The State of High-Rise Building Security

Geoff Craighead, CPP
Vice President, Field Training & Development
Allied Universal Security Services
Speaker Credentials

- 35 years experience in security management
- Board certified in security management as a Certified Protection Professional (CPP)
- Certified by Los Angeles City Fire Department in High-Rise Life Safety Services
- Member NFPA High-Rise Building Safety Advisory Committee
- Past President-ASIS International Board of Directors, Commercial Real Estate Council and Professional Certification Board
High-rise history

Uniqueness of high rises

Security/life safety threats to commercial high-rises

Best operational practices for mitigating threats

Public and private sector partnerships

Impact 9/11 on tall buildings and lessons learned

Should tall buildings continue to be built?
High-Rise History
What is a High-Rise?

The International Building Code (IBC), the NFPA 5000 Building Construction and Safety Code, and the NFPA 101 Life Safety Code, define high-rise buildings as buildings 75 feet [23m] or greater in height [7-10 floors] measured from the lowest level of fire department vehicle access to the highest occupiable floor.
According to the Institute of Real Estate Management (IREM),

“The modern office building was created in response to rapid population increases and industrialization that occurred during the late nineteenth century. Between 1870 and 1920, the nation’s population doubled, and demand for office space increased fivefold. The first commercial structures were in the East, but with railroads and a dynamic economy spurring national expansion, office buildings soon appeared in the Midwest, particularly in Chicago. In 1871, a fire destroyed this city. The disaster, combined with increased urban land values, the invention of the elevator, and the development of structural steel, gave rise to the skyscraper.”

Institute of Real Estate Management of the National Association of Realtors (IREM), Office building industry: past, present, and future” (Harris RA, Revisions Author. Managing the Office Building. Rev. ed. Chicago, IL; 1985: 2-15.)
Tallest Building in the World

The Skyscraper Center
The Global Tall Building Database of the CTBUH

Burj Khalifa

Height: To Tip
828.8 m / 2,723 ft
Height: Architectural
828 m / 2,717 ft

Height: Occupied
584.5 m / 1,918 ft

Height: Observatory
555.7 m / 1,823 ft
Floors Above Ground: 163
Floors Below Ground: 1
# of Elevators: 58
Top Elevator Speed: 10 m/s
Tower GFA: 309,473 m² / 3,351,440 ft²
# of Apartments: 900
# of Hotel Rooms: 304
# of Parking Spaces: 2,957
## Top 20 in the World

<table>
<thead>
<tr>
<th>#</th>
<th>Building Name</th>
<th>City</th>
<th>Height (m)</th>
<th>Height (ft)</th>
<th>Floors</th>
<th>Completed</th>
<th>Material</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Burj Khalifa</td>
<td>Dubai</td>
<td>828</td>
<td>2,717</td>
<td>163</td>
<td>2010</td>
<td>steel/concrete</td>
<td>office / residential / hotel</td>
</tr>
<tr>
<td>2</td>
<td>Shanghai Tower</td>
<td>Shanghai</td>
<td>632</td>
<td>2,073</td>
<td>128</td>
<td>2015</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
<tr>
<td>3</td>
<td>Makkah Royal Clock Tower</td>
<td>Mecca</td>
<td>601</td>
<td>1,972</td>
<td>120</td>
<td>2012</td>
<td>steel/concrete</td>
<td>other / hotel</td>
</tr>
<tr>
<td>4</td>
<td>Ping An Finance Center</td>
<td>Shenzhen</td>
<td>599.1</td>
<td>1,965</td>
<td>115</td>
<td>2017</td>
<td>composite</td>
<td>office / retail</td>
</tr>
<tr>
<td>5</td>
<td>Lotte World Tower</td>
<td>Seoul</td>
<td>554.5</td>
<td>1,819</td>
<td>123</td>
<td>2017</td>
<td>composite</td>
<td>hotel / residential / office / retail</td>
</tr>
<tr>
<td>6</td>
<td>One World Trade Center</td>
<td>New York City</td>
<td>541.3</td>
<td>1,776</td>
<td>94</td>
<td>2014</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>7</td>
<td>Guangzhou CTF Finance Centre</td>
<td>Guangzhou</td>
<td>530</td>
<td>1,739</td>
<td>111</td>
<td>2016</td>
<td>composite</td>
<td>hotel / residential / office</td>
</tr>
<tr>
<td>8</td>
<td>TAIPEI 101</td>
<td>Taipei</td>
<td>508</td>
<td>1,667</td>
<td>101</td>
<td>2004</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>9</td>
<td>Shanghai World Financial Center</td>
<td>Shanghai</td>
<td>492</td>
<td>1,614</td>
<td>101</td>
<td>2008</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
<tr>
<td>10</td>
<td>International Commerce Centre</td>
<td>Hong Kong</td>
<td>484</td>
<td>1,588</td>
<td>108</td>
<td>2010</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
<tr>
<td>11</td>
<td>Petronas Twin Tower 1</td>
<td>Kuala Lumpur</td>
<td>451.9</td>
<td>1,483</td>
<td>88</td>
<td>1998</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>11</td>
<td>Petronas Twin Tower 2</td>
<td>Kuala Lumpur</td>
<td>451.9</td>
<td>1,483</td>
<td>88</td>
<td>1998</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>13</td>
<td>Zifeng Tower</td>
<td>Nanjing</td>
<td>450</td>
<td>1,476</td>
<td>66</td>
<td>2010</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
<tr>
<td>14</td>
<td>Willis Tower</td>
<td>Chicago</td>
<td>442.1</td>
<td>1,451</td>
<td>108</td>
<td>1974</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>15</td>
<td>KK100</td>
<td>Shenzhen</td>
<td>441.8</td>
<td>1,449</td>
<td>100</td>
<td>2011</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
<tr>
<td>16</td>
<td>Guangzhou International Finance Center</td>
<td>Guangzhou</td>
<td>438.6</td>
<td>1,439</td>
<td>103</td>
<td>2010</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
<tr>
<td>17</td>
<td>432 Park Avenue</td>
<td>New York City</td>
<td>425.5</td>
<td>1,396</td>
<td>85</td>
<td>2015</td>
<td>concrete</td>
<td>residential</td>
</tr>
<tr>
<td>18</td>
<td>Marina 101</td>
<td>Dubai</td>
<td>425</td>
<td>1,394</td>
<td>101</td>
<td>2017</td>
<td>concrete</td>
<td>residential / hotel</td>
</tr>
<tr>
<td>19</td>
<td>Trump International Hotel &amp; Tower</td>
<td>Chicago</td>
<td>423.2</td>
<td>1,389</td>
<td>98</td>
<td>2009</td>
<td>concrete</td>
<td>hotel / office</td>
</tr>
<tr>
<td>20</td>
<td>Jin Mao Tower</td>
<td>Shanghai</td>
<td>420.5</td>
<td>1,380</td>
<td>88</td>
<td>1999</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
</tbody>
</table>

## Top 20 in the U.S.

### Building List - Base Data

<table>
<thead>
<tr>
<th>#</th>
<th>Building Name</th>
<th>City</th>
<th>Height (m)</th>
<th>Height (ft)</th>
<th>Floors</th>
<th>Completed</th>
<th>Material</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One World Trade Center</td>
<td>New York City</td>
<td>541.3</td>
<td>1,776</td>
<td>94</td>
<td>2014</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>2</td>
<td>Willis Tower</td>
<td>Chicago (US)</td>
<td>442.1</td>
<td>1,451</td>
<td>108</td>
<td>1974</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>3</td>
<td>432 Park Avenue</td>
<td>New York City</td>
<td>425.5</td>
<td>1,396</td>
<td>85</td>
<td>2015</td>
<td>concrete</td>
<td>residential</td>
</tr>
<tr>
<td>4</td>
<td>Trump International Hotel &amp; Tower</td>
<td>Chicago (US)</td>
<td>423.2</td>
<td>1,389</td>
<td>93</td>
<td>2009</td>
<td>concrete</td>
<td>residential / hotel</td>
</tr>
<tr>
<td>5</td>
<td>Empire State Building</td>
<td>New York City</td>
<td>381</td>
<td>1,250</td>
<td>102</td>
<td>1931</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>6</td>
<td>Bank of America Tower</td>
<td>New York City</td>
<td>365.8</td>
<td>1,200</td>
<td>55</td>
<td>2006</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>7</td>
<td>Aon Center</td>
<td>Chicago (US)</td>
<td>346.3</td>
<td>1,136</td>
<td>83</td>
<td>1973</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>8</td>
<td>John Hancock Center</td>
<td>Chicago (US)</td>
<td>343.7</td>
<td>1,128</td>
<td>100</td>
<td>1969</td>
<td>steel</td>
<td>residential / office</td>
</tr>
<tr>
<td>9</td>
<td>Wilshire Grand Center</td>
<td>Los Angeles</td>
<td>336.3</td>
<td>1,100</td>
<td>62</td>
<td>2017</td>
<td>composite</td>
<td>hotel / office</td>
</tr>
<tr>
<td>10</td>
<td>Chrysler Building</td>
<td>New York City</td>
<td>318.9</td>
<td>1,046</td>
<td>77</td>
<td>1930</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>11</td>
<td>New York Times Tower</td>
<td>New York City</td>
<td>318.8</td>
<td>1,046</td>
<td>52</td>
<td>2007</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>12</td>
<td>Bank of America Plaza</td>
<td>Atlanta</td>
<td>311.8</td>
<td>1,023</td>
<td>55</td>
<td>1992</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>13</td>
<td>U.S. Bank Tower</td>
<td>Los Angeles</td>
<td>310.3</td>
<td>1,018</td>
<td>73</td>
<td>1990</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>14</td>
<td>The Franklin - North Tower</td>
<td>Chicago (US)</td>
<td>306.9</td>
<td>1,007</td>
<td>60</td>
<td>1989</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>15</td>
<td>One57</td>
<td>New York City</td>
<td>306.1</td>
<td>1,004</td>
<td>75</td>
<td>2014</td>
<td>steel/concrete</td>
<td>residential / hotel</td>
</tr>
<tr>
<td>16</td>
<td>JPMorgan Chase Tower</td>
<td>Houston (US)</td>
<td>305.4</td>
<td>1,002</td>
<td>75</td>
<td>1982</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>17</td>
<td>Two Prudential Plaza</td>
<td>Chicago (US)</td>
<td>303.3</td>
<td>995</td>
<td>64</td>
<td>1990</td>
<td>concrete</td>
<td>office</td>
</tr>
<tr>
<td>18</td>
<td>Wells Fargo Plaza</td>
<td>Houston (US)</td>
<td>302.4</td>
<td>992</td>
<td>71</td>
<td>1983</td>
<td>steel</td>
<td>office</td>
</tr>
<tr>
<td>19</td>
<td>4 World Trade Center</td>
<td>New York City</td>
<td>297.7</td>
<td>977</td>
<td>65</td>
<td>2014</td>
<td>composite</td>
<td>office</td>
</tr>
<tr>
<td>20</td>
<td>Comcast Center</td>
<td>Philadelphia</td>
<td>296.7</td>
<td>974</td>
<td>57</td>
<td>2006</td>
<td>composite</td>
<td>office</td>
</tr>
</tbody>
</table>
Detroit

The Skyscraper Center
The Global Tall Building Database of the CTBUH

United States Buildings

Note: All listed data for proposed or under construction buildings is based on the most reliable information currently available. This data is thus subject to change until the building has completed and all information can be confirmed and ratified by the CTBUH.

Search: detroit

<table>
<thead>
<tr>
<th>#</th>
<th>Building Name</th>
<th>City</th>
<th>Height (m)</th>
<th>Height (ft)</th>
<th>Floors</th>
<th>Completed</th>
<th>Material</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>135</td>
<td>Hudsons Tower</td>
<td>Detroit</td>
<td>243.8</td>
<td>800</td>
<td>58</td>
<td>2022</td>
<td>concrete</td>
<td>residential / office / retail</td>
</tr>
<tr>
<td>214</td>
<td>Detroit Marriott at the Renaissance Center</td>
<td>Detroit</td>
<td>221.5</td>
<td>727</td>
<td>70</td>
<td>1977</td>
<td>concrete</td>
<td>hotel</td>
</tr>
<tr>
<td>415</td>
<td>One Detroit Center</td>
<td>Detroit</td>
<td>188.7</td>
<td>619</td>
<td>43</td>
<td>1991</td>
<td></td>
<td>office</td>
</tr>
</tbody>
</table>

Mixed-use functions continue to dominate the functional mix of the tallest 100 buildings, with 46 buildings, an increase from 41 in 2016. Meanwhile, office functions take a slightly lower share in 2017, with 38 buildings, down from 40 in 2016 and equal to the 2015 figure. Residential and hotel functions have shrunk as a proportion once again, with 11 and five buildings, respectively, down from 12 and seven in 2016.
Uniqueness of High-Rises
Concentration of people and property makes them an attractive target for criminal activity and terrorism.

Depending on the location of an incident, there may be delay in response.

Chance of a large, uncontrolled fire moving upwards.

Systems may aid spread of smoke and contaminants (elevators and air conditioning systems).

Emergency evacuation usually limited to the use of stairwells.

Buildings not designed for simultaneously evacuating all occupants.

Tall buildings provide a means to commit a crime.
Security/Life Safety Threats to High-Rises
Threats to High-Rises

- Active shooter/workplace violence
- Aircraft collision
- Assault
- Bomb and bomb threat
- Burglary
- Contractible disease (pandemic influenza, SARs, tuberculosis)
- Cyber attack
- Daredevil, protestor
- Demonstrations/Protests
- Elevator and escalator incident
- Espionage
- Fire and fire alarm
- Hazardous material, chemical and biological weapons and nuclear attack
- Kidnapping and hostage situation
- Labor dispute, demonstration and civil disorder
- Medical emergency
- Manslaughter and murder
- Natural disaster (earthquake, tsunami, storm, flood and landslide)
- Power failure
- Robbery
- Sabotage
- Sex offenses
- Slip-and-fall
- Stalking
- Suicide
- Terrorism
- Theft
- Traffic accident
- Trespass
- Vandalism
- Water leak
Active Shooter
Active Shooter Incidents in the U.S.

A Study of 160 Active Shooter Incidents in the United States Between 2000 - 2013: Location Categories

- **EDUCATION**
  - Schools (Pre-K to 12), 16.9% (27)
  - Institutions of Higher Education, 7.5% (12)

- **GOVERNMENT**
  - Other Government Properties, 6.9% (11)
  - Military, 3.1% (5)

- **OPEN SPACE**, 9.4% (15)

- **RESIDENCES**, 4.4% (7)

- **HEALTH CARE FACILITIES**, 2.5% (4)

- **HOUSES OF WORSHIP**, 3.8% (6)

- **COMMERCE**
  - Businesses, Open to pedestrian traffic, 27.5% (44)
  - Malls, 3.8% (6)
  - Businesses, Gosed to pedestrian traffic, 14.4% (23)

Cyber Attack
Over past 40 years, technological advances in access control, intrusion detection, video monitoring/storage, patrol management, communication devices, and online training platforms have decreased risk of threats.

Network connectivity of security devices has increased risk of threats. Networks provide ways for crimes to be committed without physical presence.

“As we move forward into a period of more wirelessly connected so-called ‘smart devices,’ security needs to be built into the device from inception. We are currently in a state where smart devices deployment [is] running far ahead of any general security awareness.”*

Google Headquarters, Sydney, 2013—Hackers gained access through the Internet to the building management system in Google’s Australian offices and demonstrated they could assume control of the HVAC system. After gaining access to the system the hackers notified Google of the vulnerability.*


“While some facility managers might take comfort in thinking a hacker would have little interest in playing around with their lighting, elevator, or HVAC systems, there’s a bigger potential problem—that the BAS [Building Automation System] is simply a fairly easy entry point and that, once the BAS has been breached, the hacker can ‘pivot’ into the corporate network, and do far greater damage there.”

Small Business Information Security: The Fundamentals

Celia Paulsen
Patricia Toth
Applied Cybersecurity Division
Information Technology Laboratory

November 2016
Use of Technology and Social Media
Fire
“In the U.S., most fire codes limit the use of combustible exterior cladding material, particularly on high-rise buildings.

“The requirements for automatic sprinklers (one element of what we call “active” fire protection systems) and at least two escape routes from every floor add depth to these defenses.

“Together, these rules increase the chance that a small fire will be put out quickly, reduce its ability to spread up the side of the building, and help people get out if they need to.”

“Why a Fire Like Grenfell Tower’s Is Less Likely to Not Happen in the U.S. by Brian Meacham.
http://www.slate.com/articles/business/metropolis/2017/06/could_the_grenfell_tower_fire_happen_here.html, retrieved 10262017
Terrorism
The Persistent Terror Threat to America

Since 2013...

144 Homegrown Jihadist Cases in 29 States for...

- Plots to Attack
- Overseas Travel
- Financial Support
- Lying to Authorities
- Weapons Charges

This document is produced by the Majority Staff of the House Homeland Security Committee. It is based on information culled from open source materials, including media reports, publicly available government statements, and nongovernmental assessments.
In 2017, there have been an **average of 11** terror attacks, plots, or arrests **per month**.

**ISIS-LINKED PLOTS AGAINST THE WEST SINCE 2013**

- **68 CASES**
  - ISIS used or attempted to build or use explosives

- **15 CASES**
  - A vehicle was used as a weapon

- **49 CASES**
  - An edged weapon was used

**HOMEGROWN JIHADIST CASES IN AMERICA SINCE 9/11**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>5</td>
</tr>
<tr>
<td>2003</td>
<td>4</td>
</tr>
<tr>
<td>2004</td>
<td>2</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
</tr>
<tr>
<td>2006</td>
<td>6</td>
</tr>
<tr>
<td>2007</td>
<td>4</td>
</tr>
<tr>
<td>2008</td>
<td>5</td>
</tr>
<tr>
<td>2009</td>
<td>12</td>
</tr>
<tr>
<td>2010</td>
<td>10</td>
</tr>
<tr>
<td>2011</td>
<td>12</td>
</tr>
<tr>
<td>2012</td>
<td>8</td>
</tr>
<tr>
<td>2013</td>
<td>17</td>
</tr>
<tr>
<td>2014</td>
<td>44</td>
</tr>
<tr>
<td>2015</td>
<td>29</td>
</tr>
<tr>
<td>2016</td>
<td>38</td>
</tr>
<tr>
<td>2017</td>
<td>14</td>
</tr>
</tbody>
</table>

= **214 TOTAL**

This document is produced by the Majority Staff of the House Homeland Security Committee. It is based on information culled from open source materials, including media reports, publicly available government statements, and nongovernmental assessments.
Best Operational Practices
Office Buildings

- Open or closed environment based on perceived risk
- Controlled entrance to loading dock and service elevators
- Trained security personnel and lobby ambassadors
- Use of technology (barriers, turnstiles, access cards, video systems, online visitor management, mass notification systems)
- Active fire life safety program (building emergency plan, floor wardens, online fire life safety training of occupants)

Open and welcoming environment for guests and patrons

Open or controlled entry to parking garages (luxury hotels use valets at main entrance), controlled loading docks and employee entrances

Guest room security (access card, deadbolt lock and security latch, in-room safe, safe deposit box, door viewer, security and safety awareness)

Trained security personnel and housekeeping staff

Fire life safety program primarily executed by hotel staff
Residential Buildings

- Open or closed environment based on perceived risk
- Usually controlled access to building and parking garages
- Use of technology (telephone or voice-over Internet Protocol entry systems, access cards, intrusion detection systems, video systems)
- Trained security staff (concierge style)
- Resident fire life safety program

Emerging Technology - Robots
HRBSAC Public Comments – NFPA 101

Public Comment #1: Risk Analysis for Mass Notification Systems

Comment on First Revision: FR-1006

Recommendation:
Add new text as follows -

11.8.4.3 Risk Analysis for Mass Notification Systems. For high-rise buildings with a total occupant load of 2000 or more persons, a risk analysis for mass notification systems shall be provided in accordance with Section 9.14.

Committee Statement:
Mass notification systems may be an important component to larger high-rise building safety and the new provisions of Section 9.14 should be considered for these high-rise buildings with 2000 or more occupants. It is not unusual for large scale high-rise projects to form a risk analysis addressing areas of concern for high-rise buildings. The required risk analysis will consider both fire and non-fire emergencies, which is consistent with the current all-hazard approach being implemented by many high-rise buildings today. Specific characteristics of high-rise buildings may warrant the need for a mass notification system.
Private Sector Partnering with Public/Intelligence Agencies
Since 9/11, there has been considerable improvement in the relationship between public law enforcement/intelligence agencies, emergency responders (including fire departments) and private sector involved in protecting the nation’s critical infrastructure.

Increased awareness of each groups’ responsibilities and capabilities, improved collecting and sharing of information (including intelligence/video), and heightened education of the general public have all contributed to improving the security and safety of all types of facilities, including tall buildings.
Impact 9/11 on Tall Buildings
Since 9/11, much discussion focused on the:

- Design and construction of tall buildings, and their ability to withstand explosions
- Capacity for all building occupants to evacuate in a timely manner

- Reinforced steel exterior for first 6-8 floors
Hardening a Structure

Establish an adequate stand-off distance from vehicles using fountains, sculpture, boulders, stairs, embankments, park benches, concrete planters, concrete barricades and bollards.

Other Hardening Measures

- Applying window film on lower floor glass windows
- Strengthening exposed building support columns in pedestrian lobbies and loading docks by wrapping them with layers of bomb-blast protective material
- Installing bomb blast curtains in building lobbies
- Providing blast-resistant trash or garbage receptacles; removing exterior mail boxes
On September 11, in each tower there were people who perished on the floors that sustained the direct impact of the aircraft and those who were inextricably trapped above the crash site because all three stairwells in the north tower and two stairwells in the south tower, and most elevators, were made inoperable by the impact, explosions and ensuing fires.

During some emergencies, such as fire, elevators prior to Phase 1 recall might be used for occupants to self-evacuate from impacted floors
“Irrespective of what elevator-usage protocols are finally adopted, one clear message for all tall buildings, whether or not they were evaluated to be at risk to a terrorist event, is that all occupants should be well trained in evacuation procedures.

“The Towers had a comprehensive, well-executed fire life safety program and emergency plan that helped prepare building emergency staff and occupants to react appropriately to the catastrophic events that unfolded.”

Since 9/11 there has been a continued emphasis on having well-written emergency plans, thorough policies and procedures, and well-trained occupants, so that when necessary, and depending on the nature of the emergency, people can quickly react and either shelter in place, evacuate to another location on their floor, move to another floor (staged evacuation), or evacuate out of the building.

### Active Shooter Guidelines in Emergency Plans

**Active Shooter Pocket Card** available free on the U.S. Department of Homeland Security website. [https://www.dhs.gov/xlibrary/assets/activeshooter](https://www.dhs.gov/xlibrary/assets/activeshooter)

#### Profile

**Active Shooter**
- An active shooter is an individual actively engaged in killing or attempting to kill people in a confined and populated area, typically through the use of firearms.

#### Characteristics

**Active Shooter Situation**
- Victims are selected at random
- The event is unpredictable and evolves quickly
- Law enforcement is usually required to end an active shooter situation

#### Coping

**With an Active Shooter Situation**
- Be aware of your environment and any possible dangers
- Take note of the two nearest exits in any facility you visit
- If you are in an office, stay there and secure the door
- Attempt to take the active shooter down as a last resort

Contact your building management or human resources department for more information and training on active shooter response in your workplace.

#### HOW TO RESPOND

**When an Active Shooter Is in Your Vicinity**

1. **Evacuate**
   - Have an escape route and plan in mind
   - Leave your belongings behind
   - Keep your hands visible

2. **Hide Out**
   - Hide in an area out of the active shooter’s view
   - Block entry to your hiding place and lock the doors
   - Silence your cell phone and/or pager

3. **Take Action**
   - As a last resort and only when your life is in imminent danger
   - Attempt to incapacitate the active shooter
   - Act with physical aggression and throw items at the active shooter

**Call 911 When It Is Safe to Do So**

#### How to Respond

**When Law Enforcement Arrives**

- Remain calm and follow officers’ instructions
- Put down any items in your hands (i.e., bags, jackets)
- Immediately raise hands and spread fingers
- Keep hands visible at all times
- Avoid quick movements toward officers such as attempting to hold on to them for safety
- Avoid pointing, screaming or yelling
- Do not stop to ask officers for help or direction when evacuating

**Information**

- Location of the active shooter
- Number of shooters
- Physical description of shooters
- Number and type of weapons held by shooters
- Number of potential victims at the location

**Call 911 When It Is Safe to Do So**
Should Tall Buildings Continue to be Built?
Should Tall Buildings Continue to be Built?


“The past decade has been the most productive 10 years ever when it comes to tall buildings.

“Of the current list of 100 tallest buildings in the world, half of those buildings have been built in the past ten years.”

“Of the current 100 tallest residential towers in the world, an impressive 90% have been completed in the past 10 years.”
“The 144 buildings completed in 2017 beat every previous year on record, including the previous record high of 127 completions in 2016. This brings the total number of 200-meter-plus buildings in the world to 1,319, increasing 12.3% from 2016, marking a 402% increase from the year 2000, when only 263 existed.”
Statement

This presentation is provided to BOMA Detroit members by Allied Universal for educational purposes only.

The presentation is the sole intellectual property of Allied Universal. Permission to use any portion of it should be directed in writing to Geoff Craighead, Vice President, Field Training & Development, Allied Universal Security Services, geoff.craighead@aus.com.