

Earthquake damage is excluded in commercial property insurance policies so coverage must be added...

Coinsurance is a method used to encourage policyholders to insure their properties to a certain percentage (typically 80% or 90%) of their value. Insurance coverage below these levels will result in a penalty (loss of coverage) if there is a loss.

SPECIAL HAZARD FACTORS: EARTHQUAKE CONSIDERATIONS¹

According to the United States Geological Survey's (USGS's) latest report, 143 million people across 48 states are at risk for damage from an earthquake. This is particularly true in California and in states near the New Madrid Fault, which include parts of Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee. Earthquake insurance is expensive in locations with a high risk and availability may be limited. In other areas of the country earthquake insurance is generally available.

Earthquake damage is excluded in commercial property insurance policies, so coverage must be added through an endorsement. ISO and the American Association of Insurance Services (AAIS) are the two major advisory organizations for property and casualty insurance companies in the United States. These organizations develop model insurance policy and endorsement language that is used by the majority of insurance companies.

When adding earthquake coverage, it is important to remember that premiums for earthquake coverage differ widely by location, insurer, distance from fault lines and the type of structure that is to be covered. Credits or discounts can range from 20% to 60% depending on the insurer, the risk and the level of hazard. Generally, older buildings cost more to insure than new ones. Wood-frame structures generally benefit from lower rates than brick buildings because, on average, they perform better during earthquakes.

ISO has developed two model endorsements to add earthquake (and volcanic eruption) coverage under commercial property insurance. Independently filed earthquake endorsements are also available from some insurers. The first ISO endorsement provides coverage for the full policy limit and contains a coinsurance clause. The second provides coverage subject to a sublimit that is lower than the base policy limit and does not contain a coinsurance clause.

AAIS offers a similar endorsement that provides earthquake and volcanic eruption coverage. Both the AAIS and ISO forms state that all earthquakes or volcanic eruptions that occur within a 168-hour period will be considered a single occurrence. This is important because policy deductibles apply per occurrence.

¹The Metal Building Manufacturers Association (MBMA) provides these insurance bulletins as informational guides. The information contained in these bulletins is general in nature and is not intended to serve as legal advice. Readers are advised to consult with their own counsel and/or insurance broker on matters specific to them.

As explained above, rating advisory organizations have embraced technology and have harnessed data sources to provide ever more granular risk information. The ISO LOCATION - Earthquake Risk program helps insurers better understand earthquakes and associated risks (landslides, tsunamis, etc.). In addition to offering data about earthquake risk in every state, ISO also offers tools for insurers in Hawaii to determine if a property is located in a Tsunami Evacuation Zone or in a lava-flow hazard zone.



Washington state is second only to California when it comes to earthquake risk and this is reflected in the earthquake classifications that have been developed by the Washington State Rating Bureau (WSRB), which are summarized in the following table. These classifications assign a numerical value to a building based on construction features affecting its ability to withstand an earthquake. WSRB states, “Unlike building codes, earthquake classifications are based on potential property loss, not life safety.” These classifications identify the structural system by type of material (e.g., metal frame, wood frame, masonry), which provides critical information to an insurer regarding the expected seismic performance of the building. When evaluating a risk for earthquake coverage, there are many factors to consider, including distance to a fault, soil type, liquefaction and construction materials, all of which will be reflected in the rates charged by the insurer.

Table 1: WSRB Earthquake Classifications Quick Reference Guide

Wood frame	1C-	Habitational: Dwellings, 100% apartment and condominium buildings, not exceeding 2 stories. No area limit.
		Non-habitational: 3 stories or less and 3,000 square feet or less in ground floor area.
	1D-	Area and height limits not qualifying for 1C.
Metal frame	2A-	1 story and 20,000 square feet or less ground floor area.
	2B-	Area and height limits not qualifying for 2A.
Steel frame	3A-	Floors and roofs: Poured-in-place reinforced concrete or concrete fill on metal deck. Open-web steel joists excluded.
		Exterior walls: Non-load-bearing and poured-in-place reinforced concrete or reinforced unit masonry.
	3B-	Floor and roof: Poured-in-place reinforced concrete, or metal or any combination, except buildings over 3 stories may have roofs of any material.
		Exterior walls: Any non-load-bearing material.
	3C-	Floor and roof: Any material.
		Exterior walls: Any non-load-bearing material.
Reinforced concrete frame	4A-	Exterior walls: Poured-in-place reinforced concrete or reinforced unit masonry.
		a. Poured-in-place reinforced concrete frame;
		b. Poured-in-place reinforced bearing walls;
		c. Partial structural steel frame with a. and/or b.
		*Column-free areas greater than 2,500 square feet do not qualify.
	4B-	Exterior walls: Any non-load-bearing material.
	Structural System as in 4A.	



Table 1: WSRB Earthquake Classifications Quick Reference Guide (cont.)

Reinforced concrete frame	4C-	d. Precast load-carrying system; and/or
		e. Reinforced concrete lift-floor slabs and/or roof; and
		f. Otherwise qualifying for 4A or 4B.
	4D-	Structural System as above but with: Exterior walls: Any non-load-bearing material. Floors and roofs: Any material.
Masonry	5A-	This EQ class is not used in Washington state.
	5AA-	Floors and roofs: Wood or metal.
		Exterior walls: Load-bearing:
		a. Poured (cast)-in-place reinforced concrete; and/or
		b. Precast reinforced concrete; and/or
	5B-	c. Reinforced brick masonry; and/or
		d. Reinforced hollow concrete block.
	5C-	Floors and roofs: Any material.
Exterior walls: Load-bearing of unreinforced brick or other unreinforced solid masonry units, excluding adobe.		
Floors and roofs: Any material. Walls: Load-bearing of hollow tile or other hollow unit masonry construction and/or adobe.		
		Also included are buildings not covered by any other class.

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There are certain exceptions affecting metal building systems that should be noted:

- Metal building systems with combustible sheathing and/or insulation are 2A or 2B, not 1C or 1D.
- Metal building systems should be Class 2, not Class 3, regardless of size or type of steel supports.
- Interior finishes do not affect earthquake classifications.
- Brick and stone veneers do not affect a building's earthquake classification.

When planning and designing a new structure it is beneficial to contact the insurance agent or broker to determine how the design's planned attributes will affect the expected premium. ISO and other advisory organizations can perform an additional analysis of the building to assist in obtaining the most advantageous rates for the specific location and building occupancy. ISO-affiliated insurers have access to the ISO publication, *Guide for Determination of Earthquake Classifications*, when earthquake classification verification is requested.

ISO (formerly the Insurance Services Office) is an insurance advisory organization that provides statistical and actuarial information to insurance companies. ISO is a wholly-owned subsidiary of Verisk.

Insurance rates may be adjusted for strategic business reasons and are influenced by the business goals of the insurer, not solely by the characteristics of the building and the relevant risks. For example, insurers may set rates somewhat lower for regular customers or types of buildings that they have decided to pursue as a matter of business strategy. Any rates used herein are for comparison purposes only and should not be treated as actual rates that might apply within any rating jurisdiction.

