Preston Airport (U10)

Airport Master Plan

Chapter Three: Facility Requirements

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CHAPTER THREE

FACILITY REQUIREMENTS

To properly plan for the future of Preston Airport (U10), it is necessary to determine if the existing airport facilities can safely and efficiently accommodate current and forecasted levels of activity. Each of the facilities described in Chapter 1, Existing Conditions, 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.

The main goal of this analysis will be to identify if improvements are needed, when they will be needed, and the purpose for these improvements. Each facility will be analyzed to determine its ability to safely and efficiently accommodate the forecasted activity levels discussed in Chapter 2, Aviation Forecasts. Facilities will also be examined to determine if they meet current FAA design standards, recommendations, requirements, and design considerations. Alternative methods of addressing these potential development projects will be discussed and evaluated in Chapter 4, Development Alternatives.

3.1 FACILITY REQUIREMENTS SUMMARY

Table 3.1 summarizes the airport facilities that were examined in this evaluation as well as the conclusions and recommendations that are discussed in this chapter.

Table 3.1 Summary of U10 Facility Assessment

Facility	Findings
Airfield Capacity	• No capacity improvement planning is required; the Airport's capacity will not exceed 3.9% of the annual service volume for the 20-year planning period.
Approach Procedures	• An RNAV (GPS) approach with LNAV landing minimums is recommended on Runway 4, and an RNAV (GPS) approach with LNAV/VNAV landing minimums is recommended on Runway 22. • Departure procedures are recommended on Runway 4/22.
Runway Requirements	• The RSA beyond both Runway 17/35 ends exceeds the 5% maximum negative grade. • The RSA and ROFA beyond Runway 35 are not fully within airport-controlled property. • Runway 17/35 is 30 feet wide, which does not meet the design standard of 60 feet. • Runway 4/22 will need to continue to implement declared distances due to nonstandard RSA and ROFA conditions. • Both runways meet line-of-sight standards. • Both runways will not require redesignation in the next 20 years. • Runway 4/22 meets the 95% wind coverage requirement for all crosswind components. • Runway 22 and Runway 17 RPZs have a highway, which is a historical condition. The Airport does not have full land control over portions of each RPZ at U10.
Taxiways and Taxilanes	• Taxiways A1, A2, and A3 meet or exceed safety area and object free area standards. • Portions of the main GA apron taxilanes do not meet dimensional, safety area, and object free area standards.
Airfield Pavements	• Runway 4/22 weight bearing capacity is adequate to support the existing and future critical aircraft. • Runway 4/22 pavement will require maintenance in the next 5 years.

Facility	Findings
	• Airfield markings are in good condition but will need to be updated to non-precision instrument runway markings for IFP implementation.
Airfield Signage	• Airfield signage is consistent with FAA standards for color and configuration.
Navigational Aids	• All navigational aid critical areas meet siting clearance standards. • Installation of weather sensing equipment is recommended for IFP development.
Airspace Requirements	• All Part 77 surfaces, approach surfaces, and departure surfaces should continue to be protected to the maximum extent possible in order to prevent new obstructions. • Vehicles on U.S. Highway 91 penetrate the Runway 4/22 primary and transitional surfaces and the Runway 22 Part 77 approach surface.
Landside Facilities	• A minimum of 25 new hangars will need to be planned for. • An additional 18 tiedowns will be needed by 2043.
Support Facilities	• Wi-Fi should be installed to meet requirements. • An above ground fuel storage option should be planned for when the below grade 100LL storage tank reaches its useful life. • A vehicle access gate is needed between the Airport main entrance and main GA apron. • A Wildlife Hazard Site Visit determined a wildlife exclusion fence is needed around the perimeter of the property. • Existing automobile parking meets requirements.

Source: Ardurra

3.2 AIRPORT DESIGN AND FEDERAL AVIATION ADMINISTRATION STANDARDS

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

1. Identify the size, approach category, and airplane and taxiway design groups of the critical aircraft.
2. Identify reasonably attainable visibility minimums.
3. Identify the design code for each runway.
4. Apply the appropriate design standards from FAA-issued guidance.

3.2.1 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. As previously discussed in Section 2.5, Critical Aircraft, the critical aircraft is the most demanding type of aircraft, or group of aircraft with similar characteristics, that regularly use an airport. It can be a single aircraft or a composite of the most demanding characteristics from different aircraft. Incorporating these characteristics as part of the coding system in this way helps airport planners and engineers design an airport to meet both current and future needs, while also ensuring the correct design standards are applied.

The approach speed, tail height, wingspan, weight, and landing gear dimensions of the critical aircraft defines the design parameters of an airport. The corresponding coding systems include the aircraft approach category (AAC), airplane design group (ADG), and taxiway design group (TDG).

The AAC is designated by a letter and is based on the speed of an aircraft as it approaches a runway for landing (Table 3.2). It is generally used to help ensure an airport's runway safety areas can safely accommodate the critical aircraft.

Table 3.2 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*

The 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 3.3). It is typically used to establish dimensional standards for adequate aircraft clearance.

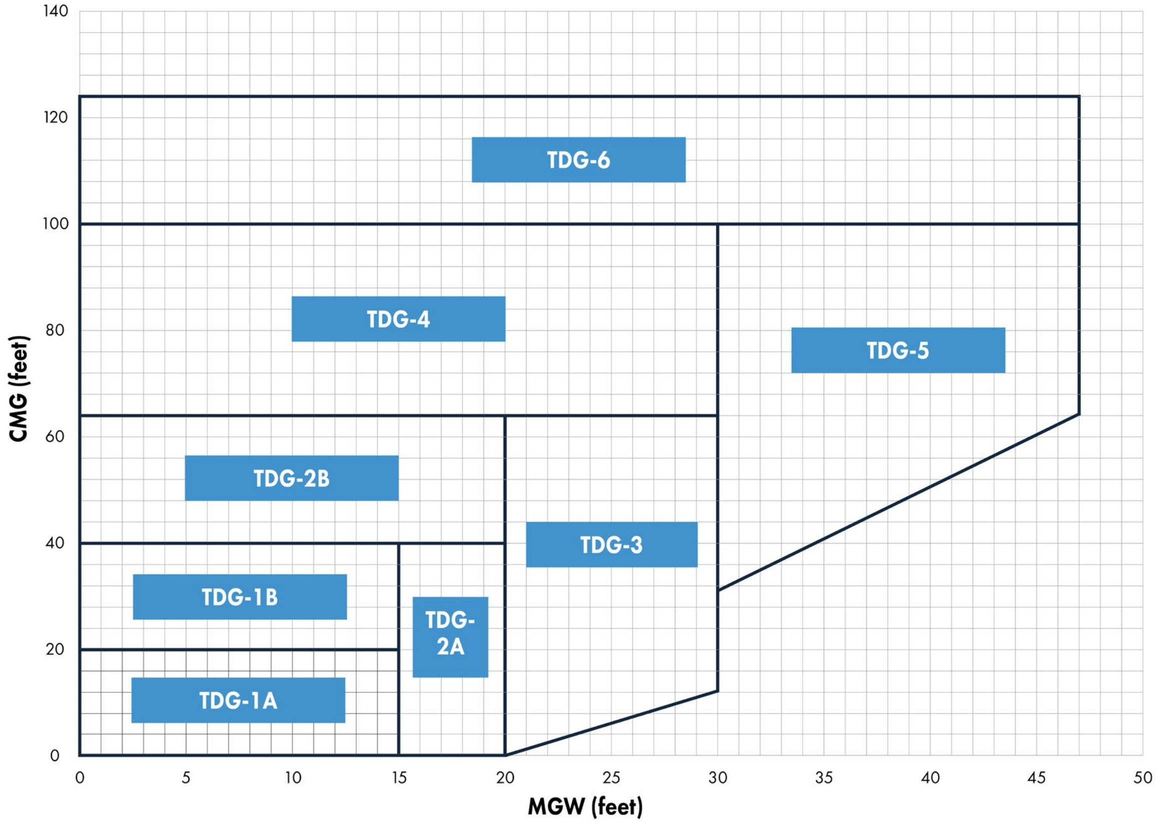
Table 3.3 Airplane Design Groups

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*

The TDG is used to establish the correct dimensions for taxiway and taxilane widths. As shown in Figure 3.1, it is based on an aircraft's landing gear dimensions from cockpit to main gear (CMG) and main gear width (MGW).

Figure 3.1 Taxiway Design Groups



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

3.2.2 Visibility Minimums and Runway Visual Range Values

A runway's lowest minimum visibility published on an instrument approach chart is used to determine its runway visual range (RVR) value. As shown in Table 3.4, a runway that does not have an instrument approach is classified as a visual runway and does not have a runway visual range value.

Table 3.4 Visibility Minimums and Runway Visual Range Values

Runway Visual Range Value	Instrument Flight Visibility (Statute Miles)
VIS	Visual Approach Only
5,000 feet	Not lower than 1 mile
4,000 feet	Lower than 1 mile but not lower than ¾ mile
2,400 feet	Lower than ¾ mile but not lower than ½ mile
1,600 feet	Lower than ½ mile but not lower than ¼ mile
1,200 feet	Lower than ¼ mile

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

3.2.3 Runway Design Code

The runway design code (RDC) is comprised of the airport approach category, airplane design group, and runway visual range. The RDC is used to establish design criteria for a specific runway, which can vary per runway depending on the type of aircraft expected to use each runway.

3.2.4 Critical Aircraft and Airfield Design Criteria

As previously discussed in Chapter 2, Aviation Forecasts, the existing and future critical aircraft has an aircraft approach category of A, an airplane design group of I, and a taxiway design group of 1A. This critical aircraft is best represented by the Cessna 172 Skyhawk, which has a MTOW under 12,500 pounds, further classifying the critical aircraft as A-I(small).

3.3 AIRFIELD FACILITIES

An assessment of the airfield facilities was conducted to determine their ability to safely and efficiently accommodate the activity forecasted for the 20-year planning period. This included evaluating the runways, taxiways, and navigational aids at U10 for FAA design and safety standard compliance. The resulting airside facility requirement determinations are then used to help identify the improvements needed to meet specific operational demands.

3.3.1 Airfield Capacity

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

Determining an airport's hourly capacity and its annual service volume is part of the methodology used for estimating an airfield's annual capacity, which is outlined in FAA AC 150/5060-5, *Airport Capacity and Delay*. This methodology accounts for differences in runway use, aircraft mix, and annual weather conditions. The aircraft mix index at U10, which is a mathematical expression of the percent of aircraft with a max takeoff weight exceeding 12,500 pounds that use an airport, was determined to be between 0 and 20. The Airport's annual service volume was estimated to be approximately 230,000 aircraft operations with 98 operations per hour conducted under visual flight rules (VFR) and 59 operations per hour under instrument flight rules (IFR).

As previously discussed in Chapter 2, Aviation Forecasts, there were approximately 6,813 total aircraft operations at U10 in 2023, which are forecasted to reach 8,856 operations by 2043. This indicates the Airport was at 3.0% capacity in 2023 and is expected to reach 3.9% capacity by 2043. According to the AC, an airport should begin planning airfield capacity improvements when capacity reaches 60% of its annual service volume. At 80% capacity, plans should be complete, and construction should begin. At 100%, an airport has reached capacity, and improvements should be completed to avoid delays.

Airfield Capacity Recommendation

With demand expected to remain below the 60% threshold for the 20-year planning period, there is no need to begin planning airfield capacity improvements at this time.

3.3.2 Runways

It is important to analyze the separation criteria, orientation, length, width, and pavement design strength of an airport's existing runways to determine their ability to meet both current and forecasted demand. The design standards, recommendations, design considerations, and requirements for a runway to safely accommodate its design aircraft are outlined in FAA AC 150/5300-13B, *Airport Design*. The following section analyzes specific runway criteria and makes recommendations based on the forecast.

3.3.2.1 Runway Approach Procedures

During periods of low clouds and reduced visibility, an airport can only be used with the aid of instruments. These instruments allow flight during poor weather conditions, allowing pilots to safely fly an aircraft using instrument flight rules (IFR). IFR capability enables pilots to descend to minimum safe altitudes providing greater potential to see the airport environment before needing to break off the approach. The higher these minimums, the more frequently a runway cannot be used during periods of adverse weather conditions.

There are no instrument flight procedures (IFPs) published for U10, which classifies both runways as visual. LEAN Technology Corporation (LEAN) completed an airspace and instrument procedure analysis in 2025 as part of this master plan update to evaluate the feasibility and benefits of introducing RNAV (GPS) instrument approach procedures at U10 (see Appendix D). The report findings indicate RNAV (GPS) approaches to Runway 4 and Runway 22 are feasible and would significantly enhance operational reliability at the Airport. The proposed approaches would require offset final approach courses and increased glidepath angles to mitigate the mountainous terrain in the area. As such, the RNAV (GPS) approaches would only be capable of offering Category A through C aircraft improved minimums compared to current VFR standards. The proposed approach procedures for Runway 4 and Runway 22 are summarized in Table 3.5 along with minimum altitude and minimum visibility requirements associated with each approach.

Table 3.5 Proposed Runway 4/22 Instrument Approach Procedures

Minimum Altitude[1] and Minimum Visibility[2] by Aircraft Approach Category[3]				
Approach	Category A	Category B	Category C	Category D
Runway 4: RNAV (GPS)				
LNAV[4]	5,180 ft & 1 mile		5,180 ft & 1⅜ mile	N/A
LNAV	5,260 ft & 1 mile		5,260 ft & 1½ mile	N/A
Circling	5,260 ft & 1 mile	5,320 ft & 1 mile	5,580 ft & 2½ mile	N/A
Runway 22: RNAV (GPS)				
LNAV/VNAV[5]	5,189 ft & 1⅜ mile			N/A
LNAV[5]	5,300 ft & 1 mile		5,300 ft & 1⅝ mile	N/A
LNAV/VNAV	5,413 ft & 2 miles			N/A
LNAV	5,620 ft & 1¼ mile		5,620 ft & 2½ mile	N/A
Circling	5,260 ft & 1 mile	5,320 ft & 1 mile	5,580 ft & 2½ mile	N/A

Source: LEAN Technology Corp, U10 Airspace and Instrument Procedure Analysis (see Appendix D)

Notes: [1]Altitude shown in feet above mean sea level (MSL).

[2]Visibility shown in statute miles (1 statute mile equals 5,280 feet).

[3]Aircraft approach categories are based on the speed an aircraft travels when configured for landing (typically 1.3 times the stall speed).

- Category A: 0-90 knots
- Category B: 91-120 knots
- Category C: 121-140 knots

[4]Lines of minima are contingent on a non-standard missed approach climb gradient of 210 feet per nautical mile (NM) to 7,360 feet MSL.

[5]Lines of minima are contingent on a non-standard missed approach climb gradient of 250 feet per nautical mile (NM) to 8,000 feet MSL.

The most precise instrument approach procedure possible for Runway 4 is a lateral navigation (LNAV) approach with a 1-mile visibility requirement and a non-standard missed approach climb gradient of 210 feet per nautical mile (NM) to 7,360 feet MSL. Unlike Runway 4, the proposed approach to Runway 22 is clear of vertical guidance surface (VGS) penetrations and could support vertical navigation (VNAV) lines of minima.

This makes the vertically guided LNAV/VNAV approach with a 1⅜-mile visibility requirement the most precise instrument approach procedure possible for Runway 22; however, these minimums are contingent on a non-standard missed approach climb gradient of 250 feet per NM to 8,000 feet MSL.

The proposed instrument approaches to Runway 4/22 include circling approach procedures, which would provide electronic course guidance to the runway environment rather than to a specific runway end. This type of procedure can be accommodated on a visual runway, such as Runway 17/35, because the pilot must maintain visual contact with the runway environment once they reach the missed approach point, prior to landing on a runway end.

Runway Approach Procedures Recommendation

The U10 Airspace and Instrument Procedure Analysis, prepared by LEAN, assessed the feasibility of RNAV (GPS) procedures for Runway 4 and Runway 22 at U10. If implemented, these approach procedures would reduce the overall minimums for both runway ends, potentially increase the Airport's overall usability, and reduce pilot workloads.

Therefore, it is recommended that the Airport move forward with the development of the proposed instrument procedures through the FAA IFP request process. A singular approach option could also be pursued, in which case the RNAV (GPS) to Runway 4 provides the most overall benefit to the Airport. Any facility improvements needed to support IFPs at U10, such as updating runway markings to those consistent with a non-precision instrument (NPI) approach, are described in the relevant sections below.

3.3.2.2 Runway Departure Procedures

The airspace and instrument procedure analysis completed by LEAN in 2025 also evaluated the feasibility of implementing RNAV departure procedures at U10. The Airport currently has no published departure procedures, which means runway departures are conducted under visual flight rules. The report findings indicate that there are feasible departure procedure options to all runways at the Airport. These proposed procedures allow for standard departure minimums; however, only a Visual Climb Over Airport (VCOA) procedure to all runways would allow for a standard climb gradient to achieve those minimums.

Runway Departure Procedures Recommendation

If implemented, the departure procedures developed by LEAN would provide obstacle-clear, predictable routes for departing aircraft, thereby improving safety and increasing the Airport's operational reliability in low visibility or marginal weather conditions. As such, it is recommended that the Airport work with the FAA to develop and examine opportunities to introduce the proposed departure procedures through the 7100.41A process.

3.3.2.3 Runway Design

Runway dimensional criteria, protection areas, and separation standards for U10 were applied according to AC 150/5300-13B, *Airport Design*. Examining these runway features for design conformance is essential for the safe and efficient operation of aircraft on the airfield. The current performance of each runway at U10 and their compliance with existing and future critical aircraft design standards is summarized in Table 3.6 and Table 3.7.

Runway 4/22

The existing RDC for Runway 4/22 is A-I(small)-VIS with a future RVR upgrade to A-I(small)-5000. While this is a downgrade from the B-I(small) critical aircraft identified in the previous airport master plan, these two categories of aircraft share the same design standards. As shown in Table 3.6, the current performance and design standards for Runway 4/22 are based on visual minimums, while the future design standards reflect visibility minimums that are greater than or equal to 1 mile.

Table 3.6 Runway 4/22 Design Standards

Design Criteria	Current Performance	FAA Standards		Compliance RWY 4 / RWY 22
	RWY 4 / RWY 22 B-I(Small)-VIS	Existing A-I(Small)-VIS	Future A-I(Small)-5000	
Runway Design				
Runway Width	60′	60′	60′	Y
Shoulder Width	15′	10′	10′	Exceeds
Blast Pad Width / Length	None	Not Required	Not Required	Not Required
Crosswind Component	10.5 knots	10.5 knots	10.5 knots	Y
Runway Safety Area (RSA)				
RSA Length Beyond Departure End	240′	240′	240′	Y/Y[1]
RSA Length Prior to Threshold	240′	240′	240′	Y/Y[1]
RSA Width	120′	120′	120′	Y/Y[1]
Runway Object Free Area (ROFA)				
ROFA Length Beyond Rwy End	240′	240′	240′	Y/Y[1]
ROFA Length Prior to Threshold	240′	240′	240′	Y/Y[1]
ROFA Width	250′	250′	250′	Y/Y[1]
Runway Obstacle Free Zone (OFZ)				
ROFZ Length Beyond Rwy End	200′	200′	200′	Y/Y
ROFZ Width	250′	250′	250′	Y/Y
Runway Separation				
Rwy Centerline to Holding Position	125′	125′	125′	Y/Y

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

Notes: [1] The Runway 22 threshold has been displaced and declared distances are needed to comply with RSA and ROFA design standards.

Runway 4/22 Design Recommendation

Runway 4/22 meets FAA design standards, and no adjustments are needed. Runway 4/22 will be designed to A-I(small) standards on the Airport Layout Plan and should be maintained to ensure compliance with these standards through the planning period.

Runway 17/35

The existing and future RDC for Runway 17/35 is A-I(small)-VIS. The RDC aligns with the previous airport master plan and is not expected to change over the 20-year planning horizon. As shown in Table 3.7, the existing and future design standards for Runway 17/35 are based on visual minimums.

Table 3.7 Runway 17/35 Design Standards

Design Criteria	Current Performance	FAA Standards	Compliance RWY 17/ RWY 35
	RWY 17 / RWY 35 A-I(Small)-VIS	Existing/Future A-I(Small)-VIS	
Runway Width	30′	60′	N
Shoulder Width	10′	10′	Y
Blast Pad Width / Length	None	Not Required	Not Required
Crosswind Component	10.5 knots	10.5 knots	Y
Runway Safety Area (RSA)			
RSA Length Beyond Departure End	62′/45′	240′	N/N[1]
RSA Length Prior to Threshold	62′/45′	240′	N/N[1]
RSA Width	120′	120′	N/N[1]
Runway Object Free Area (ROFA)			
ROFA Length Beyond Rwy End	240′	240′	Y/Y[2]
ROFA Length Prior to Threshold	240′	240′	Y/Y[2]
ROFA Width	250′	250′	Y/Y
Runway Obstacle Free Zone (OFZ)			
ROFZ Length Beyond Rwy End	200′	200′	Y/Y
ROFZ Width	250′	250′	Y/Y

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

Notes: [1]The RSA beyond the Runway 17/35 ends exceeds the 5% maximum allowable negative grade, and a portion beyond the Runway 35 end falls outside airport-controlled property.

[2]The Runway 35 ROFA meets FAA standards; however, a portion beyond the Runway 35 end extends outside the airport boundary, which should ideally be within airport-controlled property.

Runway 17/35 Design Recommendation

Runway 17/35 has nonstandard conditions that do not comply with current FAA design standards. Alternative solutions to address these conditions will be considered in Chapter 4, Development Alternatives.

3.3.2.4 Runway Length

The FAA provides recommendations for runway length, rather than design standards, to provide safe landing conditions based on the aircraft that regularly operate at an airport. FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*, provides the standards and guidelines used to determine the recommended runway lengths at U10. According to this AC, a variety of factors must be considered to determine the suitability of a given runway length. 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), runway gradient, presence of obstructions in the vicinity of the Airport, and any locally imposed noise abatement restrictions.

Table 3.8 lists the runway length recommendations based on the formulas included in the AC for aircraft with a maximum certified takeoff weight of 12,500 pounds or less. These were calculated using conditions approximating the average temperature of the hottest month (89.2°F) and the Airport's elevation (4,727 feet) to account for the decline in aircraft performance as elevation and temperature increase.

Table 3.8 Recommended Runway Lengths

AC 150/5325-4B Design Approach	Runway Length
Small, approach speeds between 30-50 kts	1,178’
Small, approach speeds of 50 kts or more, less than 10 seats, 95% of fleet	6,000’
Small, approach speeds of 50 kts or more, less than 10 seats, 100% of fleet	6,200’
Airport Planning Manual	**Minimum Runway Length**
Cessna 172 Skyhawk	
Takeoff Performance Total Distance Over 50’ Obstacle	1,630’
Takeoff Performance MTOW, 86˚F, and 5,000’ Elevation	2,975’

Source: FAA, AC 150/5325-4B, *Runway Length Requirements for Airport Design*, and Cessna, *172S Skyhawk Information Manual Revision 5*

Runway Length Recommendation

Currently, Runway 4/22 is 3,557 feet long. According to the runway length analysis, Runway 4/22 falls short of the 6,000 feet needed to accommodate 95% of the national small airplane fleet. The findings of this analysis align with those from the previous airport master plan; however, following a runway alternative analysis in 2018, Runway 4/22 has since undergone a reconstruction and lengthening project to achieve the maximum possible length in its current configuration. The runway is currently constrained by U.S. Highway 91 to the north and steeply downward sloping terrain to the southwest. Alternatives for achieving additional runway length, including the option to maintain the current length, will be further examined in Chapter 4, Development Alternatives.

Runway 17/35 is 2,375 feet in length and is primarily used by agricultural, recreational, and training aircraft. User need and safety will guide the future length of this runway, which will be further analyzed in Chapter 4, Development Alterantives.

3.3.2.5 Displaced Thresholds and Declared Distances

A runway threshold may be displaced or located at a point other than the designated beginning of a runway to address specific nonstandard conditions at an airport. When a runway threshold is moved, the protective airspace associated with that end of the runway is also moved. As a result, implementing a displaced threshold provides a means of obtaining additional runway safety area (RSA) and runway object free area (ROFA); relocating the runway protection zone (RPZ) to eliminate incompatible land uses; or increasing obstacle clearance prior to the threshold.

Displaced thresholds are communicated to pilots through pavement markings and through declared distances. Declared distances help to identify the length of runway pavement available for use in aircraft operations. The FAA publishes these distances on an airport’s master record and airport diagram. The four types of declared distances defined by the FAA, which were previously described in Chapter 1, Existing Conditions, can be adjusted for the following reasons:

- Takeoff Run Available (TORA): The length of runway available and suitable for satisfying takeoff run requirements may be reduced to resolve incompatible land uses in the departure RPZ or prevent objects from penetrating the 40:1 instrument departure surface.
- Takeoff Distance Available (TODA): The takeoff run available plus any remaining runway or clearway length beyond the TORA may be reduced to prevent objects from penetrating the 40:1 instrument departure surface.

- Accelerate-Stop Distance Available (ASDA): The runway length plus any stopway length available and suitable for the acceleration and deceleration of a rejected aircraft takeoff may be reduced to resolve nonstandard RSA or ROFA conditions.
- Landing Distance Available (LDA): The runway length available and suitable for landing may be reduced to prevent objects from penetrating an approach surface, resolve incompatible land uses in the approach RPZ, or mitigate nonstandard RSA or ROFA conditions prior to the threshold.

The published length of Runway 4/22 is 3,557 feet; however, the Runway 22 threshold has been displaced by 384 feet to meet standard RSA and ROFA requirements, which would otherwise be penetrated by U.S. Highway 91 and its associated right-of-way fence. As a result, the Runway 22 LDA needs to be reduced to account for the displaced threshold and comply with RSA and ROFA standards. All other declared distances for Runway 22 are equal to the full length of the runway.

For aircraft departing Runway 4, U.S. Highway 91 and its right-of-way of fence are in the RSA and ROFA beyond the Runway 22 end. Therefore, the ASDA and LDA for Runway 4 need to be reduced. All other declared distances for Runway 4 are equal to the full length of the runway.

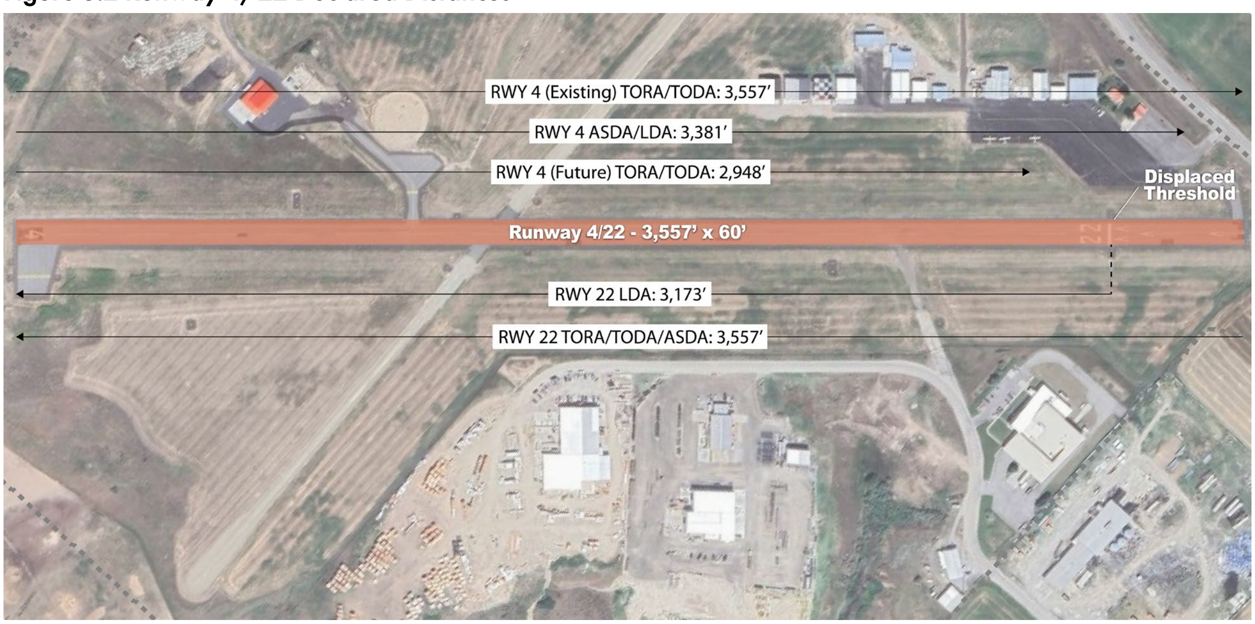
The declared distances for Runway 4/22 are summarized in Table 3.9 and shown in Figure 3.2 .

Table 3.9 Runway 4/22 Declared Distances

Declared Distance	Runway 4	Runway 22
TORA	3,557′	3,557′
TODA	3,557′	3,557′
ASDA	3,381′	3,557′
LDA	3,381′	3,173′

Source: Ardurra

Figure 3.2 Runway 4/22 Declared Distances



Source: Ardurra

Displaced Thresholds and Declared Distances Recommendation

The declared distances for U10, which are shown on the 2021 Preston Airport Layout Plan, should be updated to align with those listed in Table 3.9. Prior FAA coordination and approval will be required before the corrected declared distances can be implemented. The declared distances should be published on the Airport's master record and on the airport diagram to enhance airport safety and operational awareness.

If the Airport were to move forward with the development of the proposed departure procedures for Runway 4/22, the Runway 4 TODA and TORA would need to be adjusted to 2,948 feet for the 40:1 instrument departure surface to clear vehicles on U.S. Highway 91 (see Figure 3.2).

3.3.2.6 Runway Line of Sight and Runway Visibility Zone

A runway with a clear line of sight (LOS) allows pilots to visually verify the location and actions of other aircraft and vehicles operating along active runways. When runways meet LOS standards, it reduces the potential for accidents. For interesting runways, the runway visibility zone (RVZ) is an area formed by imaginary lines that connect the LOS points of both runways. A clear LOS in this instance, prevents objects located within the RVZ from blocking a pilot's view of the intersecting runway.

The LOS standard for airports without an air traffic control tower, like U10, states that within the RVZ, any point five feet above the runway centerline must be mutually visible with any other point five feet above the centerline of the crossing runway. For non-perpendicular intersecting runways, as is the case at U10, the LOS points are dependent on the distance between the runway intersection and each runway end.

LOS and RVZ Recommendation

Runway 4/22 and Runway 17/35 currently meet the clear LOS requirement. The RVZ should remain free of objects not fixed-by-function to maintain a clear LOS for each runway.

3.3.2.7 Runway 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 the two runways at U10 indicate redesignation is not required for Runway 4/22 or Runway 17/35 during the 20-year planning horizon.

3.3.2.8 Runway Orientation and Wind Coverage

Runway orientation is primarily a function of wind coverage requirements for the existing and projected aircraft fleet mix. The FAA recommends wind coverage of at least 95% because wind speed and direction can significantly impact the operational safety and efficiency of an airport. As shown in Table 3.10, the runway design code determines the allowable crosswind component of a runway, which helps to ensure conditions are appropriate for the type of aircraft that typically use that runway. If a single runway cannot provide this level of coverage, then a crosswind runway is often warranted.

Table 3.10 Allowable Crosswind Component by Runway Design Code

Runway Design Code	Allowable Crosswind Component
A/B-I (includes small aircraft)	10.5 knots
A/B-II	13 knots
A/B-III and C/D-I through C/D-III	16 knots
A/B-IV, and C/D-IV through C/D-VI	20 knots

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

Runway 4/22 has an existing and future RDC of A-I(small), which means, ideally, crosswinds should not exceed 10.5 knots more than 95% of the time. There is no on-airport weather observation system; therefore, the wind analysis for U10 relied on data from the ITD US-91 Franklin weather station, located approximately 1 mile east of the Airport. Based on information collected from this station, which included wind direction and speed data from 2014 to 2024, Runway 4/22 meets the wind coverage requirement of 95% for all crosswind components in all weather conditions. The all-weather wind coverage performance for each runway at U10 is summarized in Table 3.11.

Table 3.11 U10 Runway Wind Coverage Analysis

Allowable Crosswind Component	Runway 4/22	Runway 17/35	Combined
10.5 knots	97.41%	98.79%	99.29%
13 knots	98.56%	99.34%	99.68%
16 knots	99.56%	99.73%	99.86%
20 knots	99.86%	99.89%	99.95%

Source: FAA, Airport Data and Information Portal, and University of Utah, MesoWest

Runway Orientation Recommendation

Runway 4/22 provides over 95% wind coverage in all weather conditions for the 10.5 knot crosswind component. This coverage indicates the primary runway at U10 is adequately orientated for typical use by the Airport's existing and future A-I(small) critical aircraft.

3.3.2.9 Runway Protection Zones

The runway protection zone (RPZ) is a portion of the inner approach zone projected onto the ground surface. Its function is to enhance the protection of people and property on the ground. It is strongly recommended by the FAA that the Airport own the RPZ in fee or have land use control of the area. Alternatives to ownership include avigation easements and land use control measures to ensure an RPZ remains free of incompatible development. The dimensions of an RPZ are determined by the design aircraft characteristics, visual approaches, and the lowest instrument approach visibility minimum for a runway. The RPZ dimensions for each runway at U10 are summarized in Table 3.12.

Table 3.12 Runway Protection Zone Design Standards

RPZ[1] Design Criteria	RWY 4/22			RWY 17/35	
	Existing A-I(Small)-VIS	Future A-I(Small)-5000	Compliance	Existing / Future A-I(Small)-VIS	Compliance
RPZ Length	1,000′	1,000′	Y/N[2]	1,000′	N[3]/Y
RPZ Inner Width	250′	250′	Y/Y	250′	Y/Y
RPZ Outer Width	450′	450′	Y/Y	450′	Y/Y

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

Notes: [1] The dimensional values summarized in the table apply to both the approach and departure RPZs.

[2] The RPZs beyond Runway 22 contain U.S. Highway 91, which is an incompatible land use.

[3] The RPZs beyond Runway 17 contain incompatible land uses, including private roads and U.S. Highway 91.

Runway Protection Zones Recommendation

Incompatible land uses exist in the Runway 17 and Runway 22 RPZs. U.S. Highway 91 crosses through a portion of both RPZs, in addition to two private roads in the Runway 17 RPZ. The private roads are less traveled and pose a low risk to people and property on the ground, whereas the well-traveled U.S. Highway 91 presents a more elevated risk. Although U.S. Highway 91 is a historical condition in the RPZ, the Airport should make every effort to relocate U.S. Highway 91 outside of the Runway 17 and Runway 22 RPZs if the roadway undergoes realignment in the future.

Portions of each runway RPZ at U10 are not under airport owner control. The Exhibit A Property Map included in the 2021 Preston Airport Layout Plan identified these areas for either future acquisition in fee or avigation easement. The Airport should continue to protect these areas from incompatible land uses to the maximum extent possible while attempting ownership in fee, avigation easements, or land use control measures where feasible in the RPZs.

3.3.3 Taxiway and Taxilane System

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

3.3.3.1 Taxiway Design

As previously discussed, the existing and future critical aircraft associated with all taxiways serving Runway 4/22 is the Cessna 172 Skyhawk, which has an ADG of I and a TDG of 1A. The existing conditions for Taxiways A1, A2, and A3 are listed in Table 3.13 alongside the associated dimensional standards.

Table 3.13 Taxiway Design Standards

Design Criteria	Design Standard	Current Performance			Compliance
		Taxiway A1	Taxiway A2	Taxiway A3	
ADG I Standards					
Taxiway Safety Area (TSA) Width	49′	49′	49′	49′	Y/Y/Y
Taxiway Object Free Area (TOFA) Width	89′	89′	89′	89′	Y/Y/Y
Taxiway Centerline to Fixed or Movable Object	44.5′	44.5′	>50′	NA	Y/Y
TDG 1A Standards					
Taxiway Width	25′	25′	25′	>90′	Y/Y/N
Taxiway Edge Safety Margin	5′	5′	5′	>5′	Y/Y/Y
Taxiway Shoulder Width	10′	10′	10′	10′	Y/Y/Y

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

Taxiway Design Recommendation

Taxiway A1 and A2 at U10 meet the appropriate dimensional standards for all taxiway design criteria. Although Taxiway A3 meets or exceeds the dimensional standards listed in Table 3.13, it does not have a standard taxiway turnaround design. Alternative solutions to address this condition will be considered in Chapter 4, Development Alternatives.

3.3.3.2 Taxilane Design

Taxilanes are defined paths designed for low speeds and precise maneuvering of aircraft. In general, taxilanes allow aircraft to safely access taxiways and taxiway connectors from aircraft parking positions and other areas on the airfield. Unlike taxiways, where speeds will typically range from 15 to 35 mph, speeds on taxilanes don’t generally exceed 15 mph. While most design standards and recommended practices are the same for both taxiways and taxilanes, some design standards for taxilanes are different given the different aircraft speeds and uses of taxiways versus taxilanes. This includes standards for the width of the object free area (OFA) and the distance from the centerline to a fixed or moveable object. The existing conditions of the Airport’s taxilanes are listed in Table 3.14 alongside the corresponding dimensional standards.

Table 3.14 Taxilane Design Standards

Design Criteria	Design Standard	Current Performance	Compliance
		Main Apron Taxilanes	
ADG I Standards			
Taxilane Object Free Area (TLOFA) Width	79′	≥72′	Y/N
Taxilane Centerline to Fixed or Movable Object	39.5′	≥32′	Y/N
TDG 1A Standards			
Taxilane Width	25′	≥20′	Y/N

Source: FAA, AC 150/5300-13B, *Airport Design*, and Ardurra
*Some areas of GA hangar are designed specifically for ADG I according to hangar size specifications.

Taxilane Design Recommendation

Portions of the main general aviation apron taxilanes meet or exceed the appropriate dimensional standards for taxilane design criteria. However, the taxilane in front of the hangar row does not meet design standards. Alternative solutions to address these conditions will be considered in Chapter 4, Development Alternatives.

3.3.3.3 Runway and Taxiway Intersection Design

The FAA provides design guidelines for runway and taxiway intersections in AC 150/5300-13B, *Airport Design*, to reduce the potential for runway incursions and improve the safe maneuverability of aircraft on the airfield. These guidelines outline several concepts that should be considered when designing aircraft movement areas, including the three-path concept and 90-degree turns at runway entrances and crossing points. The three-path concept limits pilots to a maximum of three choices at an intersection to decrease the possibility of pilot error and confusion. Taxiways that connect apron areas to a runway should also require at least one turn prior to the runway hold line to increase pilot visibility and situational awareness.

Runway and Taxiway Intersection Design Recommendation

The aircraft movement areas at U10 meet design standards and no changes are recommended at this time.

3.3.4 Airfield Pavement Strength

FAA AC 150/5320-6G, *Airport Pavement Design and Evaluation*, was used to determine guidelines for required pavement design strength of airfield surfaces. To meet the needs of the Airport, runway pavements need to be able to accommodate the maximum takeoff weight of the existing critical aircraft as well as other types of aircraft expected to operate at U10. They should be able to physically withstand the weight of aircraft frequently arriving, taxiing, and departing, as well as sufficiently withstand the abrasive action of adverse weather conditions and other deteriorating factors. Runway pavement strength is typically expressed in terms of aircraft weight and landing gear configuration as this determines how its weight is distributed on the pavement and how the pavement will respond to the load.

Runway 4/22 at U10 has a published weight bearing capacity of 12,500 pounds for single wheel gear (SWG) configurations. Runway 17/35 is a dirt runway and does not have a published weight-bearing capacity.

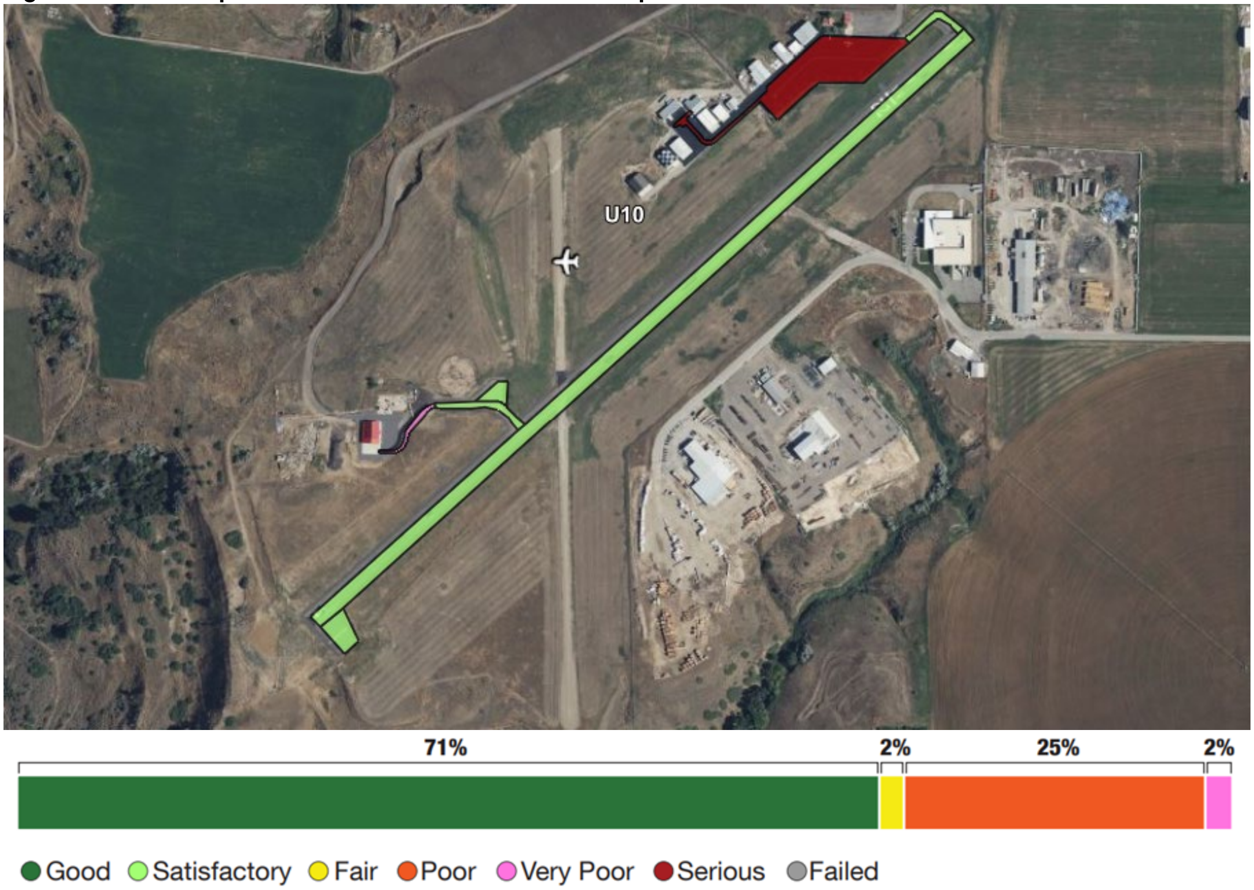
Pavement Strength Recommendation

The Cessna 172 Skyhawk, which represents the existing and future A-I(small) critical aircraft, has a single wheel gear configuration and a maximum takeoff weight of 2,550 pounds. As such, Runway 4/22 has sufficient weight bearing capacity to accommodate the existing and future critical aircraft.

3.3.5 Airfield Pavement Condition

The most recent inspection of the Airport's airfield pavements was completed in August 2021 as part of the Idaho Transportation Department, Division of Aeronautics' statewide airport pavement management program. The results of this inspection were used to develop existing and future composite PCI ratings for each of the paved surfaces at the airfield; the predicted pavement conditions in 2031 are depicted in Figure 3.3.

Figure 3.3 U10 Projected Pavement Condition Index Map, 2032



Source: ITD Aeronautics, Network Pavement Management System

If no maintenance were to occur over the next five years, the Airport's pavements would have an average PCI rating of 67. A five-year maintenance and rehabilitation plan was produced by the Idaho Transportation Department, Division of Aeronautics (ITD Aeronautics) to prevent the Airport's pavements from deteriorating to the level depicted in Figure 3.3. The plan is summarized in Table 3.15.

Table 3.15 U10 5-Year Recommended CIP Summary

Recommended Treatment Year	Recommended Treatment	Total Cost
2023	Main Apron and Taxilane Complete Reconstruction	$785,838
2023	Taxilane Mill and Overlay	$13,709
2024	Runway and Taxiway Pavement Surface Treatment	$170,087
2026	Apron and Taxilane Pavement Surface Treatment	$68,751

Source: ITD Aeronautics, Network Pavement Management System

Pavement Maintenance and Rehabilitation Recommendation

Airfield pavements should be maintained and rehabilitated according to the five-year maintenance plan outlined in Table 3.15. Outside of this plan, pavement at the Airport should continue to receive routine periodic maintenance, such as slurry seal treatment and crack sealing, to extend the life of the pavement.

3.3.6 Airfield Pavement Markings

FAA AC 150/5340-1M, *Standards for Airport Markings*, was used to determine standards for markings on the Airport's runways, taxiways, and aprons. Runway markings are specified according to the type of instrument approach available on the runway.

Runway 4/22 at U10 has markings consistent with a visual approach. The runway marking requirements are summarized in Table 3.16.

Table 3.16 U10 Runway Marking Requirements and Performance

Runway Markings	Existing Standard / Performance	Future Condition
	Visual Approach	Non-Precision Approach
Landing Designators	✓	✓
Centerline	✓	✓
Threshold Markings	Not Required / None	4 Symmetrical Stripes
Aiming Points	Not Required / None	Not Required (runway length less than 4,200 ft)
Edge Markings	Not Required / None	Not Required (full width available for use)

Source: FAA, AC 150-5340-1M, *Standards for Airport Markings*, and Ardurra

Pavement Marking Recommendation

The pavement markings for Runway 4/22 are in good condition and should be re-marked during the next routine pavement maintenance project. If the Airport were to move forward with the development of the proposed instrument procedures for Runway 4/22, threshold markings would need to be added to the Runway 4 and Runway 22 ends to meet non-precision approach marking requirements.

3.3.7 Airfield Signage

FAA AC 150/5340-18H, *Standards for Airport Sign Systems*, was used to determine standards for the siting and installation of signs on airport runways and taxiways. The Airport's runway and taxiway signage is consistent with FAA standards for coloring and configuration and are in good condition.

Airfield Signage Recommendation

All airfield signage should be maintained throughout the 20-year planning period.

3.3.8 Electronic, Visual, Satellite, and Metrological Aids

The Airport is equipped with several types of navigational aids (NAVAIDs) that enhance safety for airport operations. These include the airport beacon, medium intensity runway lights (MIRL), precision approach path indicators (PAPIs), runway end identifier lights (REILs), and a segmented circle and lighted wind cone. Each of these facilities has criteria that must be met for the device to function properly, such as requirements for where it is located and object and obstruction clearances in the critical area surrounding the equipment. Each of these navigational aids are listed in Table 3.17, along with any critical area requirements.

Table 3.17 U10 Navigational Aid Requirements

Navigational Aid	Requirement	Compliance
REIL	N/A	N/A
MIRL	N/A	N/A
PAPI	Must be sited and aimed so that it defines an approach path with adequate clearance over obstacles and a minimum threshold crossing height (TCH).	Y
Airport Beacon	Positioned high enough for bottom edge of light beam to clear all obstructions.	Y
Segmented Circle & Wind Cone	Readily visible to pilots and located outside RSA and ROFA.	Y

Sources: FAA, AC 150/5340-30J, Order 6850.2B, and Order 6560.20C

Navigational and Metrological Aid Recommendation

These facilities and the associated critical areas should be maintained throughout the 20-year planning period. Additionally, it is recommended that weather sensing equipment, such as an automated weather observing system (AWOS), be installed to enhance the accuracy of local weather reporting for procedural use if the proposed instrument procedures for Runway 4/22 are implemented.

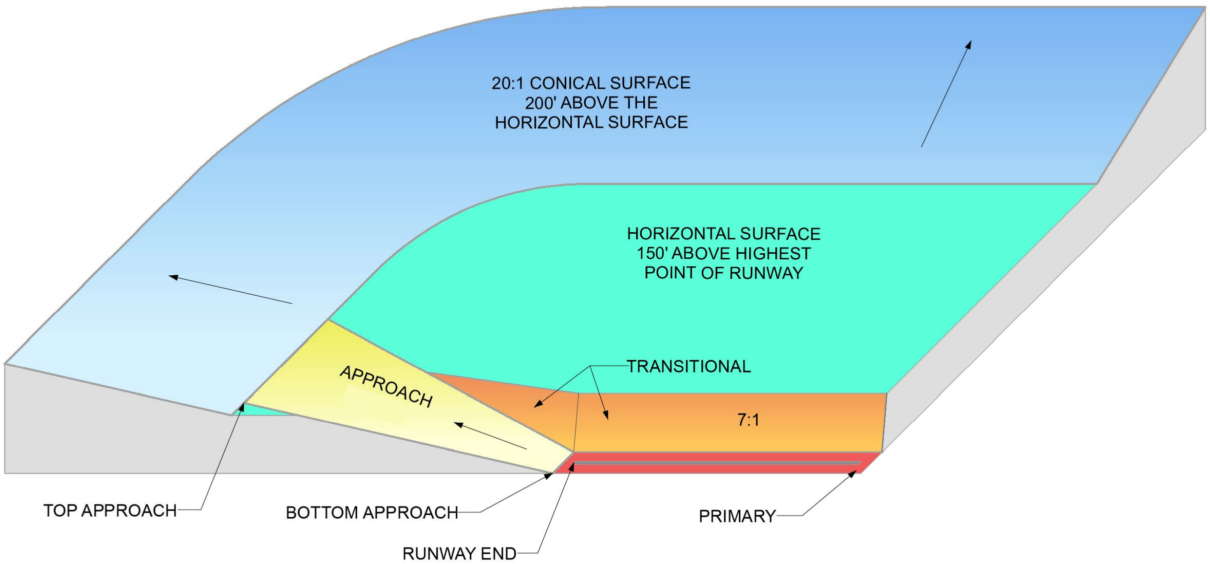
3.4 AIRPORT AIRSPACE

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

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

The standards for evaluating the Airport's airspace were established using Title 14 of CFR Part 77. This Federal Aviation Regulation (FAR), which is simply referred to as Part 77, describes the imaginary surfaces surrounding airports that are to be protected from natural and man-made obstructions considered to be aeronautical hazards. The Part 77 surfaces associated with civil airports are the primary, approach, transitional, horizontal, and conical surfaces shown in Figure 3.4.

Figure 3.4 Part 77 Surfaces



Source: 14 CFR Part 77 and Ardurra

The standards for Part 77 surface dimensions are applied individually to each runway end based on the type of approach available or planned (i.e., visual, non-precision, or precision). The most precise instrument approach associated with a runway end is also used when determining the slope and dimensions of the approach surface to that runway.

Part 77 Surface Recommendation

The 2021 Preston Airport Layout Plan identified points along U.S. Highway 91 that fail to meet the 17-foot vertical buffer required for Part 77 surfaces to clear the highway and, therefore, penetrate the primary, transitional, and approach surfaces. Although no actions were required to mitigate or remove these penetrations, the Part 77 imaginary surfaces should be protected and new obstructions prevented to the maximum extent possible. An obstruction survey and analysis of Part 77 imaginary surfaces is included in the Airport Layout Plan.

3.4.2 Approach and Departure Surfaces

FAA AC 150/5300-13B, *Airport Design*, was used to determine the dimensional standards for the runway approach and departure surfaces. It is important to note that the approach and departure surfaces defined in this AC are different from the surfaces defined in 14 CFR Part 77. However, like the Part 77 surfaces, these surfaces also need to be protected and kept free from proposed development or natural vegetation growth that could penetrate these surfaces. Maintaining clear approach and departure surfaces allows pilots to follow standard instrument approach and departure procedures and helps to protect the usability of the Airport's runways.

3.4.2.1 Runway 4/22 and Runway 17/35 Approach Surface Analysis

As discussed previously in Section 3.3.2.1, Runway Approach Procedures, there are no published approach procedures at U10, and all runways are classified as visual. The three visual approach surfaces defined in Table 3-2 and Figure 3-5 of FAA AC 150/5300-13B, *Airport Design*, have varying dimensions depending on the max takeoff weight (MTOW) and approach speeds of the critical aircraft. At U10, each runway is designed to serve small aircraft (MTOW less than 12,500 pounds) with approach speeds of 50 knots or more. As such, "Surface 2" from Table 3-2 and Figure 3-5 of the referenced AC applies to Runway 4/22 and Runway 17/35 at U10.

If the RNAV (GPS) instrument approach procedures to Runway 4/22 are implemented, different approach surfaces to Runway 4 and Runway 22 will apply. If Runway 4 were to implement an LNAV approach with visibility minimums greater than ¾ statute mile, the dimensional standards for approach "Surface 4" from Table 3-3 and Figure 3-6 in the same AC would apply. The proposed LNAV approach to Runway 22 includes vertical guidance; therefore, approach "Surface 5" and "Surface 6" from Table 3-4 and Figure 3-7 would apply.

3.4.2.2 Runway 4/22 and Runway 17/35 Departure Surface Analysis

The instrument departure surface – identified as "Surface 7" in Table 3-5 and Figure 3-9 of FAA AC 150/5300-13B, *Airport Design* – applies to runways providing instrument departure operations. There are no runways that currently meet this qualification at U10; however, if departure procedures are implemented at the Airport, the surface criteria will apply.

Approach and Departure Surfaces Recommendation

There are no existing obstructions penetrating the approach surfaces on Runway 4/22 or Runway 17/35. If the proposed instrument approach procedures are implemented on Runway 4 and Runway 22, the applicable approach surfaces are similarly free of obstructions.

As stated previously, if departure procedures to Runway 4/22 are implemented, vehicles traveling on U.S. Highway 91 will penetrate the Runway 4 instrument departure surface. Declared distances will need to be updated to alert pilots that the full runway length is not available for takeoffs due to departure surface clearance.

3.5 LANDSIDE FACILITIES

As previously discussed in Section 1.1.3, Airport Role, U10 is categorized in the 2021 *Idaho Airport System Plan* (IASP) as a local airport. The 2021 IASP includes several facility and service objectives for local airports that were used to determine requirements for each of the landside facilities listed in this section.

3.5.1 Aircraft Hangars

There are 14 hangars currently at U10, which are used to store most of the 30 aircraft based at the Airport. Based on the 2021 IASP local airport objective, the Airport should have enough hangar space to meet the needs of 50% of their based aircraft. The demand for hangar space at U10 has been growing steadily since the previous master plan and is anticipated to exceed the IASP requirement over the planning period. As such, a scenario assuming all new based aircraft will be hangered was also considered. The hangar facility analysis evaluated the Airport's ability to meet both objectives based on the existing and forecasted number of based aircraft at U10 (Table 3.18).

Table 3.18 U10 Aircraft Hangar Requirements

Year	Based Aircraft	IASP Required (50%)	Forecasted Demand (100%)	Current Need Met	Needed*
2023	30	15	30	14	16
2028	32	16	32	14	18
2033	34	17	34	14	20
2043	39	20	39	14	25

Source: ITD Aeronautics, 2021 IASP, and Ardurra

*Future need assumes one hangar for every new based aircraft.

Aircraft Hangar Recommendation

In addition to falling short of the 2021 IASP objective, the Airport does not have enough hangar space to adequately house the full potential of forecasted based aircraft. Therefore, hangar development at U10 is needed to meet this objective for both existing and future based aircraft. Potential sites for new hangars will be discussed in Chapter 4, Development Alternatives.

3.5.2 Aircraft Tiedowns

There are 9 small aircraft tiedown locations on the main general aviation apron. According to the 2021 IASP, as a local airport, U10 should provide enough apron parking space to accommodate 50% of the based aircraft fleet and 50% of transient operations.

The number of tiedowns required to meet this objective was determined using the based aircraft and itinerant aircraft operations forecasts, in addition to conversations with Airport management regarding current use. Transient aircraft demand was estimated to account for approximately 70% of itinerant aircraft operations on an average day during the peak month. Peak month operations were an estimated 11% of annual operations at U10. To prevent a shortage of aircraft tiedowns, the Airport needs to have enough aircraft parking positions to accommodate half of the peak month, average day (PMAD) transient operations and half of the based aircraft fleet (Table 3.19).

Table 3.19 U10 Aircraft Tiedown Requirements

Year	PMAD Transient Operations Forecast	Based Aircraft Forecast	Required (50% of Total)	Current Need Met	Needed
2023	12	30	21	9	12
2028	13	32	22	9	13
2033	14	34	24	9	15
2043	16	39	27	9	18

Source: ITD Aeronautics, 2021 IASP, and Ardurra

Aircraft Tiedown Recommendation

The Airport does not meet the 2021 IASP objective for aircraft tiedowns. Therefore, additional apron area is needed at U10 to meet this objective for both existing and future demand. Additional capacity solutions will be considered in Chapter 4, Development Alternatives.

3.6 SUPPORT FACILITIES

The 2021 IASP includes several facility and service objectives for local airports that were used to determine requirements for the support facilities listed in this section.

3.6.1 General Aviation Facility

The Airport has a pilot's lounge with a public restroom and vending machines, as well as a courtesy car for airport users. According to the 2021 IASP, U10 should have a courtesy car and general aviation facility with public restrooms, a pilot's lounge, and Wi-Fi.

General Aviation Facility Recommendation

The Airport meets the 2021 IASP objectives for general aviation facilities and rental car access; however, U10 does not currently have Wi-Fi. Therefore, it is recommended that the Airport move forward with Wi-Fi installation based on available broadband options in the area.

3.6.2 Fuel Facilities

According to the 2021 IASP, U10 should provide 100LL fuel. The Airport has an underground 12,000-gallon 100LL avgas storage tank and a self-serve fuel station available 24 hours a day. Therefore, U10 currently meets the 2021 IASP objective.

Fuel Facility Recommendation

The Airport currently meets the 2021 IASP objective for fuel facilities; however, the underground fuel tank should be regularly inspected for corrosion, wear, and leaks. When the fuel storage tank reaches its useful life, an above ground storage pad should be constructed to enhance safety, environmental protection, and operational flexibility.

3.6.3 Snow Removal and Ice Control

As previously discussed in Section 1.3.6, Snow and Ice Control, the Airport currently has a pick-up truck with a snowplow attachment. According to the 2021 IASP, local airports do not need to have SRE equipment.

SRE Equipment Recommendation

The Airport's current snow removal equipment is insufficient for airport staff to effectively clear Runway 4/22 and other critical areas, compromising the safety and operational capabilities of the airfield during winter months. Although it is not a 2021 IASP requirement, a snowplow is recommended at U10 to maintain a safe airfield environment during periods of heavy snow.

3.6.4 Airport Security, Fencing, and Vehicle Access Gates

Airport perimeter fences keep an airport secure and prevent people or wildlife from entering the aircraft operation areas. As previously discussed in Section 1.3.7, Fencing and Vehicle Access Gates, the Airport is not fully enclosed by fencing, but there is barbed wire or woven fencing around much of the airfield.

Fencing and Vehicle Access Recommendation

A wildlife hazard site visit (WHSV) was conducted in November 2024 as part of this master plan update to evaluate the potential risks posed by wildlife on or near the Airport that could threaten aircraft operations at U10 (see Appendix C). The WHSV report confirmed the presence of hazardous wildlife, such as deer, coyotes, and European starlings, near U10, which pose potential risks to operations both on and around the Airport grounds.

Therefore, it is recommended that the Airport install a wildlife exclusion fence around the perimeter of the property. The fence should be constructed at a sufficient height to deter deer and designed with a buried skirt to prevent burrowing by coyotes and other mammals.

Additionally, the installation of a vehicle access gate is recommended between the Airport's main entrance and the main GA apron to protect the runway environment from direct vehicle access.

3.6.5 Automobile Parking

As previously discussed in Section 1.3.8, Automobile Parking, there is a paved, unmarked parking lot adjacent to the Airport entrance. This area can accommodate approximately 40 vehicles. According to the 2021 IASP, local airports should have automobile parking available to airport users.

Automobile Parking Recommendation

The Airport currently meets the 2021 IASP objective for automobile parking, and no additional accommodation is required at this time.