

Risk Reduction and Management Plan

Preparing and adopting a comprehensive, multi-year plan to guide risk reduction and management efforts is essential to long-term progress. A risk reduction and management plan will serve to keep the work needed in the public eye for the long-term and provide a means for measuring progress and maintaining focus. It should be built on the policy guidance developed through strategic planning and serve as a detailed, programmatic guide for what needs to be done and who should do it.

The strategic planning process should produce a long-term mission statement and goals, a strategy for reaching those goals, and an initial prioritized set of concrete objectives and action items. The mission and goals will presumably not be changed often after they are formulated and approved. Much of the board's subsequent effort will carry out the strategy, revise it as necessary, implementing the initial action items, and develop new action items and priorities as experience warrants. The data collection and workshop phases provide information and perceptions regarding strengths, weaknesses, opportunities and obstacles for earthquake safety. The results are summarized, reviewed by workshop attendees, and then refined and adopted by the board. These materials, and the action items will serve as the foundation for writing and adopting a detailed programmatic plan—an earthquake risk reduction and management plan.

This plan should seek to describe and implement action items to meet the goals and objectives in a way that is consistent with the strategy adopted by the board. It should be detailed and specific and may require gathering more data and involve persons and

organizations that did not participate in the data collection or workshop deliberations. This chapter will describe the plan's contents, format, creation, and monitoring.

Contents

The earthquake risk reduction and management plan should be comprehensive. It should seek progress in a number of topical and geographic areas. For example, action items can call on geologists to identify hazards, for agencies to retrofit certain vulnerable buildings, and for emergency response agencies to improve and exercise response plans. The plan should include both risk reduction and risk management activities. For example, an owner may choose to strengthen a building to lessen the expected life loss (risk reduction) and purchase insurance and write a plan for business resumption to manage the remaining risk. The plan also should provide sequencing by calling certain action items to go before others. It may emphasize public awareness in one area and geologic mapping in another. A comprehensive plan will provide the "big picture" so that numerous organizations can act both independent of and in coordination with each other when pursuing efforts with their own resources.

A comprehensive plan is necessary because earthquakes differ from other hazards in a number of significant ways. Earthquake damage may be widespread, but also extremely variable. While many dozens of jurisdictions will be affected, each jurisdiction will have pockets of severe damage intermingled with areas without notable damage. Earthquakes affect the ability of a community to

respond by damaging lifelines, infrastructure, and communications systems.

Ground shaking triggers secondary natural hazards such as landslides, liquefaction and tsunamis and can damage structures whose failure can cause flooding or the release of hazardous materials. Emergency response planning and training are especially important because of the sudden and unpredictable nature of earthquakes as well as the potentially large number of damage incidents over a wide area and the disruption to normal communication. Carrying out a comprehensive plan will benefit communities in a variety of other ways in addition to improving its ability to withstand earthquakes. Emergency responders will be better prepared for incidents that are more frequent and isolated, and facilities will be better built and resist wind and geologic hazards as well as earthquakes.

Format

Developing the details for implementing the plan is essential to making progress. The plan can be built around individual action items or tasks. An action item is a self-contained activity or set of activities that is aimed at dealing with one seismic issue. They are essentially the same as the action items developed through strategic planning, but done in more detail. Each action item should state an objective, describe the problem and the expected outcome, identify the responsible parties, the amount and source of funding, the interim products, and a schedule for completion.

Action items should recommend activities both for the government and private-sector organizations to focus on during the specified period. Experience has proven that it is most effective to include the following components:

- *Description of the issue*—Each action item should explain the seismic safety

issue that justifies use of a government's or private-sector institution's resources.

- *Statement of the objective*—The action item should include an objective that explains what is to be accomplished, sets a date it should be completed, and identifies the agency responsible.
- *Milestones*—Each action item should include a timeline for achievable steps to help measure progress. Where the problems addressed require extensive additional study, the initial estimates of time may be only best guesses.
- *Resources needed*—The action item should include cost estimates. For some tasks, the estimates may be only best guesses because the problems to be addressed by the task will require extensive study. In others, the resources needed will have been identified and in some cases be within the responsible agency's budget.
- *Responsible entities*—Each action item must identify not only the lead agency responsible for the overall objective but also the participating agencies and organizations. The lead agency generally is responsible for coordinating the activities of the other agencies and organizations. In some instances the board may be the lead agency. Each action item should also designate an accountable individual who is ultimately responsible for the organization's participation and for the successful completion of the milestones.
- *Status*—Each action item should state the status of its compliance with its implementation schedule or milestones that have been established for it.
- *References*—The action item should provide references to any statutes, reports, or other materials that may be relevant to the issue.

Figure 9-1 is an example of an action item taken from an existing board's earthquake risk reduction and management plan.

Figure 9-1—Sample action item from a programmatic plan

Action Item

Clarify Hazard Mitigation Liability Issues

Governmental actions dictating strengthening and mitigation of seismic hazards, as well as innovative methods of maintaining the structural integrity and functionality of buildings during and immediately after an earthquake, raise legitimate concerns of tort liability in both the public and private sectors.

Buildings constructed to out-of-date standards pose the greatest life-safety risk in an earthquake. Local governments have the authority and the responsibility to protect their populations from hazardous buildings. Design professionals have the capability to design and construct buildings that maintain their structural integrity during and immediately after an earthquake. Proper building practices, retrofitting existing buildings posing a high likelihood of collapse during seismic events, and innovative structural designs and components in new buildings will significantly reduce earthquake-related casualties.

The tort liability issue of whether one has met the legal standard of due care to a foreseeable plaintiff has inhibited innovation by those involved in the retrofitting of potentially hazardous buildings, as well as the development of seismically resistant new buildings. Local governments and design professionals need a clearly defined legal benchmark to use when their professional judgment calls for deviation from existing building codes in their efforts to mitigate seismic hazards.

Objective

By December 1993, the Seismic Safety Commission clarifies tort liability issues affecting the mitigation of seismic hazards, including employing innovative methods to maintain integrity and functionality of buildings during an earthquake and to what extent they may be avoided, mitigated, or imposed on either local governments or design or construction professionals.

Milestones

1. By December 1992, the Seismic Safety Commission convenes a workshop to clarify to what extent tort liability may be avoided,

mitigated, or imposed on either local governments or design professionals for strengthening and mitigating seismic hazards and the use of innovative methods of maintaining the structural integrity and functionality of buildings during and immediately after an earthquake.

2. By September 1993, the Seismic Safety Commission provides the legislature, the governor, and local governments a report on the issue, including suggestions on how local governments and design professionals may exercise their creativity and judgment without undue apprehension of incurring a large tort liability judgment.

3. By January 1994, the Seismic Safety Commission after consultation with local jurisdictions, the governor, the legislature, as well as supporting and concerned organizations and agencies, submits proposed legislation, if needed, to clarify the tort liability concerns of local governments and design professionals.

Resources Needed

State: The Seismic Safety Commission will conduct the workshops, research, and legislative advocacy with existing staff and fiscal resources.

Responsible Agencies

- Seismic Safety Commission (Tim Cronin, Staff Counsel)
- State Bar of California (Larry Walsh, Director of Real Property Section)
- California Trial Lawyers' Association (Nancy Peverini, Associate Legislative Counsel)
- Association of Bay Area Governments (Ken Moy, Attorney)
- County Supervisors Association of California (Fred Keeley, Santa Cruz County Supervisor)
- League of California Cities
- Structural Engineers Association of California
- California Council/American Institute of Architecture (Aimee Hall, Legislative Assistant)
- Earthquake Engineering Research Institute (Frank E. McClure, Structural Engineer)

Status

To be started.

Organization

Organizing action items by related topics will make the plan easier to understand and monitor. The following categories are suggested:

- *Existing vulnerable facilities*—Action items that encourage reducing vulnerability in existing facilities and lifelines might consist of establishing seismic evaluation and retrofit standards for buildings, improving the seismic safety of public schools, publicly owned buildings, essential services buildings, and hospitals, as well as improving the performance of transportation and utility systems.
- *New facilities*—Action items that encourage reducing vulnerability in new facilities and lifelines can include improving seismic standards for new construction, mapping geologic hazards, and establishing seismic design review policies.
- *Emergency management*—Action items that encourage improvements in emergency management include improvements in emergency planning, communications equipment, training, mutual aid, emergency medical care, and shelter for earthquake victims.
- *Disaster recovery*—Action items that expedite the recovery process include providing post-event housing, estimating economic and governmental effects, and implementing recovery guidelines.
- *Research, public information, education, and legal support*—Action items include implementing a research plan, providing legal analysis of issues, conducting public information campaigns, and developing an information resources center. Earthquake-related research, public information, and education can help achieve the risk reduction and management action items in all the other categories.

Administration

A plan should lay out an administrative and management framework, including:

- *Implementing actions*—Describe actions the board will take to monitor, promote, and carryout the plan.
- *Annual work plan*—Describe and summarize the milestones to be met during each calendar year.
- *Legislation*—Describe legislation needed to enact parts of the plan.
- *Funding*—Funding for some of the action items may come from the Federal Emergency Management Agency or another funding authority that uses a comprehensive coordinated agreement or similar agreement. The action item format should provide the information (task descriptions, deliverables, schedule, cost) needed to complete these agreements.

Planning Process

A seismic risk reduction and management plan will necessarily involve dozens of agencies—governmental, private sector, and volunteer. The public sector and local government ultimately have the principal responsibility for earthquake safety. Because success will depend on their support and active participation, all sectors should be considered important contributors. The process used by other boards can help.¹

An “open” planning process involving all stakeholders is strongly recommended. The process should seek the following:

- Outside views on action items. Success of the plan will depend on organizations and information not available in the workshop.
- A consensus about what needs to be done by whom and the priorities.
- A commitment from responsible entities to implement each action item for which they are responsible.

Starting with the guidance from strategic planning, the planning process should be methodical yet flexible

¹ L. T. Tobin, F. Turner, J. F. Goodfellow, and B. L. Stoner, “California at Risk: Where Do We Go from Here?,” *Earthquake Spectra*, Vol. 8, No 1, 1992, p. 19.

and open in its involvement of parties interested in the outcome. Public involvement should be both informal and formal. Ample time must be provided for interested individuals and organizations to review draft materials. Ample notice must be given before meetings and hearings. An open process will allow time to publicize actions items so that elected officials, community leaders, professional organizations, and the media will understand what is needed and the priorities.

The planning effort should aim to build a support and commitment by creating interest and understanding and a sense of ownership among the persons who will carry it out. Care should be taken to ensure that the plan does not even appear to be dictated from a higher legal or intellectual authority. It is more important to get a commitment from the persons who can make a difference in earthquake risk than it is to make the plan a state-of-the-art document.

Care should be taken to develop a mailing list of the stakeholders identified during the strategic planning process. Other professional organizations, government organizations, and private-sector agencies should be called to identify persons to represent their interests and report back. Draft plan materials should be provided these persons for review and comment.

Workshops and open meetings can be held to air differences, to facilitate interdisciplinary discussion, and to explore technical details and relationships in depth.

Setting Priorities

Even though strategic planning will have identified priorities, the board will have to revisit the issue once the detailed action items have been developed. Once a draft plan has taken shape, use the board's judgment and perspective to set priorities. Six criteria can be applied:

- *Lives saved*—The potential for saving lives and preventing injuries.
- *Damage reduction*—The potential for reducing property damage and economic losses.
- *Socioeconomic continuity*—The potential for reducing social and economic disruption.
- *Opportunity*—The ease with which the activity can be implemented and the degree to which it complements other activities (the opportunity to build and leverage resources of others through relatively small investments).
- *Cost*—The probable cost of the activity.

Take the time to review each action item to be certain it meets a "common-sense test." Decision makers and the public should see it as being sensible, practical, and feasible. Moreover, unless the board has the wherewithal to do an action item, it should not be selected as a priority.

Approval

Before the plan is adopted, a formal public hearing should be held to be certain that organizations participate in an official capacity. The hearing process also fosters the official commitment of the organizations with the resources or legal authority to carry out the plan. Even though hearings are an opportunity to hear from those who disagree or who have new ideas, it is not a substitute for a careful open, review process.

Promoting the Plan

The board should commit itself to its plan by submitting it to the governor, legislature, and other organizations. Making the plan widely available will increase support and recognition for it, as well as for the board and the individual action items.

Many people and agencies must cooperate to make earthquake safety a reality. Concerted efforts and oversight by the board can promote long-term progress toward improved seismic

safety. The board can use reports, hearings, workshops, etc., to focus attention on government and the private-sector implementation measures that are needed. The board can sponsor legislation at the national, state, and local levels. It can provide testimony to legislative committees and city councils. The board can invite leaders of various organizations to meet with it—or send representatives to meet with them. A plan that assigns responsibility for specific tasks to agencies and recommends organizations will allow the board to coordinate and orchestrate the activities of the participants.

Monitoring Progress

A seismic risk reduction and management plan should include a mechanism for monitoring, measuring, and evaluating its effectiveness in meeting its objectives. The foundation for measuring progress is in each action item and its milestones. Only detailed milestones with reasonably achievable dates can be reviewed. A multi-year plan should be reviewed and revised yearly to allow for mid-course corrections. Timetables should be set as gauges for evaluating progress and opportunities for improvement,

regardless of whether schedules or deadlines are met.

The board can use periodic public hearings to assess progress. The meeting format will serve to reward those who are on or ahead of schedule and encourage those who are behind. Anticipation of a hearing will serve to encourage progress, even if it is at the last minute. A periodic review can also ensure that items will not be forgotten and that those that have fallen behind will be revised. A hearing format can also create media interest. Since external accountability is important, the plan should include an annual report to the legislature and governor.

Even if the plan is successfully implemented, events beyond the board's control will create reasons for revision. Periodic strategic planning, described in the previous section, and the results of the monitoring will identify new action items and revisions needed to items. A comprehensive, multi-year plan, prepared openly with the full involvement of affected organizations and individuals will be a major asset in helping a state address seismic safety. The plan should be a living document that is promoted, monitored, and revised continually.

Model Executive Order

Executive Order

No. _____

Establishing _____ Seismic Safety Advisory Board

WHEREAS, many different agencies at various levels of government have substantial responsibilities in the fields of earthquake emergency response and recovery planning and seismic safety; and

WHEREAS, there is a pressing need to provide a consistent policy framework and a means for coordinating on a continuing basis the earthquake-related programs of agencies at all governmental levels and their relationships with elements of the private sector involved in practices important to seismic safety; and

WHEREAS, this need is not being addressed by any continuing state government organization; and

WHEREAS, through concerted efforts of broad scope, coordinated by a Seismic Safety Advisory Board, long-term progress should be made toward higher levels of seismic safety; and

WHEREAS, earthquakes have caused and can cause in the future enormous loss of life, injury, destruction of property, and economic and social disruption, and with respect to future earthquakes, that loss, injury, destruction, and disruption can be reduced substantially by developing and implementing earthquake hazards reduction measures; and

WHEREAS, while the major responsibility for dealing with

earthquakes before and after they happen is firmly fixed with local government, state government also has fundamental responsibilities to take all reasonable measures to reduce the seismic hazard to which the citizens of _____ are exposed; and

WHEREAS, the state should assume a leadership role by influencing the direction of existing and future national earthquake hazard reduction programs and should serve as a model for local hazard reduction measures; and

WHEREAS, earthquake hazard reduction measures often benefit many state programs and bring about improvements in buildings, dams, transportation facilities, communications, fire safety, toxic materials handling, and emergency response preparations;

NOW THEREFORE, I, [NAME], Governor of the State of _____, by virtue of the powers and authority vested in me by the statutes and Constitution of the State of _____, do hereby issue this order to become effective immediately:

- I. Establishment of a _____ Seismic Safety Advisory Board to provide policy, guidance, and direction for the implementation of a comprehensive earthquake risk reduction and management program consistent with state organization responsibilities.

- a. There is established a _____ Seismic Safety Advisory Board, herein referred to as the "board"
 - b. The purpose of the Board is to coordinate, inform, advise and make recommendations.
 - c. The advisory Board shall consist of 15 members appointed by the Governor. The Seismic Safety Advisory Board shall elect annually from its membership its own chairman and vice chairman and may replace them with other advisory board members by majority vote.
 - d. Advisory Board members shall be residents of the State of [name].
 - e. The membership of the Seismic Safety Advisory Board shall be appointed by the Governor from lists of nominees submitted by professional organizations and associations as listed below:
 - (1) Four members appointed from established organizations in the fields of architecture and planning, fire protection, public utilities, and electrical engineering and mechanical engineering;
 - (2) Four members appointed from established organizations in the fields of structural engineering, geotechnical engineering, engineering geology, and seismology;
 - (3) Four members appointed from nominees submitted by the League of Cities and the County Supervisors Association;
 - (4) Three members appointed from established organizations in the fields of insurance, social service, and emergency services;
- II. Duties and responsibilities of the _____ Seismic Safety Advisory Board.
 - a. The Board, in the discharge of its responsibilities, may do any of the following:
 - (1) Accept grants, contributions, and appropriations from public agencies, private foundations, or individuals.
 - (2) Appoint committees from its membership, appoint advisory committees from interested public and private groups, and appoint *ex officio* members who shall not be entitled to vote, to advise the Board.
 - (3) Contract for or employ any professional services and research required by the Board or required for the performance of necessary work and services which, in the Board's opinion, cannot satisfactorily be performed by its officers and employees or by other federal, state, or local governmental agencies.
 - b. The Board is responsible for all of the following in connection with earthquake risk management:
 - (1) Setting goals and priorities in the public- and private-sectors.
 - (2) Requesting appropriate state agencies to devise criteria to promote earthquake and disaster safety.
 - (3) Recommending program changes to state agencies, local agencies, and the private sector where such changes would improve earthquake hazards and reduction.
 - (4) Reviewing emergency response, recovery and reconstruction efforts after damaging earthquakes.

- (5) Gathering, analyzing, and disseminating information.
 - (6) Encouraging research.
 - (7) Helping to coordinate the earthquake safety activities of government at all levels.
 - (8) Establishing and maintaining necessary working relationships with any boards, advisory boards, departments, and agencies, or other public or private organizations.
- c. To implement the foregoing responsibilities, the Board may do any of the following:
- (1) Review state budgets and review grant proposals, other than those grant proposals submitted by institutions of post secondary education to the federal government, for earthquake related activities and to advise the Governor and Legislature thereon.
 - (2) Review legislative proposals, related to earthquake safety to advise the Governor and Legislature concerning the proposals, and to propose needed legislation.
 - (3) Recommend the addition, deletion, or changing of state agency standards when, in the Board's view, the existing situation creates undue hazards or when new developments would promote earthquake hazard mitigation, and conduct public hearings as deemed necessary on the subjects.
 - (4) Recommend and sponsor legislation creating a state-level Seismic Safety Advisory Board as a permanent and autonomous entity of state government.

IN WITNESS WHEREOF, I have hereunto set my hand and have caused the Great Seal of the State of _____ to be affixed this ____ day of _____, 19 __

Governor of the State of

Attest: _____
Secretary of State

Model Enabling Legislation

- § 1000. Legislative Declaration
- § 1002. Seismic safety advisory board; creation; report
- § 1003. Members; appointment; chairman; vice chairman; quorum; public interest
- § 1004. Appointments to advisory board
- § 1005. Term of office
- § 1006.. Per diem; expenses
- § 1007. Powers and Duties
- § 1008. Executive director; employees
- § 1009. Earthquake hazard reduction responsibilities
- § 1010. Establishment and objectives of the [Name] Earthquake Hazard Reduction Program
- § 1011. Implementation of earthquake hazard mitigation program
- § 1012. Consultation with other agencies and groups
- § 1013. Short Title

§ 1000. Legislative Declaration

The Legislature finds and declares as follows:

First, many different agencies at various levels of government have substantial responsibilities in the fields of earthquake preparedness and seismic safety.

Second, there is a pressing need to provide a consistent policy framework and a means for coordinating on a continuing basis the earthquake-related programs of agencies at all governmental levels and their relationships with elements of the private sector involved in practices important to seismic safety. This need is not being addressed by any

continuing state government organization.

Third, through concerted efforts of broad scope, coordinated by a Seismic Safety Advisory Board, long-term progress should be made toward higher levels of seismic safety.

Fourth, earthquakes have caused and can cause in the future enormous loss of life, injury, destruction of property, and economic and social disruption. With respect to future earthquakes, that loss, injury, destruction, and disruption can be reduced substantially by developing and implementing earthquake hazards reduction measures, including, but not limited to, the following:

- (1) Improving design and construction methods and practices.
- (2) Rehabilitating vulnerable buildings.
- (3) Coordinating emergency planning for response by the government and private sectors.
- (4) Implementing land use and redevelopment planning.
- (5) Developing public information and education programs.
- (6) Improving emergency response capabilities and emergency management systems.
- (7) Developing long-term social and economic recovery strategies.
- (8) Upgrading the strong motion instrumentation system.
- (9) Improving basic research of physical and social earthquake phenomena.

Fifth, while the major responsibility for dealing with earthquakes before

and after they happen is firmly fixed with local government, state government also has fundamental responsibilities to take all reasonable measures to reduce the seismic risk to which the citizens of [name of state] are exposed. The state should assume a leadership role by influencing the direction of existing and future national earthquake risk reduction programs and should serve as a model for local risk reduction measures.

Sixth, earthquake risk reduction measures often benefit many state programs and bring about improvements in buildings, dams, transportation facilities, communications, fire safety, toxic materials handling, and emergency response preparations.

Seventh, it is not the purpose of this chapter to transfer to the advisory board the authorities and responsibilities now vested by law in state and local agencies.

§ 1002. Seismic safety advisory board; creation; report

There is created in the state government a Seismic Safety Advisory Board which shall report annually to the Governor and to the Legislature on its findings, progress, and recommendations relating to earthquake risk reduction.

§ 1003. Members; appointment; chairman; vice chairman; quorum; public interest

- (a) The advisory board shall consist of 15 members appointed by the Governor and confirmed by the Senate, one member appointed by the Senate President pro tempore, and one member appointed by the Speaker of the Assembly. The Seismic Safety Advisory Board shall elect annually from its membership its own chairman and vice chairman and may replace them with other advisory

boarders by majority vote. Advisory Board members shall be residents of the State of [name].

[NOTE: As used herein, "Senate" means the upper legislative house and "Assembly," the lower.]

- (b) A quorum shall consist of nine members if there are no vacancies, or else a majority of the members of the advisory board at the time.
- (c) The Legislature declares that the individuals appointed to the advisory board are intended to represent the professions of architecture, planning, fire protection, public utilities, electrical engineering, mechanical engineering, structural engineering, geotechnical engineering, engineering geology, seismology, local government, insurance, social services, emergency services, and the State Legislature and that such representation best serves the public interest.

§ 1004. Appointments to advisory board

The membership of the Seismic Safety Advisory Board shall be appointed by the Governor and confirmed by the Senate from lists of nominees submitted by organizations as listed below:

- (a) Four members appointed from established organizations in the fields of architecture and planning, fire protection, public utilities, and electrical engineering and mechanical engineering;
- (b) Four members appointed from established organizations in the fields of structural engineering, geotechnical engineering, engineering geology, and seismology;
- (c) Four members appointed from nominees submitted by an association representing the cities of [name of state] and an

association representing the county supervisors of [name of state] (OPTION: at least one of which shall be a member of the public at large);

- (d) Three members appointed from established organizations in the fields of insurance, social service, and emergency services;
- (e) One member shall be appointed from the Senate by the Senate President *pro tempore*, and one member shall be appointed from the Assembly by the Speaker of the Assembly. Each of the members appointed pursuant to this subdivision may designate an alternate who shall be counted toward a quorum, who may vote, and who may receive the expenses specified in Section 1006.

§ 1005. Term of office

The term of office for each member of the Seismic Safety Advisory Board shall be four years and each shall hold office until the appointment and qualification of his or her successor, except that of the initial advisory boarders, the Governor shall appoint seven whose terms will expire two years after appointment and seven members plus the chairman whose terms shall expire four years after appointment. All initial appointments shall be made by [date]. Any vacancies shall be immediately filled by the appointing power for the unexpired portion of the term in which they occur.

§ 1006. Per diem; expenses

The members of the Seismic Safety Advisory Board shall serve without compensation but shall be paid per diem expenses of one hundred dollars (\$100) for each day's attendance at a meeting of the advisory board, plus actual necessary travel expenses as determined by the _____

§ 1007. Powers and Duties

The advisory board, in the discharge of its responsibilities, may do any of the following:

- (a) Accept grants, contributions, and appropriations from public agencies, private foundations, or individuals.
- (b) Appoint committees from its membership, appoint advisory committees from interested public and private groups, and appoint *ex officio* members who shall not be entitled to vote, to advise the advisory board.
- (c) Contract for or employ, any professional services and research required by the advisory board or required for the performance of necessary work and services which, in the advisory board's opinion, cannot satisfactorily be performed by its officers and employees or by other federal, state, or local governmental agencies.
- (d) Enter into agreements to act cooperatively with private nonprofit scientific, educational, or professional associations or foundations engaged in promoting seismic safety in [State's name], including activities under the [State's name] Earthquake Risk Reduction Program as provided in Section 1010 of this Act. These associations or foundations may furnish materials for sale, and the advisory board may provide personnel services and office space therefor. Subject to rules and regulations adopted by the advisory board, all moneys received from the sale of publications or other materials provided by an association or foundation shall be returned to the association or foundation for use in furthering seismic safety programs.

- (e) Do any and all other things necessary to carry out the purposes of this chapter.

§ 1008. Executive director; employees

The advisory board shall appoint an executive director who shall be responsible for managing the affairs of the advisory board, subject to the direction and policies of the advisory board.

The executive director shall appoint such employees as may be necessary to carry out the functions of the advisory board.

§ 1009. Earthquake risk reduction responsibilities

The advisory board is responsible for all of the following in connection with earthquake risk mitigation:

- (a) Setting goals and priorities in the public and private sectors.
- (b) Requesting appropriate state agencies to devise criteria to promote earthquake and disaster safety.
- (c) Recommending program changes to state agencies, local agencies, and the private sector where such changes would lessen earthquake risk and improve risk management.
- (d) Reviewing the recovery and reconstruction efforts after damaging earthquakes.
- (e) Gathering, analyzing, and disseminating information.
- (f) Encouraging research.
- (g) Sponsoring training to help improve the competence of specialized enforcement and other technical personnel.
- (h) Helping to coordinate the earthquake safety activities of government at all levels.
- (i) Establishing and maintaining necessary working relationships

with any boards, advisory boards, departments, and agencies, or other public or private organizations.

§ 1010. Establishment and objectives of the [State's name] Earthquake Risk Reduction and Management Program

- (a) There is hereby established a coordinated program pursuant to which the state shall implement new and expanded activities to significantly reduce the earthquake threat to its citizens. This program, to be known as the [State's name] Earthquake Risk Reduction and Management Program, shall be prepared and administered by the Seismic Safety Advisory Board.
- (b) The program set forth in subdivisions (a) shall specify priorities, funding sources and amounts, schedules, and other resources needed to significantly reduce earthquake risk, etc. statewide by January 1, [year]. The achievement of this goal shall be undertaken by establishing objectives within the following categories:
 - (1) Risk Reduction. The reduction of the earthquake risk to acceptable levels through significant reduction in the number of vulnerable buildings, avoiding the creation of new or greater seismic risks, and the promotion and expansion of scientific and engineering studies to help achieve these goals.
 - (2) Emergency Response. Develop plans, agreements and protocols, to deal with special issues, such as earthquake prediction, hazardous materials, critical facilities, and disaster response and mutual aid plans for all major population centers; establish public education, training, and

information; and develop plans to increase the coordination and integration of federal, state and local resources, enhance the state's capability to respond to a major earthquake disaster.

Improve the state's emergency response capability by strengthening the statewide communication system, creating a state emergency coordination center or centers, and automating emergency management data; and training respondents.

- (3) Recovery. Develop systems to manage earthquake recovery, and minimize unemployment, business failures, tax base erosion, and associated monetary and financial losses critical to the restoration of [State's name] economy and public services.

(c) The state's existing seismic safety activities are currently administered by over [insert number] separate agencies. Responsibility for administering these activities shall remain with these agencies. These existing activities shall continue and their efforts shall be incorporated into the coordinated program established under subdivision (a).

(d) The program shall consist of a series of five-year plans and each five-year plan shall be revised by the [State's name] Seismic Safety Advisory Board annually and submitted to the Governor and the Legislature. Each revision shall include a finding on the state's progress toward the goal stated in subdivision (b).

(e) The immediate steps to be undertaken by the Board shall include the performance of existing activities provided the budget prepared by the Governor for the [date] fiscal year and the Budget Act of [date] and the preparation of the first five-year program.

- (f) The first five-year plan document shall be completed by [date], and shall include specific measures and funding needed for adequate progress towards the state's earthquake safety goals by January 1, [date]. This plan and subsequent plans shall cover a five-year implementation period and shall recommend any necessary statutory changes for program implementation.

§ 1011. Implementation of earthquake risk mitigation program

To implement the foregoing responsibilities, the advisory board may do any of the following:

- (a) Review state budgets and review grant proposals, other than those grant proposals submitted by institutions of postsecondary education to the federal government, for earthquake related activities and to advise the Governor and Legislature thereon.
- (b) Review legislative proposals, related to earthquake safety to advise the Governor and Legislature concerning the proposals, and to propose needed legislation.
- (c) Recommend the addition, deletion, or changing of state agency standards when, in the advisory board's view, the existing situation creates undue hazards or when new developments would promote earthquake risk mitigation, and conduct public hearings as deemed necessary on the subjects.
- (d) In the conduct of any hearing, investigation, inquiry, or study which is ordered or undertaken in any part of the state, administer oaths and issue subpoenas for the attendance of witnesses and the production of papers, records,

reports, books, maps, accounts, documents, and testimony.

§ 1012. Consultation with other agencies and groups

The board shall prepare the [State's name] Earthquake Risk Reduction and Management Program, in consultation with the [list appropriate agencies responsible for emergency services, geology, emergency medical services, the state's universities and other appropriate institutions of higher

learning, the National Guard], other appropriate state and local agencies, the private sector, volunteer groups, and the Legislature.

The board may hold public hearings or joint hearings with other groups and conduct other activities as necessary for the development of the program.

§ 1013. Short Title

This act shall be known and cited as the Seismic Safety Advisory Board Act.

Example of Interstate Compact

Interstate Earthquake Compact of [Year]—The Legislature of the State of [Name] hereby ratifies a compact on behalf of the state of [Name] with any other state legally joining therein in the form substantially as follows:

Article I. Purpose

The purpose of this compact is to develop plans and advise on earthquake risk reduction and management programs, emergency response measures, and earthquake recovery plans of member states, and facilitate mutual aid in the member states, and establish a central repository of standardized information, including resources in the multi-state area that might be needed in a major earthquake. The full, immediate, and effective utilization of the resources of the respective states, including such resources as may be available from the United States government or any other source, is necessary to provide needed short-term earthquake disaster assistance to states requesting aid. These resources shall be incorporated into a plan or plans of mutual aid to be developed among the appropriate agencies of states that are parties to this compact. These agencies shall develop and follow procedures designed to assure the maintenance of resource inventories and the exchange of information about earthquake risk reduction disaster response and recovery. It is the policy of the party states to carry out this compact in a spirit of cooperation to provide the most effective earthquake risk reduction and management program.

Article II. Intrastate Planning

Each party state shall have the duty to formulate earthquake risk reduction and response and recovery plans and programs within such state. There shall be frequent

consultation between the representatives of such states and within the United States government and the free exchange of relief plans and information, including inventories of any material and equipment available for response to earthquake emergencies. To this end, each state will maintain standardized data which will establish a comprehensive listing of all resources within the (number)-state region that might be needed to formulate plans during an earthquake disaster. The inventory will be shared equitably among the party states in the event of an earthquake or other emergency, recognizing each state's primary responsibility to assist and protect its residents. Each party state shall also share any available information on earthquake forecasts and reports of seismic activity.

Article III. Responsibilities Of States

Whenever the governor of a party state requests aid from the governor of another party state pursuant to this compact in coping with an earthquake emergency, the requested state shall make available all possible aid to the requesting state consonant with the maintenance of protection for its residents and the policies stated in Article I.

Article IV. Reciprocity

Whenever the officers or employees of any party state are rendering aid in another state pursuant to the request of another party state under this compact, those officers or employees shall, while under the direction of the authorities of the state to which they are rendering aid, have the same powers, duties, rights, privileges, and immunities as comparable officers and employees of the state to which they are rendering aid. Any person holding a license, certificate or other permit issued by any state, demonstrating the meeting of qualifications for professional, mechanical, or other skills may render aid involving such skill in any party state to meet an earthquake emergency, and the state in

which aid is rendered shall give due recognition of such license, certificate, or other permit as if issued in the state in which aid is rendered.

Article V. Immunity

No party state or its officers, employees or other persons, certified by party states pursuant to agreed upon criteria and procedures for certification, rendering aid in another state pursuant to this compact shall be liable on account of any act or omission in good faith on their part while so engaged, or on account of maintenance or use of any equipment or supplies in connection therewith.

Article VI. Supplementary Agreements

Nothing in this agreement precludes any state from entering into supplementary agreements with another state or states for the undertaking of mutual aid and exchange of information in the event of an earthquake emergency. These supplementary agreements may comprehend, but are not limited to, provisions for evacuation and reception of injured and other persons and the exchange of medical, fire, police, public utility reconnaissance, welfare, transportation and communications personnel, equipment and supplies.

Article VII. Compensation

Each party state shall provide compensation and death benefits to its injured officers, employees or other persons certified by party states, pursuant to agreed upon criteria and procedures for certification and the representatives of deceased officers, employees and other certified persons in case officers, employees or certified persons sustain injuries or death while rendering aid in another state pursuant to this compact, in the same manner and on the same terms as if the injury or death were sustained within the state by or in which the officer, employee or certified person was regularly employed.

Article VIII. Reimbursement

Any party state rendering aid in another state pursuant to this compact shall be reimbursed by the party state receiving

such aid for any loss or damage to, or expense incurred in the operation of any equipment answering a request for aid, and for the cost of all materials, transportation, wages, salaries and maintenance of officers, employees and equipment incurred in connection with such request, including amounts paid under Article VII, provided that nothing herein contained shall prevent any assisting party state from assuming such loss, damage, expense or other cost or from loaning such equipment or from donating such services to the receiving party state without charge or cost. Any two (2) or more party states may enter into supplementary agreements establishing a different allocation of costs as among those states. The United States government may relieve the party state receiving aid from any liability and reimburse the party state rendering aid for loss, damage or expense incurred within the terms of this article.

Article IX. Evacuation Plans

Plans for the orderly evacuation and reception of the civilian population as the result of an earthquake emergency shall be worked out from time to time between representatives of the party states. Such plans shall include the manner of transporting such evacuees, the number of evacuees to be received in different areas, the manner in which food, clothing, housing, and medical care will be provided, the registration of the evacuees, the providing of facilities for the notification of relatives or friends and the forwarding of such evacuees to other areas or the bringing in of additional materials, supplies, and all other relevant factors. The plans must provide that the party state receiving evacuees shall be reimbursed generally for the out-of-pocket expenses incurred in receiving and caring for the evacuees, for the expenditures and transportation, food, clothing, medicines and medical care and like items. These expenditures shall be reimbursed by the party state of which the evacuees are residents or by the United States government under plans approved by it. The party state of which the evacuees are residents shall assume the responsibility for the ultimate support or repatriation of such evacuees.

Article X. Availability

Any state of the United States shall be eligible to become party to this compact. As to any eligible party state, this compact shall become effective when its legislature shall have enacted it into law, provided, that it shall not become initially effective until enacted into law by two (2) party states.

Article XI. Withdrawal

Any party state may withdraw from this compact by enacting a statute repealing the same, but no such withdrawal shall become effective until ninety (90) days after the governor of the withdrawing state shall have sent formal notice in writing to the governor of each other party state informing the governors of the action of the legislature in repealing the compact and declaring an intention to withdraw. A withdrawing state shall be liable for any obligations which it may have incurred on account of its party status up to the

effective date of withdrawal, except that if the withdrawing state has specifically undertaken or committed itself to any performance of an obligation extending beyond the effective date of withdrawal it shall remain liable to the extent of such obligation.

Article XII. Severability

This compact is to be construed to effectuate the purposes stated in Article. If any provision of this compact is declared unconstitutional or the applicability thereof to any person or circumstances is held invalid, the constitutionality of the remainder of this compact and the applicability thereof to other persons and circumstances is not to be affected by it.

(This interstate compact is modeled upon the one ratified by the State of Tennessee in connection with its membership in the Central United States Earthquake Consortium.)

Example of Articles of Incorporation

Articles of Incorporation of [Name of Board]

We, the undersigned natural persons of age of twenty-one years or more, acting as incorporators of a corporation, adopt the following Articles of Incorporation for such corporation pursuant to the State of [state of incorporation]:

1. The name of the Corporation is "[Name of Board]."
2. The period of duration is perpetual.
3. (a) (1) The corporation is organized and shall be operated exclusively for charitable, scientific, or education purposes including for such purposes the making of distribution to organizations, formed and operated exclusively for public charitable purposes and qualifying for exemption from taxation under Section 501 (c) (3) of the Internal Revenue Code. (Hereinafter cited as "I.R.C." Reference herein to the I.R.C. also refers to the corresponding provisions of any future United States I.R.C. Law).

(2) The corporation shall promote and support adequate earthquake risk reduction and management in the United States and the states of [enumerate]; shall formulate and improve the administration of earthquake affairs through the Departments and agencies of their respective state and federal government of the United States.

(3) The corporation shall promote earthquake risk reduction and management and shall address the risk reduction, emergency response and recovery planning, public education, and other related matters. For the

purpose of these Articles of Incorporation and this corporation, earthquake risk management is hereby defined to mean protection from physical destruction or damage whether such damage or destruction shall be man-made or the result of the elements or geologic hazards, and the rendition of aid and assistance to people, organizations and other entities required as a result of such physical destruction or damages.

In furtherance of, and not in limitation of the general powers conferred by the laws of the State of [state of incorporation], and the objects and purposes herein set forth, it is expressly provided that this corporation shall also have the following powers, viz.:

Acting through its Board of Directors, its Chairperson and other officers, subject to the powers and restrictions of the Articles of Incorporation, and its Bylaws, to do all such acts as are necessary or convenient to the attainment of the objects and purposes herein set forth, and to the same extent and as fully as any natural person might or could do.

To purchase, lease, hold, sell, mortgage, or otherwise acquire or dispose of real or personal property, to enter into, make perform or carry out contracts of every kind with any person, firm, corporation or association; to do any acts necessary or expedient for carrying on any and all of the activities and pursuing any and all of the objects and purposes set forth

in the Articles of Incorporation and not forbidden by the laws of the State of _____.

To have offices and promote and carry on its objects and purposes within or without the State of [state of incorporation] in other states of the United States.

In general, to have all powers conferred upon a corporation by the laws of the State of [state of incorporation], except as herein prohibited, or forbidden by the Bylaws of this corporation.

(b) The Corporation shall be a non-profit corporation and none of its assets shall ever be returned or inure to the benefit of the members or officers or directors thereof, or other private persons, but shall be used exclusively for the aims and purposes of the corporation. In the event of the dissolution of the corporation the Board of Directors shall, after paying or making provision for the payment of all of the liabilities of the corporation, dispose of all of the assets of the corporation exclusively for the purposes of the corporation in such manner or to such organization or organizations organized exclusively for religious charitable, scientific, literary or educational purposes as shall at the time qualify as an exempt organization under Section 501 (c) (3) I.R.C. as the Board of Directors shall determine. Any of the assets not so disposed of, shall be disposed by the court having jurisdiction over such matters, exclusively for such purposes or to such organizations as such court shall determine which are organized and operated exclusively for such purposes.

(c) (1) No part of the net earnings of the corporation shall inure to the benefit or be distributed to the benefit of the members or officers or directors thereof or other private persons except that the corporation shall be authorized and empowered to pay reasonable compensation for

services rendered and to make payment and distribution in furtherance to this purpose.

(2) No substantial part of the activities of the corporation shall be the carrying on of propaganda or otherwise attempting to influence legislation and the corporation shall not participate in or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provisions of these Articles, the corporation shall not carry on any other activities not permitted to be carried on (1) by a corporation exempt from Federal Income Tax under Section 501 (c) (3) of the I.R.C. or (2) a corporation contributions to which are deductible under Section 170 of the I.R.C

4. The corporation may have officers and authorized agents and promote and carry out its purposes and objects within and without the State of [state of incorporation].

5. The corporation shall not have any stockholders. The corporation shall be made up of the membership of the coalition. Each member of the coalition shall be a member of the Board of Directors and the right to one (1) vote.

(a) Membership shall be open and available to the state of the coalition and the Federal Emergency Management Agency as provided by a 3 A of the Bylaws.

(b) SPECIAL PROVISIONS. (1) Neither an amendment to the Articles of Incorporation or the adoption of a plan for the dissolution of the corporation may be undertaken without the two-thirds (2/3) approval of the membership. (2) The majority of the membership shall have the sole authority to adopt or amend the Bylaws provided no adopted Bylaws nor any amendment thereto shall be made which is inconsistent with these Articles of Incorporation or any

provision of the State of [state of incorporation].

6. The term of the members of the Board of Directors shall be governed and set out by the Bylaws, which shall be consistent with the requirements as declared in Article Five above.
7. The regulation of the internal affairs of the corporation shall be as set out in the Bylaws. Provision for distribution or final liquidation shall be as declared in Article Three above.

8. The address, including street and number, of the initial registered office is [address] and the name of its initial registered agent at such address is [address].
9. The number of Directors constituting the initial Board of Directors is _____ and the name and address including street and number of the persons who are to serve as the initial directors until the first annual meeting or until their successors be appointed and qualified are: [enumerate]

Example of Corporate Bylaws

Bylaws of the [name of multi-state seismic safety advisory board] Preamble

The [name of multi-state seismic safety advisory board] shall manage and coordinate multi-state and interstate earthquake risk reduction activities in those states vulnerable to a major earthquake in the [geographic area/jurisdiction]. [Name of multi-state seismic safety advisory board] shall actively work with government and the private sector to facilitate effective efforts to reduce and manage earthquake risks.

Name of Corporation

1. This private not-for-profit corporation shall be known as the [name of multi-state seismic safety advisory board].

Seal

2. The corporate seal of the [name of multi-state seismic safety advisory board] shall have inscribed thereon the name of the corporation, the year of its creation, and the words "Incorporated, State of [name of state of incorporation]."

Members

3. Membership to this corporation shall consist of Regular and Associate members, defined as follows:

a. The Regular Members of the [name of multi-state seismic safety advisory board] shall be the states of [names of member states], and Regular membership in the [name of multi-state seismic safety advisory

board] shall be available to states for which corresponding prorated funds have been added to the annual [name of multi-state seismic safety advisory board] funding. The amount of the annual prorated funds will be calculated by dividing the annual base [name of multi-state seismic safety advisory board] funding provided by FEMA by [appropriate number of states].

b. Associate membership in the [name of multi-state seismic safety advisory board] shall be open to other states and institutions manifesting an interest in the purposes and objectives of the corporation.

c. The membership of the corporation may be expanded.

d. No membership certificates of the corporation shall be required.

e. The administrative head of any prospective state entity or private institution desiring to be considered for membership shall apply in writing to the Board of Directors specifying the type of membership requested. The board shall vote on admission of any new organization to the [name of multi-state seismic safety advisory board] at the next regular meeting and provide notice of the decision to the requesting entity.

Place of Business

4. The principal administrative office of the corporation shall be at [appropriate address]. The corporation

may have other offices in such other places as the Board of Directors shall designate from time to time.

5. The purpose of [name of multi-state seismic safety advisory board] shall be as set forth in its Articles of Incorporation as filed in the State of [name of state of incorporation].

Voting

6. a. A majority of the state representatives of the Board of Directors shall constitute a quorum for the transaction of business at any meeting of the Board, provided that if less than a majority of the directors is present at said meeting a majority of the state representatives adjourn the meeting to another time without further notice.

b. Board members may vote at meetings, either in person or by proxy. Such proxy may be extended to any person designated by the board member being represented. Such proxy will extend to the proxy party full authority, rights and privileges as specified by these bylaws for board members to the extent specified by the authorizing document. All proxy votes must be in writing and filed with the secretary-treasurer, or the Executive Director.

c. Each board member shall have one vote.

d. Neither an amendment to the Articles of Incorporation, nor the adoption of a plan for the dissolution of the corporation may be undertaken without the approval of two-thirds (2/3) of the state representatives of the board of directors.

Board of Directors

7. a. The Board of Directors shall consist of states possessing regular membership in the [name of multi-state seismic safety advisory board].

b. Sovereign state governments of the corporation shall have representation on the board of directors through the director of the appropriate state emergency management agency, or the equivalent agency.

c. In furtherance of, and not in limitation of, the general powers usually vested in the board of directors by virtue of their office, the powers expressly given by the laws of the State of [name of state of incorporation], the terms of the charter of this corporation, and elsewhere in these bylaws, the following specific powers are hereby conferred upon the Board of Directors:

(i) To take action as necessary to attain the goals and objectives of the [name of multi-state seismic safety advisory board].

(ii) To exclusively develop all policies and authorize all business transactions.

(iii) To maintain all policies and procedures established by the Board of Directors as an official record of Board activity in a policy and procedure manual which will be available for review during regular office hours at the principal administrative office of the corporation.

(iv) To pay, at its discretion, for any property or rights acquired by or services rendered to this corporation, either wholly or in part, in money, stocks, bonds, debentures, or other securities.

(v) To create, make and issue mortgage, bonds, deeds of trust, trust agreements, and negotiable or transferable instruments and securities secured by mortgage or otherwise, and to do every act and thing necessary to effectuate the same.

(vi) To appoint, remove or suspend [name of multi-state seismic safety advisory board] staff or agents permanently or temporarily, determining their duties and responsibilities, to set their salaries and to require security bonds as needed.

(vii) To confer by resolution upon the Executive Director the power to make recommendations to the board concerning; the appointment, removal or suspension of subordinate officers or agents; the designation of their duties and responsibilities; and the establishment of their salaries.

(viii) To determine and approve a party who shall have the authority on behalf of the corporation to sign bills, notes, receipts, acceptances, endorsements, checks, releases, contracts and documents.

(ix) To delegate any of the powers of the board, in the course of the business of the corporation, to any standing or special committee or to any officer or agent of the corporation, and to appoint any person or persons to be agents of the corporation with such powers (including the power to sub-delegate) and upon such terms as it sees fit.

(x) To take action as necessary and reasonable to prohibit the board, any member or employee, acting in their official capacity from authorizing or permitting any business transaction which creates a conflict of interest or the appearance of impropriety by allowing any one person or business enterprise to exert improper influence over the board.

(xi) To establish the authority to accept services, gifts, grants or loans whenever the federal government or any agency or officer thereof or whenever any person, firm or corporation shall offer to this corporation services, equipment, supplies, materials, or funds by way

of gift or grant, for purposes of facilitating and fulfilling the goals and objectives of the corporation.

(xii) To take action as necessary and feasible to ensure that all gifts, grants, loans, gratuities, discounts, favors, hospitality or services authorized by the board do not create a conflict of interest or the appearance of impropriety for the board of any member thereof.

(xiii) To ensure that, not more than 50 percent of any federally provided [name of multi-state seismic safety advisory board] funds be reserved for [name of multi-state seismic safety advisory board], and that not more than 50 percent of said funds be utilized for indirect operations, the balance be reserved for funding such multi-state projects (MSP) as the Board may identify.

Officers of the Corporation

8. a. The officers of the corporation shall be the following:

(i) The chairman, the vice-chairman, the secretary-treasurer, and the executive director.

(ii) The chairman, the vice-chairman, the secretary-treasurer shall be elected by the Board of Directors.

(iii) The elected officials shall serve for one (1) year, commencing with the first day of January following the annual meeting, at which they were elected; or until their successors are elected and duly qualified. An officer is ineligible to hold more than one elected position.

(iv) The executive director shall be appointed by the Board of Directors.

b. The chairman shall preside at all [name of multi-state seismic safety advisory board] Board of Directors meetings and provide general supervision and direction to all

officers and Board of Directors of the corporation.

c. The vice-chairman shall perform the duties of the chairman in the event of disability or absence from the latter office.

d. The secretary-treasurer shall attend all sessions of the Board of Directors and all meetings of members, and act as clerk thereof, and record all votes and minutes; shall give, or cause to be given, notices of all meetings of the members and of the Board of Directors; shall perform such other duties as may be prescribed by the chairman; and, shall be sworn to the faithful discharge of their accurate accounts of receipts and disbursements in books belonging to the corporation and to the credit of the corporation; shall disburse funds of the corporation as may be ordered by the Board of Directors, taking proper vouchers thereof, and render to the chairman and Board members at the regular meetings of the board, or whenever required, an accounting of all the transactions; and at the expense of the corporation, shall be furnished such bonds as the Board of Directors may require.

e. The executive director, the senior [name of multi-state seismic safety advisory board] staff member, shall have general and active management of the business of the corporation; shall execute bonds, mortgages, all contracts requiring a seal, and affix the corporation seal thereto in accordance with the authorization from the Board of Directors.

(i) The executive director of [name of multi-state seismic safety advisory board] shall be appointed by the Board of Directors and sit in an advisory capacity only as an ex officio member to the board.

(ii) The property of the corporations shall be managed by the executive director under the express direction

and supervision of the Board of Directors.

(iii) The executive director shall have the authority to purchase or otherwise acquire for the corporation any property, rights or privileges that have been specifically authorized to be acquired by the Board of Directors.

(iv) The executive director may be granted the authority to develop and appoint advisory committees to meet and fulfill the goals and objectives of the [name of multi-state seismic safety advisory board].

(v) The executive director shall submit a report of the operations of the corporation for the preceding fiscal year, January 1 to December 31, to the board at its first regular meeting thereafter.

(vi) The executive director shall be an advisory member of all standing committees.

(vii) The executive director shall make all necessary arrangements for the holding of meetings and shall have authority to make such reasonable expenditures for this purpose that are within the limits of funds available in the treasury of the corporation.

(viii) The executive director shall maintain all vital documents, including but not limited to all work products, fiscal records, administrative documents, contractual and developmental programs at the principal office.

(ix) The executive director, under the supervision of the secretary-treasurer, shall maintain accurate accounts of receipts and disbursements in books belonging to the corporation, and to the credit of the corporation in such depositories as may be designated the Board of Directors.

(x) The executive director, under the supervision of the secretary-treasurer, shall disburse the funds of the corporation as may be authorized by the Board of Directors, taking proper

vouchers thereof, and present to the Board of Directors at the regular meetings, or whenever required, an accounting of all transactions.

(xi) The executive director shall be furnished such bonds as the Board of Directors may require.

(xii) The executive director shall make recommendations to the board, for their final action, in respect to hiring, firing, salaries of staff members, and any other personnel action as may be designated by the Board.

Standing Committees

9. a. It is the intention of the board to establish standing committees to provide oversight and direction to the corporation as may be required.

b. The chairman with the approval of the board shall make appointments to such standing committees from the total membership, as may be deemed necessary for the proper operation and supervision of the corporation.

Meetings

10. a. Regular meetings of the Board of Directors shall be held at such time and place as may be determined by the board. Notice of the time and place of such meetings must be given to the members by the secretary-treasurer, or the office of the executive director, in writing, at least thirty (30) days prior to the date thereof.

b. All proposals and/or contracts requiring action by the board of Directors to expend moneys shall require notice of such activity and copies of said proposals and/or contracts be delivered to Board members in writing at least 15 days prior to the date of a scheduled meeting.

c. An annual meeting of the board of directors shall be conducted during the fourth quarter of each year. Notice of such meetings shall be transmitted to the members in the

same manner as provided in these bylaws for notice of amending the bylaws, the annual meeting shall be considered as a regular meeting.

d. Special meetings of the board of Directors of the corporation may be called by the chairman, or by three state representatives for such purpose or purposes as they deem advisable. Notice of such a called meeting shall be transmitted to the members in the same manner as provided in these bylaws for notice of the regular meetings of the board except that the notice shall state the purpose or purposes for which the meeting is called.

e. All meetings of the board members shall be conducted in accordance with *Robert's Rules of Order*.

Tenure of Office

11. In the event a vacancy occurs in the office of Chairman, vice-chairman, or secretary-treasurer the vacancy for the unexpired term shall be filled by majority vote of the Board of Directors within thirty (30) days of the vacancy. No officer shall be subject to removal, except for cause, nor shall their term of office be reduced during their tenure.

Compensation

12. a. The board shall not receive any stated salaries. By resolution of the Board of Directors, a fixed sum and expenses, if any, may be allowed for attendance at any regular or special meetings of the board. However, nothing herein contained shall preclude any director from serving the corporation in any other capacity and receiving compensation.

b. The Board of Directors shall adopt a policy in respect to benefits and leave which will apply to the entire [name of multi-state seismic safety advisory board] staff.

Resignations

13. A board member, as defined in Article 3, may resign their office at any time, provided such resignation is made in writing to the Board of Directors. Such resignation shall be effective upon deposit in the United States mail.

Inspection and Audit of Books and Accounts

14. a. The books, accounts, and records of the corporation shall be open to inspection by any member of the Board of Directors during regular office hours of the corporation. The original or a duplicate membership registry shall at all times be kept at the office of the corporation.

b. The books, accounts, records and substantive operations of the corporation shall be audited by an independent accounting organization after the close of each fiscal year, and the report shall be provided to the Board of Directors at their first regular meeting following the conclusion of said audit.

Notice and Waiver of Notice

15. Whenever, under the provisions of these bylaws, notice is required to be

given to any directors, officers, or members, it shall not be construed to be limited to personal notice, but such notice may be given by teletype, telecopier or in writing by depositing the same in the post office or letter box in a prepaid, sealed wrapper, addressed to such Director, officer or member at their address as the same appears on the books of the corporation, and the time when the same shall be mailed or dispatched by teletype or telecopier shall be deemed to be the time of the giving of such notice. Whenever any notice is required to be given under the provisions of these bylaws, a waiver thereof in writing, signed by the party or parties entitled to said notice, whether before or after the time stated herein, shall be deemed equivalent thereto.

16. A two-thirds majority vote of the Board of Directors shall be required to adopt or amend the bylaws provided notice of such proposed amendment has been given to each member at least thirty (30) days prior to a regular meeting at which the amendment is to be considered, providing that the proposed amendment is not inconsistent with the Articles of Incorporation.

Model Staff Duty Descriptions

Because of the multidisciplinary nature of a seismic safety advisory board's work, it will require the assistance of skilled professionals in a number of areas of expertise. If the board's fiscal and organizational means are limited, it may be necessary to rely on the technical and professional resources of other public-sector or private-sector agencies. However, the board can expect at some point to require assistance for the following professional and technical functions. They can be performed by full-time staffers, who *may perform more than just one of these functions*, or by professionals employed by outside agencies or entities who serve the board as a collateral function of their primary employment.

Legal Counsel

In addition to dealing with technical disciplines like engineering, seismology, and geology, the board will occasionally need legal advice.

For example, recent Supreme Court decisions expanded the economic rights of property owners impacted by regulatory action. When mandating seismic risk reduction measures for private property, State and local governments will need to craft risk reduction strategies that do not compromise the Constitutional principle of due process or violate the prohibition against taking of property without compensation. The board should ensure that seismic risk reduction policies and procedures are based on sound judgment and due process, intended to protect both the public safety and the economic rights of property owners.

Although design professionals have the capability to design and construct buildings that resist earthquakes, the tort liability issue has inhibited

innovation in the retrofitting of vulnerable buildings and the development of seismically resistant new buildings. Proper building practices, retrofitting collapse-hazard buildings and innovative structural designs and components in new buildings, reduce earthquake-related casualties. The board may need to develop a clearly defined tort liability benchmark to give local governments and design professionals when their professional judgment calls for deviation from existing building codes.

Such concerns may require the advice of a legal counsel, to study questions of regulatory due process and state and private-sector liability and to recommend changes to promote earthquake risk management. Moreover, legal counsel can provide the board with legal advice on contracts and interagency agreements, including contracts for grant funds, program-related services, administrative service contracts, and interagency agreements. In addition to advising the board and its staff, a legal counsel familiar with seismic safety issues also may be valuable in legislative matters, e.g., bill tracking and analysis, drafting amendments, consulting with board committees and other interested parties, making presentations, reviewing position letters.

Engineering Geologist

Earth scientists have long recognized the importance of their disciplines in identifying and avoiding or reducing earthquake hazards. Ample evidence correlating surface geology with earthquake damage has demonstrated that earth science must be better reflected in government policies aimed at reducing the effects of earthquakes on buildings, bridges, roads, and

pipelines. To carry out its responsibilities relating to the earth sciences, the board may need an experienced engineering geologist with sound judgment and recognized credibility, who can independently interact with professional peers, management-level employees of state agencies, legislators and their staffs, and local government officials. In addition, an articulate engineering geologist may prove invaluable in explaining the intricacies of earthquake-related hazards to the press, the public, and policymakers.

An engineering geologist can provide the board with a focus on "real time" geological processes, their effects on buildings already built or to be built, geological concerns regarding lifelines (gas and water pipelines, electrical distribution systems), transportation systems, and similar issues involving the interaction of manmade facilities and the terrain they rest on. Good geological advice may be particularly important in energy-producing regions where oil and gas exploration, development, and extraction may be significant issues. The Engineering Geologist would also be able to advise the board on seismic safety policy in the disciplines of geophysics, seismology, geology, and engineering geology, as well on policies relating to electric, water, and gas supply systems. Moreover, an engineering geologist may prove quite valuable in making policy recommendations to mitigate earthquake-caused landslide, ground failure, liquefaction, dam failure, and tsunami hazards, and on ways of incorporating these policies into local and-use planning, subdivision control, and building regulations.

An engineering geologist, can also serve as the board's liaison with the Legislature and organizations such as the US Geological Survey and the National Science Foundation's Division of Earth Sciences on earth science issues, as well as working with local and state government geologists to

improve understanding of seismic hazards in local government planning and regulation of development. Moreover, such help may prove invaluable in evaluating earthquake predictions for governmental leaders, the news media, and the public, helping separate scientifically based forecasts from those that are not.

Structural Engineer/Architect

A structural engineer, or architect with structural knowledge, can help with design-related matters, such as earthquake-related architectural and engineering programs, and building codes and standards affecting historical buildings, common structures and buildings, as well as schools, emergency service facilities, and hospitals.

Such services may be particularly useful in preparing, analyzing and recommending legislation related to building stock vulnerability, earthquake engineering, structural design and architecture, as well as working with building codes and building officials. Design information, perspectives and judgments on staff work having earthquake design components, retrofit and damage repair would aid in report preparation and policy recommendations. A structural engineer or architect could also provide staff liaison between the board and professional organizations representing engineering, architecture and other related disciplines, and local, state, and federal agencies, as well as the Legislature.

The structural engineer or architect should be certified by the appropriate licensing board, and have adequate practical experience in earthquake-related engineering, including dynamic analysis of structures, earthquake damage assessment, seismic hazard mitigation and post-quake repair, building codes and standards, research, government review and permit procedures. He or she should also have participated in organizations such as

the Earthquake Engineering Research Institute (EERI), and the American Institute of Architects (AIA) and be knowledgeable of the Federal Emergency Management Agency (FEMA) and the National Science Foundation (NSF).

Legislative Liaison

The board will probably consider legislation related to earthquake risk reduction, building codes, the geotechnical sciences, the engineering and design professions, planning, local government, emergency response and post-earthquake recovery. It may prove worthwhile to use a specialist for legislative tasks.

These tasks typically include collecting information and securing expert testimony, as well as bill tracking and analysis, drafting amendments, testifying at legislative committee hearings, consulting with board's committees and other interested parties, and making presentations. The Legislative Liaison could draft letters for the board to send to the Governor and the Legislature supporting or opposing legislation, as well as formulating recommendations on pending legislation.

The legislative liaison should have experience in planning, program evaluation, or policy analysis, and be able to deal with complex governmental problems. He or she should be able to effectively consult with and advise administrators or other interested parties on earthquake-related issues, gain and maintain the confidence and cooperation of those contacted, and effectively advocate the board's position on pending legislation before legislative and other committees.

Emergency Response Specialist

A major catastrophic earthquake will impose heavy demands on emergency responders, probably exceeding capabilities and resources.

Consequently, the board should focus some of its attention on ways to strengthen emergency response. This may require a specialist who would be responsible for emergency response planning. A comprehensive, multi-hazard, emergency management system should coordinate the response elements of local, state, and federal governments with volunteer and private sector resources. The board can help formulate improvements in statewide emergency response capabilities and organization, and recommendations to commit time and resources on training and testing plans for future emergencies. The failure to make such investments could leave states and local communities vulnerable.

Recovery Specialist

Financial issues critical to the restoration of an earthquake-damaged area's economy and public services may have to be addressed. The board may need the advice of a recovery specialist regarding recovery programs, priorities, legal processes, financing, insurance, and disaster aid. Through advanced planning, the board can better understand the need for outside resources and aid during the recovery phase, and determine beforehand what must be done to get assistance. After a disaster, pressure mounts to rebuild immediately, without adequately thinking through the long-term implications and consequences. The services of a recovery specialist may facilitate advance recovery planning and help ensure a more thoughtful, methodical, and production recovery process.

Public Information Officer

The board may require a public information officer to write, edit, and prepare information and material for dissemination through all major media and devise a public information campaign. Typically the officer will also

prepare replies to difficult and complicated correspondence, and act as spokesperson for the agency with public groups, news media, and individuals inquiring about board activities. This may also include arranging the participation of board members or staff personnel as speakers before public groups, or on radio and television newscasts or other programs.

Research Writer/Editor

The board may need a research writer/editor to manage the publications program (if any). These responsibilities may entail publishing a variety of documents—legislatively mandated and other reports, brochures, transcripts, guidebooks, and more—that require professional expertise to write, edit, and produce. A research writer/editor can assist the board by preparing such reports and presentations, summarizing research findings and their applicability to seismic risk reduction and management. Moreover, this staff member may also prove necessary to develop and disseminate information on seismic safety to various audiences such as professional associations, as well as preparing press releases and responding to media inquiries.

Planner/Program Analyst

The board may very likely decide to establish a risk reduction and management program, that sets forth priorities, funding sources and amounts, project schedules, and risk reduction activities needed to significantly reduce earthquake risk. Implementing the specific risk reduction activities of such a program may require a planner or program analyst to promote, monitor, and integrate the ongoing earthquake risk reduction, emergency response, and disaster recovery projects comprising such a program, as well as the accomplishment of numerous specific program milestones.

The program manager would advocate an ambitious agenda

requiring the cooperative and active participation of diverse organizations and agencies. Progress on a number of activities will require action by both the governor and the legislature to establish policy assigning new responsibilities, granting new authority, and appropriating additional fiscal resources. The program manager could participate in and monitor the process of implementing of such a program. Such a person can function as a facilitator to integrate activities, coordinate individual actions, and assist the primarily responsible agencies in every possible way.

Administrative Manager

If the board's staff becomes large enough, or if it administers numerous contracts, it may benefit from an administrative manager responsible for its administrative functions. An administrative manager's duties might also include the more difficult work in the areas of personnel, budgeting, contract administration, and managing the computer network, including determining its need for new equipment, software, and staff computer training.

It bears emphasis that such a position *may most likely only be warranted for boards with large staffs and significant programmatic responsibilities*, such as those that may confront a state with recurrent, periodic seismic activity or a consortium of states requiring integration of multi-state seismic safety activities over a broad geographic area.

Staff Analyst

As its programmatic responsibilities increase, the board may benefit from employing a staff analyst to assist in preparation of its annual budget and budget change proposals, and monitor its expenditures, prepare monthly budget forecasts and payrolls, and recommend expenditure alternatives to assure that the advisory board remains within its budget.

This staff member would also be an excellent choice to oversee the rental or leasing of office space, purchase of all goods and administrative services, and development of guidelines for routine purchasing activities to ensure compliance with appropriate purchasing procedures. He or she could also assist in drawing up contracts and

interagency agreements, including contracts for program-related services, and oversee the day-to-day management of administrative service contracts and interagency agreements. Moreover, a staff analyst can advise the board on costs and applications of employee benefits, and coordinates the board's records management program.

Model Workshop Design

[Insert brief background statement explaining why the workshop is being convened]

Purpose of Workshop

[Insert a statement of workshop's purpose and expectations.]

Strategic Planning Process

To assist board members develop a consensus on its mission, goals, and priorities, and provide a frame work for a new multi-year earthquake risk reduction and management plan, strategic planning approach is adopted. The approach includes three phases.

Phase I. Information Collection

The objective of this phase is to obtain a current and comprehensive perspective on the board's mission and performance. This perspective is derived from one-on-one in-depth interviews with representatives of the constituency that are conducted by a trained professional. The result of this phase is the accumulation of issues, raised by those who are interviewed, that provide an assessment of the perceived strengths, weaknesses, opportunities, and obstacles associated with seismic safety efforts. The issues are grouped into dominant themes and presented to the workshop participants.

Phase II. Evaluation and Integration

After the issues raised during the data collection phase are presented and discussed, they will be categorized into actionable programs, i.e., actions that can be taken to address the needs identified by the issue(s). The outcome

of this exercise should be a list of actionable programs or "action items" (there should be at least 15 of these) that the board may want to pursue in the next five years. Participants will break-up into small groups of no more than 5-7 people to develop the action items. The groups will be asked to address the following aspects for each action item:

1. Assumptions: The basic premises for proposing the program;
2. Objectives: The proposed outcome of program;
3. Implementation Steps: The required research on foundations needed, a basic implementation strategy, and an evaluation mechanism.

Each group will be assigned 2-3 action items to develop. It will take each group 2-3 hours for each one.

Once all of the action items have been developed, the workshop participants will prioritize the actionable programs according to such criteria as feasibility, projected resources listed in Chapter 9.

The last exercise of this phase will be the formulation of the board's mission statement and goals. The mission statement should reflect the objectives given to the programs the project will attempt to implement in the next five years.

Phase III. Strategic Policies

The results of the workshop will be summarized and circulated for review before the board acts to adopt. It will contain a set of policies that can be used to draft of a comprehensive risk reduction and management plan.

MODEL AGENDA FOR WORKSHOP
Development of Multi-Year Risk Management Program

[Location]

[Date]

Agenda

[Day 1: Date]

- | | |
|-----------------------|--|
| 1:00 p.m. - 2:00 p.m. | Workshop Registration [Room Name] |
| 2:00 p.m. - 2:15 p.m. | Workshop Opening [Room Name] |
| | <ul style="list-style-type: none">• Welcome and Introductions [Name of Presenter] |
| 2:15 p.m. - 2:30 p.m. | <ul style="list-style-type: none">• Review workshop Objectives, Logistics and Agenda [Name of Presenter] |
| 2:30 p.m. - 3:30 p.m. | Panel Presentation |
| | <ul style="list-style-type: none">• Ten Year Retrospective [Name of Presenter]• Earthquake Risk [Name of Presenter]• Goals and Objectives: Met/Unmet [Name of Presenter] |
| 3:30 p.m. - 4:00 p.m. | BREAK |
| 4:00 p.m. - 5:00 p.m. | Panel Presentation: |
| | <ul style="list-style-type: none">• Mandated Programs and Future Funding [Name of Presenter] |
| 5:00 p.m. - 5:30 p.m. | Review Strategic Planning Process [Strategic Planner] |
| 6:00 p.m. - 7:00 p.m. | DINNER |
| 7:30 p.m. - 9:00 p.m. | Present and Discuss Results of Information Collection Phase [Room Name] [Strategic Planner] Categorize Results into Actionable Programs Board and Staff |

[Day 2 Date]

| | |
|-------------------------|--|
| 7:30 a.m. - 8:30 a.m. | BREAKFAST BUFFET [Room Name] |
| 8:45 a.m. - 9:15 a.m. | Review Process for Development of Action Programs [Room Name] [Strategic Planner] |
| | Formation of Break-out Groups/Room assignments For Break-out groups Board and Staff |
| 9:15 a.m. - 11:00 a.m. | Break-out Groups Deliberations: First Session [Room Name] |
| 11:00 a.m. - 11:10 a.m. | Transition to Meeting Room |
| 11:10 a.m. - 12:00 p.m. | Reports From First Session Break-out groups [Room Name] |
| 12:00 p.m. - 1:00 p.m. | LUNCH [Room Name] |
| 1:30 p.m. - 2:30 p.m. | continuation of First Session Reports [Room Name] |
| 2:30 p.m. - 4:00 p.m. | Break-out Groups Deliberations: Second Session [Room Name] |
| 4:00 p.m. - 4:30 p.m. | BREAK [Room Name] |
| 4:30 p.m. - 6:30 p.m. | Reports from Second Session Break-out groups [Room Name] |
| 6:30 p.m. - 7:30 p.m. | Reception - Informal Discussions [Room Name] |
| 7:30 p.m. | BARBECUE DINNER [Room Name] |

[Day Three, Date]

7:30 a.m. - 8:30 a.m.

BREAKFAST BUFFET
[Room Name]

9:00 a.m. - 10:00 a.m.

Prioritizing of Action Programs
[Room Name]
[Strategic Planner]

10:00 a.m. - 10:15 a.m.

BREAK

10:15 a.m. - 11:30 a.m.

Formulate Mission Statement

11:30 a.m. - 12:00 p.m.

Room Check-out

12:00 p.m. - 1:00 p.m.

LUNCH
[Room Name]

1:30 p.m. - 2:00 p.m.

Presentation of Priorities List
[Room Name]

2:00 p.m. - 2:30 p.m.

Workshop Wrap-up and Next Steps

Workshop Roster

A workshop was held January 25-26, 1993, in Salt Lake City, Utah, to assess and suggest amendments to be incorporated into the final draft of this manual. The Seismic Safety Commission gratefully acknowledges all those who assisted in this endeavor.

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Lexicon of Terms

End user—Persons and organizations who are responsible for implementing risk reduction activities; those who receive and use the results of the professional work products of practicing engineers and geotechnical scientists, researchers, etc., including school teachers, emergency response and building officials, insurance and construction companies, homeowners, and the general public.

Hazard—An act or phenomenon that has the potential to produce harm or other undesirable consequences to some person or thing.

Hazardous structure—A structure or edifice whose condition creates an imminent danger of physical injury, harm, or damage to some person or thing within or nearby it.

Nonstructural hazard—A condition or phenomenon in an edifice or structure, such as non-load-bearing architectural elements and mechanical and electrical components of the building system, that is unrelated to its construction or structure that has the potential to produce harm or other undesirable consequences to some person or thing within or nearby it.

Risk—The probability that the potential harm or undesirable consequences of a hazard will be realized; the convolution of the hazard and the vulnerability.

Risk management—The evaluation of alternative risk control actions,

selection among them (including doing nothing), and their implementation. Includes predicting damaging events and their effects, and reducing the vulnerability of facilities, improving emergency response and recovery, etc.

Seismic safety—The condition of being reasonably free or secure from earthquake-related danger, harm, injury, or economic loss.

Stakeholders—Individuals, agencies, and entities, in both the private and the public sectors, with earthquake-related responsibilities who have significant influence on seismic risk management efforts.

Structural hazard—A structural condition or phenomenon, such as parts of a building that bear vertical gravity loads or lateral seismic forces, or both, in an edifice or structure that has the potential to produce harm or other undesirable consequences to some person or thing within or nearby it.

User—Persons and organizations who are responsible for formulating risk reduction activities; those who use and communicate their knowledge in their professional work products including government policy makers, practicing engineers and geotechnical scientists, researchers, etc.

Vulnerability—Susceptibility to physical injury, harm, damage, or economic loss.

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The California Seismic Safety Commission, under contract to the Federal Emergency Management Agency, developed this document. The commission's staff counsel, Timothy Cronin was project director. As stated in the acknowledgments, many others contributed to the shaping of the work.

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