

(1) How prepared are the assets managed by PBOT to withstand earthquakes?

- There is not a design standard for roads for earthquake resistance
- The City of Portland owns 157 Bridges. Of those bridges, 81 have known seismic deficiencies. Some of these bridges are located on Emergency Response Routes.
- The Aerial tram was built in 2006 to the seismic standard.
- Other Transportation assets such as stairways and retaining walls, including the Harbor wall, have not been studied for earthquake resilience.
- Most of Maintenance Operation's space for equipment storage is leased from ODOT and under ramps on I-5. In the event of an earthquake, these ramps could fall on the equipment (dump trucks, backhoes, etc.) that would be needed to respond to an earthquake.

(2) How much money is PBOT spending to make these assets more seismically sound?

- There isn't any dedicated funding for performing seismic upgrades. However, PBOT has looked for opportunities to perform seismic upgrades whenever a bridge was/is funded for replacement or rehabilitation.
- Since 2005, PBOT has **replaced** 5 seismically vulnerable bridges. Each replacement was designed to meet current seismic standards.
- Since 2005, PBOT has performed seismic upgrades to 6 bridges that were funded for rehabilitation. The level of the seismic upgrades varied from bridge to bridge to match the level of funding available.

(3) How much earthquake preparedness does PBOT consider when designing these assets?

- All new PBOT assets, whether bridges, walls, or stairways, are designed to meet the current seismic provisions of the design codes.

(4) What else is PBOT doing in regard to earthquake preparedness of its assets?

- PBOT has devised a complete Post Earthquake Bridge Inspection program for its entire Bridge Inventory following an earthquake. Maintenance Crews and Engineers have been trained to inspect the bridges in a rapid assessment procedure. Crews are re-trained on a bi-annual basis on the procedure in a mock earthquake drill.
- PBOT has identified a short list of seismic rehabilitation projects targeting the most seismically vulnerable bridges that would be done if funds were available. Many of these are located on Emergency Routes, or would block Emergency Routes if they collapsed.
- PBOT is working with Emergency Management on the Sears Facility so that Maintenance Operations would have equipment in place to respond to emergencies on the west side of the river.

(5) How much money would the City need to spend on repairs if an earthquake damaged some of its assets?

- PBOT has identified a need of \$51 million to rehabilitate or replace 64 bridges with Seismic deficiencies.
- PBOT has identified an additional need of \$151 million dollars to replace 21 bridges with various deficiencies, including seismic. In some cases it is more prudent to replace a bridge with known seismic deficiencies that rehabilitate it.