

December 06, 2021

MEMORANDUM

To: Public Safety & Human Services Committee
From: Yolanda Ho, Analyst
Subject: Resolution 32022 – Unreinforced Masonry Building Retrofit Work Program

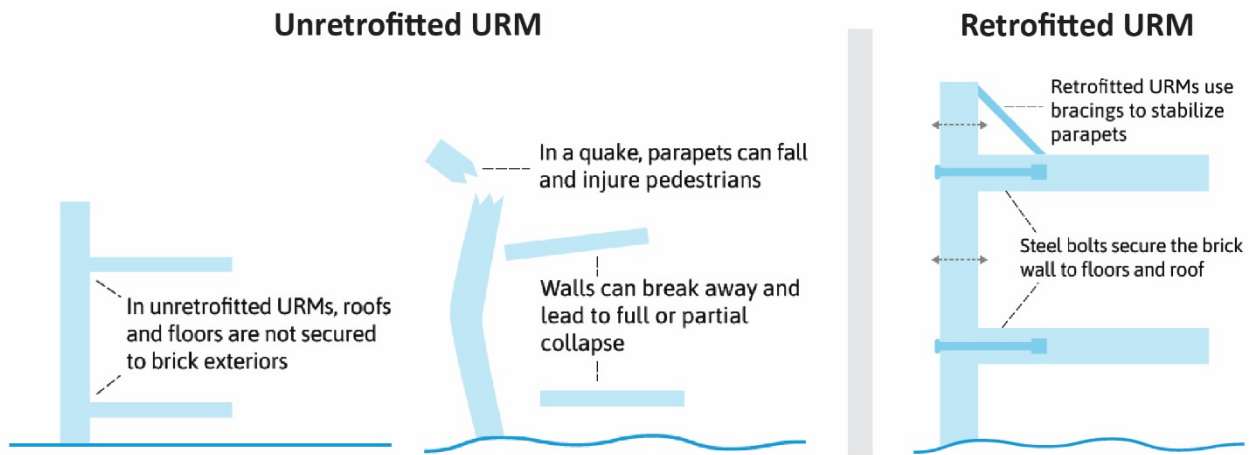
On December 9, 2021, the Public Safety & Human Services Committee (Committee) will discuss and may vote on [Resolution \(RES\) 32033](#). This resolution represents the joint commitment by the Council and the Mayor to work on developing a phased mandatory unreinforced masonry building (URM) seismic retrofit program, led by the Seattle Department of Construction and Inspections (SDCI) and the Office of Emergency Management (OEM).

This memorandum: (1) provides background on URMs; (2) summarizes the City’s policy development related to URMs and other related efforts to date; and (3) describes RES 32033.

Background

URMs are buildings constructed between 1886 and 1957 with brick or clay tile bearing walls where the parapets and walls are not secured to the floors and roofs. These buildings are particularly vulnerable to damage or collapse during earthquakes, potentially endangering both people within the buildings if walls fully or partially collapse and pedestrians if parapets break away and fall onto the sidewalk or street (Figure 1). Seattle has over 1,100 URMs in more than 50 neighborhoods, with the highest concentrations in Capitol Hill, Pioneer Square, and the Chinatown/International District.

Figure 1. Potential impact of an earthquake on an unretrofitted URM versus a retrofitted URM



Source: Funding URM Retrofits, National Development Council, 2017

The City considers earthquakes to be Seattle’s most serious hazard, based on likelihood and potential destructiveness.¹ The 6.8 magnitude Nisqually earthquake in 2001 injured about 400 people and caused around \$2 billion in property damage, including over \$8 million in repair costs to URMs in Seattle. Of the 31 buildings identified by the City as too dangerous to enter in the aftermath of the earthquake, 20 were URMs.² In 2017, SDCI and OEM reported to Council that in the next 50 years, Seattle has an 86 percent risk of being hit by another 8.6 magnitude earthquake and a 33 percent chance of an 8.0 magnitude earthquake.³

SDCI maintains a list of confirmed URMs and each building is classified based on the height of the building, the occupancy, and/or the soil conditions. Table 1 describes the three different classifications and number of URMs in Seattle assigned to each classification.

Table 1. Number of URMs by classification, September 2021

Classification	Number of URMs
Critical Risk: emergency service facilities and schools	75
High Risk: buildings over three stories in poor soil areas (i.e., liquefaction and slide areas); and buildings containing public assembly spaces with occupancies of more than 100 people	184
Medium Risk: all other buildings	883
Total Confirmed URMs	1,142

URM Policy Development and Related Efforts

The City’s URM policy discussions date back to the 1970s when the Council adopted a structural standard for all URMs, which was later repealed because property owners faced significant financial barriers to implementing the standard. In 2008, SDCI convened URM Technical and Policy Committees to propose a cost-effective URM retrofit standard along with an implementation program based on the proposed standard. While the URM Technical Committee recommended adoption of a [standard](#) similar to standards adopted by jurisdictions in California (i.e., “Bolts Plus”) in 2011, the URM Policy Committee could not provide a recommendation due to the costs associated with implementing the seismic upgrades.

At the request of Council, SDCI convened a new URM Policy Committee in 2012 to develop [draft recommendations](#) for a URM retrofit policy. To help inform the committee’s final recommendations, the City continued to analyze the issue, conducted a variety of studies to

¹ Seattle Office of Emergency Management, *Seattle Hazard Identification and Vulnerability Analysis*, April 2019, <http://www.seattle.gov/emergency-management/hazards>.

² Reid Middleton, *Unreinforced Masonry Building Seismic Hazards Study*, December 2007, <https://www.seattle.gov/Documents/Departments/SDCI/Codes/ChangesToCodes/UnreinforcedMasonry/URMSeismicHazardsStudy.pdf>.

³ Council Briefing presentation by Seattle Office of Emergency Management and Seattle Department of Constructions and Inspections, October 9, 2017, <http://seattle.legistar.com/View.ashx?M=F&ID=5486074&GUID=F2CB2289-76A9-4BBA-AA18-971216DF1AA3>.

support development of the City’s inventory of identified URMs, and piloted community outreach and education strategies in the Columbia City neighborhood. The committee released its [final recommendations](#) in 2017, which proposed a timeline of seven, ten, or 13 years for completing URM retrofits, based on building vulnerability, and a process for completing the required retrofits.

Recognizing that the greatest barrier for building owners is the cost of the seismic upgrades, the City contracted with the National Development Council to provide a [Funding URM Retrofits report](#) (released in May 2019). The report (1) identified potential financing and funding mechanisms, and (2) estimated that slightly fewer than 1,000 privately-owned URMs would require some level of seismic upgrade to meet the proposed standard, for a total cost of approximately \$1.28 billion.

In 2020, the Washington State Legislature passed, and the Governor signed into law, [House Bill 2405](#) that established a voluntary commercial property assessed clean energy and resiliency (C-PACER) program. This program provides a financing mechanism to help owners of commercial and multifamily buildings cover the costs associated with energy efficiency and seismic retrofits. As allowed under State law ([RCW 36.165](#)), the King County Council recently adopted the framework for a [C-PACER program](#), and the program is anticipated to begin accepting applications in early 2022. Additionally, the 2022 Adopted Budget includes a new position in SDCI to lead development of a mandatory URM retrofit program.

Resolution 32033

RES 32033 is intended to provide guidance to City departments as they develop a phased mandatory retrofit program for URMs. The resolution would adopt the following program goals: (1) protect life safety by reducing the risk of injury from collapse of URMs in the event of an earthquake; (2) preserve Seattle’s historic and culturally significant landmarks and structures that contribute to neighborhood character; (3) improve the City’s resiliency to earthquake events; and (4) minimize the impact of a URM retrofit program on vulnerable populations to the extent financially feasible.

To meet these goals, the resolution states that the program should include:

- A definition of URMs;
- The type of seismic retrofit standard required to bring URMs into compliance, depending on type of building;⁴
- A categorization system for building types and/or uses that prioritizes key buildings and services;

⁴ *Funding URM Retrofits* identified three different retrofit standards, depending on the condition of the building, with Bolts Plus as the least costly category; Bolts Plus, Plus Frame in the middle; and Full Seismic as the most costly. Of Seattle’s privately-owned URM inventory requiring retrofits, 23 percent are in the Bolts Plus category; 36 percent are in Bolts Plus, Plus Frame; and 41 percent are in Full Seismic.

- A timeline for compliance;
- An enforcement strategy; and
- A variety of potential funding opportunities and financial incentives for building owners to alleviate the financial burden of required seismic retrofits for URMs.

Additionally, the resolution details the following specific actions that SDCI and OEM will pursue to create the program:

1. Fund any additional staff needed to support program administration and/or provide technical expertise to review retrofit plans;
2. Work with other City departments to identify funding for City-owned URMs, complete a seismic assessment, and develop cost estimates for retrofits;
3. Continue to conduct culturally and linguistically appropriate community outreach, focusing on communities of color and low-income communities who may be disproportionately impacted by earthquake damage to URMs and the proposed URM retrofit mandate;
4. Work with the Department of Neighborhoods to coordinate and streamline the URM retrofit permitting process in historic districts and for landmark structures;
5. Work with the Office of Housing and Human Services Department to coordinate timing for retrofits for URMs containing affordable housing or emergency shelter;
6. Work with other City departments to develop strategies to mitigate the impacts of URM retrofits (i.e., displacement of residents and businesses due to higher commercial and residential rents);
7. Collaborate with Seattle Public Schools and private schools to develop an agreement on deadlines to complete retrofits for their URMs;
8. Work with a nongovernmental contractor to develop resources to provide coaching for owners of URMs and serve as a general resource for residents and building owners about the program;
9. Prepare a communications strategy; and
10. Submit legislation that would establish the mandatory URM retrofit program for Council consideration.

Finally, RES 32033 requests that SDCI, OEM, and other City departments as needed, provide a progress report to the Council on a quarterly basis, beginning on August 1, 2022.

cc: Esther Handy, Central Staff Director
Aly Pennucci, Policy and Budget Manager