

CEE691 Seminar Series in Spring 2017

The Department of Civil and Environmental Engineering
University of Hawaii at Manoa

Design of Structures for Extreme Loading

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Abstract In the United States buildings are designed to provide proper performance under two limit states: serviceability and strength. Serviceability refers to the limit state under common service level loads such as live loads, dead loads, and wind loads. The performance metrics under these demands may include limitation of beam deflections or crack sizes in reinforced concrete members. The strength limit state refers to the ability for the structure to carry elevated loads without failing. These two limit states form the foundation for achieving safe and usable structural designs. In some cases, structures are also subjected to extreme loads. This can include ground accelerations generated by earthquake events, hydrodynamic and impact loads from tsunamis, or blast pressures from detonation of high explosives or vapor clouds. These extreme loads are dynamic in nature and require specialized design approaches to ensure proper building performance under the event. A review of standard and extreme loads will be provided and the means with which structural engineers design for these effects will be discussed.

Tuesday, March 14th
2:30 p.m. – 3:20 p.m.

Crawford Hall
Room 105

Building
Select:

Crawford Hall (Craw or CR)

