



February 10, 2018

House Transportation Chair Susan McLain, Vice Chairs: Mark Meek & Richard Vial

Members: Reps. Daniel Bonham, Paul Evans, Ronald Noble, Andrea Salinas, Carl Wilson, Brad Witt (cc: Sen. Peter Courtney, Rep. Tina Kotek)

Thank you for the opportunity to testify before the Transportation Committee yesterday in opposition to HB 4092. Given that the hearing is being carried over until Monday, I am taking this opportunity to follow up on three points raised during public comment yesterday.

The first concerns the 1979 Master Plan for the Aurora Airport, and the specific nature of the “Recommendations” in that plan regarding local jurisdictions. It says

“The State should continue to work closely with Marion and Clackamas Counties to develop compatible land use planning for the airport environs.....The State should work closely with Marion and Clackamas Counties to develop zoning changes on and near the airport as recommended by the Master Plan.....In updating the Master Plan the State should work closely with the airport users, local governments, and citizens.”

To me this recommendation clearly emphasizes the intent found in our Oregon land use laws: local jurisdictions are to work together and go through the existing land use process before (if at all) pursuing a legislative legal fix.

The second concern relates to the case made for Emergency Preparedness needs. The case was made by Rep. Lewis about the safety hazards due to the current length of the runway at Aurora Airport. Another safety hazard is being ignored, and it was mentioned by Mayor Knapp of Wilsonville: the earthquake hazards at the Aurora Airport. Much of the emergency preparedness justification is to respond to a major natural catastrophe like a Cascadia Event, but no one seems to have coordinated with the Oregon Department of Geology and Mineral Industries and acquainted themselves with the attached Earthquake Hazard Maps for the area.

These maps show that the southern portions of the Aurora Airport are subject to moderate to high earthquake hazards including liquefaction and amplification effects. My father was a geologist, and his illustration is simple: what will happen in the event of a major earthquake is the same as hitting the side of a bowl of Jello with a wooden spoon. The runway will be

rendered unusable. So, the whole notion of improving the runway area to respond to the very event that will render it useless is highly questionable.

Finally, a comment on the “-3” amendment, which is intended to limit uses on the runway area as defined in this bill to “ground-based navigation facilities and related navigation equipment and any fencing required for airport safety or security.” That is all well and good, but it does not address the larger EFU ag land issue and negative impacts on local agriculture. Yesterday in the hearing was the first time I have heard the airport expansion proponents publicly state that Kiel Road would close (the portion wrapping around the south end of the runway) and then be re-routed south to Ehlen Road. That means somewhere between Airport Road and the current runway Kiel Road will be routed south to intersect with Ehlen Road. See attached map.

That action will terminate the local agricultural usage of Kiel Road to farm on both sides of the airport, and Mike Iverson of Aurora Farms testified that he estimates his farm travel costs will increase by 300% when this happens. It will also split the remaining 100 or so acres of EFU ag land between the runway area on the west and the Aurora City boundary on the east into two orphaned blocks of ground. They will essentially be un-farmable, being overflowed by prop and jet aircraft on the west, bounded on the south by Aurora’s major arterial and dissected by a major local feeder road. This land then is set up for the next major consequence of this bill: re-zoning all that ag land for aviation-related commercial or light industrial uses. There goes 100 acres, which is not an inconsequential loss of ag land.

I hope this additional information helps to make the case that this airport expansion proposal should go through the normal land use process under the current land use system where all the implications and consequences can be considered in detail and mitigated. This is simply too complicated a matter to try to solve with a legislative carve out bill.

Sincerely



Benjamin D Williams

Friends of French Prairie

RELATIVE EARTHQUAKE HAZARD MAPS OF THE AURORA AIRPORT AND ENVIRONS

A significant basis for justifying HB 4092 has been the need for enhancing the Aurora Airport for emergency responsiveness, particularly in the event of a major earthquake or Cascadia event. This is confirmed via an amendment to the bill posted on February 5 which reads as follows:

“SECTION 5. The Oregon Homeland Security Council shall consider a state airport, as defined in section 1 of this 2018 Act, to be a critical emergency preparedness, response, recovery and resiliency platform and shall prioritize state airports for resiliency investments.”.

What is missing from this intention is consultation with the State of Oregon Department of Geological and Mineral Industries, who have performed geological surveys of this area of the State and created Hazard Maps which show that the southern half of the Aurora Airport and runway are located within a significant hazard zone.

These maps follow, and specifically illustrate the following:

The **Relative Earthquake Hazard Map** of the Aurora Airport indicates that the southern half of the existing runway, and all of the proposed runway extension, “based on the combined effects of ground shaking application, liquefaction, and earthquake-induced landslides” are within “Zone B — **Intermediate to high hazard**”. (Zone A is Highest hazard and Zone D is Lowest hazard).

The **Relative Amplification Hazard Map** of the Aurora Airport indicates that the southern half of the existing runway, and all of the proposed runway extension, “based on the degree to which shaking from a given earthquake is likely to amplify” are within the “**Medium amplification hazard** (UBC soil type D)”. (UBC soil type E has the Highest amplification hazard and UBC soil type C has the Lowest amplification hazard).

The **Relative Liquefaction Hazard Map** of the Aurora Airport indicates that the southern half of the existing runway, and all of the proposed runway extension, “based on the likelihood that liquefaction will occur in a given earthquake” are within the “**Medium liquefaction hazard** zone.

The **Relative Hazard Map Earthquake-Induced Landslides** of the Aurora Airport indicates that the southern half of the existing runway, and all of the proposed runway extension, “based on the possibility that a given earthquake will trigger landslides”, are within the “**Low landslide hazard**” zone; the northern half of the Aurora Airport is outside of the Relative Earthquake-Induced Hazard zone.

The report from which the maps are drawn states the following:

This document was prepared by Friends of French Prairie and is submitted for the record re: HB 4092

"The geology of the [Canby-Barlow-Aurora] area is relatively complex with two units of Quaternary sediments overlying bedrock... part of which is "Columbia River Basalt Group... overlain "by several hundred feet of Pliocene-Pleistocene fluvial silt- and sandstone. The Quaternary sediments consist of silt, sand, and gravel and were deposited by southward flowing catastrophic floodwater associated with drainage of Glacial Lake Missoula (Bretz and others, 1956; Waite, 1985) and flowing south through the area. The floodwaters scoured an irregular surface on the bedrock units, then deposited an irregular body of pebble to boulder gravel on the scoured surface. The gravel is overlain by sand and silt deposited by waning floodwaters. The Willamette and Mollala Rivers have cut into the flood deposits and have deposited small amounts of fluvial sediment on their floodplains."

What is clearly shown in these maps and detailed in the report is that portions of the Aurora Airport are subject to significant earthquakes and associated significant earthquake-related effects (liquefaction and amplification) that a moderate to severe earthquake would in all likelihood render the runway and much of the airport unusable. Further, in the event of a major and catastrophic event such as a Cascadia event, it is certain that the Aurora Airport and runways would be unusable.

The Aurora Airport may be an appropriate site for aviation related relief in the case of forest fires or other types of catastrophes. However to assert that it would functionally survive a major earthquake event is to consciously ignore the geologic realities.

Map Source:

State of Oregon

Department of Geological and Mineral Industries (DOGAMI)

John D. Beaulieu, State Geologist

These maps were produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-97-GR-03118

Madin, Ian P., Wang, Zhenming, 1999, Interpretive Map Series IMS-8: Relative Earthquake Hazard Maps for Selected Urban Areas in Western Oregon", Canby-Barlow-Aurora, Lebanon, Silverton-Mount Angel, Stayton-Sublimity-Aumsville, Sweet Home, Woodburn-Hubbard: Oregon Department of Geology and Mineral Industries report, p. 9

Ian P. Madin, Chief Scientist, Oregon Department of Geology and Mineral Industries

Report Download:

<http://www.oregongeology.org/sub/publications/IMS/ims-008/Text/ims-08.pdf>

Maps Download:

<http://www.oregongeology.org/pubs/ims/p-ims.htm>

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Relative Earthquake Hazard Map

Hazard zones are based on the combined effects of ground shaking amplification, liquefaction, and earthquake-induced landsliding.

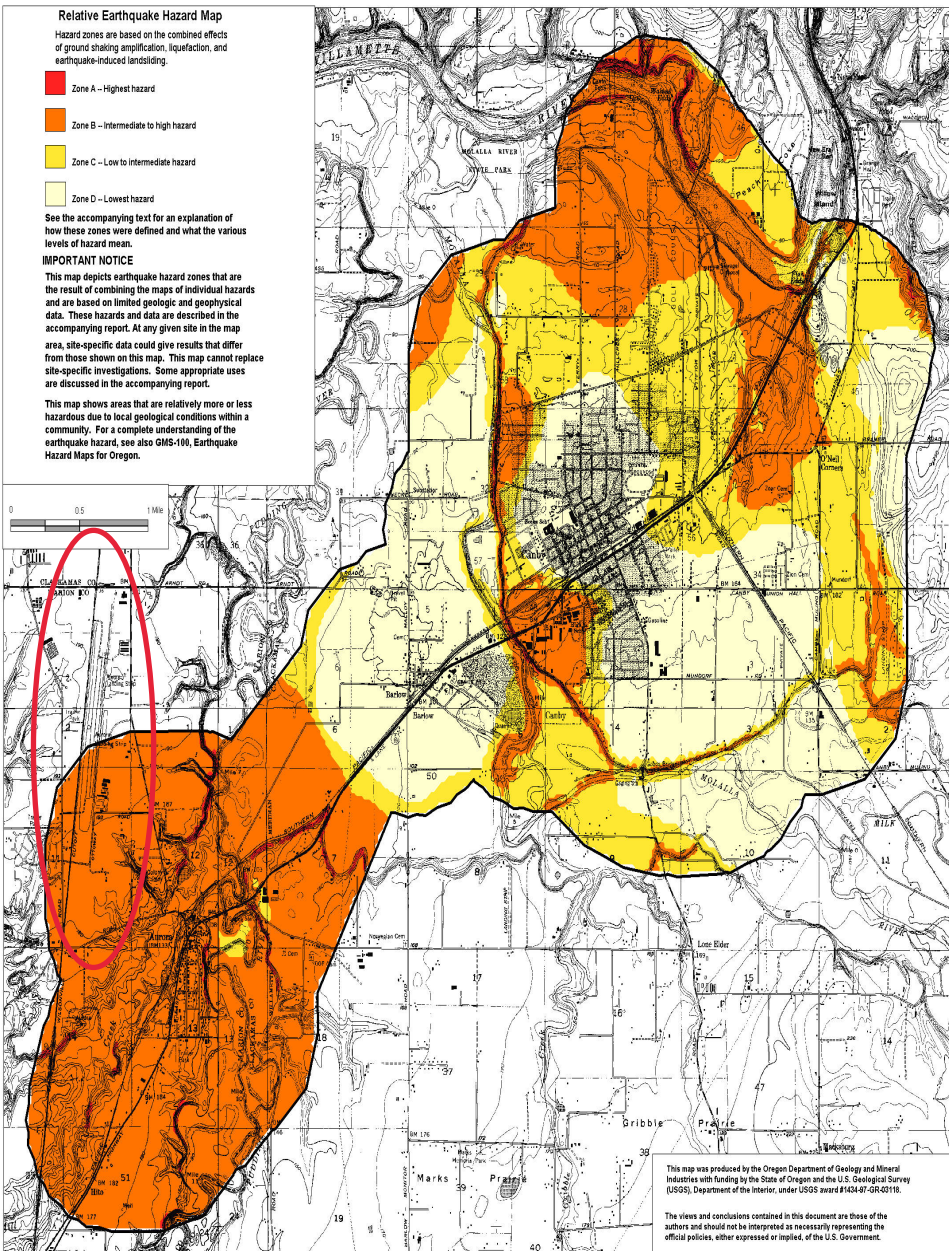
- Zone A - Highest hazard
- Zone B - Intermediate to high hazard
- Zone C - Low to intermediate hazard
- Zone D - Lowest hazard

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

IMPORTANT NOTICE





This map depicts earthquake hazard zones that are the result of combining the maps of individual hazards and are based on limited geologic and geophysical data. These hazards and data are described in the accompanying report. At any given site in the map area, site-specific data could give results that differ from those shown on this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.

This map shows areas that are relatively more or less hazardous due to local geological conditions within a community. For a complete understanding of the earthquake hazard, see also GMS-100, Earthquake Hazard Maps for Oregon.



Relative Amplification Hazard Map

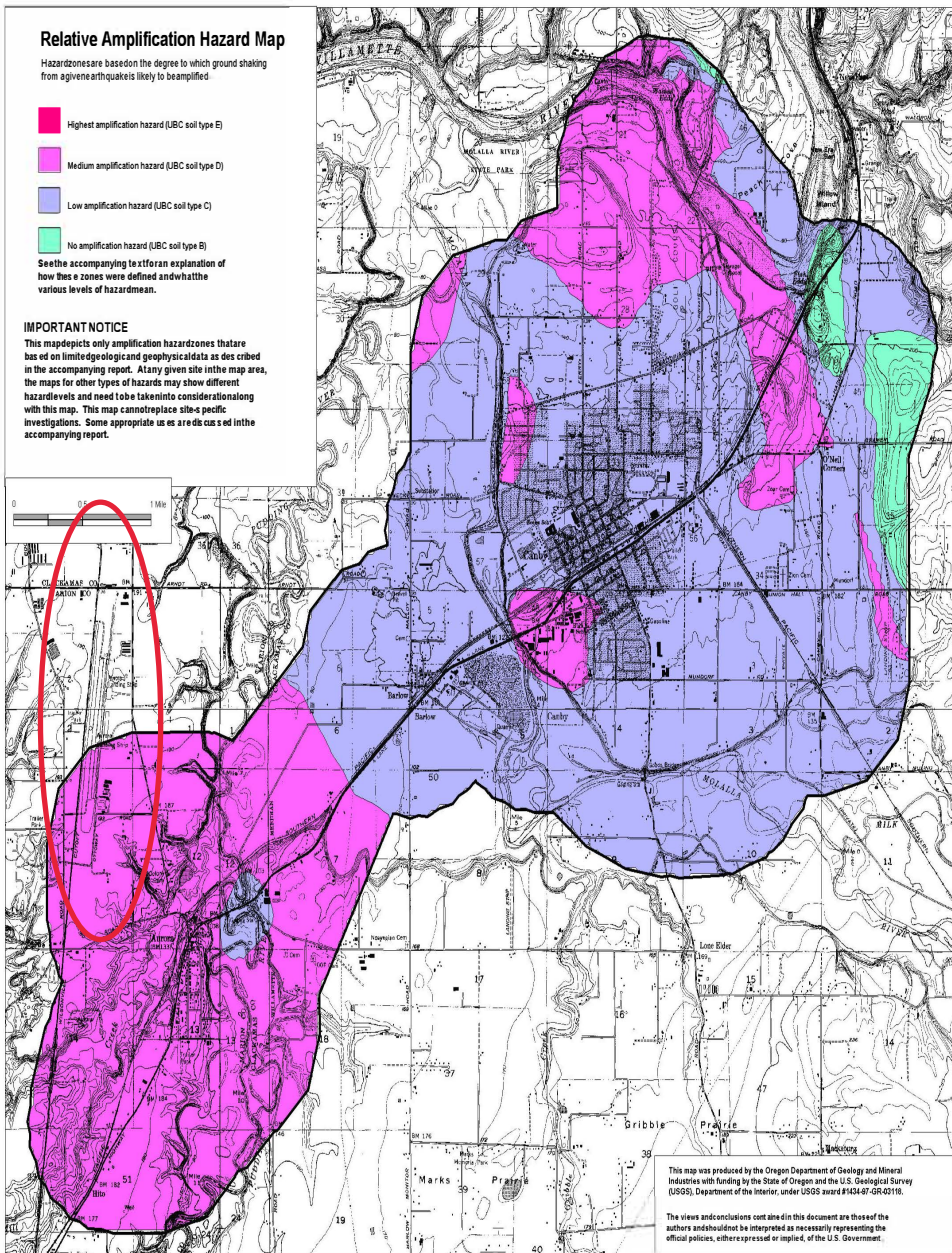
Hazard zones are based on the degree to which ground shaking from aggressive earthquakes is likely to be amplified.

-  Highest amplification hazard (JBC soil type E)
-  Medium amplification hazard (JBC soil type D)
-  Low amplification hazard (JBC soil type C)
-  No amplification hazard (JBC soil type B)

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

IMPORTANT NOTICE

This map depicts only amplification hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. Any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate use areas are discussed in the accompanying report.



This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1431-07-GR-03118.

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

Relative Liquefaction Hazard Map

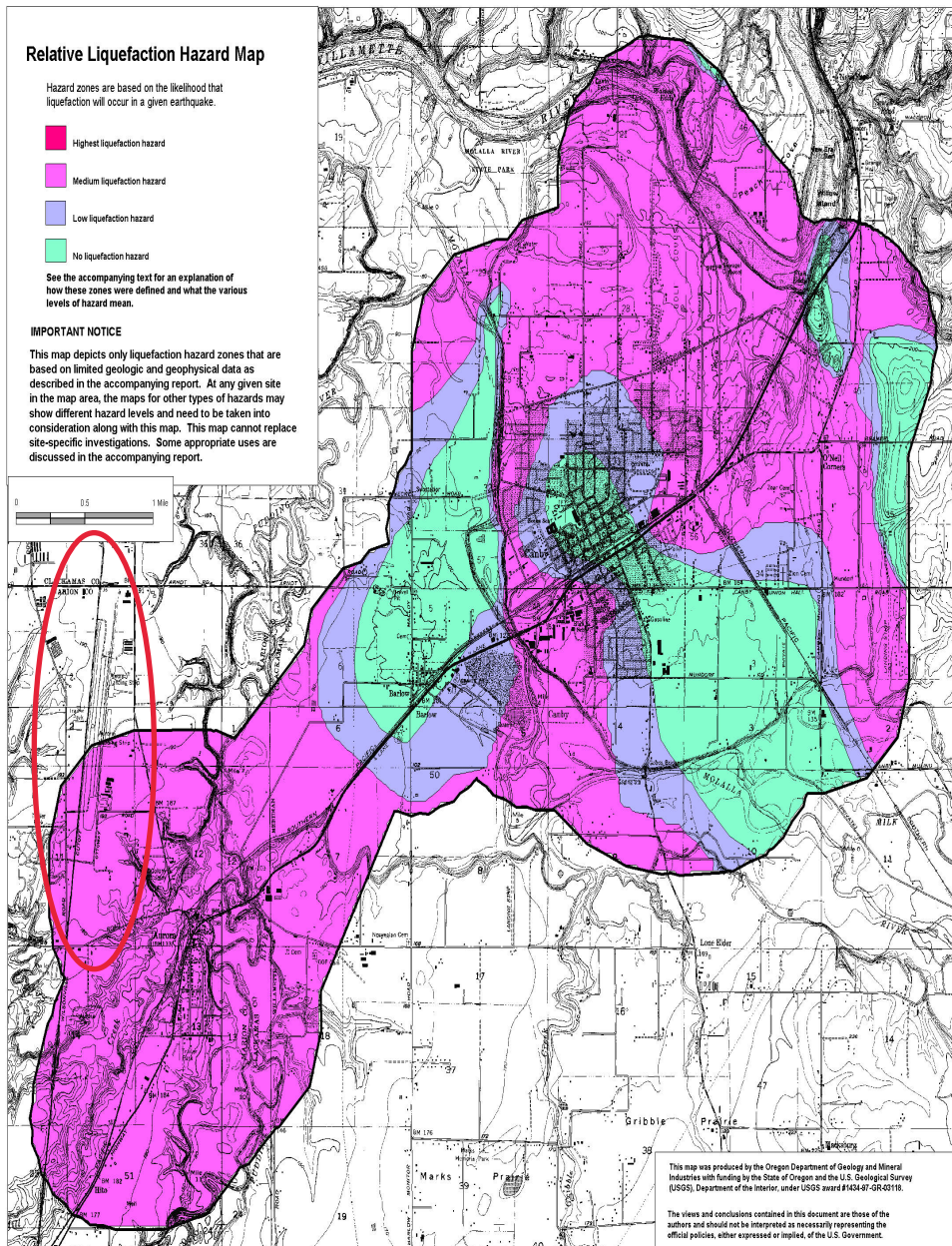
Hazard zones are based on the likelihood that liquefaction will occur in a given earthquake.

- Highest liquefaction hazard
- Medium liquefaction hazard
- Low liquefaction hazard
- No liquefaction hazard

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

IMPORTANT NOTICE

This map depicts only liquefaction hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. At any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.






This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1424-07-JR-01111.

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Relative Hazard Map of Earthquake-Induced Landslides

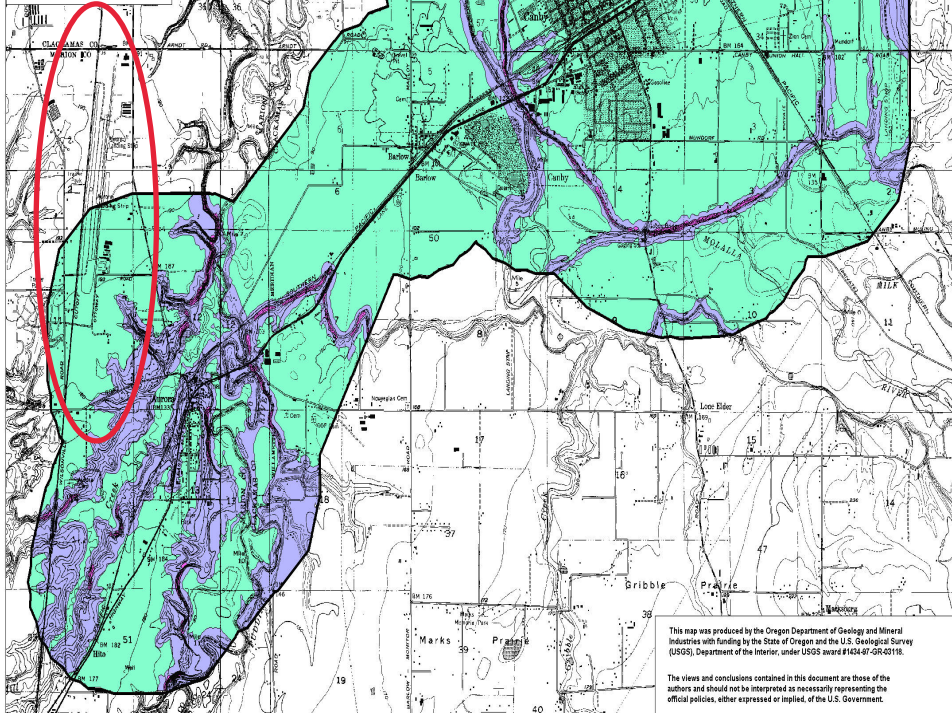
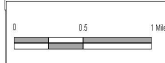
Hazard zones are based on the possibility that a given earthquake will trigger landslides.

-  High landslide hazard
-  Medium landslide hazard
-  Low landslide hazard

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

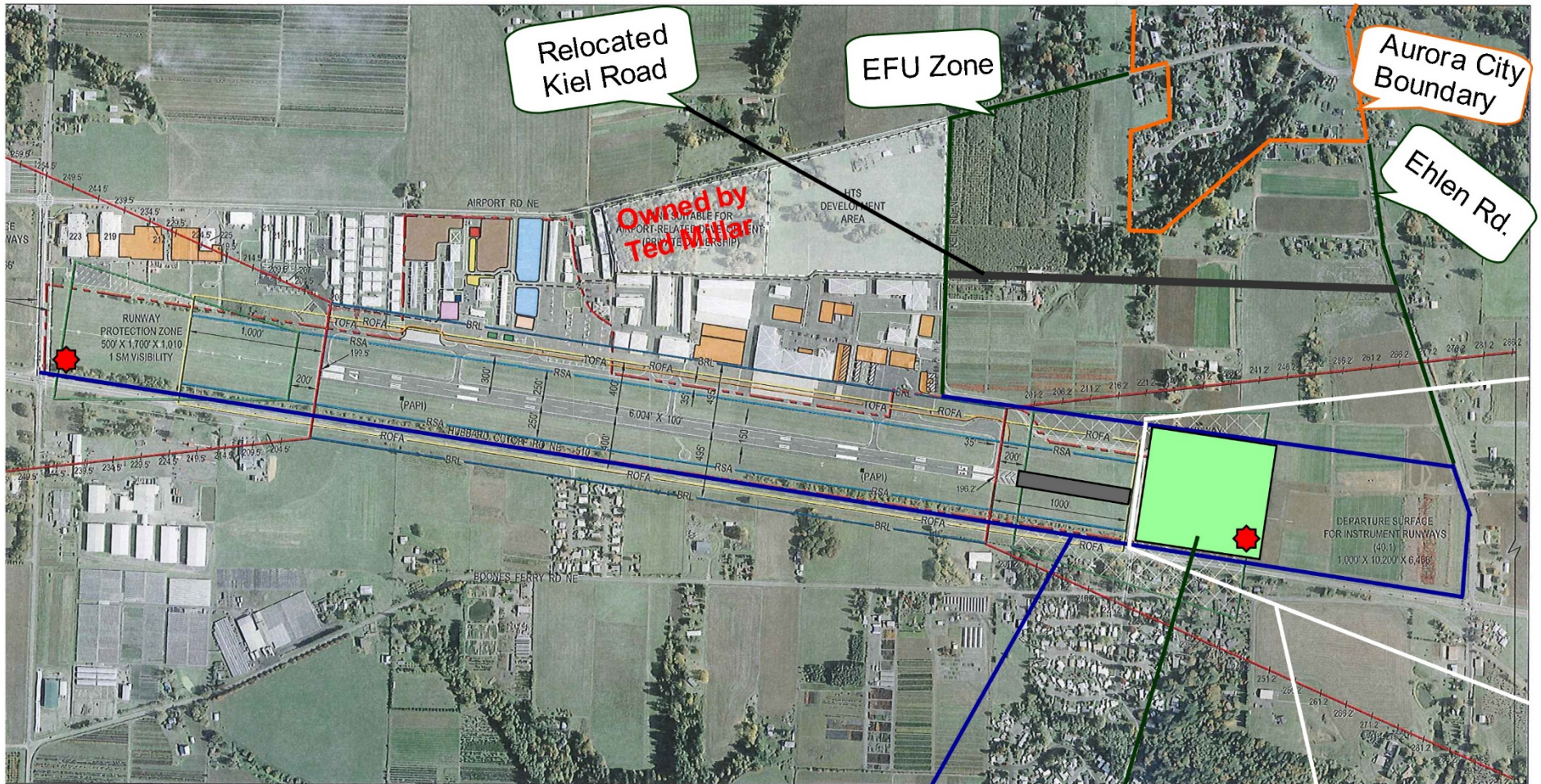
IMPORTANT NOTICE

This map depicts only landslide hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. At any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.



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<p>Legend</p> <ul style="list-style-type: none"> Property Line Future Property Line BRL 35' Building Restriction Line RSA Runway Safety Area ROFA Runway Object Free Area TOFA Taxiway Object Free Area Service Road Existing Buildings Future Buildings Future Paved Air Traffic Control Tower (ATCT) Aurora Rural Fire Protection District Future Apron Area Cargo Apron Vehicular Parking Hangar Development Fuel Station Helicopter Parking Precision Approach Path Indicator (PAPI) Existing Building Removal Existing Building Hits Septic Drain Field Future Property Acquisition Future Avigation Easement 		<p>New Airport Boundary</p>	<p>New Runway Safety Zone</p>	<p>New Runway Protection Zone</p>
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HB 4092 WORST CASE SCENARIO: Implementing 1,000 foot runway and taxiway extension, extending onto EFU ag land to place RPZ and navigation instruments, and relocating Kiel Road to stub to Ehlen Road.

Aurora State Airport
Aurora, OR

Exhibit 5J
Preferred Alternative