



Purpose and Background

The purpose of this document is to provide guidance and aid in general understanding of Authority Having Jurisdiction (AHJ) requirements for High-Pile Storage (HPS) conditions. Items outlined in this document relate to all new HPS configurations such as racking storage, solid pile storage and / or palletized storage.

Definitions

High-piled combustible storage. 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 (3658 mm) in height. Where required by the *fire code official*, *high piled combustible storage* also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets, and similar commodities, where the top of storage is greater than 6 feet (1829 mm) in height.

High-piled storage area. An area within a building which is designated, intended, proposed, or actually used for *high-piled combustible storage*, including operating aisles.

Submittal Requirements

If any interior portion of the building is over 500 sq ft and considered "High-Piled Combustible Storage", project will be required to submit plans to the Planning and Development Department (PDD) for review. The design shall be in accordance with Phoenix Fire Code Chapter 32.

The following submittals are sequential:

1. A separate submittal is required to PDD for HPS structural racking systems. See TRT document number [00701](#) for additional information. (As applicable)
2. A separate submittal is required for building Fire Sprinkler and Fire Alarm systems. (As applicable)
 - PFC Section 3206.2 Type of protection. Where required by Table 3206.2, fire detection systems, smoke and heat removal, and automatic sprinkler design densities shall be provided to protect the high-piled storage area.
 - PFC Section 3206.2.1 Extent of protection. The fire safety features required in Table 3206.2 shall extend to the lesser of 15 feet (4572 mm) beyond the high-piled storage area or a full height wall. Where portions of high-piled storage areas have different fire protection requirements because of commodity, method of storage or storage height, the fire protection features required by Table 3206.2 within this area shall be based on the most restrictive design requirements.
3. A separate FPPD submittal is required to PDD for HPS (F102-Construction Permit).
 - The Fire Safety and Evacuation Plan will not be reviewed under the F102 submittal. As applicable, the evacuation plan will be required with the Fire Department F303 submittal.
4. A separate FPPR submittal is required to the Fire Department for HPS (F303-Operational Permit).
 - PFC Section 3201.4 Fire safety and evacuation plan. Where required by the Section 403, a fire safety and evacuation plan shall be submitted at the time of permit application for review and approval. A copy of the approved fire safety and evacuation plan shall be maintained on the premises in an approved location.

Technical Reports

PFC Section 3206.2.2 Group F-1 and S-1 with a storage area greater than 500,000 square feet (46 451 m²). When storage areas in Group F-1 and S-1 are greater than 500,000 square feet a Technical Report prepared by an Arizona Professional shall be submitted for review and approval by the *fire code official*. Additional fire protection and/or life safety systems may be required by the *fire code official*.

PFC Section 3206.2.3 Storage height greater than 40 feet (12 192 mm). When the designated storage height is greater than 40 feet (12 192 mm), a Technical Report shall be prepared by a professional registrant and shall be submitted to the Phoenix *fire code official* for approval.

PFC Section 3206.4.1.4 Minimum requirements for client-leased or occupant-owned buildings. A technical report may be requested per this Section.

Plan Submittal Checklist

The following information is required to be included on the construction documents for the FPPD- F102 Construction Permit submittal.

- Transmittal Letter
 - Project process description/ narrative
 - Project scope of work
 - If any item listed below does not apply to the project HPS condition, please explain within letter
- Elevation plans indicating the following:
 - Usable storage height for each storage area
 - Number of tiers within each rack
 - Commodity clearance between top of storage and the sprinkler deflector for each storage arrangement
- Hazardous Material Inventory Statement (HMIS)- As applicable
- Locations and dimensions of *high-piled storage areas*.
- Sprinkler design criteria for all high piled combustible storage areas.
 - Per PFC 3206.4.1.3
- Aisle dimensions between each storage array.
- Maximum pile volume for each storage array (if not stored on racks).
- Description and classification of commodities in accordance with Section 3203 (2018 Phoenix Fire Code). If high hazard, please state as well.
- Location of commodities that are banded or encapsulated. If storage is neither, please state.
- Locations, dimensions, and hardware information of required fire department access doors.
- Type of fire suppression and fire detection systems.
- 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.
- State if the high piled storage areas are accessible to the public or not (Table 3206.2, 2018 Phoenix Fire Code).
- Indicate exit access travel distances (Table 1017.2, 2018 IBC)
- Indicate dead-end distances (*If applicable, Section 3206.10.3)
- Provide a detail for the "Automatic Sprinkler System Capabilities and Limitations Placard" (Section 3206.4.1.7).
- Fire extinguisher locations and ratings (Section 3206.11)