

# **Final Environmental Assessment**

## ***Glencoe Municipal Airport Parallel Taxiway***

Glencoe, Minnesota

SEH No. GLENC 121693

October 2013

This Final Environmental Assessment becomes a federal document when evaluated and signed by the responsible FAA official.

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Responsible FAA Official

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Date



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## List of Acronyms

AC – Advisory Circular	MESA – Minnesota Endangered Species Act
ADG – Aircraft Design Group	MIRLs – Medium Intensity Runway Lights
AIP – Airport Improvement Program	MITLs – Medium Intensity Taxiway Lights
ALP – Airport Layout Plan	MNDNR – Minnesota Department of Natural Resources
APE – Area of Potential Effect	Mn/DOT – Minnesota Department of Transportation
ARC – Airport Reference Code	MPCA – Minnesota Pollution Control Agency
BMPs – Best management practices	NAAQS – National Ambient Air Quality Standards
CAA – Clean Air Act	NEPA – National Environmental Policy Act
CBRA – Coastal Barriers Resources Act	NHIS – Natural Heritage Information System
CZMA – Coastal Zone Management Act	NHPA – National Historic Preservation Act
DNL – Day-night average sound level	NPDES – National Pollutant Discharge Elimination System
DOT – Department of Transportation	NRCS – Natural Resources Conservation Service
EA – Environmental Assessment	NRHP – National Register of Historic Places
ECS – Ecological Classification System	NWI – National Wetlands Inventory
eFOTG –electronic Field Office Technical Guide	PAPIs – Precision Approach Path Indicators
EPA – Environmental Protection Agency	RCRA – Resource Conservation and Recovery Act
EO – Executive Order	REILs – Runway End Indicator Lights
FAA – Federal Aviation Administration	SEH – Short Elliott Hendrickson Inc.
FEMA – Federal Emergency Management Agency	SGCN – Species in Greatest Conservation Need
FICON – Federal Interagency Committee on Noise	SHPO – State Historic Preservation Office
FIRM – Flood Insurance Rate Maps	SIP – State Implementation Plan
FPPA – Federal Farmland Protection and Policy Act	SRE – Snow Removal Equipment
GPS – Global Positioning System	SWPPP – Stormwater Pollution Prevention Plan
GYL – Glencoe Municipal Airport	TOFA – Taxiway Object Free Area
ILS – Instrument Landing System	USDA – United States Department of Agriculture
INM – Integrated noise model	WMA – Wildlife Management Area
MALSR – Medium-intensity Approach Lighting System with Runway Alignment Indicator	WSS – Web Soil Survey
MDA – Minnesota Dept. of Agriculture	
MDH – Minnesota Dept. of Health	
MIM – Minnesota & NE Iowa Morainal Region	

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## Executive Summary

### Introduction

The City of Glencoe has proposed construction of a full-length parallel taxiway to improve safety at the Glencoe Municipal Airport. The proposed improvements would be funded with Federal Aviation Administration (FAA) Airport Improvement Program (AIP) funds and require review in accordance with the National Environmental Policy Act (NEPA). The FAA will use this Environmental Assessment (EA) as the basis for their recommendation for either issuance of a Finding of No Significant Impact (FONSI) or the preparation of an Environmental Impact Statement (EIS).

### Purpose and Need for Action

The City of Glencoe has proposed construction of a full-length parallel taxiway to enhance safety at the Glencoe Municipal Airport. The lack of a parallel taxiway at the Glencoe Municipal Airport results in concerns from aircraft taxiing on the runway to travel between the airfield and the landside facilities where hangar storage, fuel, and other services are provided. This practice poses a concern because aircraft taxiing on the runway are an obstruction to the primary surface of the runway and limit runway use by other aircraft. The City of Glencoe proposes to improve the Glencoe Municipal Airport by providing access for aircraft between the airside and landside facilities and to each runway end.

### Proposed Action

The Proposed Action includes the following elements as shown on **Figure 2-1**:

- Construction of a parallel taxiway along the full-length of existing Runway 13/31,
- Reimbursement for 5.4 acres of property acquired for construction of the full parallel taxiway and fee acquisition of 0.49 acres of additional property, and
- Relocation of the lighted wind cone.

### Alternatives Considered

Alternatives to the Proposed Action were considered to minimize project effects to the natural and human environments. Because impacts to prime farmland, agricultural use and wetlands would be the primary impacts from construction of the Proposed Action, avoidance and minimization of those impacts was the primary goal of the alternatives analysis. Alternatives considered include an alternate parallel taxiway alignment.

### Northeast Parallel Taxiway

A full length parallel taxiway northeast of the runway would avoid impacts to wetlands on the southwest side of the runway, but would result in a larger amount of floodplain impact on the northeast side. In addition to floodplain impacts, locating the parallel taxiway on the Northwest side of the runway presents a safety issue. Due to the safety issue and increased floodplain impacts, this alternative was removed from further consideration.

### Affected Environment and Environmental Consequences

The following sections describe the primary effects resulting from the Proposed Action. **Table S-1** provides a summary comparison of the Proposed Action and No Action alternatives for all environmental impact categories.

### Farmlands

The majority of the soils within the Airport property are loams and are generally considered either “All areas are prime farmland” or “Prime farmland if drained”. Soils located near the Airport are similar to those listed within the project location. While the land is prime farm land by characteristics it is not actually considered to be prime due to the location and the overall score.

Three areas (see **Figure 3-1**) were evaluated using Form AD 1006, Area A (0.49 acres of property for the south portion of the taxiway object free area), Area B (4.00 acres of property located southwest of the existing taxiway) and Area C (1.25 acres located southeast of the existing taxiway). Form AD-1006 contains a scoring system to determine the significance of potential project impacts and the need for considering alternatives or measures to avoid impacting or converting farmlands. Application of the site assessment

criteria (7 CFR 658.5(b)) and the relative value of the farmland resulted in a total of 94 points for Area A, 88 points for Area B and 92 points for Area C out of a possible 260. This is below the 160 point adverse affect threshold and indicates that the Proposed Action would not result in an adverse impact to prime farmlands. A score below 160 does not require further analysis.

### **Fish and Wildlife Resources**

The Airport site consists primarily of agricultural land use with relatively poor habitat quality, due in large part to the presence of non-native and disturbance-driven grass and forb species. There is no fishery habitat on the Airport. Construction of the Proposed Action would affect approximately 12.77 acres of terrestrial communities (mowed old field, turf grass and row crop) within the existing Airport property and an additional 0.49 acres of agricultural crops on the property to be acquired. The converted habitat would not result in substantial loss to area wildlife because of the poor habitat quality. The Proposed Action would not have any direct impact on area fisheries or any rare species or critical habitat.

### **Water Quality**

The Airport is located in the South Fork Crow River watershed, which is part of the Upper Mississippi River Basin. Construction of the Proposed Action would create 3.2 acres of new impervious surface adjacent to the existing 11.0-acres of impervious surface. Surface water management on the Airport would include both construction site erosion and sediment control BMPs and post-construction storm water management. Management and treatment of surface water runoff would continue to meet state and federal performance requirements through use of grassed swales and enhanced grassed swales along the length of the linear facilities and overland flow. Treatment in typical stormwater detention ponds or facilities that create above-ground standing water would be avoided to prevent the attractant to waterfowl and other wildlife hazardous. Although additional impervious surface would increase runoff volume, management practices designed to meet regulatory standards would minimize increases in volume and in peak flow. Runoff would continue to move through and out of the Airport by existing routes without alteration of drainage patterns or hydrology of wetlands or other receiving waters. The receiving waters will be able to accommodate the minimal increase in runoff volume.

### **Wetlands**

The Proposed Action would result in direct impacts to 0.75 acres of wetland habitat. Measures to avoid and minimize impacts to wetlands have been considered in the design of the Proposed Action. The design of the taxiway includes minimization of impacts beyond the edge of the pavement by minimizing side slopes outside of the Taxiway Object Free Area (TOFA) adjacent to the taxiway. Additional efforts to minimize wetland impacts would be made during project design when detailed topography and other site conditions are known.

Construction of the Proposed Action would require permits and replacement plan approval from the United States Army Corps of Engineers (USACE) St. Paul District for a Section 404 permit and McLeod County for approval under the Rules of the Minnesota Wetland Conservation Act (WCA). A combined wetland permit application and replacement plan would be prepared for the proposed Airport improvements and submitted upon completion of the EA process.

Because FAA policy discourages creation of potential wildlife attractants on or near airport properties, wetland replacement would be provided through the purchase of approved credits from a qualifying wetland bank and at a replacement ratio in accordance with federal and state mitigation requirements. There are six wetland banks located within the South Fork Crow (#19) major watershed and Wetland Bank Service Area 7. Using these banks, there are sufficient wetland credits available.

### **Construction Impacts**

Construction would result in a temporary increase in noise and dust in the area, but would be minimized through the use of construction BMPs including watering to control dust and wind erosion, seeding with fast growing grass, hydromulch and erosion control mats in work areas that are temporarily inactive, and installation and maintenance of silt fence. All phases of construction would be performed in accordance with



FAA AC 150/5370-10B, Standards for Specifying Construction of Airports and the National Pollution Discharge Elimination System (NPDES) Construction Permit requirements.

### **Agency Consultation**

#### **Tribal Consultation**

A copy of the Draft EA will be provided to Shakopee Mdewakanton Sioux Community to allow opportunity for consultation. Should Tribal interest be identified after publication of the Draft EA, the results of consultation will be included in the Final EA.

#### **Section 106 Coordination**

The FAA issued a finding of No Historic Properties Affected on May 15, 2013 (see **Appendix B**). The SHPO concurred with the finding in a letter dated June 7, 2013 (see **Appendix B**).

### **Public Participation**

This Draft EA has been published and distributed for a 30-day comment period in accordance with the requirements of the FAA. Written comments received by **DATE** regarding the proposed project, the alternatives evaluated, and the assessment of potential effects will be considered in preparation of the Final EA document. Availability of this Draft EA has been published in the **DATE** edition of the McLeod County Chronicle along with an opportunity for a public hearing. If a hearing is requested, notification of the date, time and location of the hearing will be published at least 15 days before the hearing occurs.

Please direct written comments to:

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**Table S-1  
Summary and Comparison of Environmental Consequences**

<b>Affected Environment</b>	<b>Proposed Action</b>	<b>No Action</b>
Air Quality	No direct increase in aircraft operations. Forecasted growth would be such that no direct or indirect reasonable and foreseeable emission increases are anticipated that would exceed NAAQS conformity standards.	No direct increase in aircraft operations. Forecasted growth would be such that no direct or indirect reasonable and foreseeable emission increases are anticipated that would exceed NAAQS conformity standards.
Coastal Resources	The Glencoe Municipal Airport is not within a federally-designated coastal barrier area or coastal zone or coral reef area; therefore, would not affect coastal resources.	The Glencoe Municipal Airport is not within a federally-designated coastal barrier area or coastal zone or coral reef area; therefore, would not affect coastal resources.
Compatible Land Use	No change or development of incompatible or noise-sensitive land uses. Existing zoning protections do and will continue to provide protection from incompatible uses in the area surrounding the Airport.	There are no existing incompatible land uses and the No Action alternative would not result in any change from that condition.
Construction Impacts	Construction would result in a temporary increase in noise and dust in the area. Impacts would be mitigated through use of construction Best Management Practices.	No construction on the airport and therefore, no construction impacts.
Department of Transportation Act: Section 4(f) and Section 6(f)	No direct or indirect impact to publicly-owned recreational lands.	No direct or indirect impact to publicly-owned recreational lands.
Farmlands	Impacts to prime farmlands would remain below adverse affect threshold and would not result in an adverse impact to prime farmlands. No further analysis of farmlands is required.	Impacts to prime farmlands would remain below adverse affect threshold and would not result in an adverse impact to prime farmlands. No further analysis of farmlands is required.
Fish, Wildlife, and Plants	Conversion of old field and agricultural use to airport facilities would not result in conversion of native habitat, and therefore have a negligible effect on wildlife. No direct impact to fishery habitat. No direct impact on any rare species or any critical habitat for rare species. No effect on hazardous wildlife attractants.	No change to land cover and no impacts to fish or wildlife and their habitat. No adverse impacts to rare species or any critical habitat for rare species. No effect on hazardous wildlife attractants.
Floodplains	Floodplains exist within the proposed action's footprint. Approximately 1 acre of floodplain will be disturbed due to new impervious surface. It is not anticipated that the additional impervious surface will cause floodplain impacts due to the steepness of ditch banks in the area.	No direct physical change to any designated floodplain.
Hazardous Materials, Pollution Prevention, and Solid Waste	Past spills have been closed per the Minnesota Pollution Control Agency. Construction activities are not proposed for the area of past spills; therefore, potential to disturb the spill sites is low.	No construction or disturbance of any existing areas of potential contamination.

**Table S-1  
Summary and Comparison of Environmental Consequences**

<b>Affected Environment</b>	<b>Proposed Action</b>	<b>No Action</b>
Historical, Architectural, Archeological, and Cultural Resources	No properties within the Area of Potential Effect are eligible for listing on the National Register of Historic Places, nor were any archeological sites identified in review of the State Historic Preservation Office files, so no adverse impacts to cultural resources are anticipated.	No construction on the Airport, so no adverse impacts to cultural resources.
Light Emissions and Visual Impacts	Increase of lighting on the Airport would be minimal and would not result in adverse effects.	No changes to lighting on the airport, so no change in light emissions and no effect.
Natural Resources and Energy Supply	The Proposed Action does not include establishment of new stationary facilities, buildings, or structures. The Proposed Action will not result in changes in natural resources or energy use.	No change to the existing natural resources or energy use.
Noise	Operations would remain below levels potentially resulting in adverse noise impacts off of Airport property; therefore, no adverse impacts are anticipated.	Operations would remain below levels potentially resulting in adverse noise impacts off of Airport property; therefore, no adverse impacts are anticipated.
Secondary (Induced) Impacts	The Proposed Action is not a major development that would be expected to induce secondary impacts.	No induced impacts expected.
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	No adverse socioeconomic impacts. No disproportionate impacts to any minority population. No exposure of children to health or safety risks.	No adverse socioeconomic impacts. No disproportionate impacts to any minority population. No exposure of children to health or safety risks.
Water Quality	Proposed Action would result in an increase of 3.2 acres of impervious surface on the Airport. Surface water management would include both construction site erosion and sediment control and post-construction storm water management to meet federal and state requirements for runoff quality; therefore, no impacts to water quality are anticipated.	Current management and treatment of surface water runoff from the existing facilities would continue; therefore, no impacts to water quality are anticipated.
Wetlands	The Proposed Action would result in direct impacts to 0.75 acres of wetland habitat. Measures to avoid and minimize these impacts have been considered. Permits would be obtained from the USACE and McLeod County. Direct impacts to wetlands would be mitigated through the purchase of wetland bank credits.	No impacts to wetlands.
Wild and Scenic Rivers	There are no rivers or segments of rivers designated as Wild and Scenic Rivers in or near the project area, so none would be affected.	There are no rivers or segments of rivers designated as Wild and Scenic Rivers in or near the project area, so none would be affected.

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## Chapter 1 Purpose of and Need for Action

### 1.1 Introduction

The Glencoe Municipal Airport (GYL) is a general aviation airport owned and operated by the City of Glencoe. The City of Glencoe is located in McLeod County in central Minnesota, approximately 40 miles west of the Twin Cities Metropolitan Area (**Figure 1-1**).

The airport is located approximately five miles southeast of the Glencoe central business district along U.S. Highway 212 as shown on **Figure 1-1**. The existing airport is bound by private agricultural land. Buffalo Creek is located north of the airport.

The existing airport facility consists of a 3,300-foot, paved and lighted runway, Runway 13/31 (**Figure 1-2**). The runway is equipped with Medium Intensity Runway Lights (MIRLs). A beacon is located within the Building Area near the private hangars. There is a lighted wind cone located northeast of Runway end 13 near the Non-directional Beacon (NDB). There is an Automated Weather Observation System (AWOS) north of the Building Area.

A 300-foot long connector taxiway provides access from the Runway 13 end to the Building Area. The Building Area contains the arrival/departure (A/D) building with restroom facilities and pilot's weather briefing station. A 125-foot by 430-foot apron provides seven aircraft tie-down spaces. A fuel pump on the northwest end of the apron provides 100 Low Lead fuel. There are 36 aircraft (33 single-engine and 3 multi-engine) based at the airport. There are three T-hangars and three private hangars located west of the terminal area along with two 700-foot taxilanes. Vehicle access to the Building Area is provided from County State Aid Highway (CSAH) 1. Automobile parking is provided in a paved lot north of the A/D building.

The City of Glencoe has proposed construction of a full-length parallel taxiway to improve the Glencoe Municipal Airport. The proposed improvements are planned for construction in summer 2014 and would be funded with Federal Aviation Administration (FAA) Airport Improvement Program (AIP) funds and require environmental review in accordance with the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4347, NEPA's implementing regulations, 40 C.F.R. parts 1500-1508. This Environmental Assessment (EA) has been prepared in coordination with the FAA as the responsible governmental agency and in accordance with the requirements of FAA Orders 1050.1E, Change 1, "Policies and Procedures for Considering Environmental Impacts" and 5050.4B "NEPA Implementing Instructions for Airport Actions."

### 1.2 Need for the Proposed Action

Currently, aircraft use the existing runway as a taxiway to travel between the airfield and the landside facilities where hangar storage, fuel and other services are provided. This practice poses a concern and limits runway use by other aircraft.

The data presented in the 2008 Narrative Report was gathered in 2007. In response to the airport users' request, the City of Glencoe initiated an Airport User Survey Update in 2011 to identify and quantify users and the types of facilities required for their growing use.

The User Surveys were sent to based aircraft pilots and businesses at GYL, McLeod County registered pilots, parties listed in the Airport Guest log book entries, and frequent users identified by the Airport Board. The Pilot User Survey asked recipients about the aircraft they own, the number and type of operations they fly annually at GYL, what runway length is required to use their aircraft, the need for a parallel taxiway, and the need for fuel and lower approach minimums. The Business User Survey asked recipients about their air travel needs, the number and type of operations they fly annually at GYL, what runway length is required to use their aircraft, the type of business that brings them to GYL and their future operations, and airfield and service requirements.

There were 115 Pilot User Surveys and 65 Business User Surveys sent to users. Of the 115 Pilot User Surveys sent, 27 responded (23.5 percent), 15 from based aircraft owners and 12 from people who base their aircraft at another airport. Of the 65 Business User Surveys, seven responded (10.8 percent).

The results of the Airport User Survey Update were used to compare the needs of the Airport users to the existing conditions at the airport and identify the improvements necessary to safely meet those needs. In addition to many general aviation pilots, four businesses were identified that use GYL regularly. Of these businesses, one is based at the airport. The results of the survey indicated that a parallel taxiway is needed for existing and future users of the airport.

Of the 27 Pilot Survey responses, 23 stated that the addition of a full parallel taxiway to Runway 13/31 would be an enhancement to their use of GYL. In addition to the parallel taxiway needs, the user survey indicated a small number of airport users required a longer runway and improved approach minimums, although not enough users to justify those improvements at this time.

According to the Federal Aviation Administration's (FAA) Airport Master Record (Form 5010 dated May 31, 2012), the published annual operations are estimated at 10,615, which equates to 29 operations a day during daylight hours. In addition, the FAA's Terminal Area Forecasts (TAF) report 10,615 (2010) annual operations at GYL. The TAF is a database containing annual historic and activity forecasts by airport and is the official forecast for the FAA.

Currently, the only access to the runway from the Building Area is provided by a connector taxiway located on the Runway 13 end (**Figure 1-3**). This requires a pilot to taxi an aircraft along the length of the runway to reach the end of Runway 31 for takeoff. It also requires a pilot to back-taxi on the runway to reach the Building Area after landing on the Runway 13 end. The runway is intended for aircraft takeoff and landing operations. Aircraft taxiing on the runway limits the use of the runway by other aircraft.

The airport does not have air traffic control on the airfield. In addition, aircraft are not required to have a radio to operate at GYL. Because communication is limited between aircraft, pilots rely on visibility to maintain safe separation of operations. Reliance on visual contact is a common safety practice, but visibility from an airplane cockpit while on the ground is limited by the aircraft wing location, as well as windows that are designed to provide visibility at the elevation of the aircraft (i.e. to see other aircraft at the pilot's elevation while in flight). **Photo 1** shows the view from a cockpit window of an aircraft approaching a runway end for landing. In addition, visibility from a taxiing aircraft sitting at a perpendicular angle at a point of intersection with the runway would have minimal visual contact with an approach aircraft, particularly as it nears the point of touchdown.

GYL has a non-precision approach to Runway end 31 which allows for pilots to land at the airport when the clouds are 400 feet or higher above the airport elevation and visibility is one mile or greater. During times of reduced visibility due to weather, a full parallel taxiway would enhance safety for pilots in the air and on the ground. In addition, the full parallel taxiway will also enhance safety during periods of clear visibility and good weather. Since approaching aircraft may not be able to see the airfield until very close to the airport, they may be unaware of other aircraft's position on the airfield, especially aircraft without radio communication. When a parallel taxiway is not available, it is more likely that an aircraft may be taxiing on the runway while a different aircraft is on approach. A parallel taxiway reduces the amount of time an aircraft is on an active runway, reducing the potential for accidents between aircraft.



**Photo 1**

Source: SEH Photo

A direct, alternative access to each end of the runway is desired to enhance safety for airport users. A parallel taxiway keeps slow-moving, taxiing aircraft off of and a safe distance away from the active runway where departing or arriving aircraft are operating at high speeds. The Proposed Action would allow access between the Building Area and both runway ends, eliminating the need to use the runway for taxiing. A parallel taxiway is characteristically located parallel to the runway between the Building Area and the runway to prevent unnecessary runway crossings, thus minimizing opposing aircraft movements.

### **1.3 Purpose of the Proposed Action**

The purpose of the Proposed Action is to provide adequate facilities to accommodate the current and near-term demand. The Proposed Action would construct a full-length parallel taxiway for taxiing aircraft, which would provide access between the runway and Building Area.

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## Chapter 2 Proposed Action and Project Alternatives

NEPA (42 U.S.C. §§ 4321-4347) and implementing regulations (40 C.F.R. parts 1500-1508) require that an EA evaluate not only the Proposed Action, but also identify and review reasonable alternatives to the Proposed Action along with a No Action Alternative. This chapter includes a detailed description of the Proposed Action, No Action, and alternatives to the Proposed Action. This chapter both describes project alternatives and compares the alternatives in terms of their environmental impacts and their achievement of objectives described in **Chapter 1**.

### 2.1 Proposed Action

The Proposed Action includes the following elements shown on **Figure 2-1**:

- Construction of a parallel taxiway along the full-length of existing Runway 13/31,
- Fee acquisition of 0.49 acres of property for construction of the full parallel taxiway,
- Reimbursement for 5.4 acres of property previously acquired by the city for use by the Airport, and
- Relocation of the lighted wind cone.

The Proposed Action consists of a full-length parallel taxiway along the southwest side of the existing runway (**Figure 2-1**). The taxiway would be 3,300 feet long to extend the full length of the existing runway. The taxiway would be 35 feet wide and would be separated from the runway centerline by 240 feet in accordance with B-II design standards<sup>1</sup> and published non-precision approach with visibility minimums of one mile.

The full-length parallel taxiway would be located between the existing runway and Building Area. This is a typical location for a parallel taxiway because it improves access between the runway and the landside facilities and services provided in the Building Area and minimizes runway crossings and opposing aircraft movements.

The Proposed Action would require acquisition of 0.49 acres of property to allow the airport to own fee interest and adequately control the use of the Taxiway Object Free Area (TOFA) and Building Restriction Line (BRL) as shown on **Figure 2-1**<sup>2</sup>. In September 2010, the City of Glencoe purchased 50 acres of property adjacent to existing airport property due to the desire to protect the area southwest of the airport from unwanted encroachment and development. The City of Glencoe has designated the property as airport property and 5.4 of the 50 acres purchased will be used for construction of the full parallel taxiway. The City of Glencoe is asking for reimbursement of 5.4 acres of the additional property that is now intended to be used for the full parallel taxiway. The funds reimbursed will be used as a part of the local share of the construction of the full parallel taxiway project.

### 2.2 No Action Alternative

The No Action Alternative assumes the Proposed Action would not be implemented. However, use of the existing airport would continue and airport activity would continue to grow until meeting the capacity of the existing airport facilities. The No Action Alternative includes routine maintenance and reconstruction of facilities in their existing locations and orientations to accommodate continued use of the airport.

Under the No Action Alternative, aircraft would continue to use the runway for taxiing and issues related to that use would remain. While an aircraft is still on the runway, it is an obstruction to the primary surface and is a

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<sup>1</sup> The airport design criteria and dimensional standards for airport facilities are based on the Approach Category and Aircraft Design Group (ADG) of the most demanding aircraft with greater than or equal to 500 annual operations currently using or forecasted to use the airport. The type of approaches offered at the airport, such as visual, non-precision instrument, and precision instrument also affect design criteria. The Mn/DOT-approved Airport Layout Plan (January 2010) indicates the Airport Reference Code (ARC) for the Airport is B-II (Advisory Circular (AC) 150/5300-13).

<sup>2</sup> FAA Advisory Circular (AC) 150/5300-13 defines the 131-foot wide Taxiway Object Free Area for a B-II airport.

concern for other aircraft using the airport concurrently. This applies to aircraft that are stopped on the runway to turn around or aircraft that are taxiing on the runway at a slower speed than arriving or departing aircraft.

As part of the No Action Alternative, the Airport would request reimbursement for the acquisition of the 5.4 acres of property that protects the BRL (Areas B and C on **Figure 3-1**). Although this alternative does not meet the purpose and need of the proposed project, the No Action Alternative is carried forward throughout the EA to serve as a baseline for comparison to the Proposed Action in accordance with NEPA requirements.

## **2.3 Other Alternatives Considered**

Alternatives to the Proposed Action were considered to identify the potential to minimize project effects to the natural and human environments. Because impacts to wetlands, farmlands and the 100-year floodplain would be the primary impact from construction of the Proposed Action, avoidance and minimization of these impacts was the primary goal of the alternatives analysis.

### **2.3.1 Alternative 1: Northeast Parallel Taxiway**

Alternative 1 considers construction of a full length parallel taxiway northeast of the runway (**Figure 2-2**), rather than southwest of the runway as in the Proposed Action Alternative. Construction of a 35-foot wide, full-length parallel taxiway at a 240-foot separation from the runway (the same facility as proposed in the Proposed Action) on the northeast side of the runway would avoid impacts to wetlands on the southwest side of the runway, but would result in a larger amount of floodplain impact on the northeast side of the runway. Approximately 1.0 acre of floodplain fill would result from construction of the northeast full parallel taxiway. Alternative 1 would also impact approximately 4.29 acres of prime farmland.

In addition to having more environmental impacts than the Proposed Action, locating the parallel taxiway on the opposite side of the runway from the Building Area would require aircraft to cross the active runway to gain access to and from the Building Area. This would result in additional uncontrolled and opposing aircraft movements, which could pose a hazard. This alternative does not minimize runway crossings and, therefore, does not meet the taxiway design principles defined in AC 150/5300-13. This alternative was removed from further consideration due to the greater floodplain impacts and the requirement for taxiing aircraft to cross an active runway.

## Chapter 3 Affected Environment and Environmental Consequences

This chapter provides a description of the existing environmental conditions of the project area and the reasonably foreseeable environmental consequences of the Proposed Action and the No Action alternatives. The sections of this chapter follow in alphabetical order as described in **Appendix A** of FAA Order 1050.1E. In addition to the impact assessment for each topic, each section that follows also describes any required or proposed mitigation and any related permits or approvals that would be required.

### 3.1 Air Quality

The Clean Air Act (CAA) established National Ambient Air Quality Standards (NAAQS – 40 CFR part 50) for six pollutants, termed "criteria pollutants."

The Environmental Protection Agency (EPA) uses these six criteria pollutants as indicators of air quality and has established for each a maximum concentration above which adverse effects on human health may occur. The six criteria pollutants include ozone, which include 1-hour ozone, 8-hour ozone; carbon monoxide; nitrogen dioxide; sulfur dioxide; particulate matter, which includes PM-10 and PM-2.5; and lead. EPA Air quality classifications include:

- Non-attainment – any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
- Attainment – any area [other than an area identified in clause (i) of 40 CFR part 50] that meets the national primary or secondary ambient air quality standard for the pollutant.
- Unclassifiable – any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.
- Maintenance Areas – previously nonattainment areas.

The information on the EPA Greenbook website (<http://www.epa.gov/air/oaqps/greenbk/index.html>) indicates that there are no non-attainment areas in McLeod County.

The FAA Air Quality Handbook states that an air quality analysis should be considered if a proposed action occurs at an airport with over 180,000 general aviation and/or air taxi operations. It also states that an indirect source review would be required if an airport has 1,000,000 new or total annual passengers on regularly scheduled air carriers and commercial charter flights. These operational thresholds represent levels at which air quality impacts could occur. It can be concluded, then, that operations below these thresholds do not have that same potential.

#### 3.1.1 Proposed Action

Currently there are no non-attainment areas or maintenance areas in McLeod County. According to the FAA Airport Master Record, there are estimated 10,615 annual operations at Glencoe Municipal Airport and there are minimal changes in forecasted operations under the Proposed Action. These operational levels are considerably less than the cited thresholds requiring an air quality assessment, so it can be concluded that the potential for adverse impacts to air quality is low. A similar conclusion can be drawn because GYL does not have scheduled air carrier operations or commercial charter flights and the threshold for passenger enplanements is not exceeded. It is anticipated that there will be no change to air quality due to the Proposed Action.

#### 3.1.2 No Action

The No Action Alternative would not directly result in changes in the Airport use or the number or type of aircraft using the Airport. Therefore, the No Action alternative results in no changes to existing air quality.

### 3.2 Coastal Resources

Federal activities involving or affecting coastal resources are governed by the Coastal Barriers Resources Act (CBRA), the Coastal Zone Management Act (CZMA) and Executive Order (E.O.) 13089, Coral Reef

Protection. The CBRA, as amended, prohibits federal financing for development within the Coastal Barriers Resources System, which consists of undeveloped coastal barriers along the Atlantic and Gulf coasts and along the shores of the Great Lakes. The CZMA requires that a proposed action be consistent with approved coastal zone management programs.

The project area is not located within or near a federally designated coastal resource. The nearest designated coastal resources are found along the Lake Superior shore between Duluth and Grand Portage, Minnesota, which is between approximately 200 to 250 miles northeast of the project area. Therefore, neither the Proposed Action nor the No Action Alternative would result in direct or indirect impacts to coastal resources.

### 3.3 Compatible Land Use

The Airport consists of approximately 150 acres and is approximately five (5) miles southeast of the central business district of Glencoe. Land use surrounding the Airport is primarily agricultural as shown on **Figure 3-1**. Relatively small and fragmented wooded areas exist in the area and are often associated with waterways or with rural residences. Additional forested and wetland habitat exists along the Buffalo Creek which flows eastward approximately ½ mile from the Airport.

Jurisdictional Ditch #8 bisects the Airport property. Currently the ditch is piped under the runway via a reinforced concrete pipe culvert. Lateral tile drainage lines, off the 31 end of the runway, are shown on the McLeod County GIS maps (**Figure 3-7**).

Along the northern margin of the Airport property is the Buffalo Creek County Park, owned by McLeod County. The park is designated as a day use park and includes a walking trail, shelter, and natural areas. The park encompasses approximately 45 acres with the Buffalo Creek flowing through the center. No other open water ponds or wetlands are present in the park. The park does not increase wildlife hazards to aircraft due to the flowing creek and limited amount of other water features on site. Additionally, few larger mammals occupy the park as the forested habitat is fragmented.

On the northeast side of the runway there is a combination of woodlots and wetland habitat. These natural areas total less than 20-acres and are comprised of upland forests and smaller areas of wetland habitat. Other than the Jurisdictional Ditch, there are no areas of open water on the property. The remainder of the land use surrounding the airport is agricultural. The majority of this agricultural land is in row crops with a rotation of corn and soybeans.

The compatibility of existing and planned land uses in the vicinity of an airport is typically associated with either noise impacts related to the airport or land use planning, but can also be associated with other issues such as wildlife hazards and protection of approach surfaces. Residential, school, hospital, day care, and retirement home uses are considered noise-sensitive areas, and therefore are potentially incompatible land uses. If a noise analysis concludes that there is no significant impact, these sensitive receptors maybe considered a compatible land use.

To assure the safety of both the flying public and the adjacent property owners, developments that attract assembly of people or house noise-sensitive uses (i.e., schools, churches, hospitals) are considered incompatible uses within protection areas/zones around an airport. The closest area of assembly would be within the city limits of Glencoe, which is approximately 3-5 miles northwest of the Airport. These areas would be Glencoe Regional Health Services, Glencoe-Silver Lake High School, Junior High School, and assorted churches.

Airport property and neighboring parcels within the municipal boundary are subject to the zoning restrictions of the City of Glencoe. The Airport and parcels outside of the municipal boundary are subject to McLeod County zoning and planning restrictions and controls.



Wildlife attractants, such as open water and agricultural crops, are also potentially incompatible land uses in the vicinity of an airport. These areas provide potential habitat for the congregation of waterfowl and wildlife. Potential wildlife hazards present in the project area include the presence of one shallow marsh wetland complex, a small seasonal wetland area, and two open water areas in the vicinity of the project, Buffalo Creek and Jurisdictional Ditch #8. Buffalo Creek is located at least 1,500 feet from the runway and proposed parallel taxiway and does not provide the appropriate habitat for large flocks of waterfowl. Jurisdictional Ditch #8 flows perpendicular through the center of the runway via a 48-inch arch span culvert. Waterfowl use is limited since the ditch is narrow (approximately 10-feet wide) with steep banks. The shallow marsh and seasonal wetland areas are located near the northern boundary of the runway and the presence of these wetlands could provide potential habitat for the congregation of waterfowl and wildlife, however the small and fragmented nature of these wetlands limits the potential number of waterfowl that would utilize the habitat.

Additional potential wildlife hazards include white tailed deer that are found in terrestrial habitats. The Airport and the surrounding areas may attract deer due to agricultural crops, and mowed old field and turf for easy foraging; and forested areas for cover. The Airport currently does not have a perimeter fence and deer can access the Airport and create a potential hazard in daylight and nighttime conditions. However, the Airport has not had any wildlife hazard problems in the past nor do they report any problems now.

### **3.3.1 Proposed Action**

The Proposed Action would not result in the development of any new or additional incompatible or noise-sensitive land uses. The future land use surrounding the Airport property is expected to remain agricultural. The construction of a parallel taxiway along the full-length of existing Runway 13/31 would not require any change to the existing Airport Zoning Overlay. Existing zoning protections do and will continue to provide protection from incompatible uses in the area surrounding the Airport.

According to FAA guidelines, the number and type of operations at the Glencoe Municipal Airport are below levels potentially resulting in adverse noise impacts off of Airport property (see Section 3.13). The Proposed Action is not expected to contribute to a growth in annual operations and the level of operations is expected to remain below levels potentially resulting in adverse noise impacts off of Airport property.

The Proposed Action would reduce the available wetland habitat located on the Airport and would thus potentially contribute to reducing wildlife hazards at the Airport. The proposed parallel taxiway will bisect the larger shallow marsh wetland complex located northwest of the runway. This action would further fragment the potential waterfowl habitat located on Airport property. The additional runoff that would be produced through the Proposed Action would be treated with grassed swales with relatively flat grades. The design will minimize the potential for standing water to accumulate after a rain event. The management and treatment methods used will not create any areas of open water that could contribute to wildlife hazards for the airport.

### **3.3.2 No Action**

The No Action Alternative would result in no change to existing land uses or zoning within or surrounding the Airport. Additionally, the No Action Alternative would not result in any changes on the Airport and therefore would not improve or worsen the potential for hazards to aviation from wildlife.

## **3.4 Construction Impacts**

Construction impacts include impacts due to construction activities, including construction noise, dust and noise from heavy equipment traffic, disposal of construction debris, and air and water pollution. Construction activities can create environmental impacts at the construction site and in the surrounding area. These impacts are generally temporary in nature, and subside once construction is completed.

### 3.4.1 Proposed Action

Earth moving equipment would be active on the site during construction of the Proposed Action and would result in a temporary increase in noise and dust in the area. Noise and dust effects from construction equipment would be minimized through the use of construction Best Management Practices (BMPs). The contractor would be required to carry out dust and erosion control procedures such as watering to control dust and wind erosion, seeding with fast growing grass, hydromulch and/or erosion control mats in work areas that are temporarily inactive. The contractor would also be required to install and maintain perimeter sediment control such as silt fence. These requirements would be included in the project drawings and specifications under the FAA standard specification Item P-156, "Temporary Air and Water Pollution, Soil Erosion, and Siltation Control." These measures would also be part of the Storm Water Pollution Prevention Plan (SWPPP) developed in association with the National Pollutant Discharge and Elimination System (NPDES) Construction Permit authorized for the project. The dust and erosion control procedures would be required to be maintained throughout the construction activity and until disturbed areas are re-established.

In an effort to promote construction procedures to protect, enhance, and maintain a favorable environment, consultation with the contractor would be required prior to beginning construction. This meeting would serve to inform and instruct the contractor about the techniques and procedures included in the project construction drawings and specifications. The contractor would be instructed to keep out of farmland areas except those areas allowed for impacts by permission. In addition, the contractor will be instructed to keep out of wetlands. The Airport will also recommend that the contractors consider: opportunities to use clean diesel equipment, vehicles and fuel; using diesel-powered equipment that is properly maintained and shut off when not in direct use; locating diesel engines and equipment as far away from noise sensitive areas as possible, and reducing construction-related trips during the construction of the Proposed Action when possible.

### 3.4.2 No Action

The No Action Alternative would result in no construction activities within the Airport property. Therefore, no construction impacts would occur.

## 3.5 Department of Transportation, Section 4 (f) and 6(f)

Section 4(f) legislation was established under the Department of Transportation (DOT) Act of 1966 (now codified at 49 USC 303, 23 USC 138) and provides protection for publicly owned land in public parks, recreation areas, or wildlife and waterfowl refuges of national, state, or local significance or lands from an historic site of national, state, or local significance. Any part of a publicly owned park, recreation area, refuge, or historic site is presumed to be significant unless there is a statement of insignificance by the Federal, State, or local official having jurisdiction thereof. Any transportation action that impacts the use of publicly-owned land of a park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance or land of a historic site of national, state, or local significance must follow a specific process to review these impacts.

The closest public recreational land includes Buffalo Creek County Park and Proehl's Woods Wildlife Management Area (WMA), which are 4(f) resources. Buffalo Creek County Park is adjacent to GYL and Proehl's Woods WMA is approximately five miles to the southeast. These areas and other public lands surrounding the Airport are shown on **Figure 3-2**. Section 6 (f) of the Land and Water Conservation Fund Act (LWCFA) concerns transportation projects that propose impacts, or the permanent conversion, of outdoor recreation property that was acquired or developed with LWCFA grant assistance. Section 6(f) of the act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior's National Park Service (NPS). The United States Department of the Interior, National Park Service, Land & Water Conservation Fund website (<http://waso-lwcf.nrc.gov/public/index.cfm>) identifies Buffalo Creek County Park as having received a 6(f) grant.

There are no historic sites or sites having the potential to be classified as historic located within the project area (see **Section 3.10**).

### 3.5.1 Proposed Action

The Proposed Action would not have direct impact to Buffalo Creek County Park or any other publicly-owned recreational lands or historic sites of national, State, or local significance near the Airport (see **Section 3.10**). The Proposed Action would not result in any change in aircraft flight paths or encourage flights over the public lands in the surrounding area that are not already impacted; therefore, the Proposed Action would have no impacts to Section 4(f) or 6(f) resources.

### 3.5.2 No Action

The No Action Alternative would result in no changes on or off of the Airport property and would result in no impacts to Section 4(f) or 6(f) resources.

## 3.6 Farmlands

The Federal Farmland Protection and Policy Act (FPPA) and the Minnesota Agricultural Land Preservation and Conservation Policy Act, Minnesota Statute §17.80-17.84, were enacted to ensure that impacts to agricultural lands and operations are integrated into the decision-making process. These laws are also intended to minimize, to the extent reasonable, actions that result in unnecessary and irreversible conversion of farmland to non-agricultural purposes.

The Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS), NRCS electronic Field Office Technical Guide (eFOTG), and the McLeod County Soil Survey were referenced to identify prime and unique farmland, and farmland of statewide and/or local importance within the project area. Soils mapped and designated by the NRCS as prime farmland, prime farmland if drained, and farmland of statewide importance located within the Airport property or within the surrounding vicinity are shown on **Figure 3-3**. These soils include:

- **Clarion loam (Map Unit 102B)** which is classified by the NRCS as “All areas are prime farmland”.
- **Cordova clay loam (Map Unit 109)** which is classified by the NRCS as “Prime farmland if drained”.
- **Harps clay loam (Map Unit 112)** which is classified by the NRCS as “Prime farmland if drained”.
- **Cokato loam (Map Unit 1204B)** which is classified by the NRCS as “All areas are prime farmland”.
- **Cokato-Storden complex (Map Unit 1213B)** which is classified by the NRCS as “All areas are prime farmland”.
- **Mayer loam (Map Unit 255)** which is classified by the NRCS as “Prime farmland if drained”.
- **Dickinson fine sandy loam (Map Unit 27B)** which is classified by the NRCS as “All areas are prime farmland”.
- **Estherville loam (Map Unit 41B)** which is classified by the NRCS as “Farmland of statewide importance”.
- **Shandep clay loam (Map Unit 517)** which is classified by the NRCS as “Prime farmland if drained”.
- **Hawick coarse sandy loam (Map Unit 611C)** which is classified by the NRCS as “Not prime farmland”.
- **Clarion-Swanlake complex (Map Unit 887B)** which is classified by the NRCS as “All areas are prime farmland”.
- **Canisteo-Glencoe, depressional complex (Map Unit L107A)** which is classified by the NRCS as “Prime farmland if drained”.
- **Klossner muck (Map Unit L13A)** which is classified by the NRCS as “Farmland of statewide importance”.
- **Webster clay loam (Map Unit L83A)** which is classified by the NRCS as “Prime farmland if drained”.

The majority of the soils within the Airport property are loams and are generally considered either “All areas are prime farmland” or “Prime farmland if drained”. Soils located near the Airport are similar to those listed within the project location.

### 3.6.1 Proposed Action

Consultation with the U.S. Department of Agriculture (USDA) NRCS was initiated to determine if the FPPA applies to the proposed project and to evaluate the significance of the conversion of the prime and important farmland soils on the site for the proposed project. Form AD 1006 was used to identify farmlands that would be directly and indirectly converted as a result of the ultimate development plan (See **Appendix A**). Three areas were evaluated using Form AD 1006, Area A (0.49 acres of property for the south portion of the taxiway object free area), Area B (4.00 acres of property located southwest of the existing taxiway) and Area C (1.4 acres located southeast of the existing taxiway). These areas are illustrated in **Figure 3-1**. No affect, direct or indirect, to statewide and local important farmland would occur. The NRCS review provided "relative value" scores that represent the site's value for agricultural production. This score is calculated based solely upon the 5.89 acres (land to be acquired (.49 acres) and the previously acquired land to be reimbursed (5.4 acres)) of land currently in agricultural production. Land being used for agricultural uses within the existing airport property is not considered farmland by the NRCS and does not contribute to the score. The total score on Form AD 1006 indicates the severity of the expected farmland impacts. Impact severity increases as the total combined score approaches 260 points. Total combined scores between 161 and 200 may have the potential to adversely affect important farmlands and require considering alternatives or measures, such as reducing the acreage of important farmland converted, or finding land having lower relative value, to avoid converting the farmland.

Application of the site assessment criteria (7 CFR 658.5(b)) and the relative value of the farmland resulted in a total of 94 points for Area A, 88 points for Area B and 92 points for area C out of a possible 260. This is below the 160 point adverse affect threshold and indicates that the Proposed Action would not result in an adverse impact to prime farmlands.

### 3.6.2 No Action

The No Action Alternative would result in no changes to the existing Airport. However, the Airport would request reimbursement for the acquisition of the 5.4 acres of property that protects the BRL (Areas B and C on **Figure 3-1**). Application of the site assessment criteria (7 CFR 658.5(b)) and the relative value of the farmland resulted in a total of 88 points for Area B and 94 points for area C out of a possible 260. This is below the 160 point adverse affect threshold and indicates that the Proposed Action would not result in an adverse impact to prime farmlands. Formal consultation with the U.S. Department of Agriculture (USDA) NRCS would be required including Form AD 1006 prior to implementation of the No Action Alternative.

## 3.7 Fish, Wildlife & Plants

The Airport is located along the southern boundary of the Minnesota & NE Iowa Morainal (MIM) section and more specifically, the Big Woods sub-section as defined by the Minnesota Department of Natural Resources (MNDNR) Ecological Classification System (ECS) *Field Guide to the Native Plant Communities of Minnesota: the Eastern Broadleaf Forest Province* (MNDNR 2005). It should be noted that the Airport is only 1 mile east of the North-Central Glaciated Plains (CGP) section/Minnesota River Prairie sub-section boundary.

The Big Woods sub-section of the MIM section is geologically described as primarily mantled end moraines associated with the Des Moines lobe of the late Wisconsin glaciations. Pre-settlement vegetation was comprised of oak woodland and maple-basswood forest. The western edge of this subsection was a transition zone between the prairie and Big Woods. Lakes and wetlands are common in this subsection and many of the lakes and wetlands are groundwater controlled with no inlets or outlets. The Big Woods area has been dramatically impacted by agricultural activities although fragments of the pre-settlement vegetation are present and generally found near natural river courses.

Most of the native habitats associated with the project area have been disturbed by agricultural and other developments. The majority of the undeveloped upland habitat within the Airport property currently consists of areas in row crop and hay production and old field areas that are maintained by regular mowing. There are two

small woodlots located within the Airport property. The woodlot located in the northeastern section of the property is approximately 2 acres adjacent to Jurisdictional Ditch #8 and is an upland comprised of oak and basswood tree species. The second is located in the southwestern portion of the property and is associated with a Type 3 (PEMC) Shallow Marsh. This area is dominated by cottonwood trees and is approximately 2 acres in size.

### 3.7.1 Fish and Wildlife Resources

Upland forests within the Big Woods sub-section are recognized as having the greatest potential to harbor designated Species of Greatest Conservation Need (SGCN) including the “designated conservation priority” red-shouldered hawk (*Buteo lineatus* – state threatened), Bald eagle (*Haliaeetus leucocephalus*), and forest interior song birds, all of which are prioritized for conservation management and referenced in *Minnesota’s Comprehensive Wildlife Strategy* (MNDNR 2006). However, because the area of upland woods on the site is small, fragmented by agricultural fields, and has a small interior acreage it is highly unlikely that it is providing habitat for any of the species listed above, especially the forest interior songbird species. This also applies for the small, fragmented areas of woods surrounding the Airport property.

Invasive species of wildlife, urban wildlife, and habitat generalists are common to the types of agricultural and grassland habitat found within the Airport. Grassland species referenced in the *Strategy* that could potentially occur include plains pocket mouse (*Perognathus flavescens*), LeConte’s sparrow (*Ammodramus leconteii*), grasshopper sparrow (*Ammodramus savannarum*), eastern racer (*Coluber constrictor*), and western hognose snake (*Heterodon nasicus*). Prairie species like Sullivant’s milkweed (*Asclepias sullivantii* – state threatened) could be found in prairie remnant areas. Prairie remnants are generally found along railroad corridors or other un-tilled areas. Areas of grassland on the Airport property do not fit these remnant criteria.

There is no sustainable fish habitat on the Airport property, although jurisdictional Ditch #8 does bisect the Airport property and could potential be used by small fish occasionally. The ability of the ditch to sustain a viable fish population is unlikely. North of the Airport property is the Buffalo Creek. This watercourse provides the appropriate habitats to sustain a fish population. While wetland areas are also recognized in the *Strategy* as key habitats for numerous priority species including the American bittern (*Botaurus lentiginosus*), least weasel (*Mustela nivalis*), and four-toed salamander (*Hemidactylium scutatum*) it is highly unlikely given the relatively small size of the wetlands in the area and the use of the surrounding areas for agricultural production that indicator species of higher quality habitats (such as four-toed salamanders) would occur in any of the wetlands on site. It is assumed that the wetland area is being used by habitat generalist species such as red-wing blackbirds, barn swallows, killdeer, mallard ducks, Canada geese, green frogs and leopard frogs.

#### 3.7.1.1 Proposed Action

Construction of the Proposed Action would affect approximately 12.1 acres of terrestrial communities (mowed old field, turf grass and row crop) within the existing Airport property and the additional 0.1 acres of agricultural crops on the property to be acquired to the north as shown on **Figure 3-4**. The terrestrial communities are composted of 3.2 acres of mowed grassland to pavement that will be directly impacted from the construction of the taxiway. Additionally, grading of the associated safety areas would convert 8.27 acres of mowed grassland and 0.63 acres of agricultural land to mowed turf alongside the new taxiway.

The Proposed Action will result in 0.75 acres of wetland impacts and 0.1 acres of impacts to upland forested habitat. The converted habitat would not result in substantial loss to area wildlife. Agricultural areas providing seasonal habitat are abundant in the area and alternative habitat is available immediately surrounding the Airport. The mowed grassland cover of the Airport provides relatively poor habitat for wildlife due to the lack of diversity and regular maintenance. However, most of the mowed grassland on the Airport would remain, as well as additional similar habitat surrounding the Airport.

### 3.7.1.2 No Action

The No Action Alternative would result in no changes to land cover and no impacts to fish or wildlife and their habitat.

### **3.7.2 Rare, Threatened and Endangered Species**

No federally listed endangered or threatened species are known to occur within the Airport or the surrounding vicinity. The Poweshiek skipperling (*Oarisma poweshiek*) is a candidate species found in native prairie habitat within McLeod County. The airport currently does not provide any native prairie.

The Minnesota Department of Natural Resources (MNDNR) Natural Heritage Information System (NHIS) database was reviewed to identify known rare, special concern, threatened, or endangered species in the project area. Review of this data indicates there are no known records of state-listed or otherwise rare features known to occur on, adjacent, or within one mile of the Airport. The closest known records of listed or otherwise rare features are located approximately five miles from the Airport. Identified on the NHIS list are native plant communities, bald eagle, small white lady's slipper (*Cypripedium candidum*), regal fritillary (*Speyeria idalia*), and Sullivant's milkweed (*Asclepias sullivantii*). The Airport does not contain the listed native plant communities, nor does it provide the preferred habitats for the listed species.

#### 3.7.2.1 Proposed Action

The Proposed Action Alternative would not result in any adverse impacts to known federal- or state-listed threatened, endangered or rare species or communities within the Airport Property or the surrounding areas. Since there is no native prairie located on the airport, the Proposed Action should not result in any impacts to the Poweshiek skipperling.

#### 3.7.2.2 No Action

The No Action alternative would not result in any changes on the Airport or any adverse impacts to known federally- or state-listed threatened, endangered or rare species or communities.

### **3.8 Floodplains**

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for McLeod County, Minnesota- Panel Number 270616 0095 C map effective date August 18, 1992, is the panel that covers the area of McLeod County including the City of Glencoe and the surrounding area. The Glencoe Municipal Airport is located adjacent to Buffalo Creek. The 100-year floodplain of the creek extends to Bell Avenue, near the Airport boundary, as shown in **Figure 3-5**.

Along Jurisdictional Ditch #8 in the center of the Airport property, the 100-year floodplain intersects airport property. According to the FIRM, approximately 8.9 acres of the 100-year floodplain are located within the airports existing property.

#### **3.8.1 Proposed Action**

The Proposed Action Alternative would result in construction within 1.0 acres of existing floodplain. These changes include adding 1 acre of impervious surface within the floodplain and the addition of a culvert designed to the specifications required by the floodplain so as to not disturbed flow within the floodplain. The proposed action will affect floodplain volume by insignificant amounts.

A Conditional Use Permit (CUP) is required for any work within any designated floodplain. A CUP will be completed prior to any work commencing. For impacts greater than 1.0, the State of Minnesota requires that a National Pollutant Discharge Elimination System (NPDES) permit be obtained

#### **3.8.2 No Action**

The No Action Alternative would not result in any change or alteration to the designated 100-year floodplains.

### 3.9 Hazardous Materials, Pollution Prevention & Solid Waste

The Resource Conservation and Recovery Act (RCRA), is the culmination of a long series of pieces of legislation, dating back to the passage of the Solid Waste Disposal Act of 1965, which addresses the problem of solid waste disposal and eventually evolved into an expression of the national concern with the safe and proper disposal of hazardous waste. Executive Order 12088 as amended, directs federal agencies to comply with applicable federal, state, and local pollution control standards when implementing their actions.

A review of several environmental record sources was completed to obtain information regarding hazardous materials, environmental waste or hazardous material related impacts on Airport property<sup>3</sup>. These sources included the Minnesota Department of Agriculture, Minnesota Department of Pollution Control Agency (MPCA), the Minnesota Department of Health, and the U.S. Environmental Protection Agency

The MPCA Spills Reporting Program has record of one spill on the Glencoe Municipal Airport. Data was retrieved from the MPCA “What’s in My Neighborhood” website regarding the spill, which was aviation gas. The site achieved closure in 1991. Aviation fuel is available on-site and hangar users may be conducting maintenance on their aircraft involving the use of oil and other chemicals; therefore, the potential for spills is always a concern. A Household Hazardous Waste facility is available for disposal of oil and other chemicals used in aircraft maintenance in Hutchinson, MN and is operated by McLeod County Solid Waste Management Facility.

The Solid Waste Disposal Act notes the term “solid waste” includes garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or an air pollution control facility (42 USC Section 6903(27)). According to that Act, solid waste also includes solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining, agricultural, or community activities.

#### 3.9.1 Proposed Action

Construction activities associated with the parallel taxiway would not include the excavation and grading of soils in areas of reported spills. No fuel would be stored on site and the contractor would be required to properly manage and dispose of any hazardous waste on the site during construction. The proposed parallel taxiway would be constructed of bituminous pavement, so no concrete washout material would be generated. Existing and future airport users would continue to have the Household Hazardous Waste facility available to dispose of oil and other chemicals used for their aircraft.

During construction activities a National Pollutant Discharge Elimination System (NPDES) construction stormwater permit will be required for the site to prevent contamination of water, air, and soil. Requirements of this permit include design and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for treatment of stormwater prior to offsite discharge. Additional requirements include the availability of a spill kit, trash receptacles, silt fence to control fugitive sediment, and ground stabilization measures for erosion control. No additional hazardous wastes would be generated through implementation of the Proposed Action. The Proposed Action would not result in any changes to solid waste generation or collection at the Airport.

#### 3.9.2 No Action

The No Action Alternative would result in no construction on the Airport and existing airport users would continue to dispose of hazardous materials in the existing manner. No additional hazardous wastes would be generated under the No Action Alternative. The No Action alternative would result in no changes to solid waste generation or collection at the Airport.

### 3.10 Historical, Archaeological, Architectural and Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, requires consideration of the effects of federal undertakings on properties listed on or eligible for inclusion in the National Register of

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<sup>3</sup> This review does not constitute a Phase I Environmental Site Assessment.

Historic Places (NRHP). Compliance with Section 106 requires the lead federal agency to consult with the State Historic Preservation Officer (SHPO) to determine if there is a potential adverse effect to historic/cultural resources.

The Area of Potential Effect (APE) is that area upon which the Proposed Action has the potential to generate effect, either directly or indirectly. The APE with respect to potential archaeological resources is comprised of areas where construction disturbance(s) would occur as a result of the Proposed Action. This area includes the airport property and a buffer, amounting to approximately 163.5 acres within the proposed construction limits of the parallel taxiway. A map depicting the APE with respect to archaeological resources is included in **Appendix B**.

The APE with respect to architectural history is defined as the area that includes the existing and proposed future Airport property, any structures on property outside of the Airport experiencing Airport noise levels in excess of 60 Ldn, and any structures within the viewshed of the Proposed Action. A map depicting the APE with respect to architectural history is included in **Appendix B**.

A literature review was conducted to identify known cultural resources in the project area. A review of the SHPO files revealed no previously identified archaeological sites and no architecturally historic buildings or structures on or in the immediate vicinity of the Airport.

### **3.10.1 Proposed Action**

Because there are no structures on the NRHP or eligible for inclusion on the NHRP, and because there is low potential for archaeological resources on the Airport, the proposed action will not result in any adverse impact on any historical, archaeological, architectural, or cultural resources. The FAA issued a “No Historic Properties Impacted” finding on May 15, 2013 (**Appendix B**). The SHPO concurred with the FAA’s finding on June 7, 2013 (**Appendix B**).

### **No Action**

The No Action Alternative would result in no changes on the Airport and would not result in any adverse impact on any historical, archaeological, architectural, or cultural resources.

## **3.11 Light Emissions and Visual Impacts**

The major sources of light emissions at the Airport are exterior lighting on the A/D building and hangar building area, runway and navigational lights, and parking lot lighting. The existing runway is equipped with Medium Intensity Runway Lights (MIRLs) along the entire length of the runway. The MIRLs outline the edge of the runway during periods of darkness or restricted visibility conditions. Threshold lights (part of the MIRL system) mark the runway ends and consist of a red light directed toward the runway to indicate the end of the runway to a departing aircraft and emit green light outward from the runway end to indicate the threshold to landing aircraft.

The runway lights are on a pilot-controlled-lighting system. Lights are not illuminated continuously at night or during adverse weather. The runway lights are initiated by individual pilots as needed for night operations or operations under limited visibility. Once initiated by a pilot, the lights remain illuminated for a 15-minute period and then are extinguished automatically.

### **3.11.1 Proposed Action**

The Proposed Action Alternative would require the installation of Medium Intensity Taxiway Lighting (MITL) to identify the edges of the taxiway pavement. Similar to the existing airfield lighting, the MITL would be a pilot-controlled-lighting system initiated by individual pilots as needed for night operations or operations under limited visibility. The additional taxiway lighting would not result in a noticeable increase in light emissions from the Airport. Facility operations would continue to be in compliance with all state and local ordinances regarding light emissions and would be similar to operation of existing facilities at the Airport.



**3.11.2 No Action**

The No Action Alternative would result in no changes to lighting on the Airport. Therefore, no light emissions or visual impacts would occur.

**3.12 Natural Resources and Energy Supply**

The effects of Airport development on energy and natural resources are generally related to the amount of energy required for stationary facilities (i.e., terminal building cooling or heating equipment, electrical lighting for the interior of buildings and the airfield, and approach systems) and movement of aircraft and ground vehicles.

**3.12.1 Proposed Action**

The Proposed Action does not include establishment of new stationary facilities, buildings, or structures. The Proposed Action will not result in changes in natural resources. The Proposed Action may result in a reduction in energy use from aircraft as back-taxiing will be reduced resulting in a potential decrease in aircraft delays while operating on the ground at the Airport. However, the Proposed Action may result in increased energy use from the movement of ground vehicles due to increased pavement areas requiring plowing during winter months. Any increase in energy use will not exceed supply.

**3.12.2 No Action**

The No Action Alternative would not result in any changes on the Airport or any changes to the existing natural resources or energy use.

**3.13 Noise**

Noise is measured by the Day-Night Sound Level (DNL). It is the logarithmic average of sound levels in decibels and is based on a 24-hour Equivalent Sound Level (Leq). DNL (also known as Ldn) has been equated through social surveys with public reactions to different noise levels. DNL values incorporate a 10-decibel penalty for noise events occurring between 10:00 PM and 7:00 AM to account for increased noise sensitivity at night. The FAA considers noise sensitive areas impacted by DNL 65 dB noise levels and higher as significant. Residential, school, hospital, day care, and retirement home uses are considered noise-sensitive areas.

The DNL measurement was developed under the direction of the EPA to measure the cumulative impact of multiple noise events in an average day. The U.S. Departments of Housing and Urban Development, Transportation, and Defense recognize it for land use planning around airports. The recognized tool used to predict anticipated DNL for a project is the Integrated Noise Model (INM) developed by the FAA.

In accordance with the guidelines set forth in FAA Order 5050.4B, Chapter 5, Paragraph 47e, Section (1), a noise analysis is not required for proposed development at airports where existing or forecast operation levels do not exceed 90,000 annual propeller operations or 700 annual jet operations. Operations below these levels result in cumulative noise levels that do not exceed 60 DNL more than 5,500 feet from start of takeoff roll or 65 DNL on the runway itself. Therefore, impacts in excess of these noise levels would not be expected outside of the Airport property limits.

The Glencoe Municipal Airport currently experiences approximately 10,615 annual propeller operations and has no current jet operations. Annual operations are not expected to increase and therefore will remain below the threshold of operations having potential to generate adverse noise impacts off of Airport property.

**3.13.1 Proposed Action**

The Proposed Action would only result in minor changes in operations and would not result in propeller or jet operations that would exceed the threshold of operations having potential to generate adverse noise impacts off of Airport property.

### 3.13.2 No Action

The No Action Alternative would result in no changes to the existing airport or existing or forecasted operations. Operational levels would remain below those having potential to generate adverse noise impacts off of Airport property.

### 3.14 Secondary (Induced) Impacts

Major development projects often involve the potential for induced or secondary impacts on surrounding communities. These secondary or indirect impacts involve shifts in population, changes in economic climate, or shifts in levels of public service demand. Assessment of socioeconomic impacts is typically associated with major development at air carrier airports that involve terminal building development, major roadway alignments and similar work.

#### 3.14.1 Proposed Action

The Proposed Action would result in no shifts in population patterns or movement, changes, or demands to public services. The Proposed Action is not expected to directly contribute to any secondary commercial or industrial development.

#### 3.14.2 No Action

The No Action Alternative would result in no changes to the existing airport. The No Action Alternative would result in no shifts in population patterns or movement, changes, or demands to public services. The Airport facilities would be expected to continue to provide support to users.

### 3.15 Socioeconomics Impacts, Environmental Justice and Children's Environmental Health & Safety Risks

#### 3.15.1 Socioeconomic Impacts

Social impacts are judged as significant if they cause the relocation of any resident or business, alteration of surface transportation patterns, division or disruption of established communities, disruption of orderly, planned development or an appreciable change in employment.

##### 3.15.1.1 Proposed Action

The Proposed Action would not result in alteration of surface transportation patterns, division or disruption of established communities, disruption of orderly, planned development or an appreciable change in employment. The property purchase would not require the relocation of any residence or business.

##### 3.15.1.2 No Action

The No Action Alternative would not result in alteration of surface transportation patterns, division or disruption of established communities, disruption of orderly, planned development or an appreciable change in employment.

#### 3.15.2 Environmental Justice

*Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, dated February 11, 1994, requires each federal agency to achieve environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

##### 3.15.2.1 Demographics

The City of Glencoe is in McLeod County and, according to the 2010 census, the total population of McLeod County is 36,651 and the population of the City of Glencoe is 5,631. The Airport property and the surrounding areas are included in Block Group 950600-4 and have a total population of 1,076. Block Group 950600-4 encompasses an area southeast of Glencoe.

The median household income for the City of Glencoe in 2010 was \$50,000. This is lower than the median income for McLeod County, which is \$58,544. However, the median income in the area surrounding the Airport (Block Group 950600-4) is \$64,773, which is higher than the median income in the City of Glencoe and the median income in McLeod County. The percentage of individuals living in poverty within the City of Glencoe is similar to the rest of the county (City of Glencoe, 9.29 percent of individuals in poverty; McLeod County, 9.15 percent of individuals in poverty). In the immediate area around the airport (Block Group 950600-4), the percentage of individuals living in poverty is 2.14% which is significantly less than the Minnesota state average of ten percent (10.59%) and the surrounding area.

The City of Glencoe and the immediate project area (Block Group 950600-4) minority population are shown in **Table 3-1**. The table identifies the race characteristics for the immediate project area (Block Group 950600-4), the City of Glencoe, and McLeod County. The largest minority group living in the immediate project area (Block Group 950600-4), the City of Glencoe and McLeod County are individuals of Hispanic or Latino ethnicity.

<b>Table 3-1 2010 Census Data (100 Percent Data)</b>			
<b>Race</b>	<b>Block Group 950600-4</b>	<b>City of Glencoe (% of population)</b>	<b>McLeod County (% of population)</b>
White	98.7%	92.0%	97.3%
African American	0%	0.6%	0.6%
American Indian and Alaska Native	0.09%	0.6%	0.3%
Asian	0.37%	0.8%	0.8%
Native Hawaiian and Other Pacific Islander	0%	0%	0.00%
Two or more races	0.28%	1.2%	0.9%
Hispanic or Latino (of any race)	1.02%	14.8%	5.1%
Note: total percentages for census categories are slightly greater than 100%. This is due to census data for Hispanic or Latino race also being incorporated into the census data for other race categories.			

### 3.15.2.2 Proposed Action

Although there are low-income and minority residents in the project area, there would be no disproportionate impacts to low-income or minority residents as a result of the Proposed Action. The Proposed Action would not result in displacement of any residents and would not result in incompatible land uses or adverse noise impacts off of Airport property.

### 3.15.2.3 No Action

The No Action Alternative would result in no changes to the existing airport and would not result in any adverse impact on minority or low-income populations.

## 3.15.3 Children's Environmental Health and Safety Risks.

Environmental health risks and safety risks include risks to health or safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products to which they might use or be exposed.

### 3.15.3.1 Proposed Action

The Proposed Action would not result in changes to these substances, nor would the project result in additional exposure of these substances to children.

### 3.15.3.2 No Action

The No Action Alternative would result in no changes to the existing airport and no exposure of hazardous substances to children.

## 3.16 Water Quality

The Airport property is located in the South Fork Crow River watershed, which is part of the Upper Mississippi River Basin. The South Fork Crow River watershed (Hydrologic Unit Code 07010205) encompasses a drainage area of 818,428 acres. Buffalo Creek is the closest major stream near the Airport within the watershed. Buffalo Creek is located approximately 1/3 of a mile north of the Airport property. Buffalo Creek flows northeast and outlets into the South Fork Crow River which ultimately outlets into the Mississippi River. Approximately 83% of the land use in the South Fork Crow River watershed is agricultural. Several water bodies in the watershed have high phosphorus levels, leading to algae blooms in the summer months. Buffalo Creek was placed on the list of impaired waters for biota in 2006, turbidity and pathogens in 2008, and dissolved oxygen in 2010. The Buffalo Creek Watershed District is implementing measures to improve the water quality of the watershed.

Most of the surface water on the Airport property drains towards Jurisdictional Ditch #8, which runs perpendicular to the runway (see **Figure 3-7**). In addition, wetlands are located on the airport property and in the project area (see **Section 3.17, Figure 3-6 and 3-8**). Surface water runoff from the runway and existing impervious surfaces is treated in flat grassed swales parallel to those facilities.

The Federal Water Pollution Control Act as amended (commonly referred to as the Clean Water Act), provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, and regulate other issues concerning water quality. Additionally, a National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act is required for point-source discharges into waters of the U.S. and for construction activities to protect from construction-related erosion and sedimentation. Best management practices to be implemented during and after construction and the intent to develop a Storm Water Pollution Prevention Plan (SWPPP) and obtain a NPDES Construction Permit are described in **Section 3.4**.

No de-icing activities are conducted at the Airport. In addition, the Airport does not use salt to treat any surfaces at the Airport. The drinking water at the Airport is supplied through wells. Wastewater from the Airport is treated through the City wastewater treatment system.

### 3.16.1 Proposed Action

Construction of the Proposed Action would result in additional impervious surface on the Airport. Construction of the parallel taxiway would add 3.2 acres of impervious surface to the existing 11.0 acres within the property owned by the Airport.

During construction, surface water management on the Airport would include both construction site erosion and sediment control. Once construction is completed, post-construction storm water management practices would be implemented. Best management practices (BMPs) would be applied in accordance with the approved technical standards and to meet the required performance standards. The Buffalo Creek Watershed District is presently working on a program for the implementation of best management practices (BMPs). Potential BMPs include buffer strips, filter strips, replacement of open tile inlets, wetland restorations, stormwater detention basins, upgrading of septic systems and agricultural feedlots, among others.

Surface water management at the Airport would include both construction site erosion and sediment control and post-construction storm water management. Treatment and management of surface water runoff would continue to meet state and federal performance requirements through use of grassed swales along the length of the linear facilities and through overland flow. Although additional impervious surface would increase

runoff volume, management to regulatory standards would minimize increases in volume and in peak flow. Management and treatment of surface water runoff on the Airport under post-project conditions would be accomplished using graded swales when possible with the swales sized to accommodate a ½ inch run-off from the new impervious areas. In areas where the graded swale design is not applicable, the surface water runoff from the site will be treated using enhanced swales with underdrain discharge along each side of the parallel taxiway. These dry swales will contain a filter material that will allow the surface water to be treated and then discharged to the downstream channel via an underdrain system constructed of perforated PVC pipe. Runoff would continue to move through and out of the existing Airport by existing routes without alternation of drainage patterns of hydrology of wetlands or other receiving waters. The management and treatment methods used will not create any areas of open water that could contribute to wildlife hazards for the airport.

### 3.16.2 No Action

The No Action Alternative would result in no improvements and no new impervious surface would be constructed at the Airport. Management and treatment of surface water runoff from the existing facilities would continue to be provided in grassed swales, and there would be no impact to water quality.

### 3.17 Wetlands

Wetlands are defined in federal Executive Order 11990 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 generally include swamps, marshes, bogs, and similar areas.”*

The NWI Map (**Figure 3-6**) indicates that there is one wetland basin at least partially within the Airport property. The wetland basin is located along the northern boundary of the Airport runway. Wetland delineation was completed in accordance with the 1987 U.S. Army Corps of Engineers *Wetland Delineation Manual* and applicable *Regional Supplement* on the entire Airport property to identify wetland areas. The delineation was performed on August 1, 2012 and a report was submitted on August 10, 2012, at which time the wetland boundaries and wetland type were approved by the Wetland Conservation Act (WCA) Local Government Unit (LGU). A total of four wetlands were delineated. Two wetlands were basins and the remaining wetlands were adjacent to Ditch #8. The characteristics of the four wetland basins are summarized in **Table 3-2**.

**Table 3-2**  
**Summary of Wetland Characteristics**

Basin ID	Size (acres)	Cowardin <sup>1</sup> Classification	Circular 39 <sup>2</sup> Classification	Eggers and Reed Classification
1	1.38	PEMC	Type 3	Shallow Marsh
2	~200 linear feet	PEMA	Type 1	Fresh (wet) Meadow
3	~175 linear feet	PEMA	Type 1	Fresh (wet) Meadow
4	0.13	PEMA	Type 1	Fresh (wet) Meadow
<b>Notes:</b> <sup>1</sup> <i>Wetlands of the United States, Circular 39.</i> (Shaw and Fredine, United States Fish and Wildlife Service, 1956). <sup>2</sup> <i>Classification of Wetlands and Deepwater Habitats of the United States.</i> (Cowardin <i>et al.</i> , December 1979). <sup>3</sup> <i>Wetland Plants and Plant Communities of Minnesota and Wisconsin</i> (Eggers and Reed, 1997) <sup>3 4</sup> Includes only that portion of wetland habitat within the Airport property.				

#### 3.17.1 Proposed Action

Construction and operation of the Proposed Action would result in direct impact to wetland habitat as shown in **Figure 3-8**.

3.17.1.1 Direct Wetland Impacts

The Proposed Action would result in direct impacts to 0.75 acres of wetland habitat. This impact includes the paved area of the proposed taxiway as well as the grading required to establish the adjacent Taxiway Object Free Area (TOFA). Direct wetland impacts are shown by wetland basin in **Table 3-3**.

**Table 3-3**  
**Direct Wetland Impacts by Basin**

Basin ID	Cowardin Classification	Circular 39 Classification	Eggers & Reed Classification	Wetland Impacts (acres)
1	PEMC	Type 3	Shallow Marsh	0.70
2	PEMA	Type 1	Fresh (wet) Meadow	0.05
Total Impact:				0.75

3.17.1.2 Impact Avoidance and Minimization

Measures to avoid and minimize impacts to wetlands have been considered in the design of the Proposed Action. The design of the taxiway includes minimization of impacts beyond the edge of the pavement by minimizing side slopes outside of the Taxiway Object Free Area (TOFA) adjacent to the taxiway. Grading requirements between the runway and the taxiway are more critical than those outside of the taxiway, which limits avoidance and minimization of wetland habitat isolated between the runway and taxiway facilities. The TOFA as planned is 131 feet-wide (the width in which direct impacts have been estimated for the Proposed Action and Alternatives).

3.17.1.3 Wetlands Permitting and Mitigation

Wetlands in the project area are regulated by several agencies at the local, regional, state, and federal levels including the U.S. Army Corps of Engineers (USACE) at the federal level; the Minnesota Board of Water and Soil Resources (BWSR), Minnesota Department of Natural Resources (MNDNR), and the Minnesota Pollution Control Agency (MPCA) at the state level; and McLeod County at the local level. McLeod County has accepted responsibility for the administration of the Minnesota Wetland Conservation Act (WCA) of 1991.

Construction of the Proposed Action would require permits from the USACE St. Paul District for a Section 404 permit and McLeod County for WCA replacement plan approval. A combined wetland permit application and replacement plan would be prepared for the proposed Airport improvements and submitted upon completion of the EA process.

Replacement on-site or near the project loss is preferred to maintain wetland functions and values in or near the subwatershed where the impact would occur. However, FAA policy discourages creation of potential wildlife attractants on or near airport properties in order to minimize wildlife attractants and to reduce attractants for waterfowl and other wildlife that pose a threat to aircraft from wildlife strikes. This also includes attractants to wildlife other than waterfowl that can result in collisions on the runway. Because of the habitat value and potential to attract wildlife onto the Airport, on-site wetland mitigation is a potential conflict and is not supported by the FAA.

Instead, wetland replacement would be provided through the purchase of approved credits from a qualifying wetland bank and at a replacement ratio in accordance with federal and state mitigation requirements. The proposed wetland mitigation follows the approach in the *Final St. Paul District Draft Compensatory Mitigation Policy in Minnesota* (USACE 2009), hereafter referred as the *Policy*. The *Policy* is also implemented for the WCA mitigation under a Memorandum of Understanding (MOU) with the BWSR.

Both the WCA and the USACE Policy require a replacement ratio of 2.5:1 in McLeod County, with incentives to reduce that ratio to a minimum 2:1 ratio depending on the type, location, and timing of compensatory replacement. The USACE *Policy* encourages wetland replacement “in place” or within the

same Wetland Bank Service Area to encourage replacement near the area of wetland impact<sup>4</sup>. It also encourages replacement “in kind” to best replace lost wetland functions and values and “in advance” to establish replacement prior to the wetland loss. Wetland replacement “in kind”, “in advance”, and/or “in place” would allow a step-wise 0.25:1 reduction of the replacement ratio to a minimum of 2:1. Therefore, the mitigation requirements for the Proposed Action would be between 1.875 and 1.5 acres.

The Glencoe Municipal Airport is located in the South Fork Crow (#19) major watershed as delineated by the map “State of Minnesota Watershed Boundaries – 1979” produced by the Minnesota Department of Natural Resources. The Rainy River (Baudette) watershed is located in Wetland Bank Service Area 7 of the ten Wetland Bank Service Areas defined by the USACE.

There are six wetland banks located within the South Fork Crow (#19) major watershed and Wetland Bank Service Area 7. These banks contain many acres of Type 1, Type 2, Type 3, Type 4 and Type 5 wetland credits and upland buffer credits. These banks have sufficient credits available and would fulfill the “in place” criteria of the wetland replacement *Policy* to meet the mitigation requirements for the Proposed Action and would therefore allow an incentive decrease in the wetland replacement ratio by 0.25:1. If mitigation from one of these banks is selected, a replacement ratio of 2:1 would be utilized, and replacement acres of 1.5 acres would be purchased.

### 3.17.2 No Action

The No Action Alternative would not result in the direct or indirect impact to wetlands.

## 3.18 Wild and Scenic Rivers

Wild and scenic rivers are designated as part of the National Wild and Scenic River Program by the U.S. Department of the Interior under the Wild and Scenic River Act to protect the most beautiful and unspoiled rivers in the nation. River segments are designated based on their outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values and are to be preserved in free-flowing condition for the benefit and enjoyment of present and future generations.

The St. Croix River located along Minnesota’s eastern boundary in the south central portion of the state is the only federally designated Wild and Scenic River located within Minnesota. There are no designated National Wild and Scenic Rivers within or near the project area.

Similarly, the Minnesota Wild and Scenic Rivers Act (M.S. 103F.301 – 103F.345) is a state level effort that provides similar protections to designated rivers or sections of rivers in Minnesota. The Act is effectively managed and implemented by the Minnesota Department of Natural Resources (MNDNR).

The closest classified Wild and Scenic River is The Minnesota River. It was added to Minnesota's Wild & Scenic Rivers Program in 1977. The designated stretch extends from Lac Qui Parle Dam to Franklin is approximately 55 miles southwest of the Airport’s property. There are no rivers or segments of rivers within the project area that are designated as Minnesota Wild and Scenic Rivers.

### 3.18.1 Proposed Action

The Proposed Action would not result in direct or indirect impacts to any Wild and Scenic River.

### 3.18.2 No Action

The No Action Alternative would not result in direct or indirect impacts to any Wild and Scenic River.

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<sup>4</sup> USACE, March 2009. Final St. Paul District Wetland Compensatory Mitigation Policy for Minnesota

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## Chapter 4 Cumulative Impacts

Cumulative effects are impacts “on the environment which result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR § 1508.7).” The following is a description of past and future actions in and around the project area are described. These actions are separate from and in addition to the Proposed Action, but are described to establish the boundaries for discussion of cumulative effects. The cumulative effects of the project are anticipated to be minimal.

The scope of the cumulative effects analysis is limited to those projects with impacts to wetland habitat, floodplain management, and water quality within and near the Glencoe Municipal Airport property. This is due to the fact that impacts are limited to wetland habitat, floodplain management, and water quality from the Proposed Action. Of the potential effects described in Chapter 3, only impacts to wetland habitat, floodplain management, and water quality have the potential to contribute to cumulative effects in the project area.

### 4.1 Past Actions with Potential for Cumulative Effect

#### 4.1.1 Airport Improvement Projects

In 2008, the City reconstructed the airport entrance road and automobile parking area, as well as a portion of pavement leading from the entrance road to the hangar area. The project required a NPDES permit, and associated stormwater pollution prevention measures. The City has completed some tree clearing on site to clear the Object Free Area of obstructions.

#### 4.1.2 Off- Airport Projects

The City is not aware of any past actions near the Airport that have resulted in impacts to wetland habitat, floodplains, or increases in impervious surface that may affect water quality.

### 4.2 Present Actions with Potential for Cumulative Effect, but Not Part of Proposed Action

There are no present actions of relevance with potential to contribute to cumulative effects when considered with the Proposed Action. Concurrent airport maintenance projects include runway resurfacing, relocation of wind sock, and installation of runway end identifier lights. Runway resurfacing is scheduled to be completed on site, but is unlikely to impact floodplain and water quality as all activity will take place within the existing runway footprint, with minimal impacts. The runway end identifier lights project was Categorically Excluded by the FAA on December 3<sup>rd</sup>, 2010. Relocation of wind sock will include pouring a cement base and the installation of electrical mechanisms. These projects will have no wetland or floodplain impacts. Very minimal increased impervious surfaces will be added as a result of the wind sock and runway lighting projects.

### 4.3 Future Actions with Potential for Cumulative Effect

#### 4.3.1 Airport Improvement Projects

Several development projects at the Airport are planned over the next several years. Airport maintenance projects expected in the foreseeable future include Apron Taxiway Resurfacing, Replacement of a Hangar Floor, Hangar Area Pavement Rehabilitation and Replacement of an Existing 6- Unit T-Hanger. All of these projects will be subject to The Federal Clean Water Act and Best Management Practices to minimize impacts. These projects will not increase the area of impervious surface on the airport, and so are not anticipated to have impacts on surface water quality or quantity, nor are they anticipated to have wetland or floodplain impacts. These repairs or replacements are unlikely to contribute to the cumulative effects considered with the Proposed Action.

#### 4.3.2 Off- Airport Projects

The Morningside Avenue / County State Aid Highway (CSAH) 15 extension is a joint project between the City of Glencoe and McLeod County that will extend Morningside Avenue / CSAH 15 north of its existing terminus at the rail line to 16th Street. The project right-of-way has been in place for decades, but the road section has

not been built. The project is expected to impact some wetland areas. These wetland impacts will require mitigation. The construction of the Morningside Avenue / CSAH 15 project is tentatively scheduled for 2014.

#### **4.4 Cumulative Effects Results**

While some of the projects identified have potential to individually impact floodplains wetlands, and water quality on site and in the general vicinity of the airport, these impacts are expected to be minimal because all these actions will require mitigation and/or the use of best management practices. The results of the cumulative impacts analysis indicate that impacts to wetlands, floodplains and water quality are minimum.

## Chapter 5 List of Agencies and Persons Consulted

### 5.1 Agency Consultation

#### 5.1.1 Natural Resource Conservation Service

SEH contacted the Natural Resources Conservation Service (NRCS) on February 26<sup>th</sup>, 2013 for completion of the Farmland Conservation Impact Rating. Douglas Miller, Area Resource Soil Scientist for the Glencoe Airport concluded on February 28<sup>th</sup>, 2013 that the Proposed Action would not result in an adverse impact to prime farmlands.

#### 5.1.2 Tribal Consultation

A copy of the Draft EA will be provided to Shakopee Mdewakanton Sioux Community to allow opportunity for consultation. Should Tribal interest be identified after publication of the Draft EA, the results of consultation will be included in the Final EA.

#### 5.1.3 Section 106 Coordination

The FAA issued a finding of No Historic Properties Affected on May 15, 2013 (see **Appendix B**). The SHPO concurred with the finding in a letter dated June 7, 2013 (see **Appendix B**).

### 5.2 Draft EA Public Participation

This Draft EA has been published and distributed in accordance with the requirements of the FAA. The Draft EA will be circulated for a 30-day comment period during which comments will be accepted regarding the proposed project, the alternatives evaluated, and the assessment of potential effects. The Distribution List that follows identifies those agencies and individuals provided the opportunity to review the Draft EA. Written comments received by **DATE** will be considered in preparation of the Final EA document.

An opportunity for a public hearing has been offered upon publication of this draft EA. A Public Notice identifying the availability of this Draft EA and the Opportunity for a Public Hearing was published in the McLeod County Chronicle on **DATE**. If a hearing is requested, notification of the date, time and location of the hearing will be published at least 15 days before the hearing occurs. A copy of the Public Notice and Opportunity for Public Hearing is included in **Appendix C**.

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### 5.3 Distribution List for the Draft EA

As part of the requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4347, NEPA's implementing regulations, 40 C.F.R. parts 1500-1508, the Draft EA was circulated to the following agencies, organizations, and individuals.

#### TO BE VERIFIED PRIOR TO PUBLICATION.

Kathleen Vesely (1 copy) MnDOT Office of Aeronautics 222 East Plato Boulevard Saint Paul, MN 55107-1618	Don Berre (1 copy) MnDOT Office of Aeronautics 222 East Plato Boulevard Saint Paul, MN 55107-1618
Kenneth A. Westlake (1 copy) Environmental Planning & Evaluation US Environmental Protection Agency 77 West Jackson Boulevard, Mailstop B-19J Chicago, IL 60604-3590	U.S. Fish and Wildlife Service (1 copy) Twin Cities Field Office ES 4101 East 80th Street Bloomington, MN 55425-1665
Tamara Cameron (1 copy) Regulatory Functions Branch Dept. of the Army, Corps of Engineers Saint Paul District 190 Fifth Street East - Suite 401 Saint Paul, MN 55101-1638	Robert Maroney U.S. Army Corps of Engineers Regulatory Branch – Brainerd Field Office 10867 East Gull Lake Drive NW Brainerd, MN 56401-9051
Randall Doneen (3 copies) Department of Natural Resources Environmental Review Unit 500 Lafayette Road Saint Paul, MN 55155-4025	Paul Swenson, Reg. Director Department of Natural Resources DNR Bemidji Northwoods Office 6603 Bemidji Avenue North Bemidji, MN 56601-8669
Travis Germundson (1 copy) Board of Water and Soil Resources 520 Lafayette Road Saint Paul, MN 55155	Roger Berggren (1 copy) McLeod Co. WCA Administrator 830 East 11th Street Glencoe, MN 55336-2200
Becky Balk (1 copy) Department of Agriculture 625 North Robert Street Saint Paul, MN 55155	Ray Kirsch (1 copy) Department of Commerce 85 Seventh Place East - Suite 500 Saint Paul, MN 55101-2198
Michele Ross (1 copy) Department of Health Environmental Health Division 625 North Robert Street Saint Paul, MN 55155	Craig Affeldt, Supervisor (3 copies) Minnesota Pollution Control Agency Env Review Unit – 4th Floor 520 Lafayette Road Saint Paul, MN 55155
Minnesota Historical Society (1 copy) State Historical Preservation Office 345 Kellogg Boulevard West Saint Paul, MN 55102-1906	USDA – NRCS Wadena Service Center Alfred Street NE Wadena, MN 56482-2303

Debra Moynihan MnDOT Office of Environmental Stewardship 395 John Ireland Avenue - MD 620 Saint Paul, MN 55155	Mark Larson City Administrator City of Glencoe 1107 East 11th Street - Suite 107 Glencoe, MN 55336
Glencoe Public Library 1107 11th Street East - Suite 207 Glencoe, MN 55336	Director, Office of Environmental Policy and Compliance (1 CD) U.S. Department of the Interior 1849 C Street, NW (MS2462) Washington, DC 20240
State Archeologist (1 copy) Fort Snelling History Center Saint Paul, MN 55111-4061	Indian Affairs Council (1 copy) Jim Jones, Cultural Affairs Director Indian Affairs Council 113 NW 2nd Street - Suite 110A Bemidji, MN 56601
Mid-Minnesota Regional Development Commission 333 W Sixth Street SW - Suite 2 Willmar, MN 56201-5615	Mr. Stanley Ellison   Director Land and natural Resources Manager Shakopee Mdewakanton Sioux Community 2330 Sioux Trail NW Prior Lake, Minnesota 55372

## Chapter 6      References

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- Minnesota Department of Health (MDH), County Well Index. <http://www.health.state.mn.us/divs/eh/cwi>
- Minnesota Pollution Control Agency (MPCA) Aboveground/Underground Storage Tank Search online database. [www.pca.state.mn.us/programs/lust\\_pSearch.cfm](http://www.pca.state.mn.us/programs/lust_pSearch.cfm)
- MPCA Petroleum Remediation Program Maps online. <http://pca-gis04.pca.state.mn.us/website/lust/lustfin/entry.htm>
- MPCA What's in my neighborhood, online database. [www.pca.state.mn.us/backyard/neighborhood.html](http://www.pca.state.mn.us/backyard/neighborhood.html)
- MPCA Superfund Site Search. <http://www.pca.state.mn.us/pca/srs/remSearch.cfm?sType=SF>
- US Environmental Protection Agency Environmapper. [http://www.epa.gov/enviro/html/em/Minnesota Pollution Control Agency](http://www.epa.gov/enviro/html/em/Minnesota%20Pollution%20Control%20Agency)
- "American Fact Finder," *U.S. Census Bureau*. United States Government, 8/10/2009, [http://factfinder.census.gov/servlet/DatasetMainPageServlet?\\_ds\\_name=DEC\\_2000\\_SF1\\_U&\\_program](http://factfinder.census.gov/servlet/DatasetMainPageServlet?_ds_name=DEC_2000_SF1_U&_program)
- "National Wild & Scenic Rivers," 1/01/2007. National Wild & Scenic Rivers System. 8/11/09, <http://www.rivers.gov>.
- Shaw, S.P. and C.G. Fredine, 1956. Wetlands of the United States. U.S. Fish and Wildlife Service, Circular 39. 67 pp.

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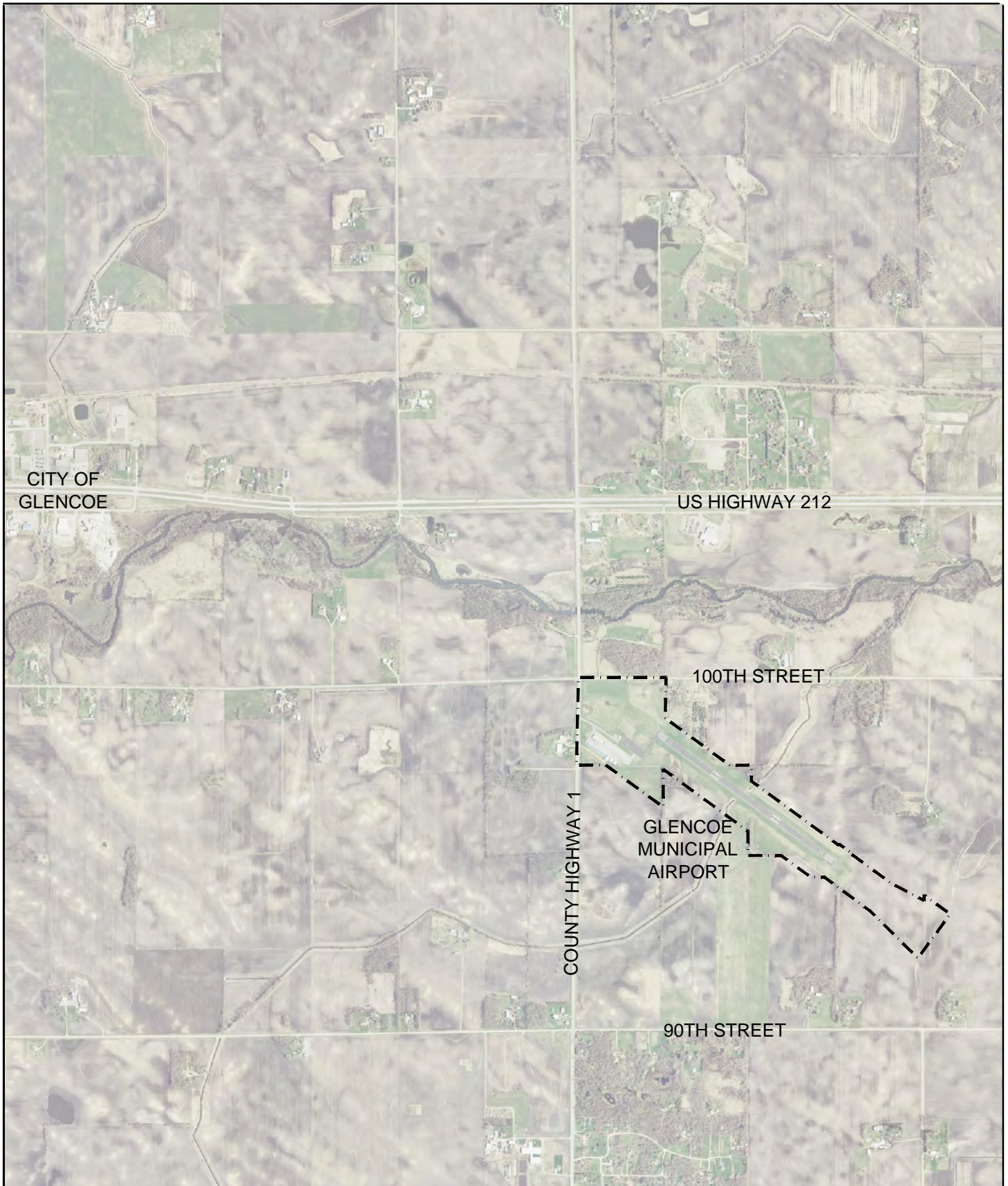
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- Figure 1-1 – Airport Vicinity Map
- Figure 1-2 – Existing Airport Facilities
- Figure 1-3 – Connector Taxiway
- Figure 2-1 – Proposed Action
- Figure 2-2 – Alternative 1
- Figure 3-1 – Existing Land Use
- Figure 3-2 – Public and Tribal Lands
- Figure 3-3 – Farmland Soils
- Figure 3-4 – Land Cover Impacts
- Figure 3-5 – 100-Year Floodplain
- Figure 3-6 – NWI
- Figure 3-7 – Hydrography
- Figure 3-8 – Wetland Impacts
- Figure 4-1 – ALP Sheet 2

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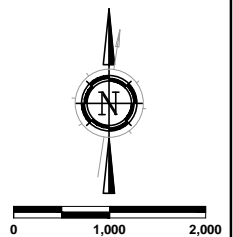


GLENC121693

March 2013

**Glencoe Municipal Airport**  
Parallel Taxiway  
Environmental Assessment  
Glencoe, Minnesota

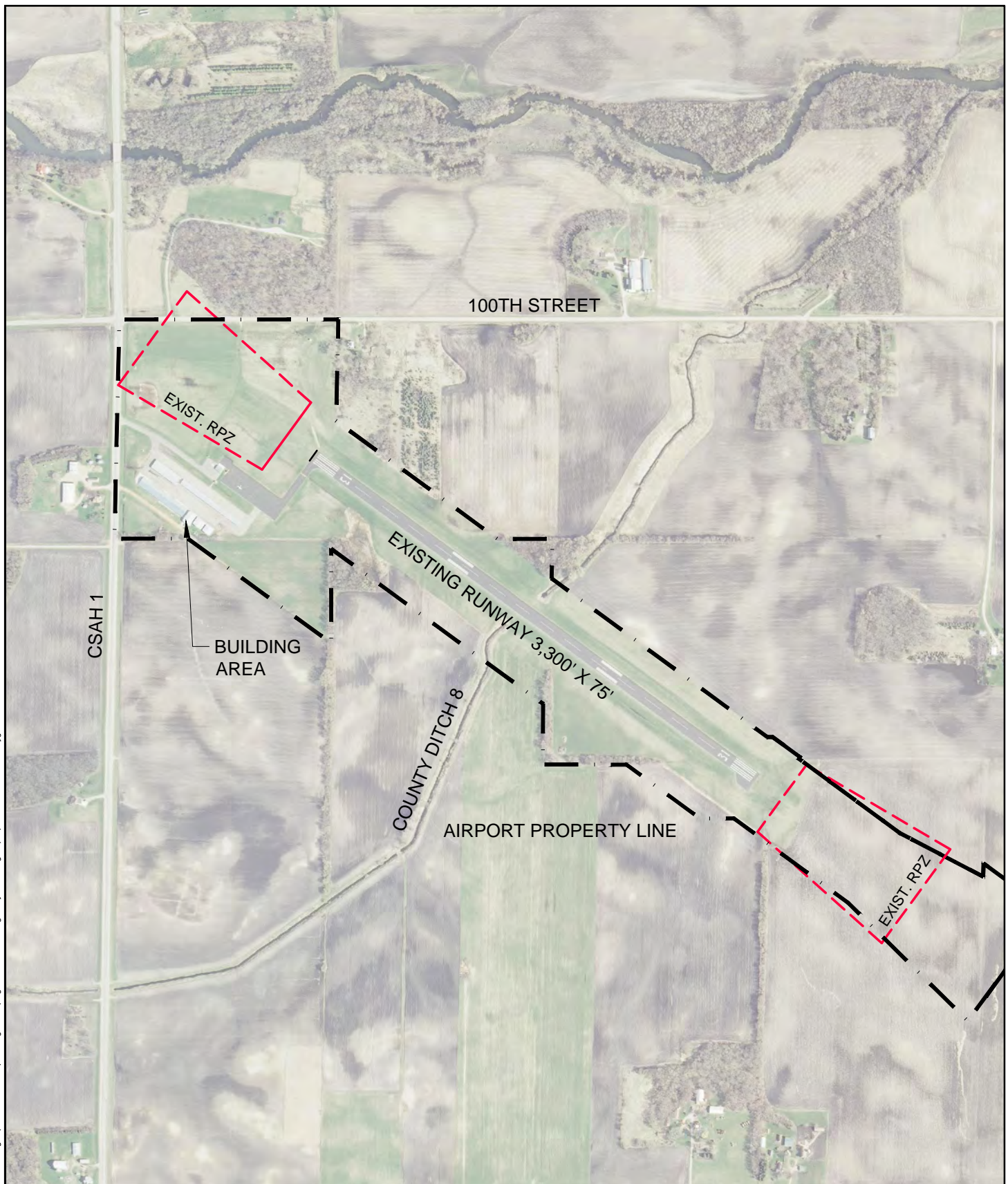
**Figure 1-1**  
**Airport**  
**Vicinity Map**



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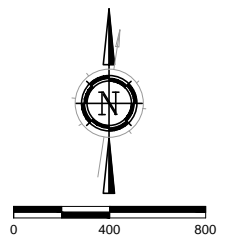


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March 2013

**Glencoe Municipal Airport**  
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Environmental Assessment  
Glencoe, Minnesota

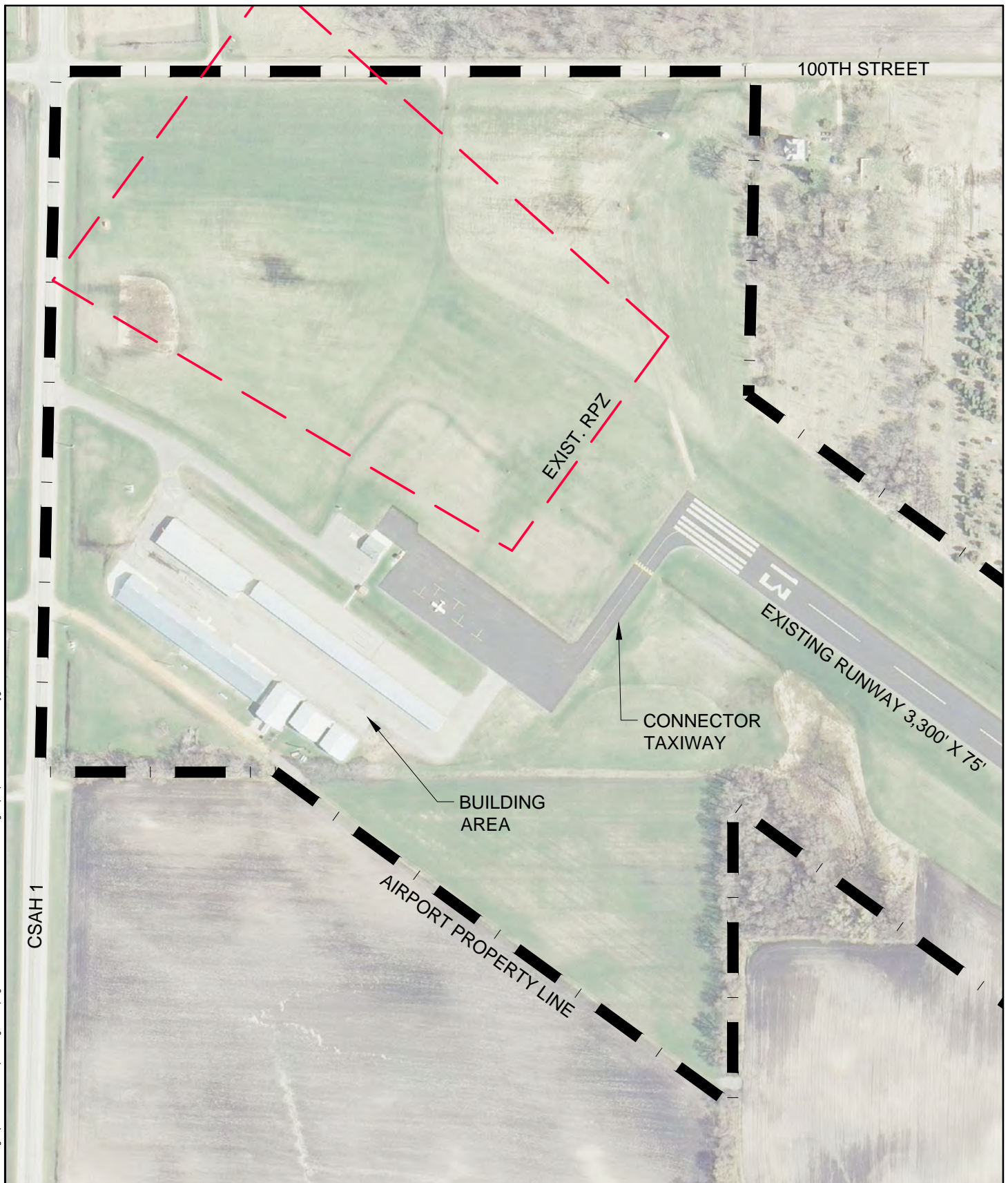
Figure 1-2  
Existing  
Airport Layout



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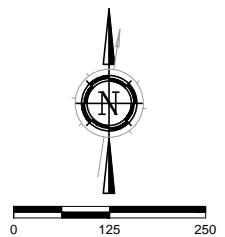


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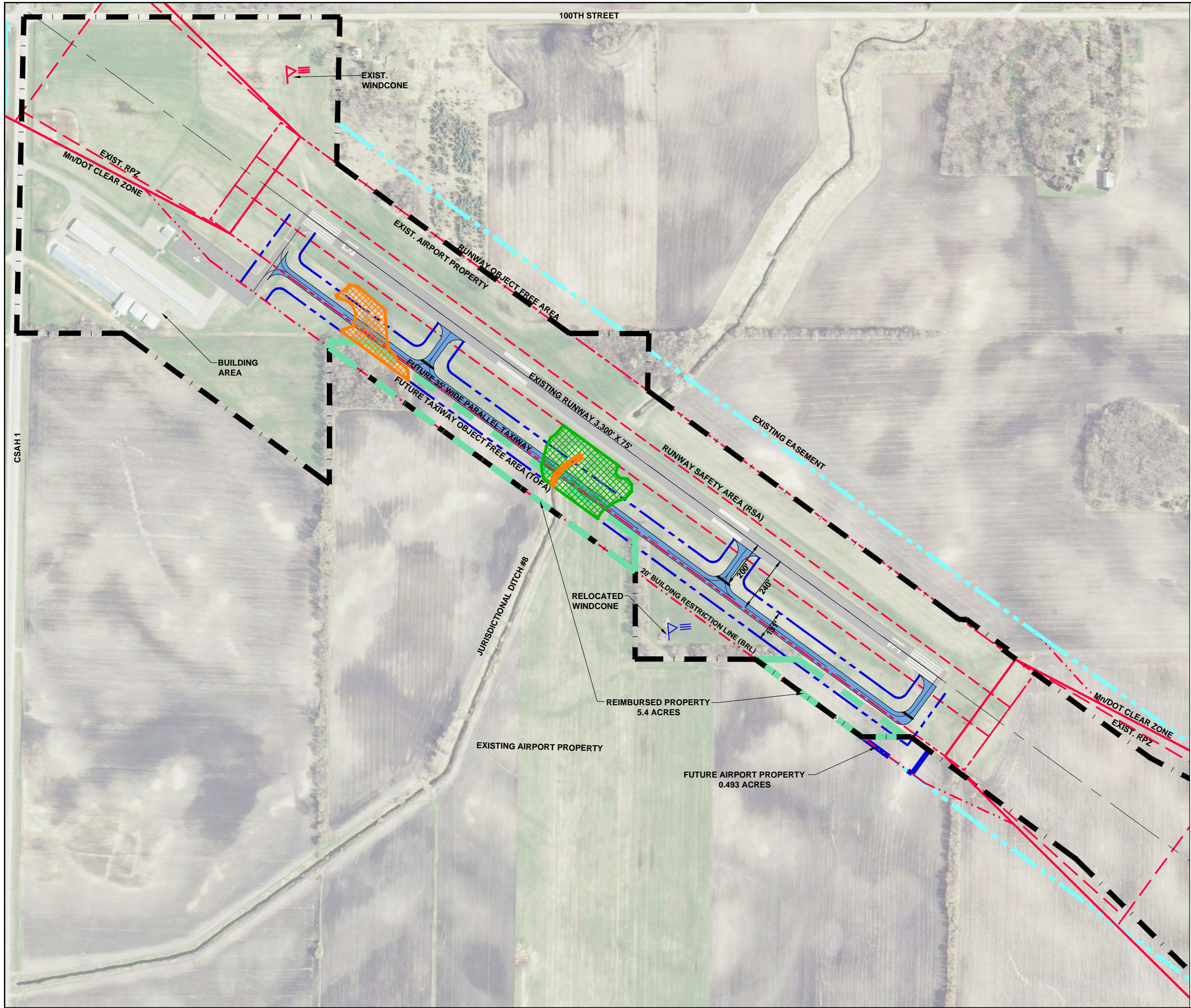
**Glencoe Municipal Airport**  
Parallel Taxiway  
Environmental Assessment  
Glencoe, Minnesota

Figure 1-2  
Connector  
Taxiway



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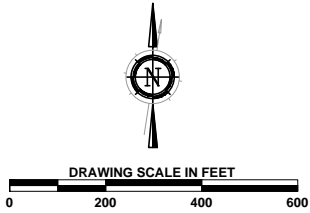


LEGEND

- EXISTING PROPERTY
- EXISTING EASEMENT
- EXISTING 20' BRL
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE AREA (ROFA)
- RUNWAY PROTECTION ZONE (RPZ)
- MN/DOT CLEAR ZONE
- PROPERTY REIMBURSEMENT
- FUTURE PROPERTY
- FUTURE TAXIWAY OBJECT FREE AREA
- FUTURE PAVEMENT

IMPACTED AREAS

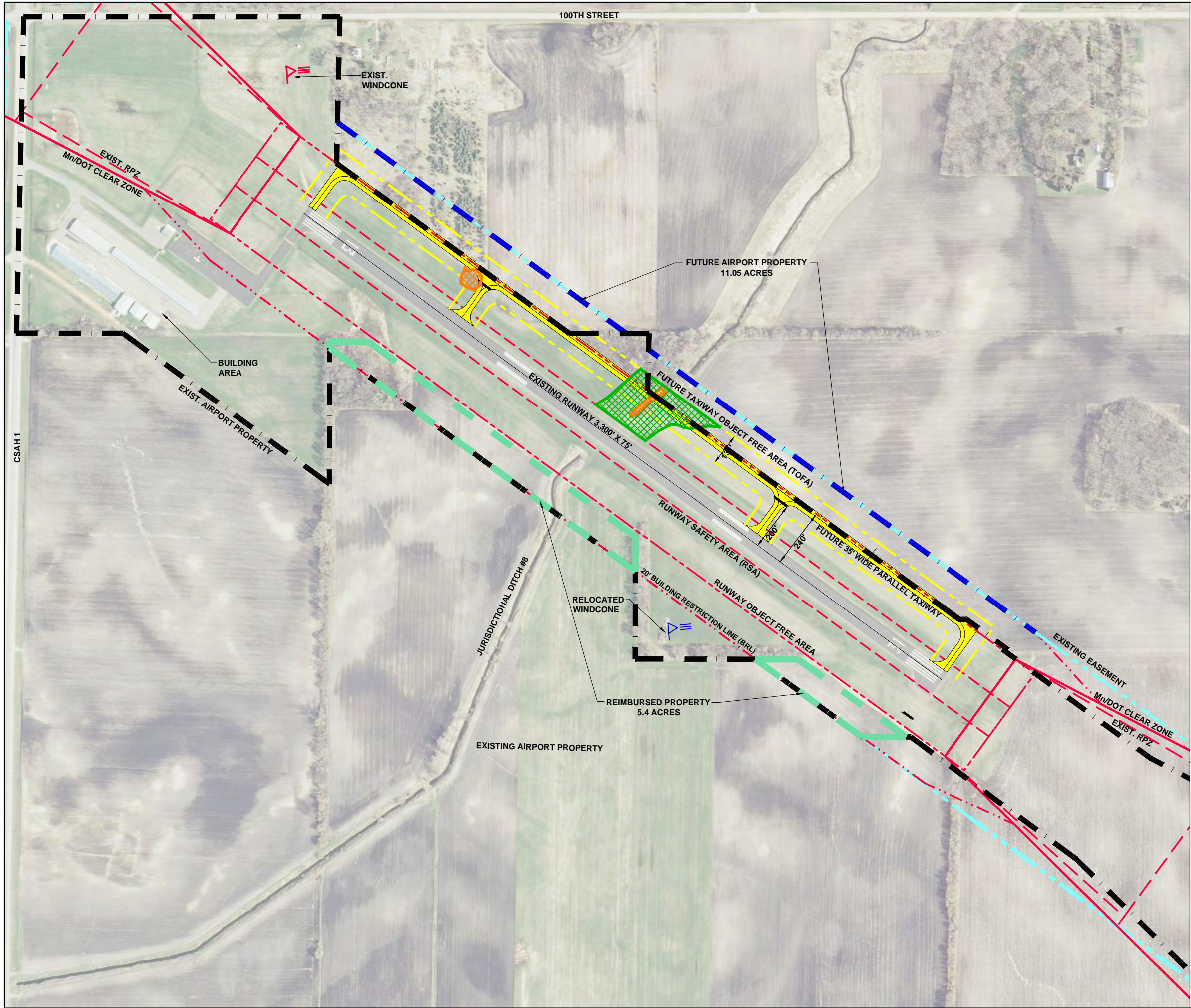
- FLOODPLAIN
- DELINEATED WETLANDS









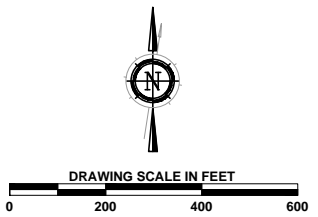


LEGEND

- EXISTING PROPERTY
- EXISTING EASEMENT
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- FUTURE TAXIWAY OBJECT FREE AREA
- FUTURE PAVEMENT

IMPACTED AREAS

- FLOODPLAIN
- DELINEATED WETLANDS



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DRAWN BY: HIRU  
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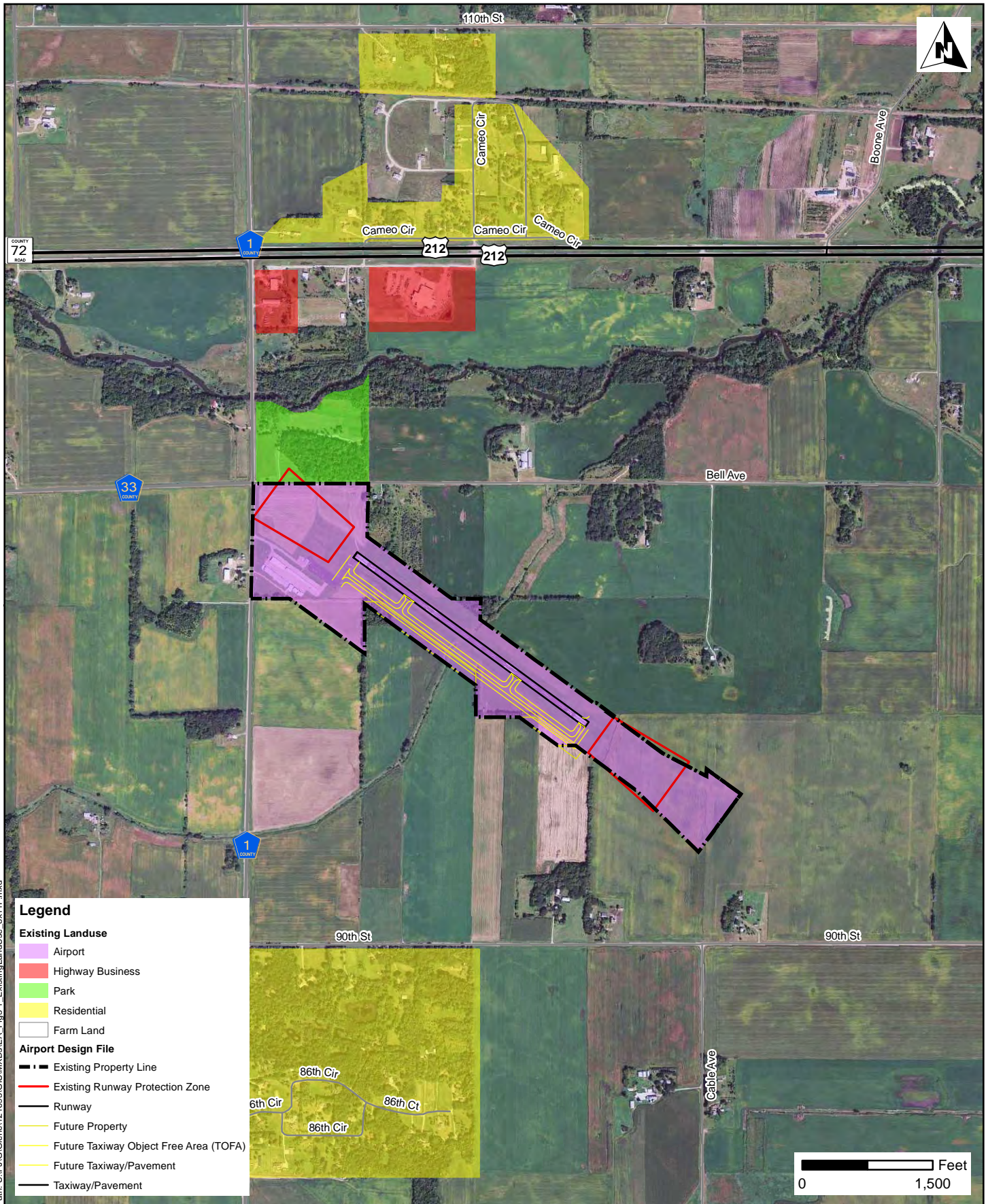
GLENCOE MUNICIPAL AIRPORT

ENVIRONMENTAL  
ASSESSMENT  
ALTERNATIVE 1

Figure  
2-2







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Map by: sfh  
Projection: NAD 83, McLeod  
County Coordinates Feet  
Source: USDA NAIP 2010,  
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## Existing Land Use

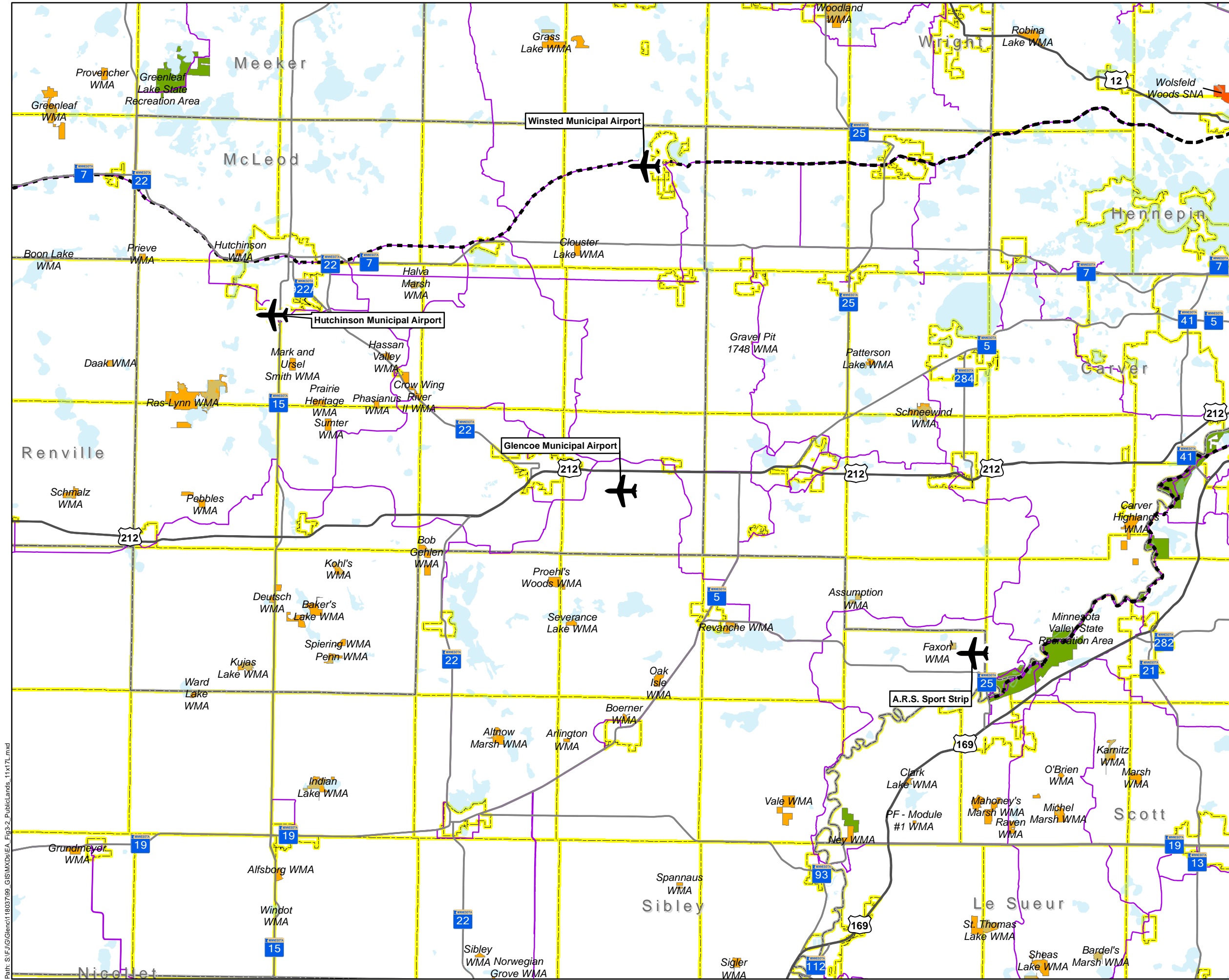
### Glencoe Municipal Airport EA

### Glencoe, Minnesota

Figure  
3-1

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- Legend**
- Airports
  - State Trails
  - Snowmobile Trails
  - Open Water
  - Tribal Lands
  - Wildlife Management Areas
  - Scientific and Natural Areas
  - State Parks
  - State Forests
  - National Forests
  - Municipal Boundary

0 1.5 3 6 Miles

Map by: srh  
Projection: NAD 83, UTM zone 15  
Source: Mn/DOT, MnDNR, SEH



## Public and Tribal Lands

### Environmental Assessment Staples, Minnesota

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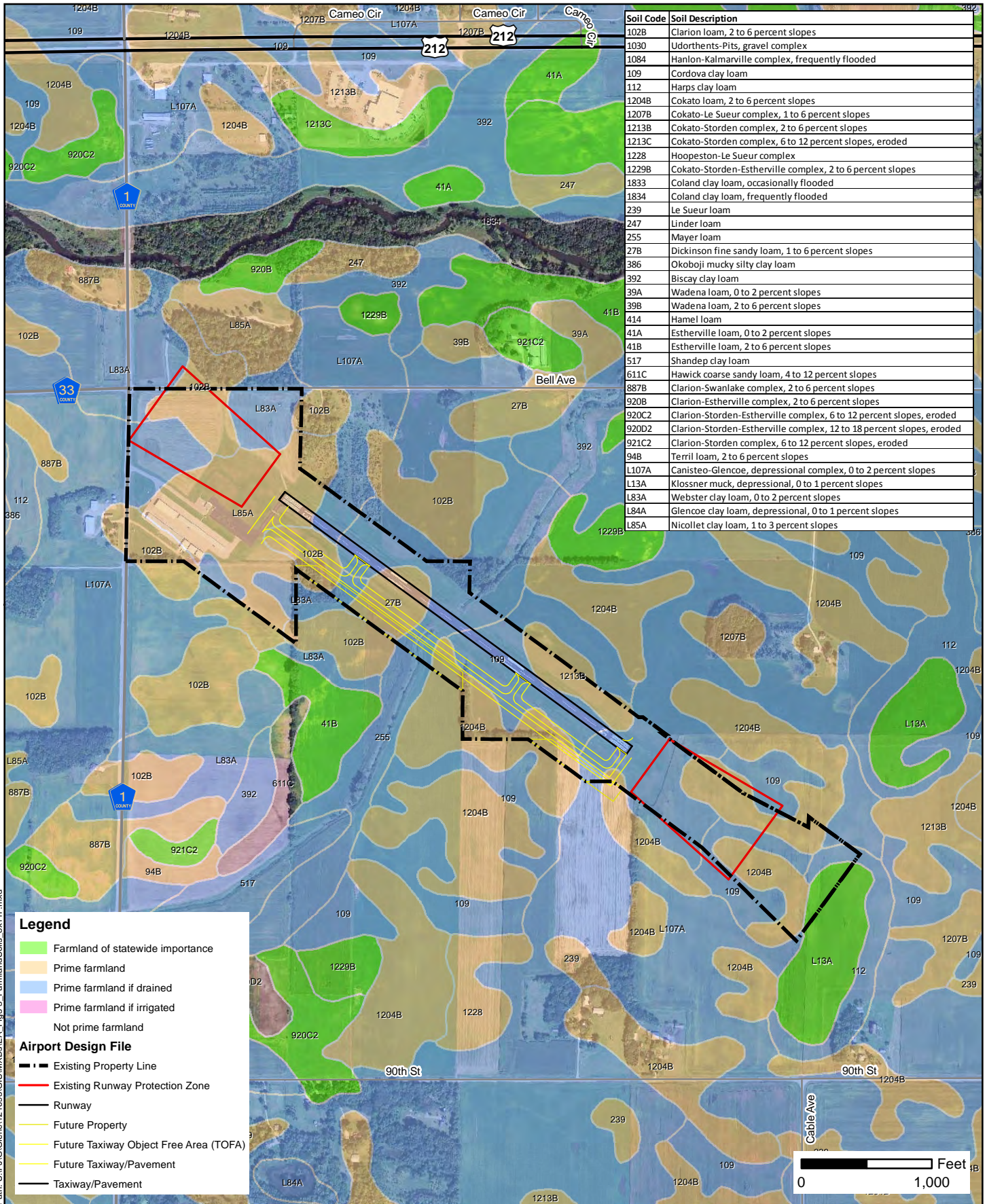


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Figure  
3-2







Soil Code	Soil Description
102B	Clarion loam, 2 to 6 percent slopes
1030	Udorthents-Pits, gravel complex
1084	Hanlon-Kalmarville complex, frequently flooded
109	Cordova clay loam
112	Harps clay loam
1204B	Cokato loam, 2 to 6 percent slopes
1207B	Cokato-Le Sueur complex, 1 to 6 percent slopes
1213B	Cokato-Storden complex, 2 to 6 percent slopes
1213C	Cokato-Storden complex, 6 to 12 percent slopes, eroded
1228	Hoopeston-Le Sueur complex
1229B	Cokato-Storden-Estherville complex, 2 to 6 percent slopes
1833	Coland clay loam, occasionally flooded
1834	Coland clay loam, frequently flooded
239	Le Sueur loam
247	Linder loam
255	Mayer loam
27B	Dickinson fine sandy loam, 1 to 6 percent slopes
386	Okoboji mucky silty clay loam
392	Biscay clay loam
39A	Wadena loam, 0 to 2 percent slopes
39B	Wadena loam, 2 to 6 percent slopes
414	Hamel loam
41A	Estherville loam, 0 to 2 percent slopes
41B	Estherville loam, 2 to 6 percent slopes
517	Shandep clay loam
611C	Hawick coarse sandy loam, 4 to 12 percent slopes
887B	Clarion-Swanlake complex, 2 to 6 percent slopes
920B	Clarion-Estherville complex, 2 to 6 percent slopes
920C2	Clarion-Storden-Estherville complex, 6 to 12 percent slopes, eroded
920D2	Clarion-Storden-Estherville complex, 12 to 18 percent slopes, eroded
921C2	Clarion-Storden complex, 6 to 12 percent slopes, eroded
94B	Terril loam, 2 to 6 percent slopes
L107A	Canisteo-Glencoe, depressional complex, 0 to 2 percent slopes
L13A	Klossner muck, depressional, 0 to 1 percent slopes
L83A	Webster clay loam, 0 to 2 percent slopes
L84A	Glencoe clay loam, depressional, 0 to 1 percent slopes
L85A	Nicollet clay loam, 1 to 3 percent slopes

Legend

- Farmland of statewide importance
- Prime farmland
- Prime farmland if drained
- Prime farmland if irrigated
- Not prime farmland

Airport Design File

- Existing Property Line
- Existing Runway Protection Zone
- Runway
- Future Property
- Future Taxiway Object Free Area (TOFA)
- Future Taxiway/Pavement
- Taxiway/Pavement

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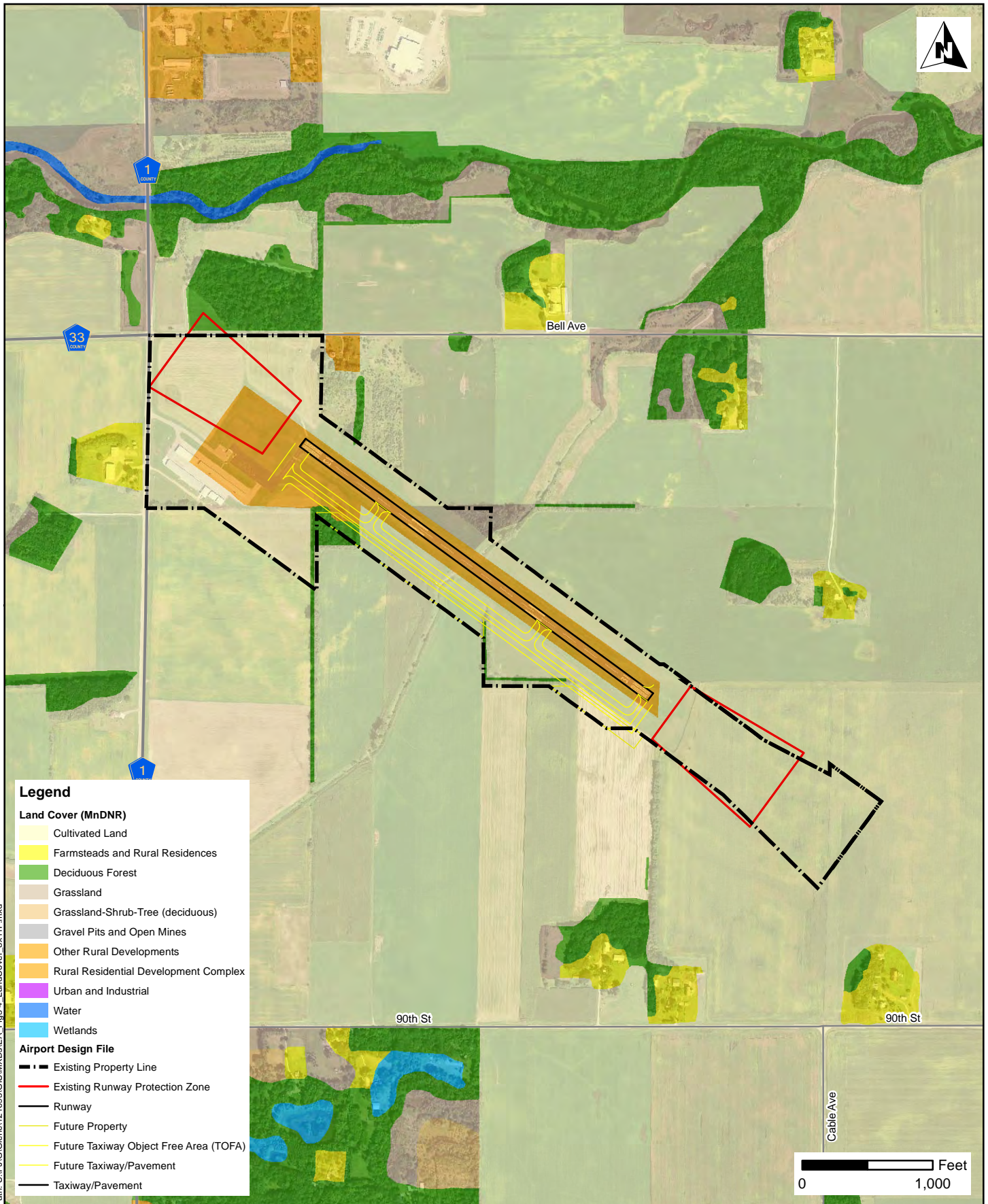
Farmland Soils (SSURGO)

Glencoe Municipal Airport EA  
Glencoe, Minnesota

Figure  
3-3

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Source: USDA NAIP 2010,  
Mn/DOT, Mn/DNR

## Land Cover Impacts

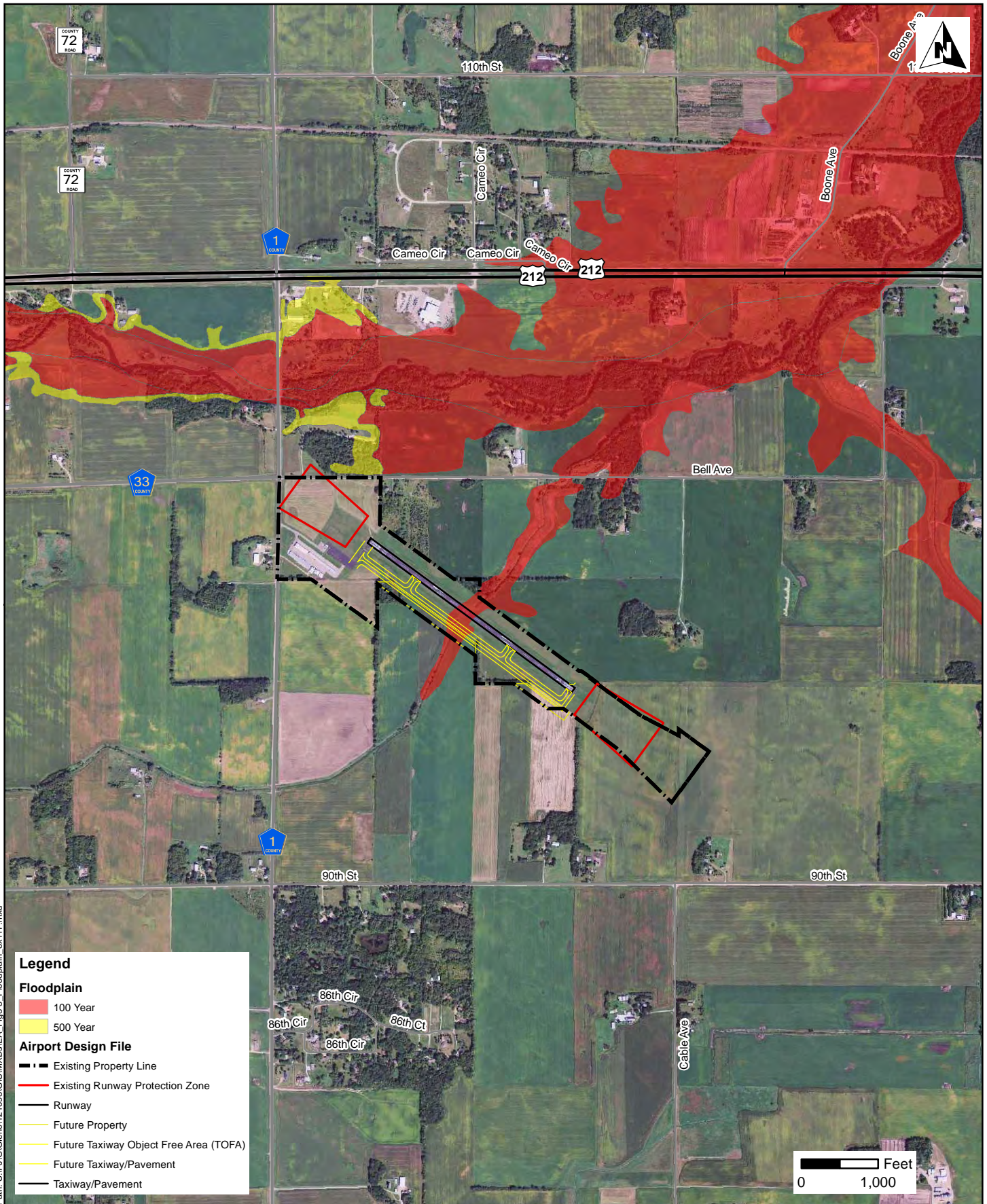
### Glencoe Municipal Airport EA

### Glencoe, Minnesota

Figure  
3-4

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Source: USDA NAIP 2010,  
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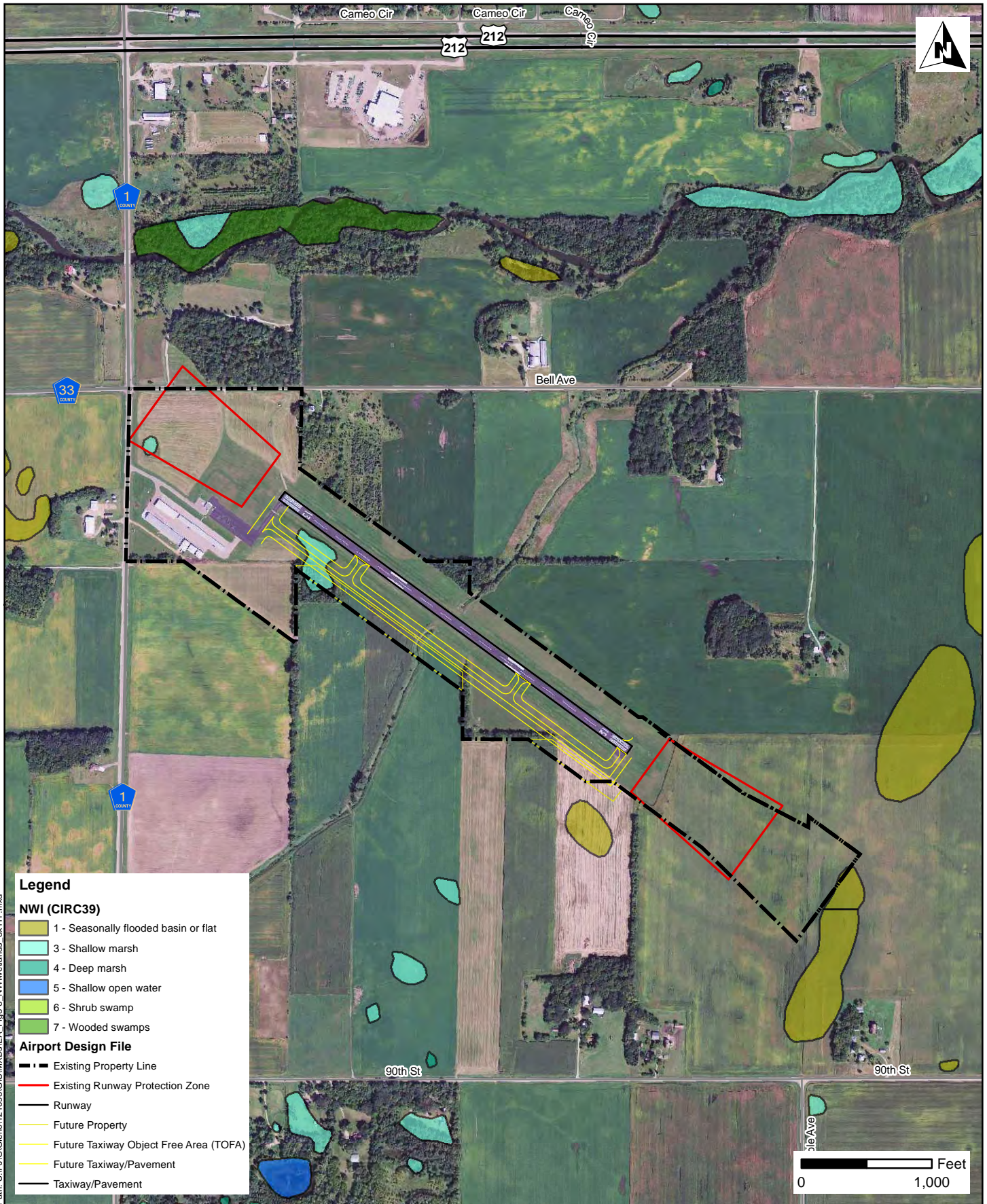
**100 Year Floodplain**  
Glencoe Municipal Airport EA  
Glencoe, Minnesota

**Figure  
3-5**

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**Legend**

**NWI (CIRC39)**

- 1 - Seasonally flooded basin or flat
- 3 - Shallow marsh
- 4 - Deep marsh
- 5 - Shallow open water
- 6 - Shrub swamp
- 7 - Wooded swamps

**Airport Design File**

- Existing Property Line
- Existing Runway Protection Zone
- Runway
- Future Property
- Future Taxiway Object Free Area (TOFA)
- Future Taxiway/Pavement
- Taxiway/Pavement

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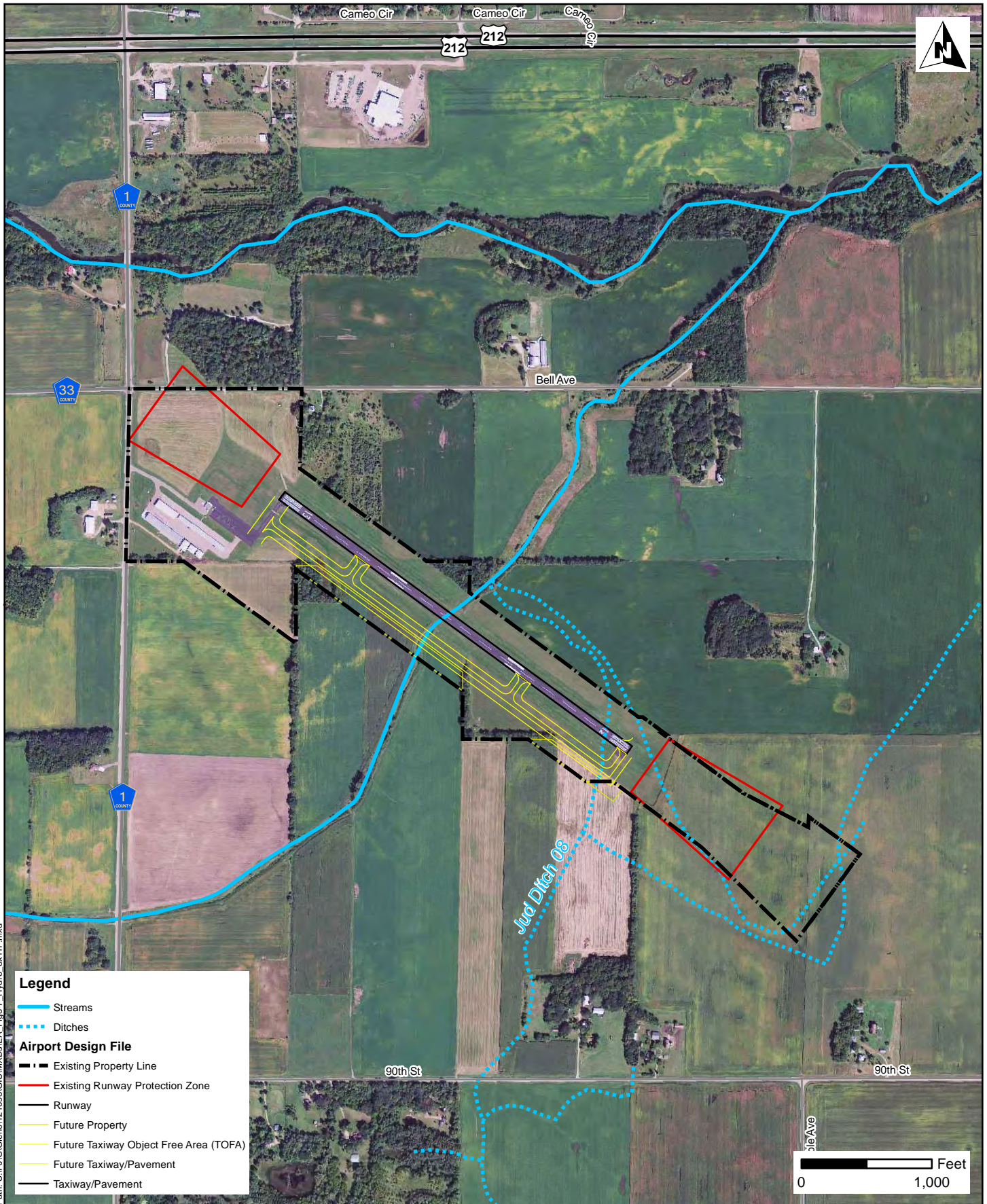
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County Coordinates Feet  
Source: USDA NAIP 2010,  
Mn/DOT, Mn/DNR

**NWI Wetlands**  
Glencoe Municipal Airport EA  
Glencoe, Minnesota

**Figure  
3-6**

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### Legend

- Streams
- Ditches

### Airport Design File

- Existing Property Line
- Existing Runway Protection Zone
- Runway
- Future Property
- Future Taxiway Object Free Area (TOFA)
- Future Taxiway/Pavement
- Taxiway/Pavement

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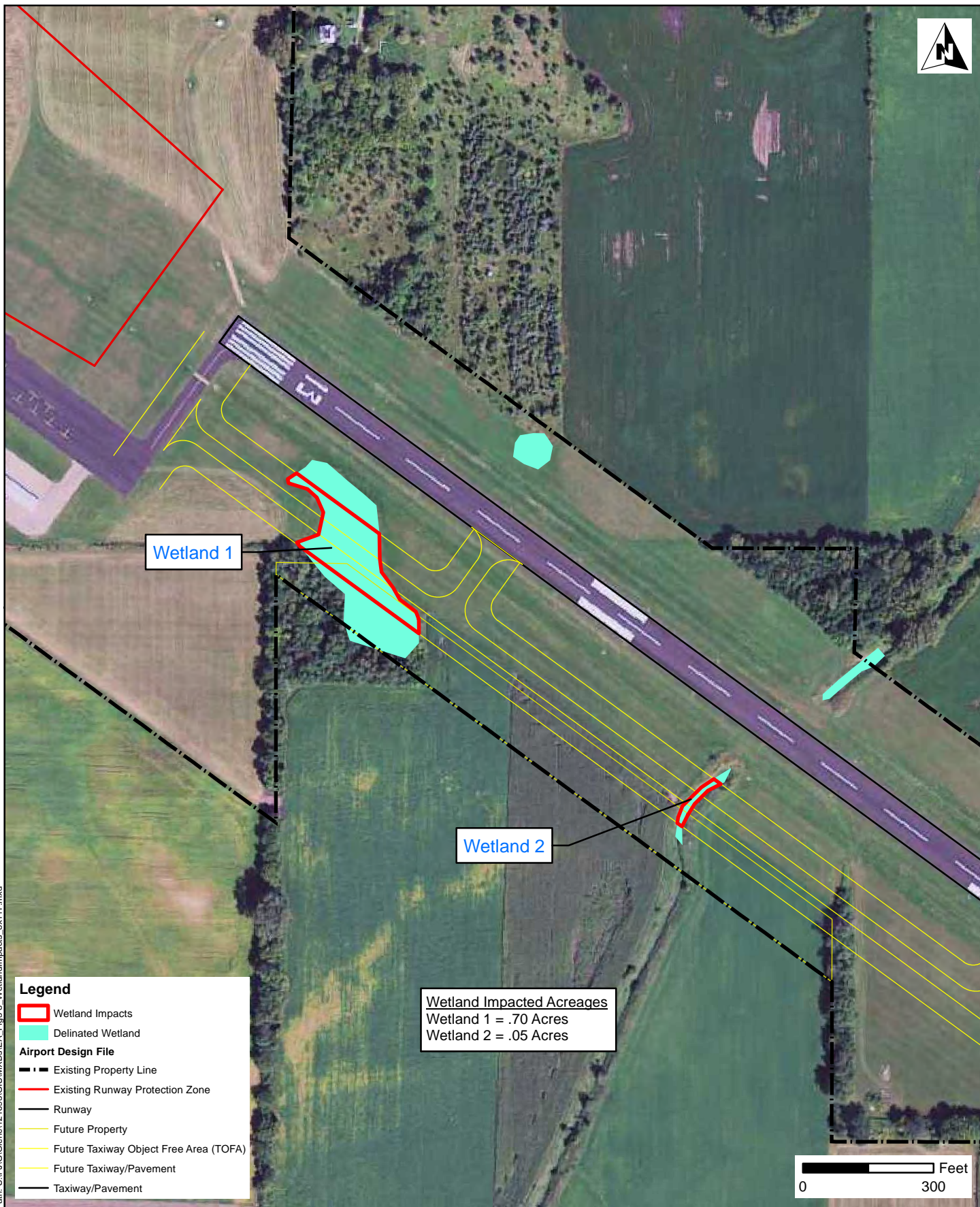
Map by: sfh  
Projection: NAD 83, McLeod  
County Coordinates Feet  
Source: USDA NAIP 2010,  
Mn/DOT, Mn/DNR

**Hydrography**  
Glencoe Municipal Airport EA  
Glencoe, Minnesota

**Figure**  
**3-7**

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#### Legend

- Wetland Impacts
- Delineated Wetland

#### Airport Design File

- Existing Property Line
- Existing Runway Protection Zone
- Runway
- Future Property
- Future Taxiway Object Free Area (TOFA)
- Future Taxiway/Pavement
- Taxiway/Pavement

#### Wetland Impacted Acreages

Wetland 1 = .70 Acres  
Wetland 2 = .05 Acres



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Map by: sfh  
Projection: NAD 83, McLeod  
County Coordinates Feet  
Source: USDA NAIP 2010,  
Mn/DOT, Mn/DNR

**Wetland Impacts**  
Glencoe Municipal Airport EA  
Glencoe, Minnesota

Figure  
3-8

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## **Appendix A**

NRCS Farmland Conversion Impact Rating form

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# FARMLAND CONVERSION IMPACT RATING

<b>PART I</b> (To be completed by Federal Agency)		Date Of Land Evaluation Request 7/11/13			
Name Of Project Glencoe Municipal Airport (PEX)		Federal Agency Involved Federal Aviation Administration			
Proposed Land Use Airport Facilities		County And State Glencoe County, MN			
<b>PART II</b> (To be completed by NRCS)		Date Request Received By NRCS 7/11/13			
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated NA	Average Farm Size 266
Major Crop(s) Corn, Soybeans	Farmable Land In Govt. Jurisdiction Acres: 292,745 % 90	Amount Of Farmland As Defined in FPPA Acres: 289,260 % 89			
Name Of Land Evaluation System Used LE	Name Of Local Site Assessment System Not Available	Date Land Evaluation Returned By NRCS 7/15/13			
<b>PART III</b> (To be completed by Federal Agency)		Alternative Site Rating			
		Site B	Site C	Site	Site
A. Total Acres To Be Converted Directly		4.00	1.40		
B. Total Acres To Be Converted Indirectly		0.00			
C. Total Acres In Site		4.00	1.40	0.00	0.00
<b>PART IV</b> (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		0.00	1.40		
B. Total Acres Statewide And Local Important Farmland		4.00	1.40		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0.00130	0.0004		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		74.00	33.00		
<b>PART V</b> (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		88	92	0	0
<b>PART VI</b> (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS		160	0	0	0
<b>PART VII</b> (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	88	92	0
Total Site Assessment (From Part VI above or a local site assessment)		160	0	0	0
TOTAL POINTS (Total of above 2 lines)		260	88	92	0
Site Selected:		Date Of Selection		Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Reason For Selection:					

# FARMLAND CONVERSION IMPACT RATING

<b>PART I</b> (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name Of Project		Federal Agency Involved			
Proposed Land Use		County And State			
<b>PART II</b> (To be completed by NRCS)		Date Request Received By NRCS			
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined in FPPA Acres: %			
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS			
<b>PART III</b> (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site					
<b>PART IV</b> (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value					
<b>PART V</b> (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)					
<b>PART VI</b> (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS		160			
<b>PART VII</b> (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or a local site assessment)		160			
TOTAL POINTS (Total of above 2 lines)		260			
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Reason For Selection:					



## STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 – Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 – Originator will send copies A, B and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 – NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 – In cases where farmland covered by the FPPA will be converted by the proposed project, NRCS field offices will complete Parts II, IV and V of the form.

Step 5 – NRCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for NRCS records).

Step 6 – The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 – The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

## INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

**Part I:** In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

**Part III:** In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

**Part VI:** Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5 (b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

**Part VII:** In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and alternative Site "A" is rated 180 points:

Total points assigned Site A =  $\frac{180}{200} \times 160 = 144$  points for Site "A."  
Maximum points possible      200

## **Site Assessment Scoring for the Twelve Factors Used in FPPA**

The Site Assessment criteria used in the Farmland Protection Policy Act (FPPA) rule are designed to assess important factors other than the agricultural value of the land when determining which alternative sites should receive the highest level of protection from conversion to non agricultural uses.

Twelve factors are used for Site Assessment and ten factors for corridor-type sites. Each factor is listed in an outline form, without detailed definitions or guidelines to follow in the rating process. The purpose of this document is to expand the definitions of use of each of the twelve Site Assessment factors so that all persons can have a clear understanding as to what each factor is intended to evaluate and how points are assigned for given conditions.

In each of the 12 factors a number rating system is used to determine which sites deserve the most protection from conversion to non-farm uses. The higher the number value given to a proposed site, the more protection it will receive. The maximum scores are 10, 15 and 20 points, depending upon the relative importance of each particular question. If a question significantly relates to why a parcel of land should not be converted, the question has a maximum possible protection value of 20, whereas a question which does not have such a significant impact upon whether a site would be converted, would have fewer maximum points possible, for example 10.

The following guidelines should be used in rating the twelve Site Assessment criteria:

### **1. How much land is in non-urban use within a radius of 1.0 mile from where the project is intended?**

More than 90 percent:	15 points
90-20 percent:	14 to 1 points
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the area within one mile of the proposed site is non-urban area. For purposes of this rule, "non-urban" should include:

- Agricultural land (crop-fruit trees, nuts, oilseed)
- Range land
- Forest land
- Golf Courses
- Non paved parks and recreational areas
- Mining sites
- Farm Storage
- Lakes, ponds and other water bodies
- Rural roads, and through roads without houses or buildings
- Open space
- Wetlands
- Fish production
- Pasture or hayland

Urban uses include:

- Houses (other than farm houses)
- Apartment buildings
- Commercial buildings
- Industrial buildings
- Paved recreational areas (i.e. tennis courts)
- Streets in areas with 30 structures per 40 acres
- Gas stations

- Equipment, supply stores
- Off-farm storage
- Processing plants
- Shopping malls
- Utilities/Services
- Medical buildings

In rating this factor, an area one-mile from the outer edge of the proposed site should be outlined on a current photo; the areas that are urban should be outlined. For rural houses and other buildings with unknown sizes, use 1 and 1/3 acres per structure. For roads with houses on only one side, use one half of road for urban and one half for non-urban.

The purpose of this rating process is to insure that the most valuable and viable farmlands are protected from development projects sponsored by the Federal Government. With this goal in mind, factor S1 suggests that the more agricultural lands surrounding the parcel boundary in question, the more protection from development this site should receive. Accordingly, a site with a large quantity of non-urban land surrounding it will receive a greater number of points for protection from development. Thus, where more than 90 percent of the area around the proposed site (do not include the proposed site in this assessment) is non-urban, assign 15 points. Where 20 percent or less is non-urban, assign 0 points. Where the area lies between 20 and 90 percent non-urban, assign appropriate points from 14 to 1, as noted below.

<b>Percent Non-Urban Land within 1 mile</b>	<b>Points</b>
90 percent or greater	15
85 to 89 percent	14
80 to 84 percent	13
75 to 79 percent	12
70 to 74 percent	11
65 to 69 percent	10
60 to 64 percent	9
55 to 59 percent	8
50 to 54 percent	7
45 to 49 percent	6
40 to 44 percent	5
35 to 39 percent	4
30 to 34 percent	3
25 to 29 percent	2
21 to 24 percent	1
20 percent or less	0

## **2. How much of the perimeter of the site borders on land in non-urban use?**

More than 90 percent:	10 points
90 to 20 percent:	9 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the land adjacent to the proposed site is non-urban use. Where factor #1 evaluates the general location of the proposed site, this factor evaluates the immediate perimeter of the site. The definition of urban and non-urban uses in factor #1 should be used for this factor.

In rating the second factor, measure the perimeter of the site that is in non-urban and urban use. Where more than 90 percent of the perimeter is in non-urban use, score this factor 10 points. Where less than 20 percent, assign 0 points. If a road is next to the perimeter, class the area according to the

use on the other side of the road for that area. Use 1 and 1/3 acre per structure if not otherwise known. Where 20 to 90 percent of the perimeter is non-urban, assign points as noted below:

<b>Percentage of Perimeter Bordering Land</b>	<b>Points</b>
90 percent or greater	10
82 to 89 percent	9
74 to 81 percent	8
65 to 73 percent	7
58 to 65 percent	6
50 to 57 percent	5
42 to 49 percent	4
34 to 41 percent	3
27 to 33 percent	2
21 to 26 percent	1
20 percent or Less	0

**3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last ten years?**

More than 90 percent:	20 points
90 to 20 percent:	19 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the proposed conversion site has been used or managed for agricultural purposes in the past 10 years.

Land is being farmed when it is used or managed for food or fiber, to include timber products, fruit, nuts, grapes, grain, forage, oil seed, fish and meat, poultry and dairy products.

Land that has been left to grow up to native vegetation without management or harvest will be considered as abandoned and therefore not farmed. The proposed conversion site should be evaluated and rated according to the percent, of the site farmed.

If more than 90 percent of the site has been farmed 5 of the last 10 years score the site as follows:

<b>Percentage of Site Farmed</b>	<b>Points</b>
90 percent or greater	20
86 to 89 percent	19
82 to 85 percent	18
78 to 81 percent	17
74 to 77 percent	16
70 to 73 percent	15
66 to 69 percent	14
62 to 65 percent	13
58 to 61 percent	12
54 to 57 percent	11
50 to 53 percent	10
46 to 49 percent	9
42 to 45 percent	8
38 to 41 percent	7
35 to 37 percent	6
32 to 34 percent	5
29 to 31 percent	4
26 to 28 percent	3

23 to 25 percent	2
20 to 22 percent percent or Less	1
Less than 20 percent	0

**4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?**

Site is protected:	20 points
Site is not protected:	0 points

This factor is designed to evaluate the extent to which state and local government and private programs have made efforts to protect this site from conversion.

**State and local policies and programs to protect farmland include:**

**State Policies and Programs to Protect Farmland**

**1. Tax Relief:**

A. Differential Assessment: Agricultural lands are taxed on their agricultural use value, rather than at market value. As a result, farmers pay fewer taxes on their land, which helps keep them in business, and therefore helps to insure that the farmland will not be converted to nonagricultural uses.

1. Preferential Assessment for Property Tax: Landowners with parcels of land used for agriculture are given the privilege of differential assessment.
2. Deferred Taxation for Property Tax: Landowners are deterred from converting their land to nonfarm uses, because if they do so, they must pay back taxes at market value.
3. Restrictive Agreement for Property Tax: Landowners who want to receive Differential Assessment must agree to keep their land in - eligible use.

**B. Income Tax Credits**

Circuit Breaker Tax Credits: Authorize an eligible owner of farmland to apply some or all of the property taxes on his or her farmland and farm structures as a tax credit against the owner's state income tax.

**C. Estate and Inheritance Tax Benefits**

Farm Use Valuation for Death Tax: Exemption of state tax liability to eligible farm estates.

**2. "Right to farm" laws:**

Prohibits local governments from enacting laws which will place restrictions upon normally accepted farming practices, for example, the generation of noise, odor or dust.

**3. Agricultural Districting:**

Wherein farmers voluntarily organize districts of agricultural land to be legally recognized geographic areas. These farmers receive benefits, such as protection from annexation, in exchange for keeping land within the district for a given number of years.

**4. Land Use Controls: Agricultural Zoning.**

Types of Agricultural Zoning Ordinances include:

- A. Exclusive: In which the agricultural zone is restricted to only farm-related dwellings, with, for example, a minimum of 40 acres per dwelling unit.
- B. Non-Exclusive: In which non-farm dwellings are allowed, but the density remains low, such as 20 acres per dwelling unit.

Additional Zoning techniques include:

- A. Sliding Scale: This method looks at zoning according to the total size of the parcel owned. For example, the number of dwelling units per a given number of acres may change from county to county according to the existing land acreage to dwelling unit ratio of surrounding parcels of land within the specific area.
- B. Point System or Numerical Approach: Approaches land use permits on a case by case basis.  
  
LESA: The LESA system (Land Evaluation-Site Assessment) is used as a tool to help assess options for land use on an evaluation of productivity weighed against commitment to urban development.
- C. Conditional Use: Based upon the evaluation on a case by case basis by the Board of Zoning Adjustment. Also may include the method of using special land use permits.

5. Development Rights:

- A. Purchase of Development Rights (PDR): Where development rights are purchased by Government action.

Buffer Zoning Districts: Buffer Zoning Districts are an example of land purchased by Government action. This land is included in zoning ordinances in order to preserve and protect agricultural lands from non-farm land uses encroaching upon them.

- B. Transfer of Development Rights (TDR): Development rights are transferable for use in other locations designated as receiving areas. TDR is considered a locally based action (not state), because it requires a voluntary decision on the part of the individual landowners.

6. Governor's Executive Order: Policy made by the Governor, stating the importance of agriculture, and the preservation of agricultural lands. The Governor orders the state agencies to avoid the unnecessary conversion of important farmland to nonagricultural uses.

7. Voluntary State Programs:

- A. California's Program of Restrictive Agreements and Differential Assessments: The California Land Conservation Act of 1965, commonly known as the Williamson Act, allows cities, counties and individual landowners to form agricultural preserves and enter into contracts for 10 or more years to insure that these parcels of land remain strictly for agricultural use. Since 1972 the Act has extended eligibility to recreational and open space lands such as scenic highway corridors, salt ponds and wildlife preserves. These contractually restricted lands may be taxed differentially for their real value. One hundred-acre districts constitute the minimum land size eligible.

Suggestion: An improved version of the Act would state that if the land is converted after the contract expires, the landowner must pay the difference in the taxes between market value for the land and the agricultural tax value which he or she had been

paying under the Act. This measure would help to insure that farmland would not be converted after the 10 year period ends.

- B. Maryland Agricultural Land Preservation Program: Agricultural landowners within agricultural districts have the opportunity to sell their development rights to the Maryland Land Preservation Foundation under the agreement that these landowners will not subdivide or develop their land for an initial period of five years. After five years the landowner may terminate the agreement with one year notice.

As is stated above under the California Williamson Act, the landowner should pay the back taxes on the property if he or she decides to convert the land after the contract expires, in order to discourage such conversions.

- C. Wisconsin Income Tax Incentive Program: The Wisconsin Farmland Preservation Program of December 1977 encourages local jurisdictions in Wisconsin to adopt agricultural preservation plans or exclusive agricultural district zoning ordinances in exchange for credit against state income tax and exemption from special utility assessment. Eligible candidates include local governments and landowners with at least 35 acres of land per dwelling unit in agricultural use and gross farm profits of at least \$6,000 per year, or \$18,000 over three years.

#### 8. Mandatory State Programs:

- A. The Environmental Control Act in the state of Vermont was adopted in 1970 by the Vermont State Legislature. The Act established an environmental board with 9 members (appointed by the Governor) to implement a planning process and a permit system to screen most subdivisions and development proposals according to specific criteria stated in the law. The planning process consists of an interim and a final Land Capability and Development Plan, the latter of which acts as a policy plan to control development. The policies are written in order to:
- prevent air and water pollution;
  - protect scenic or natural beauty, historic sites and rare and irreplaceable natural areas; and
  - consider the impacts of growth and reduction of development on areas of primary agricultural soils.
- B. The California State Coastal Commission: In 1976 the Coastal Act was passed to establish a permanent Coastal Commission with permit and planning authority. The purpose of the Coastal Commission was and is to protect the sensitive coastal zone environment and its resources, while accommodating the social and economic needs of the state. The Commission has the power to regulate development in the coastal zones by issuing permits on a case by case basis until local agencies can develop their own coastal plans, which must be certified by the Coastal Commission.
- C. Hawaii's Program of State Zoning: In 1961, the Hawaii State Legislature established Act 187, the Land Use Law, to protect the farmland and the welfare of the local people of Hawaii by planning to avoid "unnecessary urbanization". The Law made all state lands into four districts: agricultural, conservation, rural and urban. The Governor appointed members to a State Land Use Commission, whose duties were to uphold the Law and form the boundaries of the four districts. In addition to state zoning, the Land Use Law introduced a program of Differential Assessment, wherein agricultural landowners paid taxes on their land for its agricultural use value, rather than its market value.
- D. The Oregon Land Use Act of 1973: This act established the Land Conservation and Development Commission (LCDC) to provide statewide planning goals and guidelines.

Under this Act, Oregon cities and counties are each required to draw up a comprehensive plan, consistent with statewide planning goals. Agricultural land preservation is high on the list of state goals to be followed locally.

If the proposed site is subject to or has used one or more of the above farmland protection programs or policies, score the site 20 points. If none of the above policies or programs apply to this site, score 0 points.

**5. How close is the site to an urban built-up area?**

The site is 2 miles or more from an urban built-up area	15 points
The site is more than 1 mile but less than 2 miles from an urban built-up area	10 points
The site is less than 1 mile from, but is not adjacent to an urban built-up area	5 points
The site is adjacent to an urban built-up area	0 points

This factor is designed to evaluate the extent to which the proposed site is located next to an existing urban area. The urban built-up area must be 2500 population. The measurement from the built-up area should be made from the point at which the density is 30 structures per 40 acres and with no open or non-urban land existing between the major built-up areas and this point. Suburbs adjacent to cities or urban built-up areas should be considered as part of that urban area.

For greater accuracy, use the following chart to determine how much protection the site should receive according to its distance from an urban area. See chart below:

<b>Distance From Perimeter of Site to Urban Area</b>	<b>Points</b>
More than 10,560 feet	15
9,860 to 10,559 feet	14
9,160 to 9,859 feet	13
8,460 to 9,159 feet	12
7,760 to 8,459 feet	11
7,060 to 7,759 feet	10
6,360 to 7,059 feet	9
5,660 to 6,359 feet	8
4,960 to 5,659 feet	7
4,260 to 4,959 feet	6
3,560 to 4,259 feet	5
2,860 to 3,559 feet	4
2,160 to 2,859 feet	3
1,460 to 2,159 feet	2
760 to 1,459 feet	1
Less than 760 feet (adjacent)	0

**6. How close is the site to water lines, sewer lines and/or other local facilities and services whose capacities and design would promote nonagricultural use?**

None of the services exist nearer than 3 miles from the site	15 points
Some of the services exist more than one but less than 3 miles from the site	10 points
All of the services exist within 1/2 mile of the site	0 points



This question determines how much infrastructure (water, sewer, etc.) is in place which could facilitate nonagricultural development. The fewer facilities in place, the more difficult it is to develop an area. Thus, if a proposed site is further away from these services (more than 3 miles distance away), the site should be awarded the highest number of points (15). As the distance of the parcel of land to services decreases, the number of points awarded declines as well. So, when the site is equal to or further than 1 mile but less than 3 miles away from services, it should be given 10 points. Accordingly, if this distance is 1/2 mile to less than 1 mile, award 5 points; and if the distance from land to services is less than 1/2 mile, award 0 points.

Distance to public facilities should be measured from the perimeter of the parcel in question to the nearest site(s) where necessary facilities are located. If there is more than one distance (i.e. from site to water and from site to sewer), use the average distance (add all distances and then divide by the number of different distances to get the average).

Facilities which could promote nonagricultural use include:

- Water lines
- Sewer lines
- Power lines
- Gas lines
- Circulation (roads)
- Fire and police protection
- Schools

**7. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the county? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)**

As large or larger:	10 points
Below average: Deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more is below average	9 to 0 points

This factor is designed to determine how much protection the site should receive, according to its size in relation to the average size of farming units within the county. The larger the parcel of land, the more agricultural use value the land possesses, and vice versa. Thus, if the farm unit is as large or larger than the county average, it receives the maximum number of points (10). The smaller the parcel of land compared to the county average, the fewer number of points given. Please see below:

Parcel Size in Relation to Average County Size	Points
Same size or larger than average (100 percent)	10
95 percent of average	9
90 percent of average	8
85 percent of average	7
80 percent of average	6
75 percent of average	5
70 percent of average	4
65 percent of average	3
60 percent of average	2
55 percent of average	1
50 percent or below county average	0

State and local Natural Resources Conservation Service offices will have the average farm size information, provided by the latest available Census of Agriculture data

**8. If this site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?**

Acreage equal to more than 25 percent of acres directly converted by the project	10 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project	9 to 1 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project	0 points

This factor tackles the question of how the proposed development will affect the rest of the land on the farm. The site which deserves the most protection from conversion will receive the greatest number of points, and vice versa. For example, if the project is small, such as an extension on a house, the rest of the agricultural land would remain farmable, and thus a lower number of points is given to the site. Whereas if a large-scale highway is planned, a greater portion of the land (not including the site) will become non-farmable, since access to the farmland will be blocked; and thus, the site should receive the highest number of points (10) as protection from conversion.

Conversion uses of the Site Which Would Make the Rest of the Land Non-Farmable by Interfering with Land Patterns

Conversions which make the rest of the property nonfarmable include any development which blocks accessibility to the rest of the site. Examples are highways, railroads, dams or development along the front of a site restricting access to the rest of the property.

The point scoring is as follows:

<b>Amount of Land Not Including the Site Which Will Become Non-Farmable</b>	<b>Points</b>
25 percent or greater	10
23 - 24 percent	9
21 - 22 percent	8
19 - 20 percent	7
17 - 18 percent	6
15 - 16 percent	5
13 - 14 percent	4
11 - 12 percent	3
9 - 11 percent	2
6 - 8 percent	1
5 percent or less	0

**9. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?**

All required services are available	5 points
Some required services are available	4 to 1 point(s)
No required services are available	0 points

This factor is used to assess whether there are adequate support facilities, activities and industry to keep the farming business in business. The more support facilities available to the agricultural

landowner, the more feasible it is for him or her to stay in production. In addition, agricultural support facilities are compatible with farmland. This fact is important, because some land uses are not compatible; for example, development next to farmland can be dangerous to the welfare of the agricultural land, as a result of pressure from the neighbors who often do not appreciate the noise, smells and dust intrinsic to farmland. Thus, when all required agricultural support services are available, the maximum number of points (5) are awarded. When some services are available, 4 to 1 point(s) are awarded; and consequently, when no services are available, no points are given. See below:

<b>Percent of Services Available</b>	<b>Points</b>
100 percent	5
75 to 99 percent	4
50 to 74 percent	3
25 to 49 percent	2
1 to 24 percent	1
No services	0

**10. Does the site have substantial and well-maintained on farm investments such as barns, other storage buildings, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?**

High amount of on-farm investment	20 points
Moderate amount of non-farm investment	19 to 1 point(s)
No on-farm investments	0 points

This factor assesses the quantity of agricultural facilities in place on the proposed site. If a significant agricultural infrastructure exists, the site should continue to be used for farming, and thus the parcel will receive the highest amount of points towards protection from conversion or development. If there is little on farm investment, the site will receive comparatively less protection. See-below:

<b>Amount of On-farm Investment</b>	<b>Points</b>
As much or more than necessary to maintain production (100 percent)	20
95 to 99 percent	19
90 to 94 percent	18
85 to 89 percent	17
80 to 84 percent	16
75 to 79 percent	15
70 to 74 percent	14
65 to 69 percent	13
60 to 64 percent	12
55 to 59 percent	11
50 to 54 percent	10
45 to 49 percent	9
40 to 44 percent	8
35 to 39 percent	7
30 to 34 percent	6
25 to 29 percent	5
20 to 24 percent	4
15 to 19 percent	3
10 to 14 percent	2
5 to 9 percent	1
0 to 4 percent	0

**11. Would the project at this site, by converting farmland to nonagricultural use, reduce the support for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?**

Substantial reduction in demand for support services if the site is converted	10 points
Some reduction in demand for support services if the site is converted	9 to 1 point(s)
No significant reduction in demand for support services if the site is converted	0 points

This factor determines whether there are other agriculturally related activities, businesses or jobs dependent upon the working of the pre-converted site in order for the others to remain in production. The more people and farming activities relying upon this land, the more protection it should receive from conversion. Thus, if a substantial reduction in demand for support services were to occur as a result of conversions, the proposed site would receive a high score of 10; some reduction in demand would receive 9 to 1 point(s), and no significant reduction in demand would receive no points.

Specific points are outlined as follows:

<b>Amount of Reduction in Support Services if Site is Converted to Nonagricultural Use</b>	<b>Points</b>
Substantial reduction (100 percent)	10
90 to 99 percent	9
80 to 89 percent	8
70 to 79 percent	7
60 to 69 percent	6
50 to 59 percent	5
40 to 49 percent	4
30 to 39 percent	3
20 to 29 percent	2
10 to 19 percent	1
No significant reduction (0 to 9 percent)	0

**12. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?**

Proposed project is incompatible with existing agricultural use of surrounding farmland	10 points
Proposed project is tolerable of existing agricultural use of surrounding farmland	9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland	0 points

Factor 12 determines whether conversion of the proposed agricultural site will eventually cause the conversion of neighboring farmland as a result of incompatibility of use of the first with the latter. The more incompatible the proposed conversion is with agriculture, the more protection this site receives from conversion. Therefore, if the proposed conversion is incompatible with agriculture, the site receives 10 points. If the project is tolerable with agriculture, it receives 9 to 1 points; and if the proposed conversion is compatible with agriculture, it receives 0 points.

## CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

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The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor-type site or design alternative for protection as farmland along with the land evaluation information.

For Water and Waste Programs, corridor analyses are not applicable for distribution or collection networks. Analyses are applicable for transmission or trunk lines where placement of the lines are flexible.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

- |                          |                       |
|--------------------------|-----------------------|
| (2) More than 90 percent | (3) 15 points         |
| (4) 90 to 20 percent     | (5) 14 to 1 point(s). |
| (6) Less than 20 percent | (7) 0 points          |

(2) How much of the perimeter of the site borders on land in nonurban use?

- |                          |                   |
|--------------------------|-------------------|
| (3) More than 90 percent | (4) 10 point(s)   |
| (5) 90 to 20 percent     | (6) 9 to 1 points |
| (7) less than 20 percent | (8) 0 points      |

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

- |                          |                      |
|--------------------------|----------------------|
| (4) More than 90 percent | (5) 20 points        |
| (6) 90 to 20 percent     | (7) 19 to 1 point(s) |
| (8) Less than 20 percent | (9) 0 points         |

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

- |                       |           |
|-----------------------|-----------|
| Site is protected     | 20 points |
| Site is not protected | 0 points  |

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)

- |   |               |
|---|---------------|
| As large or larger  | 10 points     |
| Below average deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average | 9 to 0 points |

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

- |  |                  |
|--|------------------|
| Acreage equal to more than 25 percent of acres directly converted by the project         | 25 points        |
| Acreage equal to between 25 and 5 percent of the acres directly converted by the project | 1 to 24 point(s) |
| Acreage equal to less than 5 percent of the acres directly converted by the project      | 0 points         |

- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available	5 points
Some required services are available	4 to 1 point(s)
No required services are available	0 points

- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment	20 points
Moderate amount of on-farm investment	19 to 1 point(s)
No on-farm investment	0 points

- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted	25 points
Some reduction in demand for support services if the site is converted	1 to 24 point(s)
No significant reduction in demand for support services if the site is converted	0 points

- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland	10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland	9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland	0 points

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## **Appendix B**

### Section 106 Finding of No Historic Properties Affected



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## STATE HISTORIC PRESERVATION OFFICE

June 7, 2013

Kandice Krull  
Environmental Protection Specialist  
Federal Aviation Administration  
Minneapolis Airports District Office  
MSP-ADO-600  
6020 28th Avenue South, Room 102  
Minneapolis, MN 55450

RE: Glencoe Airport Improvement Project  
Helen Twp., McLeod County  
SHPO Number: 2013-2130


Dear Ms. Krull:

Thank you for the opportunity to comment on the above project. It has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800.

Based on available information, we concur with your finding that **no historic properties will be affected** by this project.

Please contact our Compliance Section at (651) 259-3455 if you have any questions regarding our review of this project.

Sincerely,

  
Mary Ann Heidemann, Manager  
Government Programs and Compliance

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U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Great Lakes Region  
Minneapolis Airports District Office  
6020 28<sup>th</sup> Ave S, Room 102  
Minneapolis, MN 55450

May 15, 2013

Ms. Mary Ann Heidemann  
Minnesota Historical Society  
State Historic Preservation Office  
345 Kellogg Boulevard West  
St Paul, MN 55102

Re: Determination of Effect for the Glencoe Airport Improvement Project

Dear Ms. Heidemann:

The Federal Aviation Administration (FAA) determined that a Section 106 finding of a *No Historic Properties Affected* is applicable for the Glencoe Airport parallel taxiway project. The FAA respectfully requests the Minnesota State Historic Preservation Office to provide written concurrence with the Section 106 determination of *No Historic Properties Affected*.

If you have any comments, questions, or concerns regarding the analyses and conclusions used to determine the potential effects of the proposed project on historic, cultural, and archaeological resources, or have any questions regarding the project, please do not hesitate to contact me.

Sincerely,

Kandice Krull  
Environmental Protection Specialist  
FAA - Minneapolis Airport District Office  
612-253-4639

Enclosure: No Historic Properties Affected Finding

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## **Appendix C**

Public Notice and Opportunity for Public Hearing

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**NOTICE OF ENVIRONMENTAL ASSESSMENT  
AND OPPORTUNITY FOR PUBLIC HEARING  
Glencoe Municipal Airport  
Parallel Taxiway Airport Improvement Project**

The City of Glencoe has proposed construction of a full-length parallel taxiway to improve safety at the Glencoe Municipal Airport. The Proposed Action consists of a full-length parallel taxiway along the southwest side of the existing runway. The taxiway would be 3,300 feet long to extend the full length of the existing runway.

An Environmental Assessment (EA) has been prepared and is available for public review during regular business hours at the Glencoe City Hall located at 1107 11th Street East, Suite 107 and the Glencoe Public Library located at 1107 11th Street East, Suite 207. The EA will be made available for public review beginning **DATE**. Written comments will be accepted until **DATE**. Please direct written comments to Al Fenedick, FAA Great Lakes Regional Office, 2300 East Devon Ave, Des Plaines, IL 60018.

The proposed project will result in impacts to farmland, wetlands, and surface water run-off. No impacts to rare, threatened or endangered species will result from the proposed project.

Tribal consultation with the Shakopee Mdewakanton Sioux Community will be initiated by the FAA. The FAA issued a finding of No Historic Properties Affected on May 15, 2013 and the State Historic Preservation Office (SHPO) concurred with the finding in a letter dated June 7, 2013

The City of Glencoe is offering the opportunity for a public hearing to address the proposed actions, the potential economic, social and environmental effects and consistency with the goals and objectives of community planning. Anyone interested in the project has up to 15 days from the date of this notice to request a hearing. To request a public hearing, contact Mark Larson, City Administrator, City of Glencoe, 1107 11th St. East, Suite 107, Glencoe, MN 55336, (320) 864-5586.

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