TO:  HONORABLE CITY COUNCIL

FROM:  CITY MANAGER  DEPARTMENT: PLANNING AND COMMUNITY ENVIRONMENT

DATE:  DECEMBER 13, 2004  CMR: 482:04

SUBJECT:  UNREINFORCED MASONRY BUILDINGS (URM)

This is an informational report and no Council action is required.

BACKGROUND
In January 1986, Palo Alto adopted the Seismic Hazard Identification Program (PAMC Chapter 16.42). The process of drafting an ordinance began in 1981 in response to the 1976 Comprehensive Plan Seismic Safety Element. The original staff proposal was a mandatory retrofit ordinance following the examples adopted in the cities of Los Angeles, Long Beach and Santa Rosa. At a Council meeting in April 1982, the staff proposal was rejected and staff was directed to “establish a citizens’ committee to recommend an economical, practical, and cost-effective method of reducing seismic hazards in Palo Alto.”

The citizens’ committee included representatives from the Chamber of Commerce, the Board of Realtors, Downtown Merchants Association, California Avenue Association, Planning Commission, Architectural Review Board, Historic Resources Board, Structural Engineers and an Architect. Over a fifteen-month period the committee developed the policies to be included in an ordinance to be presented to the Council Policies and Procedures Committee followed by the full Council. The Committee also identified the negative impacts of a retrofit ordinance and developed a laundry list of potential mitigation measures.

Based on the committees’ recommendations the 1986 Ordinance contained the following basic elements:

- Three categories of buildings are contained in the scope of the ordinance
  1. Category I - Unreinforced masonry buildings greater than 1600 square feet in area.
  2. Category II – Buildings constructed prior to January 1, 1935 containing one hundred or more occupants.
3. Category III – Buildings constructed prior to August 1, 1976 containing three hundred or more occupants.
   - The ordinance requires a mandatory structural analysis of the building within a specified time line.
   - Decision to retrofit is voluntary on the part of the owner.
   - Unreinforced masonry building is defined as buildings containing walls constructed wholly or partially of unreinforced masonry.

**DISCUSSION**

It is widely known that unreinforced masonry buildings are potentially the most dangerous building type in the event of a moderate to significant earthquake. While retrofitting may not prevent damage, it will reduce the potential for collapse. This is especially true in unreinforced bearing wall brick buildings.

At the time Palo Alto’s ordinance was enacted there were 46 unreinforced masonry buildings identified. All but 3 are located in the University Avenue downtown area. All building owners were notified and were given an eighteen-month time period to submit their engineering analysis as required by the ordinance. All reports were received, reviewed for compliance with the ordinance and accepted. The following table summarizes the actions that have taken place as of November 2004:

<table>
<thead>
<tr>
<th>Action</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrofitted</td>
<td>20</td>
<td>43</td>
</tr>
<tr>
<td>Demolished</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>URM removed</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Vacated</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Exempt</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No action</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>100</td>
</tr>
</tbody>
</table>

An incentive to encourage retrofitting was added to the zoning ordinance in 1987. This amendment allows a square footage increase of 2,500 square feet or 25% of the existing square footage, which ever is greater, following a seismic retrofit. This additional square footage can be added on site or sold to a receiver site (TDR program). To date, eight properties have taken advantage of this incentive.
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