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## Storage Occupancies Under Sloped Ceilings

NFPA 13 does not currently contain standardized criteria for protecting storage under a sloped ceiling (slopes over 2 in 12). The concerns are how many sprinklers will open and where will they be located when there is a high challenge fire under a sloped ceiling. For other hazards, the guidance is to increase the design area to accommodate the opening of additional sprinklers, but could that work for warehouses too?

NFSA put together a theoretical approach that a fire protection engineer could follow to evaluate and create a protection scheme for warehouse storage under a sloped ceiling. Then NFSA worked with Custom Spray Solutions to model the scenario. Sprinklers within the vicinity of the fire were shown to activate under slopes up to 6 in 12. However, many variables including the storage arrangement, fire location, and modeling details still need to be explored.

The Fire Protection Research Foundation is working on Phase 1 of a project on "Protection of Storage Under Sloped Ceilings." As part of that work, the project team is gathering information on current storage practices under sloped ceilings via an on-line survey. Input is being sought from all aspects of the fire sprinkler industry. Please read the message below from the project team and complete the survey. Your voice can help shape the future.

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Colleagues,

In association with the Fire Protection Research Foundation, we are seeking your input in the development of new design guidelines for the sprinkler protection of warehouses with sloped ceilings. At this stage in the project we are gathering data to determine the full nature of the challenges associated with the design of these systems. If you have involvement with these systems in any capacity (building owner, system designer, AHJ, insurance agency, contractor, installer, etc.) please share your experiences with us through this brief survey. For each unique experience submitted you will be entered to win one of three \$50 Amazon gift cards. The survey can be accessed at:

<https://www.surveymonkey.com/s/slopedceiling>

Thank you for your valuable feedback in support of code advancements.

Cheers,  
Stephen, Noah, Andre and Ken  
Custom Spray Solutions and University of Maryland

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