

Anchor Tall Bookcases and File Cabinets



FEMA

PROTECTING YOUR PROPERTY FROM EARTHQUAKES

During an earthquake, large pieces of furniture such as tall bookcases and file cabinets can fall on you or others. Toppled furniture can also block exits and prevent you from escaping. Anchoring furniture so that it remains upright not only helps prevent injuries but also helps protect both the furniture and its contents.

You can anchor large pieces of furniture in several ways. The figure shows how to anchor a bookcase to a wall, but the same methods can be used for other pieces of furniture. As shown in the figure, a bookcase can be anchored with metal “L” brackets and screws along its top or sides (either inside or outside) or with screws through its back.

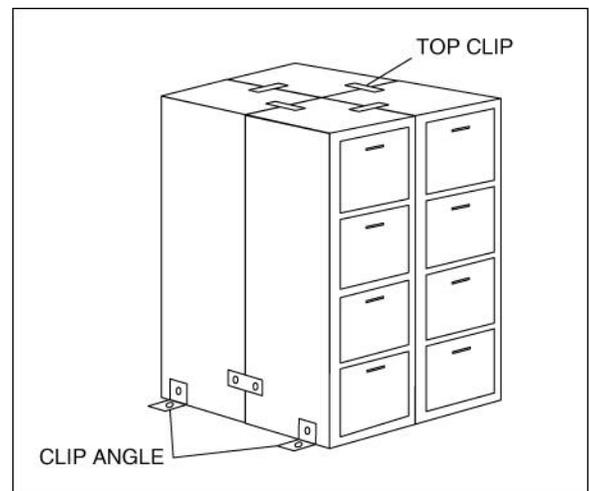
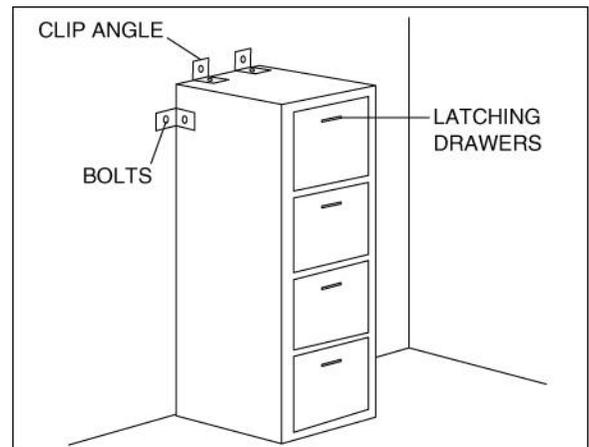
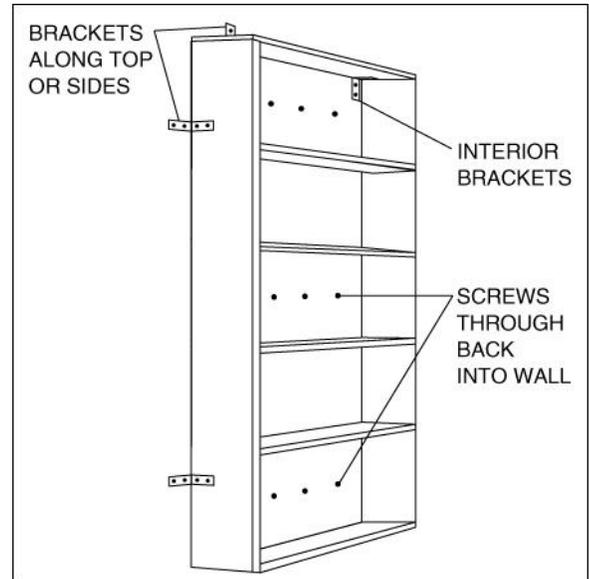
BENEFITS OF UTILIZING THIS MITIGATION STRATEGY

- Helps to prevent toppled furniture from falling on occupants
- Helps to prevent toppled furniture from blocking exits and preventing escape from a structure
- Helps to prevent damage to furniture and the contents of the book cases and cabinets

TIPS

Keep these points in mind when you anchor large pieces of furniture:

- ✓ Make sure that all anchoring screws penetrate not just the wall but the studs behind it as well. Screws embedded only in drywall or plaster will pull out. Regardless of the anchoring method you use, the screws should be long enough to extend at least 2 inches into the wall and studs.
- ✓ Before anchoring a bookcase with screws through its back, make sure the back is sturdy enough and that it is securely attached to the sides, top, and bottom. Some bookcases have backs made of very thin materials that are held in place with only small screws or staples that can easily pull out. Those bookcases should be anchored with brackets.
- ✓ If you have two or more bookcases or file cabinets that sit next to each other, consider connecting them to one another as well as to the wall. They will be even more stable if you do.



- ✓ If possible, move all bookcases, file cabinets, and other large pieces of furniture away from exits so that if they do fall, they won't prevent you from escaping.
- ✓ To prevent the contents of your bookcases from falling out, you can install a thin metal or plastic wire, a wood dowel, or even an elastic guardrail across the front of each shelf.
- ✓ Keep the tops of your bookcases free of heavy items, especially they are located near beds or desks, where persons could be injured from falling items.

ESTIMATED COST

The cost of anchoring a bookcase or file cabinet will depend on the size (height and width) of the bookcase or file cabinet. In general, if you do the work yourself, you can expect the cost to be approximately \$5 per bracket. For example, anchoring a 3-foot wide by 6-foot high bookcase will cost about \$30 for six brackets. This amount covers only the hardware you will have to buy and excludes the cost of any tools you use and the value of your time. If you hire a contractor or handyman to do the work, you will have to pay for time as well as materials.

OTHER SOURCES OF INFORMATION

FEMA 74, *Reducing the Risks of Nonstructural Earthquake Damage: A Practical Guide*, Third Edition, September 1994, <http://www.fema.gov/library/viewRecord.do?id=1574>.

FEMA 232, *Homebuilders' Guide to Earthquake-Resistant Design and Construction*, June 2006, <http://www.fema.gov/library/viewRecord.do?id=2103>.

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