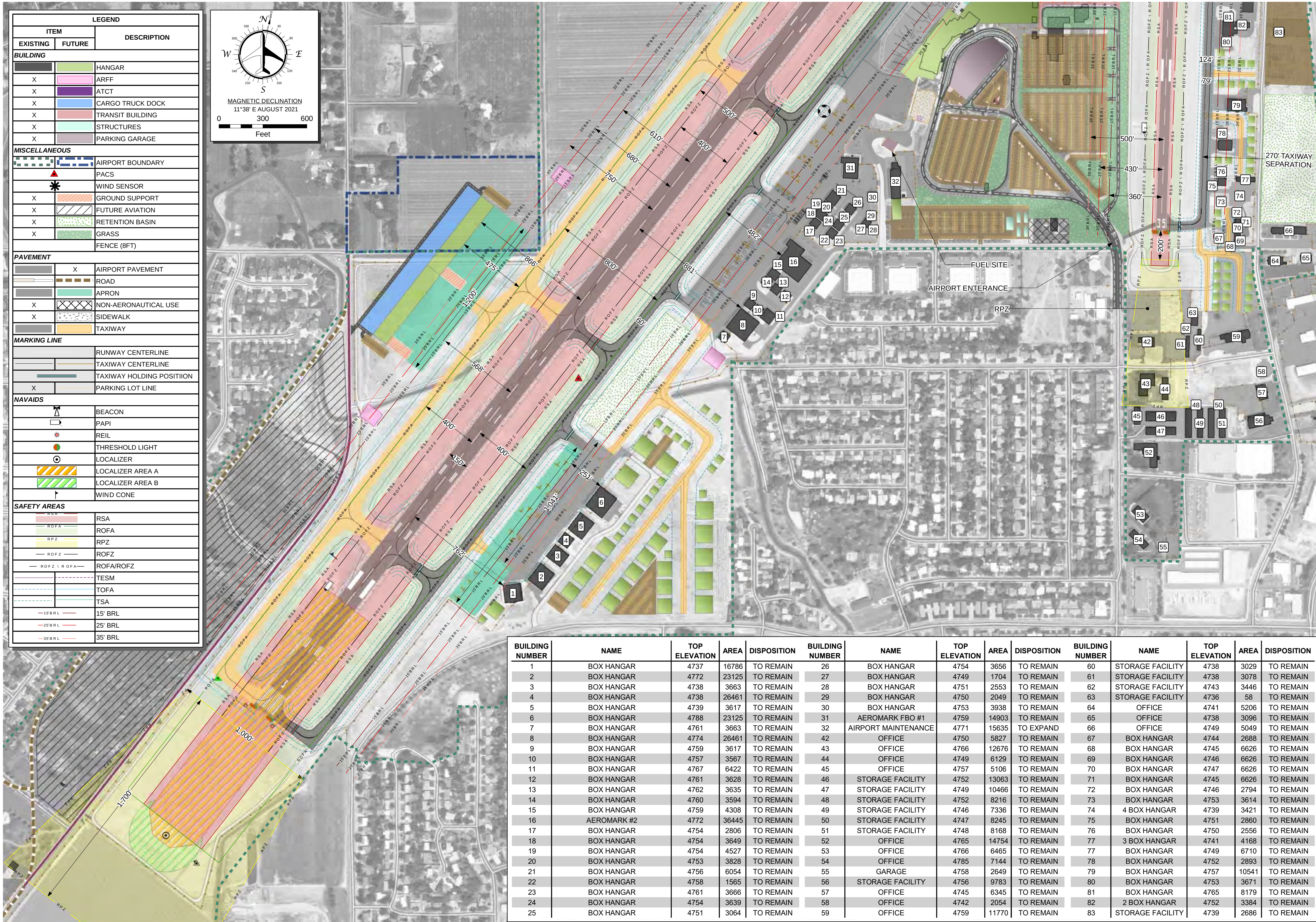
A.I.P. PROJECT # 3-16-0018-050-2021

# TERMINAL AREA NORTH

IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 8A




LEGEND

| ITEM | | DESCRIPTION |
|---|---|---|
| EXISTING | FUTURE | |
| BUILDING | | |
| | | HANGAR |
| X | | ARFF |
| X | | ATCT |
| X | | CARGO TRUCK DOCK |
| X | | TRANSIT BUILDING |
| X | | STRUCTURES |
| X | | PARKING GARAGE |
| MISCELLANEOUS | | |
| | | AIRPORT BOUNDARY |
| | | PACS |
| | | WIND SENSOR |
| X | | GROUND SUPPORT |
| X | | FUTURE AVIATION |
| X | | RETENTION BASIN |
| X | | GRASS |
| | | FENCE (8FT) |
| PAVEMENT | | |
| | X | AIRPORT PAVEMENT |
| | | ROAD |
| | | APRON |
| X | | NON-AERONAUTICAL USE |
| X | | SIDEWALK |
| | | TAXIWAY |
| MARKING LINE | | |
| | | RUNWAY CENTERLINE |
| | | TAXIWAY CENTERLINE |
| | | TAXIWAY HOLDING POSITIION |
| X | | PARKING LOT LINE |
| NAVAIDS | | |
| | | BEACON |
| | | PAPI |
| | | REIL |
| | | THRESHOLD LIGHT |
| | | LOCALIZER |
| | | LOCALIZER AREA A |
| | | LOCALIZER AREA B |
| | | WIND CONE |
| SAFETY AREAS | | |
| RSA | | RSA |
| ROFA | | ROFA |
| RPZ | | RPZ |
| ROFZ | | ROFZ |
| ROFZ \ ROFA | | ROFA/ROFZ |
| | | TESM |
| | | TOFA |
| | | TSA |
| 15'BRL | | 15' BRL |
| 25'BRL | | 25' BRL |
| 35'BRL | | 35' BRL |

| BUILDING NUMBER | NAME | TOP ELEVATION | AREA | DISPOSITION | BUILDING NUMBER | NAME | TOP ELEVATION | AREA | DISPOSITION | BUILDING NUMBER | NAME | TOP ELEVATION | AREA | DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BOX HANGAR | 4737 | 16786 | TO REMAIN | 26 | BOX HANGAR | 4754 | 3656 | TO REMAIN | 60 | STORAGE FACILITY | 4738 | 3029 | TO REMAIN |
| 2 | BOX HANGAR | 4772 | 23125 | TO REMAIN | 27 | BOX HANGAR | 4749 | 1704 | TO REMAIN | 61 | STORAGE FACILITY | 4738 | 3078 | TO REMAIN |
| 3 | BOX HANGAR | 4738 | 3663 | TO REMAIN | 28 | BOX HANGAR | 4751 | 2553 | TO REMAIN | 62 | STORAGE FACILITY | 4743 | 3446 | TO REMAIN |
| 4 | BOX HANGAR | 4738 | 26461 | TO REMAIN | 29 | BOX HANGAR | 4750 | 2049 | TO REMAIN | 63 | STORAGE FACILITY | 4736 | 58 | TO REMAIN |
| 5 | BOX HANGAR | 4739 | 3617 | TO REMAIN | 30 | BOX HANGAR | 4753 | 3938 | TO REMAIN | 64 | OFFICE | 4741 | 5206 | TO REMAIN |
| 6 | BOX HANGAR | 4788 | 23125 | TO REMAIN | 31 | AEROMARK FBO #1 | 4759 | 14903 | TO REMAIN | 65 | OFFICE | 4738 | 3096 | TO REMAIN |
| 7 | BOX HANGAR | 4761 | 3663 | TO REMAIN | 32 | AIRPORT MAINTENANCE | 4771 | 15635 | TO EXPAND | 66 | OFFICE | 4749 | 5049 | TO REMAIN |
| 8 | BOX HANGAR | 4774 | 26461 | TO REMAIN | 42 | OFFICE | 4750 | 5827 | TO REMAIN | 67 | BOX HANGAR | 4744 | 2688 | TO REMAIN |
| 9 | BOX HANGAR | 4759 | 3617 | TO REMAIN | 43 | OFFICE | 4766 | 12676 | TO REMAIN | 68 | BOX HANGAR | 4745 | 6626 | TO REMAIN |
| 10 | BOX HANGAR | 4757 | 3567 | TO REMAIN | 44 | OFFICE | 4749 | 6129 | TO REMAIN | 69 | BOX HANGAR | 4746 | 6626 | TO REMAIN |
| 11 | BOX HANGAR | 4767 | 6422 | TO REMAIN | 45 | OFFICE | 4757 | 5106 | TO REMAIN | 70 | BOX HANGAR | 4747 | 6626 | TO REMAIN |
| 12 | BOX HANGAR | 4761 | 3628 | TO REMAIN | 46 | STORAGE FACILITY | 4752 | 13063 | TO REMAIN | 71 | BOX HANGAR | 4745 | 6626 | TO REMAIN |
| 13 | BOX HANGAR | 4762 | 3635 | TO REMAIN | 47 | STORAGE FACILITY | 4749 | 10466 | TO REMAIN | 72 | BOX HANGAR | 4746 | 2794 | TO REMAIN |
| 14 | BOX HANGAR | 4760 | 3594 | TO REMAIN | 48 | STORAGE FACILITY | 4752 | 8216 | TO REMAIN | 73 | BOX HANGAR | 4753 | 3614 | TO REMAIN |
| 15 | BOX HANGAR | 4759 | 4308 | TO REMAIN | 49 | STORAGE FACILITY | 4746 | 7336 | TO REMAIN | 74 | 4 BOX HANGAR | 4739 | 3421 | TO REMAIN |
| 16 | AEROMARK #2 | 4772 | 36445 | TO REMAIN | 50 | STORAGE FACILITY | 4747 | 8245 | TO REMAIN | 75 | BOX HANGAR | 4751 | 2860 | TO REMAIN |
| 17 | BOX HANGAR | 4754 | 2806 | TO REMAIN | 51 | STORAGE FACILITY | 4748 | 8168 | TO REMAIN | 76 | BOX HANGAR | 4750 | 2556 | TO REMAIN |
| 18 | BOX HANGAR | 4754 | 3649 | TO REMAIN | 52 | OFFICE | 4765 | 14754 | TO REMAIN | 77 | 3 BOX HANGAR | 4741 | 4168 | TO REMAIN |
| 19 | BOX HANGAR | 4754 | 4527 | TO REMAIN | 53 | OFFICE | 4766 | 6465 | TO REMAIN | 77 | BOX HANGAR | 4749 | 6710 | TO REMAIN |
| 20 | BOX HANGAR | 4753 | 3828 | TO REMAIN | 54 | OFFICE | 4785 | 7144 | TO REMAIN | 78 | BOX HANGAR | 4752 | 2893 | TO REMAIN |
| 21 | BOX HANGAR | 4756 | 6054 | TO REMAIN | 55 | GARAGE | 4758 | 2649 | TO REMAIN | 79 | BOX HANGAR | 4757 | 10541 | TO REMAIN |
| 22 | BOX HANGAR | 4758 | 1565 | TO REMAIN | 56 | STORAGE FACILITY | 4756 | 9783 | TO REMAIN | 80 | BOX HANGAR | 4753 | 3671 | TO REMAIN |
| 23 | BOX HANGAR | 4761 | 3666 | TO REMAIN | 57 | OFFICE | 4745 | 6345 | TO REMAIN | 81 | BOX HANGAR | 4765 | 8179 | TO REMAIN |
| 24 | BOX HANGAR | 4754 | 3639 | TO REMAIN | 58 | OFFICE | 4742 | 2054 | TO REMAIN | 82 | 2 BOX HANGAR | 4752 | 3384 | TO REMAIN |
| 25 | BOX HANGAR | 4751 | 3064 | TO REMAIN | 59 | OFFICE | 4759 | 11770 | TO REMAIN | 83 | STORAGE FACILITY | 4739 | 2686 | TO REMAIN |

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BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|


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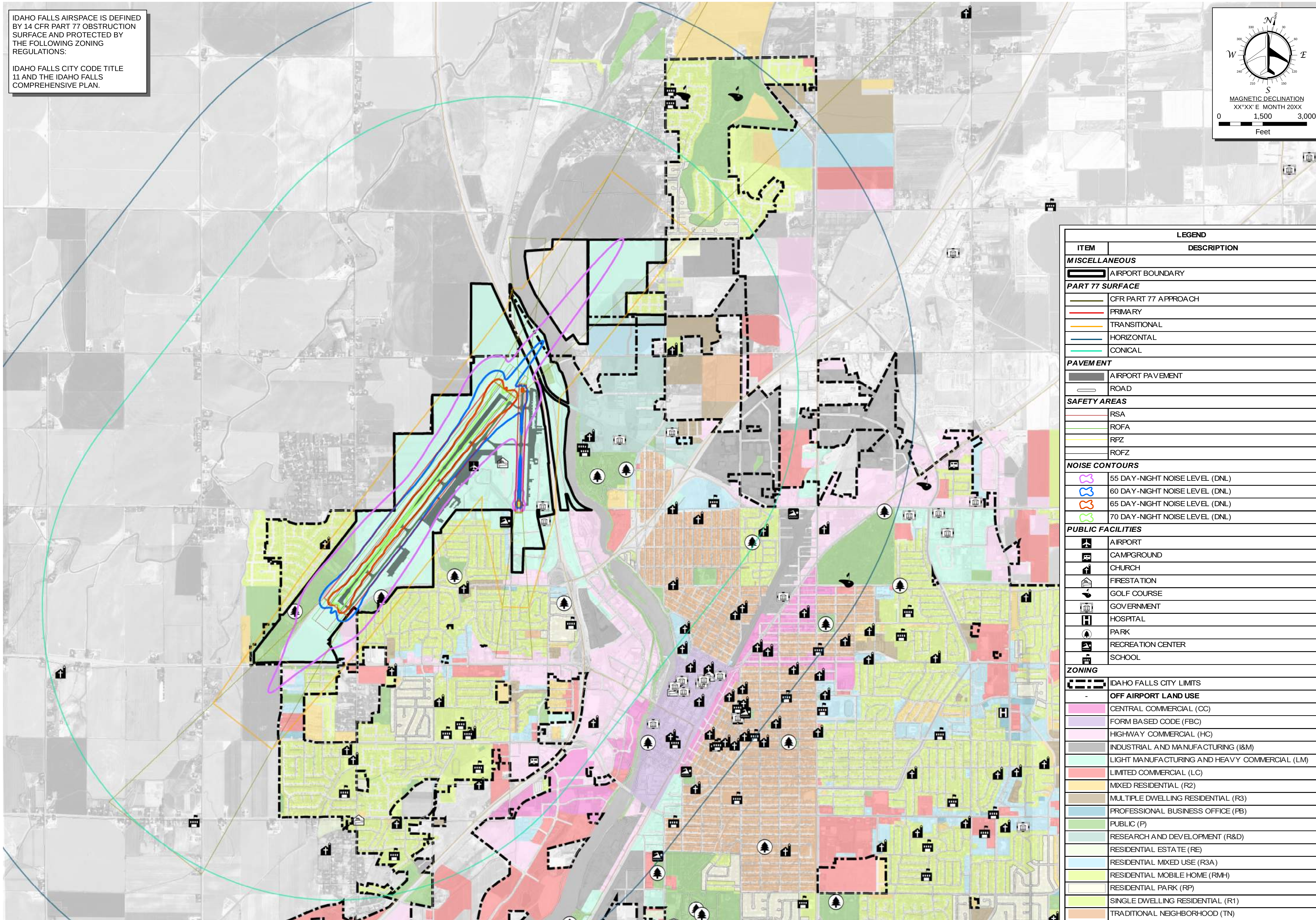
A.I.P. PROJECT # 3-16-0018-050-2021

TERMINAL AREA SOUTH
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 8B
14 OF 19

IDAHO FALLS AIRSPACE IS DEFINED BY 14 CFR PART 77 OBSTRUCTION SURFACE AND PROTECTED BY THE FOLLOWING ZONING REGULATIONS:

IDAHO FALLS CITY CODE TITLE 11 AND THE IDAHO FALLS COMPREHENSIVE PLAN.




LEGEND

| ITEM | DESCRIPTION |
|---|---|
| **MISCELLANEOUS** | |
| | AIRPORT BOUNDARY |
| **PART 77 SURFACE** | |
| | CFR PART 77 APPROACH |
| | PRIMARY |
| | TRANSITIONAL |
| | HORIZONTAL |
| | CONICAL |
| **PAVEMENT** | |
| | AIRPORT PAVEMENT |
| | ROAD |
| **SAFETY AREAS** | |
| | RSA |
| | ROFA |
| | RPZ |
| | ROFZ |
| **NOISE CONTOURS** | |
| | 55 DAY-NIGHT NOISE LEVEL (DNL) |
| | 60 DAY-NIGHT NOISE LEVEL (DNL) |
| | 65 DAY-NIGHT NOISE LEVEL (DNL) |
| | 70 DAY-NIGHT NOISE LEVEL (DNL) |
| **PUBLIC FACILITIES** | |
| | AIRPORT |
| | CAMPGROUND |
| | CHURCH |
| | FIRESTATION |
| | GOLF COURSE |
| | GOVERNMENT |
| | HOSPITAL |
| | PARK |
| | RECREATION CENTER |
| | SCHOOL |
| **ZONING** | |
| | IDAHO FALLS CITY LIMITS |
| - | **OFF AIRPORT LAND USE** |
| | CENTRAL COMMERCIAL (CC) |
| | FORM BASED CODE (FBC) |
| | HIGHWAY COMMERCIAL (HC) |
| | INDUSTRIAL AND MANUFACTURING (I&M) |
| | LIGHT MANUFACTURING AND HEAVY COMMERCIAL (LM) |
| | LIMITED COMMERCIAL (LC) |
| | MIXED RESIDENTIAL (R2) |
| | MULTIPLE DWELLING RESIDENTIAL (R3) |
| | PROFESSIONAL BUSINESS OFFICE (PB) |
| | PUBLIC (P) |
| | RESEARCH AND DEVELOPMENT (R&D) |
| | RESIDENTIAL ESTATE (RE) |
| | RESIDENTIAL MIXED USE (R3A) |
| | RESIDENTIAL MOBILE HOME (RMH) |
| | RESIDENTIAL PARK (RP) |
| | SINGLE DWELLING RESIDENTIAL (R1) |
| | TRADITIONAL NEIGHBORHOOD (TN) |

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|


ARDURRA
1144 SOUTH SILVERSTONE WAY, SUITE 320
MERIDIAN, ID 83642
PHONE: 208.323.2288 WWW.ARDURRA.COM


A.I.P. PROJECT # 3-16-0018-050-2021

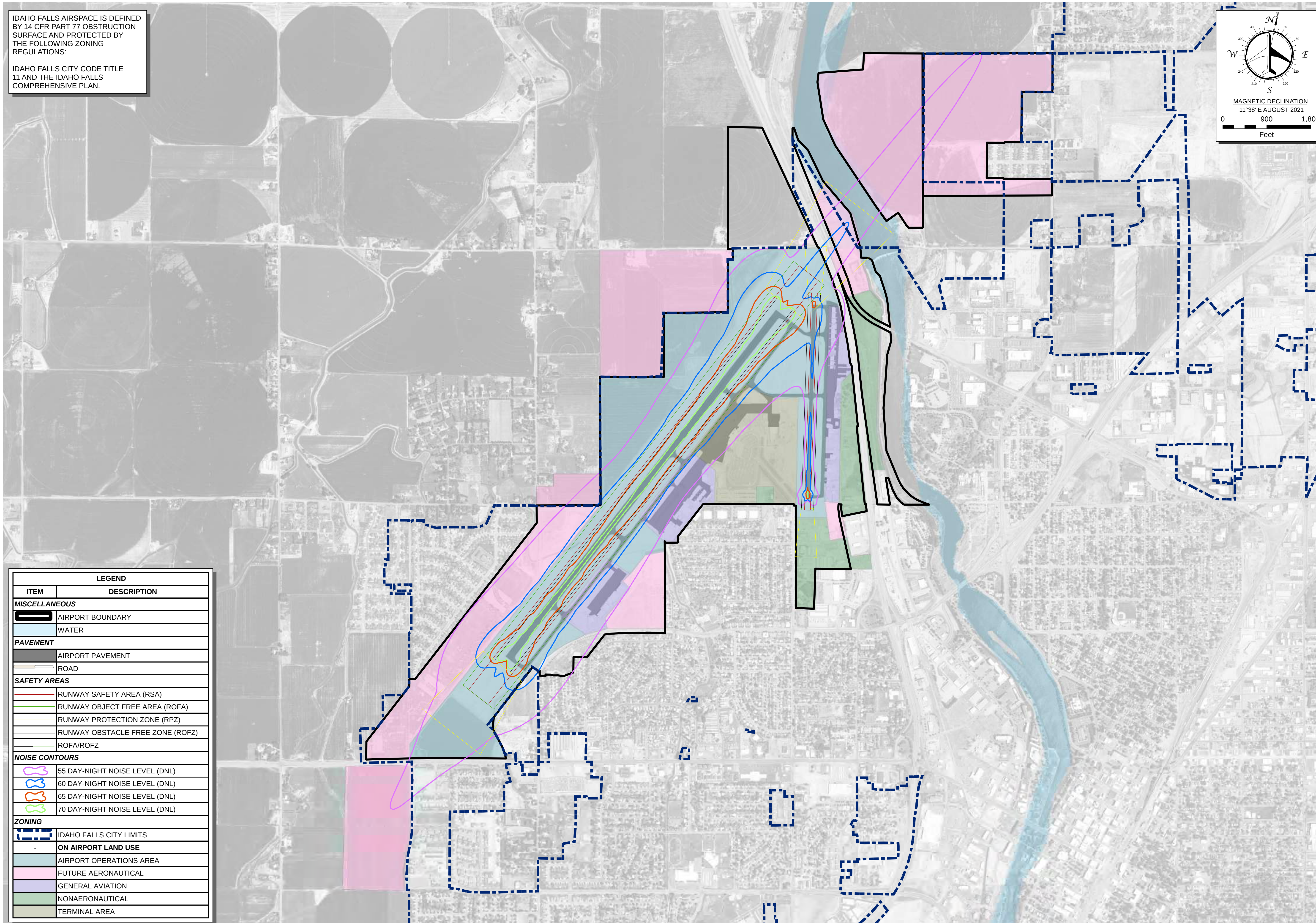
LAND USE

IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX

PROJECT # 200419

SHEET: 9A




**LEGEND**

| ITEM | DESCRIPTION |
|---|---|
| ***MISCELLANEOUS*** | |
| | AIRPORT BOUNDARY |
| | WATER |
| ***PAVEMENT*** | |
| | AIRPORT PAVEMENT |
| | ROAD |
| ***SAFETY AREAS*** | |
| | RUNWAY SAFETY AREA (RSA) |
| | RUNWAY OBJECT FREE AREA (ROFA) |
| | RUNWAY PROTECTION ZONE (RPZ) |
| | RUNWAY OBSTACLE FREE ZONE (ROFZ) |
| | ROFA/ROFZ |
| ***NOISE CONTOURS*** | |
| | 55 DAY-NIGHT NOISE LEVEL (DNL) |
| | 60 DAY-NIGHT NOISE LEVEL (DNL) |
| | 65 DAY-NIGHT NOISE LEVEL (DNL) |
| | 70 DAY-NIGHT NOISE LEVEL (DNL) |
| ***ZONING*** | |
| | IDAHO FALLS CITY LIMITS |
| - | **ON AIRPORT LAND USE** |
| | AIRPORT OPERATIONS AREA |
| | FUTURE AERONAUTICAL |
| | GENERAL AVIATION |
| | NONAERONAUTICAL |
| | TERMINAL AREA |

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BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|
| | | |

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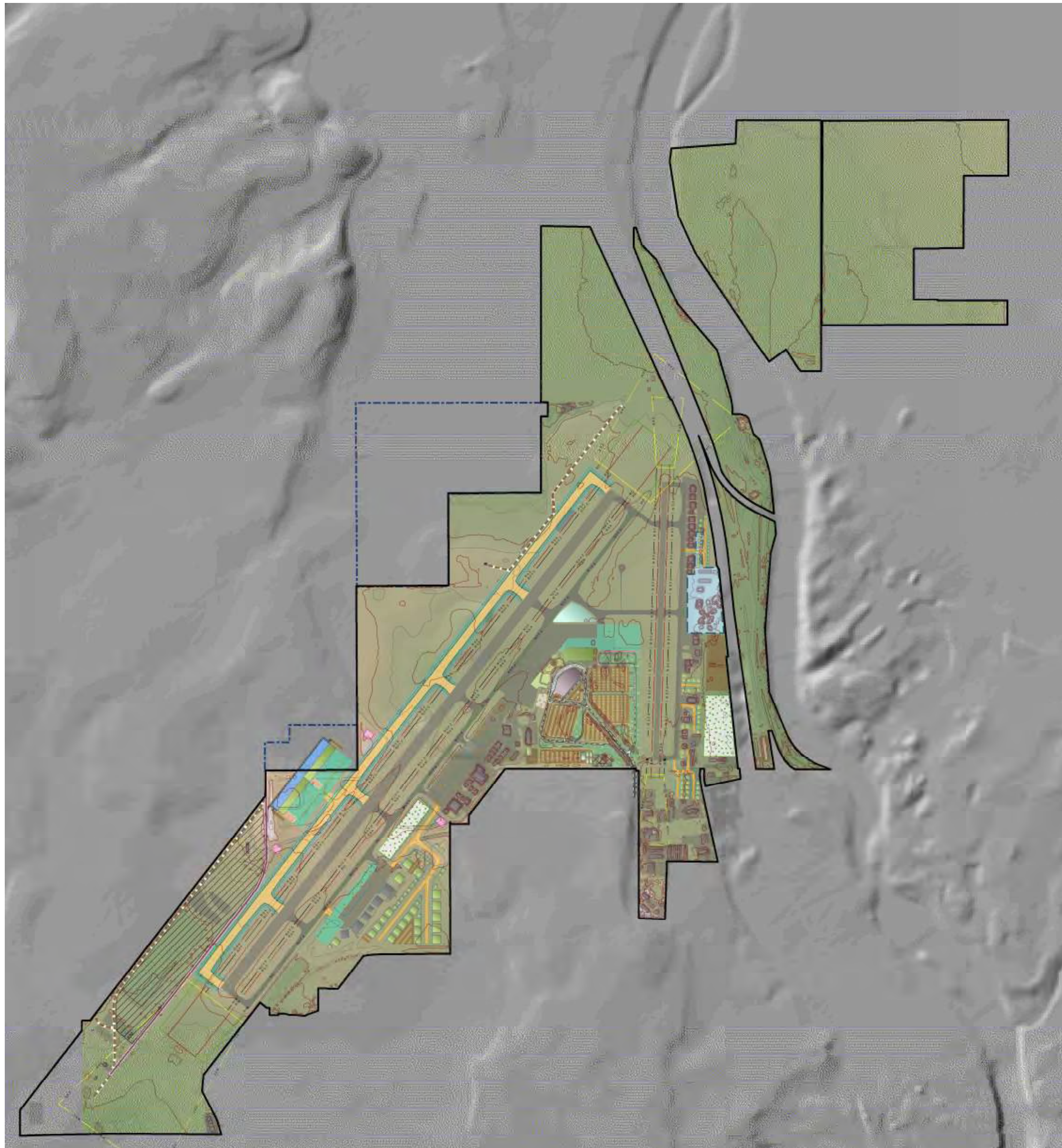
A.I.P. PROJECT # 3-16-0018-050-2021

# ON AIRPORT LAND USE FUTURE
IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 9B
16 OF 19




| LEGEND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ITEM | | DESCRIPTION | ITEM | DESCRIPTION | ITEM | | DESCRIPTION |
| EXISTING | FUTURE | | EXISTING | | EXISTING | FUTURE | |
| *PAVEMENT* | | | *SAFETY AREAS* | | *BUILDING* | | |
| | | APRON | RSA | RUNWAY SAFETY AREA (RSA) | | | HANGAR |
| | | PARKING LOT | ROFA | RUNWAY OBJECT FREE AREA (ROFA) | *5FT CONTOURS* | | |
| | | ROAD | RPZ | RUNWAY PROTECTION ZONE (RPZ) | | | MAJOR CONTOUR |
| | | RUNWAY | ROFZ | RUNWAY OBSTACLE FREE ZONE (ROFZ) | | | MINOR CONTOUR |
| | | TAXIWAY | ROFZ \ RO | ROFA/ROFZ | *MISCELLANEOUS* | | |
| *DIGITAL ELEVATION MODEL (DEM)* | | | | | | | AIRPORT BOUNDARY |

4705.23 4732.76 4760.29

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BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED WR

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|

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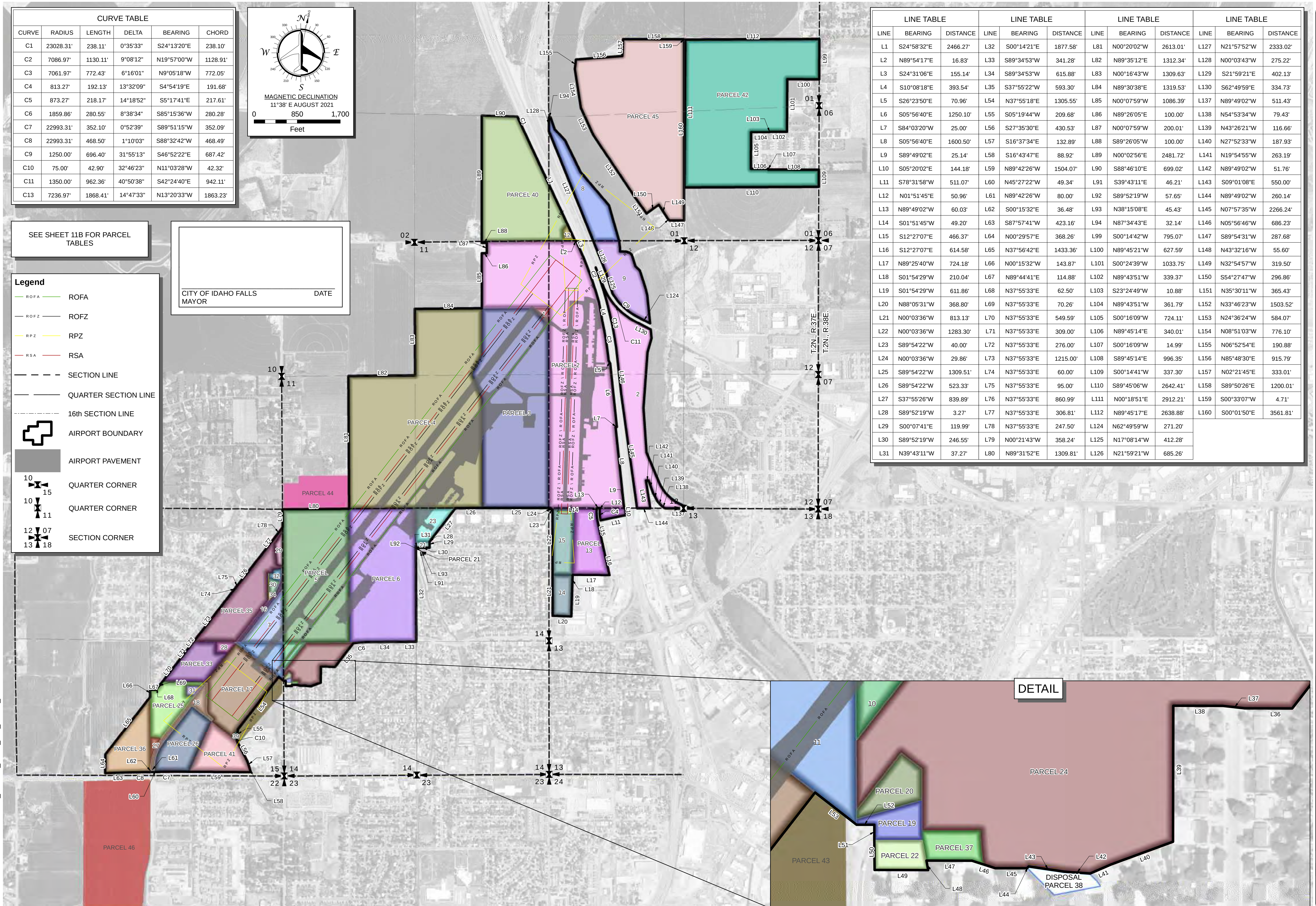
MERIDIAN, ID 83642
PHONE: 208.323.2288 WWW.ARDURRA.COM

A.I.P. PROJECT # 3-16-0018-050-2021

# PHOTO AND CONTOUR
## IDAHO FALLS REGIONAL AIRPORT

DATE: XXX X, XXXX
PROJECT # 200419
SHEET: 10




| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| CURVE | RADIUS | LENGTH | DELTA | BEARING | CHORD |
| C1 | 23028.31' | 238.11' | 0°35'33" | S24°13'20"E | 238.10' |
| C2 | 7086.97' | 1130.11' | 9°08'12" | N19°57'00"W | 1128.91' |
| C3 | 7061.97' | 772.43' | 6°16'01" | N9°05'18"W | 772.05' |
| C4 | 813.27' | 192.13' | 13°32'09" | S4°54'19"E | 191.68' |
| C5 | 873.27' | 218.17' | 14°18'52" | S5°17'41"E | 217.61' |
| C6 | 1859.86' | 280.55' | 8°38'34" | S85°15'36"W | 280.28' |
| C7 | 22993.31' | 352.10' | 0°52'39" | S89°51'15"W | 352.09' |
| C8 | 22993.31' | 468.50' | 1°10'03" | S88°32'42"W | 468.49' |
| C9 | 1250.00' | 696.40' | 31°55'13" | S46°52'22"E | 687.42' |
| C10 | 75.00' | 42.90' | 32°46'23" | N11°03'28"W | 42.32' |
| C11 | 1350.00' | 962.36' | 40°50'38" | S42°24'40"E | 942.11' |
| C13 | 7236.97' | 1868.41' | 14°47'33" | N13°20'33"W | 1863.23' |

SEE SHEET 11B FOR PARCEL TABLES

CITY OF IDAHO FALLS MAYOR DATE

**Legend**

- ROFA
- ROFZ
- RPZ
- RSA
- SECTION LINE
- QUARTER SECTION LINE
- 16th SECTION LINE
- AIRPORT BOUNDARY
- AIRPORT PAVEMENT
- QUARTER CORNER
- QUARTER CORNER
- SECTION CORNER

| LINE TABLE | | | LINE TABLE | | | LINE TABLE | | | LINE TABLE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LINE | BEARING | DISTANCE | LINE | BEARING | DISTANCE | LINE | BEARING | DISTANCE | LINE | BEARING | DISTANCE |
| L1 | S24°58'32"E | 2466.27' | L32 | S00°14'21"E | 1877.58' | L81 | N00°20'02"W | 2613.01' | L127 | N21°57'52"W | 2333.02' |
| L2 | N89°54'17"E | 16.83' | L33 | S89°34'53"W | 341.28' | L82 | N89°35'12"E | 1312.34' | L128 | N00°03'43"W | 275.22' |
| L3 | S24°31'06"E | 155.14' | L34 | S89°34'53"W | 615.88' | L83 | N00°16'43"W | 1309.63' | L129 | S21°59'21"E | 402.13' |
| L4 | S10°08'18"E | 393.54' | L35 | S37°55'22"W | 593.30' | L84 | N89°30'38"E | 1319.53' | L130 | S62°49'59"E | 334.73' |
| L5 | S26°23'50"E | 70.96' | L54 | N37°55'18"E | 1305.55' | L85 | N00°07'59"W | 1086.39' | L137 | N89°49'02"W | 511.43' |
| L6 | S05°56'40"E | 1250.10' | L55 | S05°19'44"W | 209.68' | L86 | N89°26'05"E | 100.00' | L138 | N54°53'34"W | 79.43' |
| L7 | S84°03'20"W | 25.00' | L56 | S27°35'30"E | 430.53' | L87 | N00°07'59"W | 200.01' | L139 | N43°26'21"W | 116.66' |
| L8 | S05°56'40"E | 1600.50' | L57 | S16°37'34"E | 132.89' | L88 | S89°26'05"W | 100.00' | L140 | N27°52'33"W | 187.93' |
| L9 | S89°49'02"E | 25.14' | L58 | S16°43'47"E | 88.92' | L89 | N00°02'56"E | 2481.72' | L141 | N19°54'55"W | 263.19' |
| L10 | S05°20'02"E | 144.18' | L59 | N89°42'26"W | 1504.07' | L90 | S88°46'10"E | 699.02' | L142 | N89°49'02"W | 51.76' |
| L11 | S78°31'58"W | 511.07' | L60 | N45°27'22"W | 49.34' | L91 | S39°43'11"E | 46.21' | L143 | S09°01'08"E | 550.00' |
| L12 | N01°51'45"E | 50.96' | L61 | N89°42'26"W | 80.00' | L92 | S89°52'19"W | 57.65' | L144 | N89°49'02"W | 260.14' |
| L13 | N89°49'02"W | 60.03' | L62 | S00°15'32"E | 36.48' | L93 | N38°15'08"E | 45.43' | L145 | N07°57'35"W | 2266.24' |
| L14 | S01°51'45"W | 49.20' | L63 | S87°57'41"W | 423.16' | L94 | N87°34'43"E | 32.14' | L146 | N05°56'46"W | 686.23' |
| L15 | S12°27'07"E | 466.37' | L64 | N00°29'57"E | 368.26' | L99 | S00°14'42"W | 795.07' | L147 | S89°54'31"W | 287.68' |
| L16 | S12°27'07"E | 614.58' | L65 | N37°56'42"E | 1433.36' | L100 | N89°45'21"W | 627.59' | L148 | N43°32'16"W | 55.60' |
| L17 | N89°25'40"W | 724.18' | L66 | N00°15'32"W | 143.87' | L101 | S00°24'39"W | 1033.75' | L149 | N32°54'57"W | 319.50' |
| L18 | S01°54'29"W | 210.04' | L67 | N89°44'41"E | 114.88' | L102 | N89°43'51"W | 339.37' | L150 | S54°27'47"W | 296.86' |
| L19 | S01°54'29"W | 611.86' | L68 | N37°55'33"E | 62.50' | L103 | S23°24'49"W | 10.88' | L151 | N35°30'11"W | 365.43' |
| L20 | N88°05'31"W | 368.80' | L69 | N37°55'33"E | 70.26' | L104 | N89°43'51"W | 361.79' | L152 | N33°46'23"W | 1503.52' |
| L21 | N00°03'36"W | 813.13' | L70 | N37°55'33"E | 549.59' | L105 | S00°16'09"W | 724.11' | L153 | N24°36'24"W | 584.07' |
| L22 | N00°03'36"W | 1283.30' | L71 | N37°55'33"E | 309.00' | L106 | N89°45'14"E | 340.01' | L154 | N08°51'03"W | 776.10' |
| L23 | S89°54'22"W | 40.00' | L72 | N37°55'33"E | 276.00' | L107 | S00°16'09"W | 14.99' | L155 | N06°52'54"E | 190.88' |
| L24 | N00°03'36"W | 29.86' | L73 | N37°55'33"E | 1215.00' | L108 | S89°45'14"E | 996.35' | L156 | N85°48'30"E | 915.79' |
| L25 | S89°54'22"W | 1309.51' | L74 | N37°55'33"E | 60.00' | L109 | S00°14'41"W | 337.30' | L157 | N02°21'45"E | 333.01' |
| L26 | S89°54'22"W | 523.33' | L75 | N37°55'33"E | 95.00' | L110 | S89°45'06"W | 2642.41' | L158 | S89°50'26"E | 1200.01' |
| L27 | S37°55'26"W | 839.89' | L76 | N37°55'33"E | 860.99' | L111 | N00°18'51"E | 2912.21' | L159 | S00°33'07"W | 4.71' |
| L28 | S89°52'19"W | 3.27' | L77 | N37°55'33"E | 306.81' | L112 | N89°45'17"E | 2638.88' | L160 | S00°01'50"E | 3561.81' |
| L29 | S00°07'41"E | 119.99' | L78 | N37°55'33"E | 247.50' | L124 | N62°49'59"W | 271.20' | | | |
| L30 | S89°52'19"W | 246.55' | L79 | N00°21'43"W | 358.24' | L125 | N17°08'14"W | 412.28' | | | |
| L31 | N39°43'11"W | 37.27' | L80 | N89°31'52"E | 1309.81' | L126 | N21°59'21"W | 685.26' | | | |

PROFESSIONAL LAND SURVEYOR
LICENSED
STATE OF IDAHO
ANDREW M. POE
DRAFT

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED AMP

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|

ARDURRA
1144 SOUTH SILVERSTONE WAY, SUITE 320
MERIDIAN, ID 83642
PHONE: 208.323.2288 WWW.ARDURRA.COM

A.I.P. PROJECT # 3-16-0018-050-2021

# EXHIBIT 'A'

IDAHO FALLS REGIONAL AIRPORT

DATE: XXX XX, XXXX
PROJECT # 200419
SHEET: 11A
18 OF 19

Document Path: K:\200419-CDY5_GIS\IDA_Sheet_11A_Exhibit_A.mxd

PARCEL

| | DESCRIPTION | GRANTOR | GRANTEE | DATE | RECORDING INFORMATION | INTEREST HELD | DEED ACRES | MEASURED ACRES | FEDERAL PROJECT INFROMATION | PURPOSE |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | P.O.B.: NE CRNR. SE1/4 NE1/4 SEC.11 T2N, R37 EBM | WALTER T. PETTINGER ET UX (WD-34 P.251) | CITY OF IDAHO FALLS | 12/30/1933 | 108146 | FEE SIMPLE | 1.3 ± AC | 1.3 ± AC | - | AERONAUTICAL USE |
| 2 | IN NE1/4 NE1/4 SEC.11 T2N, R37 EBM, + ALL OF SEC. 12 W OF SNAKE RIVER. SOME PORTIONS OF SEC.12 W OF RIVER WERE SOLD. | BONNEVILE CO. COUNTY DEED (BK.1 P.447) | CITY OF IDAHO FALLS | 5/13/1937 | 124907 | FEE SIMPLE | - | 223.0 ± AC | - | AERONAUTICAL USE |
| 3 | E 1/2 SE1/4 & SE1/4 NE1/4(1.32 AC. +2 AC.) | FARREL L. & LILY W. HANSEN (WD-44 P.488) | CITY OF IDAHO FALLS | 10/21/1941 | 147926 | FEE SIMPLE | 120.7 ± AC | 119.4 ± AC | - | AERONAUTICAL USE |
| 4 | E1/2 SW1/4, W1/2 SE1/4, SW1/4 NE1/4, 2AC. NE1/4 NW1/4 SE1/4 SEC.11 T2N, R37 EBM | WALTER T. & ATHYL O. PETTINGER (WD-44 P.498) | CITY OF IDAHO FALLS | 10/30/1941 | 148024 | FEE SIMPLE | 198.0 ± AC | 195.1 ± AC | - | AERONAUTICAL USE |
| 5 | W1/2 NW1/4 SEC.14 T2N, R37 EBM | ANDREW & ANNA NEWMAN (WD-97 P.553) | CITY OF IDAHO FALLS | 7/15/1955 | 238922 | FEE SIMPLE | 80.0 ± AC | 79.0 ± AC | FAAP 9-10-060-504 | AERONAUTICAL USE |
| 6 | E1/2 NW1/4 SEC.14 T2N, R37 EBM | CHARLES & HELEN REED (WD-97 P.551) | CITY OF IDAHO FALLS | 7/18/1955 | 238921 | FEE SIMPLE | 80.0 ± AC | 79.0 ± AC | FAAP 9-10-060-504 | AERONAUTICAL USE |
| 7 | IN SE 1/4 NE 1/4 SEC.15 T2N, R37 EBM, P.O.B.: W25' FROM E1/4 CRNR. | EVERETT E. & MELVA HARRIELL (WD-119 P.109) | CITY OF IDAHO FALLS | 10/16/1958 | 270921 | FEE SIMPLE | 9.5 ± AC | 10.0 ± AC | FAAP 9-10-060-C611 | AERONAUTICAL USE |
| 8 | PORT. OF LOT 6, SEC.1 T2N, R37 EBM | LLOYD & HELEN MORI (WD-119 P.213) | CITY OF IDAHO FALLS | 2/17/1959 | 271185 | FEE SIMPLE | 20.9± AC | 20.9± AC | - | AERONAUTICAL USE |
| 9 | PORT. LOT 8, SEC.12 T2N, R37 EBM, LYING N & E OF O.S.L.R.R. | HELEN ANDERSON & JUNE REMSBURG (WD-121 P.367) | CITY OF IDAHO FALLS | 6/4/1959 | 274711 | FEE SIMPLE | 20.5 ± AC | 20.5 ± AC | - | AERONAUTICAL USE |
| 10 | IN SW1/4 SEC.14 T2N, R37 EBM, P.O.B.: E41' FROM W1/4 CRNR. SEC.14 | N.L.B.C. CORP. (WD-125 P.189) | CITY OF IDAHO FALLS | 12/15/1959 | Bk. 125 P. 189 | FEE SIMPLE | 2.3 ± AC | 2.7 ± AC | FAAP 9-10-060-C611 | AERONAUTICAL USE |
| 11 | IN NE 1/4 SE1/4 SEC.15 T2N, R37 EBM, P.O.B.: 25'W OF E1/4 CRNR. | CHARLES S. & HELEN REED & STELLA REED (WD-125 P.347) | CITY OF IDAHO FALLS | 12/31/1959 | 281440 | FEE SIMPLE | 7.8 ± AC | 8.2 ± AC | FAAP 9-10-060-C611 | AERONAUTICAL USE |
| 12 | ALSO PERPETUAL FLIGHT EASEMENT 0.33 AC. ALL IN SW1/4 SEC.1 T2N, R37 EBM | HERBERT JOHN & BONNIE SWANSON (WD-126 P.435 REC.#283580) | CITY OF IDAHO FALLS | 3/8/1960 | 283580 | FEE SIMPLE | 2.3 ± AC | 1.0 ± AC | - | AERONAUTICAL USE |
| 13 | PORT. OF NW1/2 NW/14 SEC.13 T2N, R37 EBM, W OF I-15 R/W & E OF PROP. PURCHASED FROM SODERQUIST. NOTE: 9 AC. WAS DEEDED TO THE ST. OF IDAHO (WD-REC#394447), THIS PROPERTY WAS EXCHANGED FOR 6.01 AC. LOCATED I-15 & BROADWAY (WD-REC.@392078) | L.E. & GLADYS G. ERICKSON (WD-152 P.113 REC.#328180) | CITY OF IDAHO FALLS | 10/23/1963 | 328180 | FEE SIMPLE | 17.2 ± AC | 19.4 ± AC | - | AERONAUTICAL USE |
| 14 | IN NW1/4 SEC.13 T2N, R37 EBM, P.O.B.: S1312.29' & E30' FROM NW CRNR. | WM R. & BEULAH T. HATCH (WD-153 P.403) | CITY OF IDAHO FALLS | 12/20/1963 | 330671 | FEE SIMPLE | 7.7 ± AC | 7.1 ± AC | - | AERONAUTICAL USE |
| 15 | IN N1/2 NW1/4 SEC.13 T2N, R37 EBM | A.R. & VENLA SODERQUIST (WD-REC.#330237) | CITY OF IDAHO FALLS | 12/30/1963 | 330237 | FEE SIMPLE | 13.6 ± AC | 12.4 ± AC | - | AERONAUTICAL USE |
| 16 | IN NE 1/4 SEC.15 T2N, R37 EBM, RELOCATION OF OLD BUTTE RD. | PARLEY & MARGARET RIGBY, MF & MIRIAN RIGBY (WD-REC#365076) | CITY OF IDAHO FALLS | 9/23/1966 | 365076 | FEE SIMPLE | 2.8 ± AC | 2.9 ± AC | FAAP 9-10-060-C712 | AERONAUTICAL USE |
| 17 | IN SE1/4 SEC.15 T2N, R37 EBM | CHARLES S. & HELEN REED, JUDGEMENT DEED (REC.#371001) | CITY OF IDAHO FALLS | 4/6/1967 | 371001 | FEE SIMPLE | 33.8 ± AC | 34.0 ± AC | FAAP 9-10-060-C611 | AERONAUTICAL USE |
| 18 | IN SE1/4 SEC.15 T2N, R37 EBM, P.O.B.:W2628.24' FROM SE CRNR. SEC.15 | DAVID P. & NANCY REED & WAYNE L. & HELEN I. REED, JUDGEMENT DEED (REC.#371001) | CITY OF IDAHO FALLS | 4/6/1967 | 371001 | FEE SIMPLE | 6.3 ± AC | 6.1 ± AC | FAAP 9-10-060-C611 | AERONAUTICAL USE |
| 19 | LOT 32, BLK.1, ESQUIRE ACRES SUBDIV. DIV.#3 | ROBERT & ELAINE LOLLEY (WD-REC.#475512) | CITY OF IDAHO FALLS | 3/14/1975 | 475512 | FEE SIMPLE | 0.2 ± AC | 0.2 ± AC | ADAP 8-16-0018-03 | AERONAUTICAL USE |
| 20 | LOT 33, BLK.1, ESQUIRE ACRES SUBDIV. DIV.#3 | JIMMY & VICKIE KING (WD-REC.#475683) | CITY OF IDAHO FALLS | 3/14/1975 | 475683 | FEE SIMPLE | 0.3 ± AC | 0.3 ± AC | ADAP 8-16-0018-03 | AERONAUTICAL USE |
| 21 | W47.17' LOT 11, ALL LOTS 12,13,&14, BLK.14, JOHN HEIGHTS SUBDIV. DIV.#9; IN NW CRNR. LOT 21 BLK.6, JOHN HEIGHTS SUBDIV. DIV.#9 | GRANDVIEW INV. CO. CORP. (WD-REC.#476049) | CITY OF IDAHO FALLS | 3/18/1975 | 476049 | FEE SIMPLE | - | 0.8 ± AC | ADAP 8-16-0018-03 | AERONAUTICAL USE |
| 22 | LOT 31, BLK.1, ESQUIRE ACRES SUBDIV. DIV.#3 | MARVIN R. & D. JEAN HERNDON (WD-REC#477357) | CITY OF IDAHO FALLS | 4/24/1975 | 477357 | FEE SIMPLE | - | 0.2 ± AC | ADAP 8-16-0018-03 | AERONAUTICAL USE |
| 23 | IN NW1/4 NE1/4 SEC.14 T2N, R37 EBM | WM F. & JEANNE RIGBY & RICHARD I. CLAYTON (SP. WD-REC.#506669) | CITY OF IDAHO FALLS | 11/12/1976 | 506669 | FEE SIMPLE | 7.5 ± AC | 8.0 ± AC | ADAP 8-16-0018-03 | AERONAUTICAL USE |
| 24 | IN NW1/4 SW1/4 SEC.14 T2N, R37 EBM, ALSO LOTS 18 & 19 BLK.1 ESQUIRE SUBDIV. DIV.#2, LOTS 46, 47 & 48 BLK.3 ESQUIRE SUBDIV. DIV.#2 & LOTS 7,8,9,10,11,12,&13 BLK.6 ESQUIRE AC. SUBDIV. DIV.#2 | RICHARD I. CLAYTON (SP. WD-REC.#506670) | CITY OF IDAHO FALLS | 11/26/1976 | 506670 | FEE SIMPLE | 12.1 ± AC | 15.6 ± AC | ADAP 8-16-0018-03 | AERONAUTICAL USE |
| 25 | IN SE1/4 SEC.15 T2N, R37 EBM | DAVID POWELL & NANCY REED (REC.#618037) | CITY OF IDAHO FALLS | 1/6/1982 | 618037 | FEE SIMPLE | 15.5 ± AC | 14.8 ± AC | ADAP 8-16-0018-04 | AERONAUTICAL USE |
| 26 | IN SEC.15 T2N, R37 EBM | WAYNE LEROY & HELEN I. REED (WD-REC.#627375) | CITY OF IDAHO FALLS | 12/7/1982 | 627375 | FEE SIMPLE | 18.0 ± AC | 18.8 ± AC | ADAP 8-16-0018-05 | AERONAUTICAL USE |
| 27 | IN SEC.15 T2N, R37 EBM | RON & KAREN CRYSTAL (WD-REC#686714) | CITY OF IDAHO FALLS | 10/7/1985 | 686714 | FEE SIMPLE | 1.4 ± AC | 1.0 ± AC | AIP 3-16-0018-01 | AERONAUTICAL USE |
| 28 | IN SEC.15 T2N, R37 EBM | B. & N. FIELD (WD-REC.#715340) | CITY OF IDAHO FALLS | 9/9/1986 | 715340 | FEE SIMPLE | 1.5 ± AC | 1.5 ± AC | AIP 3-16-0018-03 | AERONAUTICAL USE |
| 29 | IN SEC.15 T2N, R37 EBM | JAMES H. MCDANIEL (WD-REC.#733606) | CITY OF IDAHO FALLS | 7/15/1987 | 733606 | FEE SIMPLE | 1.4 ± AC | 1.6 ± AC | AIP 3-16-0018-05 | AERONAUTICAL USE |
| 30 | IN SEC.15 T2N, R37 EBM | HARRY S. SCHULDT JR. (WD-REC.#755936) | CITY OF IDAHO FALLS | 8/24/1987 | 735936 | FEE SIMPLE | 1.0 ± AC | 1.0 ± AC | AIP 3-16-0018-05 | AERONAUTICAL USE |
| 31 | IN SEC.15 T2N, R37 EBM | R. SMITH (WD-REC.#742388) | CITY OF IDAHO FALLS | 12/29/1987 | 742388 | FEE SIMPLE | 1.1 ± AC | 1.1 ± AC | AIP 3-16-0018-03 | AERONAUTICAL USE |
| 32 | IN SEC.15 T2N, R37 EBM | GEORGE L. GRUVER (WD-REC.#754316) | CITY OF IDAHO FALLS | 8/22/1988 | 754316 | FEE SIMPLE | 1.0 ± AC | 1.0 ± AC | AIP 3-16-0018-06 | AERONAUTICAL USE |
| 33 | IN SEC.15 T2N, R37 EBM | LEROY REED, ETAL (WD-REC.#824783) | CITY OF IDAHO FALLS | 3/27/1992 | 824783 | FEE SIMPLE | 24.5 ± AC | 13.8 ± AC | AIP 3-16-0018-09 | AERONAUTICAL USE |
| 34 | IN SEC.15 T2N, R37 EBM | WM RIGBY, ETAL (WD-REC.#850700,850701) | CITY OF IDAHO FALLS | 5/14/1993 | 850700, 850701 | FEE SIMPLE | 0.4 ± AC | 0.4 ± AC | AIP 3-16-0018-09 | AERONAUTICAL USE |
| 35 | IN SEC.15 T2N, R37 EBM | GRANDVIEW INVESTMENT CO., INC. (WD-REC.#850702) | CITY OF IDAHO FALLS | 5/14/1993 | 850702 | FEE SIMPLE | 29.3 ± AC | 28.9 ± AC | AIP 3-16-0018-09 | AERONAUTICAL USE |
| 36 | IN SEC.15 T2N, R37 EBM | WALTER PETERSEN (WD-REC.#896007) | CITY OF IDAHO FALLS | 3/22/1995 | 896007 | FEE SIMPLE | 18.7 ± AC | 18.7 ± AC | AIP 3-16-0018-09 | AERONAUTICAL USE |
| 37 | LOT 17, BLK. 1 ESQUIRE ACRES SUB-DIV. DIV.#2 IN SEC.14 T2N, R37 EBM | CARL & LETA CARLSON (WD-REC.#909085) | CITY OF IDAHO FALLS | 11/2/1995 | 909085 | FEE SIMPLE | 0.2 ± AC | 0.2 ± AC | AIP 3-16-0018-16 | AERONAUTICAL USE |
| 38 | PORT OF LOTS 46 AND 47, BLOCK 3, ESQUIRE ACRES SUBDIVISION NO 2 | CITY OF IDAHO FALLS | KELLOGG, JAMES A . & TERRIE | 2/28/1997 | 937884 | FEE SIMPLE | 0.3 ± AC | 0.3 ± AC | - | AERONAUTICAL USE |
| 39 | IN SEC.15 T2N, R37 EBM | REED, CHARLES LEROY, LARENE, DAVID SMITH, SHARON LARUE, LARRY L. AND CAROL M. | CITY OF IDAHO FALLS | 5/1/2001 | 1046769 | FEE SIMPLE | 0.3 ± AC | 0.3 ± AC | - | AERONAUTICAL USE |
| 40 | PART OF S 1&2, T 2 N R 37 E | BONNIE J. SWANSON | CITY OF IDAHO FALLS | 6/26/2017 | 1556174 | FEE SIMPLE | 71.2 ± AC | 70.8 ± AC | AIP 3-16-0018-16 | AERONAUTICAL USE |
| 41 | IN SEC.15 T2N, R37 EBM | LEROY REED, ETAL (RPA00007158543) | CITY OF IDAHO FALLS | 7/13/1999 | 1001686 | FEE SIMPLE | 19.5 ± AC | 16.5 ± AC | AIP 3-16-0018-16 | AERONAUTICAL USE |
| 42 | A PORTION OF S1 T2N R37E | LLKM PROPERTIES, LLC (WD-REC. #1669032) | CITY OF IDAHO FALLS | 12/30/2020 | 1669032 | FEE SIMPLE | 138.9 ± AC | 138.9 ± AC | AIP 3-16-0018-57 | AERONAUTICAL USE |
| 43 | IN SEC.15 T2N, R37 EBM | LARRY & CAROL REED | TO BE AQUIRED | - | - | FEE SIMPLE | 7.2 ± AC | 7.1 ± AC | - | AERONAUTICAL USE |
| 44 | A SW1/4 SW1/4, SEC 11, T 2N, R 37 | VIRGINIA TRACY | TO BE AQUIRED | - | - | FEE SIMPLE | 17.7 ± AC | 18.3 ± AC | - | AERONAUTICAL USE |
| 45 | A PORTION OF S1 T2N R37E | JOHNSON LEGACY, LLC | CITY OF IDAHO FALLS | 7/18/2024 | 1771174 | FEE SIMPLE | 126.6 ± AC | 126.6 ± AC | - | AERONAUTICAL USE |
| 46 | A PORTION OF S22 T2N R37E | PETERSON FAMILY, LLC | TO BE AQUIRED | - | - | FEE SIMPLE | 73.9 ± AC | 73.9 ± AC | - | AERONAUTICAL USE |

PROFESSIONAL LAND SURVEYOR
LICENSED
17825
STATE OF IDAHO
ANDREW M. POE
DRAFT

BORDER SIZE 11"X17"
DESIGNED DESIGN
DRAWN BRC
CHECKED BWC
APPROVED AMP

REVISIONS

| NO. | DESCRIPTION | DATE: |
|---|---|---|

ARDURRA
1144 SOUTH SILVERSTONE WAY, SUITE 320
MERIDIAN, ID 83642
PHONE: 208.323.2288 WWW.ARDURRA.COM

A.I.P. PROJECT # 3-16-0018-050-2021

EXHIBIT 'A'

IDAHO FALLS REGIONAL AIRPORT

DATE: XXX XX, XXXX

PROJECT # 200419

SHEET: 11B



Document Path: K:\200419-CDY5_GIS\IDA_Sheet_11B_Exhibit_A.mxd