

MARKET ALERT

SPRINKLERS REQUIRED FOR OPEN PARKING GARAGES

BE AWARE

As state and local governments adopt the 2021 International Codes in areas where you provide precast concrete for open parking garages, the construction requirements may change and adversely impact your market. The 2021 edition of the International Building Code (IBC) requires automatic sprinkler protection in **all open parking garages** where the *fire area* of the structure is more than 48,000 square feet in size or greater than 55-feet in height. Aggregate floor areas of open parking garages, which do not have interior walls to physically separate out each floor as an individual compartment, are considered a single *fire area* for purposes of applying this new sprinkler protection provision.

WHY BE CONCERNED

Because of the excellent fire record of open parking garages, open precast concrete garages in particular, they have historically been allowed to be built larger than what is allowed for enclosed parking garages. Open parking garages lend themselves to more economical designs and shorter erection times, highlighting the benefits of precast concrete designs. If sprinklers now become required in open parking garages, the advantage to constructing open versus enclosed parking garages is reduced and potential application of precast is also reduced. The addition of sprinkler systems in structures only adds to financial burden and coordination required. Floor-to-floor height or available head room is a typical cost controlling factor, and the addition of sprinklers only adds another issue to contend with in the calculation.

BACKGROUND

During the code change process to update from the 2018 edition to the 2021 edition of the IBC, modifications were made to Sections 903.2.10 and 903.2.11.3 to mandate sprinkler protection in open parking garages. The requirements were based on a single isolated, but significant, fire incident that occurred in January 2018 in an open parking structure in the Great Britain. Even though the fire record for vehicle fires in open parking garages in the United States shows these incidences to be very infrequent and with nominal economic loss¹, the approving body within the International Code Council, promulgator of the IBC, approved the change.

CALL TO ACTION

When state and local governments adopt building codes, each jurisdiction has the prerogative to amend the codes to suit their state and local needs. Since the provisions in the 2018 IBC and earlier editions have a proven acceptable fire record, these adopting authorities can modify the 2021 IBC to provide exemptions to these sprinkler requirements and revert back to using the provisions in previous editions of the IBC. PCI has already developed draft code change language to use in guiding adopting authorities of the modifications and amendments².

To initiate change, the precast concrete industry asks you to do the following:

1. Contact the State and local authorities in your market areas and determine when, or if, they are going to consider adoption of the 2021 IBC.
2. Ask for instructions (typically available in written form) to explain the procedures to follow to propose changes to the code.
3. Ask for the time schedule of the code update process, including any submittal deadlines and meetings where such changes would be discussed.
4. Follow through with submitting the code change and attending all meetings where the code change will be discussed.
5. Contact others within the industry with an interest in the code change to seek written and/or verbal support.



¹ "Why Sprinklers Should Not Be Required in Open Parking Structures", PCI White Paper, July 2021 (doi.org/10.15554/wp-21-01)

² Code change resource available by contacting technical@pci.org.