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February 13, 2020

Dear Policy Maker,

The Oregon Section of the American Society of Civil Engineers (ASCE) thanks you for your interest in helping Oregon be more resilient against our many natural hazards, including the expected Cascadia Subduction Zone earthquake and tsunami. Upgrading infrastructure and using the latest codes are two ways to help harden our infrastructure and help make Oregon ready. We have reviewed House Bill 4119 that is proposed as a bill this session and we have concerns about the concept. Our detailed concerns that haven been submitted previously to Representative Gomberg and Oregon Seismic Safety Policy Advisory Commission (OSSPAC) and are detailed below.

We have the following concerns about the bill as written:

- We strongly recommend that the state adopt the most current version of ASCE 7 Chapter 6 for tsunami design requirements in the OSSC (Oregon Structural Specialty Code). This eliminates the reference to a specific version of an ASCE code and references the currently adopted Oregon code. The OSSC does reference the current version of ASCE 7 (currently 7-16) that has been officially adopted by the state on a chapter by chapter basis.

- For all other hazards, definitions of critical/essential structures and design criteria is included in the building code. It is not standard to put these types of regulations in state statute. Tsunami design should be treated like any other hazard. Including this in state statute will complicate hazards and add another layer of criteria that engineers and architects need to follow. This is an over complication for building design which causes issues when adopting each edition of the building code. We feel that requirements for any hazard should be handled in the building code.

- Building codes change regularly and new versions are adopted at least every three to four years. State statute that references a specific building code will be hard to change and will hinder Building Codes Division (BCD) from updating codes on a timely basis. Any updates and changes would be much more easily handled if they there included in the code as opposed to a state statue.

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- The Oregon Department of Geology and Mineral Industries (DOGAMI) is an essential scientific agency that performs important science research functions for the state. However, they are not a regulatory agency and do not have the authority to prohibit or change building codes or zoning. While they do employ scientists / geologists that have expertise in their fields, they do not have engineers qualified to review structural design. It is our opinion that all regulations on building requirements should be housed within BCD so that tsunami design is consistent with all other building design regulations. Zoning regulations should be housed within the Department of Land Conservation and Development (DCLD) that also has the authority to make zoning decisions. DOGAMI is the perfect agency to oversee or provide updated modeling changes/improvements to submit to ASCE for future enhancements in the mapping based on local Oregon expertise. That modeling can then be adopted into code through the code balloting process (a consensus ANSI standard) and updated as needed at each code cycle.

- The current DOGAMI modeling does not provide adequate design parameters to follow the current standard of practice for tsunami engineering design. This current standard, ASCE 7-16 Chapter 6 does include modeling that provides these parameters. We feel that ASCE-7-16 Chapter 6 (currently referenced in a non-mandatory Appendix O of the 2019 OSSC) should be adopted into the state building code as soon as possible so that engineers are required to use the code for design. We do understand there are concerns with the ASCE tsunami modeling. However, the ASCE modeling is an excellent first step in providing probabilistic maps required for design. The ASCE 7 Tsunami subcommittee would encourage DOGAMI to develop updated and improved modelling using the ASCE 7 process and format. Washington, California, and Hawaii have adopted this code and California and Hawaii are working to develop enhanced modeling for adoption at the next code cycle. Oregon should be following the engineering standard of practice which is to follow ASCE 7-16, Chapter 6.

- In addition to these comments, recent review of the new FEMA interim policy (FP-104-009-11 Version 2.1), if Oregon does not adopt the latest consensus-based code (ASCE 7-16 Chapter 6), we may be at risk for less FEMA funding in the event of a disaster and possibly less likely to receive pre-disaster mitigation funding. Please see information at the following links.

  https://www.fema.gov/media-library-data/1579188158300-159a38c75b6204517ad6c8641819c143/DRRA_1235(b)_V2.1_12-20-2019_508_FINAL.pdf

  https://www.infrastructurereportcard.org/new-fema-policy-requires-rebuilding-post-disaster-with-asce-codes-and-standards/

We look forward to working with you during the amendment process of this bill.

Please feel free to contact our volunteer resilience advisor, Allison Pyrch (allison.pyrch@hartcrowser.com) to discuss the contents of this letter or other relevant topics. Thank you so much for your time.

Sincerely,

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