

# Historical Fire: Jeff's Furniture Warehouse Fire

Fire & Rescue Journal | 2.27.12

## May 3, 2007:

Jeff's Furniture Warehouse, 220 Marigold St, Rocky Mount, N.C.

## Construction Type:

Bowstring Truss Construction, 16,000 square feet

## Responding Rocky Mount Fire Department Units:

Engines 1, 5, 6; Ladders 20, 30; Squads 1, 2; Air Support 11; Battalion Chief

## Incident Summary:

At approximately 4:30 p.m. on May 3, 2007, Rocky Mount Fire Department was dispatched to 220 Marigold St. for a report of smoke coming from Jeff's Furniture Outlet. The first-arriving companies found heavy smoke billowing out of the masonry building.

More than 30 firefighters spent two hours controlling the blaze. Firefighters remained outside the building initially, keeping the flames in check without entering the burning structure. The structure was constructed with a bowstring truss roof, which is susceptible to collapse if heated. For safety reasons, no firefighters were allowed inside the building to battle the fire.

Eventually, a wall of flames 50 feet wide and 100 feet tall erupted out of the front of the building. Less than an hour after the fire started, the roof collapsed.

Because the building was unstable after firefighters extinguished the blaze, Rocky Mount fire investigators, insurance company investigators and other firefighters waited until Tuesday to join forces and enter the crumbling shell. Investigators inspected wiring and lighting and took samples to be tested for the presence of accelerants. Fire department officials estimated the losses at \$600,000.

## Truss Construction

Because of the potential dangers presented by bowstring truss construction, listed below are some key points you should keep in mind when battling fire in these types of structures.



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- A truss is made up of structural members—such as boards, beams or steel bars—joined together in a rigid framework, most often in triangular shapes. Truss systems span large areas.
- In a fire, failure of one truss element can lead to failure of the entire truss. Truss system collapses may occur with little or no warning. Fires within truss systems may go unnoticed for long periods. Firefighters should be prepared for early collapse and not be committed to roof operations when fighting a fire in a building that uses truss construction.
- Firefighters should be trained to identify roof and floor truss systems and the hazards associated with each.
- Use extreme caution when operating on or under truss systems; immediately notify the incident commander of the presence of truss construction.
- In heavy fire conditions involving truss construction, interior units may need to withdraw and begin an exterior attack using large-caliber streams.

For more pictures go to the OSFM Facebook page!

***Shannon Orndorff is a fire and rescue training specialist with the North Carolina Office of State Fire Marshal.***

## References

Eckard, Eric. (2007, May 4). Blaze Destroys Furniture Store. The Rocky Mount Telegram.

LeFemina, Freddie. (2009, December 8). True Construction: Tactics You Need. Retrieved from <http://my.firefighternation.com/profiles/blogs/truss-construction-tactics-you>

