



#### House Transportation and Economic Development Committee

#### **Oregon Highways Seismic Options Report**

### Paul Mather, ODOT Highway Division Administrator

May 15, 2013



# **Oregon Highway Seismic Options Report**

# Identify strategic lifeline routes Minimize long term economic damage



Bridge Seismic Upgrade



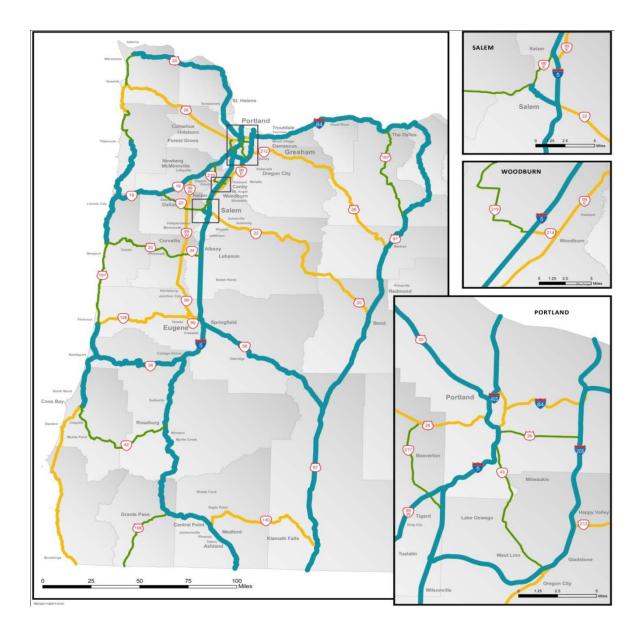
Landslide Hwy 38

# **Route Selection**

| Survivability     | <ul> <li>Emergency responders</li> <li>Critical care facilities</li> </ul>  |
|-------------------|---|
| Life Support      | <ul> <li>Critical care facilities</li> <li>Life support resources</li> <li>Evacuation routes</li> </ul>                               |
| Economic Recovery | <ul> <li>Critical freight corridors</li> <li>Mobility into and out of the region</li> <li>Routes between large metro areas</li> </ul> |

## **Recommended Lifeline Route**

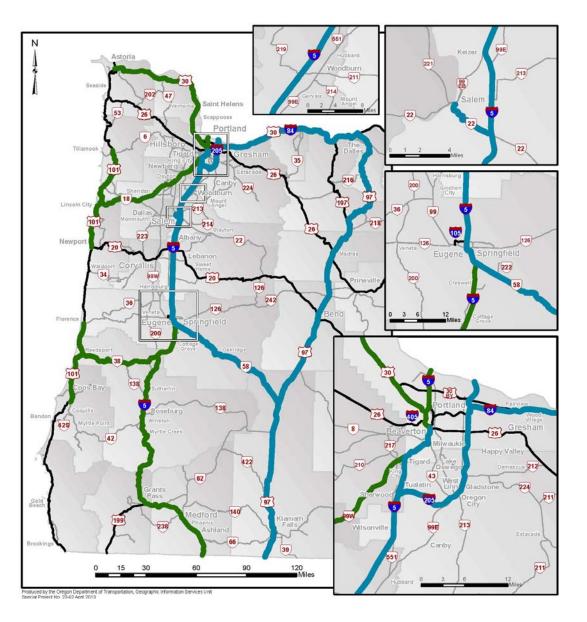
1<sup>st</sup> tier 2<sup>nd</sup> tier 3<sup>rd</sup> tier



## **Tier 1 Route Map**

\$900M

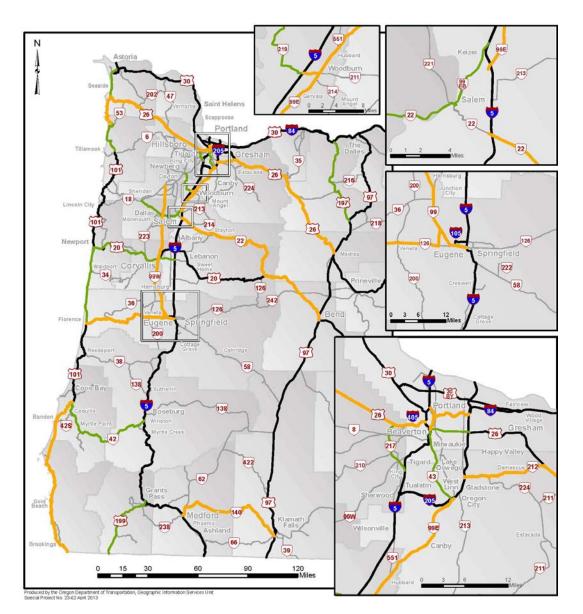
Priority 1 Priority 2



### Tier 2 & 3 Route Map

Tier 2 – \$600M Tier 3 –

\$300M



# **Economic Damage in Oregon**

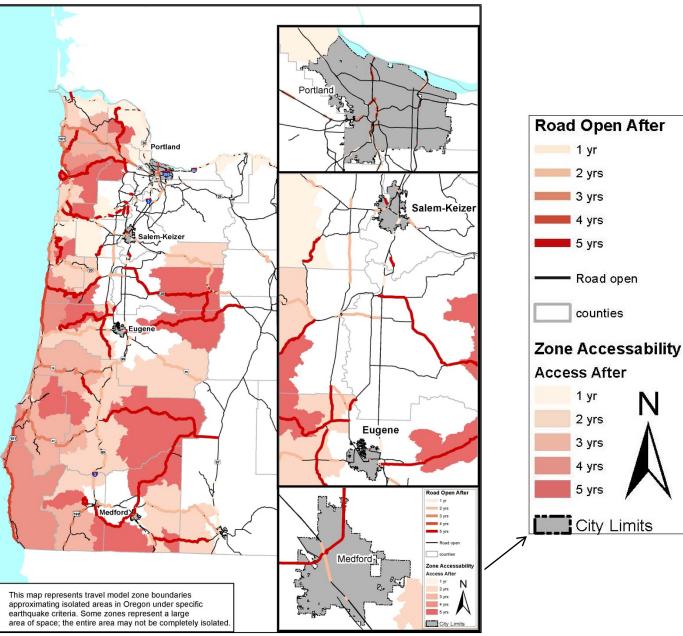
Damage to the highway system will result in **\$350B loss** in gross state product over 8-10 years.



Japan: before and after

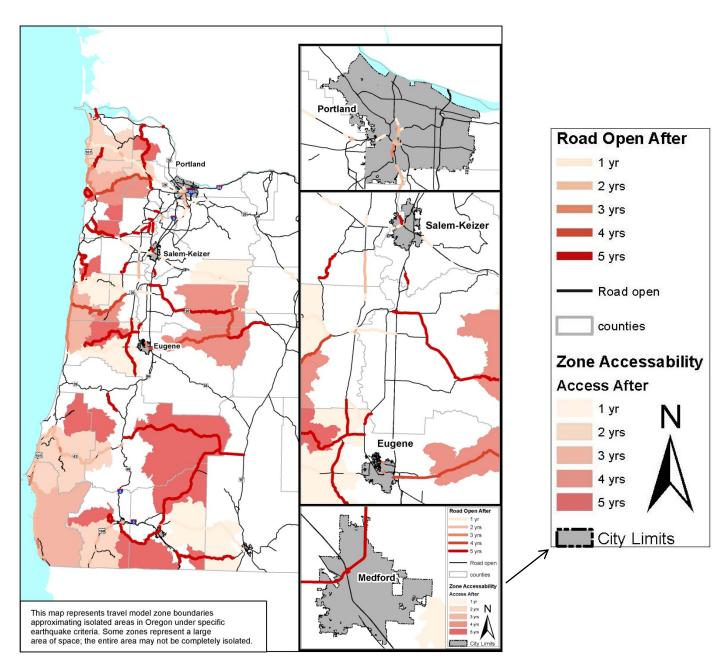
## **Major Seismic Event: Isolated Areas**

Total economic loss: **\$350B** 



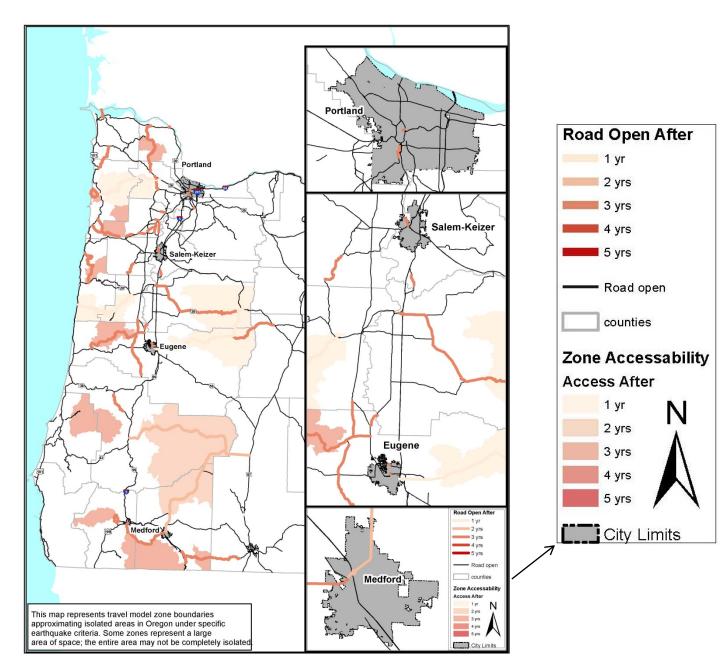
## **Isolated Zones: Stage 1 Scenario**

Reduce economic loss by: \$35B



# **Isolated Zones: Full Seismic Program**

Reduce economic loss by: \$84B



## Rate of Return is 46:1

| Tatal Cast | Stage 1 | Stage 2 | Stage 3 |
|------------|---------|---------|---------|
| Total Cost | \$0.9B  | \$0.6B  | \$0.3B  |

Total Program Budget = **\$1.8 Billion** 

Benefit/Cost is 46/1

|                             | Stage 1 | Stage 2 | Stage 3 |
|-----------------------------|---------|---------|---------|
| Total Economic Loss Avoided | \$35B   | \$20B   | \$29B   |

Total Economic Losses Avoided = \$84 Billion

### We Need to Start Now

Transportation is key to the overall response California and Washington are ahead

California: 5147 Bridges - \$13 billion
 Washington: 416 Bridges - \$177 million
 Oregon: 143 Bridges - \$44 million

## **New Funding to Lifeline Routes**

To avoid \$84B in economic losses and minimize loss of life: Dedicate new funding to complete all 3 tiers by 2030.



I-84 Sandy River Bridge

I-84 Sandy River Bridge

I-5 Willamette River Bridge (Eugene)