



February 24, 2017

The Honorable Patty Murray  
United States Senate  
154 Russell Senate Office Building  
Washington, DC 20515

Dear Senator Murray:

A 9.0 magnitude seismic event off the Washington or Oregon coast would devastate the Pacific Northwest's transportation system, hindering response efforts and impacting our economy locally and throughout the nation. The State Transportation Commissions of Washington and Oregon jointly write to alert you to the unfunded needs to seismically upgrade our transportation infrastructure and reduce the severity of damage to our transportation system and economy. Current preparations and expenditures fall short of meeting the known – and increasing – seismic risk.

As we learn more about the risks and likelihood of a Cascadia Subduction Zone (CSZ) earthquake similar to the 2011 9.0 earthquake near Fukushima, Japan, we believe targeted federal funding is an essential component to timely hardening of our transportation infrastructure. Our two states alone cannot and should not be expected to finance necessary upgrades to safeguard nationally essential assets.

### **Impacts of a 9.0 magnitude CSZ Seismic Event**

In 2011, FEMA estimated the economic impact of a 9.0 CSZ seismic event to Washington to be \$49 billion. The economic impact to Oregon was estimated at \$32 billion in 2013. Damage to transportation infrastructure would significantly multiply these impacts, and exacerbate loss of life.

In the event of a major CSZ seismic event, damage from the earthquake and related events such as tsunami and landslides will result in heavy failures and losses of our states' bridges, highways, and ports. Impacts are expected to include medium to high damage to over a quarter of Washington's road infrastructure, mostly west of the Cascade Range, and render large sections of highway completely unusable until major repairs are made. This may include up to half of Interstate 5 (I-5) in Washington, with damage most severe in the Seattle-Tacoma region. It also may isolate much of Washington and Oregon's coast with significant damage to much of U.S. 101 and most roads connecting the coast to I-5.

These impacts would severely limit evacuation efforts and commerce in coastal regions. Of the bridges across the Columbia River, only the Interstate 205 Bridge is expected to survive a major quake.

Our states' ports are major conduits of trade between the United States and Pacific Rim countries, including goods from across our country. Damage to the transportation system would severely limit our ports' capacity to operate. In 2016, \$86.4 billion in exports and \$51.1 billion in imports moved through Washington ports.

In Oregon, over \$20 billion in exports and \$14 billion in imports moved through the state's ports. Finally, while most trade in Washington and Oregon moves east to the Midwest and west to Asia, significant trade also moves north and south. For example, the value of trade between Canada, Washington and Oregon totaled nearly \$27 billion in 2015, including \$10.6 billion of U.S. exports and \$16.2 billion of imports from Canada.

Areas east of the Cascade Range also would be affected economically. Damage to the Columbia River navigation system would severely limit the export of agricultural products and shipments of fuel upriver. In addition, cities and airports east of the Cascades, such as Redmond in Oregon, and Spokane and Moses Lake in Washington, are likely staging areas for emergency response.

### **Preparations for Seismic Events**

**Washington** has long been a partner in statewide and regional efforts to research and plan for earthquake-related impacts to the state transportation infrastructure. Retrofitting bridges is one area of targeted investment Washington has made to prepare for a CSZ quake. Since the early 1990s, the Washington State Department of Transportation (WSDOT) has invested more than \$166 million to retrofit bridges and approximately \$5 billion on bridge replacements to address seismic resiliency, including the AWP replacement and the SR 520 floating bridge; however, to retrofit nearly 600 multi-column bridges was estimated to cost an additional \$1.5 billion in 2015.

The completed retrofitting efforts are only part of the solution to strengthening the infrastructure. Additional subsurface work is necessary to mitigate liquefaction hazards. While retrofitting a bridge may prevent collapse, it may still not be usable in the immediate aftermath of an event. In addition to bridges, there are other areas of focus, including unstable slopes, roadway sections, transportation communication and operational systems. WSDOT continues to evaluate its transportation network to identify areas that may be impacted by the CSZ.

**Oregon** has done the advance work of engaging stakeholders and conducting studies of key routes. The Oregon Department of Transportation (ODOT) has developed a prioritized five-phase plan for retrofitting and replacing bridges, and mitigating unstable slopes and landslides on the state highway system. Its \$5 billion plan focuses on preserving and protecting key statewide lifeline routes – both from an emergency response and a longer-term recovery perspective. This includes \$935 million to ensure the resiliency of a major emergency response corridor in Oregon. However, at current federal and state funding levels, it will take decades for ODOT to fully implement its plan.

We believe additional federal investment in our states' efforts to strengthen our transportation system for this seismic challenge is critical, and in the national interest.

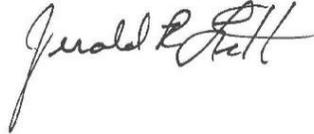
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We ask for your support, and would like to discuss how to meet this challenge with you and your staff.

Sincerely,



Tammy Baney, Chairman  
Oregon Transportation Commission



Jerald R. Litt, Chairman  
Washington State Transportation Commission

cc: The Honorable Governor Jay Inslee  
The Honorable Governor Kate Brown  
Senator Curtis King  
Representative Judy Clibborn  
Roger Millar, Secretary, Washington State Department of Transportation  
Matt Garrett, Director, Oregon Department of Transportation

This letter also sent to:

Senator Maria Cantwell  
Representative Adam Smith  
Representative Dave Reichert  
Representative Denny Heck  
Representative Dan Newhouse  
Representative Derek Kilmer  
Representative Pramila Jayapal  
Representative Rick Larsen  
Representative Suzan Delbene  
Representative Jaime Herrera Beutler  
Representative Cathy McMorris Rodgers