

Unreinforced Masonry (URM)

Retrofit Program Development

Frequently Asked Questions

What is an Unreinforced Masonry Building (URM)?

A URM is a brick building constructed prior to 1945 that lacks steel reinforcement. These buildings are at risk of collapsing in an earthquake and are a potential danger to pedestrians and building occupants. During the 2001 Nisqually earthquake, most of the buildings in Seattle determined to be unsafe to enter were URM.

How do I know if the building I own, rent, or do business in is a potential URM?

If your building is made of brick and was built before 1945, check to see if your building is in the [URM Database on SDCI's website](https://www.seattle.gov/sdci/codes/changes-to-code/unreinforced-masonry-buildings/project-documents) (<https://www.seattle.gov/sdci/codes/changes-to-code/unreinforced-masonry-buildings/project-documents>). There may be URM buildings that were not identified during the City's inventory process; if a building is found to be a URM and is not on the list, it will be classified as a URM and subject to future mandatory retrofit requirements.

If I own a URM, what should I do?

To reduce the probability of collapse in an earthquake, consider consulting with a licensed structural engineer to conduct voluntary seismic retrofits of your building. The City has developed guidance to establish minimum life safety improvements to be recognized as a seismically retrofitted URM and has plans to require URM retrofits in the future.

While the City is not currently mandating URM retrofits other than parapets, building owners should consider potential risks and liability associated with the public safety risk posed by URM buildings in an earthquake. There have been lawsuits in California where building owners were held liable for URM failures even if the retrofits weren't yet mandatory in those jurisdictions.

My building has URM parapets but it is not in the URM database.

Am I required to brace the parapets?

A parapet is any wall that continues vertically past the roofline. Due to their height, weight, and weak structural connections, URM parapets are a risk to the public (Figure 1). The City requires parapets and other unsafe building appendages, such as chimneys, to be braced or retrofitted as part of any construction permit.

What is the city doing to reduce the risk of collapse of URM buildings in an earthquake?

Seattle Department of Construction and Inspections (SDCI) has developed a minimum standard for the earthquake strengthening, or seismic retrofit, of URM buildings. Seismic retrofits of URM buildings consist of bracing and strengthening the connections between the roof, walls, and floors. The URM retrofit standard will be adopted as a voluntary measure in late 2024 and will be mandatory in the future.

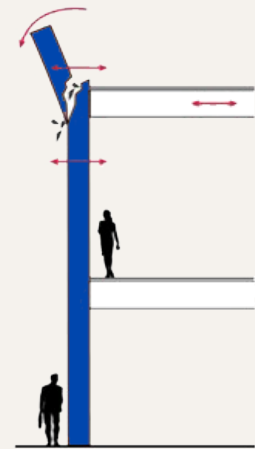


Figure 1: Unbraced URM parapets can break free of the building and fall to the street below.

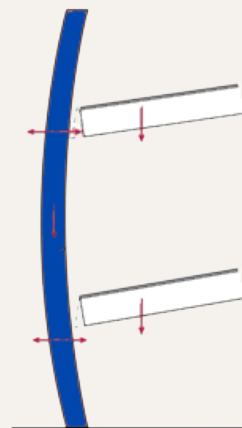


Figure 2: Floors not connected to URM walls are at risk of disconnecting and falling.

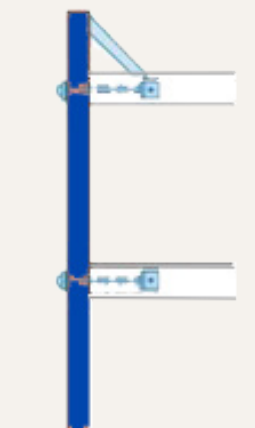


Figure 3: Typical seismic retrofit work includes connecting floors to walls and bracing the parapet.

Frequently Asked Questions Continued

When will seismic retrofits be required?

- Currently, owners must retrofit URM building parapets when they are doing other permitted construction work in the building.
- Owners can undertake a voluntary URM retrofit at any time.
- URM's must be seismically retrofitted if owners are conducting a major renovation, occupying a vacant building, or changing the use or the occupancy of the building.
- Future mandatory retrofit requirements:
 - The City will not require mandatory retrofits until financial and supportive resources have been identified.
 - Once the City has adopted a mandatory URM Retrofit ordinance, building owners will be required to meet retrofit deadlines according to the timeline associated with their URM's vulnerability classification. The URM vulnerability classification for a structure can be found in the URM Database on SDCI's website

Will performing a URM retrofit require additional upgrades of my building?

A voluntary seismic retrofit on its own does not require other renovations to your building. However, when a lot of work is proposed for an existing building, it may be considered a "substantial alteration", and that would require that additional upgrades occur for life safety purposes. SDCI can help you determine whether additional upgrades will be required.

What is required to be recognized as retrofitted on the City's list of URM buildings?

The 2021 Seattle Existing Building Code (SEBC) defines a Retrofitted URM as a URM building that meets a minimum acceptable level of life safety risk from earthquakes. A URM will be recognized as retrofitted once it has conducted a comprehensive code-based retrofit, followed the Alternate Method for retrofit, or conducted a previously permitted substantial alteration. Typically, those permitted after 1996 that can demonstrate compliance by submitting a report completed by a licensed structural engineer.

My URM is a designated landmark or is a contributing building located in a historic district. Are there different retrofit requirements for my building?

The retrofitting requirements are the same. However, URM's designated as historic or landmark structures, or contributing buildings located within a historic district, must obtain a Certificate of Approval from the Department of Neighborhoods for any retrofits.

URMs with this status should minimize the visible appearance of retrofits when feasible.

If I strengthen my URM now, will my building still be subject to further retrofitting requirements in the future?

A building that is seismically retrofitted under the voluntary measure will not be required to perform additional work when the measure becomes mandatory. The City may later require retrofitted URM buildings to complete additional upgrades for life safety purposes if proposed construction is determined to be a substantial alteration. The seismic retrofit work required as part of a substantial alteration is more stringent than the URM minimum retrofit standard.

What resources are available to tenants of URM's undergoing retrofit?

- Seattle's Tenant Relocation Assistance Ordinance (TRAO) provides benefits for qualifying renters displaced by development, including major renovations. Landlords are required to offer relocation assistance if tenants must move out of their rental unit due to redevelopment. Requirements for property owners and developers can be accessed from the TRAO website.
- Tenant households earning 80% or less of Seattle's average median income (AMI) that give notice to vacate after receipt of 10% or more increase in housing costs are eligible to apply for Economic Displacement Relocation Assistance (EDRA).

Who can I contact with additional questions?

You can email SCI_URM@Seattle.gov with additional questions.

