



Business Checklist

Recommended Actions to Plan for Transportation Disruptions Following Future Earthquakes in the San Francisco Bay Area

The following checklist should help your organization minimize the number of impacts of disruptions in transportation systems following future earthquakes, and to cope more effectively with those impacts. Employees will need to use roads to get to work, as well as to gain access to key facilities that need repair. Everyone should anticipate transportation disruptions in areas through which they generally travel. However, some of the transportation issues are more critical for manufacturing companies than for service or office workers.

The principal focus of the checklist is intended to be on minimizing the impacts of disruptions in **transportation systems** following earthquakes, not to replace checklists made by other agencies with other emphases. Therefore, it is recommended that potential users of these checklists undertake a comprehensive review of their emergency preparedness using information, for example, from the Governor's Office of Emergency Services, the Federal Emergency Management Agency, the American Red Cross, and the California Seismic Safety Commission. ***The reviews and associated plans should be updated and exercised regularly.***



**Association
of Bay Area
Governments**

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Regarding Employees

- predesignate employees who are critical so that non-essential employees are comfortable remaining at home and not on the road
- predesignate shifts and/or crews for employees to avoid everyone reporting for work at one time and simultaneously becoming overworked; data on commute distances and patterns may be used to assign employees to shifts
- work with employees to know their commute patterns and identify possible alternative routes from their homes to your key facilities and offices in an emergency which avoid known faults and other major obstacles, such as toll bridges (collecting information on maps or by zip codes as a first step)
- encourage employees to pre-arrange family phone contacts outside of your area so that they can communicate their safety and location to isolated family members
- investigate the possibility of pre-designating an employee to have the principal responsibility after an earthquake of contacting all employees families to learn of safety (thus, this person would need to know all out of area family contacts pre-earthquake)
- encourage employees to be prepared for earthquakes at home by, for example, providing disaster kits, to improve their family safety and therefore increase the likelihood that, if at work, employees can remain there, and, if at home, critical employees could travel to work more readily
- cross-train employees to allow for some workers being unable to reach your facilities in a timely manner, if feasible, *or* know the resources of your neighboring agencies or organizations and develop checklists of key components of these jobs to aid employees in performing them
- promote employee training in first aid, CPR, and, in some cases, train some Emergency Medical Technicians (EMTs)
- promote training for licensing of amateur radio operators among employees
- include earthquake hazard information in training crews that may be working on repairs so that they can identify and avoid life-safety hazard situations that may be close to the damage they are repairing
- know what you plan to do with injured and how you might want to transport them to emergency care
- investigate the possibility of providing on-site day care after an earthquake to allow essential or critical employees to work if their normal day-care options are not available
- if the phone system is operational* –
 - (a) plan to use voice mail to broadcast work and staffing information to employees
 - (b) as an alternative, investigate establishing a pre-designated hot-line or telephone trees for employees to call to gain similar information
 - (c) train employees to change their voice mail messages to state that they are safe and use the phone instead of the roads

(d) train employees that the phone system may be operational even if you do not have immediate dial tone; remain on the phone and wait for dial tone rather than hanging up repeatedly

Operations

- plan to set a priority of keeping open surface roads in and out of your facility routinely maintained by your agency
- develop resource lists of heavy equipment that may not be owned by your organization, as well as pre-arrange contracts with potential private suppliers and establish mutual aid agreements with potential public resources (realizing that you may not be a top priority for external suppliers of this equipment)
- know your neighbors, including their potential resources and problems by, for example, becoming involved in local emergency councils
- use local emergency councils, industry groups and other forums as a way of sharing useful information and techniques to minimize the potential of having to reinvent checklists and procedures that have already been developed by others
- ensure that you have stocked your operations center with food, water and sanitation systems to allow for disruptions off-site
- focus on flexibility and redundancy of disaster operations
- check that fuel pumps at vehicle yards are connected to a backup power system
- ensure adequate fuel supplies should restocking of fuel supplies be delayed
- provide, anchor and test back-up equipment used for fuel, power and emergency communications, particularly for your emergency operations center and other essential facilities, and have extra flashlights with batteries
- size fuel supply tanks for emergency generators; power outages may be longer than expected
- provide, anchor and test back-up communications equipment, such as portable radios and relay towers
- install back-up supplies of water on-site and anchor tanks
- anchor all equipment and nonstructural items
- minimize glass in hallway exit routes and consider installing film
- design on-site utility lines to minimize risk of pipeline breaks
- develop a facility hazard checklist and run audits, particularly related to buildings, critical equipment, hazardous materials, and nonstructural items that may cause injuries, to allow for a rapid post-earthquake walk-through *and* know the status of these pre-quake
- if facilities are critical, pre-arrange for post-earthquake assessment by *local* structural engineers

Location

- examine the location of your facilities relative to exposure to various earthquake hazards such as violent shaking, liquefaction, differential settlement, and earthquake-induced landsliding
- if exposures are found, address problems through mitigation or make the conscious decision to accept the risk

*During the
Emergency
Phase*

- work with employees to pre-establish those essential employees who should attempt to reach the workplace after an earthquake
- pre-establish optional work schedules to allow for limited employees at work and communicate these decisions to employees
- for employees at home* – plan on not being able to get to your office for up to 72 hours after an earthquake, due to phone and travel restrictions necessary for emergency operations (creating a “desktop in a briefcase” with key phone numbers is a good start)
- for employees at work* – ensure that your employer knows who is and is not at work so they can communicate this information to others
- plan on a stockpile of emergency supplies and equipment (including plywood) so as to support employees and business concerns for the first 72 hours after an earthquake
- plan methods for disseminating post-earthquake information to employees and their families, including
 - (a) setting up “rally points” based on where employees live with access to multiple forms of communication equipment
 - (b) *if the phone system is operational* – using voice mail to broadcast work and staffing information to employees

*During the
Recovery
Phase*

- plan possible alternative routes and methods of transportation, including small boats and ferries
- investigate options for radically redesigned work schedules to minimize the need for commuting
- investigate the option of providing limited housing for employees who may choose to remain on-site such as establishing pre-earthquake contracts with modular building suppliers
- if you are not a manufacturing company or do not provide critical services, work with employers/employees on emergency telecommuting options (THINK – how essential are you?)
- explore the option of having employees report to alternate work sites closer to their homes, either at another of your company’s facilities or at a facility where you have contracted for emergency office space
- plan on utilizing mass transit (including ferries) or carpools if telecommuting is not an option