

System Concepts, Inc.

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FILING LIBRARY STORAGE
specialists

Contractor's License No. 734396
Authorized Spacesaver Area Contractor

SEISMIC and SAFETY STATEMENT

System Concepts, Inc. has designed our storage equipment per the 2001 California Building Code, Title 24. In the event of an earthquake, this standard will help protect your material from damage and your staff from injury. The design elements listed below have a significant effect on the ability of the equipment to withstand an earthquake. We recommend consideration of this information when comparing offerings from various suppliers.

The product we are offering will have the following features:

- ▶ All four-post style shelving uprights will have a **“full” height and “full” width closure panel** of 24 ga. steel between the posts. The closure panel provides additional rigidity and strength to prevent the post from failing during an earthquake. Shelving using “open” uprights with 3” wide spacers between posts do not give the upright adequate strength and are unacceptable to engineers.
- ▶ All cantilever style shelving will have **welded lateral channels** (top, bottom and center) for seismic strength. The seismic channels will be used **on every frame**, not every second or third frame. Triangular gusset plates will be used on every frame upright to provide over turning stability.
- ▶ Mobile carriage rails will be connected to the concrete slab using **Hilti Kwik Bolt 3 Expansion anchors**. The Hilti anchor meets the description in Federal Specifications FF-S-325, Group II, Type 4, Class 1. The anchor is ICBO 4627 approved. The anchors have the critical seismic function of preventing uplift or overturning with movable carriages. Hilti Kwik Bolt 3 (or Dynabolt Red Head) anchors are specified by structural engineers. Other anchor types are unacceptable.
- ▶ Mobile carriages have an **anti-tip mechanism at every wheel** location to provide a positive connection of the carriage to the rail. This offers the greatest level of protection against overturning during an earthquake. Systems that do not use an anti-tip connection at all rails are unacceptable to engineers.
- ▶ Mobile carriages are **welded uniframe construction of 12 ga. steel** capable of supporting a minimum of 1,000 lbs. per carriage foot. This provides additional strength to support the shelving and prevent failure during an earthquake. Carriages rated at 750 lbs. per foot are inadequate.

We recommend a California certified structural engineer prepare a seismic evaluation and structural calculation to determine the anchorage for shelving and high density storage products. This evaluation will specify the proper anchor and fastening method to ensure full compliance with current codes.