Unreinforced Masonry (URM) Program Briefing

Photo by John Skelton

Seattle Department of
Construction and Inspections

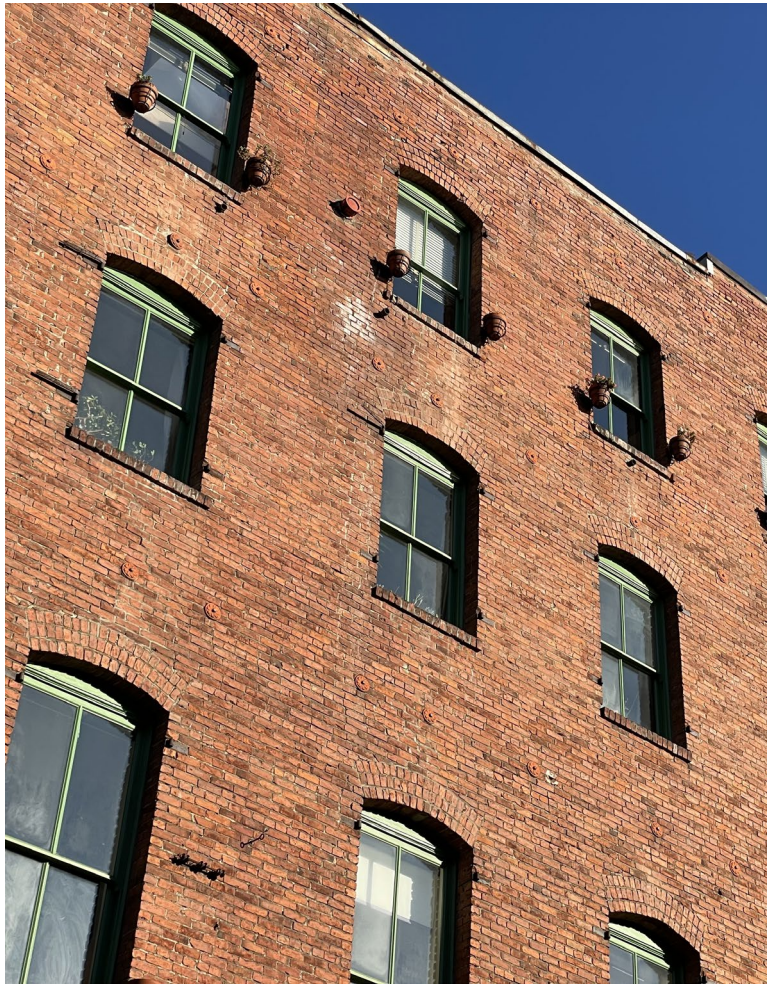
Land Use Committee
May 15, 2024

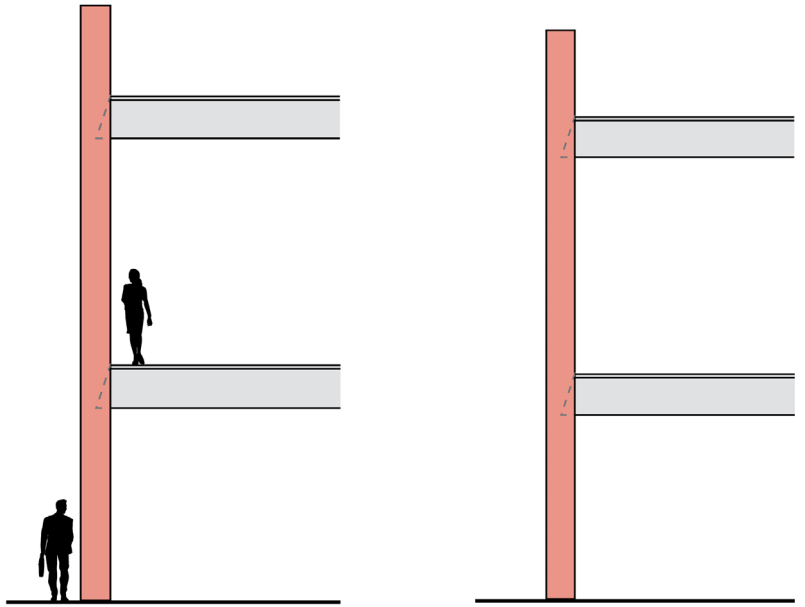
SDCI Vision, Purpose, and Values

- **Our vision is** to set the standard for awesome local government service.
- **Our purpose is** helping people build a safe, livable, and inclusive Seattle.
- **Our values** are equity, respect, quality, integrity, and service.

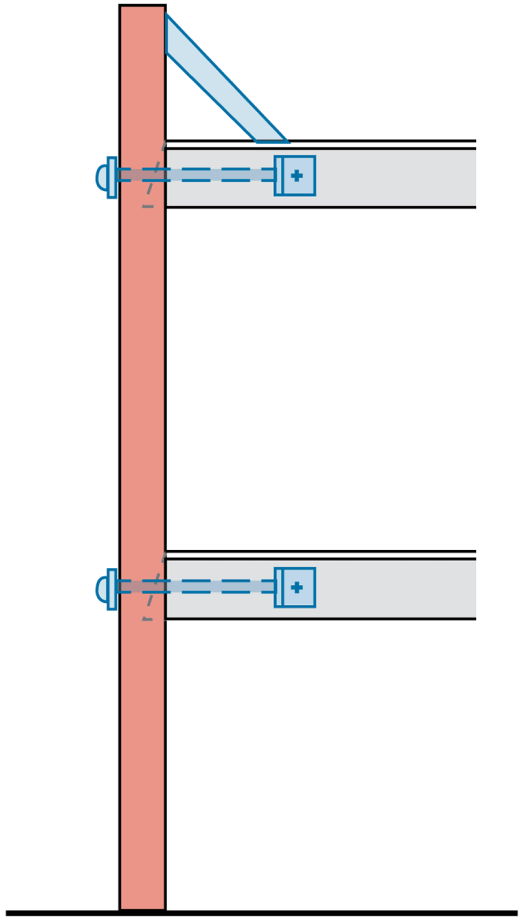
What is a URM? (Unreinforced Masonry Building)

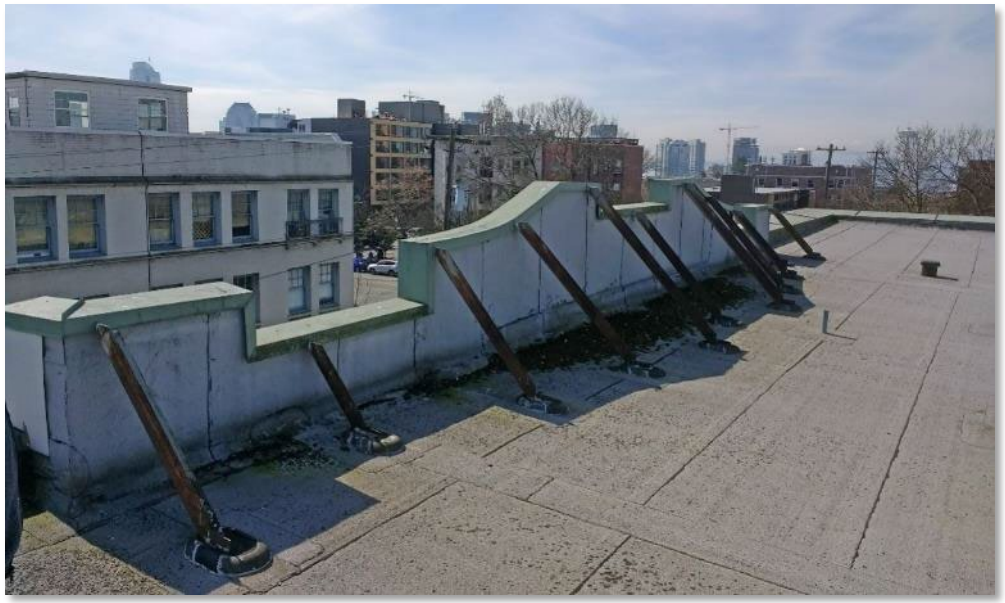
- Constructed of brick, typically before 1945.
- Bricks are unreinforced, they lack structural support.
- Often Identified by arched windows and header courses.





By retrofitting, we can reduce the risk of collapse

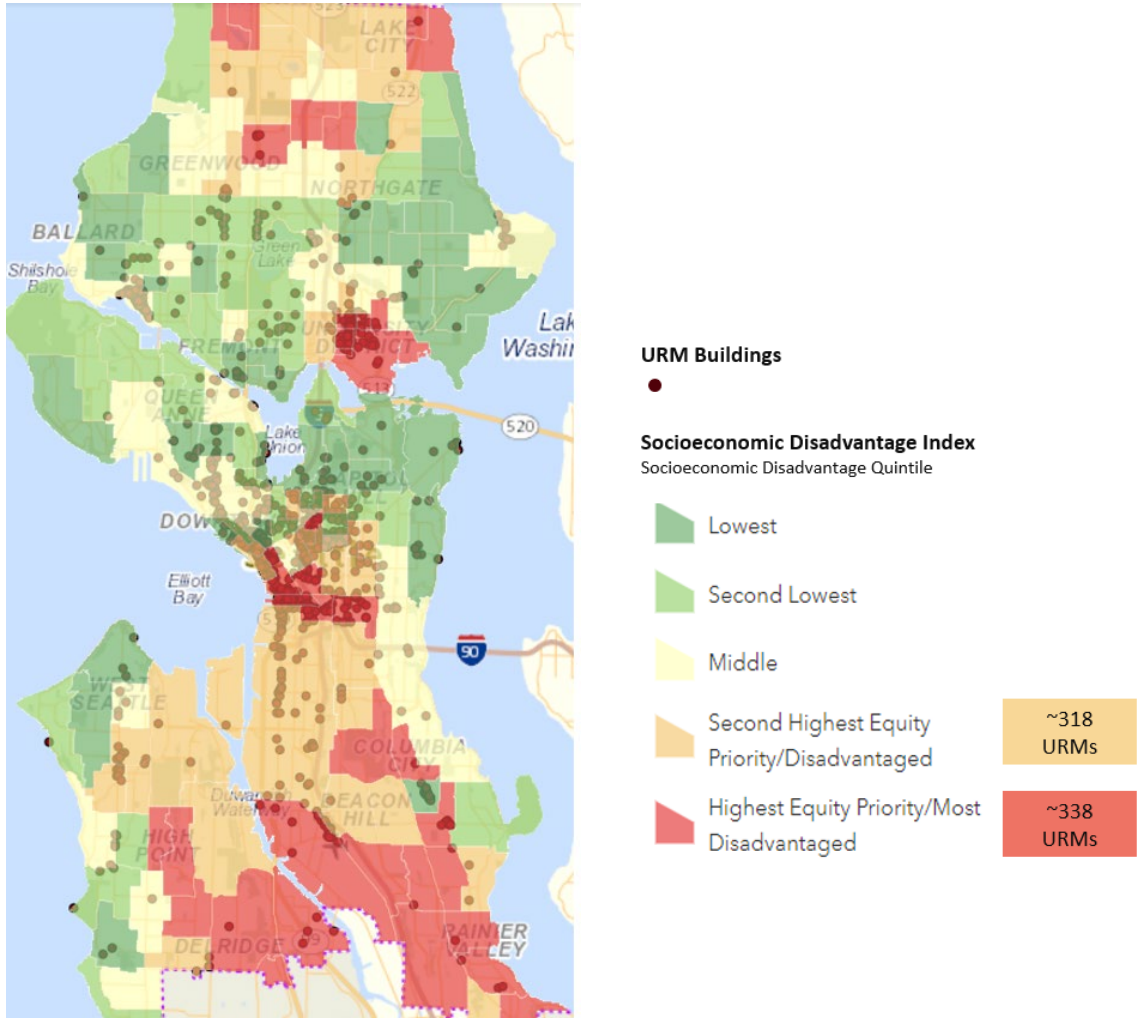




Seattle's URMS

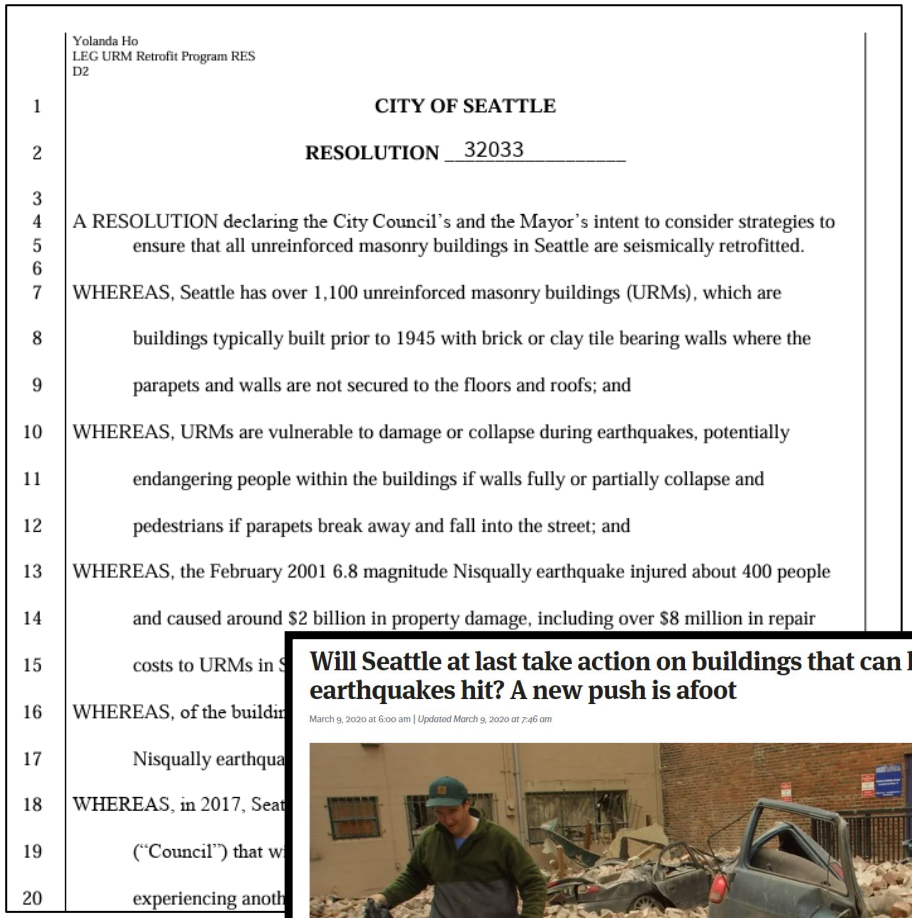
Vulnerability Classification	Number of URMs
Critical vulnerability: emergency service facilities and schools	75
High vulnerability : buildings over three stories in poor soil areas (i.e., liquefaction and slide areas); and buildings containing public assembly spaces with occupancies of more than 100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

Number of URMs by classification, September 2021



2021 –Joint Council/Mayoral Resolution 32033: Phasing in a mandate for retrofits

- Reduce risk of injury and death from URM collapse for occupants and pedestrians.
- Preserve historically and culturally significant structures.
- Identify a variety of potential funding opportunities and financial incentives to reduce the financial burden of required URM retrofits.
- Continue culturally and linguistically appropriate community outreach and engagement, with a focus on low-income, and communities of color.



Yolanda Ho
LEG URM Retrofit Program RES
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CITY OF SEATTLE

RESOLUTION 32033

A RESOLUTION declaring the City Council's and the Mayor's intent to consider strategies to ensure that all unreinforced masonry buildings in Seattle are seismically retrofitted.

WHEREAS, Seattle has over 1,100 unreinforced masonry buildings (URMs), which are buildings typically built prior to 1945 with brick or clay tile bearing walls where the parapets and walls are not secured to the floors and roofs; and

WHEREAS, URMs are vulnerable to damage or collapse during earthquakes, potentially endangering people within the buildings if walls fully or partially collapse and pedestrians if parapets break away and fall into the street; and

WHEREAS, the February 2001 6.8 magnitude Nisqually earthquake injured about 400 people and caused around $2 billion in property damage, including over $8 million in repair costs to URMs in S

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Nisqually earthqua

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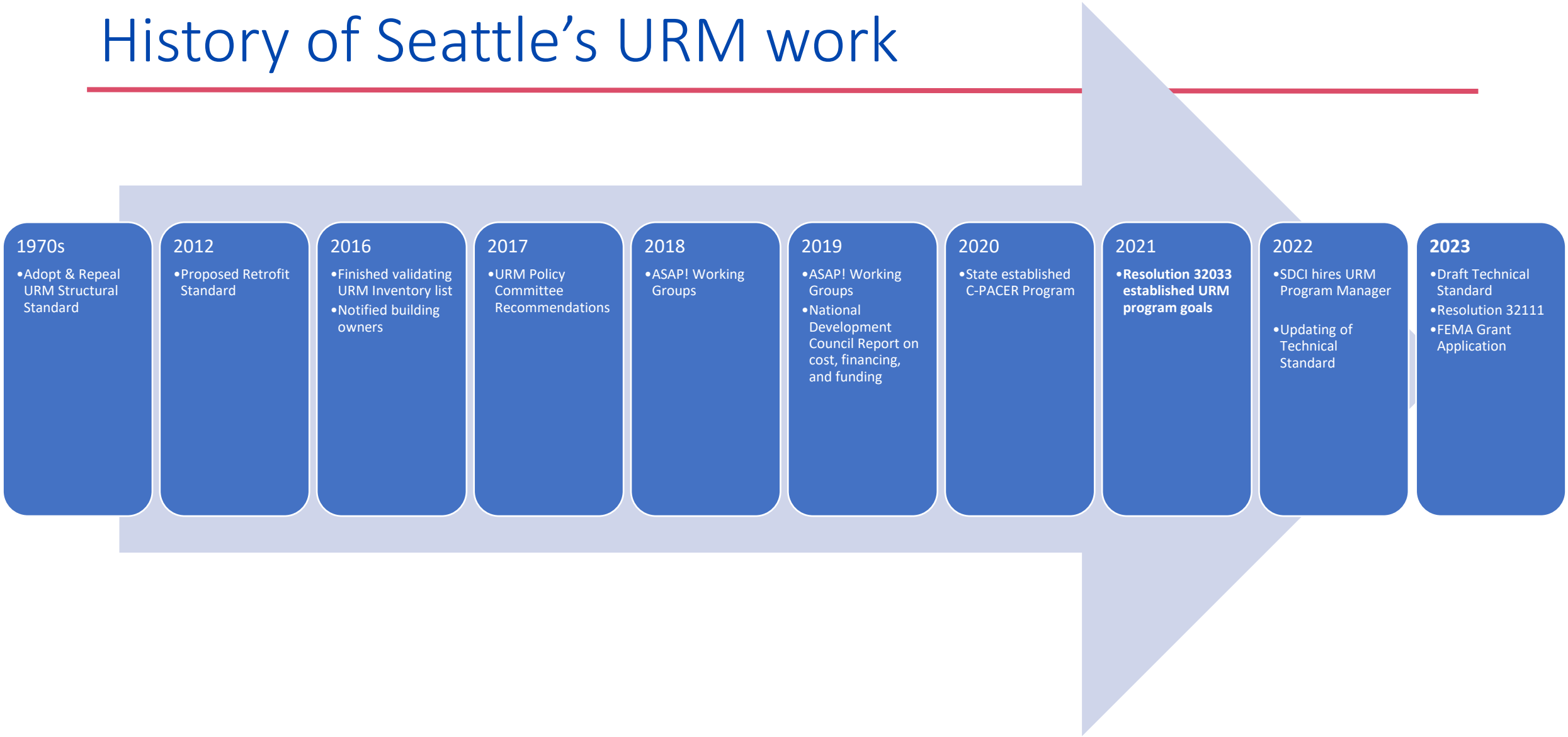
Will Seattle at last take action on buildings that can kill when earthquakes hit? A new push is afoot

March 9, 2020 at 6:00 am | *Updated March 9, 2020 at 7:46 am*

The Seattle Times

History of Seattle's URM work



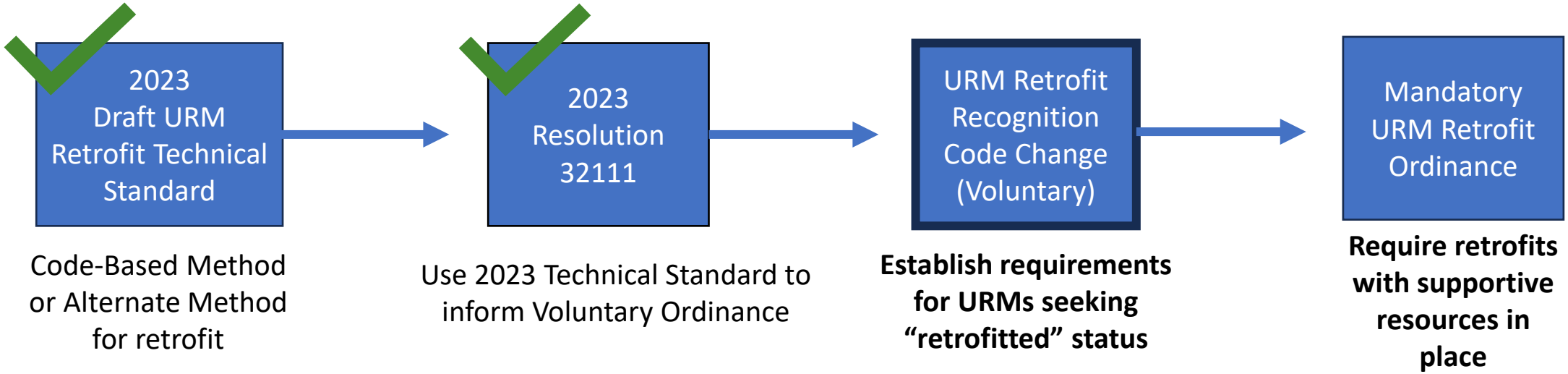
Resolution 32033

URM Program is requested to include:

- Definition of URMs
- Identification of the type of seismic retrofit standard required to bring URMs into compliance, depending on type of building
- Categorization system for building types and/or uses that prioritizes key buildings and services
- Timeline for compliance
- Enforcement strategy
- Variety of potential funding opportunities and financial incentives for building owners to alleviate the financial burden of required seismic retrofits for URMs

Pathway to Required URM Retrofits

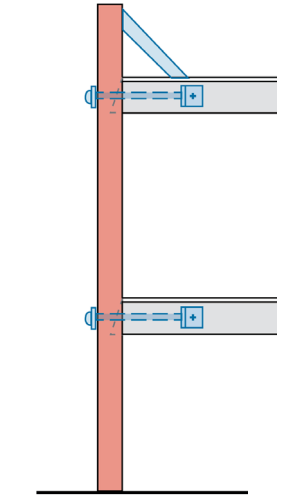
- Short-term goal: URM Retrofit Recognition Code Change *(2024)*
  - Defines minimum seismic safety requirements for a “retrofitted” URM building.
  - Establishes the Alternate Method for URM retrofit, minimizing cost and collapse hazard.
  - Encourage voluntary URM retrofits.
- Long-term goal remains establishing a Mandatory URM Retrofit Ordinance.



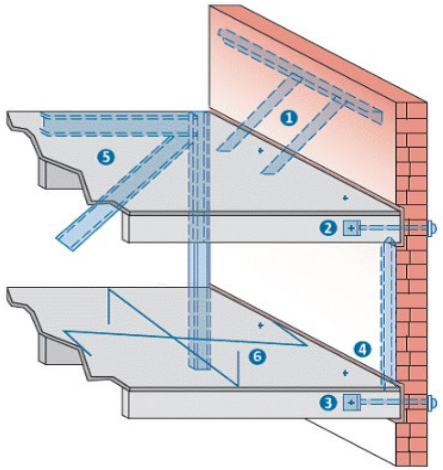
Estimated Retrofit Costs (Pre-Covid)

- Alternate Method: ~$650,000
- Code-based Method Retrofit:

  ~ 3-4x cost
- Total Estimated Cost $1.3B (2019 dollars)



Alternate Method



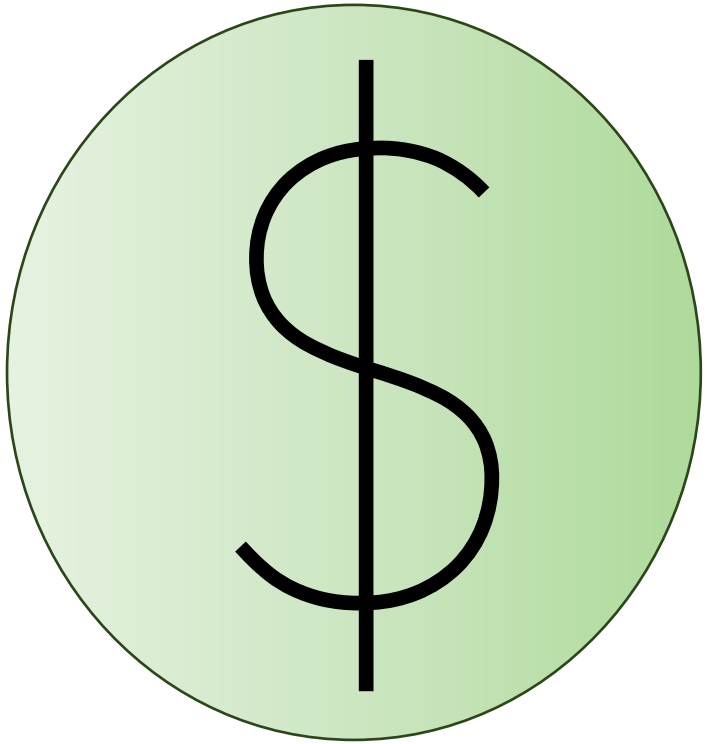
Code-Based Method

Table 2: Average Costs (Per Square Foot) to Retrofit			
Percent of URM inventory:	Bolts+ 23%	Bolts++ Frame 36%	Full Seismic 41%
Construction Costs			
Hard Costs[1]	$17.32	$19.24	$61.99
Sales Tax (10.1%)	$1.75	$1.94	$6.26
Hard Costs Contingency (10%)	$1.91	$2.12	$6.83
Total Hard Costs	$20.98	$23.30	$75.08
Soft Costs (15%)[2]	$3.15	$3.50	$11.26
Soft Costs Contingency (10%)	$0.31	$0.35	$1.13
Total Soft Costs	$3.46	$3.85	$12.39
Total Construction Expenses	**$24.44**	**$27.15**	**$87.47**
Relocation Expenses[3]			
	$8.00	$8.00	$8.00
TOTAL (Including Relocation)	**$32.44**	**$35.15**	**$95.47**

Estimated Costs Per Square Foot
"Funding URM Retrofits"
National Development Council, 2019

Funding Solutions for Consideration

- Low-interest loans such as C-PACER (Commercial Property Assessed Clean Energy & Resiliency Program)
- Tax credits for historic preservation, and greenhouse gas reduction
  - Proposed Fall 2024 Legislative Working Session in coordination with WA Emergency Management Division.
- Federal grants
- Transfer of Development Rights (TDR)

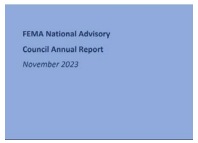


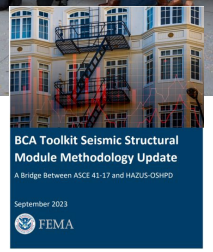
FEMA BRIC Grant

Building Resilient Infrastructure & Communities

Phase 1- 2024:

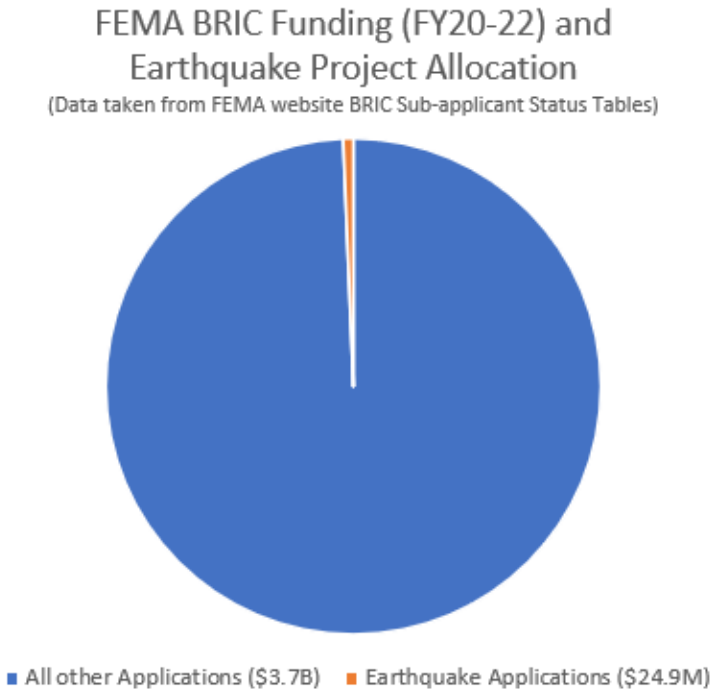
Application submitted to develop “Archetype” Cost-Effective studies for Chinatown/International District and Pioneer Square. *(Modeled after Berkeley, CA).*





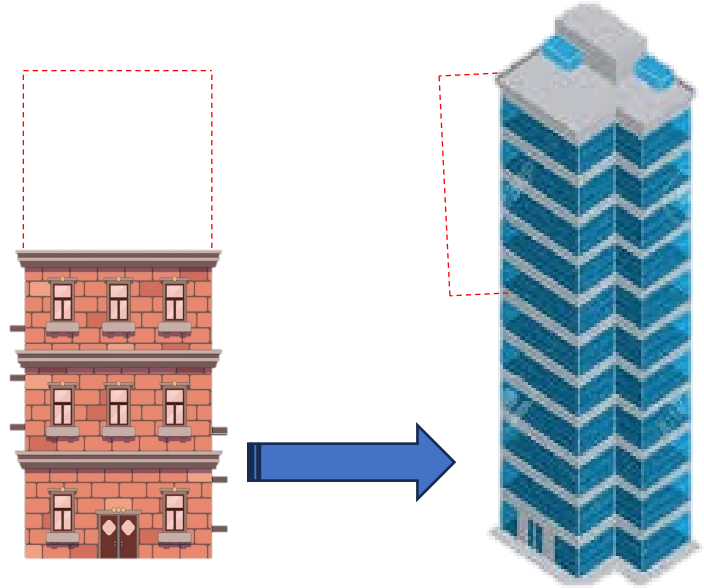
Phase 2-2027*:

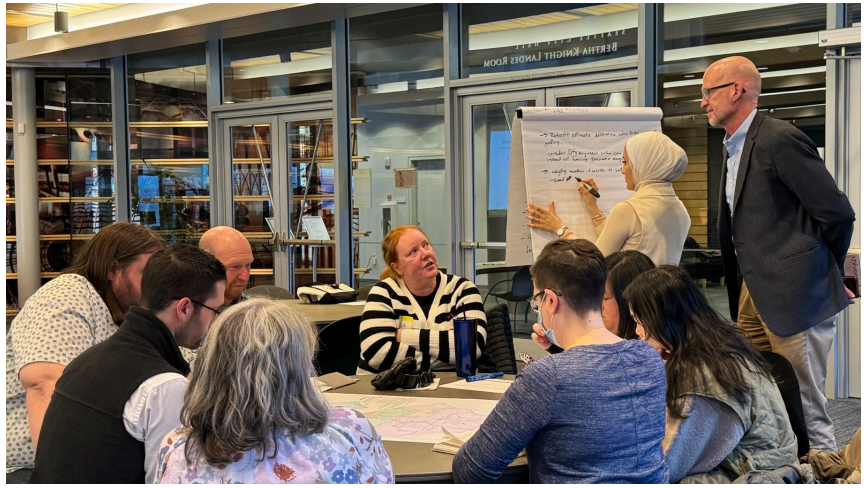
Application to reimburse for design and construction costs in Chinatown/International District.



Transfer of Development Rights

- February 27, 2024 Listening Session with OPCD
- Over 50 participants
- Feedback received will inform scope of feasibility study.
- Primary topics:
  - Retrofit cost vs. value of credits
  - Control of TDR market





URM Next Steps

1. **URM Info Session for Chinatown/International District**
   - Partnership with Office of Emergency Management
   - Proposal to Chinatown-International District Visioning Advisory Group
     - Department of Neighborhoods Coordination
2. **Adopt URM Retrofit Recognition Code Change-** Seattle Existing Building Code (SEBC)
3. **SDCI- Hire URM Engineer**
4. **Preparation for Fall Legislative Working Session**
5. **Scope TDR Feasibility Study**
6. **Await FEMA Grant Review**

Questions?

Nathan Torgelson

Director, SDCI

Nathan.Torgelson@seattle.gov

Amanda Hertzfeld

URM Program Manager

Amanda.Hertzfeld@seattle.gov

Kai Ki Mow

Principal Engineer

KaiKi.Mow@seattle.gov