Project Purpose and Need

The purpose of the proposed project is to correct deficiencies associated with Runway 2/20 and its parallel taxiway (Taxiway A). Door County Cherryland Airport (SUE) (henceforth or hereinafter referred to as the Airport) has identified degrading pavement conditions, obstructions to airspace clearance surfaces, substandard Runway Safety Area (RSA) conditions, and electrical equipment that has reached the end of its useful life in order to improve the operational capabilities of the Airport.

There are several needs that would be addressed as part of this proposed project. The first need is to improve the pavement condition of the Airport's primary runway (Runway 2/20) and Taxiway A. A pavement inspection was completed in 2020 to determine the pavement conditions on the airfield. The pavement condition index (PCI) for both Runway 2/20 and Taxiway A are below the critical PCI value, 70/100, for a general aviation (GA) airport. The PCI for the runway is 56/100 and the parallel taxiway is 51/100. The Federal Aviation Administration (FAA) considers these surfaces to be in 'fair' condition for pilots. The Automated Weather Observing System (AWOS) road pavement and proposed primary wind cone service road have significant cracking distress and addressing these pavement conditions during a proposed runway project would minimize airport closure time in the future by concurrently addressing these pavement condition needs in one proposed project.

As the Airport’s pavements have aged, cracking has continued to worsen with exposure to Wisconsin winters and associated freeze/thaw cycles. Aged pavements have been chipping out along cracks, leading to the presence of FOD on Runway 2/20 and Taxiway A.

When work is proposed to address issues with runway pavements, FAA requires airports to evaluate associated safety standards such as the RSA and airspace obstructions. As aircraft fly into an airport, airport specific approaches are followed that safely guide a pilot to runway pavement, including the use of NAVAIDs that use light signals to tell a pilot if the aircraft is following the correct slope to the pavement. These surfaces are further defined in FAA Order 8260.3F - United States Standard for Terminal Instrument Procedures (TERPS). The airspace above and extending beyond a runway must be clear of obstructions to the runway specific approaches and to ensure the light signals are visible. An aerial survey was performed for Runway 2/20 identifying obstructions to these surfaces (reference Figure 17 & 18 – Obstruction Clearing Survey Runway 2 and Runway 20, Attachment 1). To comply with FAA design standards, these obstructions would require removal through selective tree clearing or topping to maintain the runway approach slopes.

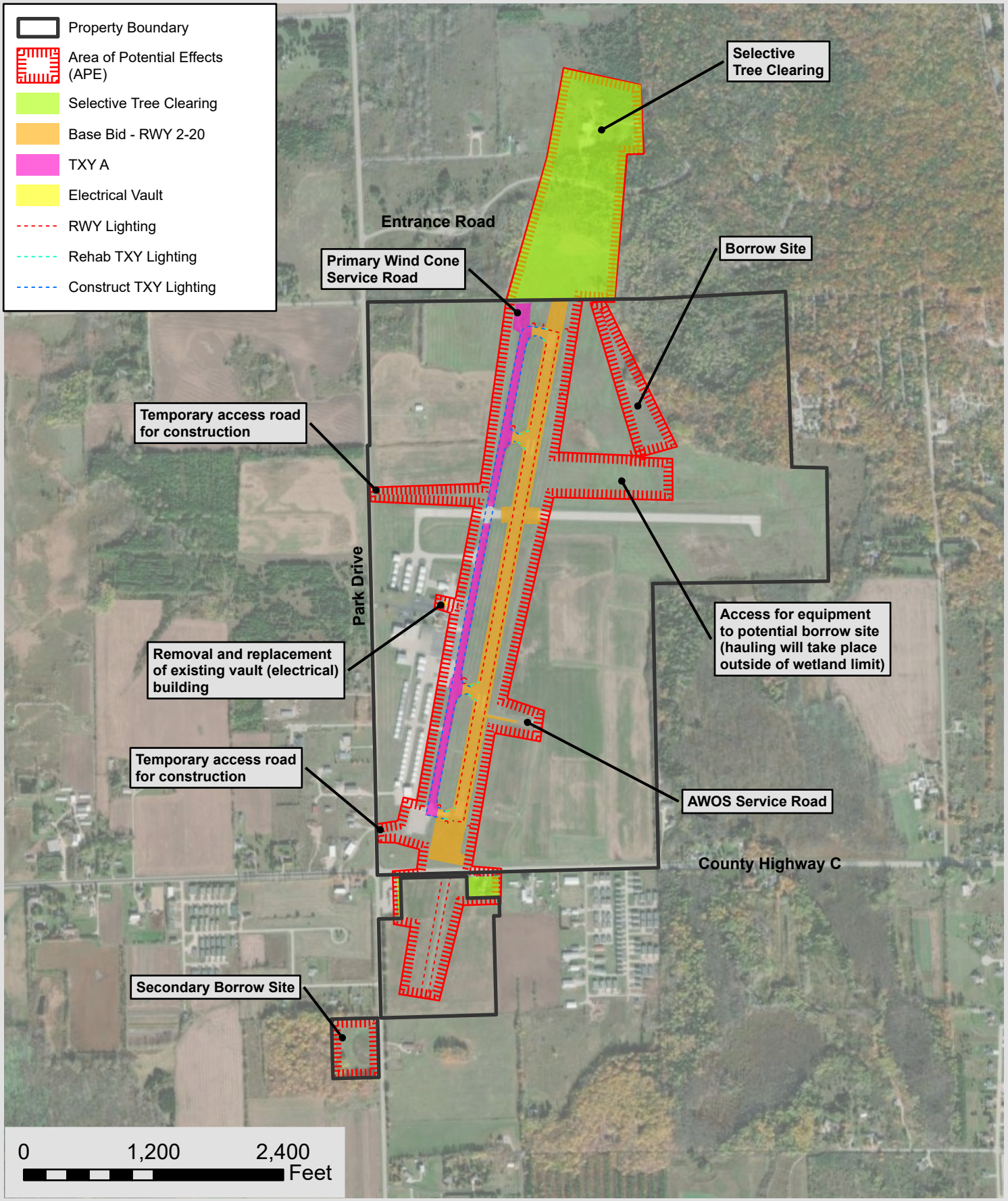
RSA standards are related to aircraft safety. If an aircraft deviates from the runway pavement, the RSA provides an area that the aircraft can navigate safely to come to a stop before major damage occurs to the aircraft, therefore protecting the safety of persons onboard that aircraft. This is a similar concept to a roadway providing a shoulder and appropriate side-slope grading to help protect the car/its occupants during in an instance where a car exits the roadway pavement. Because the RSA is directly related to the safety of the traveling persons, the RSA standards are held in high regard by the FAA, and a waiver to those standards must demonstrate that all other feasible options have been exhausted before it would be granted.

RSA dimensions are set for each runway based on the assigned Aircraft Design Group (ADG) and Aircraft Approach Category (AAC). Based on FAA’s Advisory Circular (AC) 150/5300-13 Airport Design, Runway 2/20 requires a 150-foot-wide RSA extending 300 feet beyond the runway end. A RSA Inventory was performed on Runway 2/20 to identify any areas of non-compliance with the RSA. Non-standard grading for drainage was noted intermittently along the eastern safety area, through the runway 2 approach end safety area on the south end with a drainage ditch running through it, and in northwest RSA corner containing delineated wetlands (reference Figure 19 – RSA

Inventory, Attachment 1). The proposed project would address the need to bring the RSA slopes into compliance.

During the planning process, the Airport identified the need to upgrade associated runway and taxiway lighting, NAVAIDs and other electrical work as part of the project. The existing runway edge lights and taxiway connector edge lights, including the threshold lighting off the runway ends, lead-in lighting for Runway 2, obstruction lights for County Highway C, and guidance signs have reached their useful life in accordance with FAA standards. The current lighting units are outdated luminescent, stake-mounted lights that are not as energy efficient as LED technology. The current runway lead-in lighting system (RLLS) for Runway 2 is not a standard approach lighting system and therefore is not eligible for replacement. The RLLS for Runway 2 would be removed with the project. The existing Runway End Identifier Lights (REILs) on the Runway 2 and Runway 20 ends have reached their useful life in accordance with FAA standards and are also eligible for replacement. A new primary wind cone is proposed with the project with improvements to provide users with a reliable resource on the ground for wind direction information. Due to the proposed electrical work included with the project, the primary wind cone would be most cost effective if installed with the project.

The existing vault building that houses the power sources for the airfield electrical equipment is in poor condition without proper ventilation that is needed to protect the electrical components from overheating. The Airport has a history of lightning strikes on the airfield damaging a large portion of the system with each strike. Updating electrical equipment would help minimize the impacts from future lightning strikes.



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RWY 02/20 REHABILITATION - CONDENSED EA

AREA OF POTENTIAL EFFECTS

DOOR COUNTY CHERRYLAND AIRPORT
TOWN OF NASEWAUPEE, DOOR COUNTY, WISCONSIN

Project Manager:	
Project Engineer:	
Drawn By:	JCW
Checked By:	
Date:	5/6/2024
SCALE:	1 in =1,200 ft
PROJECT NO.	**R3001498.00**
FIGURE NO.	**1**

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