Expertise and Persistence Ensure Atrium Building-Code Compliance

Challenge. The new 80-ft.-high office/research facility at the Wrigley Global Innovation Center located in the Goose Island area of Chicago was required to comply with the high-rise provisions of the Chicago Building Code (CBC) due to the presence of an atrium (a winter garden) in the center of the building. The four-story building was built to house a new research facility, offices, and pilot plant. It features state-of-the-art lab space and is designed to foster innovation in the confectionery industry.

The CBC requires high-rise buildings to comply with the following:

- The building must have automatic sprinklers throughout
- At least one elevator must have a stop on every floor
- A smoke control system must be provided
- A voice alarm system (as opposed to only bells) must be provided
- Emergency power must be provided (over 400 ft. in height, a generator is required)
- A fire command center for all emergency functions

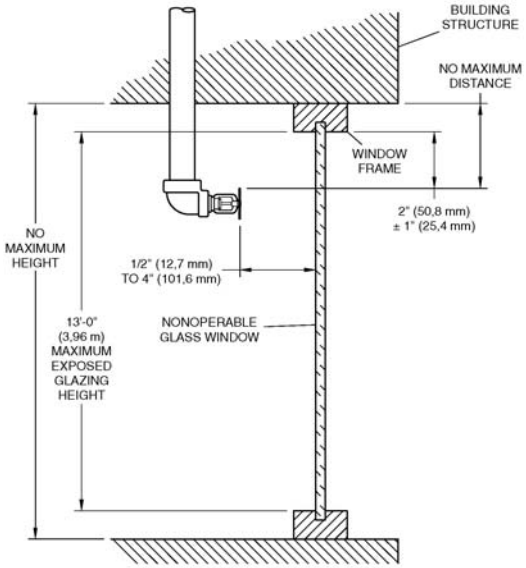
Solution. As the fire/life safety and building code consultant on the project, Rolf Jensen & Associates (RJA) recommended the use of a sprinkler-protected glass wall to separate the atrium from the remaining areas of the lab building. The specially designed window sprinkler system sprays water on the glass to keep it cool.

This solution also simplified compliance with CBC smoke control system requirements, which are based on the volume of the atrium. Occupied spaces facing the atrium did not have to be included in the atrium volume once window sprinklers were installed.

A final hurdle of the project required RJA to convince the City of Chicago that the sprinkler-protected glass wall would meet the high-rise provisions of the CBC. After completing extensive paperwork and meeting with the City of Chicago on several occasions, RJA was able to obtain a referral and present an appeal for the project, which the city ultimately approved.

Result. The Wrigley Global Innovation Center was able to meet all CBC high-rise provisions in the company's new construction project and beautify its work and research environment with a winter garden in the atrium at the center of the facility. The winter garden, located under 540 glass panels, features meeting areas equipped with power and data outlets, 25 different plant species from four continents, and timed, high-intensity lighting to ensure continued growth of the plants during Chicago winters.

Horizontal sidewall sprinkler (Typical installation)



- **Code Consulting**
- **Fire Protection Design**

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