January 21, 2025

Alex Thomas, Planning and Programs Manager Tony Beach, State Airports Manager Brandy Steffen, JLA Oregon Department of Aviation 3040 25th St SE Salem, OR 97602 <u>Alex.R.Thomas@odav.oregon.gov</u>

Re – Comments to Refined Preferred Alternative, Aurora State Airport Master Plan, Report on HDSE Easement, Drain Field Options, and AAIA's Request for Involvement in Master Plan Process

Dear Mr. Thomas,

Please include documents in the record.

1. HDSE Easement and Drain Field Lease

HDSE enjoys an easement in perpetuity for its drain field, which is located at the south end of Aurora Airport, inside the Runway Safety Area (RSA). In addition to the easement, HDSE holds a lease for the drain field. HDSE properly executed the first of two five-year extensions for the lease, with the first extension period ending in August 2029.

Should the Oregon Department of Aviation (ODAV) determine, for any reason, that the drain field needs to be relocated, it will be ODAV's responsibility to financially compensate HDSE for its investment in the drain field, which was made in good faith. The following are proposed options for addressing the current situation with the drain field:

Proposed Options for the Drain Field:

• Option 1a: Retain the Current Drain Field and Install Geo-Tech Fabric System

One option is to leave the drain field in its current location and install a geotech fabric system. This system, as per the previously submitted study, would support the operation of a CII (Civil International) aircraft and rescue equipment, in compliance with the FAA guidelines set forth in AC150/5300-13b, sections 3.10.1.4 and 3.3.a. This would allow the drain field to remain in place as a previously constructed, man-made improvement, like examples such as "a railroad at the end" outlined in FAA Order 5200.8, Appendix 1, 2.d. If necessary, this option could be combined with the following option, 1b.

• Option 1b: Retain the Current Drain Field and Install Engineered Material Arresting System (EMAS)

Another option is to keep the drain field in its current position and, in accordance with AC150/5300-13b, section 3.10.2.3, install an Engineered Material Arresting System (EMAS) to provide protection for CII aircraft within the RSA. The attached document in Tab A outlines this approach. The benefits of implementing EMAS at KUAO are numerous:

- The overrun area at the end of the runway provides an additional 300 feet of space for aircraft to begin their takeoff roll, allowing for an earlier rotation compared to the Refined Preferred Alternative.
- An earlier rotation translates to higher altitudes and reduced noise levels over congested areas in the event of an overflight directed by Air Traffic Control (ATC).
- This solution would enhance the safety of operations for both based and transient CII aircraft.
- The system would improve operational efficiency for based and transient aircraft, contributing to the overall performance of the airport.

• Option 1c: Relocate the Drain Field

The third option is to move the drain field to a designated acquisition property located directly east of its current position, outside the RSA but within the new airport boundary. This relocation would provide several key advantages:

- The property could be utilized to its best and highest potential, supporting and protecting investments at KUAO, in accordance with Oregon Revised Statute (ORS) 836-642.
- The relocation would minimize the airport's impact on surrounding valuable farmland by negating the need to establish a drain field outside the airport's boundaries.

• A larger area for the drain field could be developed, potentially serving the entire airport's needs.

2. AAIA's Request for Involvement in the Master Plan Process

The AAIA (Aviation Airport Industry Association) strongly requests that ODAV involve Through the Fence (TTF) parties as collaborative partners in the airport Master Plan process moving forward. This request applies across all state airports. The AAIA highlights the following reasons for their involvement:

- **Direct Impact and Proximity:** Through the Fence parties are located within the confines of the airport property, meaning they are directly affected by any developments or changes proposed in the Master Plan. As such, their interests and operations are more closely impacted than those of any other participants in the planning process.
- **Private Investments Based on ORS 836-642:** Through the Fence parties have made private investments based on the efficacy and stipulations of Oregon Revised Statute 836-642. These investments contribute to the airport's development and its operational success.
- Source of Airport Improvement Needs: The investments made by TTF parties contribute directly to the need for airport improvements. These improvements, in turn, are necessary for ensuring safety, efficiency, and respectful business operations, which must be coordinated with the surrounding communities.

In conclusion, HDSE and AAIA advocate for greater collaboration between ODAV and Through the Fence parties to ensure the future growth and operational success of state airports. Their inclusion in the planning process would allow for better alignment of goals, enhance safety, and support the continued development of the state's aviation infrastructure.

Sincerely,

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Lukas Nickerson Chair HDSE

Signed by: Tony Helbling Tony Helbling Chair AAIA

Tab A

We consulted with Runway Safe Inc. in Logan Township, NJ with primary staff and Mike Barnes as their lead contact person, knowing that they provide an FAA approved Engineered Materials Arrestor System (EMAS) regularly used to reduce the length of Runway Safety Areas (RSA) per AC150-5300-13B Section 3.10.2.3:

Engineered Materials Arresting Systems (EMAS).

Installing EMAS is an acceptable alternative where it is not practicable to obtain the standard RSA dimensions. A properly designed EMAS decelerates an aircraft during an excursion incident without damaging the landing gears, thus providing an equivalent level of safety to a standard RSA. The presence of an EMAS does not diminish the standard RSA width. Refer to AC 150/5220-22, Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns, for guidance on planning, design, installation, and maintenance of EMAS. Refer to FAA Order 5200.9, Financial Feasibility and Equivalency of Runway Safety Area Improvements and Engineered Material Arresting Systems, to determine the best practical and financially feasible alternative. Key design considerations for EMAS performance include:

 Aircraft weight, landing gear configuration, tire pressure, and entry speed.
Stopping the "EMAS critical aircraft" upon exiting the runway at 70 knots is a primary design condition.

3. Application of a standard EMAS may maximize the available runway length.

We discussed the specifics of the Aurora Airport master plan considerations for preserving the drain fields that are necessary for supporting the 1,500 jobs on the airport. In learning more about their EMAS system, we learned that the EMAS material itself is set back approximately 350 feet from the end of the runway, allowing those 300 feet to also function as more runway for takeoffs (but not for landings).

Runway Safe Inc. suggested Aurora might use a design similar to their design that was installed with FAA funds at Rutland – Southern Vermont Regional Airport, which is a C-II airport. It is an example of what could serve Aurora very well. Attached is the Rutland ALP showing how it is placed at the approach end of Runway 1 which then the FAA approves at a 600 foot RSA in lieu of the standard 1000 foot long RSA.

The Rutland 2022 MP describes the use of EMAS for Runway 1 as follows:

3.2.3.2 Runway Safety Area (RSA)

According to AC 150/5300-13A, standard RDC C-II runway dimensions include a length beyond the runway end of 1,000 feet, a length prior to the runway end of 600 feet, and may have a width as narrow as 400 feet. Runway 1 is equipped with a 300-foot Engineered Materials Arresting System (EMAS), effectively reducing the required RSA length beyond the departure end to 600 feet. Approximately 600 feet beyond the Runway 19 end, the terrain decreases substantially to Vermont State Route 103 and does not provide the standard 1,000' length. However, this non-standard length was found acceptable as part of a 2007 RSA Determination by the FAA. As activity levels and the design aircraft are not forecast to substantially change during the planning period, the RSA determination will likely remain valid. If the FAA determination is changed and a full 1,000-foot RSA is necessary, it would then be recommended that the north end of the runway be equipped with an EMAS bed similar to the south end.

As can be seen on the ALP, the FAA in this case allowed the 19 end of the Runway to even have a completely deficient RSA that has a road through it. The resolution was that in the future EMAS could be added there to solve that deficiency.

The Runway Safe Inc. staff coordinated with the State of Vermont's aviation department, which manages Rutland Airport. They would very much look forward to working with the ODAV in examining the potential use of EMAS at Aurora. They offered that ODAV staff could call:

Mike Barnes can be reached directly at <u>mike.barnes@runwaysafe.com</u> or cellphone: 856-491-6315

(ENTIRE Rutland ALP sent in separate file)