



High-Quality
Soft-Story
Retrofit
Solutions



(800) 999-5099
www.strongtie.com

High-Quality Soft-Story Retrofit Solutions



New Retrofit Ordinance

The City of San Francisco now mandates that owners of residential soft-story buildings with three or more stories are required to retrofit them to ensure structural integrity and the safety of its inhabitants in the event of an earthquake. For this ordinance, a residential soft-story building is defined as a wood-frame structure with five or more residential units. The structure has two or more stories over a “soft” or “weak” story, which includes a feature such as a garage, a storefront with many large openings or a tuck-under carport. Finally, it needs to have been permitted for construction prior to January 1, 1978.

A soft-story retrofit requires the expertise and guidance of a structural engineer and/or architect. These structural design professionals understand the soft-story ordinance requirements and will work with contractors to ensure the retrofit is done correctly.

How Simpson Strong-Tie Can Help

Simpson Strong-Tie offers a wide variety of state-of-the-art structural solutions specifically designed to help perform soft-story retrofits. Depending on the scope of the retrofit and the particular applications involved, our products can minimize construction time and reduce the number of special inspections, and other project risks.

Lateral Systems

Special Moment Frame and Shearwalls

Simpson Strong-Tie provides moment frame and shearwall solutions with many different design options based on the height and width of the building opening, building codes and an engineer’s overall structural design criteria. These solutions are designed to install easily and safely under occupied living or commercial spaces.



Strong Frame® Special Moment Frame

For buildings with large openings (garages, storefronts) and smaller wall space, the Simpson Strong-Tie® Strong Frame® special moment frame provides greater performance and easier installation than traditional solutions. Its patented Yield-Link™ structural fuse is designed to bear the brunt of seismic forces, thereby reducing the risk of collapse and isolating damage for a less labor-intensive and more rapid post-earthquake repair. To help eliminate a leading cause of jobsite fires within older, wooden structures as well as unwanted fumes or gases that can lead to the potential displacement of occupants, Strong Frame special moment frames are 100% bolted in place during installation.

Strong-Wall® Shearwalls

When structural loads are not high enough to require a moment frame, our prefabricated Strong-Wall® shearwalls also offer design flexibility to meet ordinance standards even with narrow walls or larger openings. When design plans call for a site-built shearwall, a prefabricated steel or wood Strong-Wall can provide easier and more convenient installation, saving valuable time on the job.

Wood Connectors

Holdowns, Tension Ties and More



Simpson Strong-Tie has been the unquestioned leading manufacturer of structural connectors for wood construction for decades. Our holdowns, plates, ties and straps are just some of the many connectors that help secure the building to the moment frame to ensure better load transfer and help prevent the kind of “racking” damage that was seen in the Marina District following the 1989 Loma Prieta earthquake.



Holdowns
Simpson Strong-Tie® holdowns provide a tension connection between a site-built shearwall and the foundation. They attach with our Strong-Drive® SDS screw into the wood member and into the concrete with an anchor bolt, an anchoring adhesive or mechanical anchor, such as the Titen® HD.

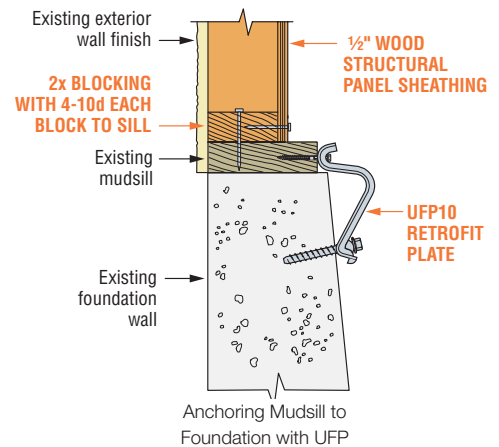


Tension Ties
For smaller load requirements, Simpson Strong-Tie® tension ties also offer a connection between site-built shearwalls and the foundation and can be used to complement our holdown solutions depending on a structure's design criteria.



Universal Foundation Plate (UFP)

In applications where minimal vertical clearance exists, the UFP retrofit foundation plate enables the cripple wall to be anchored to foundation from the side



Anchoring Solutions

Mechanical Anchors and Adhesives



Simpson Strong-Tie offers mechanical and adhesive anchoring solutions that are particularly effective for soft-story retrofits where wood structures need to be securely connected to older, harder concrete foundations.



Titen HD® Heavy-Duty Screw Anchors

For securing a soft-story structure to its foundation by bolting the mudsill to the foundation or to secure a wood ledger to concrete or masonry, the patented Titen HD® screw anchor provides optimum performance in both cracked and uncracked concrete.



SET-XP® High-Strength Anchoring Adhesive

This high-strength anchoring adhesive is frequently used to install anchor bolts for holdowns and tension ties in site-built shearwalls. SET-XP® anchoring adhesive offers increased strength and reliability in these adverse conditions, including performance under static and seismic loading.



We Would Like to Help

To learn more about how Simpson Strong-Tie can help you with the San Francisco soft-story retrofit mandate, visit www.strongtie.com or call (800) 999-5099.