



MEMORANDUM

TO: Mayor and Council

FROM: Gregory I. Guernsey, AICP, Director,
Planning and Development Review Department

DATE: July 10, 2014

SUBJECT: Development of “point towers” or “small floor plate” high rise buildings in Austin

The City Council passed Resolution 20140501-044 on May 1, 2014. Council directed the City Manager to review existing development regulations and to make recommendations to facilitate the development of point towers in Austin.

Over the past few years and only on a case-by-case basis, the City of Austin has permitted a small number of “point tower” buildings. Typically, the greatest obstacle in the permitting process is achieving compliance with section 403.5.1 in the International Building Code, and section 1015.2.1 in the local amendments to the 2012 International Building Code. The text of these two sections is included below. Both sections require a physical separation of the stairwells, determined by the dimensions of the building. However, thus far, through the use of an Alternate Method of Compliance process, staff has approved permits for these types of buildings. City staff is confident that these types of small floor plate structures can continue to be approved in the future. City staff will require developers/designers request a preliminary review meeting with Commercial Plan Review and the Austin Fire Department prior to submittal of plans for approval for these types of structures.

Code section 403.5.1 was developed and incorporated into the published building code as a result of a specific recommendation by the National Institute of Standards and Technology (NIST) as part of the Federal Government’s investigation of the September 11, 2001 World Trade Center attack. The recommendations by NIST were intended to incorporate methods into the consensus building and fire codes to help reduce the potential for damage and casualties during future significant incidents. The intent of the provision is to help ensure the viability of at least one stairwell in an emergency involving a high rise building, even in the face of an intentional act. While it involved a mid-rise building, we have witnessed a similar intentional act in Austin and the potential for an intentional act to impact multiple exits within the City of

Austin has been observed by personnel in AFD's Operations and Prevention Divisions. An alternate method is necessary to establish an appropriate level of protection for stairs in close proximity to one another so that a single intentional act might be successfully mitigated by the design. This design approach precludes publishing a design standard which could be easily obtained by persons who might be intent on exceeding the protection provided by that standard.

Other code provisions that can also have an impact address appliance venting, areas of refuge related to accessibility (areas of rescue assistance), and the addition of a requirement for elevators ("fire service access elevators") that can be used by the fire department during a fire emergency without compromising the safety of first responders. The issue of appliance venting can be solved in a manner similar to the design approach used for the Spring Condominium project. This was done by placing the venting duct within the floor plate and providing a method for building maintenance personnel to clean those ducts on a regular basis.

The fire service access elevator, like section 403.5.1 referenced above, was added to the International Building Code as a result of the Federal Government's post incident analysis following the 9/11/2001 World Trade Center incident. City staff believes that these provisions are very important to help ensure the safety of fire department emergency response personnel, but, staff also believes that areas of rescue assistance can be considered in conjunction with the design of the fire service access elevators and lobby, with the intent to combine these functions where it is possible to do so in order to conserve useable floor area.

In short, City staff believes that there are reasonable methodologies for designing small floor plate high rise buildings and will evaluate them on a case by case basis. Developers utilizing an alternate method of compliance process will require pre-approval design meetings with Plan Review and Fire Department staff. This approach brings city staff into the design effort early in the design process and allows staff to contribute to and evaluate innovative designs in a manner that preserves the safety of both the occupants and the city's emergency response personnel while addressing the needs and desires of the owners and future occupants of these unique buildings.

If you have further questions, please contact Jose Roig, Deputy Building Official and Acting Building Inspections Division Manager, at 512-974-9754, or Carl Wren, Austin Fire Department Chief Consulting Engineer, at 512-974-0191.

Attachment

Cc: Marc Ott, City Manager
Sue Edwards, Assistant City Manager
Rhoda Mae Kerr, Austin Fire Chief
Matt Orta, Austin Assistant Fire Chief
Kathy Haught, Division Manager, PDRD
Jose Roig, Deputy Building Official and Acting Division Manager, PDRD
Carl Wren, Chief Consulting Engineer, AFD

Code References:

IBC Section 403.5.1 Remoteness of interior exit stairs.

Required interior exit stairways shall be separated by a distance not less than 30 feet (9144mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the interior exit stairways. In buildings with three or more interior exit stairways, no fewer than two of the interior exit stairways shall comply with this section. **Interlocking or scissor stairs** shall be counted as one interior exit stairway.

Local amendment to IBC section 1015.2.1

Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed at a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in straight line between exit doors or exit access doorways. **Interlocking or scissor stairs** shall be counted as one exit stairway.

Exceptions:

1. When interior exit stairways are interconnected by a 1-hour fire resistance-rated corridor, conforming to the requirements of section 1018 (Corridors), the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. For an exit and exit access doorway that is not the primary exit access into a required exit stairway and that is located in a building that is equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1 (NFPA 13 sprinkler systems) or 903.3.1.2 (NFPA 13R sprinkler systems), the separation distance of the exit door or exit access doorways shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.