

**URM POLICY COMMITTEE STATEMENT ON BENEFIT/COST ANALYSES**  
**Determining the Benefits and Costs of Making Unreinforced Masonry Buildings Safer**

Identifying the benefits and costs of making URM buildings safer is difficult. We do not know what type of earthquakes will occur or how, and what buildings will be damaged. We do know that when earthquakes *do* happen, the benefits of mitigation are clear. Computer models of the earthquake events help as do models that estimate damage. These models can be used to compare the relative costs and benefits, but, they do not provide exact predictions of actual damages, and do not provide exact estimates of the benefits. For example, one of the most significant limitations of these models is that they do not take multiple events into account, including aftershocks. The City used such models, along with other sources, to help develop its policy.

The following table lists factors that were and were not specifically included in the numerical analysis in the Benefit/Cost Analysis report or public comments.

<b>Factors Included</b>	<b>Factors Not Included</b>
<ul style="list-style-type: none"> <li>• Loss of life and other casualties</li> <li>• Cost to repair building damage, including damaged contents (construction cost only)</li> <li>• Costs associated with repair and recovery time</li> <li>• Cost of temporary loss of business, including tenant displacement</li> <li>• Loss of property value</li> </ul>	<ul style="list-style-type: none"> <li>• Consideration of the full range of potential earthquake scenarios</li> <li>• Increased risk of collapse from long-duration events, Seattle Basin amplification, or the accumulation of damage in multiple events, including aftershocks</li> <li>• Increased damage from tsunami or seiche effects</li> <li>• Cost of damage to adjacent buildings</li> <li>• Cost to mitigate hazards from adjacent building</li> <li>• Cost to clear both on-site and offsite debris</li> <li>• Cost of delays associated with arranging financing for repairs</li> <li>• Cost of reduced business activity due to public perception of impaired function (e.g., perception of imminent danger or extreme damage in the area, bad traffic, etc.)</li> <li>• Upstream or downstream costs related to the inability to supply goods and services to or from a damaged building (interdependencies of businesses)</li> <li>• Permanent loss of business (businesses shift to other locations)</li> <li>• Loss of character, sense of space, or neighborhood/community</li> <li>• Cost and delays associated with lawsuits</li> </ul>

Given the limitations of all benefit cost analyses, the Policy Committee’s recommendations were not based on any one study, or any one model. The Committee understood that all models have strengths and weaknesses, and that the Committee’s role was to make their policy recommendations based on all available information.