



## Las Vegas Fire & Rescue Fire Prevention Division Information Sheet



Effective Date: February 1, 2011

CLV Ordinance #6124

*The items listed are basic information only. Codes are subject to change. Additional requirements may apply.*

# High Piled Combustible Storage

High-Piled Combustible Storage is 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. May also include certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets and similar commodities, where the top of the storage is greater than 6 feet in height. **IFC 2302**

An operational permit is required to use a building or portion thereof as a high-piled storage area exceeding 500 ft<sup>2</sup>. **IFC 105.6.22**

At the time of building permit application for new structures designed to accommodate high-piled storage or for requesting a change of occupancy/use, and at the time of application for a storage permit, plans and specifications shall be submitted for review and approval. Following approval of the plans, a copy of the approved plans shall be maintained on the premises in an approved location. The plans shall include the following:

- Floor plan of the building showing locations and dimensions of high-piled storage areas.
- Usable storage height for each storage area.
- Number of tiers within each rack, if applicable.
- Commodity clearance between top of storage and the sprinkler deflector for each storage arrangement.
- Aisle dimensions between storage array.
- Maximum pile volume for each storage array.
- Location and classification of commodities in accordance with the *International Fire Code* Section 2303.
- Location of commodities which are banded or encapsulated.
- Location of required fire department access doors.
- Type of fire suppression and fire detection systems.
  - For density/area fire sprinklers protecting the high-piled storage area, indicate the sprinkler identification number (SIN), the sprinkler k factor, square footage of the remote area, and the system design density. If the SIN is not available, a copy of the manufacturer specification sheet for the sprinkler head is required.
  - For specific application sprinklers, such as large-drop and ESFR sprinklers, protecting the high-piled storage area, indicate the sprinkler identification number (SIN), the sprinkler k factor, the number of sprinkler heads in the remote area, and the minimum residual pressure provided at the most hydraulically demanding



## Las Vegas Fire & Rescue Fire Prevention Division Information Sheet



sprinkler head. If the SIN is not available, a copy of the manufacturer specification sheet for the sprinkler head is required.

- Location of valves controlling the water supply of ceiling and in-rack sprinklers.
- Type, location, and specifications of smoke removal and curtain board systems.
- Dimension and location of transverse and longitudinal flue spaces.
- Additional information regarding design features, commodities, storage arrangement and fire protection features within the high-piled storage area shall be provided at the time of permit, when required by the fire code official.
- Type of shelving material used, whether it is solid, slatted, or wire mesh. **IFC 2301.3**

An automatic fire detection system shall be installed throughout high-piled combustible storage areas where required by the *International Fire Code*. **IBC 907.2.14**

Smoke and heat vents shall be installed in the roofs of one story buildings and portions containing high-piled combustible stock or rack storage in any occupancy group. **IBC 910.2**

Smoking shall be prohibited and approved “No Smoking” signs shall be conspicuously posted in accordance with the *International Fire Code* section 310. **IFC 2305.3**

Aisles shall be kept clear of storage, waste material and debris. During restocking operations using manual stocking methods, a minimum unobstructed aisle width of 24 inches shall be maintained in 48-inch or smaller aisles, and a minimum unobstructed aisle width of one-half of the required aisle width shall be maintained in aisles greater than 48 inches. **IFC 2305.4**

Fire detection systems, smoke and heat removal, draft curtains and automatic sprinkler systems shall be in accordance with the *International Fire Code* Table 2306.2. **IFC 2306.2**

Portable fire extinguishers shall be provided in accordance with section 906 of the *International Fire Code* and NFPA10. (Hazard Dependant) **IFC 2306.10**

Shelf storage 15 feet or more in height shall be protected in an approved manner with special fire protection, such as in-rack sprinklers. **IFC 2307.2.1**

**Las Vegas Fire & Rescue**  
**Fire Prevention Division**  
**(702)229-0366**  
**[www.lasvegasnevada.gov/LawsCodes/fire\\_code.asp](http://www.lasvegasnevada.gov/LawsCodes/fire_code.asp)**