

FOREWORD

Hazard

Hazard mitigation and emergency preparedness have become part of the San Leandro culture and an important aspect of our daily lives. Our commitment to the health and safety of our community has been a leading priority during the last several years; this *Master Plan* is an example of that commitment. The *Master Plan* has been a vision of the Disaster Preparedness Council Subcommittee, the Disaster Preparedness Citizens' Advisory Committee, and the Master Plan Committee, and with the support and leadership of the City Council, City Manager's Office and our entire San Leandro community... the *Master Plan* has become a reality.

The *Master Plan* is a document that prepares our community and future generations for the potential life threatening emergencies that are prevalent in any community and particularly in the Bay Area. This "road map" is a dynamic plan that becomes our action plan involving the hazard mitigation and emergency preparedness process. We encourage everyone to become involved and join us in the on-going implementation of our *Master Plan*. Your creative ideas and suggestions continue to make the difference between an ordinary and extraordinary program.


We are quite proud to be part of such a progressive plan and look forward to continuing to serve our City in our on-going efforts to create a *Disaster Resistant Community*.

- Shelia Young, Mayor (Chair)
- Gordon A. Galvan, Vice Mayor (Vice Chair)
- Garry A. Loeffler, Council Member
- John Jermanis, City Manager
- Wandzia Grycz, Assistant City Manager
- Robert J.P. Maginnis, Chief of Police
- Robert J. Rockett, Public Works Services Director
- William J. McCammon, Fire Chief
- Joseph Kitchen, Police Captain
- William Schock, Chief Building Official
- Dan S. Lunsford, Emergency Services Manager

Disaster Council Members




Shelia Young
Mayor


John J. Jermanis
City Manager



Introduction Part I

THE BEGINNING

Not since the 1868 earthquake on the Hayward fault has San Leandro suffered the painful consequences of an earthquake disaster. The City was spared significant damage in the 1906 San Francisco earthquake as well as in the 1989 Loma Prieta earthquake, in spite of deadly and costly devastation inflicted by those shocks in the nearby cities of Oakland, San Francisco, Los Gatos, Santa Cruz and Watsonville. Nevertheless, these earthquakes, and those that followed in 1992 and 1994 in Humboldt County, Landers and Northridge, painted a vivid picture for San Leandro's policy makers of the scale and severity of damage that San Leandro can expect in its next catastrophic disaster. These events made it clear that:

1. San Leandro's emergency services must become better equipped and trained to respond during disasters.
2. The City's essential facilities must be strengthened to withstand the impact of a major earthquake on the nearby Hayward fault.
3. San Leandro's residential and commercial buildings must be strengthened to minimize post-earthquake homelessness and economic losses.
4. San Leandro residents, schools, and businesses must become prepared to survive on their own for at least 3 days in the aftermath of a disaster.

To accomplish these objectives, the City Council in 1990 adopted a long-range plan called the "Partnership for Preparedness Program" to engage all segments of the San Leandro community in a City-wide disaster preparedness effort. Also at that time, the City Council created a new, management-level position of Disaster Preparedness Coordinator to guide this program and identify community preparedness needs, develop and implement projects to meet those needs, and seek alternative funding sources to finance needed community preparedness and hazard mitigation projects.

Protecting Life Safety in Disasters

To address the life-safety issues raised by California's earthquake disasters, the San Leandro City Council approved in 1993 and 1994 disaster preparedness projects to strengthen the City's essential services buildings (including the fire stations, Public Safety Building and City Hall) and began a citizen training effort aimed at helping San Leandrans become self-sufficient in disasters. Preparing the City staff for its disaster roles began in 1989 with the enrollment of 10 to 15 staff members per year in emergency management courses taught by the California Specialized Training Institute of San Luis Obispo. Since 1990, additional staff training has included table-top and functional disaster exercises in San Leandro's Emergency Operations Center.

In 1992 the City created and staffed a second full-time position within the Disaster Preparedness Division, titled Disaster Education Specialist, to focus on the community preparedness component of disaster management. A comprehensive series of community training programs were developed and implemented; training occurred in neighborhoods, and at schools, businesses, and service organizations upon request, as well as at scheduled monthly town meetings in the various council districts throughout the City.

Notes

NOTES

ACKNOWLEDGMENT

The City's Disaster Management Program was developed from a Vision Task Force of concerned citizens and leaders within the community after the Loma Prieta earthquake in October 1989. Several of these members volunteered to participate on the task force's Community Preparedness Subcommittee; the citizens listed below continued their preparedness efforts in the Disaster Preparedness Citizen's Advisory Committee. This advisory committee, under the leadership of the City's Disaster Preparedness Coordinator, developed and implemented a comprehensive preparedness program. It is their legacy that the City of San Leandro and its future generations enjoy the award winning and nationally recognized disaster management program called the *Partnership for Preparedness Program*. We thank these citizens for their tireless efforts in keeping San Leandro prepared for the future disaster that awaits us all:

Thank You

John Bailey
Bob Berger
Kim Brockman
Don Carlson
Joe Cramer
Sandy Forese
Carolyn Green
Sam Holcomb
Dave Jorgensen
Howard Kerr
Jeff McGallian
Mike Munoz
Bill Perras
Marion Pryfogle
Susan Reisz
Al Rosenga
Caryl Ann Symons
Trinh Tran

Of particular note in mentoring the *Partnership for Preparedness Program* since its inception has been the City Council. They have been an advocate and program promoter throughout the community involving neighborhoods, businesses, schools, City government, and service organizations. Their tireless efforts continue to enhance the program and our community's safety.

The Disaster Preparedness Division was located in the City Fire Department. In 1995 the City Fire Department was eliminated, and the City contracted with Alameda County Fire Department for fire and emergency medical services. The Disaster Preparedness Division was relocated to the County Fire Department.

In 1996 the Disaster Preparedness Division received a face lift; the division was renamed the Emergency Services Division to accommodate all emergencies and critical incidents, not just disasters. The titles of the division's two full-time positions were operationally re-titled to Emergency Services Manager and Emergency Services Coordinator to expand their range of emergency responsibilities.

In 1997 the Emergency Services Division was relocated to the City Police Department in the Services Bureau where it currently resides. That same year the Emergency Services Manager began an extensive reorganization of the City's emergency organization, as well as sweeping revisions of the City's Standard Emergency Management System (SEMS) Emergency Plan (City disaster plan) and the Management Operation Plan (Emergency Operations Center guide).

Preventing Preventing Long-term Physical & Economic Damage

The devastating, though "moderate," Northridge earthquake on January 17, 1994, raised for San Leandro an issue that is more fundamental to the future of the San Leandro community than preparing for an immediate post-disaster response. This issue threatens not only the life-safety of San Leandro's citizens, but the economic foundation of the City's commerce, community services, and future municipal revenues. The issue is "damaged and destroyed residential and commercial buildings" and the economic chain of consequences that follows.

These consequences begin with lost sales and property taxes due to earthquake-caused business closures, business "leakage" to surrounding communities, unemployment, and massive homelessness, and end with the long-term blight of neighborhood "ghost towns" populated by red-tagged and abandoned homes, apartments, and commercial buildings with bankrupt owners awaiting redevelopment and re-occupancy. The enduring damage to Los Angeles neighborhoods caused by the Northridge earthquake, witnessed first-hand by San Leandro City Council members in 1994 and 1995, provides a telling case study for staff members unfamiliar with the long-term issues of disaster recovery.



The City recognizes that this chain of consequences can be shortened greatly if residential and commercial buildings that are known to be vulnerable to earthquakes, old single-family homes on weak foundation systems, "soft-story" apartment buildings, "tilt-up" industrial buildings, and manufactured housing ("mobile homes") not tied to the ground, are strengthened before San Leandro's next major earthquake. Now that San Leandro's City government is proceeding to seismically strengthen its own vulnerable essential services buildings, the Northridge disaster has directed the City's attention to the hazardous residential and commercial buildings in its own community.

Hence, in 1994 a long-range earthquake hazard reduction plan was drafted for the purpose of (a) developing a procedure for assessing the seismic vulnerability of the community's private buildings, (b) prioritizing the community's need to strengthen these buildings, (c) developing programs to assist building owners in strengthening these buildings to survive earthquakes with minimal damage, and (d) identifying funding alternatives to get the job done before our rising earthquake probabilities become certainties.



The Future

Future

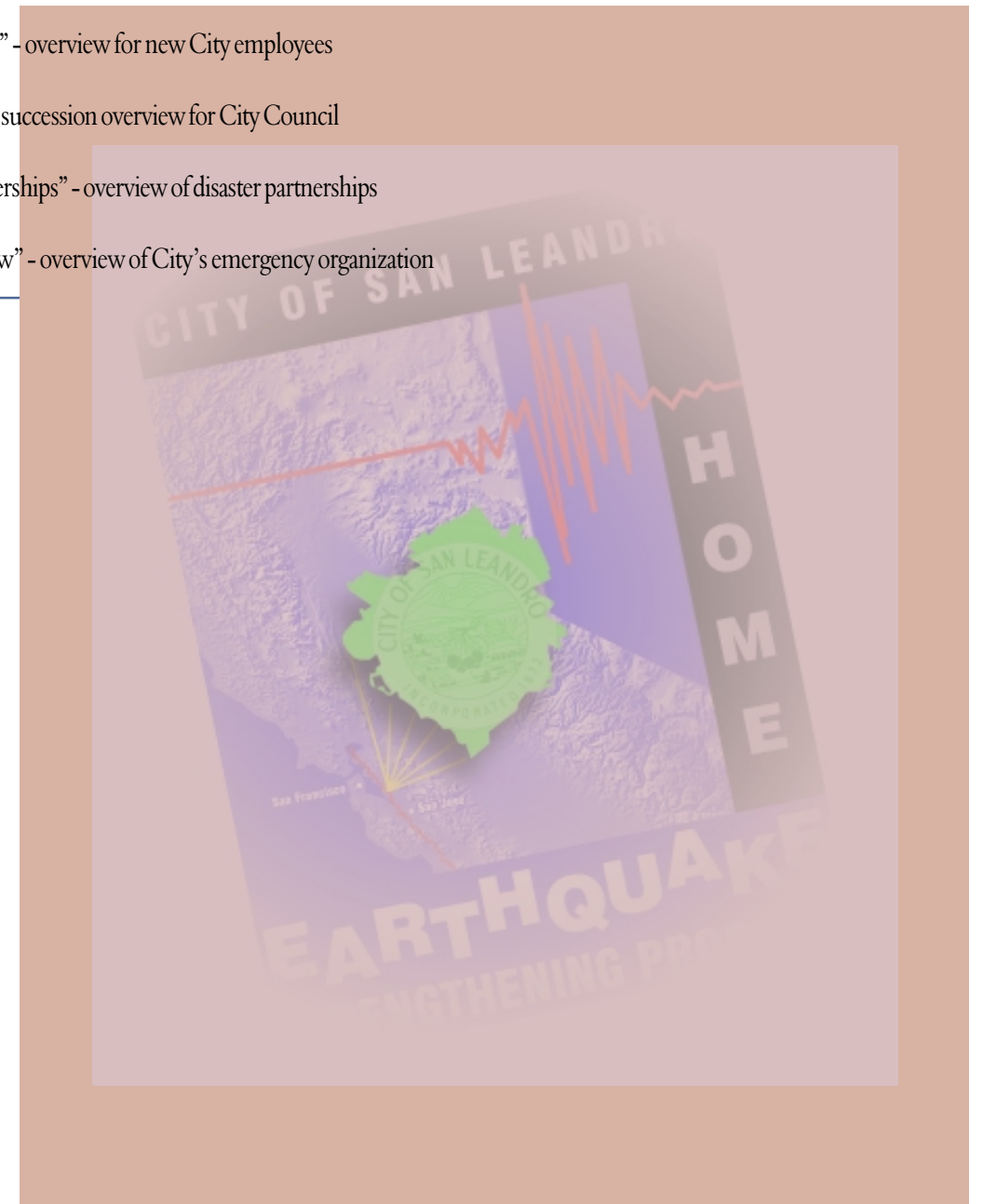
As someone once said, “Failing to plan is planning to fail.” This ambitious and energetic plan is the road map for the City to aggressively follow in preparing its community for the inevitable... a major disaster, the earthquake. The City Council and City government in partnership with its community will continue its proactive mitigation, preparedness, response, and recovery efforts. These proactive professional efforts will enhance our community’s quality of life and economic standard during our response and recovery efforts, while the rebuilding and healing process begins. This Master Plan is a vision of our City Council and City Government... a dynamic document that is subject to change as progress in our disaster management efforts is attained, with the ultimate goal of our community becoming “disaster resistant.”

Note

The City’s *Partnership for Preparedness Program* and the long-range hazard reduction plan constitute San Leandro’s **HAZARD MITIGATION MASTER PLAN** (abbreviated hereafter as the “*Master Plan*”). The elements of this strategy are outlined in the next two sections titled *Hazard Mitigation Plan (Part II)* and *Emergency Preparedness Plan (Part III)*. The *Master Plan* reflects the City’s current and future disaster resistant community efforts. The *Emergency Preparedness Plan* represents the foundation of the City’s strategy in preparing its employees and community to respond to and survive critical incidents and disasters. These plans are designed as an “action checklist” to facilitate the review, modification, and implementation process.

...with the ultimate goal of our community becoming “disaster resistant.”

- 6.9.1 Develop and implement a CISM program; a comprehensive, organized approach for the reduction and control of harmful aspects of stress in emergency services for City personnel and volunteers.
- 6.9.2 Train and implement “Peer Support” Teams to provide critical incident stress interventions.
- 7.0 **Design, develop, and produce key brochures and documents**
 - 7.0.1 “Is Your Family Ready?” - community preparedness training program
 - 7.0.2 “Home Strengthening” - home earthquake strengthening program
 - 7.0.3. “Earthquake Ready” - property mitigation for homeowners and renters
 - 7.0.4 “Alerting & Warning” - community sirens and radio program
 - 7.0.5 “Is My Business Ready?” - local business preparedness training program
 - 7.0.6 “Who Me... a Disaster Worker!” - overview for new City employees
 - 7.0.7 “Continuity of Government” - succession overview for City Council
 - 7.0.8 “Disaster Volunteers and Partnerships” - overview of disaster partnerships
 - 7.0.9 “A City Prepared - An Overview” - overview of City’s emergency organization



HAZARD MITIGATION PLAN

6.3 Grant Research and Development Plan

- 6.3.1 Continue efforts to solicit outside funding for disaster preparedness and mitigation projects.
- 6.3.2 Candidate funding agencies include, but are not limited to, FEMA Disaster Assistance Program, State OES Hazard Mitigation Grant Program, State Bond Grant Programs, USGS National Earthquake Hazard Reduction Program, and American Red Cross Disaster Network.

6.4 Disaster Cost Recovery Plan

- 6.4.1 Following declared local emergencies which receive State OES concurrence, or following State-proclaimed emergencies or presidential-declared disasters that involve Alameda County, seek reimbursements for City's costs for disaster response, emergency protective measures, debris clean-up and/or repair of damages to City-owned property.
- 6.4.2 Attend all post-disaster FEMA/State OES disaster assistance information briefings and submit Notices of Interest as needed.
- 6.4.3 Compile City documentation needed to submit Damage Survey Reports (damage, labor, equipment, etc.) applications.
- 6.4.4 Appoint City's Agent and assistant to prepare and submit claims, process Council resolutions, and respond to State and federal inquiries and audits.

6.5 City Ham Radio Equipment

- 6.5.1 Maintain and upgrade equipment as needed (EOC radios, amateur TV system, packet radio station) for primary and alternate EOC communication.

6.6 Over-Flight Program

- 6.6.1 Develop and maintain an MOU with an approved helicopter flight service to ensure availability and services during a local or regional disaster.
- 6.6.2 Services to include, but not limited to, post disaster damage assessment (utilizing ATV) and transportation of personnel and/or emergency supplies.

6.7 Employee & Resident Emergency Notification

- 6.7.1 Develop and implement a notification system that:
 - 6.7.1.1 Selectively targets employees and residents automatically and places emergency phone calls.
 - 6.7.1.2 Utilizes computerized map-based interface.

6.8 Information Management System Disaster Recovery Plan

- 6.8.1 Assist IMS Manager in revising the back-up plan for critical city applications.
- 6.8.2 Review and update as needed, back-up plan for hot-site processing during emergencies.

6.9 Critical Incident Stress Management (CISM) Program

1.0 VULNERABLE PRIVATE STRUCTURES

There are certain types of structures that are known to perform poorly during earthquakes. After every significant earthquake, the following types of structures have failed.

- 1.1 Unreinforced masonry wall buildings have collapsed or showered bricks onto sidewalks, damaging private and public property, inflicting injury and causing death and destruction.
- 1.2 Homes with inadequate under floor bracing and foundation bolting, particularly those built after the war, have been jerked off their foundations, leaving their owners homeless and neighborhoods vacant for years.
- 1.3 Concrete tilt-up structures with inadequate roof to wall connections collapse damaging their precious contents, often bankrupting unsuspecting businesses, forcing their owners to look for safer new buildings.
- 1.4 Manufactured or "mobile homes" typically not anchored to resist the force of an earthquake, are left resting on the ground, their contents strewn about, and ruptured gas lines waiting to ignite.
- 1.5 Soft-story buildings with little or no first floor bracing, collapse on their first floor contents, altering forever the landscape and lives of their inhabitants and owners.

2.0 DEVELOPMENT OF APPROPRIATE CODES AND STANDARDS

- 2.1 Before structural analysis and retrofit plans can be prepared, consensus must be reached on the nature of the problem and the standards for design. After a general consensus is achieved, it typically takes three years to revise the building code. The process starts with identification of the problem, then investigation and research into the nature and cause followed by proposals to rectify the deficiencies. The proposals are subject to peer review and submitted to the International Conference of Building Officials for consideration as changes to the uniform building codes. The proposed changes are first published and distributed for comment and challenge before a code development committee at a public hearing. Subsequently, the committee takes an action to approve, reject or amend the proposals. The results of the committee hearings are published for public review and challenged at the annual education and code development hearing where final action is voted on. Any revisions are incorporated into the building code which is published on a three-year cycle. In California, the Uniform Building Code is required to be enforced locally within 180 days of publication by the State Building Standards Commission. Cities may make further amendments based on local geography, climate or topographic conditions.

- 2.2 Currently, codes and standards have been developed for the following types of structures: retrofitting and analyzing unreinforced masonry buildings, wood frame homes with inadequate under floor bracing, concrete tilt-up structures with inadequate bracing, and a State approved system for bracing manufactured homes. Retrofit standards for soft-story structures are in the investigation and research phase.

3.0 UNREINFORCED MASONRY BUILDINGS

- 3.1 Unreinforced masonry buildings (URMB) have long been recognized as a class of buildings expected to perform poorly in earthquakes. In fact, there is almost universal agreement regarding the hazard. The risk associated with unreinforced masonry in buildings (including masonry infill) and the potential for loss of life in the event of an earthquake, was recognized by the State legislators. In 1986 after public debate and testimony, including vigorous support by the State's Seismic Safety Commission, the State legislature adopted Senate Bill 547. SB547 required that by January 1, 1990, every city and county in the State identify all unreinforced masonry buildings within their jurisdiction and to adopt appropriate mitigation programs.



3.2 Implementation

- 3.2.1 In response to the State mandate for a mitigation program, the City Council, after extensive public review and participation, adopted a plan on February 20, 1990. The City implemented a mandatory seismic retrofitting program that requires owners to demolish or retrofit URMB buildings. All identified URMB structures are to be retrofitted by 1999. The ordinance passed by the City Council is intended to promote public safety and welfare by establishing minimum standards for structural seismic resistance in unreinforced masonry wall buildings. The ordinance requires that owners of such buildings take appropriate measures to mitigate the potential hazards inherent in unreinforced masonry buildings. After adoption of the ordinance, the City Council delayed implementation of the ordinance for six months while a citizens advisory committee participated in workshops and staff meetings to develop an assistance plan.

3.3 Financing and Assistance

- 3.3.1 The City retained an engineering firm to provide a preliminary plan and cost estimate for buildings.

The City provided financial assistance ranging from grants to assistance in obtaining financing for structural repairs. A few owners obtained grants for facade improvements which could be accomplished in conjunction with the seismic upgrade. The City underwrote fees associated with obtaining permits and reimbursed owners ten percent of their engineering cost. For commercial buildings, the City formed a voluntary seismic assessment district to provide below market rate financing.

The Alta Mira Clubhouse, a historical building, received assistance in the form of a matching grant and project management services. The Mission Bell apartment building received a grant for the retrofitting from the redevelopment agency in exchange for setting aside housing units for low and moderate incomes.

- 5.5.1 Guide the planning, development and implementation of the mobile emergency communication vehicle to maintain continuity of government serving as a command post or alternate EOC during disasters, or a command post for extended operations in day-to-day emergencies.
- 5.5.2 Develop standard operating procedures for vehicle maintenance and use.

5.6 Mobile Medical Center (MMC)

- 5.6.1 Guide the planning, development and implementation of the mobile emergency medical trailers.
- 5.6.2 Develop standard operating procedures for trailer maintenance and use.

5.7 Earthquake Alert System

- 5.7.1 Explore the need and use for an earthquake alert system that quickly determines the location and magnitude, and places a call over a special radio link to paging system.
- 5.7.2 Develop standard operating procedures for system and implement.

6.0 MISCELLANEOUS

Continue to explore program ideas and identify program needs in the overall on-going development of a comprehensive emergency preparedness program.

6.1 Community Shelter Development

- 6.1.1 Complete shelter agreements with American Red Cross.
- 6.1.2 Identify facilities as potential shelters (City, school, and private facilities).
- 6.1.3 Maintain and support pool of trained volunteers and City employee shelter workers/managers.
- 6.1.4 Develop and implement an annual Shelter Summit hosted by the City and American Red Cross to identify and maintain valuable resources, and coordinate the mass care and feeding process and response.

6.2 Pet and Animal Shelter Development

- 6.2.1 Develop and implement emergency pet and animal shelter program with appropriate agency or company (MOU or contract if required).
- 6.2.2 Identify facilities and/or locations as potential shelters.
- 6.2.3 Maintain and support pool of trained volunteers and City employee pet shelter managers.



Animal Shelter

- 5.1.1 Radio San Leandro (T.I.S. - Traveler Information Station)
 - 5.1.1.1 Maintain and upgrade as needed Radio San Leandro 1610 AM.
 - 5.1.1.2 Prepare, record and manage routine and emergency radio message broadcasts.
 - 5.1.1.3 Train staff as needed in radio operation.
 - 5.1.1.4 Maintain FCC license (5-year periods or as challenged).
- 5.1.2 Siren Program
 - 5.1.2.1 Coordinate siren planning, development and operation with neighboring jurisdictions (esp., Oakland, Alameda, Hayward and Berkeley) and implement City *Alerting and Notification Memorandum of Understanding*.
 - 5.1.2.2 Purchase, install and maintain eight sirens at locations covering the entire City.
 - 5.1.2.3 Develop and implement alerting and notification educational program for community and training program for City government.
- 5.1.3. High Speed Emergency Telephone System
 - 5.1.3.1 Obtain and implement a high-speed, telephone emergency communications service that provides the City the ability to get critical information to large numbers of people in a short period of time.
- 5.1.4 Activate and manage siren-alerting and T.I.S. radio-warning system as needed for periodic testing and emergency notification via San Leandro's appropriate public safety dispatch center (ALCO fire dispatch / SLPD dispatch in PSB).
- 5.2 **Emergency Operations Center (EOC) & Multi-Purpose Training Center**
 - 5.2.1 Design, fund and construct EOC.
 - 5.2.2 Maintain and operate facility for training, disaster management, and community meetings and events.
 - 5.2.3 Obtain EOC ARK and maintain emergency supplies for EOC activation.
- 5.3 **Emergency Supply Cargo Containers (ARK's)**
 - 5.3.1 Purchase, install, supply, and maintain ARKs at appropriate site(s) in City.
 - 5.3.2 Develop and implement ARK maintenance program and deployment program.
- 5.4 **800 MHz Communication Program**
 - 5.4.1 Assist in the acquisition of needed radio equipment for City non-sworn support staff.
 - 5.4.2 Assist the City's 800MHz Coordinator in developing and implementing a radio educational, training and maintenance program for City departments and respective staff.
- 5.5 **Mobile Communications Center (MCC)**

4.0 **Wood Frame Homes Constructed With Inadequate Under Floor Bracing and Bolting**

- 4.1 History has shown that light wood frame homes constructed without adequate under floor bracing are particularly susceptible to the forces generated by an earthquake. The average cost to repair a home damaged by the Loma Prieta earthquake was between \$25,000 and \$35,000. After the Northridge earthquake, the California Building Officials and Structural Engineers Association of California formed task groups to investigate the structural deficiencies which contributed to the enormous amount of damage. Their task was to develop revised standards to the building codes along with a prescriptive standard that contractors and homeowners could use. The result of that effort was a new chapter (Prescriptive Provisions For Seismic Strengthening Of Light, Wood-Framed, Residential Buildings) in the Uniform Code For Building Conservation. The City actively participated in the process; in fact, many of the provisions were a direct result of experience gained from the City's homeowners and contractors retrofit classes. The average contractor's cost to retrofit a 1200 square-foot residence runs about \$2,800, far less than the cost to repair damage after an earthquake.
- 4.2 **Implementation**
 - 4.2.1 The City has initially focused on a voluntary program aimed at education and training. The strategy is to increase awareness, remove obstacles and to make it easy to do the work. The City developed a multifaceted approach to implementing this voluntary program—starting with a high-impact, full-color, 16-page booklet that provides residents with a plain-English explanation about earthquake risks in the community, with easy-to-follow illustrations and step-by-step instructions for evaluating and strengthening their homes. The City offers a class for homeowners on retrofitting. Participants learn the basic principles behind retrofitting and how to actually do the retrofit work themselves. They are also trained on how to evaluate the work of their contractor. The final product from the class is a blueprint tailored for their home. Standard plans and details are available at the building permit counter.
- 4.3 **Assistance**
 - 4.3.1 As an incentive to “do-it-yourselfers” who want to strengthen their homes, but lack the necessary tools, there is a free tool-lending library located at the building permit counter. The City has set aside a portion of its block grant funding for low-interest loans to low-income homeowners specifically for home earthquake strengthening.

5.0 **CONCRETE TILT-UP STRUCTURES WITH INADEQUATE ROOF TO WALL TIES**

- 5.1 The seismic hazard of weakly tied pre-cast walls to roofs in tilt-up buildings has been known for decades. Those designed to codes prior to 1976 are most vulnerable, especially on soils where earthquake shaking is amplified. Because their risks have been recognized for so long, without voluntary strengthening by most owners, some cities have enacted ordinances to require seismic strengthening of tilt-ups.
- 5.2 Concrete tilt-up buildings are one of the most economical forms of construction, having evolved over the last 40 years. They are designed to reduce construction cost both in materials and time to complete. The term “tilt-up” comes from the method of construction. Concrete slabs are cast on the ground and after hardening, are lifted or “tilted up” into place to form the building's walls. The typical roof is constructed from framed plywood panels that are dropped into place between support beams. The lateral support for the walls is provided by the plywood roof. This is accomplished by nailing the edge of the plywood roof to a wooden ledger on the walls. The concrete panels are joined together by welding reinforcing steel at the roof line or concrete closure strips between panels. Although the design of tilt-ups has been evolving and improving, older existing tilt-ups still remain as a seismic hazard to life and property. Tilt-up buildings have proven to be extremely vulnerable to earthquake damage. The first recorded collapse of tilt-ups was in the 1964 Good Friday Alaska earthquake. At that time, the vulnerability of tilt-ups was not clearly demonstrated or understood. It wasn't until the 1971 San Fernando earthquake (lasting 10 seconds) in which many tilt-up buildings collapsed. In the years following, there were a number of changes to buildings codes in an attempt to improve their performance. A major change was to the method of attachment of the roof to the walls. The perimeter plywood



The City has been active in an adhoc committee of the Structural Engineers Association of California drafting guidelines for engineers to use when evaluating tilt-up structures.

- 3.4 **Schools:** Continue supporting public (San Leandro and San Lorenzo School Districts), private, and parochial schools through active participation on disaster forums, workshops, exercises, and in-service training.
- 3.4.1 Provide school disaster training (e.g., from State OES, CSTI, FEMA, and City Emergency Services Division staff), and participate in school-site drills, etc.

- 3.4.2 Provide shelter management coordination and assistance as required.

- 3.4.3 Provide communication coordination and assistance as needed.

- 3.5 **Coordination:** Between local, county, State and federal emergency services agencies.

- 3.5.1 Attend monthly, quarterly and annual meetings of the Alameda County Emergency Managers Association (EMA), Operational Area Forums, California Emergency Services Association (CESA), and International Association of Emergency Managers (IAEM); represent City, obtain updates on new State/federal legislation, disaster programs, grants, training, planning, networking, and hosting programs, etc.

- 3.5.2 Meet with neighboring agencies (municipal, special districts, regional districts, community based organizations, etc.) to coordinate response planning.

- 3.5.3 Assist in regional disaster plan development and exercising (e.g., with Operational Area, County EMA and State OES Coastal Region).

- 3.5.4 Attend quarterly meetings of State OES Coastal Region and FEMA Region 9 meetings.

4.0 TRAINING, COORDINATION AND MANAGEMENT OF DISASTER VOLUNTEERS

Continue programs to train and organize citizens who volunteer their services in support of the City's disaster response and relief effort.

- 4.1 **RACES (Radio Amateur Civil Emergency Services):** City's official volunteer ham radio group.

- 4.1.1 Attend, train, and administer organizational activities (quarterly meetings, routine equipment testing, exercises, and Emergency Operation Center training).

- 4.1.2 Provide training on City's amateur television (ATV) system and wireless electronic mail (packet radio) system using ham radio.

- 4.2 **City Volunteer Program**

- 4.2.1 Identify and maintain pool of emergency service volunteers for post disaster service.

- 4.2.2 Maintain network and training of emergency service volunteers.

- 4.2.3 Maintain liaison and coordination with the City's Human Services Manager who is responsible for the City volunteer program.

5.0 SPECIAL PROJECTS

Identify capital needs of the City's emergency preparedness program and design, develop and advocate projects for acquisition and implementation of needed equipment and facilities.

- 5.1 **Alerting and Notification Program**

- 3.1 **Residents:** Continue presentations and further development of San Leandro's Neighborhood Preparedness and Emergency Training Workshop Series.
- 3.1.1 *Disaster Preparedness and You - Workshop I* (overview of earthquake risk, emergency supply kits and promotion of workshop presentations, 45 minutes).
- 3.1.2 *Defending Yourself From Disaster - Workshop II* (home and family preparedness and basic first aid, 3 hours).
- 3.1.3 *Managing Disasters in Your Neighborhood - Workshop III.* Assisting residents to develop functional response teams in neighborhoods, requiring 3 hours and on-going support. Training may include: CPR training and certification, First Aid training and certification, light search and rescue, utility control, disaster fire suppression, and hazardous materials, neighborhood disaster response drills, and others as needed.
- 3.1.4 Continue community presentations of disaster awareness programs on demand; develop and implement programs for:
- 3.1.4.1 Local School District and Staff
- 3.1.4.2 Apartment Owners and Managers
- 3.1.4.3 Homeowners Associations
- 3.1.4.4 Service Clubs (Kiwanis, Rotary, Breakfast Club, Optimist, etc.)
- 3.1.4.5 Business Owners & Business Associations
- 3.1.5 Staff public information displays and booths at special events such as the Farmers Markets, Cherry Festival, Neighborhood Watch, etc.
- 3.2 **Homeowners and Renters:** Providing property mitigation training services and materials to the community.
- 3.2.1 *Earthquake Ready Program -* At no cost provide homeowners and renters training and installation (available for individuals requesting assistance) for securing water heaters, shutting off gas meters, and installing cabinet door safety latches and smoke detectors.
- 3.2.2 Develop and implement training program and installation program.
- 3.2.3 Partnership with local businesses for providing tools and materials.
- 3.3 **Businesses:** Continue participation in the San Leandro Chamber of Commerce, Downtown Business Association, North Area Business Association, San Leandro Chapter of Community Awareness & Emergency Response (CAER) Group.
- 3.3.1 Attend regular meetings.
- 3.3.2 Sit on steering and administrative committees when appropriate.
- 3.3.3 Public Presentation Program (represent City with keynote speeches to Chamber, SLMA, service organizations, promotional presentations at corporate seminars, safety meetings, etc.).
- 3.3.4 Develop and implement an "Earthquake Preparedness Training for Businesses" program for the business community of San Leandro.



to ledger nailing was no longer permitted by the building code. Additional steel reinforcing was required at the tops of wall columns supporting roof beams. The next test of tilt-up performance was in the 1987 Whittier Narrows earthquake (a much shorter duration of ground movement, five seconds) when tilt-ups again suffered significant damage and roof collapses. These failures were attributed to the same inadequate connections, poor detailing of connections, and a previously-unnoticed phenomena that flexible roofs distribute greater forces in the middle of the building than to the walls, resulting in roof collapses. The design assumed forces for the mid-span of the roofs was increased in the subsequent building code. The 1994 Northridge earthquake tested tilt-ups again with very similar results: collapsed roofs and walls. After the Northridge earthquake, a number of committees were formed to study and test the various aspects of tilt-ups and associated construction failures. Tests of materials and components were conducted at universities and labs throughout the country in an effort to understand the reasons for the failures. Out of that research and investigation, came revised building code requirements for new tilt-up buildings and a standard for retrofitting existing buildings.

5.3

Implementation

implementation

5.3.1

A new chapter (Earthquake Hazard Reduction in Existing Tilt-up Concrete Wall Buildings) has been added to the Uniform Code For Building Conservation. The City has been an active participant in developing the new standards. There are further revisions to the code which were published in March of 1997. The City has been active in an adhoc committee of the Structural Engineers Association of California drafting guidelines for engineers to use when evaluating tilt-up structures. The City has assessed the scope of hazard presented by these buildings in San Leandro through an inventory of vulnerable tilt-up buildings and developed seismic retrofit standards.

5.3.2

There is no formal program to date. Engineers and building owners are strongly encouraged to evaluate tilt-up structures when the buildings change owners or undergo renovations.

5.4

Financing and Assistance

5.4.1

None to date

5.5

The City has compiled a draft inventory of concrete "tilt-up" structures.

6.0

MANUFACTURED HOMES "MOBILE HOMES"

6.1

Implementation

6.1.1

Mobile home parks and manufactured homes are regulated by the State and not subject to local jurisdiction. The State has approved seismic anchorage systems and implemented a mandatory compliance program for new or relocated structures. The City does conduct educational programs on the benefits of seismic bracing.

6.2

Assistance

6.2.1

The City has set aside a portion of its block grant funding for low-interest loans to low-income owners specifically for home earthquake strengthening.

6.2.2

The City is evaluating a partnership with mobile home parks by providing seismic shut-off valves; the City will provide the funding and technical assistance to facilitate the installation.



7.0 SOFT-STORY BUILDINGS

7.1 The Northridge earthquake revealed that multi-story buildings with ground-floor parking garages, or “soft-stories” are especially vulnerable to earthquakes. They are typically apartments or commercial buildings constructed with inadequate first-floor bracing. The apartment, condominium and commercial buildings in San Leandro that are found to be at risk should be strengthened as soon as possible to minimize the loss of lives and housing.

7.2 Implementation

7.2.1 Currently there has been no consensus or new code provisions established specifically dealing with retrofitting soft-story structures. The City has conducted workshops aimed at promoting awareness of the problem and advising building owners to seek professional evaluations by qualified engineers.

7.2.2 The City has compiled a draft inventory of “soft-story” structures.

7.2.3 The City will form and facilitate a task force comprised of community members (Stakeholders) to address the “soft-story” structural issues and develop an implementation strategy.

7.3 Financing

7.3.1 None to date.

8.0 VULNERABLE CITY FACILITIES

8.1 Strengthening essential City buildings and their contents is critical for disaster response and recovery.

8.2 In June 1990, the voters of California approved Proposition 122 (SB 1250), the Earthquake Safety and Public Buildings Rehabilitation Bond Act of 1990. This proposition provided \$250 million in general obligation bonds for program administration and for retrofitting or replacing State owned buildings, and \$50 million in general obligation bonds for program administration and for retrofitting or replacing local government essential service and public safety owned buildings. This State program would provide a 75% cost share for approved local government projects.

8.3 In 1991 the State announced its intention to implement a competitive grant program for local governments through which to distribute the local seismic retrofit money. The State’s criteria for grant eligibility under the seismic retrofit program was determined to be those essential service facilities which were not expected to be operational after a major earthquake and which were critical to carrying out the local emergency plan.

8.4 In early 1993 the formal competition for the seismic retrofit money began. The Emergency Services Manager for the City prepared and submitted eight applications for the following City facilities: (1) five fire stations, (2) one Public Safety Building, (3) City Hall, and (4) the Emergency Operations Center (EOC).

8.5 In mid-1994 the State Architect informed the City that seven of the eight proposals were approved for the full 75% State funding match requested. The only City proposal denied funding was the EOC. Collectively, the total amount of State funding approved for San Leandro was \$1.69 million. The City Council had already approved \$18 million in local bonds to retrofit the original eight facilities and other City facilities, hence the required local match (25%) proved to be no problem.

8.6 All awarded grants had to be spent within three years of the State’s commencement letter (August 11, 1994), which included construction time. Construction began in 1994 involving four phases and is completed except for Phases III and IV.

8.6.1 Phase I: Retrofit and Rehabilitation of Fire Stations 9, 13 and 14 (completed).

2.5.1 Conduct programs to ensure compliance with State mandates.

2.6 **Building Evacuation Plan and Emergency Response Team (ERT) Program:** Develop and implement a building evacuation plan for all City facilities and establish a formal building ERT Program.

2.6.1 Develop Building Evacuation Plan for each City facility and conduct periodic evacuation drills both announced and unannounced.

2.6.2 Establish formal ERT Program for City facilities and provide on-going training program to include evacuation drills and essential classroom training.

2.7 **Emergency Supply Kit Program:** Provide current and new employees, City Council members, Commission members and Board members with an emergency supply kit and bag.

2.7.1 Provide Emergency Supply Kits to current employees and new employees during employee orientation follow-up program.

2.7.2 Emergency Supply Kits shall be maintained to sustain an employee for a minimum of three days during a disaster.

2.8 **Exercises:** Develop, publish, and implement an Annual Disaster Exercise Plan comprising orientational, table-top, functional, and full-scale exercises involving members of the City’s emergency organization and community to familiarize them with the City’s Emergency Operations Center’s (EOC) procedures and SEMS Emergency Plan.

2.8.1 Conduct periodic exercises involving the EOC staff, field operations personnel, and selected community members and organizations.

2.8.2 Interdisciplinary Staff Exercise Design Team (assign staff from each City Department or EOC functional area to receive CSTI training in exercise design and thereafter be responsible for planning and conducting City drills and exercises).

2.8.3 Participate periodically in interagency drills and exercises at the local, operational, regional and State level.

2.8.4 Participate when available either in local disaster responses, or Statewide mutual aid responses to gain disaster field experience.

2.9 **Formal Emergency Services Training:** Selected employees attend and participate in specific classes, workshops and meetings sponsored by local emergency services staff, Operational Area, Coastal Region OES, State OES, and FEMA.

2.9.1 Send selected employees to specific courses taught by CSTI and FEMA.

2.9.2 Host CSTI and FEMA courses to include maximum City employee participation in hosted courses.

2.9.3 Present 90 minute *‘Til Help Arrives* course (basic first aid for disasters) to all City employees with annual periodic updates.

3.0 COMMUNITY DISASTER TRAINING AND COORDINATION

Continue programs to train neighborhood residents, employees of businesses & industries, and school staff & students to be self-reliant in disasters. Continue work with emergency response agencies in neighboring jurisdictions, and at the Operational Area, State and federal levels, and voluntary relief agencies (e.g., the American Red Cross) to ensure the most effective and efficient delivery of response and relief services to San Leandro in disasters.



1.5.1.4 Interagency administrative agreements for mutual-aid, mutual-response, siren coordination, etc.

1.5.2 **Post-disaster Legislation**

1.5.2.1 Disaster Response (e.g., local declarations).

1.5.2.2 Disaster Recovery (e.g., emergency building regulations).

1.6 **City Disaster Worker Brochure:** Ensure all current and new City employees and volunteers receive a copy of this notification of disaster worker obligations; update as needed.

1.7 **Disaster Plan Overview:** Brief review of the major elements of the plan. Update as needed and periodically review contents with City staff and policy makers.

2.0 **CITY PERSONNEL EMERGENCY SERVICES TRAINING**

Recommended training objectives include:

2.1 **City Council, Commission/Board Members and Standby Officers:** Conduct periodic orientation on disaster plan, succession list and disaster related declarations as well as public relations, media management, and risk communications for the executive management branch of City government.

2.2 **SEMS Training:** As required by the State Senate Bill 1841 (the Petris Bill) for reimbursement of City's disaster response costs, provide training on California's Standardized Emergency Management System (SEMS) to all City staff who may be involved in any form of disaster management, administration, operations or other disaster-related activity.

2.2.1 Develop four SEMS training modules to include Introduction to SEMS, SEMS for the Executive, SEMS for the Emergency Operations Center and SEMS for Schools in 1996.

2.2.2 Train all City employees and school district staff in appropriate modules by December 31, 1996.

2.2.3 Develop abbreviated SEMS training module for new City employees and volunteers, and provide training when hired or joined.

2.3 **New Employee Orientation Program:** Develop and implement a New Employee Orientation Program focusing on the natural hazards of the East Bay, their role as a Disaster Service Worker, and an overview of the City's emergency plan.

2.3.1 Provide New Employee Orientation Program (90 minutes) following the formal City Orientation Program (COP); conduct every three months for new employees.

2.3.2 City Disaster Worker Brochure: Ensure that all City employees (current and new hires) receive a copy of this notification of disaster worker obligations.

2.4 **Employee/Spouse Disaster Orientation Program:** Develop and implement an on-going Employee/Spouse Disaster Orientation Program for the spouses and families of City employees addressing their spouses' role as Disaster Service Workers, the risk of living and working in San Leandro, and tips and methods of how to prepare the family.

2.5 **First Responder's Courses:** Develop and implement first responders courses for City's in-service training program (HAZMAT, Transportation Accidents, Terrorists Incidents, Mutual Aid Response, Fire Conditions, etc.) involving sworn and



After a major earthquake or other disaster, the City recognizes that care and shelter sites will be critical resources for our homeless population.

8.6.2 Phase II: Retrofit and Rehabilitation of Public Safety Building and City Hall (completed).

8.6.3 Phase III: Retrofit and Rehabilitation of Library, Public Works Service Center, Water Pollution Control Plant (in progress).

8.6.4 Phase IV: Retrofit Fire Stations 10 and 11 (TBD).

8.7 **Hazard Mitigation Partnership between the City and the San Leandro and San Lorenzo School Districts**

8.7.1 After a major earthquake or other disaster, the City recognizes that care and shelter sites will be critical resources for our homeless population. The City has undertaken the task of reviewing and evaluating these potential sites as primary shelters for mass care and feeding. Several of the sites identified are schools.

8.7.2 In order to expedite the required post earthquake evaluation of potential mass care facilities for occupancy and use, the City has contracted with structural engineering firms to conduct evaluations of the buildings at each site in the context of their use as mass care facilities.

8.7.3 The evaluations include recommendations for post quake evaluations of each building, with key plans and text, providing guidelines for damage assessment, and acceptance criteria. Included in the scope of services is arrangement for post earthquake inspection services within 8 hours of a major event to determine the buildings adequacy to function as a mass care shelter. A detailed assessment of damage and ATC 20 safety assessment will be performed.

8.7.4 The City has funded the engineering, project management, and associated costs for the evaluation and structural pre-disaster reports for identified buildings designated for mass care use at the various school sites.

9.0

MISCELLANEOUS

9.1 Computerized Data Base and Mapping

9.1.1 Compilation and mapping of essential data for use by City officials in community planning and emergency response.

9.1.2 Mapping of geo-technical data, soils profile, faults, flood plans, transportation routes, hazardous material sites and essential facility sites.

9.2 Current Legislation

9.2.1 The City's mandatory Unreinforced Masonry Building Ordinance was passed in 1990. Revisions to the Building Code were adopted in 1995, and effective December 28, 1995.

9.2.2 The City requirements for masonry chimneys to be specifically designed to resist horizontal forces which are inspected during construction by an approved third party inspector.

9.2.3 The City has adopted requirements for structural repair and reconstruction of buildings damaged in a declared natural disaster; "required" structural upgrading of a building would then be eligible for federal assistance.

9.2.4 The City has adopted a new standard for posting placards indicating the condition of a structure for occupancy after a disaster. It would be a violation to remove, alter or cover a placard without proper authorization. In previous declared disasters, placards became a commodity that was frequently misused. Placards were traded, sold and modified by building owners or tenants. Some buildings that were unsafe to enter had counterfeit placards indicating that they were safe for continued occupancy. Other buildings that were safe had placards altered to indicate that they were unsafe to occupy.

9.3 Public Policy Study

9.3.1 City officials are continually reviewing and investigating the need and options for retrofit ordinances associated with at-risk buildings.

9.3.2 City officials are identifying and exploring legislation policies that would mandate seismic retrofitting of buildings in the community.

Part 3

EMERGENCY PREPAREDNESS PLAN

1.0 PERIODIC REVIEW AND UPDATE OF CITY DISASTER PLAN

The City's "Disaster Plan," formally known as the Multi-Hazard Functional Plan, is now titled the Standardized Emergency Management System (SEMS) Emergency Plan, and is summarized in the 1998 document *City of San Leandro Disaster Plan Overview*. Elements of that plan, which require periodic review and updating, include:

- 1.1 **Management Operation Plan (MOP):** The Emergency Operations Center (EOC) operational guide for EOC staff. Update and reformat MOP in county-wide format; review and update as required. Formerly known as the Disaster Operations Guide (DOG).
- 1.2 **Disaster Preparedness Guidebooks (DPG) for City Positions:** Develop and implement DPG's for City positions (public works and support staff) that guide non-EOC/non-sworn staff during disasters; review and update as needed.
- 1.3 **SEMS Emergency Plan:** The City's multi-hazard functional plan is used to manage a variety of disasters that threaten the City. This plan reflects the emergency management county-wide format and incorporates compliance with federal and State mandates. The plan is updated as needed to remain current with requirements of the State Office of Emergency Services.
- 1.4 **Elected Officials Guide to Continuity of Government:** Update as needed and periodically review contents with City Council, Commission/Board Members and their Standby Officers using the California's Emergency Services Act and the City's Succession Resolution.
- 1.5 **Disaster Legislation:** Periodically review and update as needed all emergency ordinances and other disaster-related legislation.
 - 1.5.1 Pre-disaster Legislation.
 - 1.5.1.1 Municipal Code Ordinance Relating to Disaster Regulations establishing City Disaster Council (Ordinance 89-023).
 - 1.5.1.2 City Council Succession Resolution (Res. 98-39).
 - 1.5.1.3 Operational Area Emergency Management Organization Agreement (Res. 95-101).

