



JOINTLY SUPPORTING COMMUNITY NEEDS

Project Impact Home Earthquake Retrofit Permit

What is Project Impact?

- A national FEMA (Federal Emergency Management Agency) funded program designed to mitigate the effects of natural disasters to communities
- Includes a public relations program to encourage building a disaster resistant community

What is the Home Earthquake Retrofit Program?

- Home Earthquake Retrofit Program is part of the umbrella Project Impact Program
- Designed to mitigate earthquake damage by encouraging owners of older wood-framed homes to do seismic retrofit
- The program will be applied consistently in the Eastside jurisdictions through a combined effort of the Building Officials
- Win-win situations for City and Community – substantial benefits to the Community
- April is Washington State Earthquake Preparedness Month

What are the components of the Home Earthquake Retrofit Program?

- Primary goal is to get the house tied down to the foundation to help prevent damage in an earthquake
- Simplified, low-cost permit process utilizing generic retrofit solutions to older wood frame homes
- Homes must qualify to use the Standard Home Earthquake Retrofit (SHER) Plan Set
- The SHER Plan Set describes the specification for seismic retrofit including UBC prescriptive details
- Detailed booklets explain the necessary steps to retrofitting
- Homes that don't qualify to use the SHER Plan Set can still do retrofitting but may need to involve engineers or architects
- Professional training for contractors and homeowners
- Financial help for low to moderate income homeowners

What is the history of the Home Earthquake Retrofit Program?

- FEMA is trying to be proactive to reduce the cost of responding to emergencies
- Larger jurisdictions like Los Angeles and San Diego have been developing programs for several years
- City of Seattle Department of Design, Construction, and Land Use (DCLU) received a grant from FEMA to develop plans, details, and processes with the direction to share this information with other jurisdictions. Seattle has about 150 retrofitted homes.



Enjoy peace of mind. Start preparing today

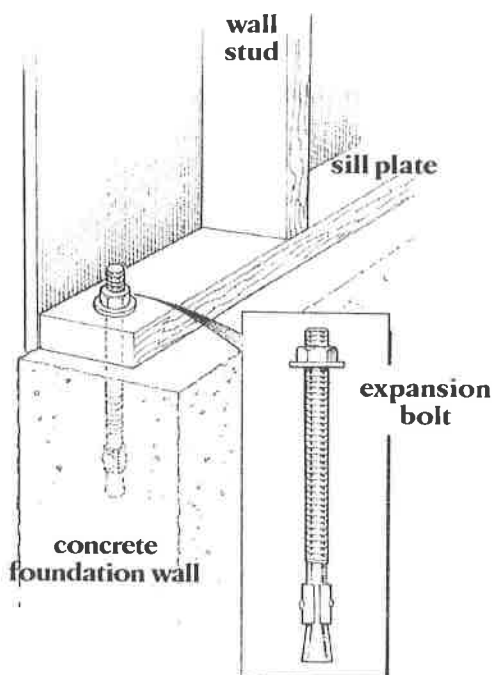
Wood-framed homes – safe & sound?

Homes that have been framed in wood are generally quite resistant to earthquake damage. While it is unlikely that conventionally framed houses will collapse, your assurances of safety are dramatically improved if the home remains on its foundation, and the roof, ceiling, and walls remain connected. If you have specific questions about your home, please contact an engineer experienced in seismic strengthening. Structural Engineers can be found in the yellow pages of the phone book.

Securing your foundation

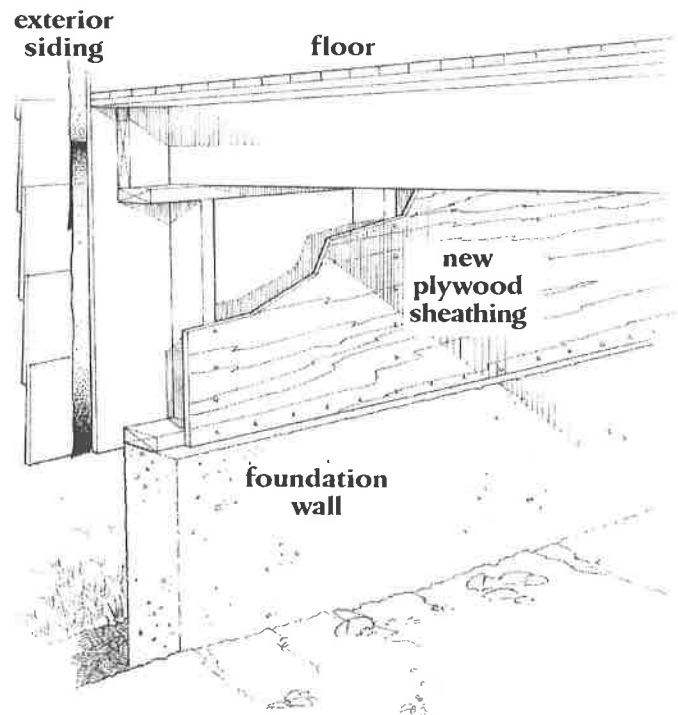
The majority of residential structural damage is caused by homes sliding off their foundations during major earthquakes.

- Check your house and garage for foundation bolts. These bolts secure the wood structure to the concrete foundation. They should be placed every six feet along the sill plate.
- Using a hammer drill and a carbide bit, drill a hole through the sill plate into the foundation. Place these holes every six feet.
- Drop a 1/2" x 8" expansion bolt into the hole and tighten the nut.



Cripple walls

- Inspect the vertical studs that extend from the foundation to the first floor of your home. These are common in crawl space areas and are called cripple walls. If they are exposed (for example, without sheathing) on the inside, they could buckle in the ground motion that accompanies many large earthquakes.
- Strengthen the cripple walls by nailing plywood sheathing to the vertical studs, sill plate, and top plate.



CAUTION: Retrofitting done improperly may actually cause damage to your home during an earthquake.

These pages are intended to illustrate the types of structural retrofitting houses need to be seismically safe. They are NOT intended to provide the specific directions on how to do the retrofitting.

Questions? Call the Building Desk in the Bellevue Development Services Center at 425-452-4121.

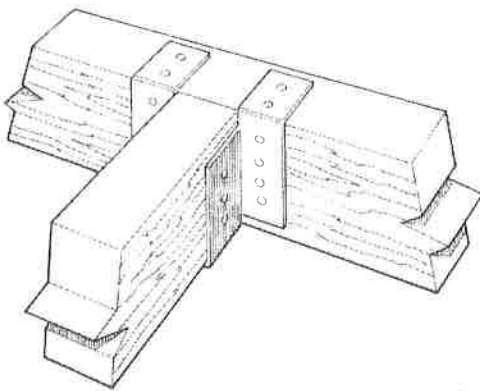
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Preparedness, when properly pursued, is a way of life - not a sudden, spectacular program.

Strengthening the frame

For a building to stay together in an earthquake, all its parts must be fastened together. Commercially available metal connectors are used to strengthen places where beams, posts, walls, the floor, and the ceiling join.

- Strengthen the connections between ceilings, walls, and floors using the appropriate hardware:



- Inspect all exposed framing in garages, basements, porches, and patio covers. Strengthen this where necessary.

Brick & masonry facades

- Check all brick, masonry, and stone facades to make sure they are securely attached to your home. Consult a structural engineer for advice on how to do this.

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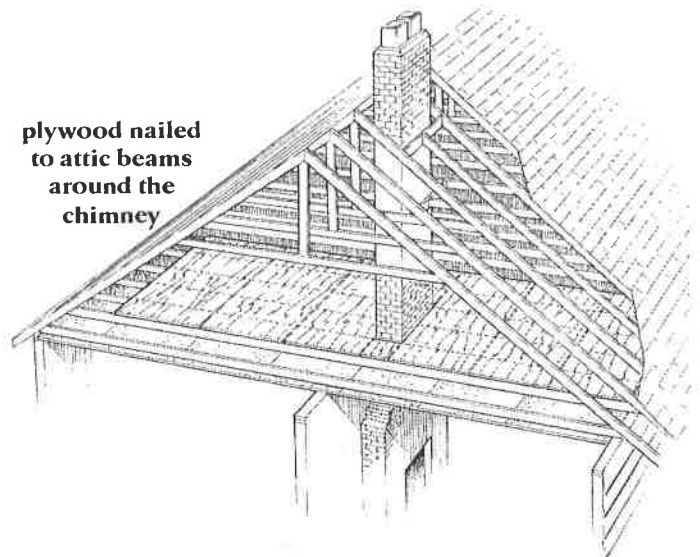
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Chimney

One of the most common types of damage suffered in earthquakes is a toppled chimney. This becomes extremely dangerous when bricks penetrate the roof and fall to the rooms below.

- Check the chimney for loose tiles and bricks.
- Reinforce the ceiling surrounding the chimney with 3/4" plywood nailed to the beams. This provides protection from falling bricks that might break through the roof.



- If your chimney is old and extends more than five feet above the roof, consider bracing it. Check the yellow pages in the phone book for engineers who are experienced in seismic strengthening.

Windows

- Inspect all large plate glass windows to make sure they are safety glass.
- Consider adding a safety film to all windows. This does not prevent the window from breaking, but it does keep the glass from falling and injuring loved ones.