

# Cycle 5 – SOAR Project Requests

February 1<sup>st</sup> - 2024













## **SOAR Overview**

### SOAR Overview

- OAR 738-124
- Cycles 1, 2, 3, and 4 project status
- Current Cash Balance
- Project Prioritization

## Cycle 5 SOAR Project Requests

- Approve Cycle 5 funds for Oakridge Project and Obstruction Removal Equipment
- Approve Cycle 5 funds for Airport Workers and Contingency















### Chapter 738

Division 124 AVIATION SYSTEM ACTION PROGRAM FUND

738-124-0090 **SOAR Program** 

- (1) Application process. The Department shall prepare, as approved by the Director, a list of proposed projects that serve some or all of the purposes described in OAR 738-124-0010(4) ("SOAR project list"). A SOAR project list prepared under this section is an eligible application, consisting of eligible projects, from an eligible Applicant for purposes of these rules. The Department shall forward the SOAR project list to the ARC for review and recommendation.
- (2) Review by the ARC. Applying the criteria in OAR 738-124-0060(2)(c), the ARC shall recommend to the Board the approval or rejection of each project on the SOAR project list.
- (3) Approval by Board. The Board shall approve or reject projects listed in the SOAR project list at a public meeting. The Board may increase or decrease dollar amounts allocated to projects it approves from the SOAR project list.









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OAR 738-124-0010 (3\*) - The purpose of the SOAR program is to distribute funds to state-owned airports for: safety improvements recommended by the Board and local community airports; and infrastructure projects at public use airports.















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- (b) Whether the project proposed in the application:
- (A) Reduces transportation costs for Oregon businesses or improves access to jobs and sources of labor in Oregon;
- (B) Results in an economic benefit to Oregon;
- (C) Connects elements of Oregon's aviation system in a way that will measurably improve utilization and efficiency of the system;
- (D) Is ready for construction or implementation, including whether the project has any unique construction-readiness, project implementation challenges, or possible delays; and
- (E) Has a useful life expectancy that offers maximum benefit to Oregon.
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# Cycles 1, 2, 3, and 4 Status









# Cycles 1, 2, 3, and 4 Status

- Cycle 1 all projects completed
- Cycle 2 projects carried forward:
  - Prospect Runway Reconstruction \$2,000,000 (only \$796,800 needed to match Connect. OR grant)
  - Mulino Water/Fire Suppression \$422,514.90
- Cycle 3 projects carried forward:
  - All Airport Capital equipment \$100,000
  - Cape Blanco ALP & Planning Update, Obstruction Removal \$105,000
  - Cascade Locks ALP Update, Pilots Lounge \$285,000
  - Pacific City Ramp Paving, Drainage Improvements \$253,390,31 remaining after completing property acquisition
- Cycle 4 projects carried forward:
  - Cape Blanco Runway Rehab and Electrical Improvements \$1,222,779.20
- Total projects carried forward \$3,185,484.41











# Project Prioritization

- SOAR Cash Balance (1/23/2024) \$3,392,462.39
- Priorities
  - Safety and Operational Runways
    - Cycle 4 Cape Blanco Runway and Electrical Rehab \$1,222,779.20
    - Cycle 2 Prospect Runway Reconstruction \$796,800
    - NEW Cycle 5 Oakridge Reconstruction and Modernization \$1,000,000
    - NEW Cycle 5 Obstruction Removal All Airports \$250,000
  - Connect OR Match
    - Cycle 2 Mulino Water / Fire Suppression \$422,514.90
- Total priority projects \$3,692,094.10
  - Plus \$200,00 for contingency and Admin/Airport Workers















# Cycle 5 – SOAR Requests











## State Owned Airports Reserve (SOAR) Program SOAR Cycle 5 2024-2025

**Project name:** Oakridge Runway Reconstruction and Modernization

Airport: Oakridge State Airport

### **Project Description:**

To keep the Oakridge State Airport open and safe for public and firefighting use, the runway requires rehabilitation. A 2023 planning level estimate for a project to rehabilitate the runway and apron estimated the cost to be \$3,240,000.00. The planned project scope included milling existing surface aggregate, an 8" fill of new aggregate base course, new 3" pavement surface, and shoulder grading on the runway and the connecting taxiway to the apron. New supplemental solar lighted wind cones are also planned at each runway end for improved safety and visibility.

The Economic Development Administration (EDA) offers a unique funding opportunity to modernize the Oakridge State Airport by introducing emerging technologies in Advanced Air Mobility (AAM) and Unmanned Aerial Systems (UAS) along with the rehabilitation of the runway, connecting taxiway, and apron.

The modernization and redevelopment of Oakridge State Airport as a multi-use, technology-enabled rural airport involves several key, closely interrelated projects to transform the airport and its role in the City of Oakridge:

- 1. Airport facilities modernization, including upgrade and modernization of the runway and apron and expansion to support additional fuel and charging sources and vertiport facilities that support the wildfire fighting mission, the next generation of wildfire fighting with uncrewed and autonomous aerial systems, and the implementation of AAM for logistics and transit;
- 2. A Minimum Viable Infrastructure (MVI) Enhanced Aviation Safety Service Area (EASSE) including micro-weather, digital NAVAIDS, and multimodal surveillance to support common vehicle integration, navigation, and awareness on a publicly owned and operated network at Oakridge, Crescent Lake, and Cottage Grove State Airports ensures a viable AAM route over the Cascades;
- 3. Integrating the MVI EASSE and three state airports into a full UAS Traffic Management (UTM) / Provider of Services for UAM (PSU) to manage mixed mode traffic with integration of general aviation and next generation uncrewed and autonomous AAM vehicles to support AAM operations for advanced wildfire fighting capabilities throughout the Cascades as well as autonomous cargo and freight that support greater firefighting capabilities, greater community resiliency during climate emergencies, and improve equitable access to Oakridge; and
- 4. Leverage the MVI capabilities to add additional SMART community capabilities in Oakridge, such as air quality, flood, and fire detection sensors that support climate resilience and further protect this critical location for wildfire fighting.

<b>Total Project Cost</b>
<b>Total SOAR Requested</b>

\$1,000,000	
\$5,970,436	

**Reduce Transportation Costs or Improved Access to Jobs:** Does the proposed transportation project reduce transportation costs for Oregon businesses or improve access to jobs and sources of labor?

The modernized Oakridge State Airport will support wildfire fighting in the Cascade Range, where it is desperately needed; support Advanced Aerial Mobility (AAM) and autonomous logistics, connecting communities on both sides of the state; and act as a hub for workforce development, training, and high-tech jobs in a remote rural community that needs these opportunities. The development of Oakridge State Airport will make Oregon more resilient against climate change, connect and protect rural communities in central Oregon, and create a model for rural high-tech job development through transportation.

The Multi-Use, technology enabled Oakridge State Airport will be a de facto center for education and new workforce development around these technologies and transit capabilities in the community, as well as creating technician and logistics jobs.

**Economic Benefit:** Does the proposed transportation project result in an economic benefit to the state?

The Multi-Use, technology enabled Oakridge State Airport supports autonomous logistics that connect the rural community of Oakridge to the statewide aviation and transit system, transforming a rural mountain community into a key aviation logistics hub for east-west traffic across the Cascades.

The modernized Oakridge State Airport will act as a hub for additional SMART community capabilities including fire detection / air quality sensors, and flood sensors that can not only provide early warning for wildfires, but help protect Oakridge as a key base of operations during wildfire season;

**Critical Link:** Is the proposed transportation project a critical link connecting elements of Oregon's aviation system that will measurably improve utilization and efficiency of the system?

The Multi-Use, technology enabled Oakridge State Airport supports the next generation of advanced logistics, allowing better goods and supplies for daily life and for resilience in climate and weather emergencies, such as extreme weather events, wildfires, and other incidents – Highway 58, the only road into Oakridge, has been closed 120 times in the past 8 years.

This project will provide a key base to expand wildfire fighting in the Cascades, a mission Oakridge already supports, through the implementation of UTM and autonomous technologies - wildfires in the Cascades have burned over 250,000 acres in the past ten years and Oakridge State Airport has supported over 150 days of wildfire fighting operations in the past four years.

**Project Readiness:** Is the proposed transportation project ready for construction or ready for implementation?

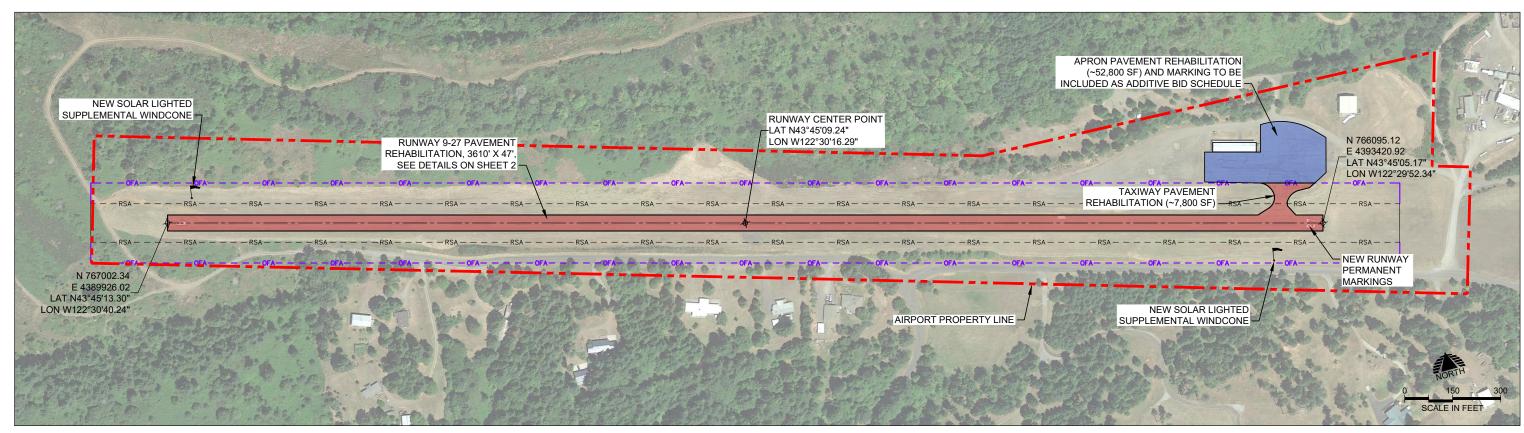
This project has been closely conceptualized with key industry leaders and governing agencies on the local, state, and federal level. The Oregon Department of Aviation is planning for \$1,000,000 of its SOAR funds, and is applying for an Economic Development Administration (EDA) Grant to fund the remainder of the total project cost

of \$5,970,436. Once the EDA grant is awarded, the project will be designed and construction is anticipated to start in the 2025 construction season.

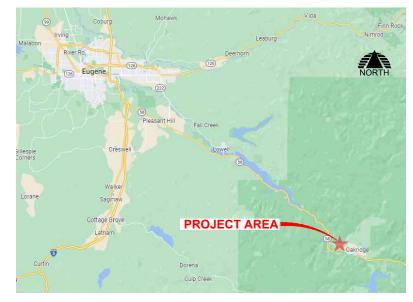
**Life Expectancy:** Does the proposed transportation project have a useful life expectancy that offers maximum benfit to the State?

Designed with aerial firefighting operations in mind, the airport will have an estimated lifespan of 40-60 years with regular maintenance.

# OAKRIDGE STATE AIRPORT RUNWAY 9-27 PAVEMENT REHABILITATION



SITE MAP



**VICINITY MAP** 

ESTIMATED PROJECT COST				
Environmental / Permitting:	\$36,000			
Engineering:	\$213,000			
Runway / Taxiway Construction:	\$2,381,000			
Apron Construction:	\$610,000			
TOTAL	\$3,240,000			

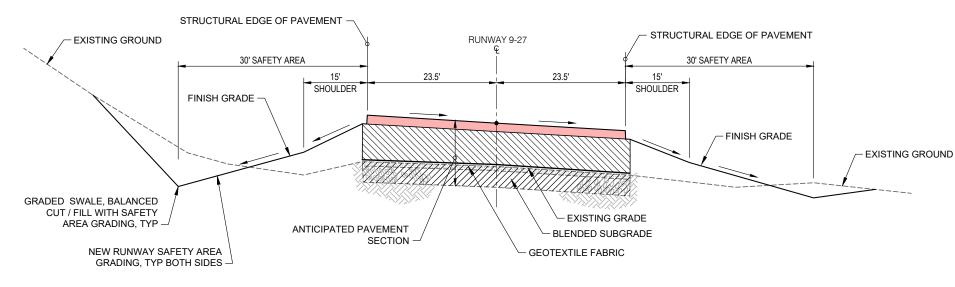
Project Construction anticipated in 2025

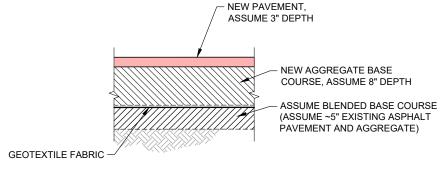
5125 Southwest Hout Street Corvallis, OR 97333 OAKRIDGE STATE AIRPORT RUNWAY 9-27 PAVEMENT REHABILITATION

**COVER SHEET** 

SHEET 1

DEC 2023





ANTICIPATED REHABILITATION PAVEMENT SECTION DETAIL

NTS

ANTICIPATED RUNWAY 9-27 REHABILITATION TYPICAL SECTION NTS

#### **NOTES**

- ASSUMED PAVEMENT SECTION INFORMATION IS FOR PROJECT COST ESTIMATING PURPOSES ONLY. SECTION REQUIRES SITE SPECIFIC ANALYSIS AND DESIGN.
- 2. DESIGN ASSUMES SOIL REQUIRED FOR SHOULDER EMBANKMENT CAN BE SOURCED FROM ONSITE BORROW EXCAVATION.
- 3. PAVEMENT SECTION UNDERDRAIN SYSTEM IS NOT INCLUDED.

OAKRIDGE STATE AIRPORT RUNWAY 9-27 PAVEMENT REHABILITATION



### **Project Overview**

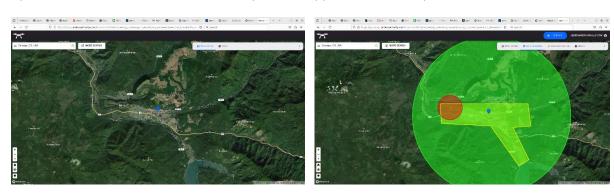
The Oregon Department of Aviation is reimagining its Oakridge State Airport asset as an Airport of the Future, serving the needs of the community, Oregon, and beyond: *the airport as heart of the community*. The re-imagined Oakridge State Airport will support wildfire fighting in the Cascade Range, where it is desperately needed; support Advanced Aerial Mobility (AAM) and autonomous logistics, connecting communities on both sides of the state; and act as a hub for workforce development, training, and high tech jobs in a remote rural community that needs these opportunities. The development of Oakridge State Airport will make Oregon more resilient against climate change, connect and protect rural communities in central Oregon, and create a model for rural high-tech job development through transportation.

Oakridge Airport is uniquely suited to this vision, and Oregon Department of Aviation sees an opportunity to use a regular maintenance upgrade to reimaging and reconfigure Oakridge State Airport as a multi-use, smart-technology-enabled airport of the future to support wildfire fighting, logistics, and resilient SMART community development. The Oakridge State Airport of the Future is ideally situated in the center of the Cascade Range that divides Oregon into West and East and supports multiple missions that have the potential to reshape education and workforce in the City of Oakridge:

- A Multi-Use, technology enabled rural airport provides a key base to expand wildfire fighting in the Cascades, a mission Oakridge already supports, through the implementation of UTM and autonomous technologies - wildfires in the Cascades have burned over 250,000 acres in the past ten years and Oakridge State Airport has supported over 150 days of wildfire fighting operations in the past four years;
- A Multi-Use, technology enabled rural airport supports the next generation of advanced logistics, allowing better goods and supplies for daily life and for resilience in climate and weather emergencies, such as extreme weather events, wildfires, and other incidents Highway 58, the only road into Oakridge, has been closed 120 times in the past 8 years;
- A Multi-Use, technology enabled rural airport supports autonomous logistics that connect the
  rural community of Oakridge to the statewide aviation and transit system, transforming a rural
  mountain community into a key aviation logistics hub for east-west traffic across the Cascades;
- A Multi-Use, technology enabled rural airport will act as a hub for additional SMART community capabilities including fire detection / air quality sensors, and flood sensors that can not only provide early warning for wildfires, but help protect Oakridge as a key base of operations during wildfire season; and
- A Multi-Use, technology enabled rural airport will be a de facto center for education and new workforce development around these technologies and transit capabilities in the community, as well as creating technician and logistics jobs.



With a 3,644-foot runway on 45 acres, Oakridge State Airport is large enough to handle wildfire fighting aircraft and all ranges of next generation aircraft currently contemplated by AAM, from small UAS to large eVTOL and hybrid next generation aircraft. It is small enough to be an ideal model for rural general aviation airports across the country that can act as a demonstrator for creating Airports of the Future across America. The airport is ideally positioned to be a key logistics hub for wildfire fighting, emergency, and commercial logistics at 25 miles from Cottage Grove (adjacent to I-5) and 25 miles from Crescent Lake (15 miles to the Highway 97 corridor). Finally, the position of Oakridge State Airport in the City of Oakridge allows it to leverage the existing fiber broadband connect to Eugene and demonstrate a sustainable future with an airport transit hub that is bikeable, walkable, and serviceable by small UAS in the heart of a community that is supportive of the airport.



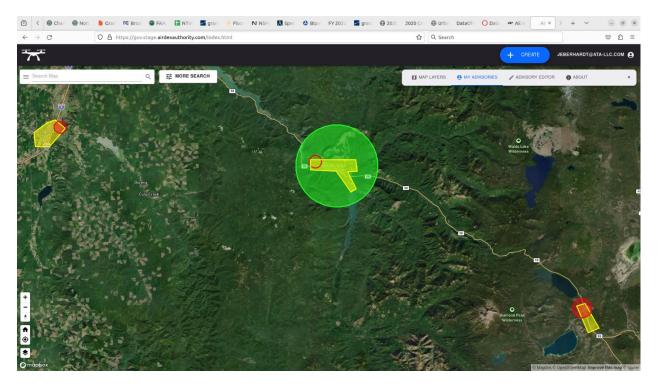
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### **Project Approach**

The initial service area consists of: i) Cottage Grove State Airport in the western foothills of the Cascades with a 6 square mile Tier 2 (Medium Density) MVI service volume and a 3 square mile tier 3 (High Density) MVI service volume encompassing Cottage Grove State Airport; ii) Crescent Lake State Airport in the eastern foothills of the Cascades with a 6 square mile Tier 2 (Medium Density) MVI service volume and a 3 square mile tier 3 (High Density) MVI service volume encompassing Crescent Lake State Airport; and iii) the Oakridge State Airport in the center of the Cascades with a 6.5 square mile Tier 2 (Medium Density) MVI service volume encompassing all of the populated areas, a 3 square mile tier 3 (High Density) MVI service volume encompassing Oakridge State Airport, and a 30 square mile (Low Density) MVI service volume to support autonomous operations and traffic deconfliction in the greater Oakridge service area.



The Oakridge Airport of the Future project demonstrates key benefits for the community, the State of Oregon, and for the country as a whole as a demonstrator project for climate resilience, technology workforce development, and equitable access for rural communities across the U.S. The project will specifically enable the following advanced community capabilities:

 A modernized airport that can support AAM-style operations, including charging and fueling for next generation electric and hybrid-electric aircraft, high speed data communications for command and control of autonomous and remotely piloted aircraft, the ability to provide NAVAIDS for digital flight rules, and ground based sensor services to support detect-and-avoid



capabilities required for autonomous and beyond visual line of sight (BVLOS) flight that can showcase environmentally sustainable development of this region;

- The ability to conduct mixed mode wildfire fighting operations, leveraging the modernized airport services married to a fully integrated regional UTM system to leverage UTM for flight planning and deconfliction in a high-tempo, mixed mode environment such as wildfire fighting that improve the climate resilience of this region;
- Provision of new digital services to improve the safety of the conventional general aviation community as they are AAM and UTM wildfire fighting operations are integrated into the general aviation community;
- Support for next generation AAM middle mile logistics and future passenger services through
  digital services and communications that support long distance BVLOS and autonomous flight
  through a fully-integrated UTM/PSU system that also integrates with digital services on the
  general aviation side improving equitable access to goods, services, and employment
  opportunities for this rural community; and
- The development of new, well-paid blue-collar technician jobs in the AAM, SMART community, and firefighting fields, with a focus on an integrated workforce development and training effort in sensor deployment, operation and maintenance, AAM maintenance and operations, data processing and analysis, and AAM / wildfire fighting logistics management.

### Project ROM Budget

The project rough order of magnitude (ROM) budget consists of the following components:

- Project administration and oversight (including ODAV personnel and indirects): \$725,754
- Airport Facilities Modernization (including runway, apron, and facilities): \$3,440,000
- Implementation of sensors (including airspace MVI and SMART communities): \$1,285,459
- Airspace operations (including safety case and oversight): \$126,933
- Operator integration (including UTM/PSU systems integration): \$416,289
- Total ROM Budget: \$5,970,436



## State Owned Airports Reserve (SOAR) Program SOAR Cycle 5 2024-2025

Project name: State Airport Obstruction Removal Equipment Acquisition
Airport: All State Airports

### **Project Description:**

This application is for the acquisition of specialized equipment that will enable Oregon Department of Aviation (ODAV) staff to remove existing tree obstructions and other dense vegetation from FAR Part 77 navigable airspace at all 28 state owned airports. The specialized tractor and mulching head attachment can fell the largest trees present at state-owned airports, it can also mulch the logs, limbs, and stumps for complete removal and finishing cleanup.

After all obstructions on state airport property are removed, the equipment will be needed to maintain the properties free of new obstructions as well as dense vegetation such as briars, scotch broom, and vegetation in areas that are too rough for regular grass cutting equipment.

The skid-steer/tractor equipment and mulching attachment can be transported to all state airports, and the equipment can be used for other airport maintenance purposes should ODAV need to acquire or rent additional attachments for other specialized tasks.

In the Winter of 2022-2023, ODAV rented a similar piece of equipment for \$23,000 for a minimum of 4 weeks. Long-term rental or hiring contractors for the amount of obstruction removal that is needed would exceed the overall acquisition cost. Acquisition of this mulching equipment and maintaining airport property in-house is the most cost-effective long-term solution.

Total Project Cost	\$250,000
2 0 0 0 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0	4=20,000

**Reduce Transportation Costs or Improved Access to Jobs:** Does the proposed transportation project reduce transportation costs for Oregon businesses or improve access to jobs and sources of labor?

By removing safety hazards in navigable airspace, this equipment will ensure the continued safe operation of all state airports. The removal of obstructions in FAR Part 77 surfaces will allow aircraft more direct access to their ultimate destination in cases where the obstruction would restrict their ability to use the airport due to performance, ratings, or other limitations. The most direct access reduces overall transportation costs compared to more distant alternatives.

**Economic Benefit:** Does the proposed transportation project result in an economic benefit to the state?

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By ensuring the most direct access to each state airport, the airports' local communities will benefit from commerce that otherwise would be diverted to another airport/community.

**Critical Link:** Is the proposed transportation project a critical link connecting elements of Oregon's aviation system that will measurably improve utilization and efficiency of the system?

Some state airports such as Cape Blanco, Cascade Locks, Oakridge, McKenzie Bridge, Nehalem Bay, and Prospect have extensive obstruction removal needs. These airports are a critical link to the National Airspace System for their rural communities.

In the event of an emergency, airports play critical roles in providing access for emergency supplies and transportation. Ensuring the airspace is safe and clear of obstructions is the best way to preserve this critical link for all possible aircraft activity.

**Project Readiness:** Is the proposed transportation project ready for construction or ready for implementation?

Once approved, these funds will immediately go toward the acquisition of the equipment for use during the next obstruction removal window outside of nesting season (October 1<sup>st</sup> through March 31<sup>st</sup>). The equipment is expected to enter service in the fall of 2024.

**Life Expectancy:** Does the proposed transportation project have a useful life expectancy that offers maximum benfit to the State?

With proper maintenance and care, the skid-steer/tractor equipment is expected to provide a useful life expectancy of more than 10 years. The mulcher teeth/blades will receive regular sharpening, replacement and regular maintenance according to the manufacturer's recommendations.



# SOAR Cycle 5 Projects

- Oakridge Runway Reconstruction and Modernization Project
  - \$1,000,000.00
- Obstruction Removal Equipment Acquisition
  - \$250,000
- Cycle 5 Project requests: \$1,250,000
- Cycle 5 Contingency \$100,000
- Cycle 5 Airport Workers \$100,000
- Total Cycle 5 requested: \$1,450,000.00











# Approval of SOAR Cycle 2 **Project Overages**

### **Approval of SOAR Projects**

ODAV requests Aviation Board approve SOAR funding for the Oakridge Runway Reconstruction and Modernization Project, and Obstruction Removal Equipment Acquisition as presented.













# Approve Cycle 4 Airport Workers and Contingency

### **Approval of SOAR Projects**

ODAV requests Aviation Board approval for \$200,000 in Cycle 5 for:

- \$100,000 Admin Airport Workers
- \$100,000 Small Project Contingencies





