Significant Fires in History

How They Happened and What Changed as a Result
November 28, 1942

492 casualties

Young man unscrewed a light bulb to have a private moment with his date

A busboy lit a match to screw the lightbulb back in

Match ignited and caught the faux palm trees and spread to the other décor

Fabric draping down from the ceiling quickly caught sending sparks over the patrons

With one visible and usable exit patrons stampeded each other

The pile grew until the door broke

The sudden burst of oxygen caused a fireball and burned everyone trying to escape

Officials testified if the doors were outward swinging 300 people could have been saved
As a result, new regulations were put in place by May 1943:

- Became illegal to have only revolving doors as main entrance
- Revolving doors need to be able to fold and open manually or need to be flanked by doors that open outward
- Installment of automatic sprinklers in any room occupied as restaurant, night club, or entertainment
- Prohibition of using basement rooms as places of assembly
- Required to define aisle space between tables in restaurants
- Exit doors in place of assembly to have so-called panic locks and no others
- Window openings of sufficient areas
- This tragic event inspired building code change, treatment for burn victims, popularized use of penicillin, and put the mob on display
The Station Nightclub Fire - West Warwick, RI

- February 20, 2003
- 100 casualties with more than 200 injured
- Heavy metal band set off pyrotechnics that ignited soundproofing foam on the club’s walls and ceiling surrounding the stage
- It reached flashover within one minute
- Hundreds of people stampeded toward the exits, but the flames spread too rapidly
- Within 15 minutes the building was engulfed in flames
The Aftermath

• RI rewrote their fire codes, becoming one of the toughest in the nation
  • Fire sprinklers required in any club that can hold more than 150 people
  • Music must shut down when fire alarm goes off and lights must come on
  • Full annual inspections required for every club in Rhode Island, every year
Our Lady of the Angels
School-Chicago, IL

- December 1, 1958
- 92 casualties and 3 nuns
- The causes:
  - Construction of the building, with interconnected concealed spaces
  - Open and combustible stairways
  - Lack of fire-rated partitions and 4 doors between corridors and classrooms
  - Glass transoms above classroom doors
  - Lack of automatic sprinkler system
  - Lack of working fire alarm system throughout building, connected to fire department
  - Lack of evacuation procedures
  - Delayed notification/arrival of fire department
The Aftermath

- Major changes nationwide in school fire safety regulations
- NFPA 101 building exit code > NFPA 101 code for safety to life from fire in buildings and structures > NFPA 101 Life safety code
  - Requires automatic fire sprinklers in any area greater than 20,000 square feet
  - Requires automatic sprinkler system in areas below exit level that are not separated from the rest of the building by fire-resisted-rated assemblies
  - Classrooms and corridors required to be separated by one-hour-rated walls
  - Stairways and other vertical openings required to be enclosed
  - Replace and require concrete building materials in place of wood and plaster in schools
Why Our Lady Angels Fire Was So Bad

• https://www.pbs.org/video/why-our-lady-angels-fire-was-so-bad-q2tnmy/
Resources

• https://www.femoran.com/blog/fires-in-history-cocoanut-grove-fire
• https://turnto10.com/amp/archive/ri-fire-code-changes-since-the-station-fire
• https://guides.library.Illinois.edu/c.php?g=416856&p=2840506