

## **Case Study to Evaluate the Effect of Building Code Violations on the Outcome of a Fatality Fire**

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### **Abstract**

Modeling with FDS 4.07 was performed to evaluate the effects of building code violations, construction changes and wind conditions on a multiple fatality fire.

Several unique construction features of the two story, eight unit structure included a covered and enclosed exit pathway. The effects of combustible siding, carpeted stairs and door closers were modeled to show that the code violations significantly affected the ability of the occupants to exit the building in the fire. Smoke detectors and pressure sensors were used to evaluate the effectiveness of smoke detectors in this situation and the ability of the doors to be closed when opened into a wind driven flashover situation.