Plan Submittal Checklist for Storage Racks

Purpose
This handout summarizes the requirements for a complete plan review submittal for the installation of storage pallet racks, movable shelf racks and stacker-racks in commercial or industrial buildings. The following guideline shall be reviewed and approval must be obtained before commencing any work.

Permits Required
A building permit is required for the following type of work:
- Storage racks greater than 5-ft 9 inches in height.
- Storage racks greater than 8-ft above ground shall be provided with structural plans, details and calculations. Note: Racks between 5’9” and 8’ shall be anchored in accordance with ASCE 7-10 and may require structural calculations at the discretion of the building official.
- Storage racks greater than 12-ft above ground shall be provided with structural calculations and a Fire Department “high-piled” permit and approval.
- Storage racks for certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids or similar commodities where the top of storage is greater than 6 feet in height.

Refer to the “Plan Submittal Checklist for High-Piled Combustible Storage” handout for detailed information.

Plan Submittal for Construction
Quantity
- Four (4) complete and scaled sets of plans prepared by a California licensed professional engineer; at least two sets must be wet-signed and stamped.
- Two (2) sets of wet-signed and stamped calculation reports prepared by a California licensed professional engineer (if required).
- Completed Building Permit Application form and plan check fee paid.

Fire Department Approval
- A separate permit is required for high-piled combustible, flammable or hazardous material storage from the Fire Department. Please contact fire department directly to obtain a permit and inspection. The fire department can be reached at (916) 617-4600.

Information
Size
- Minimum 18-in x 24-in plans (24-in x 36-in recommended) drawn to scale, fully dimensioned and legible.

Information
- Plot plan and/or Cover sheet: job address and suite number; name, address, phone number of business owner/contractor/design professional.
- Complete description of scope of work; type of business; current codes; type of construction; occupancies; type of fire sprinkler system.

Architectural Plans
- Floor plans identifying location and square footage of all storage areas, racks and shelving; location of exit door, exit access doors and exit signs.
- Location of and dimensions of smoke vents and curtain boards (if required).

High-piled storage can include racks, shelving, solid piled or pallet storage 12-ft or higher. A Fire Department permit is still required regardless whether the rack height is less than 12-ft but the proposed storage will be 12-ft or higher. The overall height for high-piled storage racks is taken from the ground to “top of storage”.

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• Provide aisle clearances between racks at 36-inch side and 44-inch minimum aisle width when serving both sides of an aisle per CBC Chapter 10.

**Structural Plans**
- Shelf and rack support base anchorage connection details and specifications to reinforced concrete slab and footing foundation and/or elevated wood floor framing system.
- Rack details showing dimensions, number of tiers, if these are single, double or multiple racks.
- Shelving installation method, support and brace framing details; if utilizing drilled and inset expansion or epoxy type anchorage bolt systems, specify on plans “Special Inspection and Testing shall be required. Exception: special inspection is not required if 50% values are utilized.
- Structural design shall comply with requirements based on the following:
  - 2019 California Building Code (CBC)
  - American Society of Civil Engineers (ASCE) 7, Section 15.5.3
  - Rack Manufacturers Institute Specifications for Steel Storage Racks (RMI/ANSI MH 16.1)

**FIRE SPRinkler Plans**
- FIRE SPRINKLER PLANS ARE SUBMITTED TO THE BUILDING DEPARTMENT. CONSTRUCTION REVIEW AND PERMITS FOR FIRE SPRINKLER AND FIRE ALARM SYSTEMS WILL BE ISSUED BY THE BUILDING DEPARTMENT.
- NFPA 13 STANDARD FOR THE INSTALLATION OF FIRE SPRINKLER SYSTEMS, 2016 EDITION.
- NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE, 2016 EDITION.

**Fees**
Building fees are based on the total value of all construction work (including labor and materials). Consult with a permit technician for details.

**Application Forms**
Building permit application forms can be obtained in the following link or requested at the Building counter located on the second floor.