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Earthquake Hazard Maps

The maps displayed below show how earthquake hazards vary across the United States. Hazards are measured as the likelihood of experiencing earthquake shaking of various intensities.

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▼ How To Read The Maps

The colors in the maps denote “seismic design categories” (SDCs), which reflect the likelihood of experiencing earthquake shaking of various intensities. (Building design and construction professionals use SDCs specified in [building codes \(/building-codes\)](/building-codes) to determine the level of seismic resistance required for new buildings.)

The following table describes the hazard level associated with each SDC and the associated levels of shaking. Although stronger shaking is possible in each SDC, it is less probable than the shaking described.

SDCs take into account the type of soil at the site, as poor soils can significantly increase earthquake shaking. These maps have simplified this by assuming normal Site Class “D” soils, which are the most commonly found.

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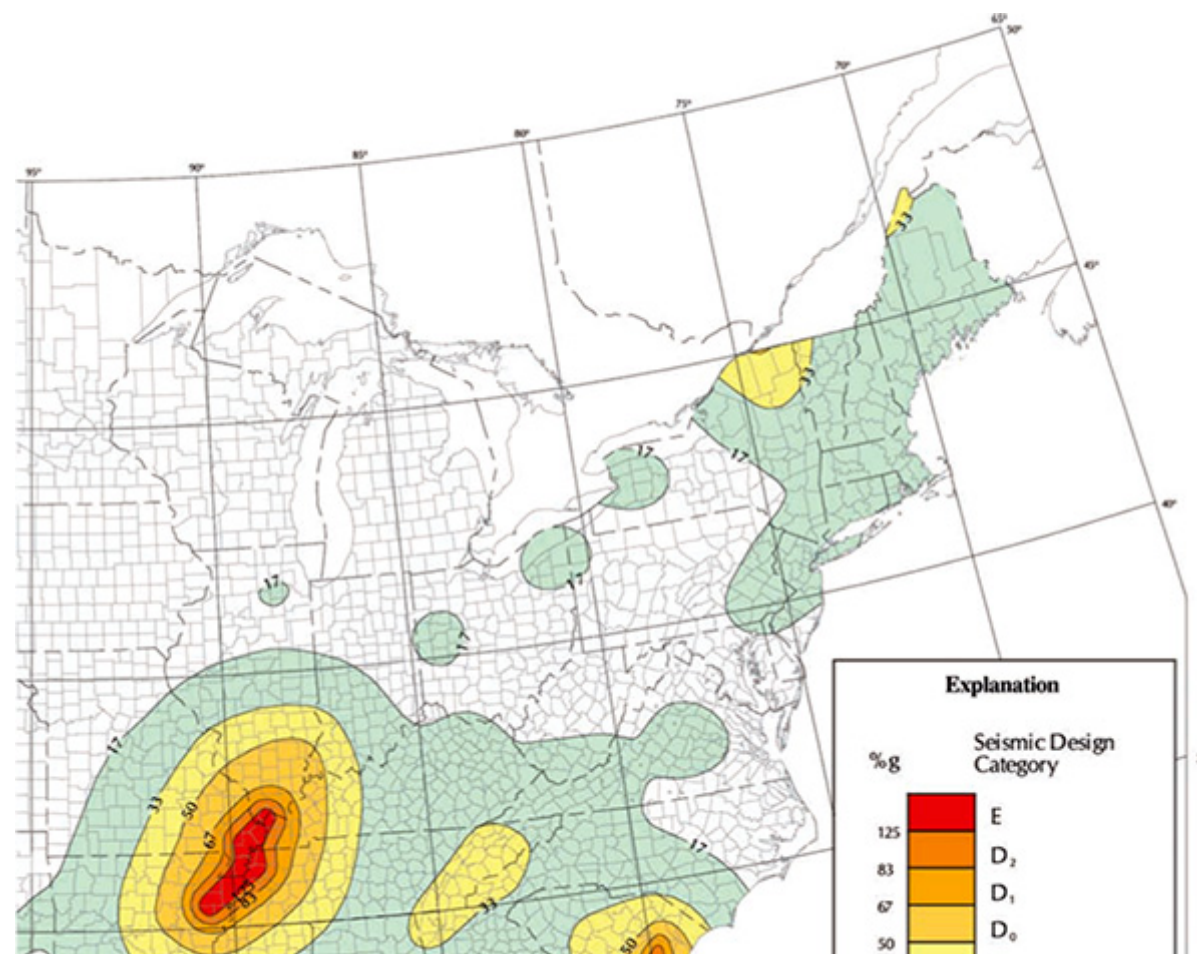
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When viewing the maps, it is important to remember that areas with high earthquake hazards do not necessarily face high seismic risks. Defined as the losses that are likely to result from exposure to earthquake hazards, seismic risks are determined not only by hazard levels but also by the amount of people and property that are exposed to the hazards and by how vulnerable people and property are to the hazards. This is explained in more detail in [Your Earthquake Risk \(/your-earthquake-risk\)](#).

▼ Maps



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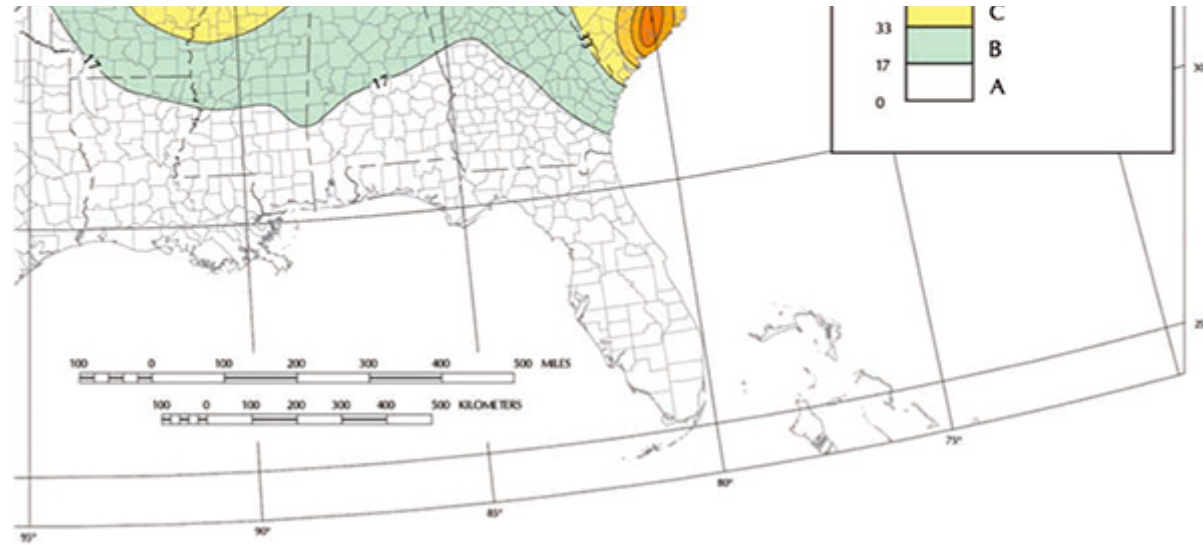
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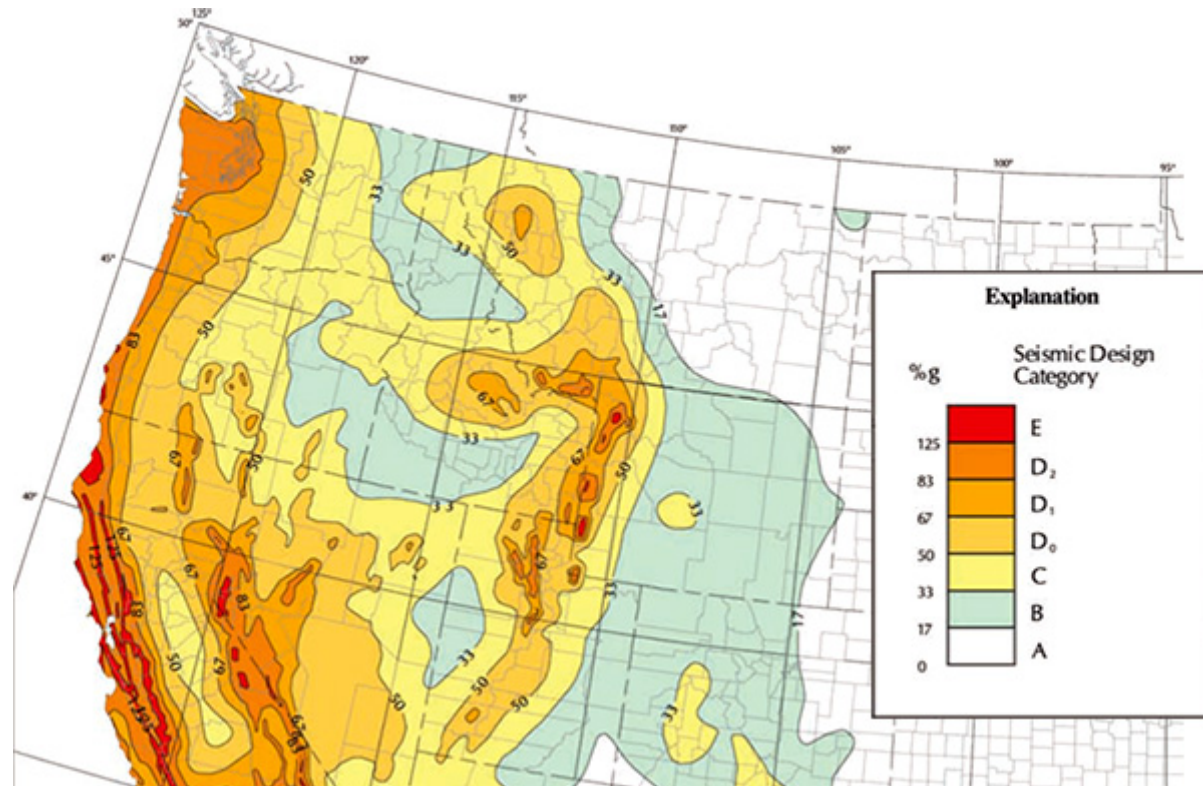
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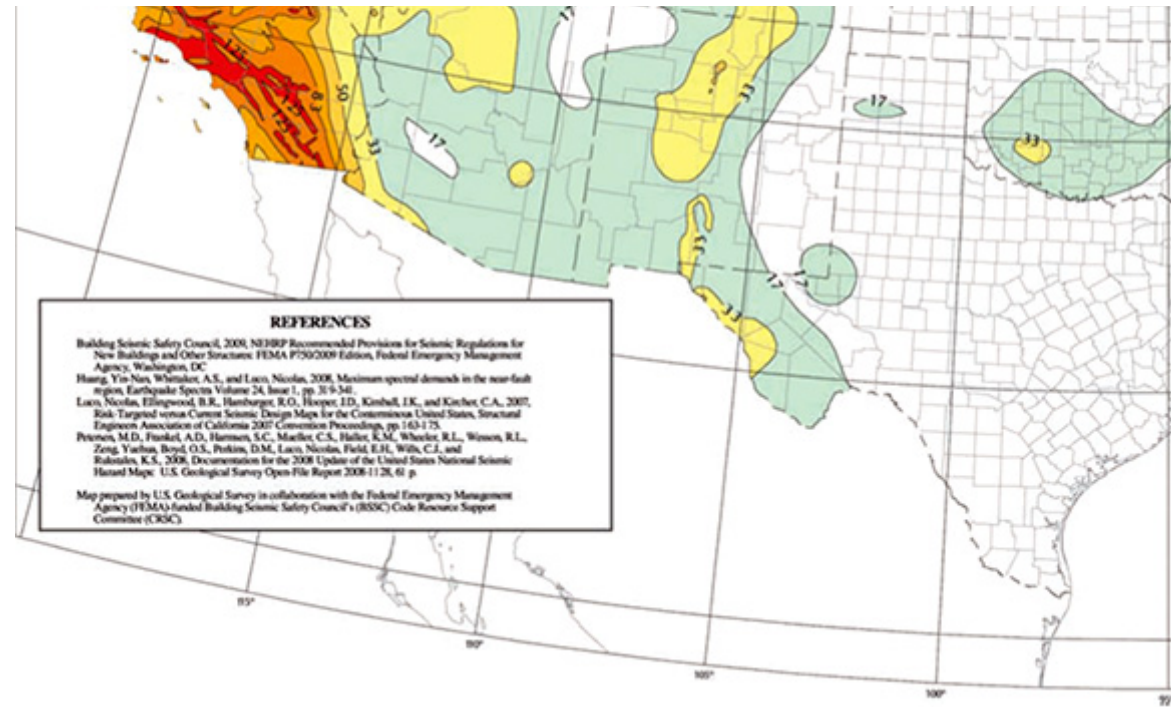
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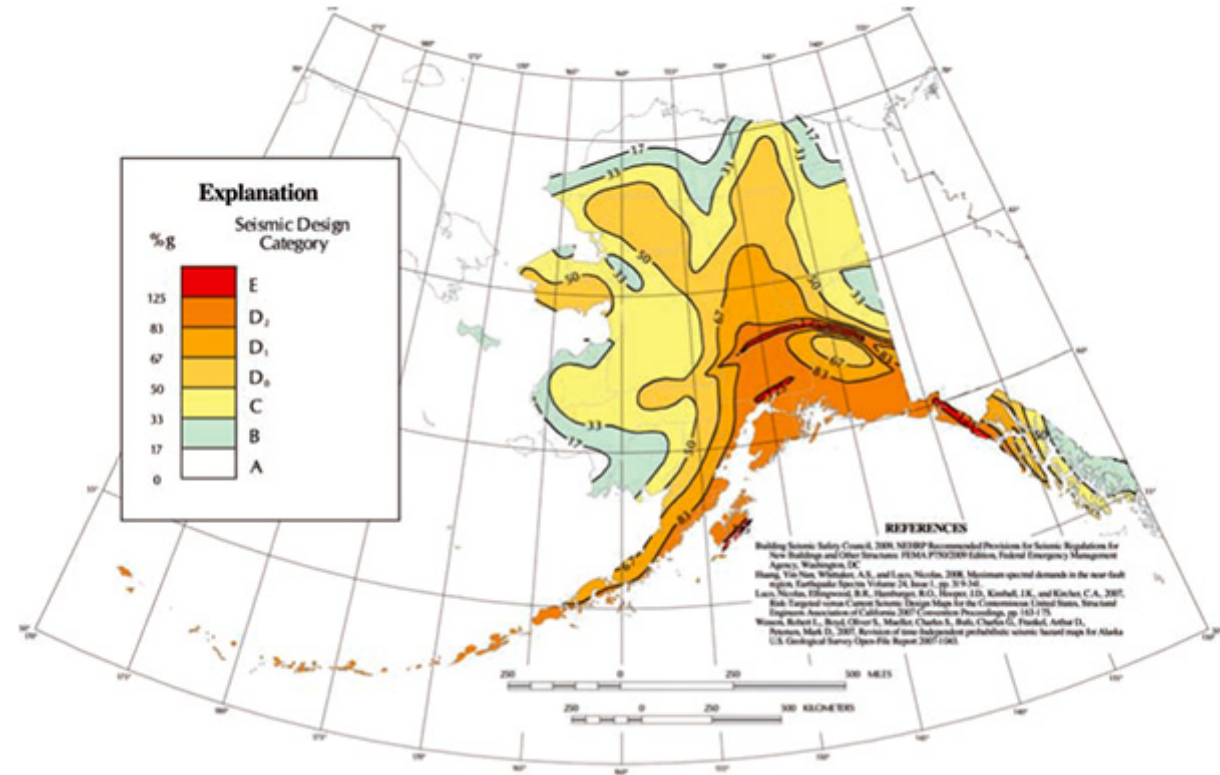


SDC map of the Eastern United States for low-rise Occupancy Category I and II structures located on sites with average alluvial soil conditions.

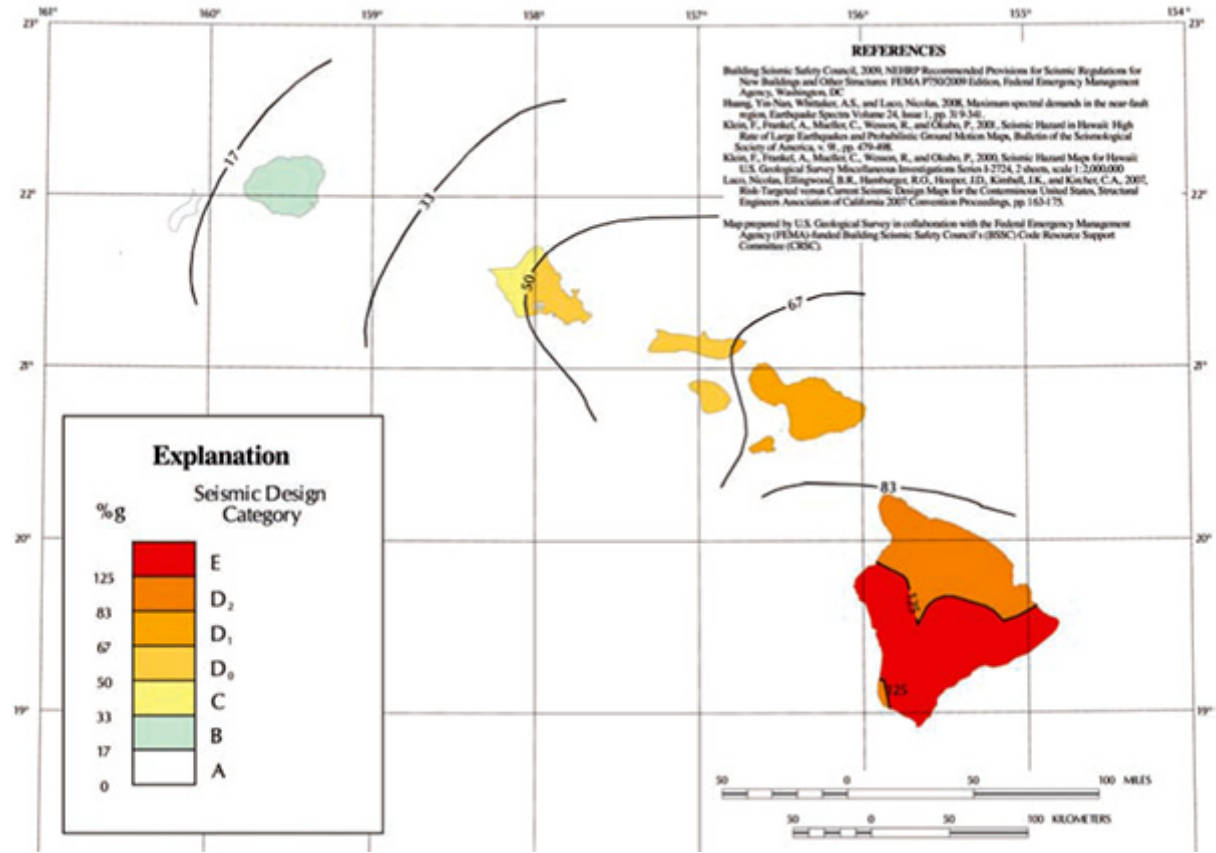




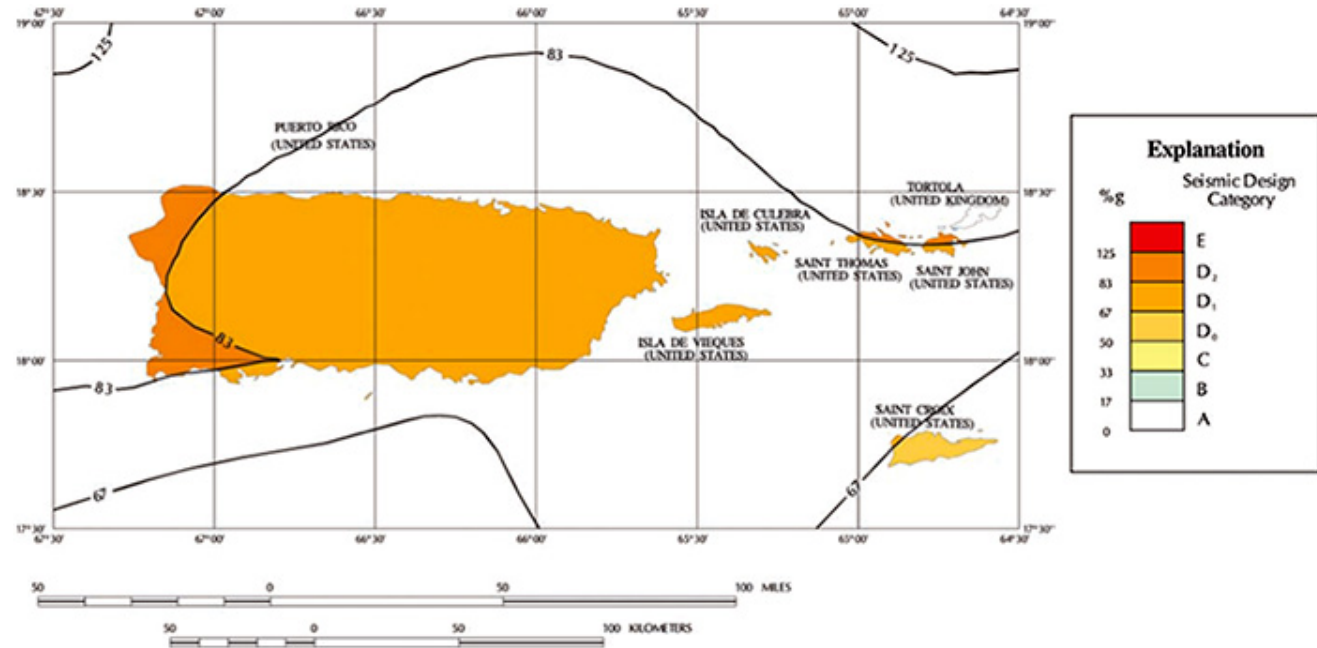
SDC map of the Western United States for low-rise Occupancy Category I and II structures located on sites with average alluvial soil conditions.



SDC map of Alaska for low-rise Occupancy Category I and II structures located on sites with average alluvial soil conditions.



SDC map of Hawaii for low-rise Occupancy Category I and II structures located on sites with average alluvial soil conditions.



SDC map of Puerto Rico, the United States Virgin Islands and Tortola for low-rise Occupancy Category I and II structures located on sites with average alluvial soil conditions.

✓ Data For Building Design Professionals

The U.S. Geological Survey, in cooperation with FEMA and the Building Seismic Safety Council, has developed a web-based seismic design application for building designers. This program can be used to obtain the earthquake ground motion parameters needed to design structures for specific geographic locations in accordance with the latest building code reference documents. To access this application, as well as the seismic design maps on which it is based, go to [U.S. Seismic Design Maps \(//earthquake.usgs.gov/designmaps/us/application.php\)](https://earthquake.usgs.gov/designmaps/us/application.php).

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 Official website of the Department of Homeland Security