



# Onsite Fire Risk Reduction Methods

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WoodWorks



# Construction Fire Safety

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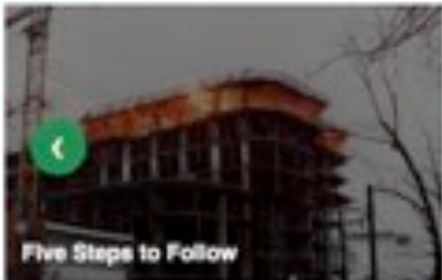
- Construction Fire Safety is not a new concept
- Issue is not lack of codes that address this
- Issue is lack of enforcement & lack of compliance
- Construction Fire Safety necessitates functioning as a team, upholding a higher level of accountability, compliance & enforcement



- What resources are available to assist with this?

# Construction Fire Safety Practices

HOME FIRE SAFETY MANUALS TOPICS LINKS & RESOURCES PHOTO GALLERY DOWNLOADS ABOUT US



## OUR MISSION »

The mission of this website is to provide background information to both public and private sector organizations regarding how to reduce the frequency and severity of fires during construction. This site identifies many best management practices that were collected during a literature search.

## RECENTLY POSTED »



[CFSP Introduction](#)

ConstructionFireSafetyPractices.com

# Construction Fire Safety Practices

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Collaborative Effort of:

- American Wood Council
- Industry Based Stakeholders Group
- FireForceOne (fire protection consultant)



Goal:

- Provide information to public & private sector organizations regarding how to reduce the frequency and severity of fires during construction



# Construction Fire Safety Practices

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Builds on existing code requirements to add guidance, based on the premise:

## Fire is No Accident

Information can be incorporated in:

- Fire Protection Plan
- Safe Work Methods
- Hot Work Permit System
- Fire Protection Policy & Procedures



# Construction Fire Safety Practices

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7 Short Videos, Discuss:

- Generating & Enforcing a Fire Protection Plan
- Hot Work Best Practices (Welding, Soldering)
- Fire Department as a Partner
- Clean Job Site
- Job Site Security
- More

## Chapter 2 – Implementing a Fire Protection Plan



# Fire Protection Plan

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Some Jurisdictions Provide FPP Templates

General Safety Guidelines Include:

- Fire safety is everyone's responsibility
- Provide fire safety orientation & training for all on site, including sub-contactors
- Report fire hazards immediately

## Fire Prevention Plan

[Department Name- Division]  
[Building Name and Address]  
[Date or Revision Date]



# Construction Fire Safety Practices

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## Fire is No Accident: **No Smoking on Job Site**

- Many utilize a zero-tolerance policy: one strike and you're out





# Construction Fire Safety Practices

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## Fire is No Accident: **Clean Construction Site**

- Waste from drilling for MEP, cutting wood (sawdust, wood chips) should be cleaned immediately
  - Can create significant fire load
- Safely secure flammable liquids



# Construction Fire Safety Practices

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Fire is No Accident: **Provide Requirements for**

- On-Site food preparation equipment
- Proper regulation of temporary heating equipment
- Proper use & maintenance of construction equipment

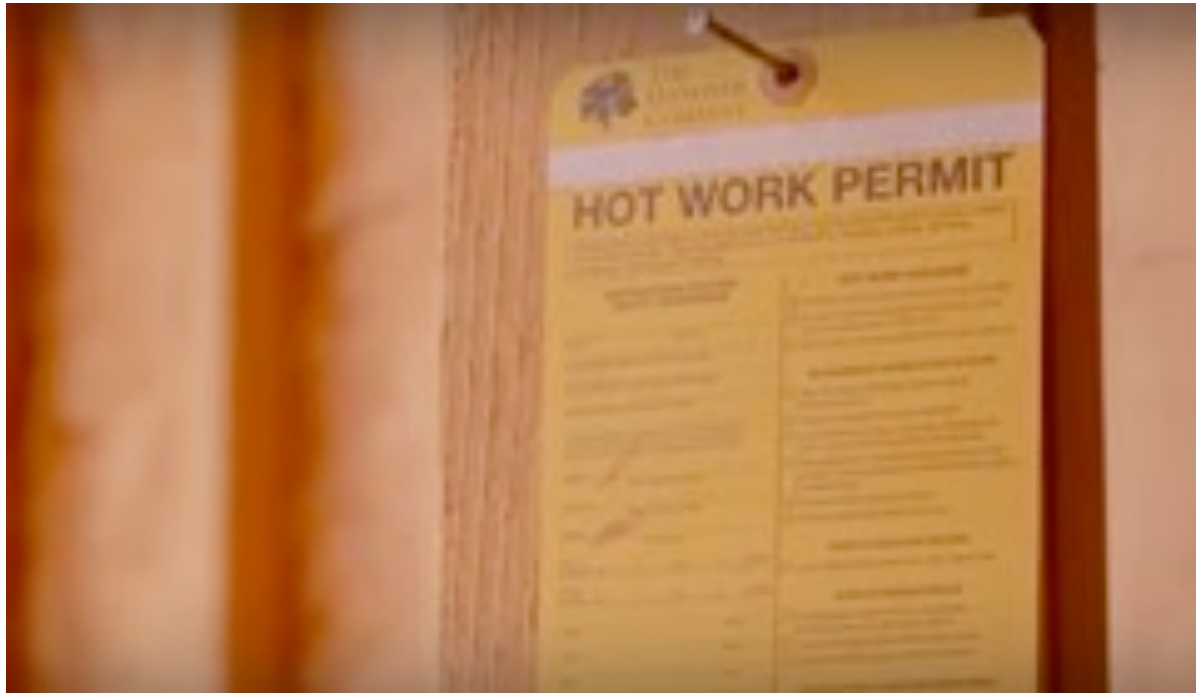


# Hot Work Best Practices

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## Hot Work Permitting System

- Identifies where each day's hot work is taking place
- Allows site supervisor, field personnel & security personnel to readily identify key areas



# Hot Work Best Practices

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## Maintain hot work watchman

- Located adjacent to any hot work taking place
- Armed with fire extinguisher, looking to spot any sparks, etc. from hot work
- Check area after hot work is complete



# Site Security & Safety

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- Off-hours more prone to vandalism, arson
- Should plan walk-through of entire building, especially in areas of that day's hot work
- Physical presence & video surveillance are key
- Proper fencing, locks, other security measures as necessary to prevent unauthorized access





# Construction Fire Safety Practices

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## Stop Fire Before it Starts

- Enforce & Maintain Code Requirements for Construction Site Fire Safety
- Generate & Follow Fire Protection Plan
- Involve Fire Service as a Key Partner
- Open Communication
- A Fire-Free Project is in Everyone's Best Interest




# Additional Resources: WoodAware.com

- Wood products primer guide with specific fire performance & fire service interaction
- Info on adhesives, smoke toxicity, charring & more

**WOODAWARE**  
Awareness Level Information for the Fire Service

PRODUCTS PRIMER | ADHESIVES | FIRE PERFORMANCE | PANELS | LUMBER | GLULAM / SCL | I-JOISTS | TRUSSES

## Trusses



**Components**  
Metal-plate-connected wood trusses are the predominant type of truss used in residential construction. They are typically fabricated from 2x4 or 2x6 dimension lumber. Trusses are categorized as "parallel" chord for use in floor and flat roof applications or "pitch" chord for sloped roof applications.

In a roof truss, the three sides (or perimeter elements) of the triangle are called "chords." The "webs" are wood pieces connecting the top and bottom chords. Chords and webs are the "members" or elements of the truss. The "connectors" joining chords and webs in modern trusses are usually metal-toothed plates.

**Performance Requirements for Code Acceptance**  
Metal-plate-connected wood trusses are designed and manufactured with ANSI/TP11 National Design Standard for Metal Plate Connected Construction<sup>1</sup>, as specified by the building code (International Building Code Section 1602.10.2, International Building Code 2003, Section 1602.10.2 regarding metal-plate-connected wood trusses can be found in Connected Wood Truss Handbook<sup>2</sup>.

**Fire Incidents Involving Trusses**  
The National Institute of Occupational Safety and Health maintains a database of firefighter fatalities. Each fire is reported separately with details of the circumstances leading to the fatality. Additionally, the reports provide information on ground management/command activities that could be improved. This information is extremely valuable to the fire service as a learning tool.

<sup>1</sup> National Design Standard for Metal Plate Connected Wood Trusses, ANSI/TP11, Truss plate Institute, Madison, WI, 2002. <http://www.trussplate.com>

<sup>2</sup> Metal Plate Connected Wood Truss Handbook, 3rd Ed., Structural Components Association, WI, 2002. <http://www.sbcindustry.com>



# Additional Resources: ModernFireFighting.com

- Provides information for fire service to educate on reaction of different building materials in fire events to enhance situational awareness & tactical preparedness
- Collaborative effort of US Fire Administration, AWC & Fireforceone

**Fire Service**


No one is exempt from the consequences of under estimating fire behavior. This section focuses on information regarding basic divisions of firefighting tactics. It addresses factors that need to be considered when responding to building fires.

### Situational Awareness

The term situational awareness has gained visibility in the fire service over the last decade. However, it is not a concept that is specific for firefighting. It is a field of study concerned with the perception of the environment that is critical to design makers in complex dynamic areas. This body of knowledge ranges from air transportation, air traffic control, power plant operations, military command and control and emergency services such as firefighting and policing. This term does not mean size up but it may mean that size up needs to be expanded to include situational awareness.

WEBSITES:

- Situational Awareness website
- Crew Resource Management website
- Rules of Engagement IAF - [http://www.lafcsafety.org/Rules\\_of\\_Engagement\\_v8.7.10.pdf](http://www.lafcsafety.org/Rules_of_Engagement_v8.7.10.pdf)



## **PRINCIPLES OF BUILDING CONSTRUCTION: COMBUSTIBLE**

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For The Fire Service Community

FEDERAL EMERGENCY MANAGEMENT AGENCY  
UNITED STATES FIRE ADMINISTRATION  
NATIONAL FIRE ACADEMY



# Questions?

This concludes The  
American Institute of  
Architects Continuing  
Education Systems  
Course

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