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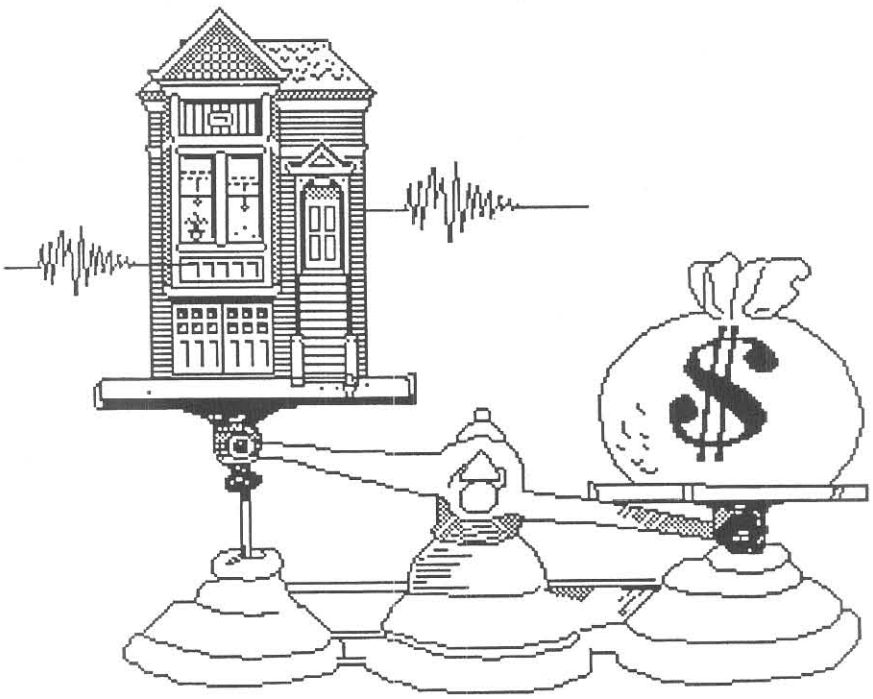
Seismic Retrofit Incentive Programs

A Handbook for Local Governments



SEISMIC RETROFIT INCENTIVE PROGRAMS

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A special thank you to all of the municipal employees that took time to answer our surveys, return our phone calls, review our work and meet with us personally. We truly appreciate the interest you showed in this project and all your efforts on our behalf.

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PREFACE

The financing of hazard mitigation continues to be one of the more difficult impediments to creating a seismically safe environment for Californians. Both State and local governments have undertaken mitigation utilizing a variety of funding mechanisms.

This *Handbook* grew out of a research project initiated by the California Seismic Safety Commission. That project explored the feasibility of utilizing Special Assessment district and other bond funding mechanisms available to most municipalities to finance retrofit of privately owned seismically hazardous structures. Making these financing tools available to private building owners will help local governments reduce or eliminate the hazard of potential collapse posed by these buildings.

Funding for the research and development of this document was provided by the California Seismic Safety Commission, the Bay Area Regional Earthquake Preparedness Project of the Governor's Office of Emergency Services, and the Federal Emergency Management Agency, (FEMA) through the National Earthquake Hazards Reduction Program. Jane Bullock, Chief, Lead Agency Unit, Office of Earthquakes and Natural Hazards, FEMA, was especially supportive of this effort. The research was designed and conducted by professional staff of the Association of Bay Area Governments.

FOREWORD

California is one of the most seismically active States in the U.S. The statistics generated by seismologists are sobering. Over the coming decades variously sized earthquakes can be expected throughout the State, some with catastrophic damage potential. A sample statistic: there is a *90% probability* that either the San Francisco Bay Area or the Los Angeles basin will suffer a magnitude 7 or larger earthquake by the year 2020.

Probabilities of Large Earthquakes Occurring in Three California Regions

	San Francisco Bay Area	Los Angeles Basin	
		San Andreas Fault	San Jacinto Fault
Earthquake Magnitude	7.0 or larger	7.5 or larger	6.5 to 7.0
Probability of occurring in next 10 YEARS	33%	20-30%	20%
Probability of occurring in next 30 YEARS	67%	60-70%	50%

Sources: U.S. Geological Survey, 1988. Probabilities of Large Earthquakes Occurring in California on the San Andreas Fault: U.S.G.S. Open-File Report 88-398, 92pp. and U.S. Geological Survey, 1990. Probabilities of Large Earthquakes in the San Francisco Bay Region, California: U.S.G.S. Circular 1053, 51pp.

Each of the many large earthquakes predicted throughout the State can cause billions of dollars in property damage, loss of human life, injury, and disruptions in transportation, communications and utilities.

As one response to this threat, because unreinforced masonry buildings (URMs) are susceptible to serious damage in a major earthquake, in 1986 the State of California adopted what is commonly referred to as "the URM Law." As discussed later in this *Handbook*, this law requires municipalities and counties within the most seismically active zones in the State to identify and create hazard mitigation programs for the unreinforced masonry buildings in their jurisdiction. A number of earthquake experts are now recommending that such identification and mitigation be applied to other seismically hazardous structures as well, including concrete frame structures

lacking ductile connections, poorly designed tilt-up concrete buildings with inadequate roof-wall connections, and older (pre-1960) homes with inadequate strength in their foundations or cripple walls.

The URM Law stopped short of requiring the owners of URM buildings to upgrade their structures. Many communities, however, have taken the initiative and mandated retrofitting of privately-owned URMs and other hazardous buildings. A few jurisdictions have mitigated the URM hazard in their community and more are in the process of doing so. The vast majority of jurisdictions, however, having identified some or all of the hazards, are wondering what they might do to mitigate them. This *Handbook* has been designed with that group in mind.

The Handbook was conceived as part of an effort to find sources of financing for retrofit of privately owned hazardous buildings. The first step in the research process was to survey the 520 cities, towns and counties in California as to the status of their URM retrofit programs, and to gather information on any financial and non-financial incentive programs they may have established. Although more than 35% of those surveyed did respond, very few respondents had implemented any retrofit incentive programs. While the survey did not reveal the pot of gold, we were excited and encouraged by the creativity and resourcefulness of the few jurisdictions which have found ways to leverage or develop financing while promoting retrofitting in their communities. Their efforts are described in this *Handbook*. As you read through the *Handbook*, we urge you to contact the individuals listed so that you may discuss with them their experience and yours.

This *Handbook* introduces the subject of retrofit incentives with PERSPECTIVE, the thoughts of Charles Eadie, former Project Manager of the City of Santa Cruz Redevelopment Agency Downtown Recovery Plan. The heart of the *Handbook* lies in the CASE STUDIES, which describe steps to promote retrofitting taken by jurisdictions throughout California that may serve as models for others. The case studies were selected from responses to our survey. We met with staff at these municipalities to develop the case studies, which include descriptions of these jurisdictions' programs, as well as discussions of their programs' development, the resources they require, and their effectiveness.

For jurisdictions now trying to develop a system for prioritizing their hazardous buildings, we have included the case study of the City of Sonoma, which adopted a mandatory retrofit ordinance that includes an objective and flexible system of establishing time-lines for retrofitting buildings identified as hazardous. The case study of the City of Palo Alto offers a model for those jurisdictions seeking to develop voluntary ordinances, and includes several non-financial incentives. (Note that we did not included a case study describing the Los Angeles Division 88 ordinance. The ordinance is readily available to those who are interested in a copy. If only because of its size, the City of Los Angeles is unique, and the process by which it developed and

is implementing the ordinance is less likely to serve as a model for the majority of cities. For information about the city's program, refer to *Strengthening Unreinforced Masonry Buildings in Los Angeles* by William Spangle Associates; see: CONTACTS.)

Financing retrofit projects is always a concern. The case studies of the cities of Torrance and Long Beach offer detailed descriptions of the Special Assessment district bond financings which these cities pioneered as a method of providing funds to owners of seismically hazardous properties. The case study of the City of Upland shows how a small city marshalled resources to provide design cost rebates to owners who retrofit their properties. This case study includes excerpts from the complete and very thorough application package designed by the city.

The City of Fullerton case study demonstrates the use of redevelopment agency funds to effect seismic retrofit through targeted no-interest loans. Finally, the case study of the City of West Hollywood illustrates a multi-faceted approach to financial incentives, including adaptation of the city's rent control ordinance to meet the needs of owners and tenants.

There are several jurisdictions in California which have mitigated the hazard in all their identified URMs. While their success is clearly laudable, their stories have not been included in the *Handbook* because their programs were not applicable in the current environment. (The City of Santa Ana, for example, used a form of bond financing which no longer provides any advantage given subsequent changes in Federal tax laws.)

In addition to the case studies, the *Handbook* contains **PROGRAM HIGHLIGHTS.** As compared with the extensive discussion in the case studies, these are brief write-ups of actions taken by local governments to promote seismic retrofitting in their communities. Names and telephone numbers are provided for readers who would like additional information.

The next two chapters of the *Handbook* discuss the tools which jurisdictions can use in developing programs to promote retrofitting. **USING ZONING AS AN INCENTIVE TO RETROFIT** by Michael Dyett, AICP, discusses ways in which zoning can be used to promote seismic upgrading. The chapter entitled **LOCAL GOVERNMENT FINANCING OPTIONS** outlines potential sources of funding.

A description of the URM Law and of recent legislation comprises **CALIFORNIA STATE SEISMIC LEGISLATION,** which includes a discussion of the direction in which the State of California is headed as it continues to address the issue. **LIABILITY IMPLICATIONS AND CONSIDERATIONS** discusses the question of liability in the event of an earthquake. Finally, we have also included for easy reference a list of the **CONTACTS** whose names appear elsewhere in the *Handbook.*

In researching this *Handbook* we have learned a few basic lessons which we would like to share with our readers:

***Developing an approach to seismic retrofitting is essential, difficult and time-consuming.** It requires the dedicated attention over a long period of time of at least one staff member, and the guidance and complete support of the elected body of the jurisdiction. Understanding the nature and scope of the problem is an important first step.

***Successful programs require the active participation of the community.** The jurisdiction must work closely with property owners, tenants, the business community, historic preservationists, and all other interested parties to ensure that the program developed is perceived to be fair, reasonable, and workable. Education, before, during and after program development, is critical to its success.

****There is no such thing as a model program.*** Each jurisdiction is unique in its circumstances and its resources, and each must develop its own approach.

We wish you good luck and hope this *Handbook* will be helpful as you search for solutions to the problem of retrofitting privately-owned seismically hazardous structures.

EXECUTIVE SUMMARY

California is one of the most seismically active States in the U.S. Over the coming decades, earthquakes of varying intensity can be expected throughout the State. Yet, the State is replete with buildings, numbering in the thousands, which are not ready to withstand the expected shock. The potential for great loss of life, injury and property damage is immense.

Most local jurisdictions are aware of the need to address this issue. Since the 1986 adoption of the "URM (Unreinforced Masonry Building) Law" in California, municipalities large and small have devoted their limited resources to identifying URM buildings in their jurisdiction that are susceptible to serious damage in the event of a major earthquake, and developing mitigation programs as required by the law. A number of earthquake experts are now recommending, and several jurisdictions have begun, identification and mitigation of other seismically hazardous structures such as concrete frame structures lacking ductile connections, poorly designed tilt-up concrete buildings with inadequate roof-wall connections, and older (pre-1960) homes with inadequate strength in their foundations and cripple walls. However, many of the jurisdictions which are diligently identifying the hazards are at a loss as to how they might encourage owners to undertake needed retrofitting projects.

This *Handbook* is designed to help local jurisdictions develop their own seismic retrofit incentive programs. Using both extensive case studies and abbreviated descriptions, it offers the reader a chance to examine the steps which 17 cities have taken to address these issues. The *Handbook* also provides a comprehensive list of financing options. To give readers a context for their program development, the *Handbook* includes both a discussion of California's legislative activity in this area and an analysis of liability considerations.

The following is a chapter by chapter summary of the contents of the *Handbook*, with conclusions drawn as appropriate.

PERSPECTIVE

The PERSPECTIVE section of this Handbook introduces the subject of retrofit incentives with the thoughts of Charles Eadie, currently the City Planner of the City of Watsonville. Prior to joining Watsonville's staff Mr. Eadie served as Project Manager of the City of Santa Cruz Redevelopment Agency Downtown Recovery Plan. Mr. Eadie acknowledges that decisions about retrofit requirements and financing are extraordinarily difficult, both for owners and for public officials. Santa Cruz struggled with the issue in the mid 1980's, in the end leaving the decision to retrofit up to individual owners. Today, after the 1989 Loma Prieta earthquake, Eadie

says "nearly every property owner wishes he or she had done more." Eadie lists the following principles, derived from his own experience and that of the City of Santa Cruz:

1. Never forget that you will have an earthquake
2. A retrofit will save lives, including possibly your own.
3. Any amount of retrofit is an advantage. The more you do the better. Even minor improvements can make the difference between repair and ruin.
4. A community unwilling to accept small architectural compromises of historical purity (through retrofit) risks major irreversible loss of historic character.
5. The disruption and cost of retrofit are minor compared to the catastrophic costs of doing nothing.
6. Recovery happens sooner when there is retrofitting.
7. Don't wait.

CASE STUDIES

The heart of the *Handbook* lies in the CASE STUDIES, which are outlined in the table entitled *Retrofit Incentive Programs: A Quick Look*. The cities chosen to be the subjects of the case studies were selected from responses we received to a survey we sent to 520 cities, towns and counties in the State of California. Each case study was developed in consultation with the local jurisdiction, and includes a description of the jurisdiction's incentive programs as well as discussions of the programs' development, the resources they require, and their effectiveness. Neither the table on the following page nor the paragraphs below can do justice to the case studies. We urge you to read the case studies themselves and, most importantly, to get in touch with the contacts listed throughout the *Handbook* so that you can learn first-hand how their experience can benefit your unique circumstance.

THE CITY OF FULLERTON

The City of Fullerton offers two-tiered, no-interest loans to owners who retrofit their buildings. The first tier comprises a deferred loan due on sale or transfer of title of the structure. The second tier, which can cover up to 50% of the remaining cost of retrofit, is payable in principal only over a ten-year period, with repayment starting two years after the project is completed. These loans are funded and offered by the city's redevelopment agency, and are very much integrated into the city's overall redevelopment plan. Approximately 114 of the city's 125 URM's are in the process of or have completed their retrofitting. Fullerton's success is in large part the result of the close working relationship

between the various departments involved. Note that in addition to its URM program, Fullerton has adopted and achieved full compliance with a tilt-up building retrofit ordinance.

THE CITY OF LONG BEACH

The City of Long Beach is renowned for issuing the first large Special Assessment bonds to finance retrofit of privately-owned hazardous structures. This bond issue made financing available, at an interest rate of 11.3%, to URM owners who joined the Special Assessment district. Copies of correspondence between the city and the owners over the course of the district's development are included as exhibits to the case study. Of the 506 URMs in the city at the time of the bond financing, about one quarter were included in the assessment district. About forty owners who did not participate in the first issue have requested that the city form a second assessment district. The City of Long Beach and its financing team learned many valuable lessons from their pioneering experience; perhaps the most important is the need to ensure that property owners thoroughly understand the program, the nature of their commitment under the program, and the roles the city does and does not play in the program. In retrospect, the city found education of the participants to be the most crucial, and the most difficult, part of implementing a Special Assessment financing program.

THE CITY OF PALO ALTO

The ordinance developed by the City of Palo Alto is often used as a model by those jurisdictions seeking to make retrofitting voluntary rather than mandatory. A copy of the ordinance is included as an exhibit to the case study. Palo Alto is also well known for offering an exemption from zoning requirements to owners considering retrofitting. While retrofitting is voluntary, the city does require owners of hazardous buildings to submit detailed engineering reports describing the potential for damage in the event of an earthquake. A lesser known feature of Palo Alto's ordinance requires that owners notify tenants when the report is complete, and that the report be made a matter of public record, attracting the attention of residents and affecting the property's rental and resale values. Palo Alto's approach has resulted thus far in the voluntary retrofit of 22 of the 91 buildings originally identified as hazardous. Interestingly, while the zoning exemption is very highly touted as an incentive, in fact only four projects thus far have requested it. The development of Palo Alto's ordinance took four years. The city learned the hard way that the community must be very much involved in the development of an ordinance if it is to be understood and accepted.

RETROFIT INCENTIVE PROGRAMS:
A QUICK LOOK

	FULLERTON	LONG BEACH	PALO ALTO	SONOMA	TORRANCE	UPLAND	WEST HOLLYWOOD
Retrofit Incentives	•deferred, no interest loans •matching loans	long-term 11.3% financing	•engineers reports made public •exemption from zoning requirements	•fee waivers •design rebates	•engineering subsidy •long-term 10.75% financing	•design and facade improvement rebates • bank loans	•fee waivers •zoning incentives •rent control modifications •long-term financing
Funding Source	redevelopment agency	special assessment bond issue	no program costs	redevelopment agency	•special assessment bond issue •general fund	•CDBG •commercial bank loans	•general fund •Mello-Roos bond issue
Comments	•flexible regarding scope and timing of mandatory retrofitting •offers attractive loans to owners	largest special assessment financing done for this purpose in California	used by many as a model voluntary retrofit program	•creative system for prioritizing buildings •clear, simple informational packet	•first special assessment financing done for this purpose in California	•qualified for CDBG under "Slum and Blight" category •arranged for reduced cost local bank loans (untested) •very thorough application package	•multi-faceted approach •includes rent control modifications allowing accelerated pass-through of retrofit costs •Mello-Roos financing in process
Ordinance Type	mandatory retrofit	mandatory retrofit	mandatory engineering reports	mandatory retrofit	mandatory retrofit	mandatory engineering reports	mandatory retrofit
# URMS	125	560	46	51	50	65	81
Type of URMs	99% commercial 1% residential	90% commercial 10% residential	100% commercial	90% commercial 10% residential	70% commercial 30% residential	100% commercial	80% commercial 20% residential
Population	109,000	430,000	57,000	8,000	133,500	64,000	36,000
1990/91 General Fund **Revenues:** **Fund Balance:**	 $42 million $ 5 million	 $224 million $ 11 million	 $48 million $14 million	 $3 million $1 million	 $93 million $10 million	 $22 million $ 8 million	 $34 million $700,000

THE CITY OF SONOMA

The City of Sonoma has drafted a mandatory retrofit ordinance which we offer as a model for those jurisdictions trying to develop a system for prioritizing hazardous structures. In most mandatory ordinances, the deadline by which owners must retrofit depends upon the priority assigned to their building. To determine a building's priority, Sonoma's ordinance establishes an objective, straightforward point system, explained fully in the case study, using factors such as type and hours of use, number of stories, proximity to public sidewalks and adjacent buildings, and structural adjustments (such as parapet bracing). Buildings may move up or down on the priority scale as they modify any of the factors which led to their original point assignments. Adjusting their priority level allows owners to adjust the timetable for retrofitting, resulting in a very flexible mandate.

The City of Sonoma also provides financial incentives to owners, offering permit fee waivers and architectural and engineering grants for seismic upgrading. The time allowed for complete upgrading ranges from 4 1/2 to twelve years, depending upon the building's priority. Nonetheless, within one year of program implementation, fourteen buildings were in the process of being, or had been, completely upgraded. As in the case of Palo Alto, a lesson which might be learned from the City of Sonoma's experience is the value of being sensitive to the concerns of the community. The ordinance was designed for maximum flexibility, and was thoroughly discussed with and explained to citizens at community meetings. One of the outstanding features of the City of Sonoma's program is how clearly it is articulated in the materials it offers to the community. Copies of that material are included as an exhibit to the case study.

THE CITY OF TORRANCE

The City of Torrance issued the first Special Assessment bond to finance the retrofit of privately owned hazardous structures. The case study of the City of Torrance is included to highlight the fact that a relatively small city (population 134,000) with few URMs (seven parcels in the assessment district) can accomplish the same thing as a larger city such as Long Beach (population 430,000) with many URMs (307 parcels in the district). Torrance in fact pioneered the technique. The Special Assessment program is one of two incentives provided to owners of hazardous structures. The second, a subsidy to pay for engineering analysis, was used by owners of more than half of the city's URMs. To date, Torrance has seen 43 of its 50 identified URMs retrofitted.

THE CITY OF UPLAND

The City of Upland is unusual in two respects. Like other jurisdictions, Upland offers owners rebates for seismic engineering and architectural costs as well as for city fees and for the cost of eligible facade improvements. Upland funded this program with Community Development Block Grant monies. Upland is also unusual in that it was able to convince local banks, at least in principle, to offer loans with favorable terms to owners seeking financing for seismic retrofitting. One of the interesting lessons learned by the city is that convincing just one owner to begin to retrofit reassures and inspires other owners, who then may begin the process themselves thereby encouraging others. The bank financing program was developed in response to owner concerns about the expense and availability of funding. Once they began the retrofit process the owners' fears did not materialize, and in fact to date no one has tested the bank financing program.

Upland is very proud of the spirit of cooperation in which the program was designed and is administered. The city works closely with owners and takes great pains to communicate with its citizens. The materials designed by the city to describe its program are very thorough. Included as exhibits to the Upland case study are the brochures describing the incentive programs and excerpts from the rebate program application package.

THE CITY OF WEST HOLLYWOOD

The City of West Hollywood offers an array of incentive programs to owners seeking to retrofit. Fee waivers play a key role, as do exemptions from zoning requirements. West Hollywood also modified its rent control ordinance, allowing owners to pass through costs to tenants on a somewhat accelerated schedule. As of April 1992, 28 of West Hollywood's 69 hazardous URMs had been retrofitted. West Hollywood also recently established a Mello-Roos district to provide financing, similar to Special Assessment district financing, to owners of 6 hazardous structures. Although many have discussed this type of program in principle,West Hollywood may become the first city to issue Mello-Roos bonds for this purpose. In addition to learning how difficult it is to be a pioneer, West Hollywood has learned that dedicated staff people are key to the success of a city's programs. The menu of programs was developed for the city by a committed staff person who spent much of his time researching the issue and was personally involved with each of the affected owners.

PROGRAM HIGHLIGHTS

In addition to the case studies, the *Handbook* contains short descriptions of steps taken by 8 local governments in the area of seismic retrofit, outlined in the table entitled *Program Highlights: A Quick Look*. The HIGHLIGHTS offer names and telephone numbers for those who would like more information. In addition to offering a menu of suggestions, this section illustrates that any jurisdiction which makes it a priority should be able to offer some kind of incentive to owners of buildings requiring retrofitting.

USING ZONING AS AN INCENTIVE TO RETROFIT

Zoning can be used to promote seismic retrofit, according to Michael V. Dyett, AICP, founder of Blayney Dyett Greenberg, urban and regional planners. These techniques have been used to promote other public purposes, such as affordable housing and historic preservation. Dyett offers the following types of incentives for consideration:

- Density/intensity bonuses
- Transfer of development rights
- Reduction in development standards
- Relief from nonconforming provisions, and
- Restrictions on new occupancy of a potentially hazardous building

These incentives are discussed in this chapter. To illustrate their use, Dyett offers an example of an incentive program for seismic hazard upgrading using these zoning incentives.

PROGRAM HIGHLIGHTS: A QUICK LOOK

Town of Arroyo Grande	(1) Flexible with its deadline for compliance (2) Offers reduced permit fees (3) Charges fees based on actual costs incurred by city (4) Allows continuance of non-conforming uses (5) Waives other aspects of updated zoning regulations
City of Berkeley	(1) Imposes 1/2% transfer tax on property sales with proceeds used to retrofit the structure (2) Waives permit fees (3) Posts clearly visible warnings
City of Inglewood	Offers two options for reimbursement: (1) Up to $1000 for plans plus 25% of construction costs or (2) Up to $3000 for plans plus 50% of cost above $3000 plus city fees
City of La Verne	(1) Offers up to 50% grant to cover engineering and construction costs
City of San Diego	(1) Voluntarily reviewed the URM situation in the community (2) Appointed City Manager's Committee on seismic retrofit (3) Requires that property owners may have to retrofit a structure when it changes use or increases occupancy
City of San Jose	(1) Exempts permit fees (2) Offers design grants (3) Forming Special Assessment district to provide bond financing (4) Developed two grant programs (5) Developing tenant assistance program (6) Hired one individual to serve as full-time liaison with URM owners and community
City of San Mateo	(1) Simplified LA model by creating two hazard categories and changing time limits (2) Ties some storefront improvements to retrofit projects (3) Provides grants and loans
City of Vacaville	(1) Offers 3%, 25-year loans for seismic retrofit and tenant improvements (2) Offers facade loans

LOCAL GOVERNMENT FINANCING OPTIONS

In recognition of the fact that no incentive for retrofit seems to work quite as well as money, we have attempted to discuss both the existence of funding and its accessibility. This section provides legal citations, background information and contacts for the following funding programs:

- California Housing Rehabilitation Program
- Community Development Block Grants
- HOME Program
- Small Business Administration
- General Obligation Bonds
- Marks-Foran Residential Rehabilitation Act
- Marks Historic Bond Act
- Mello-Roos Community Facilities District
- Public Purpose Bonds
- Special Assessment Districts
- Tax Increment Financing *or* Tax Allocation Bonds

Not all of the sources of funds we have outlined have actually been used to finance seismic retrofitting of privately owned buildings. We surveyed the many different Federal and State funding sources and described those which have been used successfully for this purpose or which seem to be potential sources. Whenever possible, we have included contacts who should be able to answer questions or provide additional information. We hope that communities are able to access some of the as yet untapped funding sources to finance seismic retrofit projects.

CALIFORNIA STATE SEISMIC LEGISLATION

This section describes the recent history of California legislation relating to seismic hazard reduction, and describes how such legislation might affect cities and counties across the State, with particular attention paid to legislation that directly affects a jurisdiction's ability to provide financial assistance to owners of seismically hazardous structures. The discussion examines legislation pertaining to bond-related options such as Special Assessment Districts, Mello-Roos Districts and General Obligation Bonds. It also discusses redevelopment agencies as financing vehicles and describes ways in which the State has attempted to reach out directly to property owners.

This section also contains a short discussion of some issues that are often raised by local officials considering financial incentive programs. Addressed are concerns about private owners being granted a "gift of public funds," the question of whether assistance to finance the retrofit of religious structures is a violation of the separation of church and State, and the question of liability, an issue discussed in more detail in the next chapter.

This section, of necessity, provides only a quick overview of the most recent seismic retrofit-related legislation. The State of California Seismic Safety Commission is a good source of additional information.

LIABILITY IMPLICATIONS AND CONSIDERATIONS

Liability in connection with the issue of retrofitting can be viewed as a double-edged sword. Potential liability can be a disincentive for retrofitting or an incentive for taking action, depending upon how it is viewed. Tort liability is discussed in this section by Jeanne Perkins of the Association of Bay Area Governments and Kenneth Moy of Moy & Lesser. There are, as yet, no appellate court decisions on this issue and therefore no legal precedents. However, the authors conclude that it is highly likely, under the appropriate circumstances, that liability could be assigned to a private owner. Addressing the hazard under the guidance of experts will significantly lessen that likelihood. Public agency liability with respect to private buildings is not large and will not increase as a result of its activities in identifying and abating hazardous buildings.

PERSPECTIVE

There is nothing easy about the decision to retrofit old buildings. Retrofit is costly, time-consuming and disruptive to tenants and building owners. It changes the economic calculation in terms of rent needed to pay off the investment, creating hardships. It can pose architectural, engineering and logistical challenges. It can affect the historic integrity of a building.

What is doubly difficult is that the benefit is easy to discount. All the costs and hardships are immediate, yet the spectre of an earthquake is an abstraction, something that seems remote, far off in the future. People acknowledge the certainty of future earthquakes but assume that it will not happen to them.

These factors combine to make decisions about retrofit requirements and financing gut-wrenching and difficult. No one knows how, when or with what force an earthquake will strike any particular city. The odds favor the politician and building owner who assume that the earthquake won't strike during their term of office or their tenure as owner.

Unfortunately for Santa Cruz, the 1989 Loma Prieta Earthquake forever tagged the town as another grim lesson about the final and irretrievable costs of discounting long term benefits for short term gain. Three deaths, the loss of 34 downtown buildings, the end of a beloved historic district and the beginning of an arduous struggle for economic and community recovery was the steep price Santa Cruz paid to join the historic landscape littered with lessons begging to be learned.

In the mid 1980s the Santa Cruz community struggled with the issue of retrofit. After much controversy the decision was left to individual property owners because of the high short-term costs and lack of financial resources available.

Today nearly every property owner wishes he or she had done more. Many are thankful for any little bit they did.

A furniture store owner says he owes his life (and those of several others) to a minor retrofitting he did as an afterthought in conjunction with a reroofing. He still has nightmares thinking how close he came to not anchoring the roof.

Another owner of a small historic commercial building points to a redwood beam and some bracing he had put in his basement in the late 1970s on the advice of his contractor. Without those relatively minor additions, his building would have collapsed under the weight of the tons of brick from a neighbor's parapet. Instead he is repaired and back in business.

A partially completed retrofit of the historic Cooperhouse was enough to prevent total collapse of that building but not to save it. Still, the owner considers every penny of the

thousands he spent to be a worthwhile investment because of the lives that were saved.

For many businesses, access to their building after the earthquake was critical to their recovery. Access was a function of damage. Damage was a function of retrofit. Fifteen minutes of access, or no access at all, was the fate of many whose buildings had no retrofit and were most unsafe. They never retrieved their files, their records, their merchandise. For others, all inventory was recovered, including irreplaceable personal and collector's items.

In 1992, three years after Loma Prieta, many Santa Cruz building owners are still sitting with vacant lots. They face crushing economic realities. Lacking any retrofit, their buildings had been damaged beyond repair. Searching for elusive financial backing to rebuild, they sometimes speak with remorse about the relative pittance it would have cost for the proverbial "ounce of prevention."

Meanwhile, grand reopenings have taken place in several buildings which had retrofits (mostly partial) that were enough to render them repairable. For these property owners and businesses, recovery arrived much sooner. And their community, desperately searching for a break, was grateful for their foresight and pre-quake commitment.

If these brief snippets of personal experience could be translated into a set of principles, it would be these:

- Never forget that you will have an earthquake.
- A retrofit will save lives, including possibly your own.
- Any amount of retrofit is an advantage. The more you do the better. Even minor improvements can make a difference between repair and ruin.
- A community unwilling to accept small architectural compromises of historical purity (through retrofit) risks major irreversible loss of historic character.
- The disruption and costs of retrofit are minor compared to the catastrophic costs of doing nothing.
- Recovery happens sooner when there is retrofitting.
- Don't wait.

Charles Eadie is the City Planner of the City of Watsonville. Prior to joining Watsonville, Eadie served as Project Manager of the Downtown Recovery Plan of the City of Santa Cruz Redevelopment Agency.

CITY OF FULLERTON

Population:	109,000
1990/91 General Fund *Revenues:* *Fund Balance:*	 $42 million $5 million
# URMs:	125
Type of URMs:	99% commercial 1% residential
Ordinance Type:	mandatory retrofitting
Retrofit Incentives:	no interest loans
Funding Source:	redevelopment agency

BACKGROUND

The City of Fullerton is located in Orange County approximately 20 miles southeast of Los Angeles along the I-5 corridor and State Highway 91. Incorporated in 1904, the City of Fullerton owes its past economic growth to the acres of orange groves that could once be found around the city and the oil that was found beneath the city. Today, the city boasts more than 6,000 businesses and industries, with a total work force in excess of 71,000.

ORDINANCE

The Fullerton city council adopted a mandatory seismic retrofit ordinance in December 1990. The ordinance is based on the Los Angeles model and has been incorporated into the Fullerton building code. The ordinance applies to all buildings constructed prior to 1934 and establishes four rating classifications: essential buildings, high-risk buildings, medium-risk buildings and low-risk buildings. The deadline for compliance under this ordinance was February 1992.

This ordinance also requires the building official to file with the county recorder a certificate stating that the subject building is within the scope of Chapter 88 - Earthquake Hazard Reduction in Existing Buildings. As a matter of policy, no such certificates were filed until a structure was in violation of the council approved deadline for compliance. This ordinance does not require

alteration of existing electrical, plumbing, mechanical or fire safety systems unless they constitute a hazard to life or property as determined by the building official.

The City of Fullerton has a separate ordinance requiring the retrofit of concrete tilt-up buildings. This ordinance, Chapter 89, applies to all buildings constructed prior to April 6, 1974 with concrete tilt-up bearing walls. This ordinance also requires the building official to file with the county recorder a certificate stating that the subject building is within the scope of Chapter 89.

INCENTIVE PROGRAM CONCEPT

Fullerton's Seismic Rehabilitation Loan Program was approved by the redevelopment agency in May 1991. This loan program was developed to finance seismic retrofit projects using tax increment funds from the city's redevelopment areas. Fullerton has designated two redevelopment areas - the Orangefair and the Central Redevelopment Projects Areas - which cover approximately 1.5 square miles of the city. Properties eligible for funding under this program include all commercial unreinforced masonry (URM) parcels or apartment buildings with five or more units that are located in either of the city's designated redevelopment areas and were identified in Fullerton's Unreinforced Masonry Survey. (The loan program is not offered for retrofit of concrete tilt-up structures.) There is also a retroactive financing clause which allows for the reimbursement of a portion of the "soft" cost of engineering retrofitting, title and insurance costs and push tests performed before the loan program was established. The availability of these funds is limited to the seismic retrofit of brick buildings in the designated redevelopment areas. The size of the loan is based on the extent of the seismic retrofit project.

The loans offered by the redevelopment authority to URM owners performing retrofit work are two-tiered. The first $25,000 of the amount needed is a deferred, no-interest loan due on sale or transfer of title of the structure. The redevelopment authority will then finance 50% of the remaining cost of retrofit which is repaid over a 10 year period with principal payments starting two years after the project is completed. There is no established ceiling on the amount of matching loan which will be made.

The redevelopment authority oversees this loan program. The redevelopment authority takes bank-like precautions before making a loan such as running a title check on the structure, running a credit check on the owner and establishing that the loan-to-value ratio for the structure does not exceed 70%. The redevelopment authority also requires that 3 bids be submitted for the work and that the lowest bid be accepted. (The least expensive of the retrofits have come in at about $12/square foot but others have cost considerably more than that.) As with most funding programs, Fullerton's system is based on reimbursement. The building owner must submit receipts for work done in order to draw down loan funds. This system allows contractors to be paid on a periodic basis.

PROGRAM RESOURCE REQUIREMENTS

The redevelopment authority has made 6 loans, totalling $325,000, to date and has another 6 loans, totalling $225,000, in the approval process. The city expects the demand for such funding to greatly increase. The redevelopment authority is concerned that the amount of tax increment funds available will not be sufficient to finance all the work required and that Fullerton is in danger of running out of funds for this program in the near future. A worst case scenario is that the amount of work necessary to completely address the seismic hazard in Fullerton will total approximately $5 million.

The seismic retrofit loan program is directly related to the general rehabilitation program of the redevelopment authority. In fact, the redevelopment authority finds itself in a difficult position regarding buildings that were given rehabilitation loans prior to the passing of the URM Law. Some of the buildings with outstanding rehabilitation loans are seismically deficient which puts the authority in a situation, similar to that in which many banks find themselves, of being first lienholder on a structure in danger of becoming rubble in the next big earthquake. The redevelopment authority has identified these buildings and aggressively marketed the seismic retrofit loan program to their owners in an attempt to obtain some additional security for the rehabilitation loans.

PROGRAM DEVELOPMENT

After the URM Law was passed by the State Legislature, the affected departments met with the Fullerton City Manager to discuss the city's approach to compliance. It was decided to pursue a mandatory retrofit program but to put an emphasis on restoring historical structures and preserving the historical fabric of the community through the use of the redevelopment authority. Before the ordinance was adopted, the city held a number of public meetings. There was a general meeting and then a number of smaller meetings targeted at URM owners, senior citizens, property owners in the redevelopment areas, etc. After the ordinance was adopted another series of meetings took place, particularly with the Chamber of Commerce. These meetings were held in an effort to calm some of the fears about the proposed program and to emphasize that the retrofit costs would not be as high as rumored.

There was clearly a realization among the Fullerton agencies involved in the enforcement of the retrofit ordinance that cooperation among themselves would be key to the success of the program. This sense of cooperation among city departments overflowed and created a sense of cooperation with URM owners. The Building Department has developed a very cooperative working relationship with URM owners. The use of the building and its historical significance are taken into consideration when developing the scale of the project. The Building Department considers

each building on a case by case basis when determining the extent to which other life safety and fire protection upgrades must be made. The Building Department has also adopted a policy allowing property owners to establish temporary offices in trailers on the project premises which can allow tenant businesses to continue to operate during the retrofit period.

PROGRAM EFFECTIVENESS

Owners of approximately 100 of the city's 125 URMs have either retrofitted their structure or submitted plans for proposed retrofitting. The owners who missed the original deadline but have since displayed some effort are being given an unofficial extension. Of the remaining buildings, owners of only 11 buildings have provided absolutely no indication that they are addressing the issue of seismic retrofitting. If the owners of these buildings have still done nothing 6 months after the deadline for compliance, their buildings will be "red-tagged" and ordered vacated.

To date 3 URM retrofits have been completed, 8 URM retrofits are under construction and 45 retrofit projects are in the plan check stage. Of the 220 tilt-up structures identified by the city, only 11 have not yet complied with the retrofit ordinance.

PROGRAM STRENGTHS

Any time a city has the means to provide some financial assistance to URM owners, it must be considered a program strength. The strong local economy and the pro-redevelopment attitude of Fullerton both add to the strength and success of Fullerton's retrofit program. It appears that the City of Fullerton's ability to deal with its URM owners in a very personalized manner is also a major strength of its retrofit program.

KEYS TO SUCCESS

There is a great deal of cooperation among the different departments involved in the retrofit program. Fullerton's Development Services Department and redevelopment authority have both been involved with the retrofit program since its inception and continue to work together closely on enforcement of the ordinance. The city also has a high level of professional expertise in-house, as exhibited by its ability to proceed with a tilt-up retrofit ordinance prior to the State of California legally requiring such retrofits.

EXHIBITS

- Seismic Loan Program - Loan Program Guidelines

CONTACTS

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Rick Forintos	Project Coordinator - Fullerton Redevelopment Agency	(714) 738-6877

CITY OF FULLERTON

EXHIBITS

SEISMIC LOAN PROGRAM

Loan Program Guidelines
January 1992

Section

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2 AMOUNT OF AVAILABLE ASSISTANCE

3 DEFINITIONS

4 ELIGIBLE PROPERTIES AND PRODUCTS

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EXHIBITS

- ELIGIBLE PROJECT AREAS
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SECTION 1 BACKGROUND AND PURPOSE

The Redevelopment Agency approved the Seismic Rehabilitation Loan Program on May 7, 1991, for the Orangefair and Central Redevelopment Project Areas. The program was adopted to assist and encourage commercial property owners to seismically upgrade their unreinforced masonry buildings to conform to the Seismic Ordinance. Apartments with five units or more are also eligible if they are unreinforced masonry.

SECTION 2 AMOUNT OF AVAILABLE ASSISTANCE

Interest-Free Commercial Loans

Up to $25,000 ([1])	100% Agency Loan, deferred, and due on sale with no interest charge.
From $25,001 and up (1)	This amount is on a 50/50 matching basis between owner and Agency. The loan repayment schedule begins two years after building completion, to be repaid in ten annual payments, with no interest.
Churches	Churches are eligible for 25% of total project costs not to exceed $100,000 to be fully repaid over 10 years starting two years after building completion.

SECTION 3 DEFINITIONS

Eligible Projects - All seismically deficient buildings as identified in the City of Fullerton's Unreinforced Masonry Study conducted in 1990. However, larger projects which are receiving substantial Agency assistance are not eligible for seismic loans unless specifically approved by the Agency.

Development Standards - Architectural guidelines for the downtown project area are contained in the CBD Guidelines booklet. All plans for buildings in either project area, when the seismic work has a visual impact on the building, are to be reviewed and approved by the Redevelopment Design Review Committee.

Owner Participation Agreement - All property owners must have an OPA approved by the Redevelopment Agency. This Agreement contains all of the terms and conditions applicable to the project, project scope, and the chosen bidder's cost breakdown. In addition, there are requirements for insurance, title policies, and non-discrimination clauses which must be followed.

Program - The Seismic Rehabilitation Loan Program as approved by the Redevelopment Agency on May 7, 1991.

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1 ADJACENT PARCELS OWNED BY THE SAME OWNER ARE NOT CONSIDERED SEPARATE LOANS. THE AGENCY LOAN IS DEFERRED ON THE FIRST $25,000 OF PROJECT COSTS WITH 50/50 MATCH OVER $25,000.

SECTION 4 ELIGIBLE PROPERTIES AND PROJECTS

A. Eligible Properties

Properties eligible for inclusion in the Program shall include all commercial parcels or apartments of five units or more within the boundaries of the Central Redevelopment Area and the Orangefair Redevelopment Area as identified in the City of Fullerton's Unreinforced Masonry Study conducted in 1990[1]. Also, those owners who have already started or completed seismic work, retroactive to March 6, 1990, may be reimbursed for those expenses if the work was done in conformance with Fullerton Seismic Ordinance requirements.

B. Eligible Work

Work eligible for Agency participation shall include the following as a minimum:

Interior or exterior repair or replacement in order to mitigate any unsafe or dangerous structural conditions as identified in the City's Unreinforced Masonry Study or such subsequent repairs as required by the Building Department. Such seismic work shall be in compliance with the architect's plans as approved by the Building Department and the RDRC. Seismic work which is performed in conjunction with new construction or which is done in conjunction with demolition or removal of more than 25% of the existing exterior walls is not eligible for this program.

Specific eligible costs may include, but are not limited to, the following:

Architectural plans and structural calculations[2], new concrete footings or strengthening of existing footings, floor/wall anchoring, roof diaphragm/shear transfer, diaphragm chords, interior shear walls, crack repair, tuckpointing, strengthening wall parapets or projecting sign boards and reroofing, replastering and patching or replacing stucco or brick which is damaged as a part of the seismic strengthening.

SECTION 5 SUBORDINATION

All loans shall be secured by a Deed of Trust listing the Redevelopment Agency as beneficiary and the City of Fullerton as trustee. The Agency is willing to take a position as a junior lienholder; however, if insufficient security exists to protect the Agency's interest in the property, then the loan amount may be reduced or the loan denied. Specifically, the Agency will agree to subordinate its seismic loan to construction or permanent financing or refinancing for a more favorable interest rate without requiring repayment. The Participant's request for subordination for refinancing or other reasons shall be reviewed and determined in the sole discretion of the Agency which approval shall not be unreasonably withheld. The Agency, when revising the subordination request, prefers that the total of all liens shall not exceed 70% of the total loans to the appraised fair market value of the appraisal of the property. When the

1 Except Concrete Tilt-up.

2 Owner can include these as project costs for reimbursement after Agency loan is funded.

SECTION 5 (continued)

estimated property value begins to approach 50% loan to value including the Agency's proposed loan, an appraisal may be required to determine the actual appraised market value of the property (see SECTION 11).

SECTION 6 APPLICATION PROCEDURES, APPLICATION REVIEW, AND APPROVAL OF LOAN

1. Applicant shall discuss the proposed project with the Redevelopment staff and Building Department in order to develop the scope of the project.

2. Applicant shall fill out a seismic application, available from the Redevelopment Office, 303 West Commonwealth Avenue, Fullerton, CA 92632.

3. Review of the application, project, and plans will include the following:

   A. Availability of Agency funds for this and other projects.
   B. Is the building on the Historical Building Survey or a designated Local Landmark?
   C. Severity of seismic problem.
   D. Has the exterior of the building been previously remodeled and does the Agency already have a Rehabilitation Loan on the property?
   E. Has the owner already spent money to do seismic work, are plans completed, and is the owner ready to start the project?
   F. Are the total loans, including the Agency loan, not in excess of 80% of the building's fair market appraisal?

SECTION 7 POST APPLICATION APPROVAL CHRONOLOGY AND BIDDING REQUIREMENTS

1. After the application has been accepted, the applicant and Agency staff shall meet with the owner's designer(s) regarding the conceptual plans for the project. The owner and his contractors shall use the Secretary of the Interior's Standards in designing and constructing the improvements and in the repair of any damage caused by the seismic work. Design professionals and contractors should be chosen based on their familiarity with these Standards and their verified rehabilitation experience on similar types of buildings. The Agency and Development Services prefer the Hilti fastening system and that the primary street exterior of the building shall not be penetrated with support flanges of any type. Exceptions to this rule will be reviewed by the Development Services Department.

2. Once conceptual plans are prepared, the applicant shall process the plans through all applicable City of Fullerton review procedures, including the RDRC if repairs impact the exterior of the building or historic or architectural features considered to be significant.

SECTION 7 (continued)

3. Two written bids are required to determine the cost of the project. The owner shall select the lowest responsible bidder. An applicant may build a project by using: a) a general contractor, b) a managing contractor on a fee basis, or c) by acting as an owner/builder.

   a. If a general contractor is used, two overall bids shall be provided in sufficient item detail to allow the Agency staff to determine that a substantially similar character of work was bid by all contractors submitting proposals. The more complex projects shall require an owner to employ a General Contractor unless it can be demonstrated that the owner or his representative has sufficient time and expertise to run the project.

   b. In the case of a managing contractor employed on a fee basis, at least two bids for each subcontracted trade used shall be required in addition to a statement of the fee to be paid to the managing contractor. The fee paid shall not exceed the then prevailing industry standard for construction management fees.

   c. If the applicant acts as an owner/builder, a cost estimate for each item of work to be performed by the owner/builder's own forces shall be provided, itemized by labor and material. If the applicant also utilizes the services of subcontractors to complete the rehabilitation, then at least two bids must be provided for any such subcontracted work. If the Agency staff questions the cost estimate of any owner/builder items not subcontracted, then the staff may request that the owner/builder provide two comparison bids for the work in question.

4. Once plans have been approved by the Building Department and bids solicited, the Agency staff shall schedule the item for the next available Agency meeting agenda. The Owner Participation Agreement shall be executed by the applicant prior to the Agency meeting. In addition to the basic agreement (attached to these guidelines in Appendix A), the following attachments to the Owner Participation Agreement will require the applicant's signature prior to the Agency meeting and are also included in Appendix A:

   Attachment C: Short Form Deed of Trust
   Attachment D: Promissory Note
   Attachment E: Contractor's General Liability Insurance, Workmen's Compensation Insurance and Owners Fire Insurance Policies
   Attachment F: Memorandum of Agreement

   A Lender's Policy of Title Insurance shall be provided to protect Agency from subsequent liens or claims.

5. After Agency approval and recordation of the Deed of Trust, the applicant may apply for reimbursement of eligible expenses. Under certain extenuating circumstances, the Agency may approve agreements after commencement of construction and may approve reimbursement of prior expenditures as long as they constitute eligible rehabilitation expenses as described in Section 3.B of the guidelines.

SECTION 8 DISBURSEMENT OF LOAN FUNDS

In order to draw down loan funds, the applicant shall submit the following items to the Redevelopment Office:

1. Participant's request for progress payment.

2. Paid invoices for the amount of eligible work.

3. Labor and material lien releases for all invoices submitted.

4. Under the owner/builder option, the applicant shall be reimbursed upon presentation of paid invoices for all materials and certified payrolls for all labor charges, up to the amount of the estimate for the work as discussed in Section 7, Item 3.C. above.

Reimbursement of eligible expenses shall be 100% of the first $25,000 of eligible costs based on invoices submitted for payment, less a 10% retention. Amounts in excess of $25,000 shall be reimbursed at 50% of eligible costs, less a 10% retention, until the maximum amount is reached. The retention shall be released to the applicant not earlier than 30 days after a Notice of Completion has been filed with the County Recorder's office.

SECTION 9 LOAN PAYBACK

Loan payback shall be made pursuant to the terms as contained in the note. The Agency may approve deferral of payback in the event of refinancing or other reasons acceptable to the Agency.

SECTION 10 SUBSEQUENT LOANS

If the scope of an approved project is expanded after construction has begun, an increase in the loan amount for eligible activities up to the stated limits of the program may be granted at the sole discretion of the Agency.

Should loan terms and amounts allowed under the program be changed subsequent to approval and disbursement of loan funds to an applicant, the applicant may reapply for an additional loan. A new application under the revised terms will be considered provided that additional work is being proposed. Only one reapplication under the terms of this section will be considered. Costs of work previously completed shall not be included in the reapplication.

SECTION 11 APPRAISAL

For projects with an Agency Loan over 50% loan to value (including senior loans), an appraisal may be required at Agency's option. The appraisal, if required, will be reviewed by the City of Fullerton's real estate office to determine its adequacy and conformance to industry standards.

SECTION 12 PARTICIPANT'S FUNDS

Participant's funds shall be available to complete participant's portion of project and be set aside exclusively for this project.

SECTION 13 TITLE REPORT

All projects shall require a title report to verify liens, easements and other matters of record, etc. and to insure the Agency's loan. The City of Fullerton has a contract with Commonwealth Land Title Company (CLTC) for title reports and the Agency shall utilize CLTC for its seismic loan program. The applicant will be required to pay for these services directly and can be reimbursed later on from loan proceeds after the loan records.

CITY OF LONG BEACH

Population:	430,000
1990/91 General Fund	
Revenues:	$224 million
Fund Balance:	$11 million
# URMs:	560
Type of URMs:	90% commercial 10% residential
Ordinance Type:	mandatory retrofitting
Retrofit Incentives:	long-term financing at 11.3%
Funding Source:	Special Assessment bond issue

BACKGROUND

The City of Long Beach, fifth largest city in California, encompasses a 50-square mile coastal area located on the southern edge of Los Angeles County. The city is known both as a major industrial center and as a popular beach resort area hosting a substantial tourist and convention business. Long Beach historically has been a leader in the area of seismic safety. In response to its losses in the 1933 earthquake, the city adopted the toughest building code in the nation. Its present day ordinance exempts all structures built after 1934. The City of Long Beach has been pursuing the seismic retrofit of hazardous buildings in its community for many years.

HAZARDOUS BUILDINGS PROFILE

Despite its longstanding concern for seismic safety, in 1989 the city still contained approximately 560 unreinforced masonry buildings (URMs). The majority of the buildings are commercial in use.

ORDINANCE

The city first adopted its seismic ordinance in the late 1970s. At that time the seismically hazardous buildings were divided into three categories:

most dangerous:	these buildings were ordered repaired immediately or torn down
more dangerous:	these buildings were given until 1985 to be brought up to code or demolished
least dangerous:	these buildings were given until January 1991 to be brought up to code or torn down (on 1/1/91 the owners of these remaining buildings were served with a notice that they had 60 days to develop a plan for compliance and submit it to the Building Inspection Department).

By the end of the 1980s owners of buildings in the first two categories had complied with the ordinance. The city did not provide these owners with any financial or other incentives. There remained to be addressed those buildings categorized as *least dangerous* by the ordinance.

INCENTIVE PROGRAM CONCEPT

Long Beach's program provided participants with long-term financing at the then-market interest rate of 11.3%. Initially, the city allowed a 3 month period in which property owners could apply for participation in the program. The application period was subsequently extended by 4 months. Property owners interested in participating submitted to the city, for review by its Superintendent of Building and Safety, a report prepared by a California licensed engineer or architect. In general, each report provided for the roof and floors of the building to be bolted to the adjoining walls, for the interior and exterior walls to be reinforced, and for provisions allowing existing usage and occupancy to be maintained and restored. The owners' parcels were then examined to determine their estimated and/or appraised values, and tax rolls were checked to ensure that none of the owners was delinquent in property tax payment. (See: PROGRAM DEVELOPMENT)

Of the 319 parcels for which applications had been submitted, 28 parcels were unable to qualify for the financing because of current year tax delinquencies. Approximately 30 dropped out prior to confirmation of assessments for unrelated reasons. Interestingly, none of the applicants failed to meet the value-to-lien requirement. (See: PROGRAM DEVELOPMENT) A total of 307 parcels were finally included in the assessment district, representing 137 structures or about one quarter of the city's remaining URMs. The parcels in the district are geographically dispersed throughout the city, with the majority located in the city's

downtown area. Of the 307 assessed parcels, 170 are concentrated in 3 multiple-unit buildings. Not all of the units in those buildings are included in the district.

In order to effect the financing Long Beach had to take certain legal steps. The first action the city took was to amend its municipal code so that it had the power to form the assessment district, levy the assessments, and issue the bonds. (See: PROGRAM DEVELOPMENT) The city next adopted a resolution of intention to proceed, and gave preliminary approval to the Assessment Engineer's report which contained estimates of project costs and per parcel assessments. Two months later the council adopted another resolution allowing an additional 65 properties to be included in the district. The council then held a public hearing and, as no protests were received, adopted a resolution establishing the district, authorizing the projects and confirming and levying the assessment for each parcel. Seven months later the bonds were issued and money was placed in an Improvement Fund awaiting disbursement to participating owners.

To receive bond funds an owner must submit to the city a certificate stating that eligible improvements have been completed and that the cost of those improvements is eligible for reimbursement. The certificate must be signed by the owner and the City Treasurer. Owners may either request reimbursement upon completion of seismic related work, or may request that progress payments be made directly to the contractor as construction progresses. However in the case of multi-unit buildings, to ensure that all necessary improvements to the building will be completed, no funds will be disbursed to owners represented in the district until the owners of units who chose not to participate in the district have secured alternative financing.

Undertaking and completing projects is the sole responsibility of individual property owners. All owners must submit final building plans to the city and obtain all the usual permits. Owners individually contract and arrange for the projects' construction, and any cost overruns are the sole responsibility of the owner. No provisions were made in the bond issue for financing such overruns. The time allotted for completion of all the projects is approximately two years. If there are bond proceeds remaining at the end of that time (perhaps because owners who participated in the district ultimately chose not to undertake the improvements, because final costs were under the amounts determined in preliminary estimates, or because they did not satisfy the city's requirements for release of the funds) these proceeds will be used to prepay the bonds.

The bonds are repaid through assessment liens against all the parcels included in the district. Assessment installments are payable in the same manner and time as general taxes on real property. Note that the assessments represent liens against parcels, not personal indebtedness of property owners.

The annual assessment billed against each parcel represents a pro rata share of the total principal and interest of the bonds coming due that year. The assessments in aggregate are sufficient not only to pay for the estimated costs of the seismic improvements, but also to cover related incidental expenses. These incidental expenses include the city's costs of developing and administering the program. Ongoing expenses payable from the bond issue include the cost to the city of monitoring construction, administering payments under construction contracts, and engineering expenses (See: PROGRAM RESOURCES) In addition to the basic assessment on each parcel, the city may levy an annual assessment to pay specified costs incurred by the city which are not covered by the basic assessment. These costs would arise from administration and collection of assessments, or administration and registration of the bonds. The additional annual assessment is capped at $150 per parcel adjusted for inflation.

The bonds issued by Long Beach are secured by the assessments levied against the parcels. The assessment liens are on parity with all general and special tax liens. They are subordinate to pre-existing Special Assessment liens, but take priority over future fixed Special Assessment liens. Most importantly the assessment liens take priority over all existing and future private liens, including bank loans and mortgages.

Failure of an individual property owner to pay an assessment installment will not increase the assessments against other parcels. Generally, property securing delinquent assessment installments in California is subject to sale in the same manner as property sold for non-payment of general property taxes. However, Long Beach has covenanted that it will commence judicial foreclosure proceedings against parcels with assessment installments which are more than two years delinquent. It also will commence such proceedings against all delinquent parcels, even those delinquent for less than two years, in the event that the total of installments received by the city is less than 95% of the amount due. When insufficient assessments are received to make interest and principal payments on the bonds, amounts in the reserve fund are drawn down to make up the deficiency (See: PROGRAM RESOURCES). The city does have the option of deferring foreclosure proceedings if the reserve requirement is met, i.e. if the city chooses to advance monies to replenish the reserve fund.

PROGRAM RESOURCES

Four different city departments were involved in developing Long Beach's program: Community Development, the City Treasurer's office, the City Attorney's office and the Planning and Building Department. In addition, the Rehabilitation Officer spent a great deal of time with individual URM owners. The services of a financing team (financial advisor, bond counsel, and underwriter) were also used extensively. Long Beach estimates it cost at least $40,000 in city staff time and other expenses to develop the program and issue the bonds. These costs, as well as the fees of the financing team, were reimbursed from the

proceeds of the bond issue. Ongoing program costs primarily involve the time of the Superintendent of Building and Safety to review and approve requests for funds, and the resources of the City Treasurer to administer the bond program and collect the assessments. The projected ongoing costs were also funded through the bond issue, and additional amounts may be collected if necessary by levying additional assessments (See: INCENTIVE PROGRAM CONCEPT).

Long Beach issued bonds in the amount of $17.4 million to which were added approximately $250,000 in accrued interest and owner deposits, for a total of $17.7 million. The funds were allocated as follows:

- $14.9 million of the bond proceeds were deposited into the Improvement Fund from which monies would be drawn to cover project costs. Monies in this fund earn interest, which is also deposited into the Improvement Fund and allocated to the projects. Together these sources were projected to supply the $15.1 million needed to cover project costs.

- The bond proceeds also funded a $1.7 million reserve account, required in most bond financings, which ensures that funds will be available to make timely bond payments.

- Approximately $500,000 was borrowed to cover interest payments which needed to be made on the bonds prior to collection of assessments.

- $450,000 was expended to pay the financing team and cover other issuance costs.

- Finally, the city received from the bond proceeds the $40,000 to reimburse itself for monies it spent developing the program, as well as $100,000 which it planned to use to cover ongoing administrative costs (See: INCENTIVE PROGRAM CONCEPT)

PROGRAM DEVELOPMENT

Long Beach's program might better be called an enabling rather than an incentive program. As the city had not provided any financial assistance to owners of buildings classified by its ordinance as "more dangerous" and "most dangerous," it saw no reason to provide such assistance to owners of the "least dangerous" structures. While the city ruled out any type of

subsidy program, however, it was not oblivious to the economic realities of the day. The poor real estate market, the slowing economy and the industry-wide problems of banks made it more difficult for the remaining class of owners to find private financing for retrofitting projects. The city felt that its most suitable function would be to obtain financing for the owners while steering clear of any responsibility for repayment. The best means of accomplishing Long Beach's objectives was determined to be a bond financing based upon the formation of an assessment district.

While assessment bonds of the type contemplated were commonly used by cities throughout California for other purposes, they had never before been publicly issued to finance repairs of privately owned structures. The uniqueness of this purpose made the assessment bond issuance process far more complicated than would normally be expected. New ground had to be broken on many fronts, a process which ended up taking 18 months rather than the 3 to 6 months more commonly spent on assessment financings. While developing an appropriate legal structure was challenging, the most difficult aspect of the development process involved qualifying the properties for participation in the district.

One issue which needed to be addressed was the status of applicant owners' property tax payments. As the assessments would be paid with property taxes (See: INCENTIVE PROGRAM CONCEPT), it was important to show that members of the district were current with their tax payments. To many people's surprise, it turned out that nearly one third of the applicants were delinquent on their tax payments, primarily as a result of a supplemental assessment that had been levied a number of years prior but for which the property-owners had never been billed. The screening process for owners delinquent on property tax payments caused about 12 applicants to drop out of the process.

As investors in assessment bonds are secured by the property upon which the lien is assessed, an important ratio in an assessment financing is the value-to-lien ratio. This ratio suggests to investors how much might be recouped from the sale of a property if its owner defaults on the assessment. (For foreclosure procedures see INCENTIVE PROGRAM CONCEPT) Typically, investors will require that assessment districts contain properties with minimum value-to-lien ratios of 3.0 to 1. Long Beach's financing team established a minimum 2.5 to 1 ratio, although a small number of properties with lower ratios were accepted into the district.

Typically, property values are determined by appraisal. Obtaining appraisals, however, can be expensive and time-consuming. The city's financial advisor devised a valuation method designed to minimize the number of properties for which appraisals would be required. As a first step, based on the assumption that a property's market value is always higher than its assessed value, an applicant's value-to-lien ratio was calculated using the property's assessed value. If the resulting ratio was 2.5 to 1 or higher, the property qualified for inclusion in the district.

The next test developed a proxy for market value by discounting the property's assessed value by 2% for each year since its most recent assessment, and increasing the resulting number to more accurately reflect changes in market value since the date of that assessment. The derived market value was then used to calculate the value-to-lien ratio. The procedure turned out to be extremely complex, but did attain the desired result as all but 50 parcels met the minimum value-to-lien ratio and were able to forego formal appraisals. The remaining parcels underwent a valuation process by a city approved MAI (Master Appraisal Institute) appraisal and in each case the valuation provided the necessary coverage. The following table illustrates the value-to-lien ratios of parcels which comprise the district, using both the assessed value and the derived or appraised market value.

Value-to-Lien Ratio	# Parcels (Value = Assessed Value)	% of Total Assessment	# Parcels (Value = Derived Value)	% of Total Assessment
< 1.00:1	27	15.7	0	0.0
1.00:1 to 1.99:1	32	20.9	0	0.0
2.00:1 to 2.49:1	28	11.3	5	4.1
2.50:1 to 3.49:1	49	17.5	41	26.1
3.50:1 to 4:49:1	42	10.6	29	15.4
> 4.50:1	129	24.0	232	54.4
TOTAL	307	100.0	307	100.0

In addition to evaluating owners' applications, Long Beach had to take certain steps to effect the bond issue. For legal as well as policy reasons, it was very important to make clear that the program being developed by the city was intended not to provide benefit to private owners but to address a public safety issue. Long Beach, which is a charter city, also needed to grant itself the powers necessary to form the assessment district. Accordingly, Chapter 3.52 was added to the city's municipal code specifically for the purpose of providing financing mechanisms to help lower the costs of private improvements required to be made to buildings in the city which fail to meet the minimum seismic and public safety requirements of the code. The new chapter established procedures for the issuance and sale of bonds, the formation of assessment districts, and the levying of assessments on properties, incorporating certain provisions of the Improvement Bond Act of 1915 and the Municipal Improvement Act of 1913, the acts allowing formation of Special Assessment districts (See: LOCAL GOVERNMENT FINANCING OPTIONS - SPECIAL ASSESSMENT DISTRICTS) Note that the amended

code established these procedures to assist in the financing of public safety improvements to private properties within the city, improvements which include but (theoretically) are not limited to seismic retrofitting.

PROGRAM EFFECTIVENESS

About one quarter of the city's 506 remaining URMs were included in the assessment district and will be retrofitted using the proceeds of the bond issue. Long Beach is now considering forming a second assessment district and floating another bond issue. About 40 property owners who failed to sign-up in time for the first assessment district have applied for inclusion in the second. It appears the second bond issue would be about 10% the size of the first one.

PROGRAM STRENGTHS

The primary advantage of the program to the city lies in the fact that Long Beach is able to provide owners with financing while retaining no repayment liability. Although the program does require ongoing monitoring and administration, these costs are fully covered by the assessments levied on the parcels receiving the financing. Because the program is privately financed and full financial responsibility lies with the property owners, the projects are not subject to regulations applied to public funds such as Davis-Bacon wage requirements. It is helpful too that the application process for property-owners is relatively simple and participation is optional.

KEYS TO SUCCESS

The effectiveness of Long Beach's program is likely linked to the earlier success of the city's retrofit efforts. Long Beach had a reputation for holding the line with URM owners. Buildings in the "most dangerous" and "more dangerous" categories which had failed to meet the earlier retrofit deadlines were razed by the city. This let URM owners know that the city was serious about its retrofit program.

Long Beach also has a great deal of experience in dealing with URMs. The issue is very well understood by staff, elected officials, and the public at large. As a result, very little controversy surrounded the city's development of its program.

By establishing this program, the city was merely offering an alternative to owners who could not find long-term financing. It was helpful too that the aggregate project size was large, so that the fixed costs of developing and administering the program could be shared among many owners. The city and its financing team also did a thorough job of marketing this financing option and convincing URM owners to sign up for membership in the assessment district. Having learned from its first issue, should it go ahead with the second Long Beach will pay particular attention to ensuring that owners understand fully the nature of their commitments and those of the city. The city found this to be the most difficult, yet the most crucial, aspect of the financing process.

Finally, the city showed a great deal of flexibility in its willingness to experiment with an untried method of financing. Long Beach exhibited a tremendous amount of patience as the financing team struggled to develop the program, a process which took 2 to 3 times as long as originally expected.

It is often said that Long Beach was able to develop this project because it is a charter city. While this was considered a key factor at that time, Long Beach's bond counsel now believes that general law cities too can use Special Assessment financing to fund retrofit programs (See: LOCAL GOVERNMENT FINANCING OPTIONS - SPECIAL ASSESSMENT DISTRICT).

EXHIBITS

- Sample letters to property owners sent over the course of the financing process.

CONTACTS

David Lewis	Rehabilitation Officer	(310) 590-6879
Richard Hilde	City Treasurer	(310) 590-6845
Tim Schaefer	Financial Advisor	(714) 545-1212
Masood Sohaili	Bond Counsel	(213) 669-6692

CITY OF LONG BEACH

EXHIBITS

CITY OF LONG BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
333 WEST OCEAN BOULEVARD • LONG BEACH CALIFORNIA 90802 • (213) 590-6841

January 5, 1990

[redacted]

Dear [redacted]

According to our records, you are the owner of property which has been identified by the Department of Planning and Building of the City of Long Beach as requiring certain repairs to meet the City's seismic code by 1991.

The City is considering the feasibility of a bond issue to make funds available to property owners for the required seismic repairs. If such an issue is found to be feasible and desirable, we are of the opinion that funds could be made available under the following general conditions:

- Interest rate would be within the market range of first mortgages.
- There would be a pro rata commitment fee required to pay for initial costs of issuing the bonds.
- Funds would be repaid on a monthly basis over a 30-year term at a fixed rate.
- Security for the funds would be an assessment district lien on the property. This form of lien would be in a superior position to any existing mortgage.
- The funds may only be used for work required for seismic repairs and cannot be used for general repairs and improvements.

If you have not yet finalized your financing for the seismic repairs to your property and if you may be interested in the bond program, we would like to discuss it with you further. We do think the bond financing offers some district advantages, particularly the interest rate and the 30-year term.

CITY OF LONG BEACH

DEPARTMENT OF COMMUNITY DEVELOPMENT

[illegible] WEST OCEAN BOULEVARD • LONG BEACH, CALIFORNIA [illegible] • [illegible]

May 21, 1990

Dear Interested Property Owner:

This letter is to inform you of the progress made to date in preparing to issue bonds to assist in financing seismic repairs to your property. At the same time, we need to let you know of information we will require from you and the date for you to submit that information.

On May 8, 1990 the City Council approved the first reading of the Procedural Ordinance providing guidelines for establishing the assessment district. The second reading of the Ordinance occurred on May 15, 1990. The next step in the public process will occur in early August 1990, when the City Council will consider the Resolution of Intention to form the assessment district. We still expect bonds to finance seismic improvements to be sold November 1990.

The next major step for you as a property owner interested in utilizing the bond financing is to complete an engineering analysis of your building as soon as possible. For your continued participation in the bond program, we will require a report, signed by an engineer or an architect licensed by the State of California, to be submitted to the City by June 29, 1990. This report is to include a description of your existing building, what work needs to be done to the building to bring it into compliance with the City's seismic code, and an accurate estimate of the cost of the work. At the same time, by June 29, 1990, you must also submit your Good Faith Deposit of $1,000 per building.

Many of you are aware that the City Council will consider an amendment to the City's Seismic Ordinance. Some of you are also of the opinion that should the amendment be approved, there may be cost savings in making repairs to your building. This opinion has led some property owners to want to delay engineering analysis of their buildings until the City Council has acted on the proposed amendment. It should be emphasized that the proposed amendment does not extend the time period to make the repairs.

We believe any delays in proceeding with the engineering work is not in the best interest as to time for those property owners wishing to participate in the bond financing

program. In order to meet out schedule to sell bonds, and your schedule to make repairs to your building, we need to proceed on our current schedule. Therefore, we suggest that your engineer or architect describe work to be done, and estimate the cost of that work, under the existing code. This should be the cost estimate you submit to us on June 29, 1990. Subsequently, if the City does amend the Seismic Code and the cost of repairs to your building is less than the original estimate, we will allow a one-time reduction of the cost to repair just prior to selling the bonds.

We will be holding a meeting of all interested property owners on Tuesday, June 12, 1990 at the Pacific Coast Club, 430 Pine Avenue, in downtown Long Beach. The purpose of the meeting is to further bring you up to date on our progress in this matter, and to answer any questions you may have.

In the meantime, if you need information or have questions, please call me at (213) 590-6879.

Sincerely,

DAVID D. LEWIS
Redevelopment Project Officer

DDL:bp

2

CITY OF LONG BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
333 WEST OCEAN BOULEVARD • LONG BEACH, CALIFORNIA 90802 • (213) 590-6841

September 11, 1990

Dear Property Owner:

This letter is to advise you that we have received your complete application for seismic bond financing to make the required repairs to your property located at _____ in Long Beach. That Property has been included in the preliminary Assessment Engineer's Report; the estimated cost to repair, upon which the property assessment is to be based, is _____.

On September 4, 1990 the City Council adopted the Resolution of Intention to Form an Assessment District and approved the preliminary Assessment Engineer's Report. The Council also consented to hold a public hearing on the proposed assessment district. The public hearing will be held at 10:30 a.m., Tuesday, October 16, 1990 in the Council Chamber in City Hall, 333 West Ocean Boulevard.

We are continuing to work with a financial consultant to complete the structure of the bond issue. At the present time, there appear to be some conditions of the bond sale about which we want to inform you.

1. The cost of issuing the bonds appears to be approximately 3.6% of the cost to repair. This amount covers all legal and administrative expenses and includes the bond underwriters fee.

2. There must be included in the bond issue an amount equal to 10% of the cost to repair for a reserve fund. The purpose of this fund is to cover any short-term cash flow problems in making payments to the bond buyers which might otherwise occur should any property owner default in making the annual assessment payment. If a default does occur and the reserve fund must be used to any degree, the fund will be repaid once the default is cured. This reserve fund will be invested, and the interest earned will be credited to each assessment on a pro rata basis. At the end of the repayment period, your share of the reserve fund will be used toward making the final payments on your assessment levy.

3. Also to be included in the bond issue is the first year's interest on the money to be used. You will not be required to make any payment of the funds used to repair your property until December 10, 1991. However, you will have initial

Page 2

use of those funds approximately one year earlier. Therefore, the interest payment to the bondholders for the first year must be included in the bond issue.

As we had advised you earlier, we will allow a one-time adjustment of your estimate of the cost to repair your property. If you wish to change the estimate you have already submitted, we ask you to submit any change before September 30, 1990. If we do not receive direction from you to change your estimate, we will include the current estimate in the final Assessment Engineer's Report, and your assessment levy will be based on that amount.

If you have any questions in this matter, please feel free to call me at 590-6879.

Sincerely,

David D. Lewis

DAVID D. LEWIS
REDEVELOPMENT PROJECT OFFICER

DDL:dm

CITY OF LONG BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
333 WEST OCEAN BOULEVARD • LONG BEACH, CALIFORNIA 90802 • (213) 590-6841

September 27, 1990

Dear Property Owner:

As we had informed all property owners earlier, one of the primary underwriting conditions for the sale of bonds for seismic repair is that the market value of the property to be repaired be at least 3 times the actual cost of repairs.

In attempting to estimate the market value of the participating properties, we began by identifying the current assessed value for each property. We then adjusted the assessed value, taking into account the year the property was purchased by the current owner and the overall average annual increase of assessed values in the Long Beach area. We have also determined that value to lien ratios of 2.5 to 1 are sufficient for this program.

Based on the analysis described above, your property located at _____ has an adjusted assessed valuation for purposes of this bond financing program only of $_____. Your estimated cost to repair your property is _____. This results in a value to lien ratio of _____, which is below the acceptable ratio of 2.5 to 1.

We recognize that the assessed value of real property is not necessarily the true market value. It is, however, the only information we have readily available.

If you have any reliable information that will help us establish the estimated market value for your property, it would be most appreciated. Such information could be an appraisal undertaken by a professional appraiser for any purpose, such as a loan or refinancing, within the last 18 months or verification of a purchase price within the past two years. Any valid information will greatly assist us in this process. Please submit such information to us no later than October 12, 1990.

For those properties where no other reliable data is available, we may undertake a "letter-opinion" appraisal of the property or other alternatives to establish the value of the property. If there remain properties which, after

Property Owner
September 27, 1990
Page 2

undertaking all of the above described analyses, still fall below an acceptable value to lien ratio of 2.5 to 1, we will be forced to exclude those properties from the bond financing program.

Thank you for your assistance. If you have any questions in this matter, please call me at (213) 590-6879.

Sincerely,

David D. Lewis

DAVID D. LEWIS
REHABILITATION OFFICER

DDL:dm

CITY OF LONG BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
333 WEST OCEAN BOULEVARD ● LONG BEACH, CALIFORNIA 90802 ● (213) 590-6841

December 3, 1990

Dear Property Owner:

On November 27, 1990 the City Council held a public hearing on the formation of Earthquake Repair Assessment District # 90-3. Following the public hearing, the Council approved the formation of the District. The property you own and for which you applied has been included in the District for purposes of financing the required seismic repairs.

We are currently working with the financial consultant and the bond underwriter to finalize the terms and timing of the bond issue. We still anticipate selling bonds in January 1991. We will keep you informed of our progress as we near the time of sale.

Several of you have asked specific procedural questions regarding the flow of bond funds once the bonds are sold. First, there will be established a construction account for each of the participating properties in the amount you have given us as your cost to repair your building. You will be responsible for selecting your own contractor to do the repair work. As the contractor proceeds and submits invoices to you for payment, you will first ensure the work is completed, to the degree of the payment request, in a satisfactory manner. You should then sign the invoice and submit it to the Assessment Engineer, Mr. Eugene J. Zeller. Following inspection of the work by the City, a check will then be drawn and mailed, payable directly to the Contractor.

If there are funds remaining in the construction account following the completion and payment for all seismic repair work, those funds, for a period not to exceed three years from the date of bond issuance, will be applied toward the payment of the annual assessment. If there still remain funds in any sizeable amount after the three year period, they may be used to pay off bonds.

Again, we will keep you informed as we near the sale of bonds. In the meantime, if you have any questions, please call me at (213) 590-6879.

Sincerely,

David D. Lewis

DAVID D. LEWIS
REHABILITATION OFFICER

DDL:dm

CITY OF LONG BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
333 WEST OCEAN BOULEVARD ● LONG BEACH CALIFORNIA 90802 ● (213) 590-6841

February 20, 1991

Dear Property Owner:

As you know, this past January we had expected to sell bonds secured by the City's Earthquake Repair Assessment District 90-3, which includes your property. However, our schedule for the bond sale was prepared at a time when we were unable to predict current world events and their effect on market conditions for our bonds.

In December, 1990, Merrill Lynch & Co. was selected as underwriter for our bond issue. Their early advice to us was that all steps must be taken to make our bond issue as attractive as possible to the highly competitive and limited taxable bond market, in order to get the lowest possible interest rate for the property owners. One strong recommendation made was to "validate" the bond issue, a process in which the City essentially sues itself to obtain a judgement from the court that the City in fact has the legal right to form the assesment district and sell these bonds. While neither we nor our bond counsel has ever questioned our right in this regard, the court judgement provides added security to the bond buyers. This process was begun last December, and since no challenge was filed within the required time period, we expect to receive a favorable judgement from the court the last week of this month.

Another requirement of the underwriter was to determine the current status of payment of property taxes on each of the properties in the assessment district. As you know, the assessment lien is billed to each property owner annually as part of the property tax bill, and is paid together with property taxes. The assumption of the underwriter is that there may be a correlation between the pattern of paying property taxes in the past with the payment of taxes, including assessment liens, in the future. In researching the current status of property tax payments, we have discovered that of the 338 owners in the district, 108 are delinquent in some portion of property tax payments. Each of those property owners will be receiving a separate letter explaining what must be done in this situation. The process of resolving this delinquent tax issue will, however, delay the sale of bonds for at least three weeks.

Property owner
February 20, 1991
Page 2

We are now anticipating the sale of bonds and the availability of funds the second or third week of April. We regret these delays in our schedule, but they have come as a result of factors beyond our control. We will continue to keep you informed of our progress toward the sale of bonds.

In the meantime, I urge you, if you have not already done so, to respond to Mr. Eugene Zeller's letter of December 28, 1990. Your response should include the status of your construction plans for the repair work, and the fact that you are a participant in the City's bond financing program.

As always, if you have any questions regarding the assessment district or the bond program, please call me at (213)590-6879.

Sincerely,

David D. Lewis

David D. Lewis
Rehabilitation Officer

DDL:gm

property.dl

CITY OF LONG BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
333 WEST OCEAN BOULEVARD • LONG BEACH CALIFORNIA 90802 • (213) 590-6841

February 20, 1991

Dear Property Owner:

As we continue our process toward the sale of bonds to finance earthquake repair to properties in Assessment District 90-3, one of the material disclosures required by the underwriter of the bonds is the current status of property tax payments on each property. We have just completed our analysis of each property in the district, and, quite frankly, we find the results rather startling. Of 338 owners in the District, 108 have delinquent tax payments.

Since the payment of the assessment lien is directly tied to the payment of property taxes, there is an assumed correlation in the pattern of property tax payments and the annual assessment payment. Property owners with delinquent tax payments who wish to remain in the district will be required to bring their property taxes current immediately.

According to the information we have received from our tax service consultant, you have a delinquent tax balance due on your property, located at _____, of $_____. If you wish to remain in the Earthquake Repair Assessment District 90-3 and have seismic repairs to your building paid with bond proceeds, you must pay all delinquent taxes on your property no later than March 15, 1991. Thereafter, you must pay your property taxes when they become due, because the private bondholders who are providing the funds for repair work do so as an investment and expect to be repaid on a timely basis. Therefore, if property taxes are not paid when due, the City is obligated for the benefit of the bondholders to commence foreclosure proceedings within 90 days.

To remain in the Assessment District, you must, as noted above, pay all back taxes by March 15, 1991. You must also, by March 15, 1991, send to me at the address on this letter evidence of payment of all back taxes. If our information is in error, please send me documentation that the taxes have been paid. If we do not hear from you at all by March 15, 1991, we will be forced to drop your property from the District.

We are sorry for this inconvenience, but this is an urgent matter which must be resolved. If you have any questions, please call me at (213) 590-6879.

Thank you for your assistance.

Sincerely,

David D. Lewis

David D. Lewis
Rehabilitation Officer

CITY OF LONG BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
333 WEST OCEAN BOULEVARD • LONG BEACH, CALIFORNIA 90802 • (213) 590-6841

June 21, 1991

Dear Property Owner:

We are pleased to advise you that the bonds to finance the structural repairs to be made on your property pursuant to the provisions of the City of Long Beach Earthquake Repair Assessment District No. 90-3 have been sold and the funds are now deposited with the City. The interest rate on the bonds is 11.3%, and the term is 24 years. We were disappointed that the interest rate was higher than originally expected, but in today's economic conditions, that was the best rate submitted by potential buyers.

It is expected that the Property Improvement accounts will be established by June 24, 1991 and owners may then begin submitting requests for payment. Requests for payment are to be made to Mr. Dick Hilde, City Treasurer, City Hall, 333 West Ocean Boulevard, Long Beach 90802.

The process for making your requests for payment is to complete the Payment Request Form (copies enclosed), and to attach a duplicate original of the invoice or statement for which payment is requested. If you have already paid the invoice or statement, it must be stamped or marked "Paid in Full" by the vendor and then submitted for payment. The payment check will then be made out directly to you . If the invoice or statement has not been paid by you, we will pay the vendor directly.

Requests for payment will be processed by the City twice each month, on the 1st and the 15th. Those requests received by the City between the 1st and 15th of each month will be processed on the 15th, and those received between the 15th and 31st will be processed on the 1st of the next month. In most cases payments will be mailed out from 7 to 10 days following the date processing began.

As you know, these funds may be used only for seismic repair work. Do not submit invoices for work that is not a part of your seismic repair. Periodic inspections will be made by the City's Superintendent of Building to ensure that all work for which payment is requested is required for seismic repair.

CITY OF PALO ALTO

Population:	57,000
1990/91 General Fund *Revenues:* *Fund Balance:*	 $48 million $14 million
# URMs:	46
Type of URMs:	100% commercial
Ordinance Type:	mandatory engineering reports
Retrofit Incentives:	(1) reports available to tenants and public (2) exemption from zoning requirements
Funding Source:	not applicable

BACKGROUND

The City of Palo Alto, located 30 miles south of San Francisco in Santa Clara County, extends from San Francisco Bay to the lower foothills of the Santa Cruz mountain range. The city is the home of Stanford University. Santa Clara County's "Silicon Valley," renowned for its high technology industry, has its roots in Palo Alto which includes the Hewlett-Packard Corporation among its corporate residents. First incorporated in the mid 1800s, Palo Alto grew by adding discrete sites so that today it includes 43 individual named neighborhoods. Most of the city's retail businesses are concentrated in 5 major commercial zones, 1 of which is a large shopping center and another the traditional downtown.

HAZARDOUS BUILDINGS PROFILE

The city identified 91 buildings as potentially hazardous. Of the potentially hazardous buildings identified, 46 are unreinforced masonry buildings (URMs) located in Palo Alto's downtown area. The buildings are primarily commercial in use, and include, for example, office buildings, a theater, a restaurant, and a supermarket.

ORDINANCE

Palo Alto's ordinance emphasizes identification rather than mitigation, establishing the city's "Seismic Hazards Identification Program." Three categories of buildings are covered by the ordinance:

(1) Buildings constructed of unreinforced masonry (except for those smaller than 1900 square feet with 6 or fewer occupants),
(2) Buildings constructed prior to January 1, 1935 containing 100 or more occupants, and
(3) Buildings constructed prior to August 1, 1976 containing 300 or more occupants.

Exceptions are made for those buildings which have been structurally upgraded in accordance either with the Los Angeles Division 88 Standard for URM buildings or the 1973, or later, edition of the Uniform Building Code.

Owners of buildings in the listed categories are required to submit to the Building Inspection Division of the city detailed engineering reports describing the potential for damage to their structure in the event of an earthquake. The reports are to be prepared by professional structural or civil engineers hired by the building owner.

The city's Building Inspection Division is instructed to notify owners of their responsibilities under the ordinance. The owners are to be notified within 6 months of enactment of the ordinance; however, owners of historic buildings are to receive notice following an 18 month delay to allow them more time to prepare. Engineering reports for URM's (category 1) are due 1 1/2 years from mailed notice, pre-1935 buildings (category 2) are due within 2 years, and pre-1976 buildings (category 3) are due within 2 1/2 years of mailed notice. Within 1 year of submitting the report the owner also must submit to the Building Inspection Division a letter of intent describing plans for taking care of any deficiency.

Upon receipt of an owner's report the Building Inspection Division, with the aid of civil or structural engineers, reviews the report to ensure it conforms with the ordinance's requirements. The report is then made available to all interested individuals. The owner is responsible for notifying tenants, in writing, within 30 days of its submission, that the report is complete and on file with the city. A semiannual status report is to be prepared by the chief building official for distribution to the City Council, discussing the number of buildings analyzed, the severity of structural inadequacies discovered, and any corrective actions undertaken by owners.

Building owners who violate the ordinance are guilty of a misdemeanor punishable by a fine of $500, or by imprisonment in the County jail for a term not to exceed 6 months, or both, for each day they are out of compliance.

INCENTIVE PROGRAM CONCEPT

Palo Alto's approach includes both incentive and pressure to retrofit. Shortly after adopting its retrofit ordinance, the city enacted zoning changes designed to provide incentives for owners of hazardous buildings who are considering retrofitting. The zoning incentives provide that an owner who strengthens a building may add 2,500 square feet or 25% of the existing usable floor area, whichever is greater, up to a maximum zoning floor area ratio of 3:1, and remain exempt from on-site parking requirements.

The "stick" embedded in Palo Alto's program is its requirement that the engineering reports submitted by building owners be made a matter of public record. Palo Alto's residents are generally highly educated and very likely to take an interest in, and do something with, such information. The city also believes that publicizing a building's seismic deficiencies could affect its resale and rental values, its eligibility for refinancing, and the cost of purchasing earthquake insurance. The city felt these financial considerations would lead at least some building owners to retrofit voluntarily.

PROGRAM RESOURCE REQUIREMENTS

The Chief Building Official of the city of Palo Alto, was the individual who spent the most time on developing the city's ordinance, which took 4 years. He was supported in this effort by a civil engineering consultant and a 12 member citizen advisory committee. Outside of staff time and related expenses, there were no costs associated with development of the program. Ongoing resource requirements also are minimal: the city's building official must receive and review the engineers reports prepared by the owners, and report to the city council semi-annually on the number of buildings analyzed. The Building Inspection Division is instructed to hire civil or structural engineers to help with report reviews. The cost of the review is recovered from fees assessed upon the owners based on the time required for the review. Ultimately the city will bear all or a portion of the review costs, as the amount collected from owners will be deducted from the plan checking fee for construction work which deals directly with correcting deficiencies identified in the reports.

PROGRAM DEVELOPMENT

The process of drafting Palo Alto's ordinance began in December 1981. The intention at the time was to pass an ordinance making retrofitting mandatory. The city recognized that a mandatory ordinance could have a negative financial impact on owners but decided against providing any financial assistance. When the first ordinance, which mandated retrofitting, was presented by staff to the city council, the outcry from the business community and the general public led the council to vote against the measure in April 1982.

The city was criticized for not including affected members of the community in the discussion and development of the ordinance. Accordingly, the council directed staff to "establish a citizen's committee to recommend an economical, practical and cost-effective method of reducing seismic hazards in Palo Alto". At least 2 structural engineers and an architect had to be included on the committee. The citizen's committee included representatives of the Chamber of Commerce, the Board of Realtors, the Downtown Merchants Association, Downtown Palo Alto Inc., the California Avenue Area District Association, the Planning Commission, Architectural Review Board and Historic Resources Board. This committee was able to represent the concerns of all the groups affected by the proposed ordinance and provided a vehicle for compromise before the issue would return to the council for a vote.

The citizen's committee and city staff switched their emphasis to development of a voluntary retrofit ordinance, despite the strong opposition of the city's building inspector. Negotiations then began covering, for example, such issues as building classification: although a system identifying 6 different types of hazardous buildings was originally proposed, in the end the committee agreed to divided affected buildings into 3 classes. After 2 years the city's staff and the citizens' committee were able to reach a compromise plan for a voluntary ordinance. In June of 1984 the city council unanimously approved the plan and instructed staff to begin work on an ordinance. The ordinance was adopted by council vote in January, 1986.

PROGRAM EFFECTIVENESS

The results to date of Palo Alto's program are illustrated in the table below. Four projects have requested the zoning waiver, one of which is under construction and another in the building permit process. Nearly half of the buildings for which engineering reports have been submitted have been retrofitted even though that is not mandatory. In addition nearly as many buildings not covered by the ordinance have been retrofitted.

	Category 1	Category 2	Category 3	All Buildings
Total Building	46	18	27	91
Reports Accepted	34	9	12	43 (48%)
Buildings Strengthened, Repaired or Demolished	10	3	7	22 (23%)
Reports Overdue	2	6	8	26* (29%)

* Owners of 11 of the 26 buildings have notified the city that they are in the process of complying

PROGRAM STRENGTHS

Palo Alto's approach promotes retrofitting while requiring virtually no incremental staff time or expenditure. From the owners perspective, the fact that there is no deadline for retrofitting means that they can pursue such projects when it is most convenient, when for example leases expire, building uses change or ownership is transferred.

KEYS TO SUCCESS

As Palo Alto learned from its experience, involvement of the community in drafting the ordinance was critical to its passage. Palo Alto also relies upon the vigilance of its citizens to encourage building owners to correct deficiencies. Without an active community, making the engineering reports generally available would not inspire retrofitting. It is also helpful that Palo Alto is a relatively wealthy community with a thriving downtown, so that given enough time and flexibility owners of hazardous structures generally can find financing for the necessary construction.

Many people believe the zoning incentives offered by Palo Alto had much to do with the program's success but it appears that, after an initial flurry of interest, the expansion incentive has not been widely used.

EXHIBITS

- City of Palo Alto Ordinance #3666

CONTACTS

Fred Herman	Chief Building Official	(415) 329-2550

REFER TO

Earthquake Hazard Identification and Voluntary Mitigation: Palo Alto's City Ordinance, by Fred Herman, James Russell, Stanley Scott and Roland Sharpe, December 1990, SSC 90-05. Published by the Seismic Safety Commission of the State of California; see CONTACTS)

CITY OF PALO ALTO

EXHIBITS

ORDINANCE NO. 3666
ORDINANCE OF THE COUNCIL OF THE CITY OF PALO ALTO ADDING CHAPTER 16.42 TO THE PALO ALTO MUNICIPAL CODE SETTING FORTH A SEISMIC HAZARDS IDENTIFICATION PROGRAM

WHEREAS, the Palo Alto Comprehensive Plan has a Seismic Safety Element which calls for the City to implement measures to lessen risk to human life and property in the event of an earthquake (Environmental Resources Policy 14, Program 47); and

WHEREAS, the City Council established a Seismic Hazard Committee made up of engineers, architects and property owners to thoroughly explore possible seismic hazard programs; and

WHEREAS, the City Council has concluded that it wishes to implement a seismic hazards identification program to require certain building owners to investigate the potential hazards of their buildings; and

WHEREAS, such a seismic hazards identification program is consistent with California Health and Safety Code sections 19160-19169.

NOW, THEREFORE, the Council of the City of Palo Alto does ORDAIN as follows:

SECTION 1. Chapter 16.42 is hereby added to the Palo Alto Municipal Code to read:

Chapter 16.42

SEISMIC HAZARDS IDENTIFICATION PROGRAM

Sections:

16.42.010 Purpose.
16.42.020 Definitions.
16.42.030 Scope of program.
16.42.040 Building categories and implementation schedule.
16.42.050 Engineering reports.
16.42.060 Review of reports.
16.42.070 Responsibilities of the building owners.
16.42.080 Program status reports to the City Council.
16.42.090 Remedies.

16.42.010 Purpose. It is found and declared that in the event of a strong or moderate local earthquake, loss of life or serious injury may result from

damage to or collapse of buildings in Palo Alto. It is generally acknowledged that Palo Alto will experience earthquakes in the future due to its proximity to both the San Andreas and Hayward faults. The purpose of this ordinance is to promote public safety by identifying those buildings in Palo Alto which exhibit structural deficiencies and by accurately determining the severity and extent of those deficiencies in relation to their potential for causing loss of life or injury. The City Council finds it desirable to identify the hazards that these deficiencies may pose to occupants of buildings and pedestrians in the event of an earthquake. Such a seismic hazards identification program is consistent with California Health and Safety Code sections 19160-19169 and is necessary to implement the Palo Alto Comprehensive Plan's Environmental Resources Policy 14, Program 47.

16.42.020 Definitions. (a) "Bearing wall" means any wall supporting a floor or roof where the total superimposed load exceeds one hundred (100) pounds per linear foot, or any unreinforced masonry wall supporting its own weight when over six (6) feet in height.

(b) "Building," for the purpose of determining occupant load, means any contiguous or interconnected structure; for purposes of engineering evaluation, means the entire structure or a portion thereof which will respond to seismic forces as a unit.

(c) "Capacity for transfer" means the maximum allowable capacity of a structural system or connection to resist in a ductile manner the lateral forces it would encounter due to earthquake forces.

(d) "Civil engineer or structural engineer" means a licensed civil or structural engineer registered by the State of California pursuant to the rules and regulations of Title 16, Chapter 5 of the California Administrative Code.

(e) "External hazard" means an object attached to or forming the exterior facade of a building which may fall onto pedestrians or occupants of adjacent buildings. Examples of this type of hazard include, but are not limited to, the following:

1. Nonstructural exterior wall panels, such as masonry infill or decorative precast concrete.

2. Parapets.

3. Marquees, awnings or other roof-like projections from a building.

4. Masonry or stone wall veneer and wall ornamentation, including cornices or other decorative appendages.

5. Masonry chimneys.

6. Tile roofing.

7. Wall signs and exterior lighting fixtures hung from a building exterior.

8. Fire escapes or balconies.

(f) "Geometry" means a building's shape or configuration, including setbacks of wall/column lines, reentrant corners, discontinuities in vertical and horizontal lateral force diaphragms, open storefront and building stiffness variations due to the distribution of resisting elements or the use of materials of differing properties within the same structural element, or other irregularities in plan or elevation.

(g) "Occupants" means the total occupant load of a building determined by Table 33-A of the 1973 Uniform Building Code <u>or</u> the actual maximum number of occupants in that building <u>if</u> that number is less than seventy-five percent (75%) of the number determined by using Table 33-A. The number of actual occupants may be documented by counting actual seating capacity if permanent seating is provided in the occupancy, or by employee and client counts which can be substantiated as a practical maximum use of the space in the building. The chief building official will establish the procedure for documenting occupant loads.

(h) "Solution" means any justifiable method that will provide for the transfer of lateral forces through a system or connection to a degree which will substantially eliminate a potential collapse failure. A general description of the methods and materials to be used shall be included in sufficient detail to allow for a cost estimate of the solution to be made (i.e., adding shear walls, overlaying horizontal diaphragms, strengthening critical connections, etc.).

(i) "Unreinforced masonry (URM)" building means any building containing walls constructed wholly or partially with any of the following materials:

1. Unreinforced brick masonry.

2. Unreinforced concrete masonry.

3. Hollow clay tile.

4. Adobe or unburned clay masonry.

16.42.030 Scope of program. (a) Applicability. The following buildings in Palo Alto shall be required to have an engineering report submitted to the City's Building Inspection Division, pursuant to section 16.42.050, to determine: (i) the existence, nature and extent of structural deficiencies which could result in collapse or partial collapse of the building; and (ii) the existence, nature and extent of deficiencies in the anchoring of external hazards:

1. Buildings constructed of unreinforced masonry (URM), except those of less than one thousand and nine hundred (1,900) square feet containing six (6) or fewer occupants.

2. Buildings constructed prior to January 1, 1935 containing one hundred (100) or more occupants.

3. Buildings constructed prior to August 1, 1976 containing three hundred (300) or more occupants.

(b) Exemptions. The following buildings need not comply with this ordinance:

1. Buildings which have been structurally upgraded in substantial accordance with either the Los Angeles Division 88 Standard for URM buildings or the 1973, or later, edition of the Uniform Building Code.

2. Buildings whose uses are subject to amortization under this code; provided that, upon the termination of the nonconforming use, such a building shall be required to be rehabilitated to the then current lateral force requirements in the Uniform Building Code prior to occupancy by a conforming use.

16.42.040 Building categories and implementation schedule. (a) Building Categories. The categories of buildings within the scope of this ordinance are set forth in Table A, below.

(b) Owner Notification. The owners of buildings in categories I through III, except those designated as historic buildings, shall be notified within six (6)

months of enactment of this ordinance by the Building Inspection Division of the City of Palo Alto that their buildings are required to have an engineering report submitted to the City. Owners of designated historic buildings, as defined in Chapter 16.49, shall be notified within eighteen (18) months of enactment of this ordinance.

(c) Implementation Schedule. The owners of buildings in categories I through III must submit engineering reports within the time frame set out in Table A, below, from the date of mailed notice by the City.

TABLE A

CATEGORY	DESCRIPTION	ENGINEERING REPORT SUBMITTED WITHIN DATE OF MAILED NOTICE (IN YEARS)
I	All URM buildings.	1 1/2
II	All pre-1935 buildings other than URM with 100 occupants or more.	2
III	All buildings with 300 occupants or more constructed between January 1, 1935 and August 1976.	2 1/2

16.42.050 Engineering reports. (a) Preparation of Reports. Building owners shall employ a civil or structural engineer to prepare the investigation and engineering report outlined below.

(b) Purpose. To investigate, in a thorough and unambiguous fashion, a building's structural systems that resist the forces imposed by earthquakes and to determine if any individual portion or combination of these systems is inadequate to prevent a structural failure (collapse or partial collapse).

(c) General. Each building shall be treated as an individual case without prejudice or comparison to similar type or age buildings which may have greater or lesser earthquake resistance. Generalities or stereotypes are to be avoided in the evaluation process by

focusing on the specifics of the structural system of the building in question and the local geology of the land on which the building is constructed.

(d) Level of Investigation. Some buildings will require extensive testing and field investigation to uncover potential structural deficiencies, while others will allow the same level of overall evaluation by a less complicated process due to simplicity of design or the availability of original or subsequent alteration design and construction documents.

It is the responsibility of the engineer performing the evaluation to choose the appropriate level of investigation which will produce a report that is complete and can serve as a sound basis for a conclusion on the collapse hazard the building may present.

(e) Format for the Report. The following is a basic outline of the format each engineering report should follow. This outline is not to be construed to be a constraint on the professional preparing the report, but rather to provide a skeleton framework within which individual approaches to assembling the information required by the ordinance may be accomplished. It also will serve as a means for the City to evaluate the completeness of each report.

1. General Information. A description of the building including: (i) the street address; (ii) the type of occupancy use within the building, with separate uses that generate different occupant loads indicated on a plan showing the square footage of each different use; (iii) plans and elevations showing the location, type and extent of lateral force resisting elements in the building (both horizontal and vertical elements); (iv) a description of the construction materials used in the structural elements and information regarding their present condition; (v) the date of original construction, if known, and the date, if known, of any subsequent additions or substantial structural alterations of the building; and (vi) the name and address of the original designer and contractor, if known, and the name and address of the designer and contractor, if known, for any subsequent additions or substantial structural alterations.

2. Investigation and Evaluation of Structural Systems. All items to be investigated and the methods of investigation for each type of building under consideration are contained in Appendices A and B, available from the City's Building Inspection Division.

3. Test Reports. All field and laboratory test results shall be included in the report. Evaluation of the significance of these test results shall be made with regard to each structural system or typical connection being evaluated. This evaluation may be limited to a statement of the adequacy or inadequacy of the system or connection based on the lateral load demand it would be required to resist by calculation. If tests reveal inadequacy, a conceptual solution must be included in the report.

4. Conclusions. Based on the demand/capacity ratio and the specific evaluation items contained in Appendices A or B, a statement shall be provided explaining the overall significance of the deficiencies found to exist in the building's lateral force resisting system regarding potential collapse or partial collapse failure.

5. Recommendations. An appropriate solution, which could be used to strengthen the structure to alleviate any collapse or partial collapse threat, shall be specified.

(f) Exceptions and Alternatives. Exceptions to the specific items required to be included in an engineering report may be granted by the chief building official upon review of a written request from the engineer preparing the report. Such a request shall provide evidence that adequate information concerning the required item(s) can be determined by alternate means or that a conclusion can be made about the item without following the solution called for in the appropriate appendix. The purpose of granting such exceptions shall be to reduce the costs or disruption that would result from taking required actions, when it can be shown that they are unnecessary to provide information available by other equivalent means. In no case will an exception be granted which would result in an item not being completely evaluated. The decision of the chief building official in granting exceptions is final.

16.42.060 Review of reports. (a) The City shall utilize the services of civil or structural engineers to assist the Building Inspection Division in determining if the submitted engineering reports conform to the requirements of this chapter.

(b) The cost of this review shall be recovered by a fee assessed from the building owner based on the time required for the review. This fee amount shall be deducted from the plan checking fee collected for any

future construction work that deals directly with correcting any of the structural inadequacies specified in the engineering report.

(c) Copies of the engineering reports shall be available to interested individuals for a standard copying fee or may be reviewed at the Building Inspection Division offices.

16.42.070 Responsibilities of the building owners. (a) Notification of Building Tenants. A building owner shall notify all tenants, in writing, that a structural investigation has been performed and that the report is available at the Building Inspection Division offices. This notice must be sent within thirty (30) days of the date the report is submitted to the City.

(b) Letter of Intent. A building owner shall submit a letter to the Building Inspection Division within one (1) year of the date the engineering report was submitted, indicating the owner's intentions for dealing with the potential collapse hazards found to exist in the building.

16.42.080 Program status reports to the City Council. The chief building official shall submit a semiannual report to the City Council on the status of the seismic hazards identification program. The reports shall include information regarding the number of buildings analyzed, the severity of the structural inadequacies discovered and any actions taken by individual building owners to correct these inadequacies.

16.42.090 Remedies. It shall be unlawful for the owner of a building identified as being included in the scope of this ordinance to fail to submit a report on either building collapse hazards or external hazards within the time period specified in section 16.42.040(c), Table A, or to fail to submit a letter of intent within the time period specified in section 16.42.070(b). The following remedies are available to the City:

(a) The City may seek injunctive relief on behalf of the public to enjoin a building owner's violation of this ordinance.

(b) A building owner violating this ordinance shall be guilty of a misdemeanor and, upon conviction thereof, shall be punishable by a fine of not more than Five Hundred Dollars ($500) or by imprisonment in the Santa Clara County Jail for a term not exceeding six (6)

months, or by both such fine and imprisonment. Such building owner is guilty of a separate offense for each and every day during any portion of which such violation of this ordinance is committed, continued or permitted by such building owner.

(c) These remedies are not exclusive.

SECTION 2. The Council hereby finds that this ordinance will have no significant adverse environmental impact.

SECTION 3. This ordinance shall become effective upon the commencement of the thirty-first day after the day of its passage.

INTRODUCED: January 20, 1986

PASSED: February 3, 1986

AYES: Bechtel, Cobb, Fletcher, Klein, Levy, Patitucci, Renzel, Sutorius, Woolley

NOES: None

ABSTENTIONS: None

ABSENT: None

ATTEST:

City Clerk

APPROVED:

Mayor

APPROVED AS TO FORM:

Sr. Assistant City Attorney

APPROVED:

City Manager

Director of Planning and Community Environment

Chief Building Official

9.

APPENDIX A

Procedures for Investigation of All Buildings (Except Unreinforced Masonry Bearing Wall Types)

(a) Preliminary Field Survey. Provide drawings of the building in plan, elevation and section sufficiently detailed to reveal the correct dimensions of the spans and extent of all structural elements in the building, including openings in walls and changes in framing directions or other data which will be used to evaluate the building.

(b) Areas of Special Investigation.

(1) Specify the type of roof diaphragm used in the building and its capacity for transfer of lateral forces.

(2) If the building is multi-story specify the existing floor diaphragm at each level above the foundation and give its capacity for transfer of lateral forces.

(3) Specify the types and spacing of connections used at each level to transfer the forces of the horizontal diaphragms into the vertical shear resisting elements of the structure, and the capacity for transfer of each type of connection present in the building.

(4) Specify the type of vertical structural elements which resist lateral forces and their individual capacities as determined either by testing or use of standard values for the types of construction found in the vertical elements.

(5) Specify the type and spacing of connections used to connect vertical shear resisting elements to each other and to the building foundation, and the capacity for transfer of each type of connection present.

(6) Specify the type of foundation system used and note any evidence of settlement.

(7) Specify the type of connection used to attach wall appendages or pre-cast wall elements to the structural frame.

Standards for the Analysis and Evaluation of All Buildings (Except Unreinforced Masonry Bearing Wall Types)

(a) Purpose. The objective of these investigations is to identify and quantify the structural inadequacies that may be present in a building which

could lead to a collapse or partial collapse during an earthquake. The focus of the reports should be 1) determining the potential life safety threat that the building presents to its occupants and 2) the potential threat to pedestrians or occupants of adjacent buildings from falling external hazards.

(b) Capacity vs Demand of the Existing Structural System and Its Elements.

(1) Define the overall type of lateral force resisting system used in the building based on Table 23-I of the 1973 Uniform Building Code. If the building has a dual or hybrid system, describe the systems and explain how they function both in combination and separately to justify the "K" factor to be choosen.

(2) For each type of diaphragm, shear wall, moment frame, braced frame and interconnection of lateral force resisting systems provide an analysis of the loads (demand) which these elements would be subject to based on the design parameters set forth in the 1973 edition of the Uniform Building Code.

(3) For each type of diaphragm, shear wall, frame and interconnection of lateral force resisting system determine a maximum capacity based on currently accepted or published allowable values, adjusted as appropriate for the material involved when used to resist earthquake forces.

(4) Provide a ratio of capacity to demand for each system or interconnection evaluated in (2) and (3) above and provide a statement of the significance of this ratio, regarding the potential for failures which could lead to a collapse, considering the materials used and the type of lateral force resisting system present.

(c) Specific Evaluation Items. The report shall contain a statement regarding the significance of each item in this section which is found to occur in the building.

(1) General.

A. Assess the condition of the structure, the quality of workmanship, the level of maintenance and the type of construction with regard to the potential loss of strength in the structural systems due to decay or deterioration.

B. Assess the redundancy exhibited in the structural system and the reserve capacity that elements of the system may provide.

C. Assess the presence or lack of ductility in the lateral force resisting elements and ductility differences due to the use of dissimilar materials in the horizontal and vertical diaphragms.

D. Assess how adequately the building is tied together in an overall sense to allow the lateral force resisting systems an opportunity to receive the forces they are designed to resist.

(2) Geometry.

A. Consider how and where torsional (rotation) forces, induced by the eccentricity of the building center of mass to its center of rigidity, are taken into the lateral force resisting system and identify the individual elements which will transmit these additional forces. Assess the potential capacity these elements have to resist the additional loads from this source.

B. Consider the effects of discontinuities in the lateral force resisting systems with regard to the existence of adequate ties, boundary members, chords or drag struts, etc. to allow redistribution of forces. Assess the capacity of the systems or elements which would receive the redistributed forces if adequate ties exist.

C. Consider the effects of reentrant corners (including the shape of individual columns) and assess their contribution to the response of the building at locations where they occur.

(3) Building Separation.

A. Consider the effects of adjoining buildings, which may have different vibration periods resulting in non-synchronized movement of the adjacent exterior walls, placing out of plane impact forces on these walls.

B. Assess the level of drift control, particularly at open storefronts and the actual physical separation distance between the exterior walls of the building and ajoining building walls.

C. Assess conditions where the wall of a building on one property provides support for structural elements of the adjoining property's building.

(4) Non-Ductile Reinforced Concrete Frames.

A. Consider non-ductile frames which act alone without the benefit of shear walls or braced frames.

B. Assess the level of compression or shear forces due to existing vertical loads on the critical supporting elements of the frame.

C. Assess masonry infill walls between frame members and their effect on the forces a column/beam joint will be subjected to when attempting to transmit lateral forces into these walls.

(5) Precast Concrete Connections

A. Assess the effects of temperature creep and shrinkage of concrete surrounding welded insert connections to precast systems and elements.

B. Consider the potential brittle failure of such connections.

(6) Non-Structural Elements.

A. Assess the effect that partitions, infill walls, precast concrete exterior (architectural) elements and ceiling systems, which have considerable strength and stiffness characteristics, may have on the overall response of the building.

B. Assess the effect of inadvertant bracing by non-structural elements such as infill walls, stair stringers or other situations of localized restraint on columns.

C. Assess the potential stress concentrations at the unrestrained ends of columns which may result from partial restraint or bracing of columns.

(7) Site Geology.

A. Consider the maximum ground shaking intensity for the building site and liquefaction potential or susceptibility by using available earthquake hazard maps.

B. Assess any existing site specific geology/soils reports to gauge the effects that the local conditions may have on the overall response of the building.

APPENDIX B

Procedures for Investigation of Unreinforced Masonry Bearing Wall Buildings

(a) Preliminary Field Survey. Prepare framing plans for roof and floors noting all beams, trusses or major lintels of all URM piers or pilasters. Prepare elevations of all URM walls noting all openings in the walls and any discontinuities above the building base.

(b) Special investigations of the following nature must be made:

(1) Note all parts of the vertical load carrying system that may act as ties to lateral load-resisting elements, to determine the elements or systems that may control relative displacements between the building's base, floors and roof.

(2) Note on floor plans all interior crosswalls that are continuous between floors or floor and roof, even if the connection of such walls to the floor or roof is only by finishes.

(3) Draw the relationship of roof or floor framing and ceiling framing to determine the extent and method if any, of their inter-connection.

(4) Draw the support systems for URM walls that are not continuous to the building base noting the materials used to provide that support. (i.e., steel frame, concrete frame, etc.)

(5) Draw on floor and roof plans the extent of sheathing and finish materials and describe their nature and nailing pattern. Note any difference in materials used which could lead to substantial variations in diaphragm stiffness. Openings in floors or roofs adjacent to URM walls must be noted. Note the type of roofing system currently in place and note if this roofing is applied directly to the main roof deck or if there are locations where it is on a cricket or other superimposed deck.

(c) Investigation of current anchorage of URM walls to floors and roof. Show the location of all wall anchors on the floor/roof plans and specify their spacing, size, and method of connection. Details of the existing anchorage system should be prepared. Embedded portions of anchors must be exposed to determine this level of detail. A minimum of 2 percent or 2 anchors exposed per floor or roof level should establish average conditions.

(d) Investigation of existing URM walls. Investigate the following items if they occur in the building, and determine:

(1) The thickness of URM walls at all levels and location of any changes in thickness.

(2) The materials used for lintels and masonry arches and their bearing area on columns or piers.

(3) The materials used in columns or piers supporting lintel beams or arches.

(4) The height of parapets, cornices, and gable ends of URM walls above the uppermost existing anchorages.

(5) The anchorage or bonding of terra cotta, cast-stone or similar facing to the back up wythes of brickwork at cornices and other architectural appendages.

(6) The coursing of exterior wythes of masonry, the bonding of wythes of masonry, and the materials used in each wythe.

(7) The condition of mortar joints and areas of lightly unburned brick should be noted on the wall elevations. Existing cracks in wall elements should also be noted.

(e) Testing. The testing of existing anchorage systems must be made to determine an average capacity. Testing shall be accomplished in accordance with the following requirements.

(1) Existing Wall Anchors of URM Buildings. Five (5) percent of existing rod anchors shall be tested in pullout by an approved testing laboratory. The minimum tested quantity shall be four (4) per floor or roof level, with two (2) tests at walls with framing perpendicular to the wall and two (2) at walls with framing parallel to the wall.

The test apparatus shall be supported on the masonry wall at a minimum distance of the wall thickness from the anchor tested. Where due to obstructions this is not possible, details of the condition encountered and the alternate method used must be included in the test result report, with calibration adjustment for conditions where the reaction of the test apparatus contributes to the tension value of the anchor.

The rod anchor shall be given a preload of 300 pounds prior to establishing a datum for recording elongation. The tension test load reported shall be recorded at 1/8" relative movement of the anchor to the adjacent masonry wall surface.

The testing of existing URM walls to determine the allowable bed-joint shear is required in accordance with the following requirements.

(2) In Place Shear Tests of Brick Masonry. The bed joints of the outer wythe of the masonry shall be tested in shear by laterally displacing a single brick relative to the adjacent bricks in that wythe. The opposite head joint of the brick to be tested shall be removed and cleaned prior to testing. Steel bearing plates of the full dimension of the brick shall be inserted at

each end of the test jack. The bearing plates shall not contact the mortar joint. The minimum quality mortar in 80 percent of the shear tests shall not be less than the total of 30 psi when reduced to an equivalent zero axial stress. The shear stress shall be based on the gross area of both bed joints and shall be that at which movement of the adjacent brick is first observed.

The minimum quantity of tests shall be two (2) per wall or line of wall elements resisting a common force (i.e., per story) or one (1) per 1500 square feet of total URM wall surface, with a minimum of 8 tests for any building. The tests should be conducted at least two brick courses above or below the bond course and be distributed vertically to include a variety of dead load surcharge situations. The exact test location shall be determined at the building site by the engineer responsible for the investigation and the distribution of such tests must be approved by the building official prior to actual testing. In single story buildings, the wall above the lintel beam at an open storefront need not be tested.

Standards for the Analysis and Evaluation of Unreinforced Masonry Bearing Wall Buildings

(a) Analysis

(1) General

The total lateral seismic forces should be computed in accordance with the following equation:

$$V = ZIKCSW$$

The value of KCS need not exceed the value set forth in Table B1-1. The value of Z and I shall be equal to 1.0. The value of W shall be as set forth in the Uniform Building Code.

(2) Lateral Forces on Elements of Structures.

Parts or portions of buildings and structures shall be analyzed for lateral loads in accordance with Chapter 23 of the UBC but not less than the value from the following equation:

$$F_p = IC_pSW_p$$

For the provisions of this section, the product of IS need not exceed 1.0. The value of C_p and W_p shall be as set forth in the UBC.

Exception: Unreinforced masonry walls may be analyzed in accordance with Section (b).

(3) The elements of buildings required to be analyzed shall include the following:

Wall height to thickness ratio.
Tension bolts for bending.
In-plane shear forces.
Parapets.
Diaphragm stress and diaphragm chords at floors and roof.

(4) Anchorage and Interconnection.

Anchorage and interconnection of all parts, portions and elements of the structure shall be analyzed for lateral forces in accordance with the UBC and the formula in Subsection (2) above. Masonry walls shall be anchored to all floors or roof to resist a minimum of 200 pounds per linear foot acting normal to the wall at the level of the floor or roof or will be considered inadequate.

(5) Required Analysis.

Except as modified herein, the analysis and recommended structural alteration of the structure shall be in accordance with the analysis specified in the UBC. A complete, continuous load path from every part or portion of the structure to the ground shall be shown to exist for required lateral forces. All parts, portions or elements of the structure shall be shown to be interconnected by positive means.

(6) Analysis Procedure.

Stresses in materials and existing construction utilized to transfer seismic forces from the ground to parts or portions of the structure shall conform to those permitted by the UBC and those types of materials of construction specified under the Materials of Construction Section (b). In addition to the seismic forces required, unreinforced masonry walls shall be analyzed as specified in the UBC to withstand all vertical loads. When calculating shear or diagonal tension stresses due to seismic forces, existing masonry shear walls may be allowed to resist 1.0 times the required forces in lieu of the 1.5 factor required by the UBC. No allowable tension stress will be permitted in unreinforced masonry walls. Walls not capable of resisting the required design forces specified in this appendix shall be deemed inadequate.

Exception: Unreinforced masonry walls which carry no design loads other than their own weight may be considered as veneer if they are adequately anchored to elements which are not part of the existing lateral force resisting system.

(7) Existing materials.

When stress in existing lateral force resisting elements are due to a combination of dead loads plus live loads plus seismic loads, the allowable working stress specified in the UBC may be increased 100 percent. However, no increase will be permitted in the stresses allowed in Section (b). The stresses in members due only to seismic and dead loads shall not exceed the values permitted in the UBC.

(8) Allowable reduction of bending stress by vertical load.

Calculated tensile fiber stress may be reduced by the full direct stress due to vertical dead loads.

(b) Materials of Construction.

(1) General

All materials permitted by this code, including their appropriate allowable stresses and those existing configurations of materials specified herein, may be utilized to show adequacy of existing construction.

(2) Existing Materials.

Unreinforced masonry walls analyzed in accordance with this appendix may provide vertical support for roof and floor construction and resistance to lateral loads. The bonding of such walls shall be as specified in the UBC.

Tension stresses due to seismic forces acting normal to the wall may be neglected if the wall does not exceed the Height to Thickness ratio and the in-plane shear stresses due to seismic loads set forth in Table B1-2. If the Wall Height or Length to Thickness ratio exceeds the specified limits, the wall will be considered inadequate unless braced by vertical members designed to satisfy the requirements of the UBC. The deflection of such bracing members at design loads shall not exceed one-tenth of the wall thickness.

Exception: The wall may be supported by flexible vertical bracing members designed in accordance with this appendix if the deflection at design loads is not less than one quarter nor more than one third of the wall thickness.

All vertical bracing members shall be attached to floor and roof construction for the design loads independently of wall anchors. Horizontal spacing of vertical bracing members shall not exceed one-half the unsupported height of the wall or ten feet, whichever is less.

(3) Existing roof, floors, walls, footings and wood framing.

Existing materials, including wood shear walls may be used as part of the lateral load resisting system, provided that the stresses in these materials do not exceed the values shown in Table B1-3. Wood shear walls may be recommended to strengthen portions of the existing seismic resisting system.

(4) Minimum Acceptable Quality of Existing Unreinforced Masonry Walls.

All unreinforced masonry walls utilized to carry vertical loads and seismic forces parallel and perpendicular to the wall plane shall be tested as specified in Section (e) of the investigation portion of this appendix. All

masonry shall be of a quality not less than the minimum standards established or shall be considered inadequate. Pointing of mortar of all masonry wall joints may be performed prior to testing if joints are raked and cleaned to remove loose and deteriorated mortar. Mortar shall be Type S or N, except masonry cements shall not be used. All preparation and pointing shall be done under the continuous inspection of a special inspector, whose reports shall be included in the final report.

(5) Determination of Allowable Stresses for Design Methods Based on Test Results.

Design seismic in-plane shear stresses shall be related to test results in accordance with Table B1-4. Intermediate values between 3 and 10 psi may be interpolated.

Compression stresses for unreinforced masonry having a minimum design shear value of 3 psi shall not exceed 100 psi. Design tension values for unreinforced masonry shall not be permitted.

(6) Construction Details.

All unreinforced masonry walls shall be anchored at all floors and roof with tension bolts through the wall or by existing rod anchors at a maximum spacing of six feet. All existing rod anchors shall be secured to the joists to develop the required forces. Testing of the existing rod anchors shall be conducted according to Section (e) of the investigation portion of this appendix.

Diaphragm chord stresses of horizontal diaphragms shall be developed in existing materials or be considered inadequate.

Where trusses or beams other than rafters and joists are supported on masonry piers, these piers must be shown to provide adequate support during seismic loading.

Parapets and exterior wall appendages not capable of resisting the forces specified in this appendix shall be considered hazardous, and methods for proper anchorage must be developed.

TABLE B1-1
HORIZONTAL FORCE FACTORS BASED
ON OCCUPANT LOAD

OCCUPANT LOAD	KCS
Building with an occupant load greater than 100	0.133
All others	0.100

TABLE B1-2
ALLOWABLE VALUE OF HEIGHT-THICKNESS (h/t) RATIO
OF UNREINFORCED MASONRY WALLS WITH MINIMUM
QUALITY MORTAR

	BUILDINGS WITH COMPLYING CROSSWALLS	ALL OTHER BUILDINGS
Walls of one-story buildings	16	13
First-story wall of multistory buildings	16	15
Walls in top story of multistory buildings	14	9
All other walls	16	13

NOTES:

1. Minimum quality mortar shall be determined by laboratory testing in accordance with Section (e) of the investigation portion of this appendix.

2. The wall height may be measured vertically to bracing elements other than a floor or roof. Spacing of the bracing elements and wall anchors shall not exceed six feet.

3. Crosswalls are defined as interior walls of masonry or wood frame construction with surface finish of wood lath and plaster, 1/2" thick gypsum board, or solid horizontal wood sheathing. They may not exceed 40 feet horizontal separation, must be full story height with a minimum length of 1 1/2 times the story height and be continuous through all stories.

TABLE B1-3
VALUES FOR EXISTING MATERIALS[1]

1. Horizontal Diaphragms	
a. Roofs with straight sheathing with the roof covering applied directly to the sheathing.	100 pounds per foot for seismic shear
b. Roofs with diagonal sheathing with the roof covering applied directly to the sheathing.	400 pounds per foot for seismic shear
c. Floors with straight tongue and groove sheathing.	150 pounds per foot for seismic shear
d. Floors with straight sheathing and finished wood flooring.	300 pounds per foot for seismic shear
e. Floors with diagonal sheathing and finished wood flooring.	450 pounds per foot for seismic shear
f. Floors or roofs with straight sheathing and plaster applied to the values for items 1-a and 1-c joist or rafters.	Add 50 pounds per foot to the allowable
2. Shear Walls	
Wood stud walls with lath and plaster	100 pounds per foot each side for seismic shear
3. Plain Concrete Footings	f'_c = 1500 psi unless otherwise shown by tests
4. Douglas Fir Wood	Allowable stress same as No. 1 D.F.[2]
5. Reinforcing Steel	f'_c = 18,000 psi maximum[2]
6. Structural Steel	f'_c = 20,000 psi maximum[2]

[1] Material must be sound and in good condition.

[2] Stresses given may be increased for combinations of loads as specified in Subsection (b) of the analysis and evaluation portion of this appendix.

TABLE B1-4
ALLOWABLE SHEAR STRESS FOR TESTED
UNREINFORCED MASONRY WALLS

SHEAR TESTS	
Eighty percent of test results in psi not less than:	Seismic in-plane shear in psi based on gross area[1]
30 plus axial stress	3
40 plus axial stress	4
50 plus axial stress	5
100 plus axial stress or more	10 (maximum)

[1] Allowable shear stress may be increased by addition of 10 percent of the axial stress due to the weight of the wall directly above.

CITY OF SONOMA

Population:	8,000
1990/91 General Fund	
Revenues:	$3 million
Fund Balance:	$1 million
# URMs:	51
Type of URMs:	90% commercial* 10% residential
Ordinance Type:	mandatory retrofitting
Retrofit Incentives:	(1) waive permit fees (2) rebate architect and engineering costs
Funding Source:	redevelopment agency

*commercial includes public facilities

BACKGROUND

The City of Sonoma is a small city located 46 miles northeast of San Francisco. It is perhaps best known for the wineries located in and around it in the Sonoma Valley, which together with Napa Valley form a large part of Northern California's wine country. Tourism is an important part of Sonoma Valley's economic and employment base, as is the agriculture industry which includes orchards, dairy farms and turkey breeding as well as the wine industry. The City of Sonoma is very picturesque, and is centered around a historic plaza featuring buildings which date back to the mid 1800s.

HAZARDOUS BUILDINGS PROFILE

In 1990 the City of Sonoma identified 51 buildings which were considered potentially hazardous (excluding four State-owned buildings). Twenty-nine of the 51 buildings are historic, and most are located on or near the plaza downtown. The buildings range in size from 550 to 15,000 square feet. Approximately 85% of the total square footage is devoted

to commercial use. The city estimates that the cost of repairing all 51 buildings may total between $7.8 and $14.5 million dollars including both structural work and tenant improvements.

ORDINANCE

The City of Sonoma's retrofitting ordinance, entitled the *City of Sonoma Seismic Upgrading Program*, was passed in October of 1990. The primary goal of the program is to mitigate the hazards associated with unsafe masonry and concrete buildings "in an economically feasible manner while preserving the historic character of the community." The ordinance is noteworthy not for the retrofit standards which it sets but for its unique and flexible system for prioritizing buildings. The ordinance requires the building department to identify buildings which do not comply with its requirements, and to notify owners of their buildings' deficiencies. Upon receipt of the notice, a property owner must hire an engineer or architect to prepare an upgrading design. Ultimately, buildings which do not comply with the requirements spelled out in the ordinance must be either retrofitted or demolished. The timing of implementation is dependent upon a building's assigned priority:

	DESIGN (from notice)	PERMIT (from notice)	UPGRADING COMPLETED (from permit)
High Priority	2 years	2 1/2 years	2 years
Moderate Priority	3 years	5 years	2 years
Low Priority	4 years	10 years	2 years

The priority system established by the ordinance assigns points for type of use (up to 5 points), number of stories (up to 3 points), proximity to public sidewalk (either 0 or 1 point), and proximity to adjacent buildings (also either 0 or 1 point). A higher number of points represents higher risk. Buildings can be credited with up to 3 points for structural adjustments, such as roof diaphragm or parapet bracing, which have already been made to the building. A worksheet for calculating a building's score is included in the ordinance (See: EXHIBITS - CITY OF SONOMA ORDINANCE #90-15).

The method of assigning points for type of use is noteworthy. The city has identified 10 types of uses to which a building might be put. Each type of use is assigned an "hours per week" figure representing the number of hours per week that use typically could be expected to take place. Office use, for example, is assigned 40 "hours per week" while residential use

is set at 84 "hours per week." For uses not originally identified by the city, the building official may assign an "hours per week" figure to a building based on its type and average hours of use.

After establishing the "hours per week" figure for each type of use, the city then determined the occupant load for each use as specified in the Uniform Building Code. Dividing the "hours per week" by the occupant load yields for each type of use an "occupant/hour factor." Restaurants, for example, are assigned 48 "hours per week" and an occupant load factor of 15, yielding an "occupant/hour factor" of 3.20. For residential facilities, assigned the above-mentioned 84 "hours per week" and an occupant load factor of 200, the resulting "occupant/hour factor" is 0.42. The city has developed a table, included in the ordinance, assigning occupant/hour factors to each of the 10 types of uses which it identified.

To determine the number of points a particular building should receive given its use, the "occupant/hour factor" for that use is multiplied by the building's square footage. This generates an "occupant/hour" figure. The "occupant/hour" figures are divided into ranges and assigned points. The owner of a 1,000 square foot restaurant, for example, would multiply its 3.2 factor by the number of square feet, arriving at an "occupant/hour" figure of 3,200. This figure falls in the 2,001 to 5,000 range, and the building would score 2 points. By contrast, a 1,000 square foot residence would generate an "occupant/hour" figure of 420 given its factor of 0.42 and would score 0 points.

A Low, Medium or High Priority is assigned to a building based upon its total score for occupant/hours, number of stories, proximity to sidewalks and buildings, and structural adjustments. Buildings receiving less than 4 points are assigned a Low Priority, those scoring between 4 and 6 points are considered Moderate Priority, and those with more than 6 points are High Priority. Buildings can change their score and move up or down on the priority scale, for example by making structural adjustments or changing their use.

INCENTIVE PROGRAM CONCEPT

The City of Sonoma offers 2 incentive programs to owners of hazardous buildings, the *Permit Fee Waiver Program* and *A&E Grants for Seismic Upgrading*. Both programs were established shortly after the ordinance was adopted, and were made effective January 1, 1991 and set to terminate on December 31, 1993. The *Permit Fee Waiver Program* applies to all seismic upgrade projects required by the ordinance and covers the following construction permit fees: (i) building, mechanical, electrical and plumbing permits, (ii) contractors license tax, (iii) micrographics fee, (iv) capital improvement tax, (v) impact fee, and (vi) within limitations, plan check fees. All other construction permit fees are assessed as normally

required. (Note that in the case of 100% affordable housing projects, the Community Development Agency will pay for all construction permit fees.)

Public Works Department fees also are waived under the *Permit Fee Waiver Program*, with encroachment fees waived for projects requiring seismic upgrade under the ordinance, and inspection fees waived for work required by the ordinance relating to installation and testing of underground fire and sprinkler system piping. Neither construction permit nor Public Works Department fees are waived for those portions of projects which create additional building floor area.

The *A&E Grants for Seismic Upgrading* reimburses owners for architectural and/or engineering expenses relating to plans for upgrading work required by the ordinance. The city will grant each owner a reimbursement per building of up to $2.00 per square foot of eligible building area. Only fees paid to a licensed architect and/or engineer or an approved testing agency are eligible for reimbursement. To receive the grant an owner must submit an application (See: EXHIBITS - SAMPLE A&E REIMBURSEMENT GRANT APPLICATION) along with original invoices. Grants are distributed when the building department has approved the seismic upgrading plans. Cost of plans for separate tenant improvements, site work, interior and exterior finishes, additions, furnishings and similar items are not eligible for reimbursement.

PROGRAM RESOURCE REQUIREMENTS

Sonoma's redevelopment agency is funding the city's incentive programs. The estimated maximum cost to the city of the *Permit Fee Waiver Program* is $75,000 while the *A&E Grants for Seismic Upgrading* are expected to cost up to $460,000. The incremental staff time required for administration of the programs is minimal.

PROGRAM DEVELOPMENT

Sonoma's program development effort was straightforward and went very smoothly. The ordinance and incentive programs were developed by a technical committee composed of the Building Director, the Community Development Director, an architect, structural engineer, and the City Manager. Upon their design of the ordinance and incentive program concepts, community meetings were held to present these ideas to tenants and owners. The community expressed a number of fears, including concern about requirements for upgraded plumbing, wiring, and the like, worries about changing the character of the city, uneasiness about loss of local ownership because of the expense of upgrading, apprehension about demolition, and

general anxiety about the reasonableness of the requirements. Most of these fears were allayed at the meetings, and the ordinance passed without incident, although concern about the expense and financing of repairs is still an issue which the city hopes to address.

PROGRAM EFFECTIVENESS

Although the earliest deadline for retrofit is not until 1994, as of January 1992, 2 buildings had already been upgraded to comply with the city's ordinance. A third building was upgraded in accordance with the State Historical Building Code, and a fourth was strengthened in accordance with 1976 UBC or above. In addition, 9 buildings were in the process of upgrading. Six buildings have applied for and received reimbursements under the *A&E Grants for Seismic Upgrade* program.

Despite the progress being made, Sonoma is still concerned about making financing available to owners unable to access it themselves. The city is evaluating bond-based programs, such as assessment district or general obligation financing, but has determined that it cannot meaningfully explore its options until it has a better idea of total project costs. To this end it has doubled to $2.00 per square foot the amount of grant funding for which owners may apply while emphasizing that the program will expire in December 1993. (Owners who have already received rebates will be granted the additional amount for which they would be eligible under the new program.) The objective is to have all the plans in hand by December 1993, and thus get a good estimate of the total retrofitting costs which the city might be asked to help finance.

PROGRAM STRENGTHS

The City of Sonoma's program is clearly articulated, simple to implement, and requires little additional staff time (although it does require money.) Through its system of prioritizing buildings, the city offers owners flexibility, allowing them to retrofit incrementally over time as best meets their needs.

KEYS TO SUCCESS

The success of the City of Sonoma's program rests on the city's ability to effect a straightforward program, clearly articulated and fully discussed with affected owners. The materials designed to describe the program are concise yet thorough (See: EXHIBITS - A&E GRANTS FOR SEISMIC UPGRADING AND PERMIT FEE WAIVER PROGRAM, a 1-page description, and ABOUT CITY OF SONOMA'S SEISMIC UPGRADING PROGRAM.) The programs were designed and are

administered by a small group of people who are very sensitive to the varying perspectives of affected parties. With the support of the city council, staff has made seismic safety a priority, and it is evident that the programs it designed are not ends in themselves, but steps in the mitigation process.

EXHIBITS

- City of Sonoma Ordinance #90-15
- *A&E Grants for Seismic Upgrading* and *Permit Fee Waiver Program*
- Sample A&E Reimbursement Grant Application
- About City of Sonoma's Seismic Upgrading Program

CONTACTS

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Michael Moore	Community Development Director	(707) 938-3681

CITY OF SONOMA

EXHIBITS

CITY OF SONOMA
ORDINANCE NO. 90-15

ORDINANCE OF THE CITY OF SONOMA
ADDING CHAPTER 14.24 TO THE SONOMA MUNICIPAL CODE
SETTING FORTH A PROGRAM FOR THE REVIEW, REHABILITATION AND
ABATEMENT OF EXISTING SEISMICALLY UNSAFE BUILDINGS.

Chapter 14.24 is hereby added to the Sonoma Municipal Code to read as follows:

CHAPTER 14.24
REVIEW, REHABILITATION AND ABATEMENT
OF EXISTING SEISMICALLY UNSAFE BUILDINGS

Sections:

14.24.010 Purpose, Scope & Application.
14.24.020 Definitions.
14.24.030 Preliminary building department review.
14.24.040 Notice to owner.
14.24.050 Property owner review.
14.24.060 Upgrading design - Requirements for continued use of structure.
14.24.070 Information required on plans.
14.24.080 Priority system and implementation schedule.
14.24.090 Notification of tenants.
14.24.100 Abatement - Rehabilitation or Demolition.
14.24.110 Appeals.
14.24.120 Violation - Penalty.
14.24.130 Severability.

14.24.010 Purpose, Scope & Application. A. Purpose. The City of Sonoma has experienced and will continue to experience moderate to great earthquakes in the future due to its proximity to the Rodgers Creek, Hayward and San Andreas faults. Many buildings subject to severe earthquake hazards continue to be a serious threat to the life and safety of people who live and work in the community in the event of an earthquake. **The primary goal of this chapter is to provide alternative construction regulations designed to reduce the risk of death or injury resulting from earthquake hazards in existing masonry or concrete buildings, in an economically feasible manner while preserving the historic character of the community.**

B. Scope. This chapter provides procedures for the systematic review and reconstruction of existing masonry and concrete buildings within the City of Sonoma to improve their safety in the event of an earthquake. The requirements of this chapter shall not apply to:

1. Public schools
2. Hospitals
3. State owned buildings
4. Detached one-and two-family dwellings.

The requirements of this chapter shall apply to the following classifications and areas of buildings:

1. All buildings or portions of buildings constructed with unreinforced masonry walls.

2. Diaphragms and connections of diaphragms in all buildings constructed of tilt-up concrete or masonry walls and constructed or being constructed prior to September 24, 1973.

This chapter does not require alteration of existing electrical, plumbing or mechanical systems unless such conditions or defects exist to the extent that the life, health, property or safety of the public or its occupants are endangered.

C. Application to Other Existing Buildings. Existing buildings, which are not subject to the requirements of this chapter and were constructed or being constructed prior to September 24, 1973, may be rehabilitated, remodeled or upgraded in accordance with the upgrading design provisions of Section 14.24.060, except that public schools, hospitals, fire stations, police stations, essential facilities and hazardous facilities, must comply with prevailing code requirements.

D. Application to Designated Historical Buildings. Designated historical buildings shall be upgraded in accordance with the State Historical Building Code. The design and upgrading provisions of this chapter may be used in conjunction with the State Historical Building Code as a method of complying with the minimum requirements of this chapter.

14.24.020 Definitions. For the purposes of this chapter, certain terms, phrases, words and their derivatives shall be construed as specified in this section or as otherwise specified in the Uniform Building Code, the Uniform Code for the Abatement of Dangerous Buildings, the State Historical Building Code or Chapter 19.04 of the Sonoma Municipal Code. Where terms are not defined, they shall have their ordinary accepted meanings within the context with which they are used.

A. "Architect" means a person who is licensed to practice architecture in this state.

B. "Designated Historical Building" means any building, structure or collection of structures, deemed of importance to the history, architecture, or culture of an area by an appropriate local, state, or federal governmental jurisdiction. This shall include structures on existing or future national, state or local historical registers or official inventories of historical or architecturally significant sites, places, historic districts, or landmarks.

C. "Engineer" as used in this chapter means any professional, civil or structural engineer who is licensed to practice engineering in this state.

D. "Occupant/Hours" is the result of the maximum occupant load for a particular type of use, multiplied by the prescribed typical number of hours the type of use might be occupied or open for business within a 7 day period.

E. "Prevailing Code" means the "regular building regulations" as that term is used in Section 18954 of the Health and Safety Code, which govern the design and construction of non-historical buildings within the city of Sonoma.

F. "Upgrading" means all work necessary to comply with the requirements of this chapter.

G. "Unreinforced Masonry Building" means any building or structure containing walls constructed wholly or partly with unreinforced masonry walls.

H. "Unreinforced Masonry Wall" is a masonry wall having an area of reinforcing steel less than 50 percent of that required by Section 2407(h) of the Uniform Building Code, 1988 Edition, with a height to thickness ratio greater than 2.

I. "Valuation" as used in this chapter shall mean the total value of all construction work, determined in accordance with prevailing code, except structural and fire upgrading work required by this chapter, for which a building permit is issued as well as finish work, roofing, mechanical systems, elevators, disabled access, and any other permanent equipment.

14.24.030 Preliminary building department review. Buildings within the scope of this chapter constructed or being constructed prior to September 24, 1973 shall be subject to a preliminary review by the building official to determine the general structural characteristics, the relative safety of the building, and its general compliance with the structural requirements of Section 14.24.060 A through E of this chapter and Appendix Chapter 1 of the Uniform Building Code. If the structure is determined to so comply, it is exempt from the requirements of this chapter. If the building official determines that the structure does not comply, it shall be further reviewed by the property owner in accordance with the provisions of Section 14.24.050.

A. The scope of the preliminary review by the building official or his authorized representative may include, but shall not be limited to, the following:

1. Location by street address and assessor's parcel number;
2. Type of occupancy and approximate square footage;
3. Type of construction and foundations, and type of material used in construction;
4. Age of construction; photos of the building exterior; construction drawings if available;
5. Quality of maintenance, cracks and cleanliness; evidence of leaks, foundation settlement, sagging floors or rusting metal and rotting wood; general deterioration of any other building material used;
6. General fire classification of the structure;
7. Adequacy of exiting system;
8. Type and strength of wall and parapet anchorage;
9. Type of diaphragms and bracing;
10. Type of interior partitions.

B. For the purposes of determining compliance with this chapter, the building official may rely on the information provided in items 1 through 10 above and shall not be required to provide extensive tests in connection with the preliminary review.

14.24.040 Notice to owner. A. Notice to Correct Deficiencies. For each building found to be not in compliance with the requirements of Section 14.24.060, the building official shall prepare a notice to owner to correct deficiencies. The notice to correct deficiencies shall include the following:

1. A statement to the effect that the structure has been reviewed and appears to be of the type which is prone to significant damage, including collapse, in a moderate to major earthquake;

2. The determination of non-compliance with the requirements of Section 14.24.060;

3. Where applicable, the findings on which the determination that the building or structure does not comply is based;

4. The determination of the priority for upgrading in accordance with the URM Building Priority System in Section 14.24.080;

5. The time schedule for abatement must be commenced and completed;

6. A statement that the structure shall be further reviewed by the property owner as provided in Section 14.24.050;

7. A statement that the owner is required to provide a copy of the notice to correct deficiencies to the tenant or tenants of the structure in accordance with Section 14.24.090.

B. Recordation. At the time that the aforementioned notice is served, the building official shall file with the office of the County Recorder a certificate stating that the subject building is within the scope of Chapter 14.24 of the Sonoma Municipal Code, Review, Rehabilitation and Abatement of Existing Seismically Unsafe Buildings. The certificate shall also state that the owner thereof has been ordered to review and structurally analyze the building and upgrade the building in accordance with this chapter.

14.24.050 Property owner review. Upon notice by the City to the property owner to correct deficiencies, the property owner shall require an engineer or architect to review and prepare an upgrading design for the subject building or structure within the time limits set forth in Section 14.24.080. Required upgrading may be designed in accordance with the provisions of Section 14.24.060.

14.24.060 Upgrading design - Requirements for continued use of structure.
Upgrading work and design shall be performed by the property owner, his representative, agent, or employee under the direct supervision of an architect, structural engineer or civil engineer specializing in structural work, to include but not be limited to the following standards:

A. The vertical dead load (without live or lateral loads) must not create any overstress as related to allowed stresses pursuant to this chapter, except that foundations may be assumed to have met the test of time where there is no settlement or damage;

B. The building must meet the requirements of prevailing code for vertical forces including live load with no more than fifteen percent overstress;

C. Walls, parapets, windows and doors must be adequate for a fifteen-pound wind, twenty percent gravity on walls, fifty percent gravity on parapets both in spanning between resisting elements and attachments supporting elements with no more than fifty percent increase to stresses in lieu of the presently allowed thirty-three and one-third percent increase;

D. Diaphragms must be capable of resisting prevailing code required lateral forces at not over one hundred percent increase in normal code values (base plus one hundred percent in place of base plus thirty-three and one-third percent). Where wood diaphragms are used to support concrete or masonry walls, the anchorage shall not be accomplished by toe nailing or the use of nails subject to withdrawal, nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. Straight sheathed diaphragms shall not be used to resist lateral forces in concrete or masonry buildings. Chords, connections of diaphragms to the vertical elements and connections of collectors to the vertical elements in structures shall be provided;

E. Shear walls must be adequately connected and tied down to foundations. Unreinforced masonry may be used in shear parallel to plane of the wall provided that the wall is securely held in place perpendicular to wall;

F. Compliance with the fire and panic requirements of Chapter 14.20 of the Sonoma Municipal Code, Appendix Chapter 1 of the Uniform Building Code, or when applicable, the State Historical Building Code, concerning exit requirements, enclosed stairways, fire sprinkler systems, fire separations, fire protection and panic hardware. Alternative methods of fire protection, including but not limited to fire sprinkler systems and smoke detection systems, may be approved by the fire marshal and the building official.

G. Existing solid masonry walls of any type, except adobe, may be allowed a maximum value of four (4) pounds per square inch in shear, without testing, with a one-third increase for lateral forces where there is a qualifying statement by the engineer that an inspection has been made, that mortar joints are filled and that both brick and mortar are in good condition. Allowable values above apply to existing unreinforced masonry, except adobe, where the maximum unsupported height or length to thickness ratio does not exceed 12. Allowable shear stress may be increased by the addition of 10% of the axial direct stress due to the weight of a wall directly above. Higher quality mortar may provide a greater shear value based on analysis by the engineer. Wall height or length is measured to supporting resisting elements which are at least twice as stiff as the tributary wall. Stiffness is based on the gross section of the wall.

H. Compliance with state and federal regulations concerning disabled access is required.

I. Existing electrical, plumbing, mechanical and other nonstructural portions of the building which are found to be dangerous to the extent that the life, health, property or safety of the public or its occupants are endangered, shall be upgraded in accordance with prevailing code. The Uniform Code for the Abatement of Dangerous Buildings shall be used in determining whether dangerous conditions exist.

14.24.070 Information required on plans. The review and upgrading design prepared by the engineer or architect shall be submitted to the building official and shall include, but not be limited to, the following:

1. Location by street address and assessor's parcel number;

2. Type of occupancy, use of the building and accurate dimensions;

3. Type of construction, type of foundation, and material used in construction. Field and laboratory tests as determined necessary by the building official, the architect or the engineer, shall include but not be limited to the drilling of inspection holes, the determination of the strength and quality of materials, and a general description of how these materials are integrated within the structure;

4. Comprehensive review of conditions, maintenance and foundation performance;

5. Complete vertical load resume, analysis or estimate based on typical bays and details of all critical areas;

6. Investigation, review and analysis of building elements including, but not limited to, mortar, masonry, walls, parapets, diaphragms, shear walls, bracing, attachments and ornamentation, ceilings, lights, stairs, type and resistance of interior partitions, presence and adequacy of diaphragm chords, and ties;

7. Verification of elements of preliminary building department review;

8. Such plans or sketches, as necessary to describe building strengths and deficiencies;

9. Summary statement of findings;

10. Statement of the engineer or architect explaining the overall significance of the deficiencies found to exist in the building's vertical and lateral force resisting system as related to current code requirements and evaluation criteria;

11. Independent statement of engineer or architect as to his professional opinion regarding the safety of the building in regard to fire, panic, moderate and major earthquake, with reasons for his opinion, without regard to code requirements;

12. A statement by the architect or engineer, in his opinion, as to whether or not special or unusual factors exist that alleviate or intensify the risk;

13. Such other information or testing as required by the building official;

14. Calculations, plans and specifications to show compliance with the requirements of this chapter;

15. Exceptions and/or alternatives to the specific items required by this subsection may be granted by the building official upon review of a written request from the engineer or architect providing the review of the building. Exceptions may only be granted when it can be demonstrated that the specific item or items are unnecessary to provide information available by other equivalent means.

14.24.080 Priority system and implementation schedule. Buildings subject to this chapter shall be classified by priority in accordance with the URM building priority system specified in this section. The building official may revise the priority classification of a building when new factual information is provided which would result in a change of the total priority points previously assigned to the building. Buildings shall be reviewed and upgraded in accordance with the implementation schedule set forth in this section.

A. Method of determining occupant/hour factors. Occupant/Hour factors are determined by dividing the number of assigned hours per week for a particular use by the occupant load factor in U.B.C. Table 33-A. The assigned "hours per week" represents the typical number of hours per week a particular use might be open for business or used and is derived from Table - A herein. Occupant loads are determined by using Table 33-A of the Uniform Building Code; 1988 Edition.

B. Table - A.

USE	HOURS PER WEEK	OCCUPANT LOAD FACTOR	OCCUPANT/HOUR FACTOR
Retail	48	30	1.60
Office	40	100	0.40
Residential	84	200	0.42
Restaurant/Bar	48	15	3.20
School/Day Care	35	35	1.00
Hotel/Motel	84	200	0.42
Public Building	48	15	3.20
Assembly Halls/Churches	8	15	1.10
Accessory/Storage	7	100	0.07
Industrial/Manufacturing	48	200	0.24

Other: For uses not listed above, the Building Official shall assign appropriate "hours per week" values based on the type and average hours of use.

C. Structural adjustments. Negative priority points for structural adjustments may be allowed by the Building Official when partial structural rehabilitation has been performed or exists to the extent that structural deficiencies due to seismic forces are significantly reduced so as to substantially reduce the hazard to life safety created by such deficiencies in the event of an earthquake. **The Building Official shall not reduce the total of priority system points by more than three (3) points for structural adjustments.**

In considering structural adjustments, the Building Official shall consider only force resisting elements and systems (i.e. complete roof diaphragm with tension anchors, shear transfer connections, parapet stability) that, will substantially complete the structural rehabilitation for that element or portion of the building in accordance with the approved upgrading plans and specifications.

D. Priority System Worksheet.

URM BUILDING PRIORITY SYSTEM

Occupant/Hour Factors

Retail	= 1.6	Office	= .4	Residential	= .42	Restaurant/Bar	= 3.2
Schl./Day Care	= 1	Hotel	= .42	Public Building	= 3.2	Assembly/Church	= 1.1
Accessory	= .07	Indstrl/Manuf.	= .24	Other: Determined by Building Official			

Determining Occupant/Hours

_____ : _____ x _____ = _____
Use — Square footage — Occ./hour factor — Occupant/Hours

_____ : _____ x _____ = _____
Use — Square footage — Occ./hour factor — Occupant/Hours

_____ : _____ x _____ = _____
Use — Square footage — Occ./hour factor — Occupant/Hours

TOTAL OCCUPANT/HOURS _____

POINTS

Occupant/Hours	Points
0 - 500	0
501 - 2,000	1
2,001 - 5,000	2
5,001 - 8,000	3
8,001 - 11,000	4
11,001 & Above	5

Occupant/Hour Points _____

Number of Stories	Points
1	1
1.5	1.5
2	2
3	3

Number of Stories Points _____

Proximity to Public Sidewalk	Points
Less than 10 feet	1
Equal or greater than 10 feet	0

Proximity to Sidewalk Points _____

Proximity to Adjacent Building	Points
Within 3 feet of adjacent building	1
Greater than 3 feet	0

Adjacent Building Points _____

Structural Adjustment	Points
Roof diaphragm, parapet bracing	-1
Storefront lateral bracing system	-1
Other bracing, ties, connections	-1

(Structural Report/Plans Required) Structural Adjustment Points _____

PRIORITY

Less than 4 points = LOW PRIORITY

4 to 6 points = MODERATE PRIORITY

More than 6 points = HIGH PRIORITY

TOTAL POINTS _____

F. Implementation schedule. **High-Priority Buildings.**

1. A review and upgrading design prepared by an engineer or architect must be submitted to the building official for approval within 2 years of notice to owner to correct deficiencies.

2. A building permit for complete upgrading in accordance with the engineer's or architect's review and reinforcement design must be issued within 2 1/2 years of notice to owner to correct deficiencies.

3. Complete upgrading shall be completed within 2 years of issuance of building permit.

G. Implementation schedule. **Moderate-Priority Buildings.**

1. A review and reinforcement design by an engineer or architect must be submitted to the building official for approval within 3 years of notice to owner to correct deficiencies.

2. A building permit for complete upgrading in accordance with the engineer's or architect's review and reinforcement design must be issued within 5 years of notice to owner to correct deficiencies.

3. Complete upgrading shall be completed within 2 years of issuance of building permit.

H. Implementation schedule. **Low-Priority Buildings.**

1. A review and upgrading design by an engineer or architect must be submitted to the building official for approval within 4 years of notice to owner to correct deficiencies.

2. A building permit for complete upgrading in accordance with the engineer's or architect's review and reinforcement design must be issued within 10 years of notice to owner to correct deficiencies.

3. Complete upgrading shall be completed within 2 years of issuance of building permit.

14.24.090 Notification of tenants. Upon receipt of notice to correct deficiencies, the building owner shall notify all tenants, in writing, that a review of the building has been performed and that said building may be structurally hazardous in the event of an earthquake.

14.24.100 Abatement - Rehabilitation or Demolition. Buildings subject to the requirements of this chapter which do not meet the requirements of this chapter shall be abated by rehabilitation, repair or demolition in accordance with the provisions of this chapter.

A. Rehabilitation. Designated historical structures, when rehabilitated, remodeled, repaired or upgraded shall comply with the provisions of the State Historical Building Code.

B. Demolitions. Buildings subject to the requirements of this chapter which do not meet the requirements of this chapter may be abated by demolition. Owners of buildings located within the Historic Conservation Combining District must receive approval from the Architectural Review Commission prior to obtaining a demolition permit to demolish the structure. Prior to obtaining a demolition permit for the demolition of a designated historical structure, the proposed building demolition shall be reviewed by the City's Environmental Review Committee and shall comply with the guidelines of the California Environmental Quality Act and the requirements of the Sonoma Municipal Code.

C. Substandard buildings, hazards or dangerous conditions which are not abated within the time limits set forth in Section 14.24.080, shall be considered a public nuisance and a dangerous building and shall be vacated and/or abated in accordance with the provisions of the Uniform Code for the Abatement of Dangerous Buildings and Chapter 14.30 of the Sonoma Municipal Code. In addition to any other remedy provided herein, the City Council may cause any building not abated within the time limits set forth in Section 14.24.080, to be vacated, strengthened, repaired, rehabilitated, remodeled, demolished or upgraded in accordance with the provisions of this chapter and place a lien on the property for all costs incurred in accordance with the provisions of the Uniform Code for the Abatement of Dangerous Buildings and/or Chapter 14.30 of the Sonoma Municipal Code.

14.24.110 Appeals Any person having record title, equitable or legal interest in the subject building may appeal any notice, order, decision, determination or action made in the administration of this chapter to the City Council of the City of Sonoma, provided that the appeal is made in writing and filed with the building official within 60 days from the date of service of said notice, order, decision, determination or action by the Building Official, except that an appeal for an extension of the implementation schedule set forth in Section 14.24.080 shall be made not less than 180 days prior to the required implementation date; however, if the building or structure is in such a condition as to make it immediately dangerous to the life, limb, property or safety of the public or adjacent property and is ordered vacated and is properly posted, such appeal shall be filed within 10 days from the date of service of this notice and order. Only one subject of appeal is allowed per building, provided due process is met.

A. The written appeal shall contain the following:

1. A heading in the words: "To the City Council of the City of Sonoma".

2. The names of the appellants named in the appeal.

3. A brief statement setting forth the legal interest of each of the appellants in the land and/or building involved.

4. A brief statement in ordinary and concise language of the specific order or action protested, together with any material facts claimed to support the contentions of the appellants.

5. A brief statement in ordinary and concise language of the relief sought and the reasons why it is claimed the protested order or action should be reversed, modified or otherwise set aside.

6. The submittal of any documents, sworn statements or other written material claimed to have value on the contentions made in support of the appeal.

7. The signatures of all parties named as appellants and their mailing addresses.

8. The verification (by declaration under penalty of perjury) of at least one appellant as to the truth of the matters stated in the appeal.

B. Upon receipt of an appeal filed pursuant to the above requirements, the Building Official shall present it at the next regular meeting of the City Council. **Failure to appeal will constitute a waiver of all rights to an administrative hearing and determination of the matter.**

14.24.120 Violation - Penalty. Any person, firm or corporation who or which violates any provision of this chapter as adopted by the ordinance codified herein, or any lawful order thereunder, is guilty of a misdemeanor as a separate offense for each and every day such person, firm or corporation violates or allows a violation to continue without taking reasonable means to cure or abate the same after having been ordered to do so. Such misdemeanors are punishable as provided by the general law of this state.

14.24.130 Severability. If any section, subsection, sentence, clause, phrase or word of this chapter is for any reason held to be invalid and/or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this chapter. The City Council of the City of Sonoma hereby declares that it would have passed and adopted this chapter and each of the provisions thereof, irrespective of the fact that any one or more of said provisions be declared invalid and/or unconstitutional.

A&E GRANTS FOR SEISMIC UPGRADING

This program becomes effective on January 1, 1991 and terminates on December 31, 1992.

A. Only plans prepared by a licensed architect and/or engineer or reports prepared by an approved testing agency, for upgrading work required by Sonoma Municipal Code Chapter 14.24 is eligible for the A&E grant. This work includes but is not limited to:

   i. Review, investigation, analysis, testing, documenting and reporting of structural, fire and life safety, exiting, mechanical systems and disabled access deficiencies.

   ii. Preparation of reports, plans and engineering documents necessary to perform required upgrading and abatement work.

B. Up to $1.00 per square foot of eligible building area will be granted to one building owner per affected building. (Eligible building area is the gross area within and including the exterior walls of the building or portion thereof. The floor area of a building, or portion thereof, not provided with exterior walls shall be the usable area under the horizontal projection of the roof or floor area above.)

C. The A&E grant is to be used exclusively for reimbursement of architectural and/or engineering fees.

D. The A&E grant will be distributed upon building department approval of seismic upgrading plans for each building required to be upgraded within the scope of S.M.C. Chapter 14.24.

E. The upgrading plans must be comprehensive and complete for all portions of the building found to be deficient in accordance with S.M.C. 14.24.

F. Original invoices from the architect, engineer and/or testing agency for the preparation of upgrading plans, specifications, testing and reports shall be submitted with the grant application.

G. Costs of plans for separate tenant improvements, site work, interior and exterior finishes, additions, furnishings and similar items are not eligible for the A&E grant program.

PERMIT FEE WAIVER PROGRAM

This program applies to all seismic upgrading projects required by Section 14.24 of the Sonoma Municipal Code and becomes effective on January 1, 1991 and ends on December 31, 1992.

1. Certain construction permit fees for seismic upgrading work required pursuant to S.M.C. Chapter 14.24 will be waived. Fees which will be waived include:

   a. All Building, Mechanical, Electrical and Plumbing permit fees.

   b. Plan Check fee up to four-tenths of one percent (0.4%) of the valuation of the work as defined by the Uniform Building Code and assigned by the Building Official.

   c. Contractors License Tax

   d. Micrographics Fee

   e. Capital Improvement Tax

   f. Impact Fee

2. All Public Works Department encroachment permit fees will be waived for projects requiring seismic upgrading pursuant to S.M.C. Chapter 14.24.

3. All Public Works Department inspection fees related to installation and testing of underground fire sprinkler system piping and required pursuant to S.M.C. Chapter 14.24.

4. No fees will be waived for those portions of projects which create additional building floor area.

5. All other construction permit fees not mentioned above will be assessed as normally required.

In addition to the program mentioned above for seismic upgrading, the Community Development Agency shall pay all of the construction permit fees listed in #1 above, for all 100% affordable housing projects as defined by Section 19.71 of the Sonoma Municipal Code.

A&E REIMBURSEMENT APPLICATION

This program commences on January 1, 1991 and terminates on December 31, 1993.

A. Only plans and reports prepared by licensed architects and/or engineers for upgrading work required by S.M.C. 14.24 are eligible for the A&E Reimbursement Grant Program. This work includes but is not limited to:

i. Review, investigation, analysis, testing, documenting and reporting of structural, fire and life safety, exiting, mechanical systems and disabled access deficiencies.

ii. Preparation of reports, plans and engineering documents necessary to perform required upgrading and abatement work.

B. Up to $2.00 per square foot of eligible building area will be granted to one building owner per affected building. (Eligible building area is the gross area within and including the exterior walls of the building or portion thereof established pursuant to Section 14.24.080 of the S.M.C. The floor area of a building, or portion thereof, not provided with exterior walls shall be the usable area under the horizontal projection of the roof or floor area above.)

C. The A&E Reimbursement will be distributed upon building department approval of required upgrading plans for each building required to be upgraded within the scope of S.M.C. Chapter 14.24.

D. The upgrading plans must be comprehensive and complete for all required structural and nonstructural upgrading (i.e. disabled access, fire resistive construction, exiting, etc.) in accordance with S.M.C. 14.24 and must contain the necessary statements required by Section 14.24.070.

E. Original architect and/or engineer invoices for the preparation of upgrading plans, specifications, testing and reports shall be submitted with the reimbursement application.

F. Costs of plans or engineering work for tenant improvements, site work, interior and exterior finishes, additions, furnishings and similar items are not eligible for the A&E Reimbursement program.

Project Address: _____ Amount of Invoices $ _____

Owner's Name: _____ Phone _____

Mailing Address: _____
Street/P.O. Box City State Zip

Engineer's Name: _____ Phone _____

Architect's Name: _____ Phone _____

Please attach all of the original invoices received from your architect and/or engineer for fees related to required upgrading work. The City of Sonoma reserves all rights to review and reject invoices or applications for due cause.

I certify that I have read this application and state that the information which I have provided, including attachments, is true and correct.

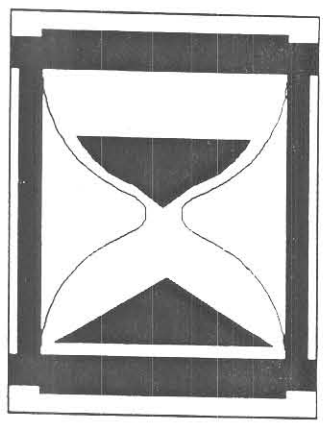
_____ _____
Signature of Owner Date

FOR OFFICE USE ONLY

1.	Invoice Totals	$ _____
2.	Adjustments to Invoices	$ _____
3.	Total Allowed Invoice Amount	$ _____
4.	Eligible Square Footage	$ _____
5.	Eligible Reimbursement Amount (@ $2.00/s.f)	$ _____
6.	**REIMBURSEMENT AMOUNT** (Enter the lesser amount shown on line 3 or line 5.)	$ _____

_____ _____
Building Official Approval City Manager Approval

April 14, 1992



ABOUT CITY OF SONOMA'S SEISMIC UPGRADING ORDINANCE

Q. What is the purpose of the seismic upgrading ordinance?

A. The primary goal of the seismic upgrading ordinance is to provide a systematic method of reducing the risk to human life posed by seismically unsafe buildings in the event of an earthquake. This will be accomplished by providing economically acceptable construction regulations designed to reduce the probability of catastrophic wall and ceiling collapse in certain buildings which are potentially unsafe, thereby reducing the number of deaths and injury in the event of an earthquake.

A study released by the United States Geological Survey in June of 1990, indicates there are 2 chances in three that an earthquake the size of the Loma Prieta quake will occur within the next 30 years. If that quake occurs on the Rodgers Creek Fault, we can expect the shaking to be 48 times greater than the shaking we felt here in Sonoma during the Loma Prieta event. As recently as April of 1992, scientists have increased the probability of a moderate to large earthquake occurring on the Rodgers Creek Fault.

Q. What buildings are affected by the City of Sonoma's new seismic upgrading program (Sonoma Municipal Code Chapter 14.24)?

A. All buildings constructed with unreinforced masonry walls and diaphragms and connections of diaphragms in buildings constructed prior to September 24, 1973, of tilt-up concrete or masonry are affected, except public schools, hospitals, state owned buildings and one-and two-family dwellings.

Q. I have an older wood framed building which I would like to structurally upgrade, may I upgrade the building using the provisions of the new seismic upgrading program (S.M.C. Chapter 14.24)?

A. Any existing building, including wood framed structures, except public schools, hospitals, fire stations and other essential facilities, constructed prior to June 1, 1973, may be upgraded or rehabilitated using the upgrading design provisions of the ordinance.

Q. My building was not on the "Potentially Hazardous - URM Building List" prepared by the City of Sonoma in December of 1989; why is my building affected by the requirements of S.M.C. Chapter 14.24?

A. The "Potentially Hazardous" - URM Building List, was prepared by the City of Sonoma and submitted to the Seismic Safety Commission to comply with the identification and notification requirements of Senate Bill 547 which was signed into law in 1986. The provisions of SB 547 required cities and counties located within Seismic Zone 4, to identify those buildings constructed of unreinforced masonry construction. There are masonry buildings within Sonoma which were constructed prior to September 24, 1973, which have partially reinforced walls and buildings constructed with reinforced masonry or concrete walls which have inadequate wall connections and roof systems. These buildings are subject to the requirements of S.M.C. Chapter 14.24 and therefore there may be buildings on the new list of potentially hazardous buildings which have not previously been identified.

April 14, 1992

Q. Who determines if my building is affected by the ordinance?

A. The Building Division of the City of Sonoma Community Development Department will conduct a preliminary review of all buildings within the scope of the ordinance to determine if the building meets the upgrading design standards of the ordinance. If the building is determined to comply with the upgrading design standards, the building will be taken off of the "potentially hazardous" building list. If the building does not comply, you will be issued a notice to correct deficiencies and provided with a copy of the preliminary review report.

Q. What if I disagree with the findings of the preliminary report by the building department?

A. The preliminary review findings of the building department may be adjusted or corrected by submitting evidence that the building department findings are incorrect by providing an engineering analysis of the building which shows that the building complies with the upgrading design requirements of the ordinance. Additionally, the ordinance provides that any decision made by the Building Official may be appealed to the City Council by the building owner.

Q. How much will seismic upgrading work for my building cost?

A. The cost of performing seismic upgrading work can vary greatly between different buildings and therefore cannot easily be assigned to your building without a detailed analysis of the work which must be performed. The best way to determine the cost for seismic upgrading for your building is to obtain an estimate from an engineer, architect or contractor, after upgrading plans have been prepared by your architect or engineer.

For the purposes of obtaining a general idea of overall URM upgrading costs, the URM Mitigation Technical Committee estimates that the average upgrading costs for basic seismic rehabilitation including tenant improvement work could be between $34 and $63 per square foot of building area.

Q. Can my tenants occupy my building while seismic upgrading work is being performed?

A. In some cases, tenants may be able to occupy some or all of the building while upgrading work is being performed provided that the building is maintained in a safe condition for the tenants and the public. Many owners and tenants prefer however, to perform the upgrading as expediently as possible, which usually requires temporarily relocating the tenant.

Q. How will the priority of my building be determined?

A. Included in the seismic upgrading ordinance is a unique URM Priority System. The system assigns priority points to a building based on six key elements including: the typical number of hours a type of use is occupied, the occupant load for the building, the number of stories of the building, the proximity of the building to the public sidewalk, the proximity of the building to an adjacent building, and whether or not certain key structural elements exist in the building. The Building Department assigns the priority points and makes the determination as to priority classification in accordance with the URM Priority System. The Priority System provides an effective, fair and practical means to measure and assign some level of risk to an existing potentially unsafe building.

April 14, 1992

Q. Does the seismic upgrading program encourage or require the demolition of historical buildings?

A. No! The seismic upgrading ordinance used in conjunction with the State Historical Building Code will actually help to preserve existing historical resources by allowing historical buildings to be upgraded without conforming with all of the requirements of the current building code. If a building owner were to propose demolition as a method of abating a seismically unsafe building, the owner would first be required to comply with the City's environmental review process as well as obtain approval by the City's Architectural Review Commission. Additionally, the ordinance affords the City Council the option of having required upgrading work performed on a building rather than demolition and all costs associated with the upgrading assessed on the tax roll for the property. Therefore, even if privately owned, buildings which are of primary historical significance to the City Council and the citizens of Sonoma could be saved from demolition.

Another important element that comes into play is the fact that under most circumstances, it will be more feasible economically to rehabilitate a historical building rather than demolish it. The reason for this is that buildings which are demolished may only be rebuilt if the proposed new building meets all current Uniform Building Code and City of Sonoma Zoning requirements. Three-fourths of the historical buildings which would be affected by the upgrading ordinance presently do not comply with the City's minimum parking requirements and would therefore need to provide additional parking for a proposed new building. For most of the historical buildings in town, it would be economically unfeasible to provide additional off-street parking as part of a new project in that there is a very limited amount of space on most historical properties. Additionally, there will be no tax breaks for persons proposing to demolish a building as opposed to performing structurally upgrading work.

Q. What effect will seismic upgrading have on my property taxes.

A. The State Constitution has been amended to prevent assessors from raising property values for seismic strengthening of unreinforced masonry bearing wall construction, necessary to comply with any local ordinance relating to seismic safety for a period of 15 years.

Q. If I upgrade my building in accordance with the seismic upgrading program, will my building be earthquake proof?

A. No! The ordinance is designed to reduce the risk to life resulting from a catastrophic or partial building collapse. Buildings upgraded in accordance with the ordinance will help to save lives in the event of a damaging earthquake, but probably will sustain some level of damage. Owners wishing to prevent major structural damage to their buildings should consider using the Uniform Building Code as the upgrading design criteria.

Q. How can the assigned priority of my building be lowered to allow me more time to perform rehabilitation work?

A. The assigned priority points for your building may be revised by performing partial seismic upgrading work or by changing the type of use to a category which is less intensive based on occupant/hours or by vacating a portion or all of the building. If the number of priority points can be reduced enough to place the building in a lower priority classification, the number of years for required upgrading will be extended to meet the schedule for the newly designated priority category.

April 14, 1992

Q. What are occupant/hours?

A. "Occupant/Hours" establishes the total accumulated number of hours a building might be occupied assuming the building is filled to maximum capacity for a 7 day period. Since the potential for injury or death resulting from a collapse or partial collapse of a building in the event of an earthquake is directly related to the number of people in and around the building, "occupant/hours" serves as an important factor in assigning the priority to a particular building.

Q. When will upgrading work be required for my seismically unsafe building under the seismic upgrading ordinance?

A. The seismic upgrading ordinance requires upgrading to be completed under an implementation schedule based on an assigned priority. Additionally, buildings which have been vacated for more than six months and buildings which are proposing significant remodeling or additions are required to perform seismic upgrading prior to reoccupying the building or as a part of remodeling or addition project. The timetable for required upgrading based on the priority implementation schedule is as follows:

I. **High-Priority Buildings:**
   a. Review and upgrading design submitted to Building Department within 2 years of notice to owner to correct deficiencies.
   b. Obtain a building permit to perform upgrading work within 2-1/2 years of notice to owner to correct deficiencies.
   c. Complete upgrading work within 2 years of issuance of building permit.

II. **Moderate-Priority Buildings:**
   a. Review and upgrading design submitted to Building Department within 3 years of notice to owner to correct deficiencies.
   b. Obtain a building permit to perform upgrading work within 5 years of notice to owner to correct deficiencies.
   c. Complete upgrading work within 2 years of issuance of building permit.

III. **Low-Priority Buildings:**
   a. Review and upgrading design submitted to Building Department within 4 years of notice to owner to correct deficiencies.
   b. Obtain a building permit to perform upgrading work within 10 years of notice to owner to correct deficiencies.
   c. Complete upgrading work within 2 years of issuance of building permit.

Q. If I perform structural upgrading on my building will a fire sprinkler system be required to be installed?

A. Possibly! In accordance with the Uniform Fire Code as amended and adopted by the city, fire sprinkler systems are required in all buildings subject to the requirements of the seismic upgrading program if the gross area of the building is greater than 4,000 square feet and the valuation of the upgrading work exceeds $50,000, exclusive of the cost of the fire sprinkler system.

April 14, 1992

Q. If I perform structural upgrading on my building, will access to the physically disabled be required?

A. **Yes!** State building regulations require that when structural alterations, repairs or an addition is made to an existing building, access to the physically disabled must be provided in the following locations:

1. The area of addition, alteration or repair.
2. The path of travel from the public sidewalk or parking area to the addition, alteration or remodeled area must be made accessible.
3. Bathrooms, telephones and drinking fountains serving the remodeled area must comply with disabled access requirements.

Q. By providing disabled access, does that mean I will be required to install an elevator in my existing two story building?

A. **Probably not.** None of the buildings in Sonoma which would be affected by the seismic upgrading ordinance would be required to install an elevator unless the use of the upstairs portion of the building was changed to a restaurant, public building or other similar type of use. Uses in existing buildings such as retail businesses, offices, lodge rooms, apartments, hotels and motels do not require an elevator.

Q. Is there any funding available to me for performing seismic upgrading work?

A. YES The City of Sonoma offers the following funding programs:

* Reimbursements of up to $2.00 per square foot of eligible building area is provided to property owners for the exclusive purpose of helping owners pay for the costs of preparing engineering analysis, reports and construction plans for upgrading work. This reimbursement program is due to expire on December 31, 1993.
* Certain building permit and plan checking fees for seismic upgrading work are paid by the City's Community Development Agency.

The typical building owner of a 4,200 square foot building would realize a cost benefit of approximately $9,300 by taking advantage of the programs mentioned above. Other limited funding sources which may be available for seismic upgrading work depending on the type and use of your building are as follows:

1. Sonoma's Community Development Agency is currently exploring methods of providing additional financial assistance to owners through special districts, loan subsidies and public/private partnerships.
2. Small Business Administration (SBA) funding may be available for engineering, planning, permits, and construction costs to business borrowers that meet the agency's size standard and eligibility standards.
3. State Housing and Community Development Department administers a number of state programs aimed at encouraging renovation of housing resources for certain groups by providing loans at favorable terms.
4. Tax credits for rehabilitation may be available under the 1986 Tax Act.

April 14, 1992

Q. What does seismic upgrading work entail?

A. In basic terms, seismic upgrading involves the following items:

1. Providing a rigid floor and roof system which will act as a complete structural unit (diaphragm) when a load is applied. This is usually accomplished by attaching plywood to the floors and roof.
2. Providing wall stability so that the walls do not collapse inward or outward. This is sometimes accomplished by providing cross walls or wall bracing.
3. Providing adequate anchors between the floor and/or roof system and the walls.
4. Providing lateral stability for walls to prevent racking (in-plane shear) of the building.
5. Provide parapet bracing if necessary to prevent the collapse or partial collapse of parapet walls.
6. Secure veneers, ornamentation and appendages so as not to detach from supporting members.
7. Comply with fire resistive construction, fire sprinkler and exiting requirements to afford safe passage for the buildings occupants.
8. Provide disabled access throughout the ground floor of the building.
9. Correct all dangerous conditions within the building.

Q. I have received a "notice to correct deficiencies", where do I go from here?

A. Step #1 Review all documents, especially the "notice to correct deficiencies", included in your package of information provided by the city. Make sure the information appears to be correct.

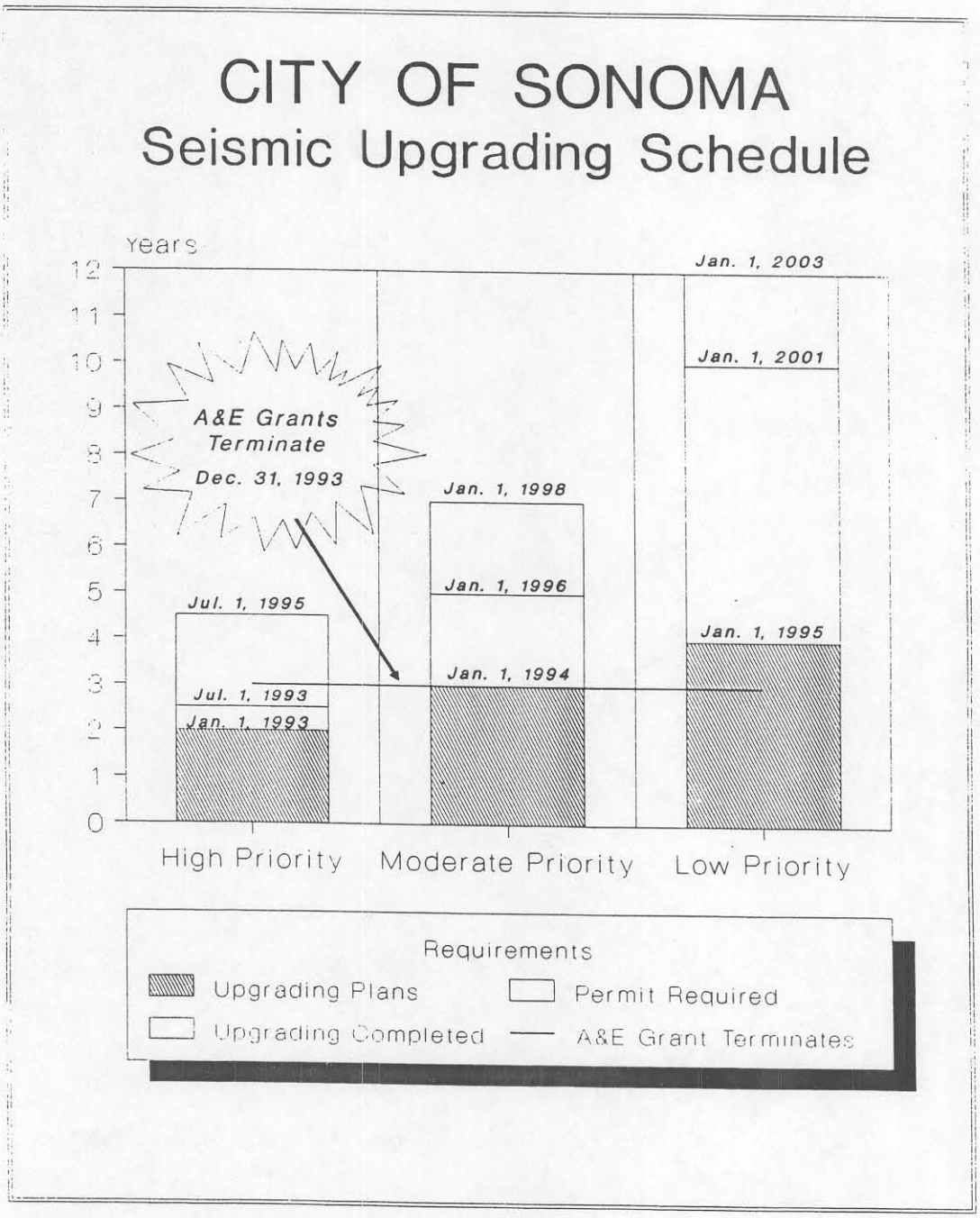
Step #2 Notify any tenants of the building that the building is potentially hazardous in the event of an earthquake as required by the ordinance.

Step #3 Contact a licensed architect or engineer to provide an analysis of the building to determine the extent of deficiencies in accordance with the upgrading ordinance and to provide you with some approximate cost evaluations. Be sure they review disabled access and fire sprinkler requirements along with their structural evaluation.

Step #4 Review all avenues of potential financing and funding assistance. Check your lease agreements to determine if there are any apparent problems relating to your legal rights to upgrade the building. Create a preliminary schedule for performing and completing work in accordance with upgrading deadline provided.

Step #5 Contact a general contractor to provide refined cost estimates and perform work.

Step #6 Complete all required upgrading work.


CITY OF SONOMA
Seismic Upgrading Schedule
Years
12
11
10
9
8
7
6
5
4
3
2
1
0
A&E Grants Terminate
Dec. 31, 1993
Jul. 1, 1995
Jul. 1, 1993
Jan. 1, 1993
Jan. 1, 1998
Jan. 1, 1996
Jan. 1, 1994
Jan. 1, 2003
Jan. 1, 2001
Jan. 1, 1995
High Priority
Moderate Priority
Low Priority
Requirements
Upgrading Plans
Upgrading Completed
Permit Required
A&E Grant Terminates

CITY OF TORRANCE

Population:	133,500
1990/91 General Fund *Revenues:* *Fund Balance:*	 $93 million $10 million
# URMs:	50
Type of URMs:	70% commercial 30% residential
Ordinance Type:	mandatory retrofitting
Retrofit Incentives:	(1) long-term financing at 10.75% (2) engineering design subsidy
Funding Source:	(1) Special Assessment bond issue (2) general fund

BACKGROUND

The City of Torrance encompasses a 20-square mile area located 10 miles south of Los Angeles along I-405. The city was originally founded in 1912 and incorporated in 1921. Torrance is presently the home to major employers such as Hughes Aircraft Company, Airesearch Manufacturing Company, and Mobil Oil Corporation. Torrance is the first city in California to use a bond instrument as a tool to finance the seismic retrofit of privately owned buildings.

HAZARDOUS BUILDINGS PROFILE

The City of Torrance contains approximately 50 unreinforced masonry buildings (URMs). The majority of these URMs are commercial structures. They range in size from 1,200 to 20,000 square feet, and command rent per square foot of about $0.50 to $1.00. One can find the majority of these buildings in old Downtown Torrance.

ORDINANCE

The city has a mandatory retrofit seismic ordinance that was adopted in 1987. Like some of the other cities in the greater Los Angeles area, Torrance's seismic retrofit ordinance is based on the 1982 Edition of Division 88 of the Los Angeles City Code.

INCENTIVE PROGRAM CONCEPT

Torrance's program provides URM owners with 2 sources of assistance: a subsidy to pay for engineering analysis and a source of long-term financing to pay for retrofit construction.

The city developed the subsidy program to promote the preparation of engineering plans. It was hoped the owners of URMs would be more willing to pay for retrofit plans if the work was subsidized. In addition, the subsidy conveyed the city's concern regarding the life safety hazard posed by URMs and its interest in seeing the issue addressed. Torrance provided a $0.50/square foot of building area subsidy to URM owners to defray the cost of plan preparation.

The city also prepared a voluntary Special Assessment district which would provide members with a long-term, market-rate source of financing for retrofit construction. Torrance allowed a 9 month period in which property owners could apply for participation in the program. Property owners interested in participating submitted to the city, for review by its Building and Safety Director, an assessment report prepared by a California licensed engineer. The assessment was determined using the lowest responsible bid from a series of 3 estimates of the cost of construction obtained by the owner, and a pro-rata share of issuance costs. If the 3 bids were not obtained, the Assessment Engineer determined a reasonable cost of the necessary seismic safety improvements based on comparable costs for similar buildings in the district. The owners' parcels were then examined to determine their appraised values.

A total of 7 parcels were eventually included in the assessment district, representing less than one-fifth of the city's URMs. The parcels in the district are located in the old downtown portion of the city, and consist of retail, office and apartment properties.

In December, 1988, the city council held the required public hearing and, as no protests were received, adopted a resolution establishing the district, authorizing the projects and confirming and levying the assessment for each parcel. Two months later the bonds were issued and money was placed in an Improvement Fund awaiting disbursement to participating owners.

Undertaking and completing projects is the sole responsibility of individual property owners. All owners must submit final building plans to the city and obtain all the usual permits. Owners individually contract and arrange for the projects' construction. A provision was made in the

bond issue for financing construction cost overruns by including a 5% contingency fund in the issue. The time allotted for completion of all the projects is approximately 3 years. If there are bond proceeds remaining at the end of that time (perhaps because owners who participated in the district ultimately chose not to undertake the improvements, or because they did not satisfy the city's requirements for release of the funds) these proceeds will be used to prepay the bonds.

The bonds are repaid through assessment liens against all the parcels included in the district. The annual assessment billed against each parcel represents a pro rata share of the total principal and interest of the bonds coming due that year. Assessment installments are payable in the same manner and time as general taxes on real property. Note that the assessments represent liens against parcels, not personal indebtedness of property owners.

The bonds issued by Torrance are secured by the assessments levied against the parcels. The assessment liens are on parity with all general and special tax liens. They are subordinate to pre-existing Special Assessment liens, but take priority over future fixed Special Assessment liens. Most importantly the assessment liens take priority over all existing and future private liens, including bank loans and mortgages.

Failure of an individual property owner to pay an assessment installment will not increase the assessments against other parcels. Property securing delinquent assessment installments is subject to sale in the same manner as property sold for non-payment of general property taxes. In addition, Torrance has covenanted that it will commence judicial foreclosure proceedings against parcels with assessment installments which are more than 150 days delinquent. (For another discussion of Special Assessment financing see CASE STUDY - CITY OF LONG BEACH)

PROGRAM RESOURCES

Four different city departments were involved in developing Torrance's program: the Building and Safety Department, the Finance Department, the Treasurer's Department and the City Attorney's Office. The services of a financing team (bond counsel and underwriter) were also used extensively. Torrance estimates it cost approximately $30,000 in staff time and other expenses to develop the program and issue the bonds. The fees of the financing team were reimbursed from the proceeds of the bond issue. Ongoing program costs primarily involve the time of the Building and Safety Department to review and approve requests for funds, and the resources of the City Treasurer to administer the bond program and collect the assessments.

Torrance issued bonds in the amount of $679,325. The funds were allocated as follows:

- $563,430 of the bond proceeds were set aside to cover project costs. This amount represents an estimated cost of $10/square foot for seismic safety improvements, plus a 5% reserve for construction contingency.

- The bond proceeds also funded a $33,966 reserve account, required in most bond financings, which ensures that funds will be available to make timely bond payments.

- Approximately $36,514 was borrowed to cover interest payments which needed to be made on the bonds prior to collection of assessments.

- $45,415 was expended to pay the financing team and cover other issuance costs.

PROGRAM DEVELOPMENT

As with the City of Long Beach, Torrance's use of Special Assessment district bonds to finance seismic retrofit projects might better be called an enabling rather than an incentive program. The city felt that its most suitable function would be to obtain financing for the owners while steering clear of any responsibility for repayment.

While assessment bonds of the type contemplated were commonly used by cities throughout California, they had never before been issued to finance repairs of privately-owned structures. The uniqueness of this purpose made the assessment bond issuance process more complicated than would normally be expected. The process ended up taking 13 months rather than the 3 to 6 months more commonly spent on assessment financings. Rather than being sold publicly, the bond issue was privately placed with an investor.

One of the more difficult aspects of the development process involved establishing the procedures for participation in the district and explaining the process to property owners. It was important for participants to realize the nature of the assessment on their property, how each account would be impacted by both interest earnings and construction drawdowns, and the impact of being fully responsible for any amount committed to.

As investors in assessment bonds are secured by the property upon which the lien is assessed, an important ratio in an assessment financing is the value-to-lien ratio. This ratio suggests to investors how much might be recouped from the sale of a property if its owner defaults on the

assessment. Typically investors will require that assessment districts contain properties with minimum value-to-lien ratios of 3.0 to 1. Torrance's financing team established a minimum 2.0 to 1 ratio. The lowest value-to-lien ratio in the district was 2.1 to 1. Thirty percent of the assessment was on properties with ratios less than 3.0 to 1, while the remaining 70% of the assessment was on properties with ratios greater than 3.6 to 1.

The following table illustrates the value-to-lien ratios of parcels which comprise the assessment district.

Value-to-Lien Ratio	# Parcels (Value = Assessed Value)	$ Amount of Assessment	% of Total Assessment
1.00:1 to 1.99:1	0	$0	0
2.00:1 to 2.9:1	2	$202,275	30
3.0:1 to 4.9:1	4	$456,750	67
> 5.0:1	1	$20,300	3
TOTAL	7	$679,3225	100.0

PROGRAM EFFECTIVENESS

More than half of Torrance's 50 URMs took part in the subsidy program for plan preparation, a sign that the URM owners take the situation as seriously as the city does. Only 7 of the 50 URMs were enrolled in the assessment district; the majority of the property owners, who elected not to participate in the district, had the ability to obtain monies from their own sources at comparable interest rates and/or prefered to perform the needed repairs from their own funds. To date 43 of Torrance's 50 identified URMs have been retrofitted.

PROGRAM STRENGTHS

The primary advantage of the program to the city lies in the fact that Torrance is able to provide owners with financing while retaining no repayment liability. Although the program does require ongoing monitoring and administration, these costs are not material. Because the program is privately financed and full financial responsibility lies with the property owners, the projects are not subject to regulations applied to public funds such as Davis-Bacon wage requirements.

KEYS TO SUCCESS

The effectiveness of Torrance's program is likely linked to the city's 2 step approach. The subsidy for plan preparation got URM owners to think about retrofitting, and the assessment district gave them an option for financing the work. This also let URM owners know that the city was serious about its retrofit program.

The issue of life safety related to URMs is very well understood by staff, elected officials, and the public at large. As a result very little controversy surrounded the city's development of its program.

Finally, the city showed a great deal of flexibility in its willingness to experiment with an untried method of financing. Torrance exhibited a tremendous amount of "municipal bravery" in being the first California city to use assessment district bonds for financing this type of program.

Torrance is a charter city. While this was considered a key factor at the time, some bond counsels now believe that general law cities can use Special Assessment financing to fund retrofit programs too (See: LOCAL GOVERNMENT FINANCING OPTIONS - SPECIAL ASSESSMENT DISTRICT).

CONTACT

Mary Giordano-Specht	Finance Director	(310) 618-5855
Jim Isomoto	Acting Building & Safety Director	(310) 618-5920

CITY OF UPLAND

Population:	64,000
1990/91 General Fund *Revenues:* *Fund Balance:*	 $22 million $8 million
# URMs:	65
Type of URMs:	100% commercial
Ordinance Type:	mandatory engineering reports (implementation deferred)
Retrofit Incentives:	(1) "soft cost" and facade rebate (2) bank loans
Funding Source:	(1) CDBG (2) commercial banks

BACKGROUND

The City of Upland sits at the foot of the San Gabriel Mountains approximately 40 miles east of Los Angeles along the I-10 corridor. Originally an agricultural community, the city is now primarily residential. Upland has a traditional downtown area in which the majority of its unreinforced masonry buildings (URMs) are located.

HAZARDOUS BUILDINGS PROFILE

The hazardous structures identified by Upland are primarily 1 or 2 story commercial URM buildings located in an eight-block section of Upland's old downtown. Most of the buildings are occupied by local merchants. Some structures have residential uses on the second floor. The majority are less than 5,000 square feet in floor area. Rents range from $0.50 to $0.85 per square foot. Many of the URMs are of brick construction. Some of these structures share common walls and may have been a single unit at one time. Some of the altered facades hide historically significant details while others have been irreversibly changed.

ORDINANCE

Upland chose to develop a retrofit ordinance based on the Palo Alto model (See: CASE STUDY - CITY OF PALO ALTO). The city's intent is to elicit voluntary action from the property owners by offering them incentives, invoking the mandate contained in the ordinance only if voluntary compliance is ineffective. The ordinance requires owners of URMs and of certain buildings containing 100 or more occupants to submit to the city's building inspection department engineering reports covering structural deficiencies and external hazards. The time allowed for submission of these reports ranges from 1 to 2 1/2 years, depending upon the building type. The ordinance exempts from this requirement owners of buildings which have been upgraded in accordance with either the Los Angeles Division 88 Standards or the 1973 or later edition of the Uniform Building Code. Under the ordinance, owners also are responsible for informing tenants that the report has been prepared, and for submitting to the building inspection department a plan for dealing with the hazards identified in the engineer's report. The ordinance provides that owners who do not comply may be guilty of a misdemeanor punishable by a maximum fine of $500 or up to six months in jail, and that the city may order the building vacated and, ultimately, demolished.

The timelines for compliance contained in the ordinance are triggered when the building inspection department mails notices to owners informing them of the requirements established by the ordinance. In order to allow compliance to be voluntary rather than mandatory, the city has refrained from mailing these notices. The city plans to continue to defer the mailing as long as the retrofit incentive programs appear to be effective.

INCENTIVE PROGRAM CONCEPT

The City of Upland's incentive program uses a 2 prong approach, one a publicly financed incentive and the other offering private financing. The publicly financed incentive is known as the *Upland Town Center Commercial Rehabilitation Rebate Program.* This program is designed to complement the overall strategy which the city has for the town center, and to provide incentives to landlords to improve the aesthetics of the town center as well as to eliminate public safety hazards. Under the program Upland will reimburse property owners up to $10,000 for seismic engineering, architectural services, city fees and eligible facade improvements. In order to receive the rebate, owners must comply with all the facade improvements recommended by the city's Design Review Committee. Rebates are made after completion of all required seismic and facade work. Priority is given to projects which contain sales tax generating uses on the ground floor.

The private financing technique is called the *Upland Town Center Construction Loan Program.* To develop this program, the city worked with property owners and local banks to

negotiate terms upon which these banks would offer loans for purposes of seismic retrofitting. The five banks which participate in the program, all of which are based in or near Upland, have agreed to offer flexible loan origination fees, interest rates and repayment terms as well as other incentives to owners participating in the city's seismic retrofit program.

PROGRAM RESOURCE REQUIREMENTS

In designing the retrofit incentive program it was of particular importance to Upland that as little staff time as possible be required for development and administration. The city specifically did not want, for example, to implement or manage a low-interest amortized loan portfolio. The design of Upland's seismic retrofit program took approximately 100 hours of staff time over the course of the 9 month design period, which the city feels was very reasonable. The program was developed by the Planning Department with the assistance of Main Street Upland Inc., a group consisting of downtown property owners and merchants. The majority of staff time was devoted to meetings with local bankers and property owners. The city's staff spent a great deal of its time educating all the interested parties on the issues surrounding retrofitting. The city incurred some additional minor program costs, primarily for production of flyers and other program materials (See: EXHIBITS.)

Ongoing administration requirements of the program are minimal, and are incorporated into the regular functions of the planning department: all the work proposed under the ordinance is reviewed in the same manner as any other work proposed in town and all facade renovations go before the Design Review Board. The ordinance does allow the city to utilize the services of civil or structural engineers to review the reports submitted by building owners. The cost of these consultants would be recovered by a fee assessed from the building owner based upon the time required for the review. This fee would then be deducted from any plan checking fees collected for future construction work arising from the report.

To fund the public portion of the program the city used Community Development Block Grant (CDBG) funds (See: LOCAL GOVERNMENT FINANCING OPTIONS - COMMUNITY DEVELOPMENT BLOCK GRANTS). Upland became an entitlement city in 1988. In each of fiscal years 1990/91 and 1991/92 Upland's CDBG Citizens Advisory Committee agreed to allocate $100,000 of the city's total entitlement ($361,000 for FY 90-91 and $410,000 for FY 91-92) to the seismic retrofit program. The level of program funding means that it will take at least 6 years for all the city's URMs to be retrofitted. Also, due to the current economy, some landlords are not able to take advantage of this program because they cannot afford the seismic retrofit.

An important aspect of the program is the fact that the facade improvement activities being funded are not labor intensive (with labor cost comprising less than 13% of total costs), and

therefore are not subject to certain HUD labor requirements. This allows implementation of and participation in the program to remain simple and inexpensive. The city developed a program description which accomplished HUD's National Objectives with respect to Slum and Blight. This source of funding has some shortcomings. As a result of recent regulatory changes, this source of funds has become self-limiting, as only 30% of CDBG funds can be used for slum/blight activities in any 1-to-3 year period.

PROGRAM DEVELOPMENT

"Cooperation" is the word used most often by city staff to describe the successful development of the retrofit incentive program. The city's program was designed with the full support of the mayor and council, the CDBG Citizens' Advisory Committee and city staff. The most important ingredient to the development and success of the program is the spirit of cooperation among the banks, the owners, and the community. Bankers, URM owners, engineers, architects and the city's staff were all educated through their participation in the program development. This education also led to a sense of control on the part of participants which increased their willingness to take part in the program. Since the inception of the program the city and Main Street Inc. have each sponsored 2 informational workshops.

Upland is one of the few communities that has been successful in rallying some interest among its banking institutions in providing loans to property owners who need to retrofit their buildings. Development of the privately-funded portion of the program required much negotiation. A critical factor to the city's success is the fact that the banks involved are all relatively small and headquartered in or near the city. All have deep roots in the area and are committed to Upland's business community. All are interested in fulfilling Community Reinvestment Act requirements, too. (Note that reliance on the local banking community may mean that property owners with credit difficulties will not have access to the program funds.) The city originally suggested that the local banks create a pooled loan fund against which retrofit loans could be made. The banks, however, were uncomfortable with the concept and instead chose each to be more accommodating of owners' requests, individually deciding how best to meet the owners' needs.

Another factor contributing to the city's success is its requirement that owners perform both facade improvements and seismic upgrade work. This is also important to the banks, as facade improvements more obviously add value to the property being upgraded. In linking seismic and facade improvements, Upland also feels it is providing URM owners with more value for their retrofit dollar. The program continues to be very interactive, with the city maintaining its cooperative relationship with property owners. URM owners applying to the program receive a great deal of upfront feedback and review commentary as their project works its way through the system.

Developing the CDBG-funded public component also required patience, education, and cooperation. City staff worked closely with the CDBG Citizen's Advisory Committee, and spent some time working with HUD to develop an acceptable program description. Note that the city does not have a redevelopment area in the town center. Staff felt that having one would have made the process much simpler.

PROGRAM EFFECTIVENESS

The city feels the rebate program resulted in facade improvements above and beyond those directly reimbursable through the grants. All the funds in the rebate program have been conditionally committed, and there is a waiting list for the next funds which become available. Since the program's inception in early 1991, one building has been completely retrofitted under the incentive program. The bank-based construction loan program remains untested.

PROGRAM STRENGTHS

A major strength of the program is its simplicity. The application is easy to complete and the city is eager to assist property owners with their proposals for seismic and facade improvements. The program requires little incremental staff time, however, as owners easily can and do take the necessary steps on their own.

Because the program offers a rebate grant, with funds disbursed only after the improvements have been completed, the city does not need to be concerned about spending money prior to obtaining the desired results. Owners do have to worry about carrying the cost of engineering and other upfront expenses; however a $10,000 grant represents a significant amount of money given labor costs in the city, which makes the money worth waiting for. Because projects can be completed on a timely basis, owners in fact end up carrying the costs for a relatively short time.

Finally, the city is finding that as participants in the programs undertake their projects, other owners are becoming less frightened of the cost and disruption of retrofit and are beginning the process themselves. The programs have thus acted as catalysts.

KEYS TO SUCCESS

Upland's publicly funded incentive program relies on the fact that it is an entitlement city, and is willing and able to allocate a portion of its CDBG funds to a seismic retrofit program. Keys to the development of the privately-funded program included the concentration of hazardous buildings in a single area and the existence of an owners' organization active in that area, as well as the presence of a number of local banks willing to participate in the program.

EXHIBITS

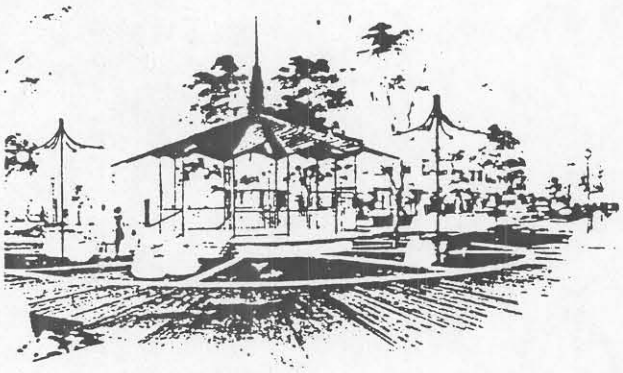
- Town Center Construction Loan Program
- Town Center Commercial Rehabilitation Rebate Program
- Excerpts from Commercial Rehabilitation Rebate Program Application Package:
  - + Cover Letter
  - + Final Application
  - + Program Guidelines
  - + Program Flow Chart
  - + Facade Improvement Guidelines
  - + Owner's Participation Agreement
  - + Selection Criteria for Engineering Services
  - + Directive for the Processing of Plans for Structural Modifications of Unreinforced Masonry Buildings

CONTACTS

Mark Trabing	Housing and Development Specialist	(714) 982-1352
Jeffery Bloom	Planning Director	(714) 982-1352
John Raymond	Main Street Manager	(714) 949-4499

CITY OF UPLAND

EXHIBITS



CITY OF UPLAND

"The City of Gracious Living"

460 No. Euclid Ave. P.O. Box 460
Upland, California 91786
(714) 982-1352

March 20, 1991

Dear Town Center Building Owner:

Thank you for submiting a Pre-application to the City of Upland Town Center Commercial Rehabilitation Rebate Program. This Pre-application helped us to determine the interest in this program. The interest is great and now we are ready to go. Enclosed please find the Final Application. To assist you in the process of obtaining a maximum of $10,000 rebate for engineering, architectural services, city fees and eligible facade improvements, the City has developed the enclosed eight documents:

1. Commercial Rehabilitation Rebate Program Guidelines
2. Commercial Rehabilitation Rebate Program Flow Chart
3. Facade Improvement Guidelines
4. Final Application
5. Selection Criteria for Engineering Services
6. Owner's Paricipation Agreement
7. Interim Design Guidelines
8. Directive For the Processing of Plans for Structural Modifications of Unreinforced Masonry Buildins (for engineer or architect)

Please read this material carefully, and submit the Final Application as per the instructions, as soon as possible. Should you have any questions, please call me at 982-1352.

Sincerely,

Mark Trabing

Mark Trabing
Housing and Development Specialist

UPLAND TOWN CENTER Construction Loan Program

Created and sponsored by:

CITY OF UPLAND
P.O. Box 460
Upland, CA 91785
(714) 982-1352

MAIN STREET UPLAND, INC.
P.O. Box 364
Upland, CA 91785
(714) 949-4499

A private lending program designed to assist Upland Town Center Property Owners with the seismic retrofit and facade improvement of their buildings.

SUMMARY

The Upland Town Center Construction Loan Program was established by the City of Upland, Main Street Upland, Inc., and the local lending community to help the Town Center property owners do two things: bring their buildings up to seismic building codes as required by city and state laws, and improve the appearance of the front and rear facades of their buildings.

The program is designed to be a flexible financing tool for the property owners, and to create an opportunity for the local lenders to participate in the seismic retrofitting -- and revitalization -- of the Upland Town Center. The creation of the Construction Loan Program reflects the willingness of the local lending community to fully support the revitalization effort in the Upland Town Center.

This program is designed to finance projects that would be more difficult to finance under conventional loan programs. There is a greater risk in the financing of downtown projects due to the age of the structures and the associated seismic risk.

The "risk" to lenders is reduced by following strict underwriting criteria

while supplying competitive financing rates. Additionally, only projects which have as their primary purpose the seismic reinforcement of the building are allowed to participate in the Program.

The Construction Loan Program is designed to work closely with the City of Upland's Commercial Rehabilitation Rebate Program, funded by Community Development Block Grant money. This program provides up to $10,000 in rebates to cover the "soft" costs -- structural engineering and architecture, city fees -- as well as eligible facade work.

ELIGIBLE EXPENSES

Eligible project expenses include seismic retrofit, such as shoring up or replacing walls and ceilings, replacing a roof, or construction of a roof diaphragm. (Note: All work may be eligible for loan program purposes if acceptable to the City. Rebate program has limitations relating to certain forms of work.)

RATE & TERMS

The rate and terms of the program are not fixed; rather, the program is designed to provide flexibility to both owners and lenders. Depending on the strength of the project and the owner's credit, there is the possibility of lower rates or more flexible terms. In most cases, the program provides the owners an opportunity to obtain financing (where they may not have been able to) and technical assistance for their projects.

APPLICATION PROCESS

Borrowers must meet the application and credit criteria of the participating lenders. The City of Upland will make a preliminary determination of the project's eligibility, i.e. that the building requires seismic retrofit and is located in the Town Center target area. It is also anticipated that most of the borrowers will have applied to the City's rebate program as well. Eligibility for the rebate program will be determined upon review of the final application.

Each owner is encouraged to contact the participating lenders for more information about the application process. Each lender has different rates, application process, and set of criteria, so owners are encouraged to discuss their projects with more than one lender. The contact persons at each of the participating lenders are listed on the following page.

PARTICIPATING LENDERS

Pomona First Federal Savings & Loan

Ted Aiken, Assistant Vice President & Community Investment Officer
550 Indian Hill Boulevard
P.O. Box 3069
Pomona, CA 91767
(714) 625-4871

Upland Bank

Dick Price, Vice President & Manager
or Kitty Hill, Assistant Vice President & Assistant Manager
100 North Euclid Avenue
P.O. Box 5009
Upland, CA 91785
(714) 946-2265

Chino Valley Bank

Russell E. Scranton, Vice President
818 North Mountain Avenue
P.O. Box 1309
Upland, CA 91785
(714) 946-6921

First Trust Bank

Paul Stratton, Vice President & Manager
Foothill Branch
234 East Foothill Boulevard
Upland, CA 91786
(714) 983-0511, extension 440

Foothill Independent Bank

Bill Davis, Vice President & Manager
569 North Mountain Avenue
Upland, CA 91786
(714) 981-8611

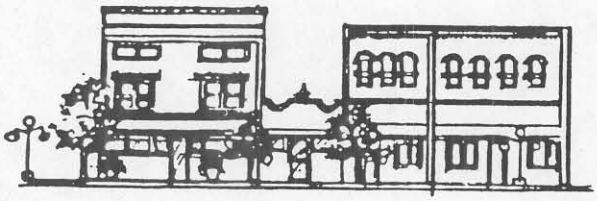
For more information about the **City of Upland's Commercial Rehabilitation Rebate Program**, contact:

Mark Trabing, Housing & Development Specialist
City of Upland
460 North Euclid Avenue
Upland, CA 91786
982-1352

For more information about Town Center Construction Loan Program or available technical assistance, contact:

John Raymond, Director
Main Street Upland, Inc.
134 North 2nd Avenue, Suite G
P.O. Box 364
Upland, CA 91785
949-4499

TOWN CENTER
COMMERCIAL REHABILITATION REBATE PROGRAM



$10,000 GRANT REBATES FOR COMMERCIAL BUILDING OWNERS UNDERTAKING SEISMIC RETROFIT AND FACADE IMPROVEMENTS

CITY OF UPLAND

P.O. BOX 460
UPLAND, CALIFORNIA 91786

(714) 982-1352

SUMMARY

The **Town Center Commercial Rehabilitation Rebate Program** will reimburse property owners of unreinforced masonry buildings up to $10,000 for seismic engineering, architectural services, city fees and eligible facade improvements. Rebates will only be made after completion of all required seismic and facade work is complete.

A **Town Center Construction Loan Program** has also been established by local lenders in cooperation with Main Street Upland Inc. and the City. A separate brochure on this program is available from Upland Main Street Inc. or the City.

PROJECT ELIGIBILITY

1. The project must be a commercial building located within the Upland Town Center.

2. The project must include:

   A. Complete seismic reinforcement of the building to meet the City's Seismic Ordinance; and,

   B. Eligible facade improvements approved by the Planning Department.

3. Priority will be given to projects which contain sales tax generating uses on the ground floor.

ELIGIBLE EXPENSES

1. **Engineering Plans** - Structural engineering plans, including specifications and cost estimates of structural modifications are an eligible expense. Plans must be done by a licensed structural engineer. Seismic reinforcement of the unreinforced masonry structure must be in conformance with the Upland Seismic Ordinance.

2. **Architectural Plans** - Plans for facade improvements or seismic retrofit (including floor plans, elevations, colors and material samples, and any other appropriate specifications) may be required by the Planning Department. If these plans are done by an architect, then the architect's fee is an eligible rebate expense. Improvements to the facade must conform to the Upland Town Center Interim Design Guidelines.

3. **Facade Improvements** - Supply and installation of signs and awnings where the installation (labor) portion of the contract involves no more than an "incidental amount" (13% of the contract amount). For example, if the total cost of manufacturing and installing a sign is $3000, and the installation portion of the contract is not over 13% of $3,000 ($390), you are eligible for a $3000 rebate. If the installation or labor portion of the contract is over 13% you will not receive a rebate. Other facade improvements may qualify if they meet the criteria noted above.

4. **City Fees -**

   A. **Building Department fees:** plan check fee and building permit fees are reimbursable. Make sure that your engineer does not include these costs in his engineering fee. You will need receipts for plan check and permits to submit to the Planning Department for a rebate after construction is completed. The cost of plan check fees and permit fees for the Building Department will depend upon the extent of construction required.

   B. **Planning Department fees:**

   A Design Review Board fee ($90) and Conditional Use Permit fees (if required) are reimbursable.

For an application and a complete information packet on this program, call the City Planning Department.

CONTACT PERSONS

For information on the overall Commercial Rehabilitation Rebate Program:

Mark Trabing
Housing & Development Specialist, City Planning Department
460 North Euclid Avenue
Upland, CA 91786
(714) 982-1352 Ext. 252

For facade improvements and Design Review Board:

John Atwater
Senior Planner, City Planning Department
460 North Euclid Avenue
Upland, CA 91786
(714) 982-1352 Ext 252

For information on the Town Center Construction Loan Program or other Town Center programs:

John Raymond, Director
Main Street Upland, Inc.
Second Avenue Mall
134 N. Second Avenue, Suite G
Upland CA 91786
(714) 949-4499

CITY OF UPLAND

COMMERCIAL REHABILITATION REBATE PROGRAM

FINAL APPLICATION

Property Information

1. Property Address _____

2. Name of Tenant(s) _____

   (Please attach copy of lease) _____

   _____

3. Property Owner Contact Person (If partnership attach Partnership Agreement _____

   _____

   Address _____

   _____

   Phone _____

Project Information

4.

	Proposed Engineer (for seismic)	Proposed Architect (for required facade improvements, if an architect is required)
Name:	_____	_____
Address:	_____	_____
	_____	_____
Phone:	_____	_____
Contact Person:	_____	_____

Project Description

5. Give a detailed conceptual description of proposed facade improvements. Also describe seismic retrofit work if you are aware of what work is needed:

Seismic - _____

_____

_____

Facade - _____

_____

_____

_____

_____

_____

Please attach a Preliminary Design of facade improvements (initial conceptual sketch of improvements) and a photograph of each exposed side of the building to be renovated. Specify in as much detail as you can, including colors and materials.

Project Financing

6. Proposed sources of funding $_____

Owner's Cash Contribution $_____

Conventional loan funds $_____

Firm financial commitment? Yes_____ No_____
If yes, please attach documentation

Are you interested in learning more about the Commercial Rehabilitation Construction Loan Program offered by local private lenders? Yes_____ No_____

Commercial Rehabilitation Construction Loan funds needed $_____

If your are an owner-user of the building, are you interested in learning more about Small Business Administration (SBA) loan guarantee programs?

Yes_____ No_____

---

7. Signature Date

_____ _____

_____ _____

The applicant certifies that the information contained in this application and attachments are true and that you have read and understand the Commercial Rehabilitation Rebate Program Guidelines.

City of Upland Town Center

COMMERCIAL REHABILITATION REBATE PROGRAM GUIDELINES

I. SUMMARY

The Upland Town Center Commercial Rehabilitation Rebate Program will reimburse property owners of unreinforced masonry buildings up to $10,000 for seismic engineering, architectural services, city fees and eligible facade improvements. This document addresses the guidelines for this rebate program.

A Construction Loan Program has also been established by local lenders in cooperation with Main Street Upland Inc. and the City. A separate brochure which addresses this program, is available from Main Street Upland Inc. or the City.

II. PROJECT ELIGIBILITY

1. The project must be a commercial building located within the Upland Town Center.

2. The project must include: a) complete seismic reinforcement of the building to meet the City's Seismic Ordinance; and, b) eligible facade improvements approved by the Planning Department.

3. Priority will be given to projects which contain sales tax generating uses on the ground floor.

III. ELIGIBLE EXPENSES

1. Engineering Plans - Structural engineering work, including plans, specifications, and cost estimates of structural modifications, must be done by a licensed structural engineer. Seismic reinforcement of the unreinforced masonry structure must be in conformance with the Upland Seismic Ordinance. Also see a seperate handout contained in this packet titled "Proposed Selection Criteria for Engineering Services."

2. Architectural Plans - Plans (including floor plans, elevations, colors and material samples, and any other appropriate specifications) may be required by the Planning Department's Design Review Board for review of facade improvements. If these plans are done by an architect, then the architect's fee is an eligible rebate expense.

Improvements to the facade must conform to the Upland Town Center Interim Design Guidelines.

3. Eligible Facade Improvements - Supply and installation of signs and awnings where the installation (labor) portion of the contract involves no more than an "incidental amount" (13% of the contract amount). For example, if the total cost of manufacturing and installing a sign is $3000, and the installation portion of the contract is not over 13% of $3,000 ($390), you are eligible for a $3000 rebate. If the installation or labor portion of the contract is over 13% you will not receive a rebate. Other facade improvements may qualify if they meet the criteria noted above. Please talk to Mark Trabing, Planning Department, before undertaking facade improvements (for which you want a rebate) other than signs and awnings. Also see a seperate handout contained in this packet titled "Facade Improvement Guidelines."

4. Permits - The cost of the Building Department's 1) plan check fee and building permit fees are reimbursable. Make sure that your engineer does not include these costs in his engineering fee. You will need receipts for plan check and permits to submit to the Planning Department for a rebate after construction is completed. The cost of plan check fees and permit fees for the Building Department will depend upon the extent of construction required.

The cost of the Planning Department's 1) Design Review Board fee ($90), and 2) Conditional Use Permit fees (if required) are reimbursable .

IV. PROCEDURES REQUIRED FOR A REBATE

1. Submit Final Application, along with attachments (detailed on the application) to the City's Planning Department C/O Mark Trabing, Housing and Development Specialist. Before submitting your application, when you are developing the conceptual idea of your facade improvements, it would be a good idea to talk to John Atwater or the "Current Planning" staff regarding various city requirements which may effect your facade proposal.

2. Planning and Building Departments will review the Final Application and determine if an architect is needed. You will either receive approval of your proposal by a Conditional Commitment letter or you will receive a request to discuss the proposed project with you.

3. Owner hires engineer and architect (if necessary).

4. Owner submits two sets of engineering plans to the City Building Department and one set to the Planning Department. Owner will also submit the Design Review Board Application (which will contain working drawings and specifications of facade improvements) to the Planning Department.

5. The Building Department and the Planning Department's Design Review Board review plans. Plans are approved or owner asked to revise.

6. After engineering plans and facade plans are approved, owner obtains contractor bids for work. Facade work must be under a seperate contract than the seismic work.

7. Owner submits to the Upland Planning Department, C/O Mark Trabing : A) a copy of the successful bid(s) for eligible facade work, B) documentation of the cost of engineering and architectural plans, and C) documentation of the cost of permits, plan check fees, Design Review Board fees, and Conditional Use Permit fees (if any). The rebate is based upon the total of these costs.

   After the rebate amount is agreed upon (before the beginning of construction), an Owner Participation Agreement (Agreement) will be executed between the City and the building owner. This Agreement will include in Attachment B of the Agreement, a Scope of Work and Budget (the amount of rebate to be paid to the building owner) upon completion of construction. The City will complete Attachment B once it is agreed upon between the City and the Owner. Do not begin seismic or facade improvements until all city approvals and building permits are issued.

8. Owner begins and completes construction.

9. After construction is completed, the building owner will submit to Mark Trabing: a) evidence of final approval of all related building permits; b) a copy of Design Review Board minutes of approval of facade improvements; c) photographs of completed facade improvements, d) invoices for all engineering and architectural design work and for facade work. The rebate designated in the Owner's Participation Agreement will then be paid to the building owner.

10. The amount of the rebate may only be modified by amending the Scope of Work in the Owner's Participation Agreement, and approved by the Housing and Development Specialist. Claims for reimbursements of items not contained in the Agreement and amendments will not be

honored. Facade improvements should be made within 180 days of signing of the Owner's Participation Agreement

Contact persons:

For information on the overall Commercial Rehabilitation Rebate Program:

Mark Trabing
Housing & Development Specialist, Planning Department
460 North Euclid Avenue
Upland, CA 91786
(714) 982-1352 Ext. 252

For facade improvements and Design Review Board:

John Atwater
Senior Planner, Planning Department
460 North Euclid Avenue
Upland, CA 91786
(714) 982-1352 Ext 252

For information on the Commercial Constuction Loan Program or other Town Center programs:

John Raymond, Director
Main Street Upland, Inc.

TOWN CENTER COMERCIAL REHABILITATION REBATE PROGRAM

FLOW CHART

1

Owner submits Final Application and Preliminary Plans to Planning Department (P.D.).

2

P.D and Building Department (B.D.) review and determine if architect needed. P.D. issue Contitional Committment letter or discuss with Owner.

3

Owner hires engineer & architect (if neccessary). Develoc plans. Submit plans to P.D. & B.D and submit Design Review Board Application & working drawings of facade improvements to P.D.

4

P.D. & B.D. review plans. Approve or ask Owner to rework engineering and facade plans.

5

After plans approved Owner obtains construction bids for seismic and facade work.

6

Owner submits eligib rebate costs to P.D. i.e. architectural & engineering fees, ci fees and cost of eligible facade improvements.

7

Owner & City agree upon rebate amount and sign Owner Participation Agreement

8

Owner begins and completes seismic and facade construction.

10

Owner submits signed off permits and invoices to obtain rebates.

Note: See "Commercial Rehabilitation Rebate Program Guidelines" for more detailed procedures.

City of Upland
Commercial Rehabilitation Rebate Program

FACADE IMPROVEMENT GUIDELINES

The Commercial Rehabilitation Rebate Program has two purposes, assisting property owners to: 1) reinforce their unreinforced masonry buildings, and 2) improve the facade(s) of their buildings, at a level to be determined with the cooperation of the City Planning Department.

Due to federal regulations tied to the use of federal money, the City is restricted on the type of facade improvements it can reimburse owners for. The City will rebate eligible facade improvements, but may require other facade improvements not eligible for a rebate.

The total amount to be rebated will not exceed $10,000 per building. The amount available for the cost of facade improvements is $10,000 less the amount billed for engineering costs (for seismic retrofit) and for architectural services (which may be required for facade improvements) and permits (if not included in the engineering costs).

After reviewing your conceptual ideas for facade improvements in the Final Application, the Planning Department may require the building owner to hire an architect to draw plans of the facade improvements for submittal to the Design Review Board. The need for an architect will be made on a case by case basis depending upon the scope of work.

All facade improvements in the Town Center, regardless of participation in the Commercial Rehabilitation Rebate Program, are subject to the Design Review Board process. All facades should comply with all municipal codes including the sign ordinance, as well as the Town Center Interim Design Guidelines. The Planning Department will assist you in determining if your plans are in compliance.

The types of facade improvements you may wish to consider are the restoration, addition or replacement of the following types of facade improvements. The following facade improvements <u>are not necessarily eligible</u> for rebates.

- ornamentation and trim
- doors and windows
- columns or balustrades
- pavement surfaces

- roof systems visible from street
- inappropriate structural. additions
- exterior lighting, attached to the building, not free-standing lighting in the public right of way
- landscaping - trees, planter boxes
- shutters
- commercial signs attached to buildings
- repointing of brick work, exterior water treatment
- remove obsolete signs and awnings
- awnings
- any other type of facade improvements you can think of

The following types of facade improvements are definitely eligible for a rebate if the labor portion of the contract is under 13% of the contract price:

Supply and installation of signs and awnings, where the installation portion of the contract involves not more than an "incidental amount" (13% of the contract amount). For example, if the total cost of manufacturing and installing a sign is $3,000 and the installation portion of the contract is not over 13% of $3,000 (or $1,690), you will receive a $3,000 rebate. If the installation or labor portion of the contract is over 13% you will not receive a rebate. Other facade improvements may qualify for a rebate if they meet the criteria noted above. This rather complicated formula is required by the federal government. Please talk to Mark Trabing, Planning Department, before undertaking facade improvements (for which you want a rebate) other than signs and awnings.

Facade Improvement Definitions

For the purposes of this program, the following definitions will apply:

Awnings/Canopy: A temporary, retractable shelter, that is supported entirely from the exterior wall of a building.

Codes: The latest editions of the City of Upland Building Code and Zoning Code.

Design Review: City Planning Department procedures that reviews plans for consistency with the Interim Design Guidelines and other Codes.

Design Guidelines: The Town Center Interim Design Guidelines, developed to ensure sensitive treatment of building exteriors.

Exterior Lighting: Lighting fixtures and the installation of same, attached or connected to a building undergoing

renovation. Exterior lighting does not include free-standing lighting in the public way.

Facade: The entire exterior surface of a building from grade to the roof line. Buildings that abut two streets and/or an alley, empty lot, parking area, or open space may have other faces considered facades at the discretion of the Planning Department.

Landscaping: Items such as trees, bushes, and planter boxes are eligible when considered integral to the facade treatment of the building. The Planning Department will determine eligibility

Preliminary Design: Initial conceptual sketches of improvements based on the objectives of the owner(s). Preliminary designs are submitted with the Final Application.

Professional Fees: These costs include engineering and architectural services fees and do not include expenses spent on materials, physical improvements, equipment, or labor directly related to their installation.

Shutter: Moveable cover or screen for a door or window to provide protection from the elements.

Sign: Any commercial sign attached to the building which is consistent with the City of Upland Sign Ordinance and the Town Center Interim Design Guidelines.

Working Drawings and Specifications: The detailed drawings which show detailed methods of installation and materials and the specifications to be followed in the construction of the improvements.

City of Upland

COMMERCIAL REHABILITATION REBATE PROGRAM

OWNER PARTICIPATION AGREEMENT

THIS AGREEMENT made and entered into this _____ day of _____ 1991, by and between_____ _____ (hereinafter "Owner") and the City of Upland, a municipal corporation, (hereinafter "City").

WITNESSETH

WHEREAS, Owner is owner of a commercial property commonly known as _____, Upland California (the "Property"), which is legally described in Exhibit "A" attached hereto,

WHEREAS, the property is in need of certain repairs and rehabilitation work, the cost of which has the effect of discouraging the upgrading of the property.

WHEREAS, City is the administrator of federal funds which may be used to provide incentives for the rehabilitation of commercial buildings, owned by a private for-profit business, where improvements are limited to the exterior of the building and the correction of code violations.

WHEREAS, Owner desires to undertake improvements to the building with the assistance of the financial incentives offered by the City.

NOW, THEREFORE, for and in consideration of their mutual promises, the Owner and the City hereby agree as follows:

1. REBATE AMOUNT: City shall reimburse Owner an amount not to exceed: _____ Dollars ($ _____) upon satisfactory completion of the rehabilitation work upon the property (the "Improvements") in accordance with the Scope of Work and Budget, attached hereto as Exhibit "B" and submission of acceptable evidence of full prior payment of all associated costs.

2. FINANCING: Owner agrees to finance the cost and expenses of constructing the Improvements and cost and expenses incidental thereto, using private funds.

3. TIME OF PERFORMANCE: Owner agrees to cause construction of the Improvements to be commenced and to be prosecuted with due diligence and good faith without delay, so that the same will be fully completed not later than _____ days after the date of this Agreement.

4. CHANGES IN WORK: Owner shall not permit any amendments or modification of the Improvements or the performance of any work pursuant to such amendments or modifications, without prior written consent of the City first being obtained with respect thereto.

5. RIGHTS OF INSPECTION: City shall have the right at any time and from time to time to enter the property for the purposes of inspection. Owner agrees to provide access to any such records pertaining to the project as the City may deem necessary to establish proper accounting of rebate amount.

6. INDEMNIFICATION: Owner shall indemnify, defend and hold harmless, the City its officers, agents, or employees from and against any loss, liability, or expense from defense costs, legal fees, and claims for damages that may arise or result from the wrongful acts or omissions or the allegedly wrongful or negligent acts or omissions of the Owner, its officers, agents or employees.

7. AGENCY: It is understood and agreed that the Owner is in no way the agent, employee or contractor for the City and the City will merely reimburse the Owner on the basis set forth in this contract for work and improvements done by the Owner.

8. USE OF DEBARRED CONTRACTORS: Owner shall not directly or indirectly employ, award contracts to, or otherwise engage the services of, any contractor during any period of disbarment, suspension or placement in ineligibility status by the U.S. Department of Housing and Urban Development (HUD) under the provisions of 24 CFR Part 24.

9. RELOCATION: Owner will no cause the displacement of any business, family or individual as defined under the Uniform Relocation Act, as a result of the project.

10. COMPLIANCE WITH REHABILITATION STANDARDS: All plans and specifications must comply with the City of Upland: Building and Fire Codes, Seismic Ordinance, General Plan and Zoning Ordinances and the Town Center Interim Design Guidelines.

11. THIRD PARTIES: This Agreement is made for the sole benefit of the Owner and the City and the City's successors and assigns, and no other person or persons shall have any rights or remedies under or by reason of this Agreement or any right to the exercise of any right or power of the City hereunder nor shall the City owe any duty whatsoever to any claimant for labor performed or materials furnished in connection with the construction of the Improvements.

IN WITNESS WHEREOF, The parties hereto have executed this agreement as of the day and year first set forth hereinabove.

"CITY"

By_____
City Manager

"OWNER"

By_____

Attest

_____
City Clerk

CITY OF UPLAND
COMMERCIAL REHABILITATION PROGRAM

SELECTION CRITERIA FOR ENGINEERING SERVICES

The City of Upland will not select an engineering firm for the owner, nor will it recommend one firm over another, this document is intended to assist property owners in selecting a qualified and reliable engineering firm for their project. The enclosed requirements include those that the City of Upland will examine when the work is submitted, and gives each owner a set of criteria by which to judge several firms equally.

To be eligible for a rebate, any contract executed with an engineering firm must include language that the engineer has read and reviewed the Seismic Safety Ordinance and attests that the work to be performed is in compliance with it. The costs quoted in a proposal must include the costs of any and all testing to be performed on the structure, as well as the costs of all plans and specifications necessary for a building permit.

I. Proposal Format

Property owners are free to select their own engineers, but should judge firms based on proposals that address the criteria below. Before actually hiring any engineering firm, owners are encouraged to meet and discuss their projects with more than one firm. A description of each firm, for purposes of comparison between firms, should consist of a report including, but not limited to, the following:

a. Approach and objectives
b. Methodology
c. Cost analysis for implementation
d. Time frame for completion
e. Firm/team description
f. Relevant experience
g. Key personnel
h. References

II. Scope of Work

The engineer will be required to prepare plans, specifications, and cost estimates to enable the participating owner to proceed with appropriate structural modifications. Because several of the buildings in the Town Center may be eligible for historic designation, the engineer should show some knowledge of and experience in structural engineering and architectural rehabilitation of historic structures, even if the particular property in question is not a historic property. This may include knowledge and experience with the Secretary of the Interior's Standards for Historic Preservation and guidelines for applying the standards for stabilization, rehabilitation, and preservation. The Town Center Interim Design Guidelines loosely follow the Secretary of Interior's Guidelines, even for non-historical buildings.

Engineers will be required to apply these standards and guidelines to any and all modifications to buildings which may be eligible for historic certification. These are buildings which have been identified on the City's Historic Buildings Survey.

For any building, whatever its historic status, the engineer will be required to submit to the Building Department materials sufficient to comply with Section 8109.09 (the reporting section) of the City of Upland Earthquake Safety Ordinance. The text of that section follows:

City of Upland Building Department
Text of Seismic Ordinance Referring to Engineer's Report

Section 8109.09

.050 Format for the Report. The following is a basic outline the format each engineering report should follow. This outline is not to be construed to be a constraint on the professional preparing the report, but rather to provide a skeleton framework within which individual approaches to assembling the information required by the ordinance may be accomplished. It will also serve as a means for the City to evaluate the completeness of each report.

.0010 General Information. A description of the building including:

(i) the street address;

(ii) the type of occupancy use within the building, with separate uses that generate different occupant loads indicated on a plan showing the square footage of each different use;

(iii) plans and elevations showing the location, type and extent of lateral force resisting elements in the building (both horizontal and vertical elements)

(iv) a description of the construction materials used in the structural elements and information regarding their presentcondition;

(v) the date of the original construction, if known, and the date, if known, of any subsequent additions or substantial structural alterations of the building;

(vi) the name and address of the original designer and contractor, if known, and the name and address of the designer and contractor, if known, for any subsequent additions or substantial structural alterations.

.0020 Investigation and Evaluation of Structural Systems. All items to be investigated and the methods of investigation for each type of building under consideration are contained in Appendices A and B, available from the city's building inspection department.

.0030 Test Reports. All field and laboratory test results shall be included in the report. Evaluation of the significance of these test results shall be made with regard to each structural system or typical connection being evaluated. This evaluation may be limited to a statement of the adequacy or inadequacy of the system or connection based on the lateral load demand it would be required to resist by calculation. If tests reveal inadequacy, a conceptual solution must be included in the report.

.0040 Conclusions. Based on the demand/capacity ratio and the specific evaluation items contained in Appendices A or B attached to the ordinance codified in this chapter, a statement shall be provided explaining the overall significance of the deficiencies found to exist in the building's lateral force resisting system regarding potential collapse or partial collapse failure.

CITY OF UPLAND
DIRECTIVE FOR THE PROCESSING OF PLANS
FOR STRUCTURAL MODIFICATION OF UNREINFORCED MASONRY
BUILDINGS

The Upland Building Department has identified approximately 67 unreinforced masonry buildings within the City. These structures are susceptible to failure in the event of a moderate or strong earthquake. To ensure the safety of the public, the Upland City Council has enacted the Seismic Hazards Ordinance which establishes the process for stabilizing these structures.

To facilitate the seismic stabilization review process, an outline of the process, and the major issues of concern are listed below.

I. SCOPE OF PROJECT MEETING: With the initial contact between the applicant and the Planning Department, a joint meeting with the Building and Planning Departments, the developer, project engineer or architect will be scheduled. The purpose of the meeting will be to explore the scope of the proposed seismic reinforcement project. If the project location is within the Town Center boundaries, the applicant will receive a copy of the Interim Design Guidelines which outlines the design issues for that area.

The scope of project meeting will also discuss the potential effects of the structural modifications to the architectural integrity of the exterior of the building and the potential future use of the interior.

II. PROJECT REVIEW PROCESS Any or all of the following boards may review the project. Check with the Planning Department project coordinator for further information:

A. Administrative Committee
B. Design Review Board
C. Environmental Review Board
D. Planning Commission (public hearing)
E. Redevelopment Agency
F. City Council

III. REQUIRED CONSTRUCTION PLAN CONTENT:

A. **PLANS FOR PLANNING DEPARTMENT**
Architectural plans including elevations and floorplans shall be submitted. Plans shall note any proposed modifications to the interior or exterior of the building. Color and material modifications shall also be completely noted and detailed on the plans.

The architectural plans shall also include notes and/or details on the following:

1. Proposed color and/or material changes.
2. Modification to any door and/or window openings, frames or hardware.
3. Modification of exterior pediments, parapets or ornamentation.
4. Removal of or repainting of exterior surfaces. (The methods of paint removal shall be completely noted and detailed on the plans).
5. Addition or removal of awnings or shade providing devices.
6. Removal and/or replacement of exterior facade treatment. (The methods of material removal shall be completely noted and detailed on the plans).
7. Proposed modifications to existing ceiling levels.
8. Proposed locations of interior columns or walls.
9. Addition of brick veneer.

B. **PLANS FOR BUILDING DEPARTMENT:**
Structural plans shall be submitted, including notes and details of any proposed additions or modifications to the interior or exterior of the building. Plans shall include details and locations of the following:

1. The addition of structural frames.
2. The addition or removal of cross or partition walls.
3. All connection details between the roof and wall, floor and wall, or wall to wall.
4. A statement of the theory or methodology followed in accordance with the City of Upland Seismic Ordinance.
5. The statical system used for the stabilization or retrofitting of the structure.
6. The details and description of the parapet connections to the roof diagram.

IV. CONTRACTOR LIST Applicant's shall submit a listing of the names and phone numbers of all contractors and subcontractors involved in the project to the Building and Planning Departments. This list shall be kept current and specifically identify the responsibilities of each contractor or sub-contractor.

V. PERIODIC INSPECTIONS The Building and Planning Departments will schedule special, periodic inspections with contractor and/or sub-contractors, prior to commencement of work during various stages of construction. The inspections are on an as need basis, determined by the City staff or at the request of the developer or contractor. The intent of the inspections is for clarification of methods or materials as described on plans submitted to the Building and Planning Departments.

All existing regulations for the processing of building permits and the associated requirements will be the same as for any other structural modification to an existing building.

This directive in no way precludes additional review by the City as determined necessary by the Chief Building Official or the Planning Director.

JZ 8/90

CITY OF WEST HOLLYWOOD

Population:	36,000
1990/91 General Fund	
Revenues:	$34 million
Fund Balance:	$700,000
# URMs:	81
Type of URMs:	80% commercial 20% residential
Ordinance Type:	mandatory retrofitting
Retrofit Incentives:	(1) planning fee waivers (2) zoning incentives (3) rent control modifications (4) Mello-Roos district bonds
Funding Source:	(1) general fund (2) Mello-Roos district bonds

BACKGROUND

Incorporated as a General Law city in November 1984, West Hollywood is one of the youngest cities in Los Angeles County. The strength of West Hollywood's economic base has enabled the city to provide an array of social services to its residents. West Hollywood provides more money per capita to fund social services for its residents than any other municipal government in the United States. The city is located in an area which is highly susceptible to earthquake damage. The Hollywood/Raymond Fault, the Santa Monica Fault and the Elysian Park Fault, a "hidden" fault, all pass through some part of the city's 1.9 square miles.

HAZARDOUS BUILDINGS PROFILE

The unreinforced masonry buildings (URMs) in West Hollywood were generally constructed before 1933. Thirty-two of the structures originally identified as potentially hazardous buildings were eventually proven to have sufficient structural integrity to be outside the

scope of the city's ordinance. A majority, 63, of the 81 URMs remaining on the list are exclusively commercial in use or a mix of commercial and residential uses. There are 12 apartment buildings, containing a total of 210 residential units, on the list of URMs. The remaining 6 structures include a homeless shelter, a fire station, garages and a warehouse.

ORDINANCE

The City of West Hollywood originally adopted Chapter 96 of the Los Angeles County Uniform Building Code as its Earthquake Hazard Reduction Ordinance. Although in effect since 1985, little had been done to require compliance with the noticing and retrofitting schedules. In April 1990, the Departments of Community Development and Rent Stabilization submitted a series of amendments to Chapter 96 which were approved by the City Council. The amendments related to the procedure and timing of seismic retrofit improvements, some policy options for financing incentives, procedures for demolition and the rules and regulations of the Rent Stabilization Ordinance as they relate to seismic rehabilitation.

The amendments to Chapter 96 provided a more flexible schedule to URM owners for complying with the ordinance. The original schedule called for complete retrofitting within 3 years of being served notice, with a 1 year extension upon the early installation of wall anchors. The amended schedule allows 12 to 18 months for the installation of anchors and 4 to 7 years, depending on building type, for full compliance. Under these amendments, all URMs in West Hollywood will have satisfactory wall anchorage within 2 years and full strengthening within 8 years. The amendments also allow the owners of historical buildings an additional 90 days for compliance (included in the schedule referenced above) to accommodate review by the Cultural Heritage Advisory Board.

The noticing section of West Hollywood's ordinance requires the city to record the URM status of a building so that such status is fully disclosed upon sale of the property. The revamped schedule for noticing URM owners under the amendments includes new classifications which attempt to identify structures, such as supermarkets, pharmacies, etc., whose function immediately following an earthquake disaster are important to recovery from such a disaster.

The amendments also addressed the issue of URM owners passing along the costs of retrofitting to tenants in light of West Hollywood's strong rent control ordinance. New amortization schedules and rent increase allowances for seismic retrofit projects were developed. A streamlined process for rent increase applications directly related to seismic retrofitting was also developed.

INCENTIVE PROGRAM CONCEPT

The seismic retrofit incentive program devised by the City of West Hollywood is multi-faceted. The program provides both financial and non-financial incentives to the owners of URMs.

Fee Waivers play a key role in West Hollywood's retrofit incentive program. As an incentive to encourage owners to complete full strengthening of the structure as quickly as possible, the city waives the planning permit fees for owners who choose to do the full retrofit upfront. The city also waives the fee for a rent increase application when such an application is directly related to a rent hike to finance seismic improvements.

Zoning Incentives are also part of the city's retrofit program. West Hollywood's zoning ordinance does not require buildings that undergo major rehabilitation to comply with new zoning or land use requirements. This allows building owners to avoid demolishing a building or evicting current tenants because the retrofitted building would not be in compliance with new zoning requirements.

The *Rent Control Modifications* allow owners doing seismic retrofit work to pass through the costs of this work to tenants on a much quicker basis. The rules and regulations of the rent stabilization ordinance were amended to establish a 30-year amortization period for seismic rehabilitation work. The rules regarding the maximum rent increase allowed were also changed for owners doing seismic rehabilitation work. Rent increases over 50% are allowed to be passed on to tenants over a 3 year period. As an example, a rent increase of 60% would result in a 12% increase in each of the first 2 years (12% is presently the maximum annual increase) and an increase of 36% in the third year. It was felt this phasing of the increases would allow tenants sufficient time to look for other housing accommodations if necessary.

A *Mello-Roos District* is being formed by West Hollywood. (See: LOCAL GOVERNMENT FINANCING OPTIONS - MELLO-ROOS COMMUNITY FACILITIES DISTRICT.) The bonds issued by this district will provide a source of long-term, market-rate financing to URM owners. The proposed Mello-Roos district will include 5 properties (4 commercial structures and a 21-unit condominium) and will total approximately $1 million. It is expected 12 of the 21 condominium units will be included in the district for a total of approximately $750,000.

PROGRAM RESOURCE REQUIREMENTS

Of the 4 incentive program components examined above, only the fee waivers have a direct fiscal impact on the city. West Hollywood estimates it will forego a maximum of $69,000 by

waiving planning permit fees, and a maximum of $12,000 by waiving rent increase application fees. The zoning incentives do not represent any additional cost to the city. The proposed Mello-Roos bond issue does not represent a direct cost to West Hollywood, but the great amount of staff time spent on developing the district represents an indirect cost to be borne by the city. The city also estimates it will take approximately 10% of one staff person's time for a year to coordinate the initiation of the Mello-Roos bonds loan program.

PROGRAM DEVELOPMENT

West Hollywood's revised seismic retrofit ordinance represents a great deal of work by the city's staff, particularly the Housing and Economic Development Division, the Building and Safety Division in the Department of Community Development, and the Department of Rent Stabilization. It was obvious to staff the existing ordinance was not doing what was necessary to address the public safety issue posed by West Hollywood's URMs. The amendments to the ordinance and related policy recommendations represent a tremendous amount of research and groundwork on the part of the city staff. All possible sources of information, such as the programs established by other cities and surveys of West Hollywood's URM owners, were tapped. Not including the time it has taken to establish a Mello-Roos district, it took the city staff approximately 6 months to develop the program.

PROGRAM EFFECTIVENESS

Of the 81 URMs originally identified, 12 were removed from the list on appeal from owners who provided information necessary to prove the structures meet current seismic standards. As of April 1992, 41 of West Hollywood's identified URMs had yet to be retrofitted. This number includes the 5 structures that will be joining the Mello-Roos district. Work on the structures which have been retrofitted to date has been financed privately.

PROGRAM STRENGTHS

The enforcement follow-through by the Building and Safety Division is considered a strength of West Hollywood's program. Existing city ordinances make it difficult to exercise demolition as a retrofit option, so Building and Safety, realizing that URM owners will most likely retrofit their structures, provided assistance. A regulatory strength of West Hollywood's program is the fact that no extension of retrofit deadlines is accorded a new URM owner. This keeps a property from being passed between fictional owners to avoid retrofit.

KEYS TO SUCCESS

Probably the most important quality resulting in community acceptance of West Hollywood's program was that the city paired a mandatory ordinance with a financing mechanism. The City of West Hollywood also indicated that much of the success this program enjoys can be traced to a dedicated staff person who worked with URM owners. This individual, who is no longer with the city, worked directly with owners to develop strategies for retrofitting their buildings. The city feels this one-on-one contact with URM owners was a major factor contributing to the success of the program.

CONTACT

Rhonda Sherman	Development Specialist	(310) 854-7468

PROGRAM HIGHLIGHTS

The previous section provided a detailed look at seismic retrofit programs in several communities throughout the State of California. In this section we would like to give you a glimpse of some additional techniques used by jurisdictions throughout the State to promote retrofitting of privately-owned hazardous structures.

TOWN OF ARROYO GRANDE

POPULATION: **14,400**
URMS: **20**

The Town Council of Arroyo Grande instructed the building department to work with the owners of identified potentially hazardous buildings to retrofit such structures under a "reasonable" timeline. The city originally set a deadline of three to five years for completion of the work, but in recognition of the recent economic downturn, and in the spirit of cooperation on which the program is founded, the city building department is being **flexible with its deadline** for compliance.

The Building Department also provides **reduced permit fees** to owners performing retrofit work. Instead of charging building permit fees on the basis of the valuation of the work, a valuation which the Building Inspector feels is difficult for anyone to make, the city estimates how many inspections it will need to make during the construction process and **charges fees based on the number of inspections and other handling costs the city will incur.** The building department also **allows the continuance of non-conforming uses** and **waives other aspects of updated zoning regulations** such as parking requirements.

CONTACT

John A. Richardson	Chief Building Inspector	(805) 489-1303 x109 or 104

CITY OF BERKELEY

POPULATION: **106,000**
URMS: **517**

The City of Berkeley instituted an additional **1/2% transfer tax on property sales** which can either be paid to the city or used by the owner to pay for seismic retrofit work on the building. The city believes owners would rather see the monies go into their properties than into the city's tax coffers. The city estimates that on single-family homes the 1/2% tax would help cover the cost of such improvements as bolting structures to foundations, sheer wall improvements, chimney reinforcement and the like. The city also **waives permit fees** on seismic retrofit projects.

The City of Berkeley ordinance imposes a mandatory unreinforced masonry building (URM) retrofit program. Included in the ordinance is a requirement that owners of such buildings **post a clearly visible warning inside the main entrance of the building** stipulating as follows: "This is an unreinforced masonry building, which under State of California law, constitutes a severe threat to life safety in the event of an earthquake of moderate to high magnitude."

CONTACTS

Harry Attri	Chief of Codes and Inspections	(510) 644-6526
Sonali Bose	Finance Director	(510) 644-6476
Alan Goldfarb	Councilmember	(510) 644-6399

CITY OF INGLEWOOD

POPULATION: **112,500**
URMS: **60**

Inglewood has developed a program which presents **two options for reimbursement of construction costs** to property owners performing retrofit repairs. An owner may choose either to receive (i) reimbursement of up to $1,000 of the cost of preparation of plans and engineering studies and (ii) 25% of the actual cost of the required improvements **OR** (iii) reimbursement of up to $3,000 of the actual cost of engineering studies and plan preparation, (iv) 50% of any cost in excess of $3,000, and (v) the actual cost of plan checking, building permits and related taxes and fees. The city funds this program with CDBG monies. The predominant choice for reimbursement is the second program. Even though the first reimbursement option (i and ii) could potentially result in a larger rebate, property owners avoid it because of the Davis-Bacon Wage laws with which they would have to comply if they use CDBG monies to pay for construction. Owners generally feel that the additional cost associated with compliance would not be offset by the larger rebate. The city estimates the reimbursements will range from a minimum of $6,000 per building to a maximum of $12,000 per building. The seismic retrofit program is overseen by two departments: the Building Department handles the technical aspects of the program while the Department of Community Development and Housing handles the financial components.

CONTACTS

Jose Alvarez	Building Department	(310) 412-5294
Dianna Joe	Dept. of Community Development and Housing	(310) 412-5221

CITY OF LA VERNE

POPULATION: **31,100**
URMS: **9**

The City of La Verne has developed a program, to be funded with redevelopment agency monies, which will provide **property owners with a grant of up to 50% of cost** of engineering and construction for retrofitting. The city set a 5 year goal to complete the repairs, hoping to be able to fund 2 buildings a year at a cost of approximately $50,000. However, the number of structures retrofitted is dependent on the funds available each year. The city hopes that in addition to the seismic repairs, owners will be encouraged to do facade renovations/restorations.

CONTACT

Linda Christianson	Community Development Department	(714) 596-8706

CITY OF SAN DIEGO

POPULATION: **1,144,000**
URMS: **1,050**

The City of San Diego is unique when compared to the other communities pursuing seismic retrofit programs because it is currently not located in Seismic Zone 4 and therefore is not subject to SB 547, the "URM Law." Approximately 6 years ago, San Diego began a **voluntary review of the unreinforced masonry buildings in the community** with the **appointment of a City Manager's Committee on the seismic retrofit of older buildings.** Initially, the Building Inspection Department proposed a mandatory retrofit ordinance to the City Manager's Committee. It was soon obvious that such an ordinance would raise immediate opposition from property owners and would certainly not be approved by the city council. The City Manager's Committee is now considering an alternative voluntary ordinance with some mandatory aspects. There is disagreement between structural engineers, local architects and property owners on how, or even whether, the issue should be addressed. There is also some local controversy regarding the possibility that San Diego may be reclassified so it is included in Seismic Zone 4. San Diego does have an existing **requirement that may cause property owners to retrofit a structure when it changes use or occupancy to one more hazardous than the existing use.** There has been some voluntary seismic retrofit work done in San Diego by both private owners and public agencies. The city is interested in, but has been unable to identify, a source of funds which would allow it to make construction grants to owners of hazardous structures.

CONTACTS

Jean Libby	Building Inspection Department	(619) 236-7338
Peter López	Building Inspection Department	(619) 236-6087

CITY OF SAN JOSE

POPULATION: **782,000**
URMS: **150**

The City of San Jose has identified approximately150 privately-owned unreinforced masonry buildings (URMs) city-wide. Most of the buildings are almost exclusively commercial/retail, with a few providing low-cost housing on the upper floors. Many of the buildings are on the City Historic Resources Inventory. About half of the URMs are located in redevelopment areas. Fifty five of those, housing 121 businesses, are included in the redevelopment agency's retail focus area. San Jose has developed a multi-level set of programs to encourage retrofitting.

San Jose is **exempting permit fees** on retrofit projects, a program expected to cost the city approximately $250,000 and the redevelopment agency about $50,000. San Jose is also offering **design grants** to owners, a program to which the city and redevelopment agency are each contributing up to $1 million. The city council has approved procedures for forming a **Special Assessment district** to provide long-term, market-rate financing for retrofits.

For owners of retail structures in the redevelopment agency's focus area, San Jose has developed **two grant programs to offset construction costs** at a cost to the redevelopment agency of $4.6 million over 4 years. Retail buildings in the focus area have been ranked based on 4 criteria: historic significance, consistency with the downtown strategy plan, location within the retail focus area, and key building features such as strategic retail value, condition of building, retail desirability, building owners commitment, and tenant status. Owners of buildings receiving qualified ranking will be eligible for the basic grant. Owners of buildings receiving the highest ranking will be eligible for an additional grant, in exchange for which they will be asked to make a corresponding amount of tenant improvements. The agency also is developing a **tenant assistance program** for commercial and residential tenants located in retrofit assisted buildings.

San Jose also assigned one individual to act as **full time liaison with URM owners and the community.** The Liaison is a part of the City Manager's Department Office of Emergency Services. The Liaison provides information and answers questions about the programs offered by the city and the redevelopment agency, interacting with owners, tenants, the media, and other city departments. The Liaison also supplies the city council and the public with information on the progress which has been made towards retrofitting each of the identified buildings. The Liaison is expected to take a particularly active role in development of the financing district, working with the financing team, and explaining the program to and soliciting feedback from URM owners.

CONTACTS

Robert "Pi" Silverstein	Building Retrofit Program Liaison	(408) 277-4735
Noel Ameele	Redevelopment Agency Development Officer	(408) 277-4744

CITY OF SAN MATEO

POPULATION: **87,500**
URMS: **12**

The City of San Mateo adopted a mandatory retrofit ordinance in January, 1990. San Mateo **based its ordinance on the Los Angeles model, simplifying it by creating only 2 hazard categories and changing some of the time limits.** If an owner installs anchors he or she can take up to 8 years to complete the retrofit; otherwise, the owner must complete retrofit within 3 years. The majority of the buildings affected by this ordinance have historic designations or are contributors to a proposed historic district.

The ordinance also directly addresses the conversion of unused second floors in commercial buildings to residential use. In San Mateo's commercial district there is also an attempt to **tie some storefront improvement to retrofit projects**. Both second-floor conversion and storefront projects are handled through San Mateo's Housing and Economic Development Division. **Assistance in the form of grants and loans** is made available for use towards the retrofit of buildings participating in these programs.

Of San Mateo's 12 unreinforced masonry buildings (URMs), 1 has been retrofitted, 3 are presently undergoing retrofit construction, and engineering plans have been prepared for the remaining structures.

CONTACTS

Fred Cullum	Chief Building Offier	(414) 377-3390
Bob Muehlbauer	Housing and Economic Development	(415) 377-3393

CITY OF VACAVILLE

POPULATION: **73,000**
URMS: **20**

The City of Vacaville has established the "Key Building Loan Program," a **3%, 25 year loan program** to finance the cost of seismic retrofit. A property owner can also receive a 50% matching loan for tenant improvements. The total amount of these loans is based on underwriting criteria which include a loan-to-value determination, setting a limit on total debt on the structure of up to 80% of the estimated post-rehabilition property value. The city has an associated **facade loan program** providing up to $15,000 worth of funding for facade renovation. These programs are paid for out of redevelopment funds through incremental tax revenues, and therefore are limited to those buildings located in the redevelopment area.

CONTACT

David Gouin — Office of Housing and Redevelopment — (707) 449-5161

USING ZONING AS INCENTIVE TO RETROFIT

Local land use controls can be used to help reduce earthquake hazards. Incentives as well as controls on changes in building occupancy can complement both mandatory and voluntary unreinforced masonry building (URM) retrofitting ordinances. Typically, zoning is viewed in negative terms by many building owners because they perceive the emphasis is "thou shall not ... . " Planning Commissions and zoning administrators often reinforce this perception during the development review process, and public-private partnerships rarely are fostered through zoning. However, this relationship can change if zoning ordinances are used in a positive manner to implement General Plan policies by offering bonuses and other types of incentives to achieve specific public purposes. Notable examples include the density bonuses for affordable housing and transfer of development rights for historic preservation. Lessons learned from these programs may help local governments design similar initiatives to encourage property owners to retrofit and upgrade their hazardous buildings.

Where potential funding sources are limited and, due to bond issuance costs, the advantages of municipal borrowing are perceived as not that much more attractive than private credit, local governments may want to explore how zoning mechanisms can be structured to create specific incentives for retrofitting seismically-unsafe structures. In the preceding chapters, the CASE STUDIES and PROGRAM HIGHLIGHTS show that funding incentives alone may not be sufficient to ensure widespread program participation. Time limits on retrofitting have proven to be effective, particularly when combined with priority ranking systems. Any and all programs can be complemented by zoning incentives, which also could have time limits attached to them in order to reinforce the need to act.

TYPES OF INCENTIVES

As part of a voluntary retrofit program, or to make a mandatory upgrading program more attractive, five general types of incentives to facilitate seismic upgrading of URMs and other potentially hazardous buildings may be appropriate for local zoning ordinances:

- Density/intensity bonuses;
- Transfer of development rights;
- Reduction in development standards;
- Relief from nonconforming provisions; and
- Restrictions on new occupancy of a potentially hazardous URM or other potentially hazardous building.

Each of these incentives is described more specifically below; choice of the right "incentive package" should be based on local conditions and needs. To show how these provisions might be combined into a comprehensive package, an approach to implementing a zoning incentive program is attached. This can be used as a guide in designing local programs.

DENSITY/INTENSITY BONUSES

Where a number of URMs contribute to the historical or architectural character of a district or area, a city may want to offer specific increases in the maximum allowable building density or intensity to help offset the added costs of seismic upgrades. To encourage affordable housing, for example, the State requires that a 25% density bonus be provided, recognizing that the cost of providing such housing is greater than the cost of providing market-rate housing. Similarly, a number of communities allow taller or larger buildings if pedestrian amenities, such as plazas, are provided, or if parking is placed underground.

Within each zoning district, similarly-situated properties need to be equally treated so such provisions are not considered "spot zoning." To provide a strong legal foundation for this type of incentive, a community's General Plan policies should specifically identify the purposes to be achieved by a density/intensity bonus program (e.g. "to encourage seismic upgrades and conserve and enhance the community's historic and architectural resources"). The actual standards that would apply should be based on construction cost analysis and urban design and planning studies. As a starting point, local planners should consult the State of California Seismic Safety Commission's *Guidebook to Identify and Mitigate Seismic Hazards in Buildings*. (See: CONTACTS)

A density/intensity incentive program is more likely to work only where the base zoning "envelope" does not provide for substantial development potential but, instead, is geared to maintaining the existing scale of development. Where the zoning envelope is generous, there would be little incentive to participate in the retrofitting program.

TRANSFER OF DEVELOPMENT RIGHTS (TDR)

The rationale for allowing a property owner to transfer unused development rights to another site is based on the concept that there is a public purpose to be achieved in requiring a seismic upgrade, and the existing use of the building may not generate sufficient income to justify the retrofitting costs. TDR is particularly suited to designated or certified historic

structures where no intensification of use is contemplated or even allowed. Restrictions of the right of transfer could be imposed. For example, transfers might only be allowed to adjacent lots within the same zoning district, or they could be permitted to any lot within the same zoning district, or to lots in specific zones where intensification of development is envisioned. The value of the development right to be transferred should approximate the cost of the retrofitting, so again careful analysis of construction costs is needed as a basis for designing an equitable and effective TDR program.

REDUCTION IN DEVELOPMENT STANDARDS

As with the preceding incentives, the objective of allowing for a minor reduction in certain specified building or site development standards would be to offset the added costs associated with retrofitting older structures. Seismically safe structures offer obvious public benefits, so there is some justification for allowing for reduced standards. Again, though, the challenge will be to tie the reduction in standards to the upgrade cost, so a "windfall" is not created, and after paying for the costs of upgrading, owners of URMs face the same requirements as owners of newer buildings.

Provisions for a reduction in development standards should include a specific requirement that the reduction is necessary to meet building standards for seismic safety. Specific restrictions could apply, such as no increase in building height. A time limit could be set, requiring applications for a reduction in development standards to be submitted within a specified period of time following adoption of the zoning incentive program, to coincide with State or local time limits for upgrading URMs.

RELIEF FROM NONCONFORMING PROVISIONS

Because many URMs were built before current zoning ordinances were adopted, they may not conform to the development standards that now apply to new construction. For example, there may not be any on-site parking and the setbacks may be less than are now required of new construction. Most zoning ordinances state that such nonconforming structures may not be altered or enlarged unless the alteration or enlargement will result in the elimination of the nonconformity.

To provide relief from these nonconforming provisions, the following exemptions may be made for alterations or enlargements for purposes of seismic upgrade.

(1) Exterior or interior alterations or improvements may be allowed for purposes of retrofitting a structure occupied by a nonconforming use to meet building standards for seismic safety *(add appropriate reference to code or ordinance requirements)* without elimination of the nonconformity, provided there is no expansion of the use *(or an expansion not to exceed _____ percent).*

(2) A nonconforming structure may not be altered or reconstructed so as to increase the discrepancy between existing conditions and the standards for front yard, side yard, rear yard, height of structure, driveways, or usable open space prescribed in the regulations for the district in which the structure is located unless such alteration or reconstruction is specifically required to meet local building standards for seismic safety *(add appropriate reference to code or ordinance requirement).*

NEW OCCUPANCY OF A URM OR OTHER POTENTIALLY HAZARDOUS BUILDING

A zoning ordinance could require that any applicant for a discretionary zoning permit for occupancy of a URM, or of another potentially hazardous structure that does not conform to current building code standards for seismic safety, present a schedule for upgrading the structure to meet seismic standards within a stated period of time. The Planning Director could require that priority be given to upgrading that would reduce potential hazards which might affect adjacent structures or would reduce the risk of structural failure by improved bracing, foundation anchors or other types of retrofitting.

EXAMPLE OF AN INCENTIVE PROGRAM FOR SEISMIC HAZARD UPGRADING USING ZONING INCENTIVES

This program is presented in outline form to illustrate an approach to designing provisions for zoning incentives that will encourage privately-funded seismic upgrading of existing URMs and other potentially hazardous structures.

(1) Purpose. The purpose of the Seismic Hazard Upgrading Incentive Program for Unreinforced Masonry Buildings (URMs) and other potentially hazardous buildings is to provide financial incentives, consistent with State law *(requirement for mitigation programs)* to property owners and developers who undertake privately-funded upgrading of seismically hazardous structures.

(2) Who May Apply for an Incentive. A property owner of a URM identified by the city as potentially hazardous, pursuant to _____ *(add applicable reference)* may request that the city grant a density or intensity (FAR) bonus or an incentive of financial value equivalent to such density/intensity bonus and a regulatory concession or incentive.

(3) Types of Incentives. This section does not require the provision of direct financial incentives to finance seismic upgrading, but does provide for waiver of fees or dedication requirements. The following incentives and regulatory concessions or incentives are intended to ensure that the upgrading of seismically hazardous structures can be undertaken at a reduced cost:

(A) A reduction in site development standards or a modification of zoning code requirements or architectural design requirements which exceed the minimum building standards approved by the State Building Standards Commission, including, but not limited to, a reduction in setback and square-footage requirements and in the ratio of vehicular parking spaces that would otherwise be required.

(B) An increase in the maximum allowable density and/or intensity of land use, not to exceed _____ percent of the limit established by the base zoning district.

(C) Approval of a transfer of development rights to _____ *(specify whether the unused development rights may be transferred only to adjacent lots on the same block, to sites within the same district or to other sites or zoning districts specifically identified on the Zoning Map or in the General Plan).*

(The development rights that may be transferred could be limited to the "unused" rights on the site, and the ordinance should specify that restrictions on future development are officially recorded and bind future owners.)

(D) Approval of mixed use zoning in conjunction with a development project if commercial, office, industrial, or other land uses will reduce the costs of a seismic upgrade for an existing structure and if the commercial, office, industrial, or other land uses are compatible with the upgrading project and the existing or planned development in the area where the proposed upgrading will take place.

(E) Waiver of fees for zoning permits, site plan review, building permits and *(specify other types of permits)*.

(F) Other regulatory incentives or concessions proposed by the developer or the city, which result in identifiable cost reductions.

(4) Seismic Upgrade Incentive Agreement Required. After City Council approval of a request of incentives, the property owner shall be required to enter into an agreement with the city to guarantee completion of the proposed seismic upgrade. This Seismic Upgrade Incentive Agreement shall include, but not be limited to, the following provisions:

(A) The components of the seismic upgrade shall be specified.

(B) The specific incentives that the city will make available to the property owner and any conditions pertaining to them shall be described.

(C) A commitment that seismic upgrade will be completed within a specified period of time. Security or compliance with these provisions shall be a promissory note in the amount of _____ percent of the construction costs, but not less than $_____, secured by a deed of trust against the property.

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LOCAL GOVERNMENT FINANCING OPTIONS

In order for a jurisdiction to implement a hazard reduction program in its community, it is often suggested that the jurisdiction offer some form of financial assistance as an incentive. The problem of financing retrofit of hazardous buildings, however, is both critical and intractable. This chapter discusses the problems associated with financing retrofit projects, and lists sources of public funds which could possibly be used for this purpose.

This chapter focuses strictly on the issue of financing, implicitly assuming that the policy issues have been discussed at the local level and that the jurisdiction has made the commitment to provide financial incentives to owners of hazardous structures. In much of the discussion, this chapter takes the perspective of owners rather than of local government. This is because we assume the readers will be primarily public sector professionals who are conversant with the local government perspective while perhaps less so with private sector rationale. This approach is not intended in any way to minimize the importance of local governments' perspectives and responsibilities, comprising the health, safety and economic welfare of the public, which form the primary incentive for this *Handbook*.

THE SCOPE OF THE FINANCING PROBLEM: ATTAINABILITY, AFFORDABILITY, AND ECONOMIC INCENTIVE

Some owners are able to fund retrofitting projects with their own cash. For those owners, access to financing is not a problem. Most owners, however, are unable to fund retrofitting projects themselves and need to rely to a greater or lesser extent on outside sources of funds.

To be useful it is important that financing be not just available, but also attainable and affordable. Sources of funds can and do exist which might seem to be available for retrofitting projects but which in fact are not attainable. The Rosenthal Bond program illustrates this problem most clearly. Rosenthal Bond funds were designed to be available for retrofit projects if the projects, by virtue of the retrofitting, generate additional revenue and this revenue is available to pay off the bonds. As retrofitting usually is not revenue generating, few if any projects can meet the criteria established by the funding source. To our knowledge Rosenthal Bond funds have never been used. In fact, very few people are aware of the program and the way in which it is meant to work. Many local governments, which are supposed to administer the program, have never heard of it. Various other problems, including subsequent changes in tax laws, have rendered the Rosenthal Bond program virtually useless.

A common hurdle to accessing available sources of funds is the fact that the buildings in need of retrofitting often do not meet the criteria established for these funds. Bank and bond

financing, for example, require that a specified loan-to-value ratio be present as a prerequisite to funding. Owners of highly leveraged buildings and buildings in depressed areas are often unable to meet these criteria and therefore do not have access to these types of financing. This problem is faced most acutely by owners of unreinforced masonry buildings (URMs) who are unable to obtain tenants because their buildings are considered hazardous. Subsequent to the Loma Prieta earthquake, the appraised value of URMs dropped precipitously because of their poor performance in that seismic event. Meanwhile, tenants began shying away from URM buildings, which had a negative impact on owners' cash flows. Owners in this situation would in fact see an increase in revenues as a direct result of retrofitting, as well as an increase in value to pre-quake levels. However, because these buildings generally carry a level of debt that is already based on their pre-quake values, their loan-to-value ratios are too high to permit the additional borrowing necessary for retrofitting projects.

Affordability of the project and its financing is the second major hurdle which trips up most owners considering retrofitting. As mentioned above, retrofitting is not necessarily revenue generating. It is also expensive. While it is commonly accepted that costs for post-earthquake repairs are significantly higher than the costs of retrofitting, owners have no mechanism allowing them to take into account the probability of their particular building being damaged in the next earthquake. Thus, owners who consider retrofitting out of concern about the safety and/or the long-term value of their property find themselves weighing the concrete expenses of retrofitting against perceived but unquantifiable benefits.

Owners must also consider the economic impact of retrofitting on tenants in their buildings. Few retail tenants can afford to interrupt their business for any length of time, and most feel that temporary relocation is impractical. Therefore, long-term retrofit projects causing major disruption would likely result in the loss of tenants. Increased lease rates required to pay for the project also are a concern. This is particularly difficult in the case of smaller buildings, where project costs per square foot are high because the fixed costs of retrofitting are spread over a smaller area. For all these reasons retrofit-only projects are uncommon. Retrofitting has mostly been undertaken in conjunction with larger remodeling projects, which are expected to result in revenues sufficient to compensate for the temporary loss of tenants as well as to at least pay for the project.

In many cases a major disincentive to retrofit is that it provides no net measurable economic benefit to owners. It has been argued that retrofitting property lessens liability exposure, rendering the decision to retrofit economically justifiable. This argument is weak for at least two reasons. First, although retrofit reduces liability exposure, it does not remove it entirely. The second reason relates to the way in which, as a practical matter, liability is handled by owners and insurers. (Note that we are discussing here liability insurance, not earthquake insurance which covers damage to property.) Owners who find themselves at increased

exposure to liability as a result of the hazardous condition of their buildings generally can deal with the matter by purchasing additional liability insurance. The incremental cost of this additional coverage is minuscule in comparison to the owners' other costs of doing business and, of course, to the cost of retrofitting. Insurance companies will offer the liability coverage, typically finding it less expensive to risk the loss than to determine the type of construction of each of the buildings owned by the businesses which it insures. Exposure to liability turns out to provide economic incentive to retrofit only to those large businesses which are self-insured. (See: LIABILITY IMPLICATIONS AND CONSIDERATIONS)

The most compelling way that jurisdictions can make an economic case for retrofit-only projects is by passing ordinances which require that owners either retrofit their property or face demolition. However, some skeptical owners have questioned the efficacy of such ordinances, doubting the political will of jurisdictions to actually carry them out.

Even when faced with the ultimate loss of their property, many owners will not retrofit either because the money to do so is not accessible to them, as discussed above, or because they simply cannot afford to make interest and principal payments on the financings. In discussions with property owners rebuilding in Santa Cruz we found that all but one relied heavily on 4% 30-year financing from the Small Business Administration. (Note that this source of funds is only available for earthquake recovery, not for preventive retrofitting.) All of these owners indicated that they could not have rebuilt their properties without these funds, and even with this low-cost source of financing most found the expense difficult to bear. One owner commented that he does not ever expect to break even, let alone reap economic rewards; he was undertaking the project on behalf of his heirs. Owners who are losing money or breaking even, and who are unable to raise lease rates or rents to pay for the retrofits, are unable to comply with retrofit ordinances. In some instances owners may be willing to raise rents but tenants would be unable to pay; in the case of owners of residential property, jurisdictions may not want or permit them to do so for policy reasons, particularly where affordable housing is at stake. Owners comment that it is unreasonable for jurisdictions to enact tough ordinances without suggesting the means to comply.

It is worth pointing out that the attitude expressed in the above paragraph, while common, is not necessarily appropriate. In many areas of the State healthy aftermarkets are occurring for URM buildings. Some owners are selling their properties, albeit at a loss, while others are attempting to retrofit. Gentrification and revitalization are occurring in some areas. In still other areas, rents are sufficiently high as a result of other market pressures that owners can afford to absorb as overhead the cost of retrofitting. In the City of Los Angeles, two-thirds of the 8,100 identified URMs have been strengthened or are under construction; less than 20% have been demolished.

BANK LENDING

Faced with a project which needs financing, most owners turn to their local bank. In the case of retrofit projects, the banks are likely to be less than eager to lend. Obvious concerns are credit issues, such as loan-to-value ratios and debt service coverage (the ratio of funds available to make payments, to the principal and interest payments themselves). In a bank's view, retrofit projects are particularly difficult unless the owners have built up enough equity to support the additional loan.

For the most part, the banks look as much if not more at the owner's cash flow and ability to repay the loan; the value of the collateral is a secondary issue, as the bank wants never to have to collect on it. Further, the value of the collateral is, in the bank's eyes, not its cost but its market value. The market value of the property, and thus the bank's collateral, will not necessarily be improved by a retrofit project.

One might argue that the banks should be concerned with their potential for loss when the "big one" hits. We suspect that, as with the liability insurers discussed above, large banks in particular consider it reasonable to take the risk associated with hazardous buildings in their loan portfolio, planning to write off in the future such losses as are incurred rather than to spend money now to prevent potential losses. The banks' loss experience with the Loma Prieta earthquake did nothing to belie this argument.

New bank lenders, ones not already associated with a property, have an even stricter test of the value of the collateral. Until the seismic retrofit is complete, the banker considers that at any moment the earthquake may happen and the structure collapse. From a collateral perspective, then, unless earthquake insurance is available the banker really can only count on the value of the underlying land, less demolition/clean-up costs, less existing loans. It is a rare property that can withstand this form of analysis, and it is a rare bank which today will make such a loan.

The bankers' logic is derived primarily from the perspective taken by bank regulators. Bank regulators painfully scrutinize banks' portfolios and apply harsh tests to determine their creditworthiness. Regulators apply the logic outlined above to the analysis of banks' portfolios, and require that more capital be set aside in reserve against riskier loans. Riskier loans are therefore more expensive for the banks, which must then choose either to forego them in favor of cheaper loans or to pass the added cost onto the borrower. Adding to the borrower's cost, of course, makes it harder for the borrower to pay, debt service coverage deteriorates, and both bankers and owners find themselves in a frustrating position from which bankers extricate themselves by simply withdrawing from the market.

Note that the regulators make no allowances for Community Reinvestment Act (CRA) loans; CRA loans have to meet ordinary credit criteria. However, if the projects could stand up to ordinary criteria we likely wouldn't be relying upon CRA to get them funded. CRA turns out to be a very weak lever with which to pry loans out of the banking community.

SOME SOURCES OF FUNDS

Owners unwilling or unable to use their own cash or to get bank funding will turn to local government to provide the funds for retrofitting. As mentioned above, this chapter does not address the issue of whether or not local governments should provide any amount of financing. Assuming that the policy decision is made to do so, as a practical matter local jurisdictions are no more able, and in many cases are less able, than property owners and banks to come up with the funds. This section mentions several sources of funds available for retrofitting privately-owned properties. These sources, highlighted in bold, are outlined in more detail later in this chapter.

One source of funds available to some jurisdictions is the **Community Development Block Grant Program** (CDBG) administered by local jurisdictions and funded by the U.S. Department of Housing and Urban Development (HUD). As CDBG is a grant program, the funds need not be repaid to HUD. In its own way CDBG is a very flexible source of funds, allowing jurisdictions to design and administer local retrofit programs. Los Angeles uses CDBG funds extensively for its retrofit program. However, the projects using this funding must comply with strict criteria; generally, the projects must benefit low- and moderate-income individuals. Most large cities (over 50,000 population) and urban counties receive "entitlements" under the CDBG program, funds to which they are entitled and which they receive each year. These funds generally are committed to existing programs. Diverting them to retrofit projects is a matter of political choice.

Owners of properties providing low- and moderate-income housing have perhaps the widest array of financing tools from which to choose. Most can use long-term tax-exempt bond financing which, in today's market, offers an interest rate about two-thirds of bank lending rates. The tax credit program, wherein owners can take direct deductions from their tax bill, is a very powerful tool. At various times the State and Federal governments may offer programs providing financing, subsidies, and/or incentives to property owners to construct, remodel or rehabilitate low- and moderate-income housing. Two State programs, the **California Housing Rehabilitation Program** and the **Marks-Foran Residential Rehabilitation Act**, are particularly applicable to retrofit projects. Most of the previous Federal programs have been replaced by a single new program, dubbed **HOME**. Various other agencies, both public and private, are available to provide funding for low- and moderate-income housing.

The financing processes and requirements for funding low- and moderate-income housing are very complex. An industry of bankers and consultants is poised to help eligible owners seeking such financing. Most owners nonetheless suffer from both the attainability and the affordability problem. Simply stated, the fundamental difficulty is that in order to afford to finance new projects, even at relatively low interest rates, owners need to raise rents. This, of course, could defeat the purpose of the housing, and may render it ineligible for these sources of funds. Further, because of the complexity of the field, it is generally not economical to seek financing of this sort for projects costing less than several million dollars.

Other sources of funds are available for particular types of properties. **Marks Historic Bond Act** funding is available to aid in the rehabilitation of historically or architecturally significant structures. The **Small Business Administration** offers a number of programs, the most applicable being a loan guarantee program for owner/tenants in seismically hazardous buildings.

In addition to the Federal and State programs mentioned above, bond financing can be an option for local jurisdictions wishing to offer market-rate financing to property owners in their community. **Special Assessment District** financing has proven useful in at least two cities, and **Mello-Roos Community Facilities District** financing, a similar technique, should also be helpful. However, both attainability and affordability can be problems with these types of financing. Possible additional sources of bond financing are **Tax Increment Financing** (also known as Tax Allocation Bonds) available to properties in redevelopment areas, taxable **General Obligation** bonds, which must be approved by a two-thirds vote, and **Public Purpose Bonds** which must be issued primarily for other public capital improvements allowing no more than 5% of the bond proceeds to be used for the purpose of retrofitting privately-owned property. The latter three techniques have never to our knowledge been applied for the purpose of retrofitting privately-owned property. A great deal of study, particularly on the part of bond counsel, and especially with regard to public purpose bonds, would need to be undertaken before these techniques could be recommended as sources of funds for local jurisdictions.

On the following pages you will find more detailed descriptions of the sources of funds highlighted in bold in this section. These sources of funds, although limited, are tools available to local governments interested in promoting retrofitting.

(Winter, 1991)

STATE AND FEDERAL PROGRAMS

CALIFORNIA HOUSING REHABILITATION PROGRAM

(Propositions 77, 84 and 107)

(California Government Code - Section 8878.15 et seq.)

General: The California Housing Rehabilitation Program (CHRP) is administered by the California Department of Housing and Community Development (HCD) and is funded by General Obligation Bonds sold by the California State Treasurer. The program is divided into four categories, with funds allocated to each of those categories and split between rural and non-rural projects. The table below shows the project categories and the amount of funding available under each. CHRP is open to any individual or public or private entity capable of owning, rehabilitating and managing rental housing. Funds are allocated on a competitive basis.

Program Category	Rural Appropriated ($MM)	Rural Used ($MM)	Non-Rural Appropriated ($MM)	Non-Rural Used ($MM)
Seismic retrofit of Unreinforced Masonry Buildings (URMs)	4.0	none	16.0	13.65
General rehabilitation and acquisition of projects requesting seismic retrofit	4.0	none	16.0	13.65
Nonseismic general rehabilitation and acquisition	13.8	2.1	18.3	18.3
Single Room Occupancy (SRO) hotel/model rehabilitation and acquisition	6.8	none	10.2	9.375

Benefits: Through the CHRP program, HCD provides low interest loans directly to project sponsors. The interest rate on these loans is 3% calculated on a simple basis. The minimum term for rehabilitation-only projects is 20 years. The minimum term for refinance/ rehabilitation or acquisition/rehabilitation is 30 years. Longer terms or 10-year extensions are sometimes available. Usually, annual interest-only payments are required with the principal due as a balloon payment at the end of the term.

Types of Properties: CHRP loans may be used for various types of rental housing developments to be occupied by very low-income and other lower income households, with some funds specifically targeted for SROs.

Jurisdiction's Responsibilities: The CHRP program does not require the participation of the municipality.

Owner's Responsibilities: It is the owner's responsibility to submit a complete application on a timely basis. Proposals at the most advanced stages are more likely to be funded.

Limitations: Under this program, loan limits for rehabilitation-only projects are $15,000 per SRO unit, $25,000 per 0-2 bedroom apartment and $35,000 per 3+ bedroom apartment. An additional $10,000 per unit is allowed when the project includes both rehabilitation and acquisition. New construction is ineligible.

After rehabilitation under this program a project must comprise a rental housing development with assisted units. Rent limitations apply to all assisted units for the full term of the agreement, regardless of prepayment, sale or transfer.

The CHRP program includes significant relocation rights and obligations. A URM must meet the following requirements to be eligible for program funds:

(1) At least 50% of the gross floor area will be used for residential purposes
(2) The building has been identified as "potentially hazardous" by the local building department due to the need for seismic reinforcement, and is located in a jurisdiction that has inventoried its unreinforced masonry buildings and has adopted a mitigation ordinance.
(3) The building contains at least 6 residential units, and at least 70% of these units will be assisted units.
(4) The assisted units could not be reinforced without also reinforcing the nonassisted units or nonresidential space.

For nonprofit sponsors, total after-rehabilitation debt may not exceed 100% of after-rehabilitation value. For for-profit sponsors, after-rehabilitation debt may not exceed 90% of after-rehabilitation value. HCD publishes a chart listing the maximum allowable initial gross rent by county and unit type.

Comments: Applications are accepted on an ongoing basis until all program funds have been committed. This program is very well suited for the rehabilitation of structures presently housing low-income residents, but remains limited in usefulness in many other aspects.

Property owners feel the requirements which must be met under this program are overly restrictive, particularly the percentage of residential units which must be reserved for low-income residents and the tenant relocation guidelines.

***Contact*:** Department of Housing and Community Development
P.O. Box 952051, Sacramento, CA 94252-2051
(916) 445-6501

COMMUNITY DEVELOPMENT BLOCK GRANTS

General: Community development block grants (CDBG) provide Federal funding for programs that are designed and administered by local governments. CDBG funds flow through to municipalities in various ways dependent upon the size and location of the municipality. Large cities and urban counties, as well as some smaller cities, receive entitlement funds from this program on an annual basis. Municipalities under 50,000 in population, which are not qualified for entitlement funds, may apply to the State through a competitive process for funds in the "Small Cities" program.

The CDBG program is administered by the Department of Housing and Urban Development (HUD). Authorized under Title I of the Housing and Community Development Act of 1974 as amended, the primary objective of the program is to provide "decent housing and a suitable living environment and expanding economic opportunities, principally for persons of low and moderate income." Activities funded through CDBG must also meet one or more of the three National Objectives: (i) benefit to low and moderate income individuals, (ii) aid in the prevention or elimination of slums or blight, or (iii) address other community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community where other financial resources are not available to meet such needs.

Benefits: CDBG funds are among the most flexible sources of financing of eligible projects. Municipalities may design grant and loan programs tailored to their communities' needs.

Types of Properties: Many different types of properties can be served by CDBG funded programs. Designing a program which meets eligibility requirements may or may not be difficult, depending upon the complexity of the program being designed and on the activity and National Objective which the program is designed to meet. The table on the following pages, derived from HUD's *Guide to Eligible CDBG Activities*, outlines possible categories of programs for which a municipality might choose to use CDBG funds.

Jurisdiction's Responsibilities: Jurisdictions must design and administer CDBG-funded programs. Those jurisdictions which receive entitlement funds can use a portion of those funds for a seismic retrofit program. Non-entitlement municipalities must apply to the State through the State CDBG "Small Cities" program. Jurisdictions seeking to use CDBG funds for seismic retrofit programs should seek additional guidance from HUD.

Owner's Responsibilities: Owners need to meet the criteria established by the municipality for distribution of CDBG funds and must apply to the municipality for those funds.

Limitations: The National Objectives of CDBG are very specific for commercial and industrial buildings. Only certain activities are eligible under a CDBG-funded retrofit program. Under the "Small Cities" program, the maximum amount allowable per activity is $500,000.

Comments: Municipalities which receive entitlement funds generally direct most of those funds to ongoing programs. Retrofitting could be very expensive, requiring a large allocation of funds. Reprogramming funds from ongoing programs to a retrofitting activity could prove politically difficult. The "Small Cities" program for non-entitlement jurisdictions is very competitive. The program has $24 million to distribute annually, and receives anywhere from $35 to $75 million in applications. To have a reasonable chance of being accepted, "Small Cities" applications should address a number of CDBG objectives. Retrofitting alone is unlikely to be competitive.

Contact: Housing & Urban Development Department
Regional Office - Region IX
450 Golden Gate Avenue, San Francisco, CA 94102
(415) 556-5900
or
Your regional office

Eligible Activity	Objective	Qualifies If	Example
Housing Rehabilitation: **Rehabilitation of any publicly or privately owned residential property, including the conversion of non-residential property for housing, provided such rehabilitation meets a national objective**	Low/Moderate Housing	The housing to be rehabilitated is occupied or will be occupied by Low/Moderate income persons. Rental units must be occupied at affordable rents	Conversion of non-residential structures into permanent housing for Low/Moderate persons.
	Slum or Blighted Area	Housing rehabilitation for households not known to have Low/Moderate incomes qualifies if: (1) the structure rehabilitated is located within a designated slum or blighted area; (2) housing deterioration is one of the conditions which contributed to the deterioration of the area; and (3) the structure to be rehabilitated is considered substandard under local definition before rehabilitation (such definition being at least as stringent as standards used in the Section 8 Housing Assistance program)	Correction of substandard conditions in housing units located in designated blighted areas exhibiting housing deterioration
	Spot Blight	Housing rehabilitation for households not known to have Low/Moderate incomes qualifies if: (1) the structure rehabilitated is located within a designated slum or blighted area; and (2) the rehabilitation is limited to the extent necessary to eliminate specific conditions detrimental to public health and safety	Elimination of faulty wiring, falling plaster or other similar conditions that are hazardous to all potential occupants

Eligible Activity	Objective	Qualifies If	Example
Special Economic Development: **Commercial or industrial improvement carried out by the municipality or a nonprofit, including acquisition, construction, reconstruction or installation of commercial or industrial buildings or structures and other real property equipment and improvements, or assistance for private for-profit entities for an activity determined to be "necessary or appropriate" (as specifically defined by the regulations) to carry out an economic development project.**	Low/Moderate Area Benefit	The assistance is to a commercial business which serves a Low/Moderate income residential area	Assistance to neighborhood businesses such as grocery stores and laundromats, typically qualify
	Low/Moderate Jobs	The assistance is directly linked to the creation or retention of permanent jobs, at least 51% of which are for Low/Moderate income persons	Assistance to a manufacturer in financing an expansion which will create permanent jobs, at least 51% of which are for Low/Moderate income persons
	Slum or Blighted Area	The assistance is to a business in a designated slum or blighted area and addresses one or more of the conditions which contributed to the deterioration of the area	A low-interest loan to a business as an inducement to locate a branch store in a redeveloping blighted area

Eligible Activity	Objective	Qualifies If	Example
Clearance: **Clearance, Demolition, Removal of Buildings and Improvements, Movement of Structures to Other Site**	Spot Blight	Clearance is undertaken to eliminate specific conditions of blight or physical decay on a spot basis not located in a slum or blighted area	Demolition of an abandoned and deteriorated structure

Other categories of activities which might usefully be explored, always bearing in mind CDBG's national objectives, are Relocation: payments and assistance to individuals, families, businesses, nonprofit organizations and farms; Historic Properties: rehabilitation, preservation and restoration programs; and Commercial or Industrial Rehabilitation: for private for-profit businesses to the extent that rehabilitation is limited to improvements to the exterior of the building and the correction of code violations.

THE HOME PROGRAM

General: The HOME Program, a new housing assistance program from the Department of Housing and Urban Development (HUD), was created under Title II (the Home Investment Partnerships Act) of the National Affordable Housing Act of 1990. The general purposes of HOME include:

- To expand the supply of decent and affordable housing, particularly rental housing, for low- and very-low-income Americans. Such housing includes existing rental housing made affordable through tenant-based rental assistance.

- To strengthen the abilities of State and local governments to design and implement strategies for achieving adequate supplies of decent, affordable housing.

- To provide both financial and technical assistance to participating jurisdictions, including the development of model programs for affordable low-income housing.

- To extend and strengthen partnerships among all levels of government and the private sector, including for-profit and nonprofit organizations, in the production and operation of affordable housing.

HOME funds are available to States, cities, urban counties and consortia (contiguous units of local government). Funding for the HOME program includes a $25 million set-aside for technical assistance. HOME funds are allocated by formula, with 60% of these funds available for cities, counties and consortia and 40% for States. Each participating jurisdiction will be required to set aside 15% of its formula allocation for development of projects owned, developed or sponsored by community housing development organizations (CHDOs). HOME funds may be used for a variety of activities to develop and support affordable housing. Eligible activities include: tenant-based rental assistance, assistance to first-time homebuyers and existing homeowners, property acquisition, new construction, reconstruction, moderate or substantial rehabilitation, site improvements, demolition, relocation expenses and other reasonable and necessary expenses related to development of non-luxury housing.

Benefits: The HOME program is not a categorical housing program requiring a specific housing activity. Instead, the HOME program provides States and local governments flexibility to decide what kind of housing assistance, or mix of housing assistance, is most appropriate to meet their housing needs.

Types of Properties: Many different types of properties can be served by HOME program funds. The HOME program is structured to encourage States and local governments to use HOME funds most efficiently by requiring the smallest State and local matching contributions for the most cost-effective housing activities.

Jurisdiction's Responsibilities: Before receiving HOME funds, a jurisdiction must prepare (and HUD must approve) a Comprehensive Housing Affordability Strategy (CHAS), submit a notice of intent to participate, and provide a program description.

Owner's Responsibilities: The HOME program is specifically designed to meet the housing needs of low- and very-low-income residents, so the residents of buildings whose owners are applying for HOME program funds must meet HUD income guidelines if the project is to be eligible.

Limitations: HOME funds may not be used to pay for any administrative costs of a participating jurisdiction. Other activities prohibited under the HOME program include public housing modernization, tenant subsidies for certain special mandated purposes under Section 8, matching funds for other Federal programs, Annual Contributions Contracts (ACCs), activities under the Low-Income Housing Preservation Acts of 1987 and 1990, and operating subsidies for rental housing. Additionally, the funds cannot be used to create a reserve to undertake those activities at a later date.

Comments: As cities have not received HOME funds in the past, there are no established programs dependent on this source. Using these funds for seismic retrofit projects therefore will not require reprogramming, which may make the HOME program more accessible for seismic retrofit projects than established funding sources such as CDBG. However, as it is a new Federal program, we have no track record from which to judge the availability of HOME funds for this purpose.

Contacts:

Office of Affordable Housing Programs
U.S. Department of Housing and Urban Development
451 Seventh Street, SW
Washington, D.C. 20410
or
Housing and Urban Development Department
Regional Office - Region IX
450 Golden Gate Ave., San Francisco, CA 94102
or
Your HUD regional office

THE SMALL BUSINESS ADMINISTRATION (SBA)

General: The Small Business Administration (SBA) program most likely to be of interest to owners of seismically hazardous buildings is the Guaranty Loan Program. Loans are made by private lenders with a percentage of the loan amount (up to a maximum of $750,000) guaranteed by the SBA. Loan terms are dependent upon the use of the loan proceeds.

Benefits: Interest rates on SBA guaranteed loans range from prime rate plus 2.25% to prime rate plus 2.75%, depending on the term of the loan.

Types of Properties: This program is only suitable for small businesses that are owner/ tenants in seismically hazardous buildings. The proceeds from a loan through this program may be used for leasehold improvements.

Jurisdiction's Responsibilities: This program does not require the direct participation of the municipality.

Owner's Responsibilities: The owner must initiate this process by contacting the SBA. An applicant must have an historical earnings and cash flow record which demonstrates an ability to repay the loan. An acceptable tangible net worth is required to demonstrate that the business operates on a sound financial basis.

Limitations: The SBA requires sufficient assets be pledged as collateral. Although the SBA does not set minimum loan amounts, it is unusual to find a lender willing to participate in loans for amounts under $50,000.

Comments: A decision on a loan package is usually made within 10 working days after it is received by the SBA, not including the bank's processing time. A list of local lending institutions that participate in this program can be obtained from the SBA. This program can prove helpful to owners who can qualify for a loan but have been unable to find a bank willing to provide one. The Guaranty Loan Program will be of little help to owners who need some type of subsidy in order to afford a retrofit project.

Contact: Small Business Administration
San Francisco District Office
211 Main Street, San Francisco, CA
(415) 744-6820
or
Your district office

BOND PROGRAMS

GENERAL OBLIGATION BONDS

(California Government Code - Section 43600 et seq. for cities)
(California Government Code - Section 29900 et seq. for counties)

General: AB 1001 (Chapter 658, Statues of 1991) allows the use of General Obligation (GO) bonds to finance the seismic retrofit of privately-owned hazardous structures. GO bonds are repaid from property and other general taxes levied throughout a jurisdiction so they must be used to finance projects with a public benefit.

Benefits: The funds from sale of GO bonds can be used to provide financing to owners of hazardous structures on any terms established by the municipality.

Types of Properties: A GO-funded loan program can be designed to finance retrofit of any type of property, assuming the project provides a public benefit.

Jurisdiction's Responsibilities: The jurisdiction must design and administer the program, issue the bonds, and make bond payments.

Owner's Responsibilities: The owner must agree to meet the requirements of the program.

Limitations: As with any GO bond, the issue must be approved by a two-thirds vote. General Obligation bonds are also subject to a jurisdiction's statutory debt limit.

Comments: To our knowledge, this financing mechanism has not been used by local governments to fund retrofitting of privately-owned structures.

Contact: Financial Advisor, Investment Banker, and/or Bond Counsel

MARKS-FORAN RESIDENTIAL REHABILITATION ACT
(California Health and Safety Code - Section 37910)

General: The Marks-Foran Residential Rehabilitation Act authorizes cities, counties, housing authorities and redevelopment agencies to issue tax-exempt revenue bonds to finance residential rehabilitation. The rehabilitation program should be based on a public improvement plan reviewed and adopted by a citizens committee. Any work pursued with funding from this program must comply with a municipality's rehabilitation standards. The funds from such a Marks-Foran bond issue can be used to provide long-term, low-interest loans to owners of residential property.

Benefits: Marks-Foran bonds provide loans at tax-exempt rates to property owners.

Types of Properties: Single-family and multi-family residential properties qualify for Marks-Foran bond financing. Commercial properties may qualify if located in a designated residential rehabilitation area.

Jurisdiction's Responsibilities: The sponsoring municipality must designate an area for residential rehabilitation, must design and administer the loan program, and must issue the bonds.

Owner's Responsibilities: Property owners must apply for funding and demonstrate ability to repay loans.

Limitations/Comments: Up to 20% of loans for absentee-owned property and up to 40% of loans for owner-occupied property may be used for general property improvements not required by such local rehabilitation standards. Funds can also be used for architectural, engineering, appraisal, origination and other fees.

Contact: Financial Advisor, Investment Banker, and/or Bond Counsel

MARKS HISTORIC BOND ACT

(California Health and Safety Code - Section 37600 et seq)

General: The Marks Historical Rehabilitation Act of 1976 allows a city, county, city and county or a redevelopment agency to issue bonds to finance the rehabilitation of historic properties. The project may comprise acquisition, relocation, reconstruction, restoration, renovation or repair of the historical property for any of four purposes, one of which is to provide for the safety of occupants or passersby. Prior to issuing bonds under this program, a municipality must adopt a historical rehabilitation financing program and designate historical rehabilitation areas.

Benefits: Provides tax-exempt financing to aid in the rehabilitation of historically or architecturally significant structures.

Types of Properties: Property must be "historical property" as defined by the Marks Act, (such as property listed on existing national, State or local historical registers or official inventories).

Jurisdiction's Responsibilities: A jurisdiction must adopt an historical rehabilitation financing program, setting forth the architectural and/or historical criteria to be used in selecting historical properties which may be eligible for rehabilitation financing. The jurisdiction's legislative body must designate historical rehabilitation areas using specified criteria. The jurisdiction must also allow affected citizens to participate in the planning and implementation of the historical rehabilitation financing program and in the designation of historical rehabilitation areas, providing for a maximum of citizen participation, including the establishment of a citizens advisory board.

Owner's Responsibilities: Owner must provide documentation that the structure meets the criteria for selection as an historically/architecturally significant building.

Limitations: Loans made under a Marks Historic Bond Act program must meet the following criteria:

(1) outstanding loans on the project property, including the loan for rehabilitation, cannot exceed 90% of the post-rehabilitation value of the property
(2) repayment period cannot exceed 40 years or 4/5 of the expected economic life of the property, whichever is less
(3) loan must be used only for historical rehabilitation work as defined in the Act.

Comments: A seismic retrofit program designed around historically significant buildings may be an appropriate option for a community with a traditional downtown area that contains a number of historically significant structures and a high concentration of seismically hazardous structures. A municipality's historical rehabilitation financing program may include a public improvement portion. Such infrastructure improvements must take place within a designated rehabilitation area. A rehabilitation agency can also buy historical properties with this financing.

Contact: Financial Advisor, Investment Banker, and/or Bond Counsel

MELLO-ROOS COMMUNITY FACILITIES DISTRICT
(California Government Code - Section 53311 et seq.)

General: The Mello-Roos Community Facilities District Act of 1982, subject to certain limitations, allows jurisdictions to provide market rate loans to private property owners to finance seismic retrofit work. Mello-Roos is therefore useful as an alternative to private financing mechanisms, particularly when private financing is limited.

Mello-Roos bonds are payable from and secured by a special tax on the properties in the district, so a jurisdiction is not legally liable for the debt incurred under this type of issue. The special taxes are generally collected with property taxes, and are in place only so long as they are needed to pay principal and interest on the bonds. The interest on Mello-Roos bonds issued to finance seismic rehabilitation of private properties is exempt from California State taxes but is subject to Federal taxation. Mello-Roos financings are similar to Special Assessment financings. (See: SPECIAL ASSESSMENT DISTRICTS)

Benefits: Mello-Roos bonds can provide financing at rates comparable to bank lending rates. Mello-Roos districts are geographically flexible, and can be designed to include all owners who are interested in and qualify for the financing. Depending on the guidelines for membership (e.g. value to lien requirements, etc.) Mello-Roos financing may be easier to qualify for than traditional financing.

Types of Properties: Mello-Roos bonds can be used to finance the retrofit of all types of privately owned, seismically hazardous structures.

Jurisdiction's Responsibilities: As a prerequisite to establishing a seismic retrofit Mello-Roos district, a municipality must adopt a mandatory retrofit ordinance which sets specific code requirements. The ruling legislative body of the jurisdiction must also adopt a resolution of intention to establish the district, levy the special tax, and issue the bonds. The legislative body must within 60 days hold a public hearing on the formation of the district and the issuance of bonds, and then must submit the matter to a vote. The issue requires a "yes" vote from all property owners included in the district. The jurisdiction generally assembles and works with a financing team to help establish criteria for allowing property owners to join the district, to help work with the owners of URMs and other seismically hazardous structures, and to bring the bonds to market. Once the bonds have been issued, the jurisdiction's responsibilities include monitoring of construction and administration of the district.

Owner's Responsibilities: Owners must decide to become members of the district and demonstrate their ability to meet criteria established for membership in the district.

Limitations: Some limitations to the use of Mello-Roos financing to pay for seismic safety work on privately owned buildings are:

(1) financing may be used to pay only for work necessary to comply with locally adopted seismic retrofit standards
(2) financing cannot be used to demolish, replace or repair a building unless it is located in the disaster area declared as a result of the Loma Prieta earthquake of October 1989
(3) all work financed on historical buildings must be done in accordance with the State Historical Building Code
(4) the district must be authorized by a 100% "yes" vote (i.e. the district may only include the properties of those owners who want to participate in, and who qualify for, the Mello-Roos program)
(5) Mello-Roos bonds may only be issued for this purpose prior to October 17, 1994

Mello-Roos bonds may be used to finance work on privately owned buildings. They cannot finance the retrofit of public buildings, because properties owned by government agencies are exempt from the taxes which are levied on properties in a Mello-Roos district.

Comments: Mello-Roos financings for the purpose of seismic retrofitting have generally been considered for use by general law cities and counties, although charter cities may use them as well. Membership in the district is voluntary so there are likely to be few compliance problems. To be certain a property owner is serious about joining the district, a jurisdiction may want to require potential members to submit preliminary plans, an engineer's estimate, and a sizeable non-refundable deposit, and make current all property tax payments. A Mello-Roos financing may require a significant amount of staff time, but there are few hard costs to the jurisdiction; all fees may be passed through to the district members. One of the more difficult efforts associated with a Mello-Roos financing may be determining the guidelines for membership in the district, such as setting value-to-lien ratios. The time necessary to establish a Mello-Roos district depends on the community and the commitment of the building owners. If the community has experience with Mello-Roos issues and the owners have already done engineering studies, then the bond can be issued relatively quickly. On the other hand, it is possible the establishment of a district could take several years. Proceedings to issue bonds can be concurrent with efforts to establish a district, which can shorten the overall timeline. An experienced municipality with a few well-prepared owners may theoretically be able to complete the formation of a district and issue bonds in 6 months or less. The legislation surrounding Mello-Roos financing is frequently updated; bond counsel should be consulted for the most current information. (See: CASE STUDY - CITY OF WEST HOLLYWOOD)

Contact: Financial Advisor, Investment Banker, and/or Bond Counsel

PUBLIC PURPOSE BONDS

General: Many communities issue bonds and other forms of obligations to finance projects which serve a "public purpose" such as construction or remodeling of public buildings. Subject to certain restrictions, tax laws permit up to 5% of the proceeds of such a financing to be used for unrelated private purposes. Financing the seismic retrofitting of a privately owned building theoretically could be one use of this 5% portion.

Benefits: These funds can be obtained without undertaking a separate financing, and would be available at the same low rate as the general issue.

Types of Properties: A funding program of this type can be designed to meet the needs of a jurisdiction for the retrofitting of any type of structure.

Jurisdiction's Responsibilities: The jurisdiction would prepare the financing as it would any other issue, working with its financing team and private owners to ensure that the financing is marketable and complies with tax laws. The jurisdiction will also be responsible for bond repayment.

Owner's Responsibilities: The owner must work with the jurisdiction and the financing team and meet the criteria established by the jurisdiction.

Limitations: Less than 5% of the proceeds of a public purpose financing may be used on private projects.

Comments: To our knowledge this technique has never been used. This type of program would be particularly well suited for communities which expect to issue a public purpose financing and which have a small number of structures in need of seismic retrofitting. Note that the 5% limit is not designed for this purpose; rather, it is a built in "buffer" in case a portion of a financing accidentally is used inappropriately. Bond counsel needs to be consulted about the appropriateness of using the 5% portion in a planned manner to finance seismic upgrade of privately-owned hazardous structures.

Contact: Financial Advisor, Investment Banker, and/or Bond Counsel

SPECIAL ASSESSMENT DISTRICT

(California Street and Highways Code - Section 5000 et seq., 10000 et seq. and 8500 et seq.)

General: Special Assessment District financing is similar to Mello-Roos Community Facilities District financing. (See: MELLO-ROOS COMMUNITY FACILITIES DISTRICT) Almost all Special Assessment proceedings are conducted under the Improvement Act of 1911, or the Municipal Improvement Act of 1913 used in conjunction with the Improvement Bond Act of 1915. The 1911 Act and the 1913 Act are general purpose acts that can be used, within certain limitations, by cities and counties to make market rate loans available to property owners to finance the seismic retrofitting of privately owned buildings.

Special Assessment financing presents an alternative to private financing mechanisms for owners of seismically hazardous buildings. Assessments levied on properties in a district are in proportion to the financing received for their retrofit projects. Bonds are issued based upon the total of unpaid assessments. A lien is created against each parcel with an unpaid assessment and the assessments are recorded in the county recorder's office. Assessments are collected in the same manner as property taxes and can be pre-paid in full within 30 days. The interest on Special Assessment bonds issued to finance the seismic retrofitting of privately owned buildings is exempt from California State taxes but is subject to Federal taxation.

Benefits: Special Assessment bonds can provide financing, at rates comparable to bank lending rates, to owners of seismically hazardous structures. Depending on the guidelines for membership, this financing may be easier to qualify for than traditional financing.

Types of Properties: Special Assessment bonds can be used to finance the retrofit of all types of privately owned, seismically hazardous structures.

Jurisdiction's Responsibilities: Prior to establishing a Special Assessment district, the governing body of a municipality must adopt an ordinance mandating seismic retrofitting of affected buildings and a procedural ordinance. The ruling legislative body also must adopt a resolution of intention to establish the district, levy assessments and issue bonds. An Assessment Engineer then prepares a report describing, among other things, the method used for determining the assessment to be levied against each property. After a 60-day notice period, the legislative body must hold a public hearing on the formation of the district and the issuance of the bonds. Unless owners of at least half the parcels protest, the legislative body can then adopt resolutions forming the district and authorizing issuance of the bonds. The jurisdiction generally assembles and works with a financing team to help develop guidelines

for district membership. The municipality then offers district membership, in accordance with the developed guidelines, to all owners of seismically hazardous buildings. Membership can be voluntary.

Owner's Responsibilities: Owners must elect to participate in the district, obtain engineering and construction cost estimates, and demonstrate their ability to meet criteria established for membership.

Limitations: The following are some limitations applicable to any Special Assessment procedure:

(1) The money raised must be used for a public purpose, such as improved public safety.
(2) The total of the assessment cannot be greater than the sum of the cost of improvement and the expenses related to the bond financing.
(3) The assessment on any parcel must be proportionate to the benefit received by that parcel.
(4) The owner of a parcel assessed must be given an opportunity for a hearing on the extent of benefit his or her parcel is judged to receive.

Comments: Special Assessment financing for the purpose of seismic retrofitting has generally been considered for use by charter cities and counties, although general law jurisdictions may use this technique as well. As membership in a Special Assessment district may be voluntary, the jurisdiction should encounter few compliance problems. To be certain that a property owner is serious about joining the district, a jurisdiction may want to require potential members to make a sizable non-refundable deposit and to make current all property tax payments. A Special Assessment district may require a significant amount of staff time, but there are few hard costs to the jurisdiction as all fees may be passed through to district members. One of the more difficult efforts associated with a Special Assessment financing may be determining the guidelines for membership in the district, such as setting value to lien ratios.

In 1989, the City of Torrance established a Seismic Safety Assessment district to finance approximately $680,000 worth of seismic retrofit projects. Torrance used a combination of the 1913 and 1915 Acts to finance the retrofitting of 7 of the 40 privately owned structures in the city which were designated as seismically hazardous. (See: CASE STUDY - CITY OF TORRANCE) In 1991, the City of Long Beach used the same method to finance approximately $17.4 million worth of seismic retrofit projects on 307 parcels throughout the city. (See: CASE STUDY - CITY OF LONG BEACH). The interest rate on the Torrance bond issue was 10.75% while the rate on the Long Beach issue was 11.3%.

The time it takes to establish a Special Assessment district depends upon the experience of the community with such districts, the number of properties to be included in the district, and the commitment of the building owners. A smaller, experienced jurisdiction should theoretically be able to establish the district and issue the bonds in less than 6 months. By contrast the Long Beach financing took 18 months to complete.

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and/or Bond Counsel

TAX INCREMENT FINANCING OR TAX ALLOCATION BONDS

(California Health and Safety Code - Section 33670)

General: Tax Allocation bonds are normally issued by redevelopment agencies to finance the revitalization of blighted and economically depressed areas. While to our knowledge they have not been issued for this purpose, Tax Allocation bonds theoretically can also be used to finance seismic retrofit projects. The "tax increment revenue" used to make principal and interest payments on the bonds is the portion of future property taxes that reflects an increase in the project area's assessed valuation due to the redevelopment work.

Benefits: Tax Allocation bond funds can be used for programs ranging from grants to low-interest long-term loans.

Types of Properties: These funds can be used to finance the retrofit of any structure located in the redevelopment district.

Jurisdiction's Responsibilities: The redevelopment authority of the jurisdiction must develop program guidelines for distributing funding, must issue bonds, administer the program, and make bond payments.

Owner's Responsibilities: An owner must qualify for funds under local program guidelines.

Limitations/Comments: Tax Allocation bonds have not, to our knowledge, been used to fund programs aimed at financing retrofitting of privately-owned seismically hazardous structures. The bonds issued to finance this type of program will likely be Federally taxable because of the emphasis on investment in privately owned buildings. It is unclear whether seismic retrofitting alone will generate sufficient tax increment revenue to cover bond payments.

Contact: Financial Advisor, Investment Banker, and/or Bond Counsel

CALIFORNIA STATE SEISMIC LEGISLATION

In 1986 the legislature of the State of California enacted a comprehensive law addressing the hazards posed by unreinforced masonry buildings (URMs) which mandated certain actions be taken by January of 1990. Three months before that deadline the San Francisco Bay Area experienced the Loma Prieta earthquake. In the two years which followed, much legislation was proposed to address various aspects of seismic safety. The following discussion highlights legislation which passed into law during that period and which provides incentive for retrofitting privately-owned seismically hazardous structures.

THE URM LAW

In response to the danger posed by the great number of potentially hazardous buildings in California, in 1986 the State legislature enacted the unreinforced masonry building law (Chapter 250, Statutes of 1986: SB547 [Alquist]; Government Code Section 8875 et seq.) The backbone of the State's efforts to address seismically hazardous structures, this legislation, commonly known as the "URM Law," is aimed at mitigating the hazards posed by URMs. The URM Law applies to all jurisdictions in California's Seismic Hazard Zone 4, the region of highest earthquake activity in the nation. Seismic Hazard Zone 4 runs along California's coast from parts of San Diego County in the south through Humboldt County in the north, as well as inland in parts of the State, and contains several areas with a 60% or higher chance of a major earthquake occurring within the next thirty years. Seismic Hazard Zone 4 includes 365 jurisdictions containing roughly 80% of the State's population.

The URM Law spells out three tasks which local jurisdictions in Seismic Hazard Zone 4 are required to accomplish. The first step, which was to be completed by January 1, 1990, requires jurisdictions to identify all URMs which are "potentially hazardous." These are defined in the law as buildings "constructed prior to the adoption of local building codes requiring earthquake resistant design of buildings and constructed of unreinforced masonry wall construction." The law does not require local jurisdictions to identify warehouses and similar buildings with few occupants (excluding those used for emergency services or supplies), residential buildings with five or fewer living units, or structures which are historically or architecturally significant.

The second step required by the URM Law is development and implementation of a mitigation program. Each jurisdiction is free to develop its own program, the only requirement being that legal owners be notified that their buildings are potentially hazardous. The third step, which was also to be accomplished by January 1, 1990, is submission of the information collected and the mitigation plan to the California Seismic Safety Commission.

Note that the Seismic Safety Commission's primary function is to advise the governor and the legislature and coordinate the responsibilities of State agencies on issues regarding seismic safety. The Commission is responsible for establishing programs for earthquake hazard mitigation, and was required by the URM Law to develop an advisory report for local jurisdictions to use when complying with that law. While the Seismic Safety Commission collects the information submitted by local jurisdictions, the URM Law does not give the Seismic Safety Commission any regulatory authority to approve that material. As of June 1992, all but a handful of communities had complied with the requirements of the URM Law.

ENFORCEMENT OF LOCAL ORDINANCES

Case law clearly spells out the authority of local governments to conduct surveys of seismically hazardous structures and to require retrofitting (See: LIABILITY IMPLICATIONS AND CONSIDERATIONS). In addition, California legislation makes it clear that local jurisdictions have the right to abate potentially hazardous buildings (AB1279: Hauser: 1989-90 Legislative Session: Chaptered 90-192). This legislation states that the local jurisdiction's enforcement agency may order a building retrofitted to local building standards if the building is identified by the jurisdiction as being "potentially hazardous to life in the event of an earthquake," and (1) in the event of an earthquake the hazardous condition "would endanger the immediate health and safety of residents or the public," (2) the condition can be corrected with current technology, and (3) the owner has not complied with an abatement order of the enforcement agency. If the owner does not comply, the enforcement agency may apply to the superior court for appointment of a receiver who will obtain a lien against the property and act to abate the hazard in accordance with procedures set out in the legislation.

CONCERNS OF LOCAL JURISDICTIONS: GIFT OF PUBLIC FUNDS, SEPARATION OF CHURCH AND STATE, AND LIABILITY

Much of this *Handbook* is based on the assumption that jurisdictions have decided to provide retrofitting funds to property owners, and are looking for ideas as to how they might do so. In California the question often arises of whether a particular financing program violates the State constitution's prohibition against a "gift of public funds." This question is directly addressed in some of the legislation enabling particular financing techniques, where the legislation expressly declares that the loans made pursuant to the legislation should not be construed to be gifts of public funds. Local jurisdictions need to consult with their attorneys to ensure that any financing programs which they design, whether or not pursuant to specific legislation, do not violate the constitutional prohibition.

The issue of "separation of church and State" also comes to the minds of those designing financing programs, querying whether it is appropriate for local agencies to provide assistance to religious institutions. The legal questions may be complex. With respect to the constitutional question, so long as a program is designed to finance retrofit of all buildings and not just those put to religious use, in general there is no Federal or State prohibition against local agencies providing assistance to religious institutions. This is articulated in Everson v. Board of Education, 330 U.S. 1, 18 (1946), a case which questioned the use of public tax dollars for parochial school children's transportation to school. In his opinion, Justice Black wrote that the First Amendment "... requires the State to be neutral in its relations with groups of religious believers and non-believers; it does not require the State to be their adversary. State power is no more to be used so as to handicap religions than it is to favor them." The use of taxes in that case was upheld since the government was not being discriminatory.

Where bond financing is involved, the regulations are somewhat different. Generally, if a program is bond financed, it must be designed to finance the retrofit of all buildings not just those put primarily to religious use or, for that matter, to other prohibited use; whether or not a building may be provided bond financing must be decided by bond counsel on a case-by-case basis. The main concern with bond financing, however, is the *type of work* that may be financed rather than which buildings may be eligible. Whether or not a program is being bond financed, local agencies again are advised to seek the opinion of counsel when putting together a financing program to ensure that they are in compliance with these and other relevant State and Federal statutes.

Liability is an issue which frequently comes up in discussions of seismic retrofit, with arguments being made for liability as both an incentive and a disincentive to retrofit. (See: LIABILITY IMPLICATIONS AND CONSIDERATIONS). Jurisdictions may be concerned about their potential liability as a result of the use of public funds to install equipment and construct improvements on private property. California law spells out conditions under which public agencies are liable for injuries caused by dangerous conditions of public property. In 1990 a bill was passed (SB2819: Robbins: 1989-90 Legislative Session: Chaptered 90-1318) which provides that seismic safety or fire sprinkler improvements "which are owned, built, controlled, operated, and maintained by the private owner of the building in which the improvements are installed are not public property or property of a public entity solely because the improvements were financed, in whole or in part, by means of the formation of a Special Assessment district."

SPECIAL ASSESSMENT, MELLO-ROOS AND GENERAL OBLIGATION BONDS

Having decided to offer financing to private owners of hazardous buildings, an obvious next step is for the jurisdiction to identify sources of funds which can be used for that purpose. Special Assessment District financings (California Street and Highways Code - Section 5000 et seq., 10,000 et seq. and 8500 et seq.) and Mello-Roos Community Facilities District financings (California Government Code - Section 53311 et seq.) have recently been explored as sources of loan funds. Generally speaking, these techniques allow local jurisdictions to form districts composed of properties which will participate in the seismic project being financed. A tax or assessment is levied on participants in the district, and bonds are issued which are repaid from the proceeds of the tax or assessment.(See: LOCAL GOVERNMENT FINANCING OPTIONS - MELLO-ROOS COMMUNITY FACILITIES DISTRICTS and SPECIAL ASSESSMENT DISTRICTS)

Special Assessment District and the more recent Mello-Roos District financing mechanisms were designed and have routinely been used to finance public infrastructure, facilities and services. Because the legislation enabling such financings did not originally contemplate their use to fund work on privately-owned structures, the techniques are not easily applied for such use. Nonetheless, Special Assessment bond financing has already been used by certain cities to finance seismic retrofit of privately owned hazardous buildings (See: CASE STUDIES - CITY OF LONG BEACH AND CITY OF TORRANCE) and several jurisdictions are at various stages in the process of creating Mello-Roos districts for that purpose (See: CASE STUDY - CITY OF WEST HOLLYWOOD). Legislation has been passed, and continues to be proposed, aimed at allowing, clarifying, and simplifying use of these techniques to finance retrofit of private structures.

The Mello-Roos legislation was the first to be amended for this purpose. Shortly after the Loma Prieta earthquake in 1989, legislation was passed allowing Mello-Roos districts to be used by jurisdictions located in a disaster area to finance the repair of buildings damaged or destroyed by the earthquake (SBX27: Mello: 1989-90 First Extraordinary Session of the Legislature: Chaptered 90-29X). This legislation also provided for financing of "work deemed necessary to bring buildings, including privately owned buildings, into compliance with seismic safety standards or regulations." This work may be financed through a tax levy on properties in the Mello-Roos district, provided that all the votes cast on the question are in favor of the tax. Work financed using Mello-Roos must be certified by local building officials as necessary to bring the building into compliance with seismic safety standards or regulations. All such work on qualified historical buildings must comply with the State Historical Building Code. Demolition of a building and its replacement with a new building can not be financed, nor can construction of a new building except in Federally declared disaster areas.

Recently legislation was passed to clarify ambiguities regarding the use of Special

Assessment techniques to finance seismic retrofit of privately-owned properties. (AB1700: Farr: 1991-92 Legislative Session: Chaptered.) This legislation states that cities and counties may issue bonds, incur debt and make loans to owners of private buildings for "seismic strengthening of unreinforced buildings and other buildings." The strengthening must be done in accordance with a plan approved by a jurisdiction's building official or drawn up by a registered civil engineer or a licensed architect, one of whom must certify that the work "is necessary for seismic safety reasons or is otherwise legally required for completion of the work or occupancy of the building." As with the Mello-Roos legislation discussed above, demolition and new construction are not permitted, work on historical buildings must be done in accordance with the State Historical Building Code, and "no lot, parcel, or building shall be included in the district without the owner's consent." Addressing a concern regarding affordable housing, the legislation specifies that to the extent funds are used to retrofit residential buildings containing affordable units for lower income households, the owner must enter into an agreement to maintain the number and level of rents of those units. To qualify to issue bonds and make loans under the program, the legislation requires a jurisdiction to have completed its inventory of URMs and to have adopted a mitigation ordinance in accordance with the URM Law.

The least expensive form of loan financing available to government entities is General Obligation bonding: issuance of bonds which are guaranteed by the full faith, credit and taxing power of the issuing jurisdiction. As with Special Assessment and Mello-Roos financings, tools originally designed for public finance, General Obligation bonds have been examined as possible vehicles to provide funding for retrofit of privately owned structures. Legislation was passed (AB1001: Brown: 1991 Legislative Session: Chaptered 91-0658) stating that a city or county may issue bonds for the purpose of seismic strengthening of unreinforced and other buildings. Use of this tool is subject to many of the same conditions described above such as certification that the work is necessary, preservation of low-income housing units, and jurisdictional compliance with the URM Law. Primarily because in California General Obligation bonds must be approved by a two-thirds vote, this technique has not yet been tested.

REDEVELOPMENT AGENCIES

In many cases URMs and other privately-owned seismically hazardous buildings are concentrated in one geographic area within a jurisdiction, such as an old downtown area. Often these geographic areas fall within the purview of a redevelopment agency. As compared with agencies throughout the country, redevelopment agencies in California have uniform structures and powers and generally have the ability to raise more types of revenues.

As a result, in California redevelopment agencies are important resources. Subsequent to the Loma Prieta earthquake, legislation was passed authorizing redevelopment agencies to take those actions they determine necessary to seismically strengthen specified buildings, including historical buildings, in order to bring them into compliance with seismic building code standards (AB356: Cortese: 1989-90 Legislative Session: Chaptered 90-933).

STATE REACHING OUT DIRECTLY TO PROPERTY OWNERS

The discussions above focus on State actions to help local jurisdictions effect retrofitting in their communities. The State also has taken steps to provide incentives directly to property owners. Two such steps are particularly noteworthy.

It is well known that in 1978 California voters passed Proposition XIII, amending the State constitution to limit the amount of *ad valorem* property taxes on real property to 1% of "full cash value." Full cash value is defined as "the county assessor's valuation of real property ... or ... the appraised value of real property when purchased, newly constructed or a change in ownership has occurred ...." Under Proposition XIII construction undertaken to retrofit hazardous properties could result in increased property taxes, a considerable disincentive to property owners. In 1990 a measure was put on the ballot and the State constitution was amended (SCA33: Rogers: 1989-90 Legislative Session: Chaptered 90-R-57) excluding from the definition of "new construction" seismic retrofitting improvements or improvements utilizing earthquake hazard mitigation technologies. Thus, private owners undertaking seismic retrofitting projects are exempt from the higher property taxes which otherwise would result from new construction.

Many jurisdictions are using disclosure of a building's seismically hazardous condition as an incentive for owners to retrofit (See for example: CASE STUDY - CITY OF PALO ALTO). The idea is twofold: that tenants of a building identified as hazardous might take action to encourage the owner to retrofit, and that the market value of the property will fall once it becomes known that the structure is hazardous, leading the owner to undertake retrofitting in order to maintain or restore the property's value. The State is in the process of taking steps to require disclosure by sellers of residential and commercial properties' seismic condition (AB2959: Klehs: 1989-90 Legislative Session: Chaptered 90-1499 and AB 1968: Arieas: 1991-92 Regular Session: Chaptered 859, respectively). This is particularly significant because it pertains to transfers of all types of residential and commercial property, not just those hazardous structures identified pursuant to the URM Law.

The material described above is but a sample of the many pieces of legislation pertaining to the retrofitting of seismically hazardous structures. Among other things, the California State legislature also has addressed seismic safety of affordable housing, historically significant

structures, and public, hospital, and school buildings, as well as speaking to the issue of earthquake insurance. Additional information on State legislation in this area is available from the Seismic Safety Commission of the State of California. (See: CONTACTS)

FUTURE DIRECTIONS IN HAZARD MITIGATION

Six years have passed since the State's URM Law became effective. Since then, 90 percent of the URM buildings affected by that law have been included in hazard reduction programs. Since the law gave considerable discretion to local governments by allowing them to tailor their own hazard reduction programs, there is quite a wide variation in the effectiveness level of the 190 local programs. The State plans to continue to monitor the status of local government compliance with the URM Law each year. In the meantime, the Seismic Safety Commission has recommended in *California at Risk 1992-1996*, that the State begin to focus on other facilities that pose unacceptable levels of earthquake risk.

Three seismic hazard guidebooks for building owners are currently being developed by the Commission. The first guidebook will disclose typical seismic hazards to buyers of residential buildings. (A publication entitled *Home Buyers Guide to Earthquake Hazards* is currently available from the Bay Area Regional Earthquake Preparedness Project; see: CONTACTS) A similar guidebook is also planned for commercial buildings. These guidebooks will rely on the real estate and lending markets to adjust to a greater awareness of seismic hazards. The guidebooks may spur many owners to reduce seismic hazards voluntarily at the time of sale, much the way owners treat termite repairs. The Commission has plans to issue a third handbook for URM building owners to help them retrofit.

One of the major stumbling blocks in addressing hazardous buildings other than URMs is the lack of uniform standards for seismic hazard evaluations, retrofits, and repairs. Lacking standards, most governments are reluctant to require hazard reduction for non-URM buildings, owners are discouraged from evaluating their buildings, and design professionals do not offer consistent advice. There are several efforts to develop new seismic standards. The Office of the State Architect and the Building Standards Commission must develop uniform seismic retrofit guidelines for State government buildings by January 1, 1993. These could eventually become the basis for future standards. The National Science Foundation, the Federal Emergency Management Agency and the Seismic Safety Commission have research programs focussed on this effort. SB 597 (Alquist) proposes to expand this effort to include key private building concerns in the development of new seismic evaluation and retrofit standards.

Hazardous materials are often stored in older buildings that may collapse in earthquakes or otherwise cause leaks capable of endangering the public. The Chemical Emergency Planning and Response Commission, the Office of Emergency Services, and the State Fire Marshall will soon be considering regulatory measures to ensure that seismic safety in buildings storing acutely hazardous materials is addressed.

Two fires caused major losses after the April 1992 Petrolia Earthquakes. These were a stirring reminder of the great fire after the April 1906 earthquake. In Petrolia, four critical minutes were lost when the doors of its firehouse were jammed shut after the first earthquake. By the time fire fighters extricated their equipment, the adjacent building was burning out of control. The Seismic Safety Commission will be asking the State Fire Marshall and other fire safety regulators to consider a statewide program to modify firehouse doors that may stick in earthquakes.

In 1991, the Building Safety Board recommended establishing a major program to reduce earthquake risk in hospitals built prior to the Hospital Seismic Safety Act. The program would address hospital buildings like those that collapsed and killed patients in the 1971 San Fernando Earthquake. The Seismic Safety Commission will be seeking legislation to create this program in the coming years.

In 1991, the legislature passed AB 1964 (Areias) to set a goal of reducing hazards in unreinforced masonry, State-owned government buildings by the year 2000 in conjunction with the Commission's recommended policy on acceptable levels of earthquake risk. This proposal was considerably less ambitious than that offered by the risk policy, which recommends addressing earthquake hazards in all major State government buildings by the year 2000. Governor Wilson vetoed this bill because the State does not yet know the scope of the problem. The Legislature will probably reconsider the need to set a goal once an inventory of State buildings is developed. In the meantime, the Commission plans to encourage State agencies to disclose to the public known seismic hazards in and around existing State government buildings. The State owns a number of buildings that were identified more than a decade ago as posing serious collapse hazards in earthquakes.

The State government is at a critical stage of the URM hazard reduction effort. Despite a significant budget deficit, the State is faced with the costs of retrofitting its own buildings and bridges, as are most local governments. Private building owners and local governments are looking to the State for both a firm commitment and assistance. Most cities, counties, and building owners have expressed a willingness to take more effective steps to reduce their hazards if affordable financing and standards are made available. Accomplishing needed retrofits will take an equally firm commitment from private lending institutions statewide. Increased public awareness as well as financial and insurance pressures will come to bear upon most URM building owners over the next decade to address the seismic hazards in their

buildings. The success of the URM Law and future hazard reduction efforts will be influenced by future earthquakes, the perception of risk, and how they, in turn, influence the public's willingness to allocate money for hazard reduction.

LIABILITY IMPLICATIONS AND CONSIDERATIONS

BACKGROUND

In examining the issue of retrofitting of unreinforced masonry buildings, the question of potential tort liability is often brought up, sometimes as a disincentive for action (because determining that a building has a problem creates more liability than not knowing about a problem), and sometimes as an incentive for action (that fear of potential liability might act as an economic incentive for action).

The discussion in this chapter is limited to potential ***tort liability***. A tort is a civil (as opposed to a criminal) wrong, other than a breach of contract, for which courts award damages. Thus, this discussion does not define liability in the broader, non-legal, context of the prospect of direct building or contents damage.

In assessing the potential for liability, one must understand that there are ***4 elements of a tort***, each of which must be proven:

- a pertinent duty must be imposed on the building owner;
- the building owner must have violated that duty;
- the victim must have been injured or suffered damages; and
- there must be a causal connection between the building owner's negligence and the harm suffered by the victim.

The ***concept of negligence*** is usually based on the rule of reasonableness. How would a reasonable person have acted under similar circumstances? Could the injury or loss have been foreseen? What was the apparent magnitude of the risk? What were the relative costs and benefits of action vs. inaction?

Finally, the remarks in this chapter must be prefaced by noting the fact that after extensive research in the caselaw of 50 States, ABAG was unable to identify a single case where a public or private entity was held to be liable under traditional tort law for personal injury or physical damage directly resulting from earthquakes. Most cases are settled out of court, including the potential cases from the Loma Prieta earthquake in October 1989. In addition, if and when such a case makes it to trial, it will take approximately 2 more years to become an appellate court decision, and only appellate court decisions become legal precedent. However, ***there is a very high probability that under the appropriate circumstances, liability will be imposed on either public or private entities for personal injury or property damage resulting from an earthquake.*** The majority of this chapter spells out, in as clear a manner as possible, those circumstances for ***private*** building owners. As stressed below, the liability of the local government associated with those private buildings is exceedingly small.

THE ANALYSIS

The most expeditious way to explain the operation of liability rules is to use a specific scenario. Therefore, assume the City Council of the City of Forward, California directs the implementation of a program to survey its entire city to determine the location of all unreinforced masonry buildings (as directed by California law) and, in addition, its downtown area to determine the location of all concrete buildings built between 1950 and 1970 (determined by the city to be most likely to be the non-ductile concrete buildings prone to pancake collapse in earthquakes). The program is implemented by the building department utilizing in-house engineers and other design professionals. The building department, develops a list, including address and owner, and submits the list to the City Council. The City Council notifies the owners of the identified properties, but does not require retrofit of the buildings.

PRIVATE OWNER LIABILITY

(a) No Remedial Action

Building owner Art receives the report and ignores it, doing nothing. A magnitude 7 earthquake strikes the City of Forward and there is significant personal injury and property damage on the property of the passive owner. If the injured parties can prove that the damages were caused in whole or in part by the dangerous conditions identified in the survey, there is a very high probability that liability will be imposed. The property owner has been placed on notice of the dangerous conditions of his property, and his callous reaction to such notice serves as both a legal and a social policy ground for recovery by the plaintiffs. In fact, under the circumstances, the plaintiffs may be able to recover punitive damages.

(b) Owner Study - No Remedial Action

Building owner Brenda receives the notice, engages her own experts, and has them develop a set of recommendations for retrofit. The experts determine that the building is reasonably safe. A magnitude 7 earthquake strikes the area and personal injury and property damage result. This building owner has some liability exposure. Depending on the process by which she selected the design and engineering professionals that she hired, and the directions given to those professionals in evaluating the building, her actions in following these recommendations appear reasonable and non-negligent. However, if there was negligence involved in selecting an unskilled design professional or instructing the professional in a way which clearly militates against a finding of earthquake hazards, that action may be judged negligent and be a source of liability.

(c) Owner Study - Remedial Action

Building owner Clean-Up receives the notice, engages appropriate experts, and implements a retrofit. The earthquake strikes, and personal injury and property damage occur. Is the building owner liable? Mere compliance with the recommendations of the design professionals will not absolutely bar the imposition of liability. However, if the design professionals selected were skilled, it is unlikely that liability will be imposed. On the other hand, if the building owner had knowledge of a major defect which the designers overlooked, and it is this defect which causes either personal injury or property damage, liability will likely be imposed for such injuries or damage.

LOCAL GOVERNMENT LIABILITY

To explore the issue of the liability of the local government associated with private buildings, it is necessary to change the scenario somewhat.

(d) Decision to Survey

Would the City of Future have exposed itself to potential liability had it ***not*** conducted the survey? More specifically, Dale (the owner of a building) and his customers are severely injured in a moderate earthquake. The owner claims that he would have retrofitted his building had he been notified by the city that a problem existed.

If the city is in the portion of California covered by the California law requiring identification of unreinforced masonry buildings (with certain exceptions, including single-family homes), the city has a mandatory duty to undertake that portion of the earthquake building survey. The city is liable for its failure to comply with a mandatory duty unless it has exercised "reasonable diligence" to discharge that duty.

One possible defense might be that the city did not have sufficient funds to undertake the inventory activities mandated by the State statute in the then current fiscal year. The harm suffered MAY be of the type against which the statute is designed to protect. The issue is foggy because the statute does not require the retrofitting of buildings. Therefore, its primary purpose is to inform and educate property owners. A foreseeable, and desirable, result would be remedial action by the property owner. At the present time, there is no reported case which would help determine if this apparent but secondary purpose of the statute is one on which the plaintiff can base a claim that the statute was "designed" to protect against the injuries and damages which would result from an unreinforced masonry building failure in an earthquake.

The next question is whether the local government has exercised reasonable diligence in the discharge of its duty. In this situation, the City of Future's use of due diligence to locate existing funds or to seek new funds to finance compliance with the law are presumed facts. Therefore, the immunity ought to apply. However, if funds become available in the future, it will be unreasonable for the local government to refuse to comply and immunity would no longer apply.

Even if the mandatory duty doctrine applies, it may be very difficult for Dale and his customers to prove that the failure of the City of Future to inventory the affected building proximately caused the injury which occurred. First, he would have to prove that the retrofit would have retrofitted the building. Second, he must prove that the retrofit would have prevented the particular harm which is the subject of the lawsuit.

With respect to those types of private buildings which are ***not*** constructed of unreinforced masonry, the question becomes: is there a legal duty on the city to conduct such a survey? A decision to implement such a program by the policy making body of the jurisdiction (in this case, the City Council) should fall under the discretionary immunity provisions of Government Code Sections 830 and 835.

(e) Inspection Process

Is the City of Future liable if the survey program is undertaken, but the inspections themselves or the consequent recommendations were conducted negligently? The California Government Code Section 818.6 immunizes local governments for an inspection process. The immunity would probably extend to the recommendations resulting from such inspections.

THE "ACT OF GOD" DEFENSE

Throughout this discussion, some may assume that the earthquake, being a natural, unpredictable and awe-inspiring event, is an "act of God" for which no liability should be imposed. This is not true.

The "act of God" defense is not triggered by the occurrence of a natural catastrophe which sets into motion a chain of events causing the injury or damage. If the natural catastrophe is one which is reasonably foreseeable and for which reasonable precautions can be taken, then the "act of God" defense is not available. The reasonable building owner must assume that a major earthquake will strike at or near its building while that building is in its ownership. It will be fruitless for the owner of a building to state that the injuries and damages that might result from the failure of its building during an earthquake could not be foreseen by it. Mass

media have disseminated information on earthquake hazards and the technical expertise necessary to evaluate and mitigate some of those hazards is available. The courts will conclude that it is only reasonable to expect responsible property owners to take some precautionary measures.

ECONOMIC ISSUES ASSOCIATED WITH LIABILITY EXPOSURE

Another issue surrounding liability to owners is related to the extent to which property retrofit, by lessening liability exposure, acts as an economic incentive to retrofit. The economic argument is weak for at least two reasons. First, although retrofit reduces the liability exposure, it does not remove it entirely. The second reason relates to, in a practical manner, how liability (whether for earthquakes or other risks) is handled. A typical building owner might have $2 million in comprehensive general liability insurance coverage (CGL). As a result of learning of the hazard at its building, it might increase its CGL from $2 million to $10 million. The incremental cost of such an increase in coverage is minuscule in comparison to its other costs of doing business. Insurance companies offering GLC will typically find it more expensive to determine the type of construction of those buildings owned by the businesses it covers than the risk of loss. However, in the case of large companies which are self-insured, such risks are more likely to have economic weight. As a practical matter, however, these large businesses are unlikely to own the unreinforced masonry buildings typically being discussed for retrofit. They are more likely to own the non-ductile concrete buildings prone to collapse. Liability exposure may function as an economic incentive for these owners.

AUTHORITY OF LOCAL GOVERNMENTS TO CONDUCT SURVEYS AND REQUIRE RETROFITTING

Another legal issue, not associated with liability, surrounds the authority of local governments to conduct surveys and require retrofitting. Unlike the liability issues, there is clear caselaw in this area. Specifically, the police powers case of Barenfield v. City of Los Angeles, 162 Cal.App. 3d 1035, 209 Cal.Rptr. 8 (1984) clearly establishes this authority. It is important to note that the case was determined prior to the passage of the California law requiring many local governments in California to survey unreinforced masonry buildings and notify owners.

The city enacted a local ordinance which required the owners of all buildings constructed prior to October 6, 1933 which have unreinforced masonry bearing walls (with exceptions not applicable to this case) to take remedial actions designed to reduce earthquake-related

hazards. Each of the plaintiffs owned one or more buildings subject to the ordinance. Each of them received an order from the city requiring them to (1) perform seismic retrofitting of the building(s), or (2) submit a structural engineering analysis indicating that the building(s) meet the ordinance standards, or (3) install temporary safeguards so as to qualify for an extension of time to comply with (1), or (4) demolish the building(s). Plaintiffs sued claiming the ordinance constituted an unconstitutional taking of private property without compensation.

In support of its motion, the city offered evidence that unreinforced masonry buildings pose a safety threat to the public and that the ordinance bore a reasonable relationship to the objective of making the public more safe from this hazard. The plaintiffs offered evidence questioning whether the ordinance's provisions had a reasonable relationship to increased safety. The trial court granted the city's motion for summary judgment.

The appellate court noted that the issue of the reasonableness of the ordinance's provisions was brought into question by the plaintiffs' evidence. However, as challenge to the constitutionality of an enactment, the court must defer to the legislature's judgment unless it is manifestly unreasonable, arbitrary or capricious. ***The court also upheld, without exposition, the ordinance's regulation of private property use as a valid exercise of the city's police powers and not as a taking.***

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