



City of Thornton Fire Department | 2300 Thornton Parkway | Thornton, CO 80229
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High-Piled Combustible Storage

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

Plan Submission Requirements:

The following are required for all high-piled combustible storage plan review submissions. The accuracy and completeness of the information provided will contribute to the progression of the plan review process result.

High piled combustible storage requires meeting the appropriate Chapter of the currently adopted International Fire Code. This includes obtaining an operational permit for High-piles storage over 500 square feet. Fire Construction Plans detailing the following information regarding all high-piled combustible storage areas shall be submitted to Fire Prevention for review and approval before an operational permit can be issued:

- Floor plan of the building showing locations and dimensions of all high-piled storage areas
- Usable storage height of 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 each storage array
- Maximum pile volume for each storage array
- Location and classification of commodities in accordance with the fire code
- Location of commodities that are banded or encapsulated
- Location of aerosols, flammable and combustible liquids, and hazardous materials (the storage and retail display of aerosol products, flammable and combustible liquids and hazardous materials shall also be in accordance with the fire code).
- Locations of required fire department access doors.
- Type of fire protection systems
- Location of valves controlling the water supply for ceiling and in-rack sprinklers
- Type, location, and specifications (including the temperature rating of fusible elements) of smoke removal systems
- Dimension and location of transverse and longitudinal flue spaces

- Any additional information regarding required design features, commodities, storage arrangement, and fire protection features within the high-piled storage areas
- Owner's Statement Documents
- Fire safety and evacuation plan must be submitted for review and approval (if applicable)

If storage is on racks or shelves:

- Verification the system is rack or shelf storage, or bin boxes greater than five (5) feet in any dimension.
- Number of tiers within each rack, shelf or bin box system.
- The use of solid or slatted decks.
- Location and anticipated quantity of plastic pallets or bin boxes, if applicable.
- Description of material from which plastic pallets or bin boxes are made.
- Dimension and location(s) of transverse and longitudinal flue spaces.
- Location and anticipated quantity of idle pallet storage area, if applicable.

If storage is solid-piled, palletized or small bin boxes:

- Verification the system is solid-pile, palletized, shelves less than fifteen (15) feet high or bin boxes smaller than five (5) feet in any dimension.
- Pile dimensions (length, width and height) for each storage array.
- Maximum pile volume for each storage array.
- Location and anticipated quantity of plastic pallets or bin boxes, if applicable.
- Description of material from which plastic pallets or bin boxes are made.
- Location and anticipated quantity of idle pallet storage area, if applicable.

[Owner's Statement](#) (Click link to complete)

Owner's Statement documents the use or occupancy classification based on factors pertaining to the function, the activities conducted within, and potential risk associated with the activities in terms of safety. Any special hazards or considerations that are relevant to fire safety (e.g., storage of hazardous materials) should be identified. By providing comprehensive information about hazardous materials in a statement of building use, ensures compliance with fire codes, mitigate risks effectively, and facilitate emergency response preparedness. This information shall be kept current and accessible to relevant personnel and authorities responsible for building safety and emergency management.