




# City of Phoenix

FIRE DEPARTMENT  
FIRE PREVENTION DIVISION

## Explanatory Policy – Fire & Life Safety Report

<b>SUBJECT:</b> Fire & Life Safety Report Content & Code Requirements	<b>EFFECTIVE DATE:</b> July 19, 2019 Rev. May 12, 2020
<b>REFERENCES:</b> The Phoenix Fire Code (2018 Edition) Section 105.4.2.2	<b>REVIEW DATE:</b> July 2024
<b>APPROVED:</b>	
 John Mertens, Fire Marshal	

**Scope:**  
The Fire Code Official is authorized to require fire & life safety reports. Fire & Life Safety Reports shall be submitted for review and be subject to fees in accordance with Chapter 81 of the Phoenix Fire Code. Prior to submitting construction drawings for high-rise buildings, covered mall buildings, buildings containing atriums, and other structures as determined by the fire code or building official, a Fire & Life Safety Report shall be submitted containing a description of the fire protection systems in the building.

The description shall include the coordination of those systems. Upon completion of the project, a copy of the approved documentation shall be maintained at the site and by the Fire Department until demolition of the building.

This description shall include the basic concepts used for:

Basis of Design		
1.	Building Description/Introduction	<ul style="list-style-type: none"> <li>• Project Address/ Cross Streets</li> <li>• Intended use and occupancy groups</li> <li>• Construction type(s)</li> <li>• Building height</li> <li>• Number of floors above/below grade</li> <li>• Area per floor (s.f.)</li> <li>• Total area (s.f.)</li> <li>• Seismic design/ Risk category</li> </ul>
2.	Codes, Standards, Laws and Regulations/ Testing Criteria	<ul style="list-style-type: none"> <li>• See current list of adopted codes PFC Ch 80</li> </ul>
3.	Designer Responsibility Fire Protection and Life Safety Commissioning Team	<ul style="list-style-type: none"> <li>• Project design professional in charge</li> </ul>



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4.	Design and Construction Methodology	<ul style="list-style-type: none"><li>• Demolition</li><li>• Phased construction</li><li>• Occupancy plan</li></ul>
5.	Special Consideration & Description	<ul style="list-style-type: none"><li>• Historic Preservation</li><li>• Greater than 420 ft in height</li><li>• Institutional occupancy</li><li>• Essential facility structure i.e., (natural disaster shelter, major community infrastructure)</li></ul>
6.	Infrastructure (supporting building fire protection and life-safety systems)	<ul style="list-style-type: none"><li>• Available fire flow (PFC Appendix B)</li><li>• Fire main and hydrants (municipal, private)</li><li>• Electrical service (Transformer size, Oil filled, Location/method of protection)</li><li>• Standby/ Emergency Power Connections (Distinguish what is connected NEC 700, 701, 702)</li><li>• Other Utilities: Information tech., natural gas, etc.</li><li>• Water tank</li></ul>
7.	Special Design	<ul style="list-style-type: none"><li>• Alternative methods and materials (Include Code Modification(s)/ Appeal(s) in Appendix)</li></ul>
<b>Passive, Active Fire Protection and Life Safety Equipment and Systems</b>		
8.	Critical Process and Systems	<ul style="list-style-type: none"><li>• Energy management systems (see integrated testing requirements)</li><li>• Hazardous materials and processes (temperature control etc.)</li><li>• Mechanical refrigeration machine room Research Labs</li></ul>



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9.	Emergency Response	<ul style="list-style-type: none"> <li>• Two-way communication (Type) – Required in high-rise buildings</li> <li>• Emergency responder radio coverage – Required as indicated by testing</li> <li>• Fire command center</li> <li>• Firefighter Breathing Air</li> <li>• Access control doors</li> <li>• Fire emergency access</li> <li>• Fire Service Access Elevator (Design method to prevent water infiltration, # of elevators, etc.)</li> <li>• EMS Access Elevator</li> <li>• Ambulance stretcher designated</li> <li>• Fire fighter's emergency operation (Phase I and II)</li> <li>• Firefighter Sequence of Operation (Smoke Control, etc.)</li> </ul>
10.	Hazardous Materials/Operations	<ul style="list-style-type: none"> <li>• Type of material and physical state (HMIS- Provide in Appendix)</li> <li>• Maximum allowable quantities</li> <li>• Control areas</li> <li>• Type of hazard and method of protection</li> <li>• Management Plan (HMMP)</li> </ul>
11.	Fixed Fire Suppression Systems	<ul style="list-style-type: none"> <li>• Automatic fire suppression system (Wet, Dry, 13, 13R, etc.)</li> <li>• Standpipe system (Class I, II, III)</li> <li>• Fire pump (Electric, Diesel- Include fuel capacity analysis)</li> <li>• Commercial cooking (Hood Type, Suppressant)</li> <li>• Special systems (pre-action, water mist, etc.)</li> </ul>
12.	Fire Alarm Systems	<ul style="list-style-type: none"> <li>• System Design (full vs partial evacuation, Class A, etc.)</li> <li>• Sequence of operation (Cause/ Effect Matrix)</li> <li>• Notification requirements (ADA, special design)</li> <li>• Voice evacuation</li> <li>• Emergency alarms (H Occupancy)</li> <li>• CO/ CO2 Detectors</li> </ul>



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13.	Smoke Control and Management Systems	<ul style="list-style-type: none"> <li>• Post fire smoke removal method and design (Glass break method not allowed per Explanatory Policy – Smoke Removal Systems)</li> <li>• Stair pressurization</li> <li>• Elevator hoistway pressurization</li> <li>• Atrium smoke exhaust system</li> <li>• Smoke compartmentation</li> <li>• Fire fighter's smoke control panel</li> <li>• Diagram and controls</li> <li>• System acceptance</li> </ul>
14.	Means of Egress Systems and Components	<ul style="list-style-type: none"> <li>• Number of exits and/or stairways</li> <li>• Exit access components (fire/smoke resistant corridors)</li> <li>• Horizontal exits</li> <li>• Occupant evacuation elevators</li> <li>• Access to the public way or staging</li> <li>• Access controlled egress doors (permit required)</li> <li>• Luminous egress markings</li> </ul>
15.	Fire-resistant and Smoke-resistant Assemblies	<ul style="list-style-type: none"> <li>• Method of protection (i.e. spray fire proofing, tested assemblies, etc.)</li> <li>• Fire and smoke dampers</li> <li>• Fire and smoke doors</li> <li>• Through penetration fire stops</li> <li>• Smoke vents (including elevator hoistway venting)</li> <li>• Smoke and fire rated assemblies</li> </ul>
16.	Explosion Prevention and Control Systems	<ul style="list-style-type: none"> <li>• Complying with PFC CH 9</li> </ul>
<b>Commissioning and Integrated Testing</b>		
17.	Delivery of Operation and Maintenance Documentation	<ul style="list-style-type: none"> <li>• Smoke control</li> <li>• Active systems (WON doors, smoke guard, magnetically hold open)</li> <li>• Inspection Intervals (Smoke control, Alarm, Sprinkler System, etc.)</li> <li>• Manufacturer's installation instructions and specifications</li> </ul>
18.	Occupant Overview of Life Safety Systems	<ul style="list-style-type: none"> <li>• Training owner/ employees, staff on maintaining/ operating/ performance of systems</li> <li>• To be done prior to Certificate of Occupancy</li> </ul>



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19.	Test Plan	<ul style="list-style-type: none"> <li>• For new systems the minimum requirements for a test plan shall include the following:               <ol style="list-style-type: none"> <li>1. Written verification that the integrated system and its individual systems have been installed in accordance with the approved design documents.</li> <li>2. List of the individual systems to be tested</li> <li>3. Documentation of the individual systems as required by the applicable codes or standards</li> <li>4. Integrated test team and additional entities required to be in attendance</li> <li>5. Equipment required for testing</li> <li>6. A comprehensive functional matrix depicting all system inputs and associated output functions</li> <li>7. List of necessary drawings, including riser diagrams and control diagrams</li> <li>8. Narrative description of the test scenarios, including what is needed for record of completion to document approval by the AHJ</li> <li>9. The extent of systems to be tested under the direction of the ITM</li> <li>10. Test schedule, including individual systems</li> <li>11. Periodic integrated systems test frequency</li> <li>12. Annual inspection of fire-resistant and smoke-resistant assemblies.</li> </ol> </li> </ul>
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**Appendix**

A.	Smoke Control/ Modeling Summaries/ Rational Analysis Report	<ul style="list-style-type: none"> <li>• Consider ASHRAE Temperatures</li> <li>• Wind speed and direction analysis</li> </ul>
B.	Timed Egress Analysis Report	<ul style="list-style-type: none"> <li>• Where applicable to project</li> </ul>
C.	Fire flow test	<ul style="list-style-type: none"> <li>• PFC Appendix B</li> </ul>
D.	Appeals/Code Modifications/FCC Location Approval	<ul style="list-style-type: none"> <li>• Where applicable to project</li> </ul>
E.	Commissioning/ Final Inspection/ Integrated Testing for all fire life safety systems documentation	<ul style="list-style-type: none"> <li>• To be provided prior to Certificate of Occupancy</li> <li>• Accuracy of Diagrams of System Interconnection and Device Location</li> </ul>



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		<ul style="list-style-type: none"><li>• Installation in Accordance with Manufacturer's published Instructions</li><li>• Performance in accordance with applicable codes and standards</li><li>• Third party testing and special inspections</li><li>• Fire command center</li><li>• Fire alarm system</li><li>• Energy management system</li><li>• Emergency power system</li><li>• Emergency responder radio coverage</li><li>• Elevator systems</li><li>• Equipment and Tools (Door Fan Test, Smoke Control Pressurization, etc.)</li><li>• Special inspection / observation certificate</li></ul>
F.	Hazardous Material (HMIS)	<ul style="list-style-type: none"><li>• If applicable to project</li><li>• IFC Chapter 50</li><li>• IBC Section 414</li><li>• (MAQ) Maximum Allowable Quantity Evaluation</li></ul>
G.	Floor Plans 11X17	<ul style="list-style-type: none"><li>• Provide site civil fire line with hydrant locations, fire alarm, fire sprinkler, fire pump, standpipe, smoke &amp; heat removal system, elevator, rescue air, MEP and architectural with site plan.</li></ul>