Merged Survey Data

Previous Studies:
- Cynthia Hoover (1994);
- EQE International (1995); and,
- Reid Middleton (2007).

DPD’s “windshield” survey:
- Initial computer “fly-overs” conducted with Visual Earth to identify potential URM buildings.
- DPD engineering staff subsequently visited the site to visually observe whether a building appeared to be URM construction evidenced by the presence of tie/header courses, arches over windows, etc.
URM Survey Information

- Intended as the starting point for identifying URM buildings
- Information about specific buildings has not been verified, and may not be accurate
- Some of the buildings on the list may already be retrofitted to an extent that they meet the proposed technical standard
- Some buildings will require a fairly modest effort to bring them into compliance with the proposed standard; some will likely require extensive work
Updating the List of URMs

DPD has a process for applicants to challenge the URM identification and to update the URM list

Upon applicant/owner request, DPD will review an engineer’s report to reach a determination that

- The building is not a URM bearing wall building,
- or
- The building retrofit does or does not comply with the proposed technical standard

The list will then be updated.

NOTE: Buildings with URM bearing walls that have been retrofitted will be listed as URMs regardless of whether the building meets appropriate standards.
Of the 819 identified URM buildings in the survey, the majority of these are less than 3 stories, with an average of 2 stories.

The database indicates that 118-144 or around 14% of the buildings appear to have been retrofitted to some degree as evidenced by the presence of rosettes or braces.
Percent of Buildings Retrofitted to some degree

One and two story buildings are those that are least likely to have been retrofitted.
- The survey yielded square footage information for 283 or about one third, of the 819 URMs identified.

- Of these 283 buildings it is estimated that 9.15 million square feet have been retrofitted to some degree.
- The majority of the occupancies observed in the URM survey are commercial, office and residential.
- The majority of commercial uses are in one-story buildings.
- The majority of residential uses are in 3 story buildings.
- FEMA 154 Rapid Visual Screening of Buildings for Potential Seismic Hazard occupant load estimates are in three broad groups: 0-10, 11-100 and >100 occupants.
There are a total of 50 schools on the URM survey list; 30 of them are public schools including colleges.

It has not yet been determined whether these retrofits would meet the standard proposed in the Technical Report.