
ENVIRONMENTAL ASSESSMENT (EA)

FOR

RUNWAY IMPROVEMENTS

at Casselton Robert Miller Regional Airport in Casselton, North Dakota

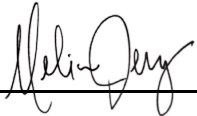
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under contract with the Casselton Regional Airport Authority

July 2026

FAA CERTIFICATION:

This becomes a federal document when evaluated, signed, and dated by the Responsible FAA Official.

Signature:  Date: 7/2/2026

Title: FAA Environmental Protection Specialist

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In accordance with Federal Aviation Administration (FAA) Order 1050.1G §1.5(e)(4), this Environmental Assessment (EA) represents the FAA's good-faith effort to prioritize documentation of the most important considerations required by the statute within the Congressionally mandated page limits. This prioritization reflects the FAA's expert judgment. Any considerations addressed briefly or left unaddressed were, in the FAA's judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental impacts and the resulting decision on how to proceed. This EA represents that the FAA has made a good faith effort to fulfill National Environmental Priority Act (NEPA) requirements within the Congressional timeline; that such effort is substantially complete; that, in the FAA's expert opinion, it has thoroughly considered the factors mandated by NEPA; and that, in the FAA's judgment, the analysis contained therein is adequate to inform and reasonably explain the FAA's final decision regarding the proposed Federal action.

1.1 INTRODUCTION

Casselton Robert Miller Regional Airport (“Airport”), Federal Aviation Administration (FAA) identifier 5N8, is located approximately two miles south of Casselton, ND and twenty miles west of Fargo, ND (**Figure 1-1**). The Airport is owned by the Casselton Regional Airport Authority (CRAA), which consists of the townships of Amenia, Casselton, Durbin, Empire, Everest, Harmony, and Rush River, along with the city of Casselton.

The Airport has one runway, Runway 13-31, which is 3,900 feet long by 75 feet wide and constructed of concrete. Each runway end has a GPS approach with visibility minimums down to 1-mile. The GPS approach for Runway 31 is a Localizer Performance with Vertical Guidance (LPV), meaning it provides vertical guidance to aircraft equipped with the required equipment. The existing airfield is shown in **Figure 1-2**.

An Airport Master Plan (AMP) was completed in 2020. The AMP evaluated all aspects of the Airport, including airside and landside facilities. During development of the AMP, deficiencies in taxiway Object Free Areas and corresponding congestion and circulation limitations for aircraft became apparent. CRAA desires to address these deficiencies within the 20-year planning horizon; however, timing may be further dictated by pavement condition as addressed in Section 2.2.1 below.

Federal financial participation in projects through the Airport and Airway Improvement Act of 1982 (AIP) requires environmental review under the National Environmental Policy Act (NEPA). An Environmental Assessment (EA) is a document prepared under NEPA that evaluates the effects of a proposed action on the surrounding natural, social, and economic environments. This EA is prepared under the requirements of the Title V of Public Law 97-248 of the Airport and Airway Improvement Act of 1982, NEPA, and FAA Order 5050.4B, *National Environmental Policy Act Implementing Instructions for Airport Actions* (April 2006). The EA also meets the requirements of FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures*, dated June 2025.

The intent of the EA is to provide the environmental documentation necessary to assist local, state, and federal officials in evaluating the proposed action at 5N8. The EA outlines the purpose and need for a proposed project and evaluates the proposed action and a full range of alternatives. The analysis also identifies and discusses measures to avoid, minimize, and mitigate possible environmental impacts.

The FAA will evaluate the EA under NEPA and, if the project does not have the potential for significant impacts, issue a Finding of No Significant Impact (FONSI), or if it does have significant impacts, prepare an Environmental Impact Statement (EIS). No other agencies are expected to play a cooperating role. The FAA prepared this EA in accordance with NEPA, within applicable statutory and regulatory page and time limits, using its expert judgment and good-faith effort to inform decision-making. Issues addressed briefly or not in detail were determined not to be substantive or meaningful to the environmental analysis or decision.

Updates in Final EA

Public and agency comments were reviewed during preparation of the Final EA. This review resulted in refinements to the Proposed Action related to roadway connectivity and clarifications regarding drainage coordination and permitting. Comments did not identify new environmental resources, impacts, or deficiencies in analysis that would warrant changes to the Purpose and Need or additional technical studies.

Figure 1-1: Airport Location Map

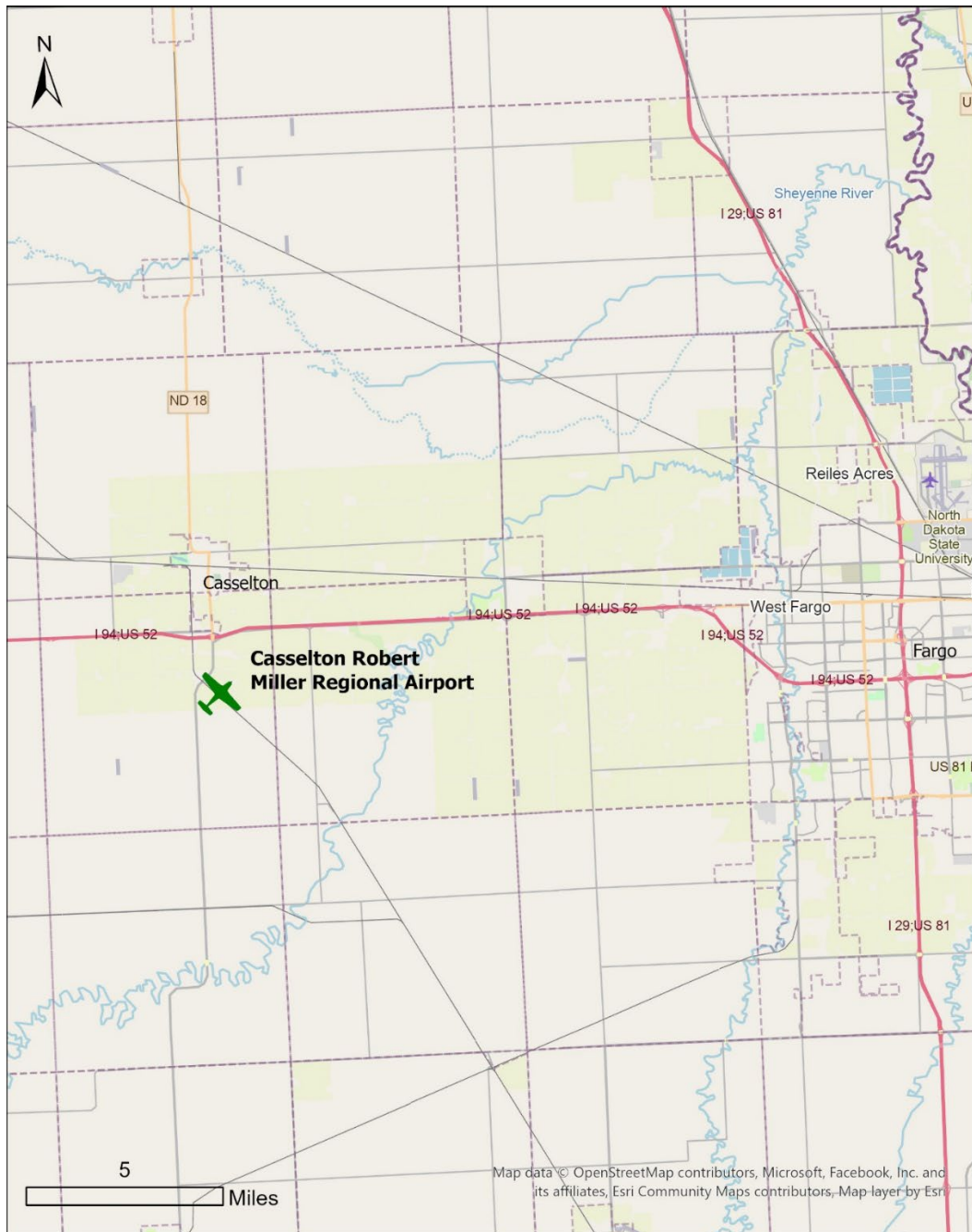
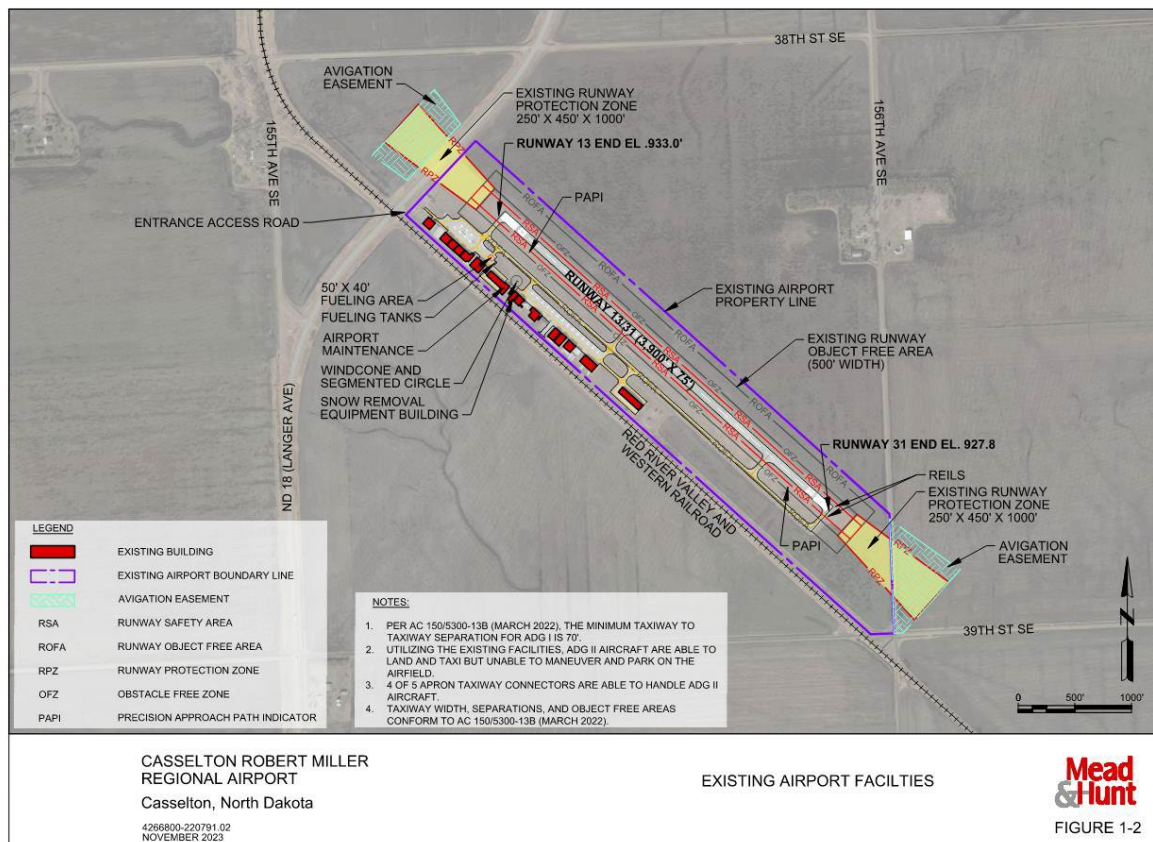


Figure 1-2: Casselton Existing Airfield

1.2 PROJECT PURPOSE

The project purpose for the FAA is to maintain the runway and parallel taxiway at Casselton Regional Airport while satisfying existing user needs, meeting current FAA airport design standards. Further, and controlling adequate fee simple property for long-term airport needs. Additional purpose for the airport sponsor is to accommodate expected future aviation activity and to allow for operations during inclement weather (instrument meteorological conditions).

The project purpose is stated separately for the FAA and the airport sponsor because the proposed action includes more runway length than is currently eligible for FAA funding. FAA funding eligibility is tied to existing infrastructure and the existing critical aircraft, which limit improvements to the current 3,900-foot runway and related standards. The airport sponsor's purpose, however, considers anticipated needs of the ultimate critical aircraft, which are not eligible for FAA funding.

1.3 PROJECT NEED

The overall need for the project is to address deteriorating runway and taxiway pavement conditions while ensuring compliance with FAA requirements and guidance for existing airport users. For the FAA, this means maintaining safe and efficient airfield operations by meeting established design standards for current aircraft activity. For the airport sponsor, the need includes incorporating ultimate critical aircraft requirements into the project to avoid redundant improvements in the long-term. This means that the pavement replacement design should consider whether the existing infrastructure geometrics are adequate for expected future operational demands associated with the forecasted ultimate critical aircraft identified by the 2020 Master Plan and Airport Layout Plan (ALP), reducing the risk of costly rework and optimizing long-term investment. The key elements driving the need for the project are:

- Deteriorating pavement condition on the runway and associated parallel taxiway.
- Insufficient land to increase separation of runway and taxiway and accommodate existing and future critical aircraft design standards in the apron, hangar, and development area.
- Inadequate runway length to accommodate future operations of larger aircraft.
- Instrument approach procedures, navigational aids, and lighting for any runway changes.
- Incompatible land use in Runway Protection Zones (RPZs) and insufficient land to provide clear RPZs.

Further details on the conditions driving the project need are found in the following subsections.

1.3.1. PAVEMENT CONDITION

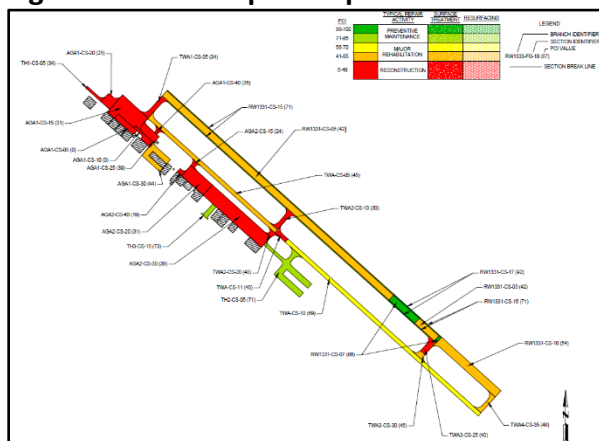
The airfield at 5N8 consists of a single runway, Runway 13/31, supported by a full parallel taxiway, Taxiway A, which has four connecting taxiways. The initial layout of the runway (3,200' x 60') was constructed in 1987. Improvements and additions to the Airport were completed over the next five years, which means that the majority of Airport pavement is over 30 years old. Although multiple rehabilitation projects have occurred since its original construction, pavement throughout the Airport is now in poor condition and nearing the end of its service life. Notably, there have been several significant acute pavement failures in recent years, including:

1. Runway concrete blow-up - May of 2014
2. Parallel Taxiway severe faulting - October of 2018
3. Parallel Taxiway two concrete blow-ups - May of 2019

A full map of the Airport with its pavement conditions is shown in **Figure 1-3**. Based upon a visual inspection by experienced engineers, a pavement condition index (PCI) rating is assigned to each pavement section on an airport. FAA guidance in AC 150/5380-7B, *Airport Pavement Management Program*, provides PCI rating scales for assessing pavement condition, with values below 55 indicating substantial deterioration and poor condition. AC 150/5320-6G, *Airport Pavement Design and Evaluation*, further explains that full-depth reconstruction is generally warranted when PCI values are very low and pavement integrity cannot be restored through

overlays or maintenance. Much of the runway and taxiway pavement at 5N8 is in fair to poor condition, with sections approaching or below this threshold, indicating significant deterioration. While a rehabilitation project in 2023 temporarily preserved usability, it did not address underlying deficiencies, and the extent of deterioration warrants full-depth reconstruction in several segments. This need exists independently of any proposed runway enhancements.

Figure 1-3: PCI Map of Airport Pavements



Source: Casselton Robert Miller Regional Airport Runway Airfield Pavement Report, NDAC, 2024

The condition of the connector taxiways ranges from poor to fair with a PCI range of 24 through 54. Consistent with much of the Airport's pavement, the sections in better condition are on the



southeast portion of the Airport, as both Taxiways A3 and A4 have a PCI in the 50s. To the north, both Taxiways A1 and A2 are in the 30s while the connection from the south apron to the parallel taxiway has a PCI of 24 with severe faulting between slabs, as shown in Figure 1-4¹.

Figure 1-4: Faulting on Taxiway Connector

Source: 2021 PCI Study

According to AC 150/5380-7A, *Airport Pavement Management Program*, maintaining a pavement in good condition over its life cycle is four to five times less expensive than periodically rehabilitating a pavement in poor condition. In addition to poor pavement conditions costing more to upkeep, it also presents a danger to aircraft. Longitudinal cracks in the pavement and faulting between concrete slabs presents a risk to aircraft tires and loose pieces of pavement that have broken off pose the risk of being propelled by prop wash to damage aircraft, property, or people.

¹ Pavement section AGA2-CS-15

1.3.2. DESIGN STANDARDS FOR EXISTING AND FUTURE CRITICAL AIRCRAFT

Because reconstruction of the runway and parallel taxiway is necessary due to existing pavement condition, improvements should be designed to meet standards for existing and projected users. The critical aircraft determines appropriate design standards for facilities including runways, taxiways, and apron areas. The critical aircraft is defined by FAA Advisory Circular (AC) 150/5000-17, *Critical Aircraft and Regular Use Determination*, as, “the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of an airport” defined as 500 annual operations.

Critical Aircraft:

The aircraft with regular use at an airport that has the most demanding operational characteristics. This is defined by the two aircraft classifications described below.

Aircraft Approach Category (AAC):

This standard is based on the approach speed (in knots) of the critical aircraft.

Airplane Design Group (ADG):

This second standard is based on the wingspan and tail height of the critical aircraft as shown in Table 1-1.

Table 1-1: Aircraft Approach Category (AAC) and Airplane Design Group (ADG)

Aircraft Approach Category	Approach Speed	
A	<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	Approach speed 166 knots or more	
Airport Design Group Number	Tail Height	Wingspan
I	< 20 ft	< 49 ft
II	20 ft to < 30 ft	49 ft to < 79 ft
III	30 ft to < 45 f	79 ft to < 118 ft
IV	45 ft to < 60 ft	118 ft to < 171 ft
V	60 ft to < 66 ft	171 ft to < 214 ft
VI	66 ft to < 80 ft	214 ft to < 262 ft

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

Existing Critical Aircraft

The existing critical aircraft at Casselton (based on current airport activity and identified by the 2020 Master Plan and ALP) is A/B-II (Small), represented by the Air Tractor 402/502. These aircraft meet the FAA threshold for regular use and therefore dictate existing design standards. Aircraft within this category have a maximum takeoff weight (MTOW) of 12,500 pounds or less, and a wingspan of less than 79 feet.

Table 1-2: Selected Characteristics of Existing Critical Aircraft

Aircraft Type	Maximum Takeoff Weight (MTOW)	Wingspan
Air Tractor 402	7,000 lbs.	51 feet
Air Tractor 502	9,400 lbs.	52 feet

However, the current airfield geometry does not fully meet Airplane Design Group II (ADG-II) standards, and the current runway and taxiway configuration limits the Airport's ability to accommodate the existing critical aircraft, specifically ADG-II (wingspans of 49 feet to 79 feet). Design standards relevant to the configuration constraints associated with this design group are:

- Taxiway Object Free Area (TOFA): 124 feet wide centered on taxiway centerline
- Taxilane Object Free Area (TLOFA): 110 feet wide centered on taxilane centerline
- Runway centerline to taxiway centerline lateral separation: 240 feet

As shown in **Figure 1-6**, below, the existing aircraft parking aprons are designed to accommodate a 79' wide, ADG-I standard TLOFA providing wingtip clearance between taxiing and parked ADG-I airplanes. Because the existing critical aircraft is B-II, as identified above, apron, taxilane, and runway/taxiway separation standards should be planned to accommodate ADG-II aircraft. There is insufficient space on either apron to provide a compliant 110' wide ADG-II TLOFA, because existing hangars and aircraft parking positions would be situated within the TLOFA associated with an ADG-II taxilane centered on the current taxilane centerline. Compliant ADG-II taxilanes can only be provided by expanding the aprons toward the airfield and reconfiguring the taxilanes and aircraft parking positions on the larger aprons. However, the aprons cannot be expanded toward the airfield without also relocating the taxiway and runway to the east to maintain both the 124' wide ADG-II TOFA for the parallel taxiway and the 240' standard lateral separation between the runway centerline to the parallel taxiway centerline. Because the pavement condition necessitates reconstruction of the runway and parallel taxiway, this is an advantageous time to consider substantial changes to runway and taxiway location that will allow the Airport to meet design standards for the existing critical aircraft.

Taxiway Separation:

The Taxiway and Taxilane Object Free Areas provide effective wingtip clearance for aircraft circulating on the airfield. For this reason, the wingspan of the critical aircraft/ ADG is a crucial measurement to determine appropriate design.

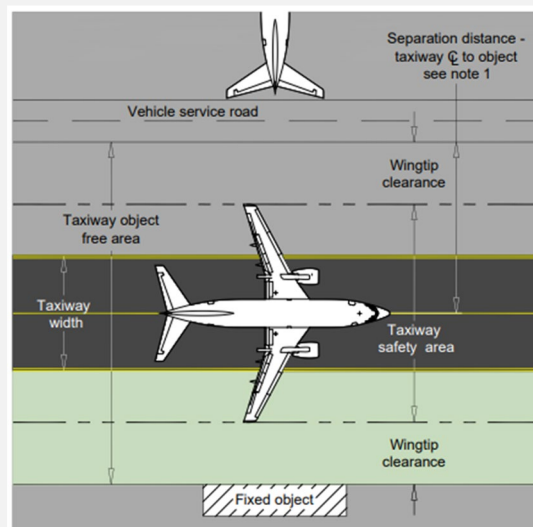
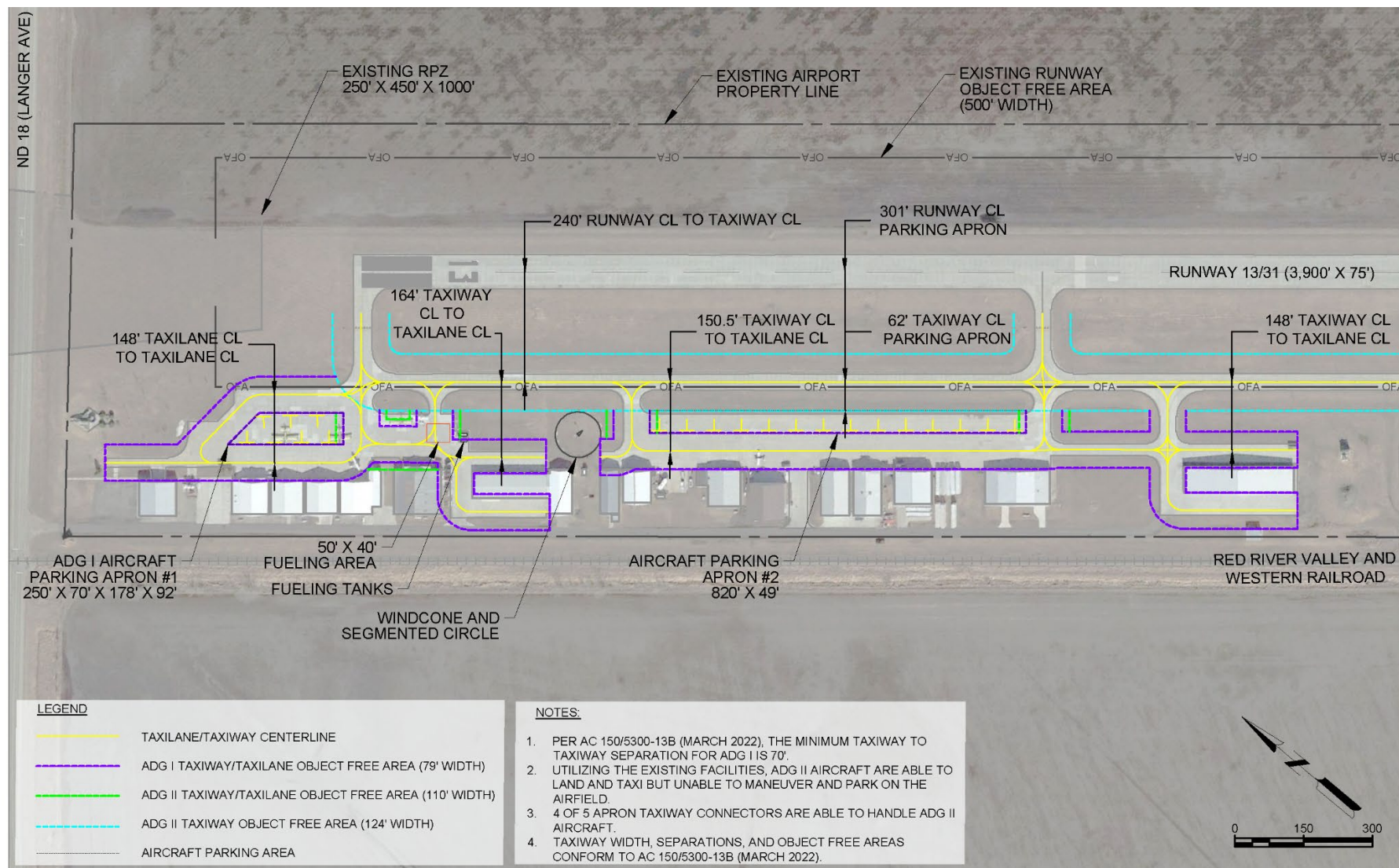


Figure 1-5: Taxilane Separation FAA AC 150/5300-13-B

Figure 1-6: Group II Aircraft Limitations



Future Critical Aircraft

The forecasted ultimate critical aircraft for 5N8 identified by the 2020 Master Plan and ALP is B-II (Large). This designation does not require 500 annual operations today but reflects reasonably foreseeable demand supported by:

- Regional population and economic growth (Cass County, Fargo-West Fargo-Moorhead metro statistical area).
- Continued hangar waitlists and limited basing capacity at nearby airports.
- Increasing presence of larger agricultural aircraft (Air Tractor 802), turboprops, and business jets.
- Forecasts from the 2020 Master Plan showing substantial increases in unconstrained based aircraft (to 81 by 2037) and annual operations (to ~29,400).

These factors support the Airport's purpose of planning for regular use by B-II (Large) aircraft within the 20-year horizon even though FAA funding eligibility for lengthening the runway remains tied to existing usage.

According to the Fargo Moorhead Economic Development Corporation², as of 2021 the region's population increased by 6.3% overall since 2016 and is expected to increase by 7.6% overall between 2021 and 2026, in comparison to 3.2% and 3.4% for the same periods for the state of North Dakota as a whole. As the community and its economy continue to grow, this may lead to more aviation activity and a diversification of the types of aircraft in use at surrounding airports such as 5N8. Operators of more demanding aircraft may choose to operate out of the Airport more frequently or base their aircraft at the Airport as demands on surrounding airports increase. In addition to the population and economic growth in the broader region, Casselton is a hub for agribusiness including processors of agricultural products like soybeans and ethanol, food manufacturing, large farms, and agriculture technology innovation laboratories. The Airport is well positioned to be a base for corporate aviation for these businesses in the future, and these conditions support B-II (Large) as the ultimate design standard, serving as the basis for the airport sponsor's need to consider future users at Casselton.

B-II (large) aircraft with MTOW exceeding 12,500 pounds are commonly used for business and corporate purposes. In an interim scenario where large turboprop aircraft operations exceed 500 annual operations, but jet operations do not, this group is represented by the Beech King Air 300 and the Air Tractor 802. In a long-term scenario with regular use by jet aircraft, the group is represented by the Cessna Citation II, Cessna CJ4, and the Embraer Phenom 300.

² <https://gfmedc.com/business/community-profile/economic-profile/>

Table 1-3: Selected Characteristics of Future Critical Aircraft

Aircraft Type	Maximum Takeoff Weight (MTOW)	Wingspan
Beech King Air 300	14,000 lbs.	58 feet
Air Tractor 802	16,000 lbs.	59 feet
Cessna Citation II	14,800 lbs.	52 feet
Cessna CJ4	17,110 lbs.	51 feet
Embraer Phenom 300	17,968 lbs.	52 feet

**Figure 1-7: Air Tractor 802****Figure 1-8: Beech King Air 300**

While MTOW for the future critical aircraft exceeds 12,500 pounds, other physical characteristics including wingspans of these aircraft are still within ADG Group II, meaning that space considerations and separation for runway and taxiway design will be the same as the existing critical aircraft. The increased MTOW has implications for runway length requirements, discussed in Section 1.3.3. Alleviating constraints to development by making changes to the airfield will allow the Airport to meet standards for future users with Group II Large turboprop and jet aircraft, forming part of the airport sponsor's purpose for the project.

1.3.3. APRON AND HANGAR DEVELOPMENT

Currently, all hangars at 5N8 are leased and a waitlist is maintained. Additional apron and hangar capacity would be needed to accommodate growth safely and efficiently. However, development is constrained, in part by the existing separation of the runway and parallel taxiway from the apron and hangar areas that cannot accommodate the existing critical aircraft with ADG II. Additionally, a railroad runs parallel to and approximately 600 feet south of Runway 13/31 just outside the Airport property line.

A single row of hangars is located between the edge of the taxilane object free area and the southern edge of Airport property. The Airport is unable to consider expansion beyond this property boundary because costs and coordination efforts to relocate an active railroad corridor would decidedly outweigh the benefits of Airport property acquisition. Further development along this strip is not practical because current design standards do not allow sufficient space for taxilanes, aprons, and aircraft parking and maneuvering between any potential hangars and Taxiway A. Additionally, continuing to extend the building area along the property line results in a considerable and potentially undesirable distance between future hangars and Airport facilities such as the terminal and fueling area.

1.3.4. RUNWAY LENGTH

Runway length requirements depend on the aircraft types expected to regularly use the Airport. For existing users (B-II Small), the current 3,900-foot runway meets FAA recommended lengths, as shown in Table 1-4, and the 2020 Master Plan did not identify an FAA-justified need for greater runway length under existing conditions. However, the ultimate critical aircraft (B-II Large) identified by the Master Plan and ALP has higher takeoff weights and performance requirements. Based on FAA AC 150/5325-4B, the Master Plan determined:

- 4,800 feet is appropriate for foreseeable large turboprop usage (interim)
- 5,500 feet is needed for long-term large jet operations (ultimate)

Table 1-4: Runway Length Requirements (< 12,500 lbs.)

Airport and Runway Data	
Airport Elevation	933 feet MSL
Mean Daily Maximum Temperature of Hottest Month	82.3°F
Aircraft Classification	Recommended Runway Length
<i>Small Airplanes 12,500 Pounds or less</i>	
10 or more passenger seats	4,200 feet
Less than 10 passenger seats at 100 percent of fleet	3,900 feet
Less than 10 passenger seats at 95 percent of fleet	3,300 feet

Source: Casselton Robert Miller Regional Airport Master Plan, 2020; FAA AC 150/5325-4B

The FAA runway length requirements of 100 percent of fleet of small airplanes less than 12,500 pounds apply at Casselton due to being within the Fargo/Moorhead metropolitan statistical area according to AC 150/5325-4B Chapter 2, Paragraph 205 a, *Selecting a Percentage of Fleet*. At minimum, the relocated runway should be 3,900 feet long to accommodate current users, and baseline data from the 2020 Master Plan did not show an existing need for additional runway length.

However, as space constraints for larger aircraft at the airport ease and population and economic trends in the area continue, this is likely to change over the long-term 20-year planning horizon as larger and heavier aircraft make use of the Airport. Forecasts in the Master

Plan indicate long-term growth in based aircraft (to 81 by 2037) and total operations increasing to approximately 29,400 annually. While long-term growth does not justify extending the runway with FAA funds at this time, it does support the airport sponsor's purpose to establish land control for a future runway length that meets the needs of larger agricultural, turboprop and jet aircraft whose performance requires longer runway lengths.

The MTOWs shown for the future interim and ultimate aircraft (Table 1-3, above) warrant additional runway length, as shown in Table 1-5. It is anticipated these aircraft would fall into the "75 percent of fleet" classification of large aircraft less than 60,000 pounds. The exact percent useful load is not known at this time; however, short-haul trips are assumed to travel from Casselton to destinations in the Midwest.

Table 1-5: Runway Length Requirements (12,500 lbs. up to 60,000 lbs.)

Airport and Runway Data	
Airport Elevation	933 feet MSL
Mean Daily Maximum Temperature of Hottest Month	82.3°F
Maximum Difference in Runway Centerline Elevation	5 feet (+50 feet)
Runway Condition	Wet and Slippery Runways
Aircraft Classification	Recommended Runway Length
<i>Large Airplanes more than 12,500 Pounds but less than 60,000 Pounds</i>	
75 percent of fleet at 90 percent useful load (Wet)	7,000 feet
75 percent of fleet at 90 percent useful load (Dry)	6,400 feet
75 percent of fleet at 60 percent useful load (Wet)	5,500 feet
75 percent of fleet at 60 percent useful load (Dry)	4,800 feet

Source: Casselton Robert Miller Regional Airport Master Plan, 2020; FAA AC 150/5325-4B

An interim future runway length of 4,800 feet would accommodate the situation where turboprop aircraft operations exceed 500 annual operations, but jet operations do not. The length for this scenario would be 4,800 feet due to the fact the turbojet adjustment for wet runways would not apply. The 2020 Master Plan and ALP in **Figure 1-9** also depicted a long-term length of 5,500 feet to accommodate large jet aircraft and an interim length of 4,800 feet.

Because the need for land acquisition for increased runway length is foreseeable within a 20-year period, the Airport is considering the interim and long-term runway lengths as part of the proposed project. This will allow the Airport to protect future aviation needs through land control. Because the runway and taxiway must be reconstructed and relocated to meet current ADG-II standards, this project presents a one-time opportunity to:

- Acquire and protect the land needed for the ultimate runway length
- Avoid future road relocations and environmental disruptions
- Preserve long-term operational capability for larger aircraft.

While the area around 5N8 is agricultural and outside of the expected growth areas set in the Casselton and Cass County Comprehensive Plans, a survey conducted by the North Dakota chapter of the American Society of Farm Managers and Rural Appraisers indicated that farmland value in the Red River Valley region rose approximately 28% year over year in 2021. Given the rapid increase in values, consideration of the potential for rising future costs of land acquisition are likely appropriate. Acquiring land for the long-range 20-year planning period will protect areas needed for future runway length and safety areas from potential encroachment and rapidly rising values in a growing metropolitan area.

Runway end 13 to the north is constrained by State Highway 18; therefore, any extension would occur to the Runway 31 end to the south. Both 4,800-foot interim and 5,500-foot long-term lengths would require relocation of 39th Street SE and 156th Avenue SE to avoid the runway and provide clear Runway Protection Zones, discussed further in Section 2.2.5.

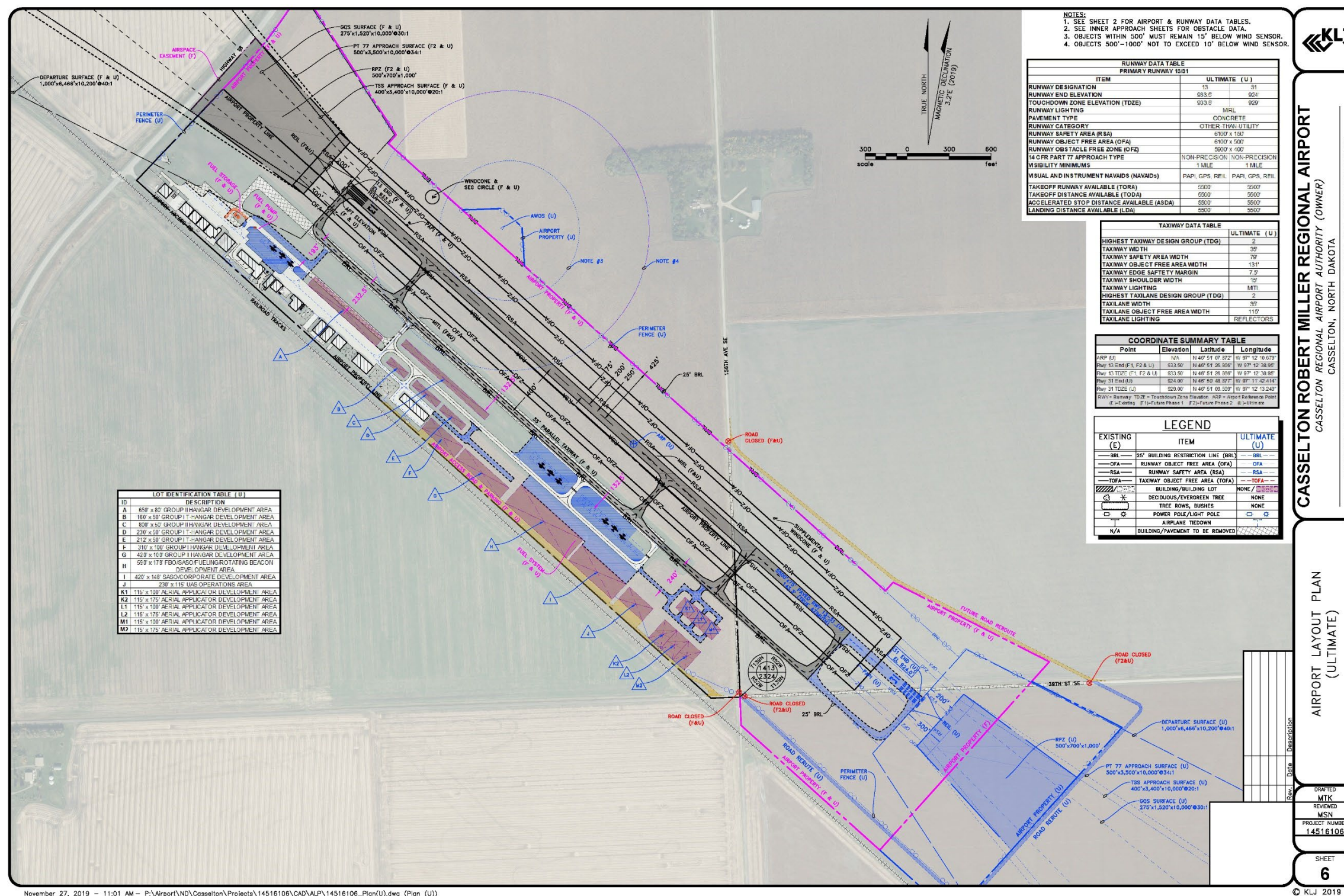
1.3.5. INSTRUMENT APPROACHES, NAVIGATIONAL AIDS, AND LIGHTING

If runway end locations change to meet the needs discussed in the above sections, approach procedures would require reevaluation and new GPS approaches would be established for the new runway ends. Runway 31 has an LPV approach with vertical guidance. Existing PAPIs and all existing NAVAIDs disrupted by relocating the runway should be relocated and reinstalled corresponding with new runways ends, and new runway lighting would be included as part of the proposed project.

Runways 13 and 31 currently support LNAV GPS approaches with 1-mile visibility minimums. However, as the airport sponsor anticipates increased activity by business jets and heavier aircraft over the 20-year planning horizon, it is prudent to plan for lower visibility minimums to ensure the infrastructure can support the full range of operational needs. A runway extension without corresponding improvements to approach minimums may limit the effectiveness of the investment, as aircraft may still be unable to land during periods of reduced visibility.

Lower minimums, such as $\frac{3}{4}$ mile or less, enhance the airport's operational potential by allowing more consistent access during fog, snow, or other low-visibility conditions. This is especially important for business jet users, who often operate on tight schedules and rely on reliable access regardless of weather. Improved minimums also make the airport more attractive as a reliever for Fargo (FAR) or as an alternate destination when conditions elsewhere deteriorate. This approach ensures that the environmental analysis captures the full breadth of potential impacts associated with runway improvements.

Figure 1-9: Airport Layout Plan



1.3.6. INCOMPATIBLE LAND USES IN RPZ

An RPZ is a trapezoidal area beyond the runway end intended to enhance the safety and protection of people and property on the ground. Public roadways are considered incompatible land uses within RPZs according to current FAA policy, and the existing RPZs at 5N8 contain roads including State Highway 18 in the Runway 13 RPZ and 156th Avenue SE in the Runway 31 RPZ.

The proposed project should include road relocations that provide clear RPZs and meet land use guidance standards in the existing, interim, and long-term runway length conditions, discussed in Section 1.3.3. This roadway relocation should allow the proposed long-term runway length scenario, which is foreseeable within a 20-year period, to minimize the disturbance that would be caused by multiple relocations within that time. Existing rights-of-way and utilities along roadways should be relocated along with the road. Additionally, like the future runway length considerations, acquiring land for the future RPZ within the 20-year planning period allows the Airport to protect future RPZs from future potential encroachment.

Runway Protection Zone:

The Runway Protection Zone is one of many safety areas on and near an airport that have restricted uses to protect airport users or those nearby.

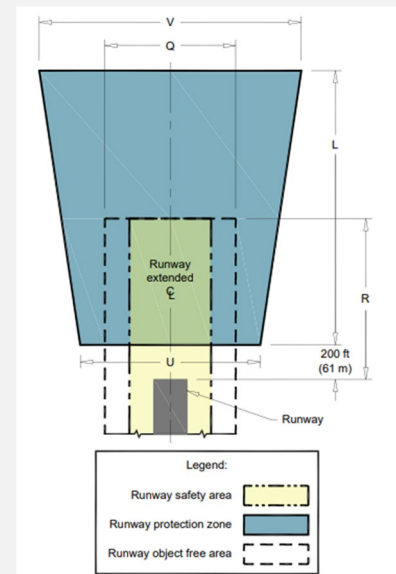


Figure 1-10: RPZ Diagram FAA AC 150/5300-13-B

OBJECTIVES

To meet the project purpose and address these needs, the following objectives will be pursued:

- Relocate Runway 13/31, parallel taxiway, and associated connector taxiway pavements.
- Meet design standards for the existing and expected future critical aircraft and provide space to meet based and transient aircraft design standards and facility needs.
- Provide the required runway length for existing, interim, and long-term critical aircraft needs.
- Update instrument approach procedures, navigational aids, and lighting to correspond with runway changes, including improved approach minimums.
- Minimize incompatible land uses in the Runway 13/31 runway protection zones (RPZs).

Alternatives in Chapter 3 of this document will be screened against these objectives.

2.1 INTRODUCTION

According to FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, the Alternatives section of an EA is based on the Purpose and Need statement, and compares the no action, the proposed action, and reasonable alternatives (if any). This chapter compares a range of alternatives and evaluates them based on the Purpose and Need and operational, implementation, and known environmental feasibility factors. The result of the evaluation is the selection of a proposed project and alternatives to be carried forward for further evaluation of environmental impacts, identified in Section 2.4. The alternatives are presented and analyzed in the following sections:

- Array of Alternatives Considered
- Alternatives Analysis
- Alternatives Comparison
- Preferred Alternative and Alternatives Carried Forward for Analysis

2.2 ARRAY OF ALTERNATIVES CONSIDERED

The 2020 Master Plan for the Casselton Robert Miller Regional Airport (5N8 or the Airport) identified a range of development alternatives intended to meet the needs of both the airport sponsor and its frequent users. The Master Plan alternatives compared existing facility conditions and requirements for projected and documented needs to arrive at the range of options that are now considered and described in this Environmental Assessment (EA) with some refinements.

Alternatives focus on relocation of Runway 13/31 to increase the separation distance from the terminal area and aprons to meet the purpose and need, user needs, and FAA design standards while minimizing environmental impacts and incompatible land uses. The array of alternatives considered include:

- No Action: Maintain existing Airport facilities as-is.
- Runway length: Extend runway beyond existing critical aircraft needs with state or local funding.
- Runway Alternative A: Extend existing Runway 13/31 by 1,600 feet for 5,500 feet of total length.
- Runway Alternative B: Relocate Runway 13/31 up to 400 feet to the east; extend to 5,500 feet of total length.
- Runway Alternative B $\frac{3}{4}$: Alternative B with $\frac{3}{4}$ -mile visibility.
- Runway Alternative C: Construct 5,500-foot Runway 18/36, decommission Runway 13/31.
- Development Areas: Establish near-term and long-term development areas.

2.3 ALTERNATIVES ANALYSIS

This section evaluates the alternatives based on their ability to meet the Purpose and Need, practical implementation considerations, and relevant pre-existing environmental factors. The proposed action must address the project purpose and need detailed in Section 1.2 and 1.3 of this document, and to do so will aim to meet following objectives outlined in Section 1.4:

- Identify ultimate location of Runway 13/31, parallel taxiway, and associated connector taxiway pavements to provide the required separation distance between the runway and the terminal and apron areas.
- Comply with FAA design standards for the existing and expected future critical aircraft and provide space to meet based and transient aircraft design standards and facility needs.
- Provide the required runway length for existing, interim, and long-term critical aircraft needs.
- Update instrument approach procedures, navigational aids, and lighting to correspond with runway changes, including improved approach minimums.
- Minimize incompatible land uses in the Runway 13/31 runway protection zones (RPZ).

Additionally, to further determine the strengths and weaknesses of each alternative, the following objectives are considered. A desirable project would include elements that:

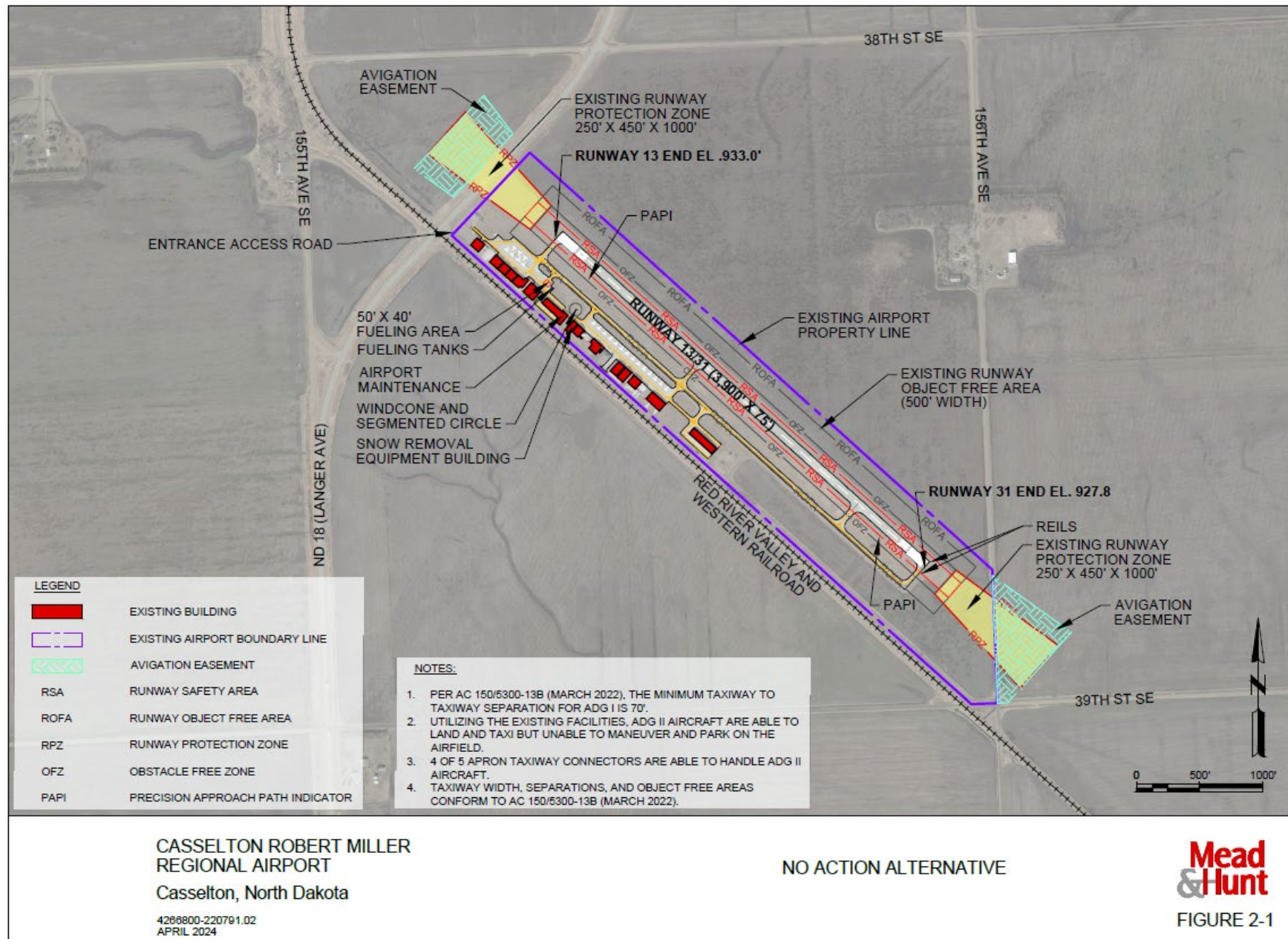
- Provide for flexibility in the way of unforeseen changes
- Are technically feasible, constructable, and implementable
- Are socially and politically feasible.

Alternatives analysis in this chapter is limited to the detail necessary to select or dismiss each alternative. The goal of this analysis is to identify the preferred alternative, which should 1) meet the Purpose and Need, 2) be available and practicable for implementation, and 3) avoid, minimize, and mitigate impacts to known existing environmental resources. After assessing these factors, detailed environmental effects of each alternative carried forward will be evaluated in Chapter 3, Affected Environment and Environmental Consequences.

2.3.1. NO ACTION ALTERNATIVE

NEPA regulations require consideration of a No Action Alternative. For this EA, the No Action Alternative is defined as the reconstruction and continued operation of the existing runway and parallel taxiway as they are currently designed and constructed. As a result, the No Action Alternative would not address the Purpose and Need.

Relocate Runway 13/31 to Increase Separation Distance from the Terminal and Apron Areas Shown in **Figure 2-1**, the No Action Alternative would leave 5N8 in its present condition, operating with the existing runway configuration.



Comply with FAA Design Standards

The No Action Alternative keeps the Airport out of compliance with FAA design standards relative to aircraft separation standards, RPZ standards, and airspace standards.

Provide Adequate Runway Length

While existing Runway 13/31 is sufficient for current users, the No Action alternative does not provide the needed length for the future interim and long-term critical aircraft described in Section 1.3.3.

Update Procedures, NAVAIDs and Lighting

The No Action alternative does not include runway end or threshold changes, and would not require updating procedures, NAVAIDs, or lighting because the existing equipment is sufficient for the runway in the current condition. All NAVAIDs at the Airport are airport-owned and would remain so in the no-action scenario.

Minimize Incompatible Land Uses

The No Action Alternative does not provide any mitigation to existing incompatible land uses and penetrations to runway approach and departure surfaces.

Summary of No Action Alternative

Because NEPA requires consideration of a No Action Alternative, this alternative will be carried forward for evaluation.

2.3.2. RUNWAY LENGTH

As discussed in Section 1.3.3. in Chapter 1: *Purpose and Need*, because the need for increased runway length is foreseeable within a 20-year period, the Airport is considering land acquisition for a long-term runway length of 5,500 feet as part of the proposed project, even though construction and maintenance of a runway length beyond 3,900 feet are not currently eligible for FAA funding.

Planning for 5,500 feet will allow the Airport to protect future aviation needs through land control as described in Section 1.3.3. Additionally, there may be alternative sources of funding available for runway length exceeding 3,900 feet in the near term. While the longer runway does not currently meet justification for federal Airport Improvement Program (AIP) funding, it would still require NEPA review for ALP approval, and would require FAA actions for associated procedures, airspace, and NAVAIDs. For these reasons and to make sure all potential environmental impacts of the proposed project are considered, the ultimate runway length scenario of 5,500 feet, which exceeds FAA eligible length by 1,600 feet, will be carried forward for further analysis and included in the following alternatives.

2.3.3. RUNWAY ALTERNATIVE A: EXTEND RUNWAY 13/31

Alternative A, presented in **Figure 2-2**, considers extending Runway 13/31 and parallel taxiway by 1,600 feet, for an overall length of 5,500 feet, a runway design code (RDC) of B-II (large), and a visibility component of 1-mile. The closures of 156th Avenue SE and 39th would be required due to the new runway and taxiway crossing the road.

Relocate Runway 13/31 and Taxiways to Increase Separation from Terminal and Apron Areas

Alternative A would not shift the runway away from the apron area, and consequently would not provide relief for limited maneuvering ability for airplane design group (ADG) II aircraft in taxilanes around the terminal and apron areas discussed in Section 1.3.2. This alternative does not provide adequate apron areas for landside development.

Comply with FAA Design Standards

This alternative does not increase separation between the taxiway and taxilanes and limits the Airport's ability to accommodate ADG II aircraft within FAA design standards as detailed in Section 1.3.2. Additionally, the separation distance of the parallel taxiway from the runway remains at the existing 240 feet, potentially impacting the ability of future larger aircraft to turn perpendicular to the runway at the hold line. Alternative A results in obstructions in the 34:1 Part 77 approach surface for Runway 31.

Update Procedures, NAVAIDs and Lighting

This alternative would include updating procedures and airport-owned NAVAIDs and lighting for the new Runway 31 end. Due to the proximity to the parallel railroad, obstructions would limit improvements to approach minimums.

Minimize Incompatible Land Use

This alternative requires the closure or relocation of 156th Avenue SE and 39th Street SE due to the new runway end intersecting the existing road alignments. Penetrations of protected airspace remain in place with Alternative A from hangars and a transmission line to the south of the Airport. In this scenario, public roads (Langer Avenue) remain within the Runway 13 RPZ.

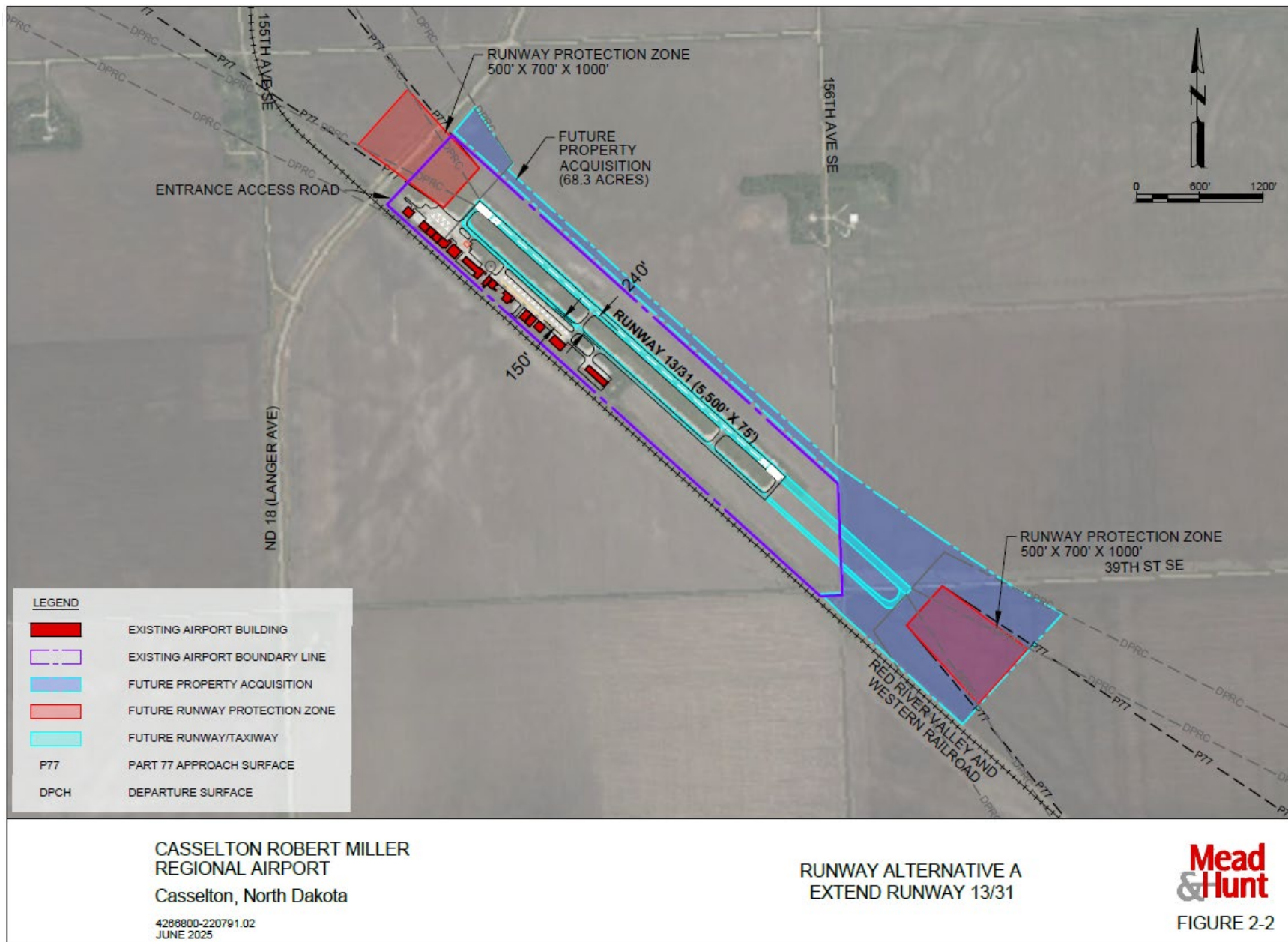
Additional Factors

The implementation of Alternative A requires the least amount of land acquisition (60 to 70 acres) while allowing approximately 12 acres for near-term hangar development on existing Airport property. However, this alternative limits further development and available land will still be constrained by the distance between the property line and the parallel taxiway, which would make development that accommodates the existing critical aircraft, ADG II, challenging. Additionally, construction of this alternative would require a significant period where the airport is closed for construction.

This alternative would lead to impacts to a narrow band of jurisdictional wetlands that follow 39th Street SE, with the proposed runway and taxiway requiring culverts. Alternative A would lead to potential farmland conversion of up to 70 acres.

Summary of Alternative A

This alternative fails to address several aspects and objectives of the purpose and need and would not adequately serve current and existing users. Taxilanes around the development area would not meet B-II standards for TOFA separation for the existing critical aircraft and maneuvering space would not be increased. RPZs would continue to contain roadways as incompatible uses. Because of these factors, Alternative A will not be carried forward for further analysis.



2.3.4. ALTERNATIVE B: RELOCATE RUNWAY 13/31 AT LEAST 400 FEET EAST

Alternative B, presented in **Figure 2-3**, considers extending Runway 13/31 and the parallel taxiway by 1,600 feet for a total ultimate length of 5,500 feet, and relocating the runway 400 feet to the east. The runway width would be 75 feet with a taxiway width of 35 feet. This alternative results in an RDC of at least B-II (large) and a visibility component of 1-mile. The closures or realignment of 156th Avenue SE and 39th would be required due to the new runway and taxiway crossing the existing roads.

Relocate Runway 13/31 and Taxiways to Increase Separation from Terminal and Apron Areas
Alternative B increases the separation of the parallel taxiway from apron taxilanes from approximately 150 feet to approximately 400 feet. This places the new parallel taxiway approximately 250 feet from the existing taxiway. This distance would allow existing Group II aircraft to maneuver within the apron areas while meeting FAA standards for taxiway object free areas (TOFA). It would also allow aircraft parking positions to move out of the ADG II OFA in Apron #2 on a future expanded apron, a need discussed in Section 1.3.2. These changes would allow the Airport to better accommodate the existing critical aircraft, serving the overall purpose of the project to meet near-term user needs. It would also allow the Airport to prepare to meet the needs of future critical aircraft as Casselton Regional Airport is likely to serve more demanding aircraft as the region continues to grow (refer to page 1-9 in Section 1.3.2 of Chapter 1: Purpose and Need).

300-FOOT SEPARATION VARIATION

One variation of this alternative examined in the Master Plan included separating Runway 13/31 and the parallel taxiway by only 300 feet. This variation places the new taxiway in the same place as the 400-foot option relative to the existing taxiway, which would provide the same amount of maneuvering space on the existing aprons for Group II aircraft outside of the TOFA, and similarly meet the needs of existing and future users.

Comply with FAA Design Standards

This alternative provides 400 feet of separation between the runway and the parallel taxiway, which would allow future larger aircraft to line up perpendicular to the hold line. While this could be achieved with a smaller separation distance, Alternative B also features no penetrations to the Part 77 34:1 approach surface, which is an improvement from Alternative A and the No Action Alternative.

300-FOOT SEPARATION VARIATION

Clearing the Part 77 34:1 approach surface would not be possible with a 300-foot separation distance.

Update Procedures, NAVAIDs, and Lighting

This alternative would include updating procedures and acquiring new NAVAIDs and lighting for the new runway location to meet the project need for these components and support operations in inclement weather according to the project purpose.

Minimize Incompatible Land Use

The closure or realignment of 156th Avenue SE and 39th Street would be required due to the future runway intersecting the existing road locations.

Alternative B removes ND 18/Langer Ave from the Runway 13 RPZ, and with a 400-foot separation does not result in any penetrations to the Part 77 34:1 approach surface, which remain in the No Action alternative and Alternative A. A small portion of the Runway 13 RPZ that extends beyond airport property within the ND 18 ROW would require a new aviation easement encompassing approximately 3 acres. Furthermore, this alternative protects the long-term future Runway 31 RPZ by purchasing the future RPZ through a fee-simple real estate transaction. This addresses the project need to reduce or eliminate incompatible land uses in the existing RPZs.

300-FOOT SEPARATION VARIATION

Alternative B with a 300-foot runway/taxiway separation distance would similarly clear incompatible land uses in the RPZ. Roadway closures and realignments would still be required due to the intersection of the new runway with the existing 156th Avenue SE and 39th Street, although realignment distance may be shorter.

Additional Factors

This alternative would lead to impacts to a narrow band of jurisdictional wetlands that follow 39th Street SE, with the proposed runway and taxiway requiring culverts. This alternative would convert fewer than 170 acres of prime farmland away from crop production.

This alternative does not require the closure of the existing runway, apart from reducing the length to 3,000 feet for approximately 30 to 45 days during construction.

Future developable space for apron and hangar areas under this configuration is up to 43 acres, with a proposed fee-simple acquisition of 150 to 170 acres.

300-FOOT SEPARATION VARIATION

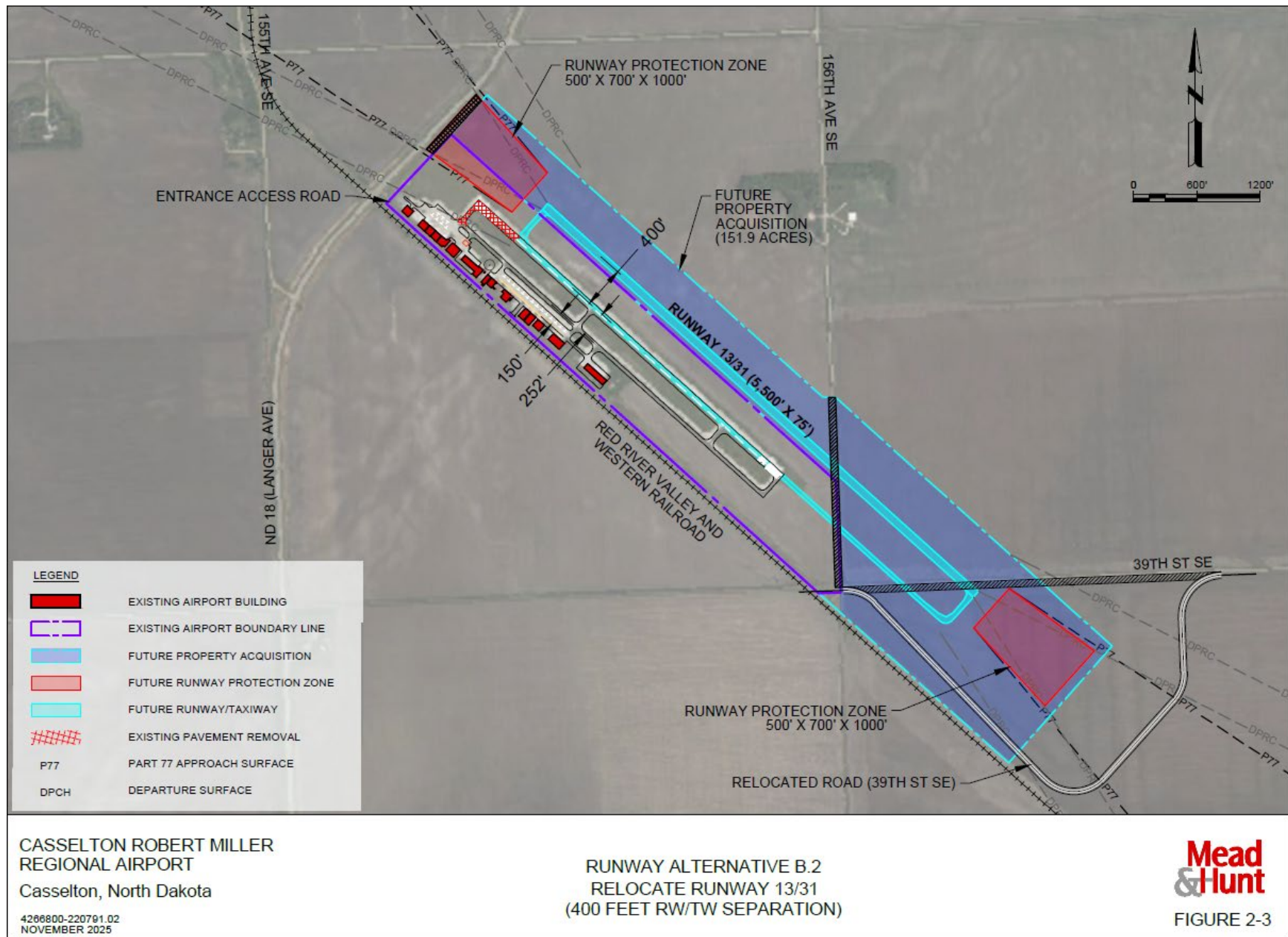
Developable space would be approximately 40 acres, with proposed land acquisition of 130 to 140 acres.

Summary of Alternative B

The preceding analysis shows that this alternative adequately addresses the purpose and needs of the project described in Section 1.2 and 1.3 of this EA, and meets the objectives described in Section 1.4. Alternative B will be carried forward for further analysis of environmental consequences.

300-FOOT SEPARATION VARIATION

Alternative B with a 300-foot runway/taxiway separation also largely serves the purpose and needs of the proposed project, with the exception that FAA standards would not be met for the Part 77 34:1 approach surface.



2.3.5. ALTERNATIVE B $\frac{3}{4}$: ALTERNATIVE B WITH $\frac{3}{4}$ -MILE VISIBILITY MINIMUMS

Alternative B $\frac{3}{4}$, shown in **Figure 2-4**, considers a physical airfield alternative identical to Alternative B with a 5,500-foot-long x 75-foot-wide runway shifted to the east to provide 400 feet of separation from a full length 35-foot wide parallel taxiway, with the addition of providing the required land to meet the standards to develop approach procedures with $\frac{3}{4}$ -mile visibility minimums.

Relocate Runway 13/31 and Taxiways to Increase Separation from Terminal and Apron Areas

Alternative B $\frac{3}{4}$ meets this objective in the same way as Alternative B described in Section 2.2.3. above.

Comply with FAA Design Standards

This alternative provides the same separation distance as Alternative B above.

Update Procedures, NAVAIDs, and Lighting

This alternative would include acquiring new NAVAIDs and lighting for the new runway location. It would also include updating GPS-based procedures to lower the approach minimums to $\frac{3}{4}$ -mile visibility minimums. $\frac{3}{4}$ -mile minimums would enhance the Airport's ability to support operations in inclement weather, which meets the project purpose.

Minimize Incompatible Land Use

The closure or realignment of 156th Avenue SE and 39th Street would continue to be required due to the future runway intersecting the existing road locations.

Alternative B $\frac{3}{4}$ would, similar to Alternative B, protect future RPZs via fee-simple land acquisition. The RPZ would increase in size from 500 ft x 1,000 ft x 700 ft to 1,000 ft x 1,700 ft x 1,510 ft, as shown in **Figure 2-4**.

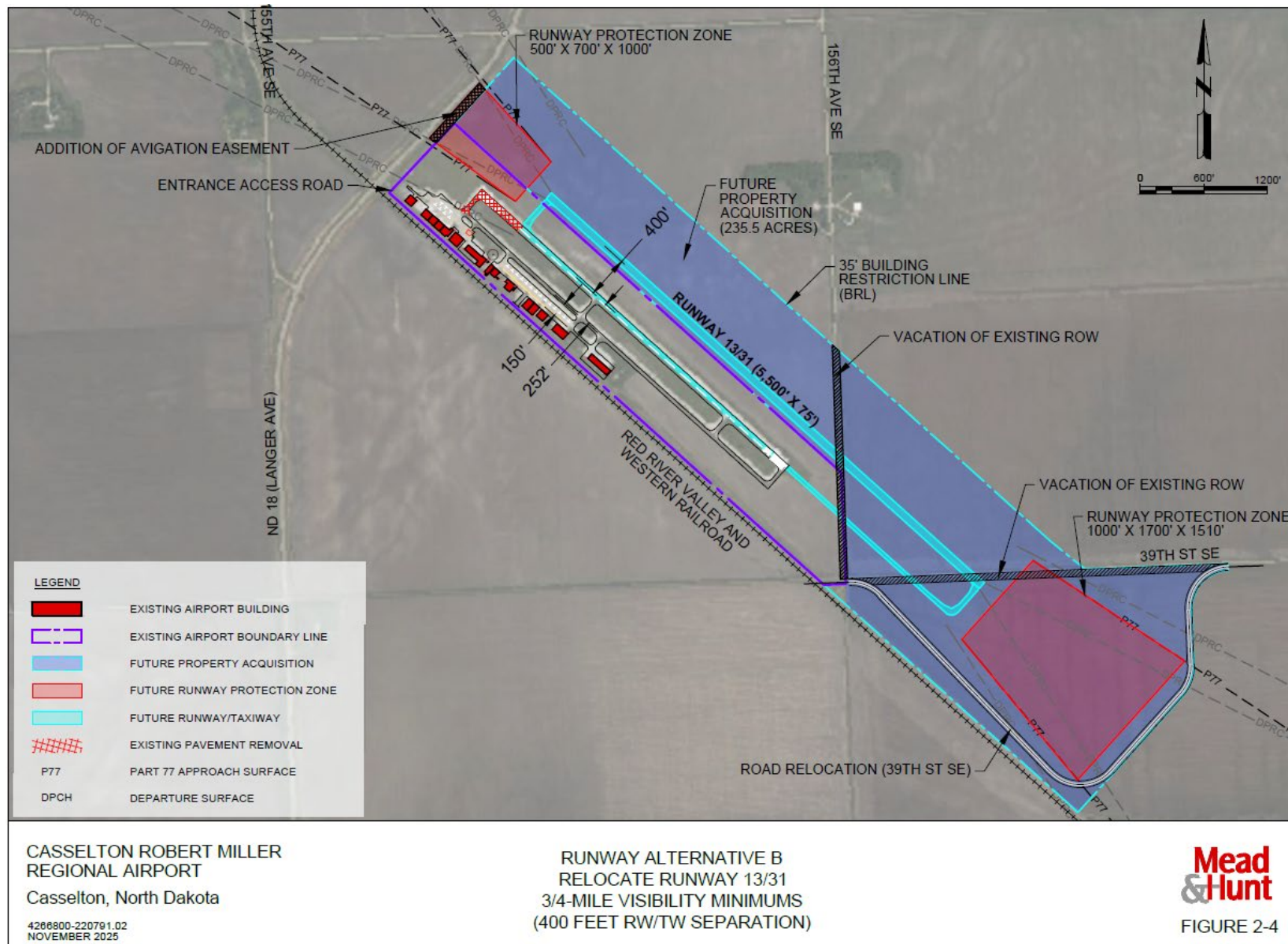
Additional Factors

Like Alternative B, this alternative would lead to impacts to a narrow band of jurisdictional wetlands that follow 39th Street SE, with the proposed runway and taxiway requiring culverts for maintain connectivity. This alternative would convert approximately 180 acres of prime farmland away from crop production.

Land acquisition would increase to approximately 250 acres due to the larger RPZ area and expanding the northern extent of the acquisition to the 35-foot building restriction line (BRL). The BRL is a line that indicates suitable locations for structures in relationship to the airfield while protecting safety areas and aircraft operational surfaces.

Accomplishing all future land acquisition for the ultimate runway length that could be achieved with local or state funding and for RPZs corresponding with the lowest potential visibility limits, as well as positioning the relocated roadway for the ultimate future condition would help minimize community disruption by having one-time impacts rather than multiple land sales and road closures.

Figure 2-4: Runway 13/34 Runway 13/31



Summary of Alternative B ¾

Like Alternative B, this alternative adequately addresses the purpose and needs of the project described in Section 1.2 and 1.3 of this EA, and meets the objectives described in Section 1.4. This alternative also positions the airport and community for fewer future changes in the event they seek to improve their ability to operate in inclement weather with visibility as low as ¾ mile for the ultimate 5,500-foot Runway 13/31. Alternative B ¾ will be carried forward for further analysis of environmental consequences.

2.3.6. ALTERNATIVE C: CONSTRUCT RUNWAY 18/36, DECOMMISSION RUNWAY 13/31

Alternative C, presented in **Figure 2-5**, considers the construction of a new runway: 5,500-foot Runway 18/36 with a parallel taxiway at 300 feet from the new runway centerline that could accommodate at least RDC B-II. This was shown on a previous ALP as Runway 17/35. While the Master Plan alternative considered this to be a crosswind runway, this Alternative C includes decommissioning Runway 13/31 in order to address deteriorating pavement condition and incompatible land uses the project is intended to remedy according to the Purpose and Need.

Relocate Runway 13/31 to Increase Separation Distance from the Terminal and Apron Areas
Alternative C would construct a new longer runway with a different orientation, which would provide a large amount of maneuvering space and reconfiguration options in the existing apron area that would no longer be constrained by the airfield parallel to the adjacent railroad. This would meet the project need to accommodate existing and future critical aircraft.

Comply with FAA Design Standards

This configuration would provide runway to parallel taxiway separation of 300 feet, allowing future larger aircraft to turn perpendicular to the runway at the hold line. All other design standards would be accounted for in the relatively unconstrained environment where the new runway would be placed.

Update Procedures, NAVAIDs, and Lighting

This alternative would include new GPS-based procedures, NAVAIDs, and lighting for the new runway. An approach procedure with ¾-mile visibility minimums would be possible in the future due to the ability to conform to required design standards for lower visibility conditions. This would allow more operations in inclement weather.

Minimize Incompatible Land Use

Alternative C would require the closure of 38th Street SE due to the future runway alignment. RPZs would remain clear of off-airport incompatible uses, the northernmost one being located just south of Interstate 94.

This alternative would potentially limit near-term expansion options on existing property because certain areas must remain free of development to meet Runway 18/36 design standards. Additionally, Alternative C introduces airspace surfaces above an area of development within the City of Casselton north of Interstate 94, and places airport activity nearer to off-airport commercial uses south of the interstate. This may create future burden on the airport to protect those surfaces and may introduce land-use-related airport impacts to the

community where none have existed historically. No penetrations to the Runway 18/36 departure surface or Part 77 34:1 approach surface would be expected.

Additional Factors

This alternative requires the largest amount of proposed land acquisition and potential farmland conversion of all the considered alternatives, estimated at more than 250 acres.

Alternative C would align Runway 18/36 over the Wheatland Channel, which would result in wetland and surface water impacts that would require detailed analysis for environmental consequences.

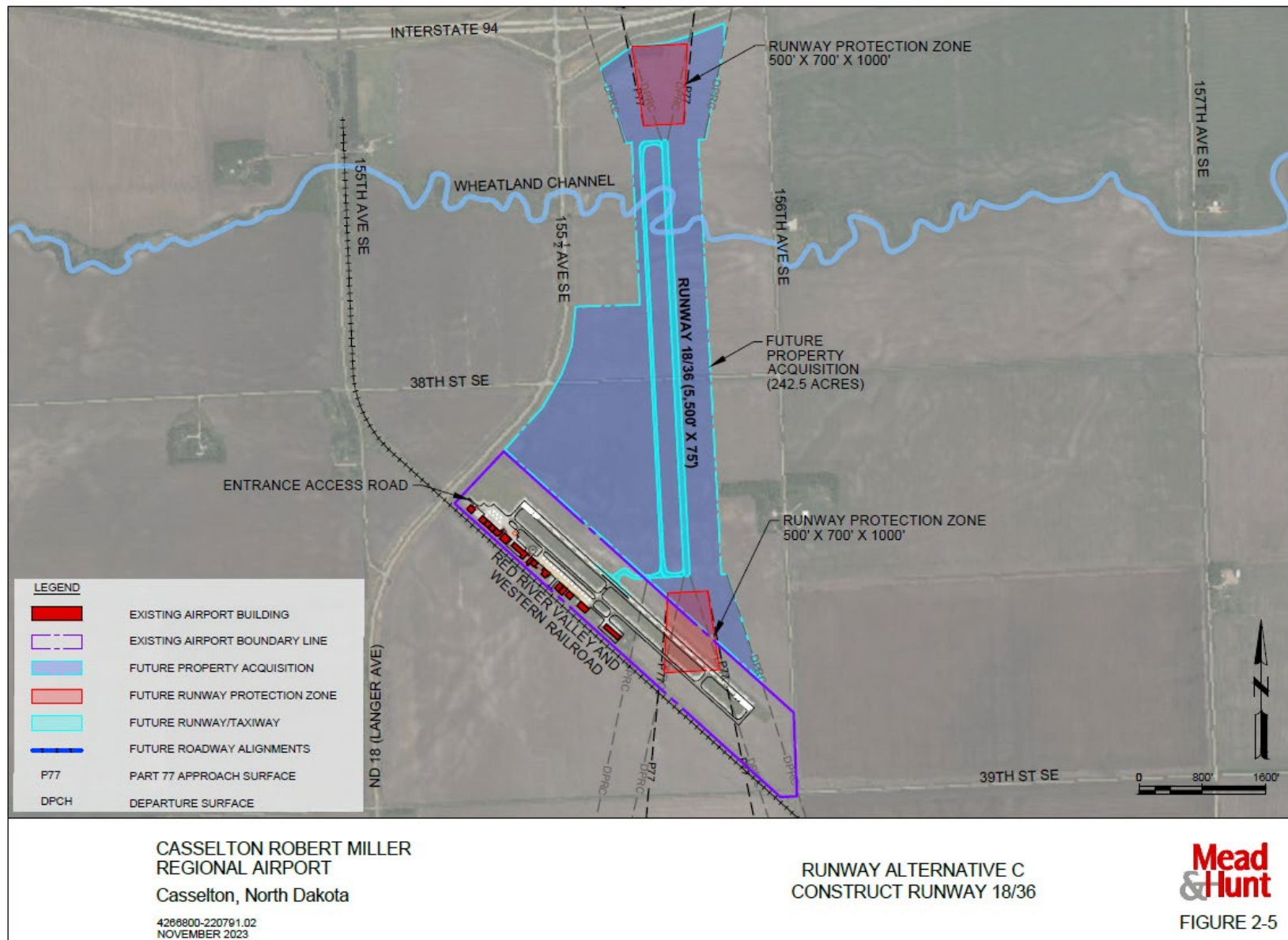
Alternative C would increase taxiing distance for airport users, and future development.

This alternative would not require the closure of the existing runway during construction.

Summary of Alternative C

While this alternative addresses the purpose and needs of the project, practical factors including costs and potential future land use concerns, along with the desire to avoid disrupting the Wheatland Channel led to eliminating Alternative C from further analysis.

Figure 2-5: Alternative C, Runway 18/36 Construction



2.4 RUNWAY ALTERNATIVES COMPARISON

A comparison of the practicability of and technical and logistical factors for each runway alternative is presented in **Table 2-1**.

Table 2-1: Alternatives Comparison Matrix

Criteria		No Action	Alternative A	Alternative B	Alternative B 300-foot variation	Alternative B $\frac{3}{4}$	Alternative C
		Maintain Airport facilities in existing state	Extend Rwy 1,600 feet for 5,500 feet total length	Relocate Rwy 400 feet east, extend for 5,500 feet total length	Relocate Rwy 300 feet east, extend for 5,500 feet total length	Alternative B with $\frac{3}{4}$ -mile visibility minimums	Construct 5,500-foot Runway 18/36, decommission Runway 13/31
Meets Overall Purpose		No	No	Yes	Yes	Yes	Yes
Purpose and Need Objectives	Relocate Runway 13/31 and taxiways to allow room for improvements suitable for the existing and future critical aircraft	No -Apron areas remain congested -Future facilities for ADG II aircraft not feasible	No -Apron areas remain congested -Future facilities for ADG II aircraft not feasible	Yes	Yes	Yes	Yes
	Meet FAA Design Standards	No -Penetrations to Part 77 34:1 approach surface	No -Penetrations to Part 77 34:1 approach surface	Yes	No -Penetrations to Part 77 34:1 approach surface	Yes	Yes

Criteria		No Action	Alternative A	Alternative B	Alternative B 300-foot variation	Alternative B $\frac{3}{4}$	Alternative C
		Maintain Airport facilities in existing state	Extend Rwy 1,600 feet for 5,500 feet total length	Relocate Rwy 400 feet east, extend for 5,500 feet total length	Relocate Rwy 300 feet east, extend for 5,500 feet total length	Alternative B with $\frac{3}{4}$ -mile visibility minimums	Construct 5,500-foot Runway 18/36, decommission Runway 13/31
	Provide adequate runway length for existing, interim, and long-term users	No	Yes	Yes	Yes	Yes	Yes
	Allow improved approach minimums, update procedures, NAVAIDS, and lighting to correspond with runway changes	NA	No Improved minimums not feasible	Yes Does not include land for RPZs for improved minimums	Improved minimums may not be feasible due to obstructions.	Yes	Yes
	Minimize incompatible land uses	No Roads remain in RPZ	No Roads remain in RPZ	Yes	Yes	Yes	Yes, but leads to surfaces over developed area
Practicability Factors	Land acquisition	0 acres	60-70 acres	150-170 acres	130-140 acres	230-250 acres	More than 250 acres

Criteria		No Action	Alternative A	Alternative B	Alternative B 300-foot variation	Alternative B ¾	Alternative C
		Maintain Airport facilities in existing state	Extend Rwy 1,600 feet for 5,500 feet total length	Relocate Rwy 400 feet east, extend for 5,500 feet total length	Relocate Rwy 300 feet east, extend for 5,500 feet total length	Alternative B with ¾-mile visibility minimums	Construct 5,500-foot Runway 18/36, decommission Runway 13/31
	Runway closure	None	Considerable runway closure	Minimizes runway closure	Minimizes runway closure	Minimizes runway closure	Minimizes runway closure
	Future development area	None	12 acres	43 acres	40 acres	43 acres	More than 50 acres
	Other	None	Road closures: 156 th Avenue and 39 th Street	Road closures: 156 th Avenue and 39 th Street	Road closures: 156 th Avenue and 39 th Street	Road closures: 156 th Avenue and 39 th Street	-Road closures: 38 th Street -Most expensive
Known Environmental Features Affected			-Up to 70 acres of farmland impact -Wetland impact	-Less than 170 acres of farmland impact -Wetland impact	-Up to 170 acres of farmland impact -Wetland impact	-Reduces multiple impacts by consolidating road impact & land acquisition - Est. 180 acres of	-Direct Wheatland Channel and associated wetlands impacts -> 250 acres farmland conversion

Criteria	No Action	Alternative A	Alternative B	Alternative B 300-foot variation	Alternative B $\frac{3}{4}$	Alternative C
	Maintain Airport facilities in existing state	Extend Rwy 1,600 feet for 5,500 feet total length	Relocate Rwy 400 feet east, extend for 5,500 feet total length	Relocate Rwy 300 feet east, extend for 5,500 feet total length	Alternative B with $\frac{3}{4}$-mile visibility minimums	Construct 5,500-foot Runway 18/36, decommission Runway 13/31
					farmland conversion -Wetland impact	
Source: Mead & Hunt, 2024 Key: ■ Positive ■ Potential concern ■ Negative						

Table 2-1 illustrates that of the alternatives considered, Alternative B and its variations meet more of the objectives of the project outlined in the Purpose and Need Section 1.4 than Alternatives A or C. There is a greater amount of property acquisition than Alternative A or the No Action Alternative, but less property acquisition and fewer known environmental impacts than Alternative C. Because of these factors, Alternative A and C will not be carried forward for further analysis.

2.5 PREFERRED ALTERNATIVE AND ALTERNATIVES CARRIED FORWARD FOR ANALYSIS

Based on the previous analysis and alternatives comparison, Alternative B with a 400-foot runway to taxiway separation best meets FAA standards for airfield design and unobstructed runway protection zones and other surfaces. Specifically, in alignment with the Purpose and Need and project screening conducted as part of this EA, this alternative:

- Provides adequate separation of the runway and parallel taxiway from the terminal and apron areas
- Complies with FAA design standards
- Provides RPZs free of incompatible land uses
- Reserves land for future improved approach minimums for operations in low-visibility conditions
- Provides more space for more apron and landside development that could accommodate Group II aircraft
- Provides adequate runway length for existing and future users.

Alternative B with a $\frac{3}{4}$ -mile visibility minimum meets the stated objectives. While it presents a practical challenge due to the cost of increased property acquisition, it would result in a more desirable community outcome by reducing the number of times the surrounding area would be impacted by future property acquisition and roadway relocation. This approach supports achieving the ultimate build condition, which would be made possible through state or local funding sources, while enhancing operational reliability by allowing aircraft to land in lower visibility conditions.

The area affected by Alternative B $\frac{3}{4}$ encompasses all impacts associated with Alternative B. Alternative B $\frac{3}{4}$ will be carried forward for detailed environmental analysis as the preferred alternative, in comparison to the No Action alternative.

2.5.1 LANDSIDE DEVELOPMENT ALTERNATIVES

The selection of Runway Alternative B $\frac{3}{4}$ leaves only the area between the Red River Valley and Western Railroad and the airfield for landside development. Future apron and hangar development in this area will be carried forward for further analysis as compared to the No Action Alternative.

2.5.2 ROADWAY ALTERNATIVES

The Draft EA evaluated an east–west roadway connection via a realigned 39th Street SE to maintain local agricultural and residential access following runway relocation. Based on comments received during the public comment period and subsequent stakeholder coordination, the Final EA further refines the Proposed Action to include a north–south roadway connection via a realigned 156th Ave SE to improve local circulation and access while maintaining compliance with FAA Runway Protection Zone (RPZ) standards. **Figure 2-6** shows

the proposed road alignment. The existing public prescriptive use rights of way (ROW) for 39th Street and 156th Avenue would be vacated at the time a new road is opened.

The new 39th Street alignment will directly impact a narrow jurisdictional wetland ditch when extending south of the existing alignment, which will require culverting. Additionally, the realignments would include purchasing the road right of way (ROW) and either turning this over in fee to the Everest Township, the entity with roadway jurisdiction, or establishing ROW easements depending upon the outcome of property negotiations and settlements. The standard ROW width for gravel township roads is 66 feet, which would be included within the total roadway acquisition.

2.5.3 PHASING CONSIDERATIONS

The timing of construction for the ultimate runway length of 5,500 feet is dependent upon the availability of funding. Early coordination with the State of North Dakota indicates that funding for a length of 4,800 feet (exceeding FAA eligible length by 900 feet) may be feasible if funding for the full 5,500 feet is not yet available. In this case, the airport would build the runway to an interim length of 4,800 feet while property acquisition and construction related to disrupted roadways would be completed to accommodate the ultimate 5,500-foot length in order to reduce future costs and limit disruption to the community. This interim condition is shown in **Figure 2-7**.

Figure 2-6: Proposed Road Alignment

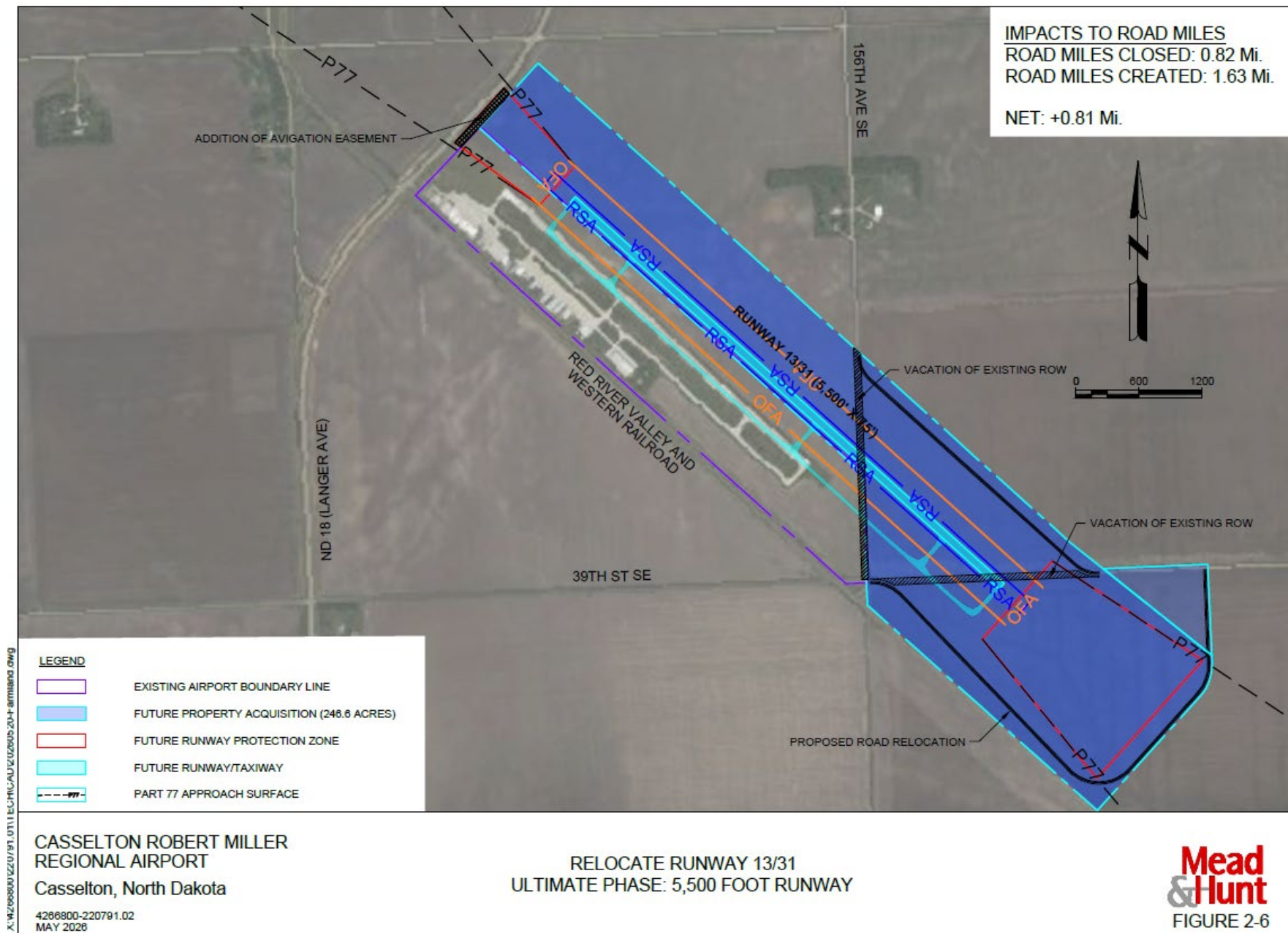
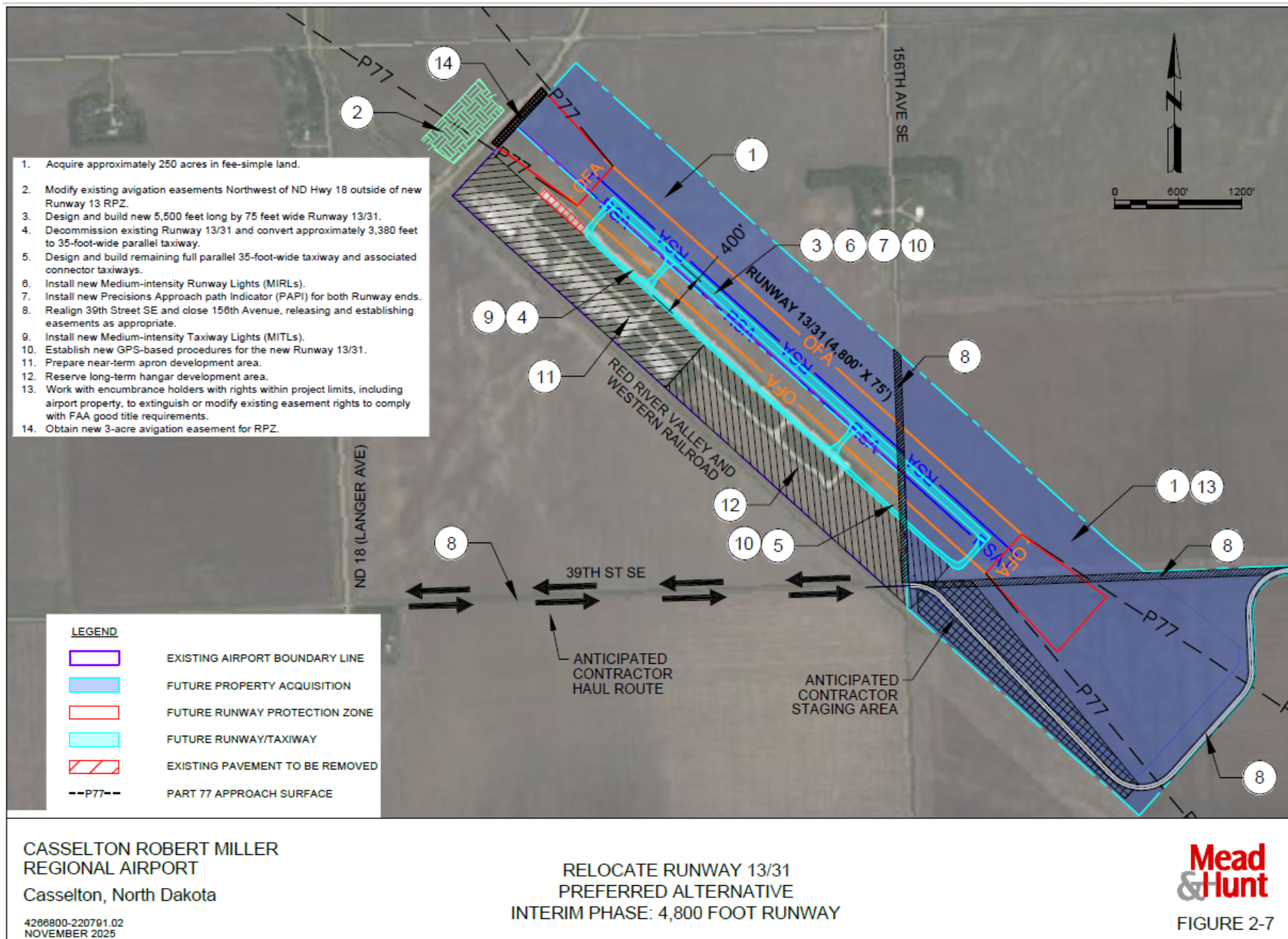


Figure 2-7: Road Alignment Interim Conditions



2.5.4 AIRPORT SPONSOR'S PROPOSED PROJECT

The major elements of the proposed projects, along with ancillary or associated projects, are presented below. These components are detailed in **Figure 2-8**, and the known environmental impacts associated with this alternative are shown in **Figure 2-9**.

1. Acquire approximately 250 acres in fee-simple land.
2. Modify existing aviation easements northwest of Langer Ave/ND 18 outside of new Rwy 13 RPZ.
3. Design and build new 5,500 feet long by 75 feet wide runway 13/31.
4. Decommission existing Runway 13/31 and convert 3,380 feet to 35-foot-wide parallel taxiway.
5. Design and build remaining full parallel 35-foot-wide taxiway and associated connector taxiways.
6. Install new Medium-intensity Runway Lights (MIRL).
7. Install new Precision Approach Path Indicator (PAPI) for both runway ends.
8. Realign 39th Street SE and close 156th Avenue, releasing and establishing rights of way as appropriate after land negotiations are completed.
9. Install new medium-intensity taxiway lights.
10. Establish new GPS-based procedures for the new Runway 13/31.
11. Prepare near-term apron development area.
12. Reserve long-term hangar development area.
13. Work with encumbrance holders with rights within project limits, including airport property, to extinguish or modify existing easement rights to comply with FAA good title requirements.
14. Obtain new 3-acre aviation easement for RPZ, and additional easement over 39th St SE.

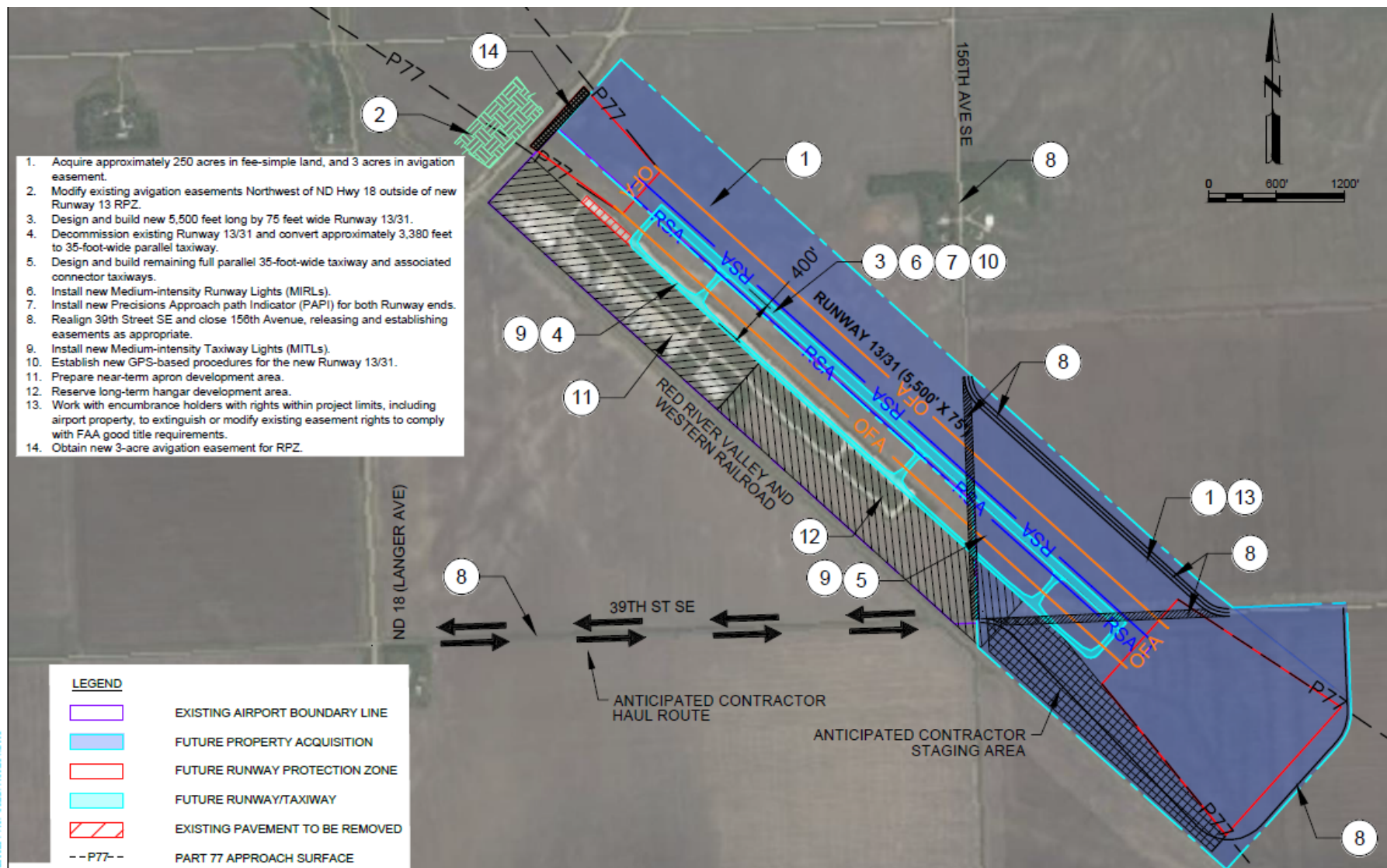
Major Federal Actions

Under NEPA a “major federal action” refers to activities that require federal involvement, such as approvals, funding, or permits. NEPA applies only when a federal agency has a decision to make, so it is important to identify these actions at the outset. For the proposed action, implementation will require the following major federal actions by the FAA:

- Approval of the revised Airport Layout Plan (ALP) to incorporate the new Runway 13/31, associated taxiways, and land acquisition.
- Airspace review and approval for the new runway configuration and establishment of GPS-based instrument procedures.
- Airport Improvement Program (AIP) funding for land acquisition and eligible runway and taxiway construction.

These federal actions are necessary to support implementation of the proposed improvements and trigger the need for this Environmental Assessment.

Figure 2-8: Proposed Project Elements



CASSELTON ROBERT MILLER
REGIONAL AIRPORT
Casselton, North Dakota

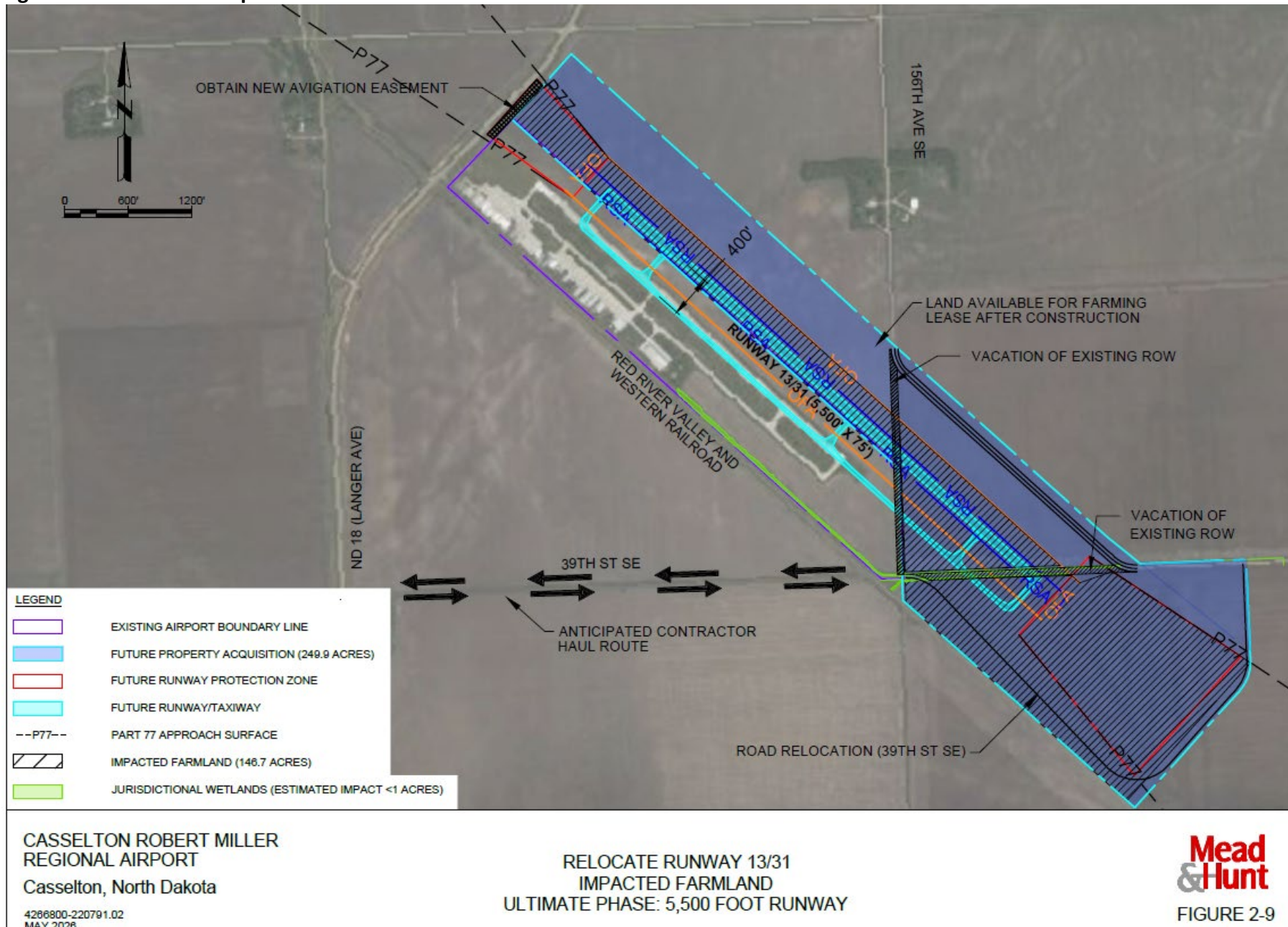
4266800-220791.02
MAY 2026

RELOCATE RUNWAY 13/31
PREFERRED ALTERNATIVE
ULTIMATE PHASE: 5,500 FOOT RUNWAY

**Mead
& Hunt**

FIGURE 2-8

Figure 2-9: Associated Impacts



3.1 INTRODUCTION

This chapter provides background information regarding the surrounding community and environment at Casselton Regional Airport (5N8 or the Airport). The chapter includes appropriate analysis of all environmental impact categories required by FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures*. A detailed analysis of each resource category includes a discussion of the regulatory setting, affected environment, environmental consequences, mitigation, and significance determination.

The following sections describe the information included under each resource category. If the resources within the category are not present in the affected environment, their absence is stated, and the following subsections are not included in this document for the absent resources.

3.1.1. REGULATORY SETTING

The regulatory setting section under each resource category discusses the requirements for assessing the resource and applicable federal, state, and local laws and regulations.

3.1.2. AFFECTED ENVIRONMENT

The affected environment section under each resource category describes the existing environment in the project area. This information establishes the baseline conditions for each resource category against which to evaluate potential impacts of the proposed action.

3.1.3. ENVIRONMENTAL CONSEQUENCES

The environmental consequences section under each resource category assesses the potential impacts of the no-action and preferred alternative. Environmental consequences include all direct, indirect, and cumulative impacts, as the NEPA defines those terms, as well as mitigation measures if applicable. This section considers environmental consequences with reference to specific thresholds at which the FAA considers an environmental impact to be significant.

Mitigation

The mitigation section under each resource category describes mitigation measures, if applicable. This section provides guidance on types of mitigation that may be used to reduce the potential impact of the proposed project.

3.1.4. ENVIRONMENTAL CATEGORIES NOT ANALYZED IN DETAIL

Coastal Resources

The Coastal Resources section is not analyzed in detail because the resource is not present on or near the Airport.

Noise and Compatible Land Use

Noise and noise-compatible land use also does not include a detailed analysis in this chapter. According to the FAA Order 1050.1 Desk Reference, no noise analysis is needed for projects

involving Design I and II airplanes in Approach Categories A through D operating at airports whose forecast operations in the period covered by the NEPA document do not exceed 90,000 annual propeller operations or 700 annual jet operations. Because the Airport is not expected to cross either of these activity thresholds, no noise analysis was conducted.

3.1.5. AREA OF ANALYSIS

The Airport is in Everest Township, within Cass County, North Dakota. It is accessible by Interstate 94, which is one mile north of the airport, and via North Dakota 18, which runs west of the Airport. The land immediately surrounding the Airport is primarily used for agriculture and is mostly undeveloped with the exception of two residential buildings located less than half a mile from Runway 13/31.

Study areas for each resource category are defined in each section and summarized in **Table 3-1**

Table 3-1: Resource Category Study Areas	
Resource Category	Study Area
Aviation Emissions and Air Quality	Cass County
Biological Resources (including fish, wildlife, and plants)	Project boundary 1-mile radius of project boundary
Department of Transportation Section 4(f) and Land and Water Conservation Fund (Section 6(f))	1-mile radius of project boundary
Farmlands	Project boundary
Hazardous Materials, Solid Waste, and Pollution Prevention	Project boundary
Historical, Architectural, Archeological and Cultural Resources	Project Boundary
Land Use	1-mile radius of project boundary
Natural Resources and Energy Supply	Project boundary
Socioeconomics and Children's Health and Safety Risks	1-mile radius of project boundary Everest Township City of Casselton
Visual Effects / Visual Character	Project boundary Areas directly adjacent to Airport
Water Resources	Project boundary

3.2 AVIATION EMISSIONS AND AIR QUALITY

3.2.1. REGULATORY SETTING

Under the Clean Air Act, the EPA regulates levels of certain pollutants that in high enough concentrations affect air quality and can harm human health, affect crops and vegetation, and

cause property damage. According to the FAA Air Quality Handbook, “an EA or EIS typically includes an air quality assessment commensurate with the project air quality impact to help evaluate and disclose the potential effects on air quality associated with the project.”

The North Dakota Department of Environmental Quality (NDDEQ) establishes state-wide regulations in regard to air pollutants under North Dakota Century Code Chapter 23.1-06. The ND code establishes air quality rules that are more strict than existing federal requirements. The North Dakota Division of Air Quality monitors ambient air quality state-wide, ensures EPA standards are met, and oversees permitting and compliance of state and federal program requirements.

3.2.1. AFFECTED ENVIRONMENT

When considering air quality impacts, it is important to determine whether the project study area, defined as the project boundary, is in an attainment or nonattainment area for the National Ambient Air Quality Standards (NAAQS). As of 2024, Cass County is in Attainment for all criteria pollutants, meaning all federal standards regarding air quality are met.

3.2.2. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

No emissions would be induced by the No Action alternative; no infrastructure changes would be made to change fleet mix or capacity.

Proposed Project

Consistent with the FAA’s Air Quality Handbook, Version 4 (**flowchart Figure 4-1**), if a proposed project does not result in reasonably foreseeable increases in emissions, a qualitative air quality assessment is appropriate. For this project, potential emission sources include aircraft operations, routine airport maintenance, and construction activities. However, the proposed improvements will not increase the airfield’s operational capacity and therefore will not cause ongoing emissions increases.

While the completed project could accommodate a different fleet mix than the current configuration, these changes would respond to foreseeable demand rather than induce new activity. Temporary emissions will occur during a two-year construction period (spring through fall), but these impacts are short-term and minimal as compared to the NAAQS. As a result, emissions are not expected to exceed the NAAQS. Because the project area—and Cass County as a whole—is in attainment for all criteria pollutants, a general conformity determination is not required.

Minimization and Mitigation

Emissions associated with project construction will be reduced through use of voluntary best management practices (BMPs), such as engine idling restrictions and maintenance requirements, and other control strategies identified in the U.S. Environmental Protection Agency Diesel Emission Restriction Checklist.

Significance Determination

According to the 1050.1 Desk Reference, the FAA considers air quality impacts to be significant if an action will cause pollutant concentrations to exceed one or more of the NAAQS for any of the time periods analyzed or increase the frequency or severity of any existing violations. Based on the above, no significant impacts are expected from the proposed project.

3.3 BIOLOGICAL RESOURCES

Biological resources are defined as the various types of flora and fauna in a particular area and the habitat that supports them. The EA biological resources section addresses effects on federal- and state-listed rare or unique species and their habitats.

3.3.1. REGULATORY SETTING

The primary federal regulation for biological resources is the Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544, administered by the U.S. Fish and Wildlife Service (USFWS). The ESA requires all federal agencies to conserve threatened and endangered species and, in consultation with the USFWS, to ensure federal actions do not jeopardize the existence or destroy critical habitat of threatened and endangered species. Overall coordination on species and habitats of concern is administered under Section 7 of the ESA, which requires federal agencies to consult the USFWS and appropriate state fish and wildlife agencies when a federal project may adversely affect fish or wildlife resources.

Additional federal regulations regarding wildlife include the Migratory Bird Treaty Act, 16 U.S.C. §§ 703-712, administered by the USFWS, which prohibits taking, selling, or other activities that harm migratory birds, bird eggs, or nests unless authorized by a special USFWS permit. In addition, the Bald and Golden Eagle Protection Act, 16 U.S.C. §§ 668-668d, provides protection to eagles and nests from unauthorized capture, purchase, or transportation.

The Endangered Species Act also guides actions regarding vegetation management and land cover as it pertains to habitat for sensitive species. In addition, Executive Order 13112, Invasive Species, directs federal agencies to use all feasible and prudent means to prevent the introduction of invasive species and to provide for the restoration of native species and habitat conditions.

3.3.2. AFFECTED ENVIRONMENT

The Airport is located in the plains of the Glacial Lake Agassiz Basin. Airport property is mostly covered with modern grasses, cut frequently as part of Airport-related vegetation management. Adjacent land is primarily agricultural land used for grain crops such as corn, soybeans, and sugar beets.

According to the USFWS Information for Planning and Consultation (IPaC) search tool as of October 2025, two listed species may reside within the project development area: the monarch butterfly, proposed threatened, and Suckley's cuckoo bumble bee, proposed endangered. During the aquatic resource delineation, the biologist identified a habitat potential for the rusty

patched bumblebee, a species listed as endangered under the ESA. However, according to the IPaC system, the species is not likely to be present near the airport.

The IPaC species list included the bald eagle, which is not a species of concern, but is protected by the Bald and Golden Eagle Protection Act. Nine Birds of Conservation Concern species were also identified by the IPaC tool, shown in **Table 3-2**. The official IPaC species list is found in **Appendix A**.

Table 3-2: Protected Species		
Species	Status	Protection Act
Monarch Butterfly	Proposed Threatened	Endangered Species Act
Suckley's Cuckoo Bumble Bee	Proposed Endangered	Endangered Species Act
Bald Eagle	Not BCC Vulnerable	Bald and Golden Eagle Protection Act
Black Tern	BCC	Migratory Bird Treaty Act
Bobolink	BCC	Migratory Bird Treaty Act
Chimney Swift	BCC	Migratory Bird Treaty Act
Franklin's Gull	BCC	Migratory Bird Treaty Act
Lesser Yellowlegs	BCC	Migratory Bird Treaty Act
Northern Harrier	BCC	Migratory Bird Treaty Act
Pectoral Sandpiper	BCC	Migratory Bird Treaty Act
Red-headed Woodpecker	BCC	Migratory Bird Treaty Act
Western Grebe	BCC	Migratory Bird Treaty Act
Source: U.S. Fish and Wildlife Service Information for Planning and Consultation, July 2025		

3.3.3. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

No impacts to listed species or biological resources would be anticipated as a result of the No Action alternative.

Proposed Project

3.3.3.1 Listed Species

The monarch butterfly's habitat consists of areas of grasslands, scrublands, and roadsides where milkweed grows³. The vegetation management practices and cultivated fields that make

³ Monarch butterfly, USFWS Environmental Conservation Online System, <https://ecos.fws.gov/ecp/species/9743>

up the majority of the project area are not hospitable to the growth of this plant, limiting the likelihood of potential disturbance to the monarch butterfly.

Suckley's cuckoo bumble bees require above- and below-ground micro-sites for overwintering and nesting, including logs, stumps, and abandoned rodent and ground-nesting bird nests. The species is a social parasite, and their habitat mirrors their host species, the western bumblebee, which are often found in open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. Intensive agricultural development, such as the fields surrounding the airport, is not suitable habitat.⁴

Some road ditches in the project area may include suitable habitat for both listed species that would be disrupted when roadways are realigned. However, future roadway alignments would provide similar replacement habitat. According to the IPaC tool, proposed species are not required to be analyzed for consultation, unless the action is likely to jeopardize the continued existence of a proposed species. Due to the relatively limited amount of habitat within the project area and its replacement as part of the project, the proposed action is unlikely to cause a threat to either species' existence.

3.3.3.2 Migratory Birds

Vegetation management practices on the airfield and active farming in the adjacent fields limit the potential habitat for birds protected by the Migratory Bird Treaty Act within the project area, and they are unlikely to be impacted.

Minimization and Mitigation

In 2015 the US Department of Agriculture published a guide, "*Pollinator-Friendly Best Management Practices for Federal Lands*⁵", which includes best practices for restoring monarch habitat, including planting milkweed appropriate for the region and ensuring that native wildflowers are available, diverse, and abundant to provide nectar for monarchs. The guide also provides beneficial actions for all pollinators, including Suckley's cuckoo bumblebee and potential rusty-patched bumblebees, such as mowing less frequently, and timing mowing around blooming seasons. Where appropriate and balanced against the vegetation management needs of the airport, the proposed project and subsequent operations may incorporate some of these practices.

Significance Determination

According to the FAA 1050.1 Desk Reference, the FAA considers impacts on listed species to be significant 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."

⁴ Suckley's cuckoo bumblebee, Washington Department of Fish and Wildlife, <https://wdfw.wa.gov/species-habitats/species/bombus-suckleyi>

⁵ Pollinator Friendly Best Practices, USDA, <https://www.fs.usda.gov/wildflowers/pollinators/BMPs/documents/PollinatorFriendlyBMPsFederalLands05152015.pdf>

Given the limited amount of potentially suitable habitat in the project area, along with pollinator best practices the Airport can employ as part of the proposed project, no significant impact to listed species and other biological resources are anticipated as part of the proposed project.

3.4 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) AND LAND AND WATER CONSERVATION FUND, SECTION 6(F)

3.4.1. REGULATORY SETTING

Section 4(f) of the Department of Transportation (DOT) Act of 1966 protects public parklands, historic sites, and other special resources of national, state, or local significance from impacts of transportation projects. Section 6(f) of the Land and Water Conservation Fund Act protects public outdoor recreation areas developed or improved with LWCF assistance from conversion to non-recreational uses without approval and replacement of equivalent resources.

3.4.2. AFFECTED ENVIRONMENT

There are no 4(f) protected properties located within one mile of the project. No LWCF resources are located within 2 miles of the project.⁶

No historic sites were identified within the identified area of potential effect (APE). See Section 3.7 for detailed information about historic and cultural resources.

3.4.3. ENVIRONMENTAL CONSEQUENCES

No 4(f) resources are present within the study area, and therefore neither the No Action alternative nor the proposed project would have a significant impact on DOT Section 4(f) resources.

3.5 FARMLANDS

3.5.1. REGULATORY SETTING

According to the 1050.1 Desk Reference, the FAA defines farmland as those agricultural areas considered important and protected by federal, state, and local regulations. Important farmlands include all pasturelands, croplands, and forests (even if zoned for development) considered to be prime, unique, or of statewide or local importance.

Projects involving impacts to farmland require coordination with the US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), including submittal of USDA Farmland Conversion Impact Rating Form AD-1006. These actions are necessary to follow the guidelines set forth in the Farmland Protection Policy Act (FPPA) of 1984. FPPA is intended to

⁶ The Land and Water Conservation Fund Past Projects Map, <https://lwcf.tplgis.org/mappast/> accessed 1/8/2026

minimize unnecessary and irreversible conversion of farmland to non-agricultural use by federal actions.

3.5.2. AFFECTED ENVIRONMENT

The study area for farmland is the project boundary. The majority of the project boundary is comprised of Bearden-Kindred silty clay loams, which are defined by the USDA as very deep, somewhat poorly drained, moderately to slowly permeable soils most suitable for small grains and row crops. According to the Web Soil Survey from the NRCS, all areas of the proposed project are considered Prime Farmland. Prime farmland is land that does not flood frequently and has the best chemical and physical characteristics for producing food, feed, fiber, oilseed crops, and forage. Prime farmland's soil allows both water and air to pass through and has the characteristics needed to produce and sustain high yields of crops.

While the surrounding land is zoned for agricultural use, the Airport property itself is zoned for commercial use.

3.5.3. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

The no action alternative would not convert any existing farmland to non-agricultural use and thus would not result in significant farmland impacts.

Proposed Project

In August 2024, information regarding farmland to be converted as part of the proposed project was provided to the NRCS office in Bismarck, North Dakota. The NRCS determined that approximately 180 acres of farmland will be directly converted by the proposed project. A copy of the completed Form AD-1006 and associated correspondence are included in **Appendix B**.

The NRCS determines a score using the AD-1006 form, composed of up to 100 points for relative value and up to 160 points for a site assessment, with a combined possible score of 260. Based on the farmland value scores calculated by the USDA NRCS, and the site assessment scoring developed in this EA, the total conversion score is 193. This final score was returned to the NRCS for concurrence.

Minimization and Mitigation

While the proposed project score of 193 does not fall above the threshold of 200 to be a significant impact, the FAA Order 1050.1 Desk Reference notes that: "When making decisions on proposed actions or alternative(s) for sites receiving scores totaling 160 or more the following should be considered:

- Use of land that is not farmland or use of existing structures
- Alternative sites, locations, and designs that would serve the project purpose but convert either fewer acres of farmland or other farmland that has a lower relative value

- Special siting requirements of the proposed action or alternative(s) and the extent to which an alternative site fails to satisfy the special siting requirements as well as the originally proposed site.”

Site selection was analyzed in Chapter 2, Alternatives. The nature of the runway project limits the potential placement of the preferred alternative, and alternative sites such as the north/south runway alignment considered in Alternative C would have resulted in more farmland conversion. Additionally, the Airport will lease acquired land to farm where feasible.

Concerns about farmland drainage were raised during public engagement for the EA. Stormwater from the project will be addressed as noted in Section 3.12.

Significance Determination

Farmland impacts are considered significant if directly impacted farmlands receive a total combined farmland conversion impact rating of between 200 and 260.

Based on a farmland value score lower than 200, calculated in coordination with the USDA NRCS, there are no significant impacts associated with the proposed project, as defined by the FPPA and NEPA.

3.6 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

3.6.1. REGULATORY SETTING

Hazardous materials are substances or materials that can pose unreasonable risks to health, safety, and property when transported in commerce. Hazardous materials include both hazardous wastes and hazardous substances, as well as petroleum and natural gas substances and materials.

In North Dakota, the Hazardous Waste Program (HWWHP) regulates the generation, treatment, recycling, storage, transportation, and disposal of hazardous waste and used oil to ensure that hazardous waste management activities in North Dakota are conducted in compliance with North Dakota’s Hazardous Waste Management Rules. North Dakota is an authorized state, which means HWP implements the requirements of the Resource Conservation and Recovery Act (RCRA) in place of the federal Environmental Protection Agency.

3.6.2. AFFECTED ENVIRONMENT

A Phase I Environmental Site Assessment (ESA) was conducted in accordance with ASTM Practice E1527-21 in the fall of 2023 for the project area (see **Appendix C**). This assessment revealed no recognized environmental conditions, controlled recognized environmental conditions, or significant data gaps in connection with the subject property. The EPA’s Enviro Atlas showed only one site required to report to the EPA (such as businesses that generate hazardous waste, sites listed on the Toxic Release Inventory, Super Funds, RCRA sites) in the project vicinity: a business registered at the airport as a generator of very small quantities of hazardous waste. The adjacent freight line transports oil and other potentially hazardous

substances, but does not regularly expose airport property or the proposed acquisition to these chemicals.

3.6.3. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

The No Action alternative will not disturb any existing hazardous materials nor produce any construction debris. This alternative will have no significant impact on hazardous materials, solid waste, and pollution prevention.

Proposed Project

The Phase I ESA showed no hazardous materials in the project vicinity; therefore, the proposed project is not expected to disturb any hazardous sites. No hazardous materials would be involved in the construction process.

The proposed project would produce construction debris such as dirt, concrete, and asphalt. Construction materials and other waste resulting from the proposed actions will be disposed of at a local facility in accordance with North Dakota laws.

Minimization and Mitigation

Because no substantial project-related impacts to hazardous materials or solid waste are expected, no mitigation is required as part of the proposed project.

Significance Determination

The FAA has not established a significance threshold for hazardous waste, solid waste, or pollution prevention. However, according to the 1050.f Desk Reference, there are factors to consider when evaluating potential environmental impacts for hazardous materials, solid waste, or pollution prevention. **Table 3-3** below lists these factors and discusses how they are applicable to the proposed project.

Table 3-3: Hazardous Materials, Solid Waste, and Pollution Prevention Factors for Consideration

Factors with the potential to:	Applicability to Proposed Project
Violate applicable federal, state, tribal, or local laws or regulations	No laws or regulations regarding hazardous waste would be violated
Involve a contaminated site	No contaminated sites are located within the proposed project boundary
Produce an appreciably different quantity or type or hazardous waste	There would be no hazardous waste generated by the proposed project
Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity	It is anticipated that the local disposal facility would have enough capacity to handle solid wastes that are generated by the proposed project
Adversely affect human health and the environment	Based on the Phase I ESA results and the above information, the proposed project is not anticipated to adversely affect human health and the environment

Based on the above analysis, there are no significant hazardous materials, solid waste, or pollution prevention impacts anticipated with the proposed project.

3.7 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

3.7.1. REGULATORY SETTING

As required by FAA regulation, the Airport must comply with Section 106 of the National Historic Preservation Act of 1966, which requires federal agencies to consider effects to historic properties. Historic properties are considered those included on the National Register of Historic Places (NRHP) or those that meet one or more criteria for inclusion on the NRHP. If it is determined that no type of activity or disturbance will impact the historic property, the federal agency has no further Section 106 obligations.

3.7.2. AFFECTED ENVIRONMENT

A Class III Cultural Resource Inventory for the Casselton Robert Miller Regional Airport was conducted between October 20 through 24, 2022 by Juniper, LLC. As a part of this inventory, the Sisseton Wahpeton Oyate (SWO) and Spirit Lake Sioux Tribe (SLST) Tribal Cultural Specialists (TCS) worked alongside the Juniper archaeologists to provide a tribal perspective and interpretation of the proposed undertaking. No new or previously recorded cultural resources

were recorded in the inventoried area. An additional area of agricultural field was included after the initial survey area was completed. This area has a low likelihood of discovery of cultural resources based on the literature review for the surrounding area and due to its similarity to the adjacent surveyed area and current agricultural use.

3.7.3. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

No changes to the vicinity would be made, and no impacts to cultural resources would be expected as a result of the No Action alternative.

Proposed Project

The FAA consulted with the North Dakota State Historic Preservation Office (SHPO) in February 2023, resulting in a determination of No Historic Properties Affected on February 27, 2023, provided all borrow materials come from an approved source. Updates to the project were reviewed in fall 2025, and an updated concurrence was received October 17, 2025. SHPO Correspondence is located in **Appendix D**.

Minimization and Mitigation

Because no impacts to cultural resources are expected, no mitigation is required as part of the proposed project.

Significance Determination

The FAA does not have a significance threshold for Cultural Resources but does consider whether or not a finding of adverse effect is made under Section 106 of the NHPA.

No historic or archaeological resources are present within the study area and the SHPO has issued a finding of No Historic Properties Affected. Therefore, the proposed project would not have a significant impact on cultural resources.

3.8 LAND USE

3.8.1. REGULATORY SETTING

FAA guidance requires the discussion of possible conflicts between the proposed action and federal, state, regional, and local land use plans, policies, and controls. Where an inconsistency exists, the NEPA document should describe the extent to which the agency would reconcile its actions with the plan. Notable, the FAA also requires agreement to written grant assurances from airport sponsors prior to providing federal funding for airport improvements. This section also demonstrates the required airport sponsor's assurance under 49 U.S.C §47107(a)(10) that "appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable," to restrict existing and planned land use next to and near the Airport to activities compatible with Airport operations.

FAA Land Use Guidance

Land use regulations near airports typically focus on safety for airport users and the surrounding community, along with minimizing negative impacts such as noise disturbance, and zoning regulations generally discourage or prohibit land use that is incompatible with airports. The authority to enact zoning codes lies at the local level. However, the FAA offers guidance documents and grants that fund airport planning and land use studies.

Specific guidance offered by the FAA concerns land uses within the Runway Protection Zone (RPZ). An RPZ is a trapezoidal shaped area beyond a runway end with the purpose of protecting pilots as well as individuals and property on the ground. The size of this zone is determined by the design of the runway, the types of aircraft most frequently using the runway, and the visibility minimums for runway instrument approach procedures.

FAA Advisory Circular (AC) 150/5300-13B, Change 1, *Airport Design*, states that, “It is desirable to clear the entire RPZ of all above-ground objects to minimize risk to the public.” AC 150/5190-4B, *Airport Land Use Compatibility Planning*, states that, “For projects proposed by the sponsor, such as runway extensions or new runways, that would result in moving the RPZ into an area that has incompatible land uses, the FAA expects the sponsor to have or secure sufficient control of the RPZ, ideally through fee simple ownership, including any off-airport property within the RPZ.” It also states, “The FAA has higher expectations for the airport sponsor to mitigate potential incompatible land uses within the RPZ when the introduction of the incompatible land use is the result of an airport sponsor-initiated project (regardless of funding source).” AC 150/5190-4B further clarifies incompatible land uses and indicates that public roads are considered incompatible land uses within an RPZ. Consultation with the FAA is required when there are new or changed uses planned within an RPZ, or a planned change to an RPZ size or location. However, farming that meets airport design clearance standards in FAA AC 150/5300-13 is considered a permissible land use that requires no further FAA evaluation.

North Dakota Airport Zoning Act

The North Dakota Airport Zoning Act outlines regulations designed to prevent the creation or establishment of airport hazards and to limit conflicts with local zoning regulations.

Local Zoning Ordinances

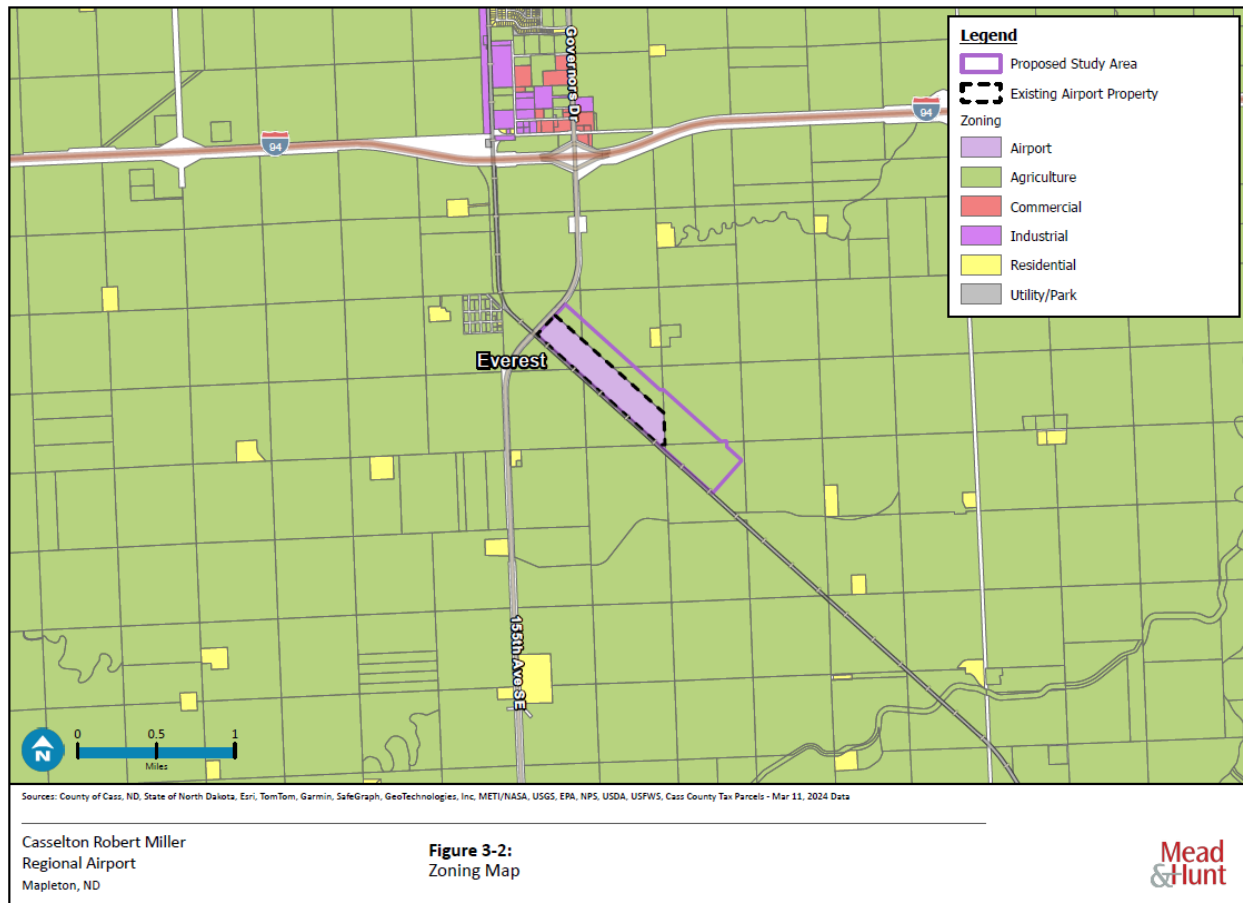
According to the Everest Township Zoning Ordinance and Map (**Figure 3-2**), the Airport property is zoned for Commercial use while the surrounding parcels are zoned as Agricultural. The Agricultural district allows for public buildings and facilities as conditionally permitted uses.

3.8.2. AFFECTED ENVIRONMENT

The study area for land use is a one-mile radius of the project boundary and airport property. Land uses incompatible with airports include those that hinder safe and efficient airport operations or those that expose people living or working nearby to noise or other aviation hazards. Land uses that are least compatible with airports include densely populated residential or office buildings, streetlamps and structures that emit bright light, dust-producing smokestacks that cause visual and physical obstructions, and ponds, large wetlands, and

agricultural practices that can attract wildlife. Other incompatible land uses include residential developments and places where people gather in large numbers.

Figure 3-2: Everest Township Zoning Ordinance and Map



Land use in the project area is made up of paved airport facilities, mowed short grasses on Airport property, agricultural lands, and local roads. There are three residential buildings within one mile of the Airport property; one which is 0.5 miles east of Runway 13/31, one which is 0.3 miles south-west of Runway 13/31, and another which is 0.3 miles north-west of Runway 13/31. Additionally, there is a winery located 0.9 miles north-east of Runway 13/31.

A Class 1 freight train runs parallel to Airport Road, about 0.2 miles south-west of Airport facilities. According to the North Dakota Department of Transportation (NDDOT), the route running adjacent to the Airport is utilized by an average of 50 trains per day. The Red River Valley and Western Railroad (RRV&W) has plans to construct a sidetrack 15 feet southwest of the existing railroad centerline extending 8,000 feet along the track south of ND Highway 18. Coordination with RRV&W indicated that no additional property acquisition was intended for this project.

Lands adjacent to the project boundary are primarily used for agricultural purposes. Because the area is largely undeveloped, airport noise is less likely to fall into areas where it may be a nuisance, and development on the ground is unlikely to cause a hazard to airport operations.

3.8.3. ENVIRONMENTAL CONSEQUENCES

The FAA has not established a significance threshold for land use, or factors to consider when determining significance of a project's effect on land use.

No Action Alternative

No changes to the vicinity would be made, and no impacts to land use would be expected as a result of the No Action alternative. Under the No Action alternative, the Airport would remain non-compliant with FAA RPZ design standards due to both State Highway 18 and 156th Avenue SE remaining in the RPZs.

Proposed Project

Runway 13/31 will relocate to the northeast of the existing runway, while also shifting and extending to the southeast, affecting undeveloped agricultural lands. Approximately 180 acres of land in agricultural use will be converted to airfield or roadway use as a result of the proposed project. Section 3.6 includes further details about farmland impacts. No new incompatible land uses are anticipated to be introduced under the proposed project.

3.8.3.1 Runway Protection Zones

The relocation, shift, and extension of Runway 13/31 will result in a change to RPZs. On the Runway 13 end, the RPZ will shift south, and State Highway 18 will no longer intersect the surface. The aviation easement protecting the current off-airport Runway 13 RPZ could foreseeably be modified at a later date to release building restrictions due to the runway no longer being aligned with the area; however, covenants would remain due to federal funding for the original easement acquisition. Existing signage along roads located within the Airport's RPZs warning of low-flying aircraft are anticipated to be deemed unnecessary and eliminated once the majority of the RPZ is under Airport ownership. Approximately three acres of the Runway 13 RPZ that extends beyond airport property within the ND 18 ROW, but not over the roadway itself, would require a new aviation easement.

The implementation of an improved approach procedure to Runway 31 with a visibility minimum of $\frac{3}{4}$ mile (down from 1 mile) will increase its RPZ dimensions. The ultimate runway shift and extension to the south also shifts the RPZ south, requiring roadway relocations to provide a clear RPZ. This will require land acquisition to accommodate the increased and shifted RPZ. Approximately 3,000 feet each of 39th Street SE and 156th Avenue SE on the southeast side of the airfield will be closed, and roadway rights held by the township will be publicly vacated. The preliminary rerouted roadway would closely follow the proposed new airport boundary line and be located outside the RPZ, providing compatible land use and Airport control of the entire zone, in compliance with RPZ standards.

3.8.3.2 Railroad

During project scoping, RRV&W inquired about whether the proposed airport project would further limit railroad development heights, and if it would hinder them from developing new rail serviced customers south of Casselton. See correspondence in **Appendix E**. The proposed project would not hinder the development of additional service and will not result in new height or other restrictions to railroad facilities. The railroad heights are primarily restricted by

the runway's transitional surface, which currently allows a height of approximately 950' above sea level (ASL) at the most restrictive point along the railroad. Because the proposed runway will move farther from the railroad centerline, the future condition will be restricted to an elevation of approximately 1,000' ASL, providing more clearance. The departure surface will also shift along the tracks due to the new runway alignment, but clearance is expected to remain approximately 50 feet above the estimated height of a railroad vehicle on the tracks, which would not affect railroad activities.

During the comment period, RRV&W expressed concerns related to potential increases in vehicle traffic at an existing uncontrolled railroad crossing, the suitability of the crossing geometry for large or heavy equipment, and the potential need for surface improvements to crossing panels if the roadway were used as a construction haul route.

These considerations relate to final roadway and construction logistics design and do not alter the Proposed Action or the environmental impact conclusions of this EA. Any roadway or railroad crossing improvements, if required, would be designed and implemented in coordination with the railroad and applicable regulatory authorities prior to construction. The proposed roadway connections are intended to preserve existing local access and circulation patterns and are not expected to generate new traffic or increase long-term traffic volumes beyond existing conditions.

3.8.3.3 Roadways

No permanent additional trip generation or parking is anticipated from the proposed project. No additional congestion is anticipated, and no new traffic will be generated.

The runway relocation, shift, and extension move the pavement and associated design surfaces and protected areas, such as the runway safety area (RSA) and RPZ, to the northeast and southeast, resulting in direct impacts to 39th Street SE (a minimum maintenance-style gravel road) and 156th Avenue SE (a regularly maintained gravel road). 156th Avenue SE will be closed, and a new roadway alignment for 39th Street SE will be built to maintain east/west traffic flow. This would likely increase travel time; people travelling on 39th Street SE will be routed around the RPZ, and to follow design standards, the road will require signage to allow lower speeds than the typical 55 miles per hour indicated for gravel roads in North Dakota. People traveling on 156th Avenue SE will need to use an alternate route.

The realigned road will be owned and maintained by Everest Township, outside the city limits of Casselton, in Cass County. The new road will be designed to meet Everest Township standards, which align with those of Cass County. During project scoping and subsequent coordination, Everest township and adjacent landowners provided input on the proposed alignment. Everest Township and community members indicated the importance of the east/west flow for farming and residential access, and Everest Township prioritized maintaining a steady number of road miles. The realignment of 39th Street SE, as identified in the proposed action, will be designed to address these concerns. See a summary of correspondence and meeting notes in **Appendix F**. To meet Township priorities to the extent feasible, this alignment results in a loss of 0.04 road miles with 1.11 miles closed and 1.07 miles created.

Due to closing and relocating portions of 39th Street SE and 156th Avenue SE, rights of way and prescriptive easements will be vacated or extinguished to release property interests where they are no longer needed. Vacation of prescriptive rights-of-way for the existing roads and establishment of new rights-of-way for the realigned 39th Street SE will be completed through the platting process administered by Cass County. The County will coordinate this process with Everest Township and solicit their comments. A preliminary plat request was submitted to Cass County on January 22, 2026; an approved preliminary plat is expected prior to the publication of the final EA; and an approved final plat will be requested concurrently with completion of the land acquisition process. All acquisition will follow the Uniform Relocation and Real Property Acquisition Act (URRPA).

The anticipated contractor haul route for construction is from State Highway 18 along 39th Street SE to the project area. Public road signs indicating construction traffic are anticipated with the proposed project. The contractor will be required to follow Manual on Uniform Traffic Control Devices (MUTCD) requirements for signage.

3.8.3.4 Utilities

Initial title work indicated the presence of easements relating to utility rights of way on parcels to be acquired by the Airport. A utility-locate did not reveal active lines within the project area. Further title work will be gathered to identify encumbrances within the limits of the proposed project, including existing airport property. Based on the findings, the airport sponsor will work with encumbrance holders to extinguish or modify their rights to comply with FAA good title requirements.

Minimization and Mitigation

Appropriate steps for land and easement acquisition and release would be taken, as described in the sections above, prior to project construction.

Significance Determination

Land use impacts associated with the proposed action will not be significant based upon the factors described above. The preferred alternative eliminates incompatible uses within the RPZs when compared to the no-action alternative. Traffic flow will change, but access to existing residences and agricultural lands will remain available along new and alternate routes.

3.9 NATURAL RESOURCES AND ENERGY SUPPLY

3.9.1. REGULATORY SETTING

FAA guidance requires consideration of a proposed project's energy and natural resource requirements in NEPA documents. Airport construction projects often change an airport's demand on local energy and natural resource supplies. The following impact categories should be included in an EA:

1. Impacts of the proposed action on local electric, gas, and water utilities.
2. Construction material required for the proposed action, and its availability from local suppliers.

3. Impact of the proposed action on aircraft and ground vehicle fuel use.

3.9.2. AFFECTED ENVIRONMENT

Airfield facilities affected by the preferred alternative do not consume natural gas or water. Existing runway and taxiway lighting systems on the airfield require electricity supply. Airfield lighting includes medium intensity edge lights and precision approach path indicator lights, as well as runway end identifier lights (REIL) on Runway end 31.

3.9.3. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

The No Action alternative does not involve construction activities beyond periodic pavement maintenance; however, the deteriorating pavement condition will require a more frequent maintenance cycle. Potential uses of natural resources and energy associated with the No Action alternative include paving materials for runway and taxiway repairs, and fuel for construction vehicles.

Proposed Project

The proposed project will lengthen Runway 13/31 by 1,600 feet. This will require additional lighting as well as additional snow removal and maintenance operations. No significant increases in aircraft or ground vehicle fuel usage are expected under the preferred alternative. New airfield lighting is expected to be LED, which will help offset energy use for additional lighting required for a longer runway.

Resources will be required for construction for pavement for the runway, taxiway, and relocated roadways, as well as fuel for construction equipment.

Minimization and Mitigation

Because no substantial impacts to natural resources and energy supply are expected as a result of the proposed project, no mitigation is required.

Significance Determination

The FAA has not established a significance threshold for natural resources and energy supply but has identified a factor to consider when evaluating the context and intensity of potential environmental impacts in this category. This factor includes “situations in which the proposed action... would have the potential to cause demand to exceed available or future supplies of these resources. For most actions, changes in energy demands or other natural resource consumption for FAA projects will not result in significant impacts.”

The proposed project will not cause demand to exceed supply of nearby energy sources or natural resources required for project construction or operation. Based on this information, no significant natural resources and energy supply impacts are expected to be associated with the preferred alternative or the no-action alternative.

3.10 SOCIOECONOMICS AND CHILDREN’S HEALTH AND SAFETY RISKS

3.10.1. REGULATORY SETTING

Statutes related to socioeconomic impacts include the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970. Title VI of the Civil Rights Act of 1964, Executive Orders, and other federal guidance have been issued to address environmental justice and children’s environmental health and safety risks.

3.10.2. AFFECTED ENVIRONMENT

The study area for this category is affected jurisdictions and areas directly adjacent to the project boundary. The Airport, which is owned by the City of Casselton, is immediately surrounded by the Township of Everest in Cass County. As discussed in Section 3.8, the land immediately surrounding the Airport is zoned for agricultural use, with the nearest residential building residing 0.5 miles east of the Airport.

According to the U.S. Census Bureau, the population in North Dakota has increased by 11% between 2012 and 2022, the most recent year with complete available data. Everest Township has seen a decrease in overall population since 2012, declining by 38% since 2012. **Table 3-3** summarizes the total population in North Dakota, Cass County, Casselton, and Everest Township as well as the compound annual growth rate since 2012.

Table 3-3: Total Population				
	2012	2017	2022	Compound Annual Growth Rate
North Dakota	699,628	755,393	779,261	1.2%
Cass County	156,157	177,787	192,734	2.4%
Casselton, ND	2,137	2,773	2,496	1.7%
Everest, ND	52	40	32	-5.3%
<i>Source: U.S. Census Bureau, American Community Survey, 2022, 2017, and 2012</i>				

Income and household size are useful indicators for understanding the potential sensitivity of a community to socioeconomic impacts. **Table 3-4** summarizes per capita and median household income on the state, county, city, and township levels in 2022. According to the U.S. Department of Health, the federal poverty line in 2022 was \$19,720 for a household of 2 and \$24,860 for a family of 3. The North Dakota Department of Human Services reports that in 2022 the state poverty line was \$25,268 and \$31,782 for a household of 2 and 3 respectively. As shown in **Table 3-4**, the per capita and median household income for the state, county, city, and township are all well above the federal and state poverty lines.

Table 3-4: Income and Household Size

	Per Capita Income	Median Household Income	Average Household Size
North Dakota	\$41,800	\$71,970	2.34
Cass County	\$41,923	\$66,747	2.56
Casselton, ND	\$46,331	\$61,861	2.31
Everest, ND	\$41,261	-	2.07
Source: U.S. Census Bureau, American Community Survey: Financial Characteristics 2022 U.S. Census Bureau, American Community Survey: Household Demographic Information 2022			

3.10.3. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

No changes to the surrounding community would be expected as part of the no action alternative, and therefore no impacts would be anticipated.

Proposed Project

3.10.3.1 Socioeconomics

The FAA has not established a significance threshold for socioeconomics, but there are factors to consider when analyzing the context and magnitude of potential impacts. These include whether the proposed action has the potential to:

4. Induce substantial economic growth in an area
5. Disrupt or divide the physical arrangement of an established community
6. Cause extensive relocation
7. Disrupt traffic patterns and reduce the level of service of roads serving a surrounding community
8. Substantially change a community's tax base

The proposed action is not expected to significantly influence economic activity in the area, nor will it cause any relocation of the established community.

3.10.3.2 Land Acquisition

The Airport would purchase approximately 250 acres of land adjacent to the existing property for the RPZ and runway relocation and extension, including land encompassing the 25-foot building restriction line for Runway 13/31. Easements would be acquired by the airport for the approximately 3 acres of the Runway 13 RPZ beyond airport property to the northwest within the ND 18 ROW, and by Everest township for realigned roadway ROW as appropriate based on the outcome of land negotiations.

Land purchased for the proposed project would comply with the Uniform Relocation Assistance and Real Property Acquisition Policy Act. Coordination with landowners regarding potential

impacts is ongoing. Any existing encumbrances would be addressed as part of the land acquisition process.

This land acquisition may slightly decrease the tax base; however, these impacts are not significant within the context of the activity occurring in the larger area.

3.10.3.3 Children's Environmental Health and Consequences

In most cases, the significance of impacts to children's environmental health and safety is dependent on the significance of impacts in other environmental categories. The FAA has not established a significance threshold for this category but requires consideration of whether the proposed project will lead to disproportionate health or safety risks to children.

Impacts in other resource categories are not considered significant. Areas affected by Airport noise do not include schools, playgrounds, or other facilities that would otherwise be primarily accessed by children. There are no significant impacts to air quality or water resources associated with the proposed project that may influence the health of the surrounding population, including children. There are no disproportionate safety risks associated with the proposed project, which will not occur near public facilities such as parks that may attract children. No disproportionate health or safety risks to children are expected.

Minimization and Mitigation

No impacts are expected to socioeconomic and children's environmental health and safety; therefore, no mitigation is required.

Significance Determination

Socioeconomic and children's environmental health impacts will not be significant based upon the factors discussed above.

3.11 VISUAL EFFECTS / VISUAL CHARACTER

3.11.1. REGULATORY SETTING

Airport-related lighting facilities and activities have the potential to affect light sensitive areas such as residential neighborhoods, parks, and recreational facilities. According to FAA Order 1050.1G, light emissions analysis should consider the degree to which the proposed action has potential to create annoyance or interference with normal activities and to affect the visual character of the area.

3.11.2. AFFECTED ENVIRONMENT

The study area for visual effects is the project boundary and directly adjacent properties. No scenic views or vistas are located near the project area. Existing runway and taxiway lighting systems on the airfield include medium-intensity incandescent runway edge lights and runway end identifier lights on the Runway 31 end; precision approach path indicator (PAPI) lights on both ends of Runway 13/31; and medium intensity taxiway edge lights on the parallel taxiway. Runway 13/31 is equipped with a pilot-controlled lighting system to turn on the lights during the day, or to increase the intensity of runway lights above a standard low-intensity at night.

Land surrounding Airport property is primarily agricultural and does not include light sensitive uses such as residential development or recreational facilities.

3.11.3. ENVIRONMENTAL CONSEQUENCES

No Action Alternative

No changes to airfield lighting would be made, and no impacts to the visual environment would be expected as a result of the No Action alternative.

Proposed Project

The proposed project would shift all lighting south and east along the new runway alignment. This impacts agricultural land and would not lead to increased exposure in light-sensitive areas.

Minimization and Mitigation

Because no substantial light-related or visual impacts to sensitive areas are expected, no mitigation is required as part of the proposed project.

Significance Determination

The FAA has not established a significance threshold for visual effects, but the EA should consider the context and intensity of lighting emissions and other visual impacts. Based on the information above, there are no significant visual effects associated with the proposed project.

3.12 WATER RESOURCES

3.12.1. SURFACE WATER AND STORM WATER

Regulatory Setting

Surface waters include streams, rivers, lakes, ponds, estuaries, and oceans. The Clean Water Act (CWA) was established to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA allows states to adopt water quality standards. North Dakota has done so under Century Code 23.1-11 and Administrative Code 33.1-16, which is administered by the NDDEQ.

North Dakota Administrative Code 33.1-16-02.1 determines systems and standards for waters of the state. These standards assign beneficial uses, known as designated uses, for every water body. North Dakota waters and their assigned designated uses are to be protected whether for drinking water, recreation, fish consumption, or aquatic life. Not only do water quality standards establish designated uses, but they also establish criteria that must be met within the bodies of water, so water quality is maintained to support their designated uses. So-called “impaired waters” are any bodies of water that do not meet water quality standards or fully support the water body’s beneficial use. Section 303(d) of the CWA requires states to assess and list impaired waters and establish priority ranking by considering the water’s uses and

pollutant levels. The NDDEQ submits an Integrated Report to EPA every two years that includes Section 303(d) list of impaired waters and Section 305(b) water quality assessment report.

For stormwater and other activities, Article 33.1-16-01 of the Administrative Code describes the North Dakota Pollutant Discharge Elimination System (NDPDES) Permits Program, administered by the NDDEQ. Regulated activities include municipal/industrial wastewater, stormwater, and other water uses.⁷ A stormwater permit for construction activity is required for activities disturbing one or more acres of soil. Permittees are required to control runoff from construction sites and develop a construction SWPPP that includes erosion prevention and sediment control BMPs.

The Airport's drainage system must meet federal, state, and local requirements. Local requirements will be determined as a result of the platting process, initiated January 22, 2026, with Cass County. Applicable federal requirements include the FAA's 5-year design storm for airfield facilities and ponding limitations due to potential for increase in wildlife attractants caused by standing water.

Affected Environment

The Airport is located in the Maple River Watershed, part of the greater Red River Basin. The project area is part of the Maple River Water Resource District. Swan Creek and Maple River run about 4 miles east of the Airport, along with several seasonal drainages, all of which run east towards the Red River. The Wheatland Channel, which flows east to Swan Creek is located just over ½ mile north of the airport. The Durbin-Everest Channel, also a tributary to Swan Creek and eventually Maple River, is located approximately ½ mile south of existing airport property. Both of these nearby are listed as impaired streams, as is Swan Creek from its confluence with the Maple River upstream to the Casselton Reservoir, including all tributaries. The 2022 Waterbody Report from the EPA, included in **Appendix G**, shows impairments for fish and aquatic biota as well as recreation. The report listed no probable sources of impairment for these waterbodies.

An agricultural drainage ditch serving neighboring field and connecting to the Durbin-Everest Channel is connected to Wetland 4, discussed in detail below. This surface drain was remarked upon by the ND Department of Water Resources (DWR) during project scoping, who noted that a permitted surface drain, Surface Drain Permit No. 6270, was identified to be within the proposed project area, in the SW ¼ of Section 13, Township 139 North, Range 52 West, Cass County. The DWR requests to be notified of any alterations, modifications, or improvements to this drain as a drainage permit may be required.

Adjacent agricultural landowners indicated a history of inundation around the airport and the permitted drainage ditches as they flow to the east and south during periods of heavy rain and snow melt that are accompanied by high volumes of runoff.

⁷ North Dakota Department of Environmental Quality (DEQ), NDPDES – Permits Program: https://deq.nd.gov/WQ/2_NDPDES_Permits/default.aspx

Environmental Consequences

3.12.1.1 No Action Alternative

No changes to the airfield or area of impervious surfaces would occur, and no impacts would be associated with the no action alternative.

3.12.1.2 Proposed Project

The proposed project would not directly impact natural surface waters but would impact a portion of a permitted agricultural drain. Culverts would be included as part of the project to facilitate the flow of water and preserve drainage function. The DWR will be notified of any alterations, and an appropriate permit will be obtained.

The proposed project would add approximately 48,000 square yards of impervious area to the airport, which will increase stormwater runoff from these surfaces. Required post-construction conditions will be determined by Cass County during the platting process, initiated January 22, 2026.

The project was included in a Maple River Watershed District meeting for comment in February 2025; the board had no comments at that time.

3.12.1.3 Minimization and Mitigation

Airport stormwater infrastructure would be updated to accommodate runoff from additional impervious surfaces. The additional stormwater runoff would be held on airport property, outside of the Runway Safety Area (RSA), and ultimately released to the drainage ditches at a rate and volume designed to avoid increasing outflow to the drainage ditches from pre-construction conditions. This would minimize the potential to exacerbate runoff-related inundation concerns and would meet local stormwater regulations. Stormwater infrastructure would comply with FAA AC 150/5200-33C *Hazardous Wildlife Attractants on or near Airports*, and any on-airport water would be drained within 48 hours.

The realigned roadway would incorporate ditches meeting local standards and regulations to handle road-related runoff. Final stormwater management features will be developed during final design in coordination with Cass County, applicable drainage authorities, and adjacent and affected landowners to the extent practicable, consistent with permitting requirements and applicable standards. This coordination is intended to address site-specific drainage considerations while maintaining pre-project runoff conditions and avoiding adverse effects on downstream properties.

The project will comply with the North Dakota Pollution Discharge Elimination System (NDPDES) Construction Permit along with site-specific Cass County requirements and will include preparation of a construction SWPPP incorporating on site best practices.

3.12.1.4 Significance Determination

The proposed project will have impacts to adjacent ditches and indirect ditches to the surface water system that will require BMPs and other mitigation measures. Stormwater and water quality impacts will be mitigated through on-airport stormwater facilities. Given these considerations, no significant impact is expected as part of the proposed project.

3.12.2. FLOODPLAINS

Regulatory Setting

Executive Order 11988, Floodplain Management (May 24, 1977), defines floodplains as “the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.” Executive Order 11988 bans federal actions in a floodplain unless no practicable alternative exists and requires measures to minimize unavoidable short-term and long-term impacts if the proposed action occurs in a floodplain.

Affected Environment

According to the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL), the Airport and surrounding area are designated by FEMA as Zone D, Areas of Undetermined Flood Hazard. Zone D designation is used for areas where there are possible but undetermined flood hazards as no analysis of flood hazards has been conducted. The State of North Dakota DWR has determined Base Level Engineering elevations for the area in collaboration with FEMA in a non-regulatory effort to identify risk, finalized in 2019⁸. The entire airport and project area are shown within elevations within the 1 percent annual chance of flood. Anecdotally, the Airport regularly faces seasonal flooding on the eastern and northern borders of the Airport boundary. Adjacent landowners have noted a history of seasonal flooding in the areas surrounding the drainage ditches, among other locations.

Environmental Consequences

3.12.2.1 No Action Alternative

No changes to the airfield or surrounding area would occur, and no impacts would be associated with the no action alternative.

3.12.2.2 Proposed Project

The majority of the site will not be altered in a way that would affect flood zones or elevations as part of the proposed project, including undeveloped areas within the RPZs and areas likely to remain in agricultural use. Runway and roadway development would occur within the ND DWR BLE area showing a 1 percent annual chance of flood. The runway and taxiway would be constructed above these elevations in order to minimize risk to airport infrastructure. Consequently, the project would involve fill within this area of flood risk and will require coordination with the floodplain administrator as part of permitting. The Cass County Engineer serves this role and would review the project to determine whether it adversely affects the flood carrying capacity of a flood-prone area. According to Ordinance 1998-2:

For the purposes of this ordinance, ‘adversely affects’ means damage to adjacent properties because of rises in flood stages attributed to physical changes of the channel and the adjacent overbank areas. (1) If it is determined that there is no adverse effect and the development is not a building, then the permit shall be granted without further considerations. (2) If it is determined that there is an adverse effect, then technical

⁸ North Dakota Risk Assessment Map <https://ndram.dwr.nd.gov/>

justification (i.e., registered professional engineer) for the proposed development shall be required.⁹

3.12.2.3 Minimization and Mitigation

Much of the site will remain undeveloped and at existing elevations and, therefore, will not impact flood capacity. Where fill will be added, including the runway and taxiway, stormwater infrastructure improvements described above in the Surface Water and Storm Water section would minimize additional water flowing to adjacent and downstream properties resulting from fill and impervious surface added as part of the proposed project. Runway and roadway development would occur within the ND DWR BLE area showing a 1 percent annual chance of flood.

3.12.2.4 Significance Determination

Floodplain impacts would be significant if: The action would cause notable adverse impacts on natural and beneficial floodplain values. These can include:

1. natural moderation of floods,
2. water quality maintenance
3. groundwater recharge
4. fish, wildlife, plants
5. open space
6. natural beauty
7. scientific study
8. outdoor recreation
9. agriculture, aquaculture, and forestry.

Given the existing conditions, the minimization efforts associated with the project keeping outflow to existing levels, and the relatively low intensity of development, no significant impacts are expected.

3.12.3. GROUND WATER

Regulatory Setting

The North Dakota Ground Water Protection Program protects and monitors groundwater quality and works toward restoration of groundwater that has been impacted by contaminants. The North Dakota Century Code “establishes a degradation prevention program to protect ground water resources, encourages the wise use of agricultural chemicals, provides for public education regarding preservation of ground water resources, and provides for safe disposal of wastes in a manner that will not endanger the state’s ground water resource.”

Affected Environment

Cass Rural Water District drinking water is primarily sourced from well water from the West Fargo Aquifer, the Sheyenne Delta Aquifer, and the Page Aquifer.¹⁰ The City of Fargo also provides drinking water to some townships. There are no groundwater storage facilities or tanks within the Airport property, nor any source water or wellhead protection areas.

⁹ Cass County Ordinance 1998-2 <https://www.casscountynnd.gov/home/showpublisheddocument/742/636258918605700000>

¹⁰ Cass Rural Water District, 2023. <https://www.cassruralwater.com/wp-content/uploads/2023-Water-Quality-Report.pdf>

Environmental Consequences

No groundwater resources are present within the study area, and therefore neither the No Action alternative nor the proposed project would have a significant impact on groundwater.

3.12.4. WETLANDS

Regulatory Setting

Wetlands are a valuable resource to human, animal, and plant communities. They are responsible for providing a home to a variety of insects, mammals, vegetation, fish, birds, and microbes. Wetlands perform physical, chemical, and ecological functions while varying in shapes, sizes, and types. The U.S. Army Corps of Engineers (USACE, or “Corps”) defines wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands are not limited to swamps, marsh, and similar areas, as a temporarily flooded pothole may also be a wetland if certain soils and vegetation are present.

Impacts to wetlands are regulated at the federal level by the CWA, with the USACE as the permitting agency. The CWA establishes the basic structure for regulating the discharge of fill materials and pollutants into Waters of the United States, which include wetlands and waterways. The two primary sections of the CWA relating to wetland impacts and permitting are Section 404 and Section 401. Section 404 of the CWA requires that those proposing to deposit dredged or fill material into the Waters of the United States, including wetlands, must receive a permit before doing so. Section 401 requires any applicant for a federal license or permit to conduct an activity that may result in a discharge of a pollutant into Waters of the United States to obtain a certification from the State that the discharge complies with the applicable water quality standards. The Corps issues Section 404 permits that are then certified by Section 401 approvals at the state level.

Affected Environment

An aquatic resource delineation was conducted on November 2nd and 3rd, 2022, by Western Plains Consulting (WPC). The report for this delineation is found in **Appendix H**. WPC identified four wetlands within the Airport property, shown in **Figure 3-4** and **Table 3-5**. Wetlands 1 and 2 are located on the northern half of the Airport property within the runway and taxiway. Wetlands 3 and 4 are on the southern half of the Airport property, with Wetland 3 located near Runway-end 31 and wetland 4 located on 39th Street Southeast and 156th Avenue Southeast.

Table 3-5: Wetland Summary Table

Aquatic Resource Name	Cowardin Classification By NWI	Cowardin Classification by WPC	Location – Latitude	Location – Longitude	Aquatic Resource Size (acres)	Square Footage
Wetland 1A	-	PEM1C	46.857363	-97.214197	0.01	534
Wetland 1B	-	PEM1C	46.856808	-97.213186	0.08	3,698
Wetland 2A	PEM1Cx	PEM1Cx	46.855025	-97.210206	0.41	17,693
Wetland 2B	PEM1Cx	PEM1Cx	46.854147	-97.208900	0.21	9,112
Wetland 3	-	PEM1C	46.850669	-97.203969	0.05	2,352
Wetland 4A	-	PEM1Fx	46.846955	-97.200491	0.05	2,231
Wetland 4B	-	PEM1Cx	46.847081	-97.199651	0.07	2,879
Wetland 4C	-	PEM1Cx	46.847090	-97.196716	0.15	6,418
Wetland 4D	-	PEM1Cx	46.847214	-97.193260	0.11	5,004
Wetland 4E	-	PEM1Cx	46.847226	-97.197743	0.45	19,504
Wetland 4F	-	PEM1Cx	46.847479	-97.200333	0.01	361
Wetland 4G	-	PEM1Cx	46.847231	-97.200696	0.05	2,097
Wetland 4H	-	PEM1Fx	46.849609	-97.204583	1.36	59,223
					Wetland Sum	3.01
					OW Sum	0
						131,106
						0

Figure 3-4: WPC Wetland Summary Map



Of these wetlands, Wetlands 2 and 4 were classified as excavated ditches. Wetlands 1 and 3 are artificial wetlands created by the higher runway and taxiway infrastructure around them. Wetland 4, a low-quality wetland composed primarily of reed canary grass and cattails, was determined to be jurisdictional in USACE correspondence dated May 11, 2023, found in **Appendix I**. Non jurisdictional wetlands within the project area total approximately 0.8 acres, and jurisdictional wetlands total 2.2 acres. The project area was expanded to include the preferred roadway alignment in summer 2025. While an additional survey was not completed, jurisdictional wetland ditches are assumed to continue along 39th Street for the full length of the project area. A Level 1 wetland review was completed for the additional area, and is included in **Appendix H**.

Environmental Consequences

3.12.4.1 No Action Alternative

No changes to the airfield or wetlands would occur, and no direct impacts would be associated with the no action alternative. Runway pavement maintenance would introduce construction near Wetlands 1, 2, and 3, with the potential for indirect impacts. These wetlands are considered artificial.

3.5.3.1 Proposed Project

The proposed project would directly impact less than 0.7 acres of Wetland 4 where the runway and taxiway would cross Wetland 4, along with necessary grading, as well as where the realign road would reconnect to 39th Street.

3.12.4.2 Minimization and Mitigation

Avoidance and minimization measures will be implemented to reduce or eliminate impacts to wetlands to the greatest extent possible. In the design process, hydrologic connections between impacted wetlands due to road crossings will be maintained through culverts or other structures as necessary. Grade slopes along roadways and the runway extension will be minimized to the greatest extent possible within design requirements and safety guidelines.

Because it is anticipated to be more than 0.5 acres, unavoidable impacts would require an individual Section 404 permit with the USACE, and mitigation within an appropriate wetland bank. A pre-application meeting was held with the USACE September 3, 2025, confirming the need for permitting and replacement for wetland impacts. In addition, a Section 401 Water Certification through the North Dakota Department of Environmental Quality would be required. The USACE RIBITS shows area availability for appropriate replacement credits, including a site in Cass County with a 43.92 acres of prairie pothole credits.

3.12.4.3 Significance Determination

The FAA Order 1050.1 desk reference notes that a significant impact would occur when the action would:

1. 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;
2. 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;
3. Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public);
4. Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands;
5. Promote development of secondary activities or services that would cause the circumstances listed above to occur; or
6. Be inconsistent with applicable state wetland strategies.

Wetland 4 is considered to have low ecological function and quality due to its dominance by invasive reed canary grass and cattails. These species, while capable of providing basic hydrological benefits such as sediment filtration and erosion control, tend to form dense monocultures that suppress native plant diversity and reduce habitat complexity. These aggressive invasive species alter nutrient cycling and limit the wetland's capacity for long-term carbon sequestration. The linear, fragmented nature of this wetland further diminishes its ecological connectivity and wildlife value, making it functionally inferior to larger, intact native wetland systems.

Based on the above, it is concluded that minimization measures and a replacement plan using a wetland bank will mitigate wetland impacts associated with the proposed project, and it will not result in significant impacts.

3.13 SUMMARY

A summary of the impacts presented in this section is presented in **Table 3-6**. The table includes the impacts from the no-action and preferred alternatives, as well as any required mitigation, permits, or associated actions.

Table 3-6: Summary of Environmental Consequences

Environmental Impact Category		No-Action Alternative: Significant Impact?	Preferred Alternative: Significant Impact?	Permitting/Mitigation & Associated Actions
Aviation Emissions and Air Quality		No	No. Minimal impacts during construction	Implement EPA-recommended best management practices (BMPs) and emissions control strategies during construction.
Biological Resources (including fish, wildlife, and plants)		No	No.	None
Coastal Resources		No	No	None
DOT Section 4(f) and Land and Water Conservation Fund (Section 6(f))		No	No	None
Farmlands		No	No. 180 acres directly converted	None
Hazardous Materials, Solid Waste, and Pollution Prevention		No	No	Dispose of construction materials and solid waste in accordance with state and local laws.
Historic, Architectural Archeological, and Cultural Resources		No	No	None
Land Use	RPZ	No	No. Improved RPZ compatibility.	Fee-simple land acquisition of Runway 31 RPZ, and easement acquisition for 3 acres Runway 13 RPZ.
	Utilities	No	No.	The airport sponsor will vacate, extinguish, subordinate easements within the project area as needed to ensure good title.
	Transportation	No	No. Roadway realignment.	Vacation of prescriptive rights-of-way for existing roads and establishment of new rights-of-way will be completed through the platting process administered by Cass County. The County will coordinate this process with Everest Township and solicit their comments.
Natural Resources and Energy Supply		No	No. Minor increase in energy and materials demand during	None

Table 3-6: Summary of Environmental Consequences

Environmental Impact Category		No-Action Alternative: Significant Impact?	Preferred Alternative: Significant Impact?	Permitting/Mitigation & Associated Actions
			construction and operation	
Noise and Compatible Land Use		No	No	None
Socioeconomics and Children's Health & Safety Risks		No	No	Land acquisition (fee simple and easements) in compliance with Uniform Relocation Assistance and Real Property Acquisitions
Visual Effects and Visual Character		No	No	None
Water Resources	Surface Water & Stormwater	No	No. Net impervious surface increase of 48,000 square yards. Alteration to DWR permitted agricultural drain. Culverts beneath new runway end to preserve drainage.	- Stormwater infrastructure improvements, no increase to outflow - Construction Stormwater Pollution Prevention Plan - Onsite Best Management Practices - DWR notification and drainage permit
	Floodplains	No	Impacts to ND DWR BLE 1 % annual chance of flood elevation.	- Coordination with Floodplain administrator - Stormwater infrastructure improvements - Runway and taxiway above 1% elevation
	Groundwater	No	No	None
	Wetlands	No	- More than 0.5 acres direct wetland impact under USACE jurisdiction	- USACE CWA Section 404 Permit - ND DEQ 401 Permit - Replacement Plan Mitigation at Approved Bank Service Area (BSA)

Agency and Public Engagement

4.1. SCOPING LETTERS

Scoping Letters were distributed to relevant federal, state, and local governments and agencies identified in consultation with FAA. On July 22, 2024, Mead & Hunt solicited initial comments from the identified governments and agencies via electronic mail. Agencies were asked to submit comments for consideration during the environmental review process. Agencies receiving this correspondence included the following:

- NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY (NDDEQ)
- NORTH DAKOTA DEPARTMENT OF WATER RESOURCES (ND DWR)
- NORTH DAKOTA PUBLIC SERVICE COMMISSION (NDPSC)
- NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (ND DOT)
- CASS COUNTY GOVERNMENT
- CITY OF CASSELTON
- USDA NATURAL RESOURCES CONSERVATION SERVICE (NRCS)
- US ARMY CORPS OF ENGINEERS (USACE)
- US FISH AND WILDLIFE SERVICE (USFWS)
- WESTERN AREA POWER ADMINISTRATION (WAPA)
- US ENVIRONMENTAL PROTECTION AGENCY (EPA)
- NORTH DAKOTA ASSOCIATION OF COUNTIES (NDACO)
- RED RIVER VALLEY & WESTERN RAILROAD (RRVW)
- LUMEN TECHNOLOGIES
- CASS COUNTY ELECTRIC COOPERATIVE
- EVEREST TOWNSHIP
- ND GAME & FISH DEPARTMENT
- ND DEPARTMENT OF HEALTH
- ND SOIL CONSERVATION COMMITTEE
- NDUS – USGS (NORTH DAKOTA GEOLOGICAL SURVEY)
- FEDERAL HIGHWAY ADMINISTRATION
- CASS RURAL WATER DISTRICT
- CASS COUNTY SHERIFF'S OFFICE
- CASS COUNTY AGENT / WEED CONTROL OFFICER
- CASS COUNTY AUDITOR
- ND SOIL CONSERVATION DISTRICT – CASS COUNTY

The agency mail list and Scoping Letter template, as well as the agency responses to the SOV letters, can be found in Appendix J.

4.2. PUBLIC COMMENT PERIOD AND PUBLIC HEARING

The Draft EA was made available for public review and comment from March 11, 2026, to April 24, 2026, with a public hearing held on April 14, 2026. Public comments primarily focused on roadway access, drainage and stormwater management, farmland conversion, runway length justification, and aircraft noise. Agency comments focused on regulatory compliance, permitting, and construction best practices. While several commenters expressed opposition to the proposed runway length, no comments identified environmental impacts not already evaluated in the Draft EA, nor did comments request preparation of additional studies or an Environmental Impact Statement.

Comments received during the public comment period were reviewed and considered during preparation of the Final EA. As a result of this review, the Proposed Project was refined to include a north–south roadway connection to improve local access and circulation; the east–west roadway connection evaluated in the Draft EA remains. Additional clarifications were made regarding stormwater management and coordination during final design. While the Draft EA concluded that stormwater impacts would not be significant and would be addressed through design and permitting, comments emphasized the importance of drainage considerations on adjacent agricultural lands. Consistent with these comments, final stormwater management features will be developed during final design in coordination with Cass County and adjacent and affected landowners to the extent practicable, consistent with permitting requirements and engineering standards. These refinements and clarifications do not alter the impact analyses or significance determinations presented in the Draft EA.

In addition to formal written comments, the Airport Sponsor engaged in informal coordination with the Red River Valley & Western Railroad. The railroad identified considerations related to roadway crossings, including vehicle safety at an existing uncontrolled crossing, constructability for large or heavy equipment, and potential needs associated with use of the roadway as a construction haul route. These considerations will be addressed, as appropriate, during final design and construction coordination with the railroad and applicable authorities and do not alter the environmental impact conclusions of the EA. A summary of comments and responses along with a hearing transcript and full written and verbal comments are included in **Appendix K**.

Other Public Engagement

Multiple public meetings occurred during the EA drafting process, including an open house on December 16, 2024, the City of Casselton Economic Development Committee on January 23, 2025, and Airport Authority meetings in spring and summer 2025. Presentations can be found in **Appendix L**. Meetings with impacted landowners began October 2024.

A Tenant / Airport User Survey was distributed to airport users in August 2022 to better understand and accommodate airport user needs. Six responses were received, and responses were incorporated into the draft of the EA.

5.1. INTRODUCTION

The responsibility for the EA under NEPA rests with the FAA Dakota-Minnesota Airports District Office. This EA was prepared by Mead & Hunt, Inc. under contract with the Casselton Regional Airport Authority.

5.2. PREPARERS AND QUALIFICATIONS

The following Mead & Hunt staff members and subconsultants were directly responsible for preparing the contents of this document.

Evan Barrett, AICP, CM – Midwest Aviation Planning Manager

Mr. Barrett has more than 15 years of experience with NEPA documentation, airfield planning studies, and airport master plans.

Sarah Emmel, AICP – Project Manager and Environmental Planner

Ms. Emmel is an airport planner with experience in environmental planning and NEPA, airport sustainability, land use planning, and stakeholder engagement.

Josh Brelje – Airport Engineer

Mr. Brelje regularly works with airports in North Dakota on airfield engineering projects.

Anthony Gonzalez – Airport Planner

Mr. Gonzalez is an airport planner with 3 years of experience on airport projects. He also has 5 years of experience as a transportation engineer, bringing knowledge in highway design and construction, SW3P inspections, and stakeholder engagement.

Colleen Bosold – Stakeholder Engagement Coordinator

Ms. Bosold has 17 years of experience in the aviation consulting industry, focusing on planning, environmental documentation, community engagement, and communications. Colleen also has experience assisting project teams with management and coordination activities. Her attention to detail, organizational and communication skills help to keep project tasks moving forward efficiently and effectively.

Cole Kiernan – Environmental Planner

Mr. Kiernan is an environmental planner with experience in wetland regulation, NEPA review, and state environmental review documentation.

Mark Sauer, AICP – Transportation Planner

Mr. Sauer has contributed to planning projects for over 14 years, and has prepared numerous environmental documents including Categorical Exclusions, Environmental Reports, Environmental Assessments, and Indirect and Cumulative Effects Analyses. He has completed Phase I Environmental Site Assessments for projects throughout the Midwest.