

From the Ground Up

Fire Safety in Wood Construction & Buildings



Over 90% of the homes that are built in the United States each year are constructed using wood-frame construction. Wood-framed structures have served the needs of society since the 1700s—from single-family homes to larger, multi-story apartment buildings, townhouses, commercial and industrial properties.

Less than 1%

of building fires occur during construction.

The fires that do occur are often when required elements — such as fire-limiting gypsum board, fire doors, smoke alarms and sprinklers — have not been put in place.

Source: U.S. Fire Administration

Fire departments are called to control fires in non-sprinklered buildings almost

3 times more often.

Fires occurring in sprinkler-protected buildings were smaller with almost 97% of fires contained to the room of origin.

Source: Fire Safety and Protection, reThink Wood

The International Code Council approved a code change in 2016 that addresses construction fire safety during non-work hours: building and fire officials can **require a round-the-clock fire watch** for construction that exceeds 40 feet above grade (code change F329-16).

Fire Safety on Construction Sites

International Building Code (IBC) Chapter 33 and the International Fire Code (IFC) provide safety precautions and requirements for fire during construction including:¹



Access to Fire Extinguishers: 1 portable fire extinguisher shall be placed at each stairway on all floor levels with combustible materials.

EXIT

Maintaining Means of Egress: Means of egress must be maintained during construction, demolition, remodeling or alterations and additions to buildings.



Availability of Standpipes: In buildings required to have standpipes (water supply piping included in buildings to allow delivery of water to sprinklers and fire hoses on each floor), not less than one standpipe shall be available during construction for fire department use.



Commissioning of Sprinkler System: The sprinkler system must be tested and approved before the certificate of occupancy is awarded.

Fire Safety in Occupied Buildings

In occupied buildings, methods to mitigate impacts on occupant life, safety and property protection from fire can include the following:²

- Construct firewalls
- Use gypsum protection
- Automatic sprinkler system
- Implement fire detection systems
- Plan ahead by developing an evacuation plan
- Receive consultation and approval from fire departments



¹CEU: Fire Protection in Wood Buildings, reThink Wood

²Fire Safety and Protection, reThink Wood



Fire hydrants are easily obscured on the scene of construction sites. In this case, a trash container is placed in front of the hydrant rendering it almost useless. Such obstacles should be removed immediately.