



Pennsylvania State Fire Academy

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Minimum Standard for Accreditation (MSA)

September 1994

Course Title: High Rise Fire Fighting (HIRI)

Length of Course: 16 Hours

Lecture/Lab Breakdown: 8/8

Prerequisites: ICS, ECOP, TRCO

Referenced Texts: IFSTA "Essentials of Fire Fighting", 4th edition; NFPA "Fire Protection Handbook", 17th edition; NFPA "Building Construction for the Fire Service" by Francis Brannigan (3rd edition); "High Rise/Fire and Life Safety" by John T. O'Hagan; and "Collapse of Burning Buildings: A Guide to Fireground Safety" by Vincent Dunn.

Course Goal: This course will introduce the student to basic and advanced concepts of high-rise operations at high-rise incidents.

Description of Course: This course will provide instruction in fire fighting and support operations in high-rise buildings. The special problems encountered by the fire fighter in this type of fire are also discussed. Safe operations, the use of a tactical checklist and application of the Incident Command System are stressed.

Description of Methodology to be used: (Brief) A combination of lecture, demonstration, table-top exercises and supervised evolutions.

Student Equipment/Supply Needs: Notebook and pen/pencil, full Turn Out Gear with spare SCBA cylinder.

Equipment/Audiovisual/Supply requirements: Classroom with adequate seating, screen, chalkboard, slide projector, VCR w/ monitor, overhead projector as appropriate for the audiovisuals selected.

Apparatus typical to a first alarm assignment for the response area (minimum of two engines and an aerial apparatus) plus air/light, EMS and Rehab units.

Sufficient assistant instructor during the Practical Field Exercises to provide a 1:5 instructor to student ratio is recommended to assure safe and effective completion of practical evolutions.

The specific 6 hour practical exercises employed will be chosen by the instructor on a case-by-case basis, taking into consideration available facilities and any locality - specific
(Continued)

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Equipment/Audiovisual/Supply requirements: continued

issues. They will be designed to reinforce course objectives within the parameters of the available resources. They may consist of (but not necessarily be limited to) table-top exercises, single-skill evolutions or combined skill evolutions. Based on time/facility constraints, a maximum enrollment of 30 students is emphatically recommended.

COURSE OUTLINE
(General - Not Detailed)

<u>Time</u>	<u>Content</u>	<u>Instructor</u> <u>Notes</u>
2:00	Introduction to High-Rises and their Problems	
1:00	Building Construction and Systems	
2:00	Tour of High-Rise Structures	
2:00	Pre-planning	
2:00	Command Concepts and the High-Rise Incident	
1:00	EMS/Support Operations	
6:00	Practical Field Exercises	

Competency Evaluation Mechanism (Brief description-attach copy): Written examination (optional) and student evaluation by instructors during practical evolutions.

Course Objectives (specific): Upon successful completion of this program, the student shall be able to:

1. identify structures which are considered to be high-rise buildings.
2. list common complicating factors of high-rise buildings which require the modification of standard structural fire fighting strategy and tactics.
3. identify the common types of construction found in high-rise buildings.
4. list the impact of high-rise construction types on fire fighting operations.
5. identify common mechanical (HVAC) & fire detection/annunciation/suppression systems found in high-rise buildings; and their impact on high-rise fire fighting operations.
6. describe a command system capable of managing the resources necessary to safely and efficiently complete high-rise operations including command and staff positions specific to high-rise operations.
7. describe the impact of building specific pre-planning on high-rise operations; including the components of an adequate high-rise pre-plan.
8. describe the support operations necessary for a successful high-rise operation; including EMS and rehab operations.
9. working as a crew of three to five fire fighters, complete the following tactical evolutions:
 - a. connect to and advance both small (1-1/2" or 1-3/4") and large 2-1/2") interior hoselines from standpipes.

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Course Objectives (specific): continued

- b. support existing standpipe and/or sprinkler systems with fire department pumping apparatus.
- c. develop an alternate water delivery system from fire department pumping apparatus to supplement inadequate, failed or absent standpipe systems.
- d. conduct a large area search.
- e. provide adequate stair tower pressurization using existing building systems.
- f. Provide adequate stair tower pressurization using positive pressure ventilation.
- g. correctly utilize fire service elevators during high-rise operations.
- h. establish an effective incident command system to manage the resources of a high-rise operation.

* Dependent on available facilities

**Questions/Comments: Rita Wessel, Curriculum Specialist: Extension 106
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