

Storage Racks and Shelves Guidelines

Rack Design: Steel racks shall be designed in accordance with the most recent Rack Manufacturers Institute (RMI) specifications and applicable CBC, ASCE, CFC and ACI. The submittal guidelines for storage racks shall be as follows:

Racks Description	Building permit required	Documentation
Movable Storage Racks 5 feet 9 inches in height or less	No	None required
Non-Movable, Anchored Storage Racks 5 feet 9 inches or less in height	Yes	<ul style="list-style-type: none"> Key plan or site plan and Racks layout for fire and life safety
Storage Racks over 5 feet 9 inches and up to 8 feet in height	Yes	<ul style="list-style-type: none"> Key plan or site plan and Racks layout Plans for fire and life safety Details for the anchorage of racks to slab.
Storage Racks over 8 feet in height	Yes	<ul style="list-style-type: none"> Key plan or site plan Site plan or key plan and racks layout Plan for fire and life safety Structural plans, details and calculations for the storage racks and slab anchorage prepared by a Licensed California Engineer.
High-piled Storage Racks greater than 12 feet in height	Yes	<ul style="list-style-type: none"> Same documentation as storage racks over 8 feet in height. And required to comply with the applicable CFC and CBC

High piled storage: High piled storage can includes storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12 feet in height. It includes certain high-piled combustible storage such as rubber tires, group A plastics, flammable liquids, idle pallets and similar commodities, where the top of storage is greater than 6 feet in height.

Plans:

- Key Plan/Site plan: Showing property lines, street names, and location of building with the proposed storage racks.
- Key Plan/Site plan or cover sheet: Applicable design codes (i.e.: RMI/ANSI., XXXXCBC, ASCE 7-XX....)
- Key Plan/Site plan or cover sheet: Complete description of scope of work, type of business, type of construction, occupancies, type of fire sprinklers.
- Floor Plans to scale, identifying the location and square footage of all storage areas, racks and shelving; location of exit doors, exit access doors and exit signs, Aisles and cross aisles width.
- Racks details showing dimensions, number of tiers,
- Name of rack manufacturer
- Unit load- Total weight of material to be stored on the rack consisting of the product load and pallet weight
- Location of and dimensions of smoke vents and curtain boards (if required).

Structural details and calculations:

- All structural calculations and details to be signed and stamped by a California licensed engineer.
- All required Lateral bracing details
- Anchorage details, including type, size, depth and spacing of anchors. The anchorage details must be clearly shown on the plans.