



Southaven Fire Department

Fire Marshal's Office

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High Piled Combustible Storage Facilities Guide

Construction documents shall be submitted that comply with 2012 International Fire Code Section 3201.3 and all applicable sections of Chapter 32.

- 1) Fire Sprinkler design shall be based on 40,000 square feet per riser with no exceptions. All areas are to be considered high-piled storage. Shipping and receiving areas can be reconfigured without our prior approval. Where ESFR sprinklers are provided, there must be a sign posted at the fire dept. connection identifying the system demand to be provided in the event the fire pump fails or power is interrupted.
- 2) The **fire pump room** must be constructed in compliance with **NFPA 20**. Some issues are ventilation, heat, emergency lighting, fire rating, fire stopping, fire alarm annunciator, schematic of sprinkler coverage with separation wall locations included, drainage, spare sprinklers, roadway valve key, and proper electrical connection for the pump. Where a smoke evacuation system is required and a fire rated cut off room is provided, the alarm annunciator can be provided in this area instead of the fire pump room. Fire pump churn shall not exceed 175 P.S.I. and pressure relief valves shall not be acceptable for dumping excess pressure.
- 3) **Fire flows** shall comply with **Appendix B**. Fire hydrants shall not be closer than 1.5 times the height of the exterior wall from the base of that wall. Where yard post indicating valves are used, they shall be the same distance as above from the building. The minimum is 40 feet for each. **The Southaven Water Dept. must be consulted regarding taps made on the municipal water supply.** Bacterial testing of pipes must be within the water dept. guidelines. The water dept. must be contacted prior to making taps to allow verification of sectional valves in the event a section of water main must be isolated for any reason.
- 4) Fire hydrant distribution and spacing shall comply with **Appendix C**. The fire hydrant located **within 100 feet** of the fire dept. connection shall not be included on the fire pump line. It should be municipal pressure.
- 5) The fire dept. connection shall be a **five inch Storz** connection "Elkhart 171" or equivalent. A **30 degree turndown** must be provided to avoid kinks in hose. Ball drip valves are required. The pipe size for the FDC shall be calculated to verify sufficient supply.
- 6) 1.5" hose connections shall be provided near firefighter access doors for accessibility. Piping shall be painted red from the connection to the ceiling for ease in identification. Signs should be provided on exterior side of doors where hose connections are provided. Signs shall be provided at hose connections stating that connections are for fire dept. use only, subject to fire pump pressures of P.S.I. 10,000 square foot coverage shall be used to determine the number of hose connections required but they shall be placed as previously mentioned.
- 7) Tenant separation wall locations shall be identified on the exterior wall. Wall Post Indicator Valves shall be marked on the exterior indicating which system is controlled. Separate control valves shall be provided for offices, mezzanines, etc. where connected to the overhead system. All valves shall be electronically monitored.
- 8) **NFPA 704** placarding shall be provided where applicable for hazardous materials.
- 9) Racking plans shall be submitted for review along with conveyor systems. Evacuation plans for the facility shall address any obstructions.

- 10) **Private fire hydrants** that are subject to fire pump pressures shall be painted silver with a red bonnet. Private hydrants on municipal pressure shall be silver. Traffic protection shall be provided where applicable. Provisions shall be made such that hydrants remain visible and accessible.
- 11) Roadway valve boxes installed on sectional valves and part of the sprinkler system shall have **tamper resistant roadway box lids** that lock down. This is done to distinguish system valves from domestic water valves.
- 12) Gates shall comply with **Southaven Gate Ordinance** with appropriate Knox Entry System. A **Knox key vault** shall be provided near the fire pump room. Where there are multiple tenants, separate Knox vaults might be required to eliminate confusion and time in distinguishing keys.
- 13) All electrical disconnects shall be labeled such as follows: 1 of 5, 2 of 5, etc.; to ensure that all disconnects are deactivated when necessary.
- 14) **Propane tank storage** shall apply with the appropriate NFPA standard and 2012 IFC. A submittal shall be provided for review prior to installation.
- 15) Fire extinguishers shall comply with **NFPA 10**.
- 16) Any **tenant modifications** shall be submitted for review. This shall include addition of rooms, racking changes, changes in commodity stored, hazardous materials storage, significant increase in employees, conveyor systems, evacuation plans, etc.
- 17) Each occupant shall maintain a current **evacuation plan** and provide a means of notifying all occupants if evacuation is necessary. At least one notification device shall be provided for each tenant in a normally occupied area that shall notify occupants of water flow alarms. A system of accountability shall be established for emergency evacuation of the building. A designated assembly area shall be identified that does not obstruct responding emergency apparatus. Comply with **2012 IFC Section 3201.4**
- 18) Comply with the requirements of **2012 Fire Code Chapter 32** in regards to High Piled Storage and any other applicable Chapters or sections that would be applicable to the type of storage to be provided. The commodity class of the products to be stored should be determined and provided at the time of review or determine the level of storage that the design will allow. If all applicable components are provided for high hazard storage, then that should be noted on the drawings.
- 19) High hazard storage submittals shall be designed by a **fire protection engineer**. The drawings must note all of the applicable provisions complied with for that particular type of storage. An example would be aerosol storage.
- 20) The tenant shall be responsible to consult the Fire Marshal's office prior to the addition, modification, or deletion of any construction, racking/conveyor systems, or storage array in the building. Fire protection must be re-evaluated with any changes. It is the design professional's duty to provide directions for the use of the building based upon the design so that the use does not exceed the limits of the design. Each contractor should be responsible for training an owner representative in regards to the operation of fire protection systems, alarm systems, smoke evacuation, and any other life safety provisions that they have provided. All of the design work is useless if the facility is not operated as intended.
- 21) Fire apparatus access roads must comply with **Appendix D of the 2012 International Fire Code**. Temporary access roads must be provided during construction to ensure access by EMS vehicles and firefighting apparatus when combustibles are brought on site. Fire hydrants must be operable prior to bringing combustibles on site as well.