



## National Fire Protection Association

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### *Meeting Minutes*

## **High Rise Building Safety Advisory Committee**

June 29-30, 2010 Meeting

Arup

560 Mission Street, Suite 700  
San Francisco, CA 94105

- 1. Call to Order.** The meeting was called to order by Chair Jim Quiter at 8:30 a.m. PST on Tuesday, June 29, 2010 at Arup offices, San Francisco, CA.
- 2. Introduction of Attendees.** The following committee members were in attendance:

<b>NAME</b>	<b>COMPANY</b>
James R. Quiter, Chair	Arup Rep. Safety to Life Correlating Committee
Geoff Craighead, Principal	Universal Protection Service
Jon D. Magnusson, Principal	Magnusson Klemencic Associates Rep. National Council of Structural Engineers Associations (NCSEA).
John P. Miller, Principal	Los Angeles City Fire Department Rep. International Assoc. of Fire Fighters
Jack J. Murphy, Principal	Fire Safety Directors Assoc. of Greater NY Rep. Fire Safety Directors Assoc. of Greater New York
Jake Pauls, Principal	Jake Pauls Consulting Services in Building Use and Safety Rep. American Public Health Association
William A. Stewart, Principal	Toronto Fire Services Rep. Metropolitan Fire Chiefs-IAFC
Kristin Collette, Staff Liaison	National Fire Protection Association

The following committee members were not in attendance:

NAME	COMPANY
Steven M Nilles, Principal	Goettsch Partners Rep. Council on Tall Buildings & Urban Habitat
Robert Pratt, Principal	Tishman Speyer Properties
Sally Regenhard, Principal	The Skyscraper Safety Campaign
Charles R. Jennings, Alternate	John Jay College of Criminal Justice Rep. The Skyscraper Safety Campaign

The following guests were in attendance:

NAME	COMPANY
Vickie Sakamoto	CAL Fire Office of the State Fire Marshal
Ronny J. Coleman	Fireforce One
Joshua Elvove	USGSA
Barbara Schulthers	SF Fire Department
Doug Fowler	Austin Fire
Carl Wren	Austin Fire Dept.

3. **Review of Agenda.** Chair Quiter reviewed the agenda with one modification. The committee will address agenda item 13 as the last item for the meeting.
4. **Approval of Minutes.** The July 17-18, 2007 meeting minutes were approved with one modification. Jake Pauls name was corrected in item #10 of the minutes.
5. **NFPA 1, NFPA 101 and NFPA 5000 proposals relating to high rise buildings for the review and/or action by HRBSAC.** Ms. Collette reviewed the proposals relevant to high rise buildings from NFPA 1, 101 and 5000. The committee reviewed these proposals and created comments where necessary. The comments developed at the meeting will be balloted by the committee and submitted to the appropriate Technical Committees in the name of the HRB-SAC committee.
6. **Status of Evacuation Planning Concepts Guide.** Jack Murphy distributed a copy of the current version of the Evacuation Planning Concepts Guide to the committee. Any immediate comments on the draft should be sent to Mr. Murphy as soon as possible. Jack and his task group consisting of John Miller, and William Stewart will circulate an updated draft to the committee by August 31<sup>st</sup>. The committee will then comment on that draft by September 30 and have another updated draft and perhaps final copy made available by November 30<sup>th</sup> of 2010. Ms. Collette will be speaking with various parties at NFPA to determine the best options for publishing and distributing the final EAP document. Options discussed by the committee were a downloadable document on NFPA's website or a published NFPA guide. Ms. Collette will distribute the current draft to the committee in electronic form and facilitate processing of the document. **See minutes Attachment A.**

1. **Discussion of TVCC Fire.** NFPA had not yet received a report of this fire. No additional updates were available.
2. **SFPE High Rise Building Design Guide.** Chair Quiter informed the committee that a task group has been formed by SFPE to develop a High Rise Building Design Guide. The projected completion date for this guide is 2012. The task group is currently working on chapter outlines and will be developing language for the guide by the end of 2010.
3. **San Francisco Fire Fighter Elevator Provisions.** Barbara Schultheis of the San Francisco Fire Department distributed a copy of San Francisco's local requirements for elevators for firefighter use and discussed with the committee the development and application of these requirements in the city of San Francisco. **See minutes Attachment B.**
4. **Discussion of Austin, TX IRS Building Fire.** Doug Fowler and Carl Wren of the Austin Fire Department gave a presentation to the committee on the Austin IRS Building Fire. This presentation provided details on the building characteristics, fire department and emergency personnel response, a timeline of the event, and many photographs of the fire investigation and results of the fire.
5. **CTBUH update/crossover with HRBSAC activities.** Robert Solomon provided the committee with an update on the work of the Council on Tall Buildings and Urban habitat (CTBUH). This included a summary of the work of the Fire Safety Working Group for which Mr. Solomon is a member of as well as an update from the last council meeting. There are currently no actions items for the HRB-SAC committee related to the CTBUH work. **See minutes Attachment C.**
6. **ASME Symposium on Elevator Emergency Use By Occupants and Fire Fighters.** The committee was provided with a summary of the upcoming Symposium on Elevator Emergency Use By Occupants and Fire Fighters to be held in Orlando, Florida in December of 2010. The ASME task groups on elevators will be presenting all of the work done since their inception in 2004. **See minutes Attachment D.**
7. **Future of HRBSAC.** Collaboratively, members discussed the future of the committee now that the initial tasks of the group have been completed. The committee unanimously agreed that there is value in continuing the committee's work. It was decided the committee would meet twice per year. A planning conference call will be held at the beginning of each year to establish action items for the committee. An in person meeting will be held each year in the summer/fall to complete those action items and additional work of the committee.
8. **Other Business.** Jake Pauls gave a short presentation on the status of the field of human behavior in fire.
9. **Adjournment.** The meeting was adjourned at 1:00 pm PST on Wednesday, June 30 by Chair Jim Quiter.

**Meeting Minutes prepared by:**

A handwritten signature in black ink, reading "Kristin Collette". The signature is written in a cursive, flowing style with a large initial 'K' and 'C'.

**Kristin Collette, NFPA Staff Liaison**

**ATTACHMENT A**

**STATUS OF EVACUATION  
PLANNING CONCEPT GUIDE**

**JUNE 29-30, 2010 MEETING  
MINUTES  
HIGH RISE BUILDING SAFETY  
ADVISORY COMMITTEE**

HRB-SAC

**DRAFT V-3 / June 21, 2010**

**High-Rise Office Building / All-Hazard (Non-Fire) Emergency Action Plan**

### **Chapter 1 Administration**

**1.1 Scope.** This document provides minimum criteria for developing an all-hazard (non-fire) emergency action plan for use by personnel responding to emergencies.

**1.1.1** The authority having jurisdiction shall determine the location of the all-hazard (non-fire) emergency action plan, data to be collected, and extent of documentation appropriate for the jurisdiction.

**1.2 Purpose.** The purpose of this document shall be to develop an all-hazard (non-fire) emergency action plans to assist responding personnel in effectively managing all-hazard (non-fire) emergencies for the protection of occupants, responding personnel, property and the environment.

### **1.3 Adoption requirements.**

**1.3.1\*** When this standard is adopted by a jurisdiction, the authority having jurisdiction shall set a date or dates for achieving compliance with the requirements of this standard.

**1.3.2\*** The authority having jurisdiction shall be permitted to establish a phase-in schedule for compliance with specific requirements of this standard.

**1.3.3** Not every portion of this document may be applicable to the development of an all-hazard (non-fire) emergency action plan. It is up to the authority having jurisdiction to apply the appropriate recommended procedures in this standard to the development a pre-incident plan.

### **Chapter 2 Referenced Publications**

**2.1 General.** The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

#### **2.2 NFPA Publications. (Reserved)**

National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101. NFPA 1, *Standard for Fire Code*, xxxx edition.

National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101. NFPA 101, *Life Safety Code*, xxxx edition.

National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101. NFPA 1620, *Standard for Pre-Incident Planning*, 2009 edition.

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National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101. NFPA 5000, *Building Code* **xxxx** Edition

### **2.3 Other Publications. (Reserved)**

### **Chapter 3 Definitions**

**3.1 General.** The definitions contained in this chapter apply to the terms used in this standard. Where terms are not included, common usage of the terms applies.

### **3.2 NFPA Official Definitions.**

**3.2.1\* Approved.** Acceptable to the authority having jurisdiction.

**3.2.2\* Authority Having Jurisdiction (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

**3.2.3 Shall.** Indicates a mandatory requirement.

**3.2.4 Should.** Indicates a recommendation or that which is advised but not required.

**3.2.5 Standard.** A document, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Non-mandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

### **3.3 General Definitions.**

**Assembly area.** A designated outdoor area to which building occupants are directed to report upon implementation of a total or partial evacuation in accordance with an all-hazard (non-fire) emergency action plan.

### **Business hours**

**Building occupants.** All persons in the building, including employees, building personnel and visitors.

**Critical operations staff.** Building personnel or other building occupants designated to remain after the emergency action plan is implemented to perform or shut down critical operations, or perform essential services, before they shelter in place, relocate in building or evacuate.

**Deputy fire safety/EAP director.** One (1) or more employees designated by the owner as qualified and trained to perform the duties of such position in accordance with the requirements of **chapter xxx and** who possesses the requisite qualifications and training, as set forth in **chapter xxx**

**EAP.** Emergency action plan.

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**EAP staff.** The individuals identified in an emergency action plan as responsible for the implementation of such plan, including but not limited to the fire safety/EAP director, deputy fire safety/EAP director, EAP wardens, deputy EAP wardens, EAP searchers, members of the **EAP emergency response team** and critical operation staff.

**Emergency.** An incident involving an explosion, a biological, chemical, radiological, nuclear or other chemical incident or release, natural disaster, or the threat thereof, or a declaration of emergency by a lawful authority, that requires implementation of a building's emergency action plan to help ensure the safety of the building occupants.

**Emergency Action Plan.** A plan of designated actions by employers, employees, and other building occupants that includes procedures for reporting a fire or other emergency; procedures for emergency evacuation, including types of evacuation and exit route assignments; procedures to be followed by employees who remain to operate critical pre-incident plant operations before they evacuate; procedures to account for all employees after evacuation; procedures to be followed by employees performing rescue or medical duties; and the name of job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan (OSHA 29 CFR 1910.38).

**Evacuation Capability.** The ability of occupants, residents, and staff as a group either to evacuate a building or to relocate from the point of occupancy to a point of safety.

**Fire safety/EAP director.** The employee designated by the owner to perform duties of such position in accordance with the requirements of this section and who possesses the requisite qualifications and training.

**In-building relocation.** The controlled movement of building occupants from a non-endangered area of a building to an in-building relocation area within the same building in response to a fire or an emergency.

**In-building relocation area.** A designated indoor area to which building occupants may be relocated in accordance with an all-hazard emergency action plan.

### **High-Rise Building**

**Material Safety Data Sheet (MSDS).** A form provided by manufacturers and compounders (blenders) of chemicals, containing information about chemical composition, physical and chemical properties, health and safety hazards, emergency response and waste disposal of the material.

**Neighboring buildings.** Buildings subject to the provisions of this section that are located on either side of a city street, up to a distance of 200 feet apart, unless separated by a barrier to movement, such as a restricted access roadway or railway.

**Owner.** The fee owner or lessee of the building, or other person or entity having charge thereof.



**Partial evacuation.** The emptying of a building of some but not all building occupants in response to an all-hazard emergency.

**Shelter-in-place.** The precaution of directing building occupants to remain inside the building, at their present location, in response to an all-hazard emergency.

**Sky Lobby.** An intermediate floor where people can change from an express elevator that only stops at the sky lobby to a local elevator which stops at every floor within a segment of the building.

**Sprinkler System.** For fire protection purposes, an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The installation includes one or more automatic water supplies. The portion of the sprinkler system aboveground is a network of specially sized or hydraulically designed piping installed in a building, structure, or area, generally overhead, and to which sprinklers are attached in a systematic pattern. The valve controlling each system riser includes a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

**Standpipe System.** An arrangement of piping, valves, hose connections, and allied equipment installed in a building or structure, with the hose connections located in such a manner that water can be discharged in streams or spray patterns through attached hose and nozzles, for the purpose of extinguishing a fire, thereby protecting a building or structure and its contents in addition to protecting the occupants. This is accomplished by means of connections to water supply systems or by means of pumps, tanks, and other equipment necessary to provide an adequate supply of water to the hose connections.

**Total Evacuation.** The emptying of a building of all building occupants in response to a fire or an emergency.

## **Chapter 4 Fire Safety/EAP Director**

### **4.1 FIRE SAFETY/EAP DIRECTOR TRAINING REQUIREMENTS**

Establish a thirty –two (32) hour training course of study for fire safety and all-hazard (non-fire) emergency training curriculum where the AHJ requires a Fire Safety/EAP Director to be on duty during normal business hours. The AHJ proposes to require a continuing education eight (8) hour course every three (3) years to ensure that the Fire Safety/EAP Director are familiar with the new, comprehensive building operation, maintenance requirements of the local building and fire codes.

At time of renewal of such FS/EAP Director certificate during the period a successful completion of a continuing education course that addresses issues as directed by the AHJ. Such course shall be conducted by an educator or a credited educational institution.

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## Chapter 5 Emergency Action Plan

This Chapter sets forth standards, requirements and procedures for the preparation, content, submission, acceptance and amendment of all-hazard (non-fire) emergency action plans; designation, qualifications and training of the building fire safety and emergency action plan staff, and their duties and responsibilities; education of building occupants, including the conduct of drills; recordkeeping; obligations of building occupants and employers of building occupants; and provision of assistance to building occupants with special needs.

### General Requirements

Applicability. This chapter applies to all Group-B high-rise office building occupancies as set forth in NFPA 5000 Building Code

### Preparation of all-hazard emergency action plans

An owner shall cause an emergency action plan to be prepared for such building, and periodically reviewed and amended. The emergency action plan shall be in the form set forth in Annex-xxxx and shall include a pre-incident planning building information card in the form set forth in Annex-xxxx.

An owner shall cause a fire safety/EAP director, and deputy fire safety/EAP directors, EAP building evacuation supervisors, EAP wardens, deputy EAP wardens, EAP brigade members, EAP searchers and critical operations staff, to be designated in the emergency action plan in accordance with chapter xxx with the authority, duties and responsibilities set forth therein.

An owner shall consult with the owners of neighboring buildings in connection with the preparation of the building's emergency action plan, with respect to the matters set forth in chapter xxxx

### Emergency action plan submission, acceptance, training and recordkeeping

- (A) An owner shall cause an emergency action plan to be submitted to the AHJ, and obtain acceptance from the AHJ, in accordance with chapter xxxx
- (B) An owner shall cause the emergency action plan and educational materials to be distributed, and EAP drills conducted, in accordance with chapter xxxx
- (C) An owner shall cause recordkeeping to be maintained in accordance with chapter xxxx
- (D) A paper copy of the emergency action plan, including floor plans, shall be maintained at the fire command center and shall be made available for inspection by the AHJ.

Compliance with an all-hazard (non-fire) emergency action plan. All building occupants and employers of building occupants shall comply with the directions of the fire safety/EAP director and EAP staff upon implementation of the emergency action plan, and otherwise fulfill their obligations in accordance with chapter xxxx.

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Authority to implement an all-hazard (non-fire) emergency action plan

- (A) The emergency action plan shall be immediately implemented and building occupants directed to totally evacuate, in-building relocate, partially evacuate or shelter-in-place, whenever such action is deemed necessary to ensure the safety of building occupants.
- (B) The ability of the fire safety/EAP director to implement the emergency action plan shall not be subordinated to the authority of any other person or impaired by any notification procedure established by the owner, in circumstances where, the fire safety/EAP director becomes aware of an emergency presenting an immediate danger to building occupants, and, in the absence of direction from lawful authorities, determines that delaying implementation of the emergency action plan to obtain direction from lawful authorities, the owner or the owner's designated representative would likely result in harm to building occupants. The fire safety/EAP director shall determine the safest and most efficient course of action consistent with the emergency action plan, depending on the nature of the emergency.

The authority of the fire safety/EAP director to implement the emergency action plan, as set forth in chapter xxxx, this section and in the plan itself, shall be assumed by a deputy fire safety/EAP director in the absence of the fire safety/EAP director.

Compliance with orders of the AHJ

- (A) The owner, fire safety/EAP director and all other EAP staff and building occupants shall comply with the orders of the AHJ or emergency response personnel should such incident commander or emergency response personnel be present at the building.
- (B) In the absence of any direction from an emergency response agency, incident commander or emergency response personnel, the owner, fire safety/EAP director and all other EAP staff and building occupants shall comply with the official announcements or directions of the local AHJ.

Official notifications of emergency and implementation of emergency action plan. The fire safety/EAP director shall immediately report any emergency to 911 and notify the 911 operator that they are implementing the emergency action plan. The fire safety/EAP director may report to 911 any condition that is being investigated as a possible emergency.

Communications with building occupants

(A) The fire safety/EAP director shall be responsible for communicating information and directions to building occupants whenever the emergency action plan is implemented, including during an EAP drill.

(B) Implementation of the EAP or the conduct of an EAP drill shall be communicated to building occupants by the sounding of an alarm or alert tone followed by an announcement. The announcement shall include the following information.

(1) whether the announcement is being made in connection with an emergency condition or an EAP drill, and if in connection with an emergency:

(a) what has occurred?

(b) where it has occurred?

(c) what provisions of the emergency action plan will be implemented? and

(d) why it is necessary to implement this provision of the emergency action plan?

The announcement shall be repeated or updated on a frequent basis, to inform and reassure building occupants.

EAP staff training. The EAP staff training required by [chapter xxxx](#) shall be in the form of live instruction, but may be supplemented by video presentations, [table-top exercises](#) and/or distribution of other educational materials. Training may be conducted in the form of computerized training, without live instruction, provided that such computerized training is interactive, includes an evaluation of the EAP staff members' understanding of the training materials, and is not conducted in lieu of live instruction for more than one-half (½) of the required EAP staff training sessions per year.

EAP instructional drills. The EAP instructional drills required by [chapter xxxx](#) shall be in the form of live instruction, but may be supplemented by video presentations and/or distribution of other educational materials. Such instructional drills may be conducted in the form of computerized training, without live instruction, provided that such computerized training is interactive, includes an evaluation of the participants' understanding of the training materials, and is not conducted in lieu of live instruction for more than one-half (½) of the required FSP drills.

(d) Content of Emergency Action Plans. Each emergency action plan adopted pursuant to this section shall include the following provisions:

(1) Types of [All-Hazard \(non-fire\)](#) Emergency Responses

(A) The emergency action plan shall set forth the circumstances and procedures for the total evacuation, in-building relocation, partial evacuation and/or sheltering in place of the building occupants in response to an emergency.

(B) The emergency action plan shall address how such measures will be implemented during regular business hours, and at times other than business hours, when EAP staff may be absent from the building.

(2) Designation of EAP Staff. The emergency action plan shall designate:

(A) a fire safety/EAP director and a sufficient number of deputy fire safety/EAP directors to ensure that a deputy fire safety/EAP director is present to perform the duties of the fire safety/EAP director at all times that a fire safety/EAP director is required to be on duty, but is absent;

(B) at least one (1) EAP warden for each floor of the building. EAP wardens shall be on duty on each floor during business hours for such floor;

(C) at least one (1) deputy EAP warden for each employer of building occupants on a floor. If the floor area occupied by an employer of building occupants on a single floor exceeds 7,500 square feet, a deputy EAP warden shall be designated for each 7,500 square feet or portion thereof. At least the minimum required number of deputy EAP wardens shall be on duty on each floor during the regular business hours of such employer;

(D) at least one (1) male and one (1) female EAP searcher for each employer of building occupants on a floor. Such EAP searchers shall be on duty on each floor during the regular business hours of such employer;

(E) the members of a EAP **emergency response team**. The EAP **emergency response team** shall consist of the building manager, chief engineer and director of security (or, in their absence, qualified designees), and other building personnel, office employees or other building occupants designated to assist in the implementation of the emergency action plan, including persons assigned to assist building occupants that require assistance to participate in the plan. EAP **emergency response team** members shall be on duty during business hours. The fire safety/EAP director and deputy fire safety/EAP directors shall not be designated as EAP **emergency response team** members; and

(F) critical operations staff, who are to be exempted from participation in EAP drills and/or delayed in participating in the implementation of the emergency action plan, as set forth in the emergency action plan. Such staff shall be designated based on the critical nature of their duties, either to the operation of the building service equipment or other essential services. The emergency action plan shall identify each such individual and the essential service that the individual is required to perform even under emergency conditions. Employers of building occupants may request that the fire safety/EAP director designate certain office employees as critical operations staff. Such requests shall be granted only if the employer can demonstrate that the employee is performing a public safety function or essential service for the employer in which there is a compelling public interest in maintaining even in the event of an emergency. All requests and designations shall be documented in writing and made available for inspection by the AHJ representatives, upon request.

(G) Designation of fire command center. Except as otherwise provided in **chapter xxxx**, the emergency action plan shall designate the fire command center as the location from which the fire safety/EAP director shall coordinate implementation of the emergency action plan or conduct an

#### EAP drill.

(4) Communications with building occupants

(A) The emergency action plan shall designate the primary and alternative means by which the fire safety/EAP director will communicate information and directions to building occupants. Buildings equipped with a fire alarm system with voice

communication capability may utilize such fire alarm system for communications relating to the implementation of the emergency action plan or the conduct of EAP drills.

(B) The emergency action plan shall set forth procedures for announcing the implementation of the emergency action plan or the conduct of an EAP drill.

(5) Use of elevators and other building systems. The **all-hazard (non-fire)** emergency action plan shall specify whether and how elevators and other building systems will be used to implement such plan. Elevators may be used to implement the emergency action plan, subject to the following considerations:

(A) Floors or building occupants to be evacuated or relocated by elevators shall be designated in the emergency action plan.

(B) Elevators that are to be used for total evacuation, partial evacuation, shelter in place, or in-building relocation must be provided with two-way voice communication to the fire command center in accordance with the **NFPA 5000** Building Code requirements.

(C) Elevator uses shall be directed only when the fire safety/EAP director or deputy fire safety/EAP director has assessed the situation and determined that such use would be safe.

(D) Only designated elevators shall be used and only those elevators so designated shall remain in service. All other elevators shall be recalled to the lobby or their lowest floor of travel.

(E) Movement of elevators shall be controlled either by operation in manual mode by an EAP staff member or at the elevator control panel in the lobby, under the direct supervision of the fire safety/EAP director.

(F) Building occupants shall board elevators only on designated floors and disembark elevators at floors as directed by the fire safety/EAP director.

(6) Assistance to building occupants with **a physical disability**

(A) The emergency action plan shall establish procedures for identifying in advance building occupants who require assistance to participate in the emergency action plan because of an infirmity, disability or other special need, and procedures for providing such assistance. Assistance that may be required may include implementing procedures or modifying equipment to ensure receipt of announcements, designating areas for assistance, and designating persons to provide assistance.

(B) The owner shall make the procedure for requesting such assistance known to all building occupants and employers of building occupants.

(C) A **confidential** list of the building occupants who have requested such assistance, and their work location, shall be maintained at the fire command center, and made available to AHJ representatives upon request.

(D) The fire safety/EAP director, EAP wardens and, as appropriate, other EAP staff, shall periodically review the list of such building occupants on the floors or other areas of the building in which they perform their duties, so as to familiarize themselves with the building occupants requiring assistance to participate in the emergency action plan.

(E) Areas of refuge assistance for people with disabilities are to be coordinated with the AHJ for an emergency response

(7) Floor plans. The emergency action plan shall include, for each floor of the building (including any floors below grade), a current floor plan bearing the signature and seal of a registered design professional, containing the information required by chapter xxxx, marked to reflect exit routes, in-building relocation areas, and other information contained in the emergency action plan amenable to graphic representation. Such plans shall be submitted to the AHJ in a form and manner to be specified by the AHJ, as set forth in chapter xxxx

(8) Pre-Incident Planning - Building Information Card. A building information card, in the format set forth in chapter xxx and Annex- xxxx, shall be maintained at the fire command center, and made available to AHJ representatives upon request.

(9) EAP staff floor postings. Notices identifying the EAP staff shall be conspicuously posted on each floor, and kept at the fire command center, where they shall be made available for inspection by AHJ representatives. The format of such notices shall be as set forth in chapter xxx

(e) Specific Requirements For Sheltering-In-Place

(1) The sheltering-in-place provisions of the emergency action plan shall be based on an analysis of the circumstances in which such action would best ensure the safety of building occupants, and the manner in which it could best be implemented in the building.

(2) The emergency action plan shall set forth the actions that would be taken in the event of sheltering in place, including, but not necessarily limited to, those in regard to the following building components or systems:

(A) access to and egress from the building, including entrances, exits and stairwells;

(B) elevator operation;

(C) ventilation system operation, including air handling equipment, heating, ventilation and air conditioning equipment and smoke management systems;

(D) operable windows;

(E) interior doors, including fire doors;

(F) electrical, natural gas, steam, water and other utility operations; and

(G) fuel oil storage systems and associated pumps and piping.

(f) Specific Requirements For In-Building Relocations

(1) The in-building relocation provisions of the emergency action plan shall be based on an analysis of the circumstances in which such action would best ensure the safety of building occupants, and the manner in which it could best be implemented in the building.

(2) The emergency action plan shall:

(A) set forth the number of building occupants on each floor;

(B) designate the in-building relocation areas to which building occupants could be relocated in building, and, for each such in-building relocation area, identify:

(1) the type of area (such as an interior office, conference room, file room or mechanical room);

(2) the floor and its exact location thereon;

(3) the type of protection it offers;

(4) the estimated maximum number of building occupants each relocation area can accommodate; and

(5) whether it affords access to water, lavatories and/or other facilities, equipment or supplies, including any pre-positioned equipment or supplies.

(C) designate the route by which building occupants would be directed to in-building relocation areas if such areas are on a different floor, and identify the stairwells and (if applicable) elevators to be utilized; and

(D) set forth the actions that would be taken with respect to building components or systems in the event of an in-building relocation, including the building components and systems set forth in [chapter xxxx](#); and

(E) the procedures by which employers of building occupants will account for their employees after an in-building relocation is completed.

(g) Specific Requirements For [Total](#) Evacuations And [Partial](#) Evacuations

(1) The evacuation provisions of the emergency action plan shall be based on an analysis of the circumstances in which such action would best ensure the safety of building occupants

(2) The emergency action plan shall identify the safest and most efficient means of evacuating persons from the building or designated floors or areas thereof. Priority shall be given to building occupants on floors or other areas of the building most at risk of harm, and, in the designation of exit routes, to the avoidance of congestion.



(3) The emergency action plan shall:

- (A) set forth the number of building occupants on each floor, including an estimate of the number of visitors, if any, on a typical day;
- (B) identify the location of exits, stairwells and (if to be utilized) elevators, and their capacity; and
- (C) set forth the actions that would be taken with respect to building components or systems in the event of a total or partial evacuation, including the building components and systems set forth in chapter xxxx.

(4) The emergency action plan shall designate:

- (A) primary designated exit routes for the evacuation of each floor or other area of the building, and alternative exit routes in the event that the primary designated routes cannot be used;
- (B) whether building occupants will be directed to leave the area by any safe means (other than in circumstances that preclude such action, such as contamination), or directed to one (1) or more assembly areas that are:
  - (1) at a safe distance from the building (preferably a distance from the building not less than the height of the building);
  - (2) sufficient in number and size to accommodate the building occupants that will be assigned to report to such assembly area; and
  - (3) allow for the continuous movement of building occupants away from the building to their assembly areas;
- (C) the procedures by which employers of building occupants will account for their employees after a partial evacuation or evacuation is completed.

(h) EAP Staff Requirements

(1) Fire safety/EAP director.

- (A) Qualifications. The fire safety/EAP director shall be the person designated as the fire safety director in the fire safety and evacuation plan. The fire safety/EAP director shall hold a fire safety/EAP director certificate, shall have previously served as a firefighter, police officer or as a member with the Office of Emergency Management and otherwise possess the qualifications set forth in chapter xxxx

(B) Duties and responsibilities. The fire safety/EAP director shall:

(1) be present and on duty in the building during business hours;

(2) be fully familiar with the provisions of the emergency action plan;

(3) supervise and train the deputy EAP directors, EAP wardens, deputy EAP wardens, EAP searchers, EAP emergency response team members, critical operation staff and

other EAP staff, including conducting initial and periodic refresher training to maintain the state of readiness of such staff. Critical operations staff exempt from participating in EAP drills shall receive training in evacuation procedures and other matters addressed during the EAP drill, and such other information as an individual would need to know by reason of their delayed participation in any evacuation or other implementation of the emergency action plan;

(4) select qualified building personnel for the EAP emergency response team, organize, train and supervise the EAP brigade, and be responsible for the state of readiness of the EAP emergency response team, in accordance with chapter xxxx;

(5) be responsible for a daily check of the availability of EAP wardens and deputy EAP wardens, and make such notifications or temporary assignments as are necessary to ensure adequate EAP staffing;

(6) immediately report to 911 any emergency and any determination to implement the emergency action plan;

(7) in the event of an emergency in or affecting the building, report to the fire command center or designated alternative location, and, if appropriate, implement the emergency action plan in accordance with its terms and the provisions of this section, and notify arriving emergency response personnel and incident commander of the emergency and the building response thereto;

(8) be responsible for communicating all information and directions to building occupants in accordance with chapter xxxx and as may be required by the emergency action plan;

(9) conduct the EAP drills required by this section;

(10) approve the content of the emergency action plan educational materials and the EAP drills provided to building occupants pursuant to chapter xxxx

(11) ensure that the required notices are posted on the floors and that the required recordkeeping is maintained;

(12) review and approve the procedures established by employers of building occupants to account for building occupants after a total evacuation, in-building relocation, partial evacuation or sheltering-in-place; and

(13) with respect to the implementation of fire safety and evacuation plans and the conduct of fire evacuations and fire drills, comply with the requirements of NPFA 1 and the rules.

(2) Deputy fire safety/EAP director

(A) Qualifications. The deputy fire safety/EAP director shall hold a fire safety/EAP director certificate and otherwise possess the qualifications set forth in chapter xxxx. The deputy fire safety/EAP director shall receive training in the emergency action plan from the fire safety/EAP director in accordance with chapter xxxx

(B) Duties and responsibilities. The deputy fire safety/EAP director shall:

- (1) in the absence of the fire safety/EAP director, perform the duties of the fire safety/EAP director, as circumstances warrant, except that the fire safety/EAP director shall personally supervise all FSP staff training; and
- (2) in the presence of the fire safety/EAP director, assist the fire safety/EAP director in carrying out the requirements of the emergency action plan and this section, as circumstances warrant.

(4) EAP wardens

(A) Qualifications. The EAP warden shall receive training in the emergency action plan from the fire safety/EAP director in accordance with chapter xxxx

(B) Duties and responsibilities. The EAP warden shall:

- (1) be familiar with the emergency action plan, including total evacuation, in-building relocation, partial evacuation and sheltering-in-place evacuation procedures, the exit and in-building relocation routes to be utilized for the floor, the location of in-building relocation areas and assembly areas; and the means of communicating with the fire safety/EAP director;
- (2) in the event of an emergency on the floor or immediately affecting building occupants on the floor, notify the fire safety/EAP director and building occupants on the floor of the emergency, and initiate appropriate action;
- (3) in the event of an emergency not on the floor or not immediately affecting building occupants on the floor, establish communication with the fire safety/EAP director and, if possible, await direction from the fire safety/EAP director;
- (4) keep the fire safety/EAP director informed of his or her location and the progress of the implementation of emergency action plan measures;
- (5) confirm the in-building relocation or evacuation of the floor or portion thereof by directing deputy EAP wardens and/or other EAP staff designated as EAP searchers to search all areas of the floor to be relocated in building or evacuated; to do so by visual inspection, not merely by the lack of a voice response; and to notify any remaining building occupants that they must immediately comply with the applicable emergency action plan procedures;
- (6) determine whether the stairwells are safe to enter before directing building occupants to use them, and, if unsafe, notify the fire safety/EAP director, and to instruct building occupants not to use elevators unless and until the fire safety/EAP director authorizes their use; and
- (7) perform such other duties as set forth in the emergency action plan, or as directed to do so by the fire safety/EAP director.

Deputy EAP wardens

(A) Qualifications. The deputy EAP wardens shall receive training in the emergency action plan from the fire safety/EAP director in accordance with [chapter xxxx](#)

(B) Duties and responsibilities. The deputy EAP wardens shall:

(1) in the absence of the EAP warden, perform the duties of the EAP warden, as circumstances warrant; and

(2) in the presence of the EAP warden, assist the EAP warden in carrying out the requirements of the emergency action plan and this section, by searching all areas of the floor to be relocated in building or evacuated, and notifying any remaining building occupants that they must immediately comply with the applicable emergency action plan procedures, and by performing such other duties as assigned by the emergency action plan or directed by the EAP warden.

EAP emergency response team

Qualifications. All EAP [emergency response team](#) members shall receive training in the emergency action plan from the fire safety/EAP director in accordance with their duties and responsibilities.

(7) Critical Operations Staff

(A) Qualifications. All critical operations staff shall receive training in the emergency action plan from the fire safety/EAP director in accordance with [chapter xxxx](#). Such training shall be for the same duration and frequency as required for EAP brigade members pursuant to [chapter xxxx](#)

(B) Duties and responsibilities. Critical operations staff shall:

(1) perform their designated assignments, as set forth in the emergency action plan or as directed by the fire safety/EAP director; and

(2) in the event of an emergency, immediately report to their designated locations, as set forth in the emergency action plan or directed by the fire safety/EAP director, and undertake their designated assignments.

(8) EAP Searchers

(A) Qualifications. All EAP searchers shall receive training in the emergency action plan from the fire safety/EAP director in accordance with [chapter xxxx](#). Such training shall be for the same duration and frequency as required for EAP brigade members pursuant to [chapter xxxx](#)

(B) Duties and responsibilities. EAP searchers shall:

(1) in the absence of the deputy EAP warden, perform the duties of the deputy EAP deputy warden; and

- (2) in the presence of the EAP warden, assist the EAP warden in carrying out the requirements of the emergency action plan and this section, by searching all areas of the floor to be relocated in building or evacuated, notifying any remaining building occupants that they must immediately comply with the applicable emergency action plan procedures, and performing such other duties as assigned by the emergency action plan or directed by the EAP warden.
- (9) Identification. Upon implementation of the emergency action plan or during EAP drills, the fire safety/EAP director and all EAP staff shall identify themselves to building occupants and others by donning a vest, armband or other form of identification indicating their role.

(i) Consultation With Neighboring Buildings

- (1) Prior to filing an emergency action plan for a building, the owner shall consult with the owners of all neighboring buildings with respect to the terms of the proposed emergency action plan as it affects such neighboring buildings. Such consultations shall include but not be limited to designation of evacuation routes, assembly areas, and the coordination and notification of EAP drills involving evacuation of building occupants.
- (2) Such consultations, and any agreements reached as a result, shall be documented in written form, and shall be made available for inspection by Department representatives, upon request.
- (3) The owner of a building shall be deemed to have satisfied the requirements of this section notwithstanding the lack of cooperation on the part of the owners of neighboring buildings, if the owner makes reasonable efforts to engage in such consultations, and documents such efforts.

(j) Submission and Acceptance of Emergency Action Plan

(1) \_\_\_\_\_ Time for submission.

(A) An owner of a building for which a certificate of occupancy or temporary certificate of occupancy has been issued by the AHJ prior to **xxxxx**, or which is otherwise occupied before such date shall submit to the **AHJ** an emergency action plan for such building by **xxxxx**, for all buildings not in any of the preceding categories.

(B) An owner of a building constructed or occupied on or after **xxxxxx**, shall submit to the AHJ an emergency action plan for such building at the same time as the fire safety and evacuation plan required pursuant to chapter **xxxx** is submitted to the AHJ

- (2) AHJ review and acceptance. Emergency action plans shall be filed for AHJ review and acceptance in the accordance with the standards, requirements and procedures set forth in **Chapter xxxx**

(3) Plan review fee. Original emergency action plans filed for AHJ review and acceptance shall be accompanied by the plan review fee set forth [Annex xxxx](#). Applicants filing amended plans will be billed the plan review fee set forth in [Annex xxx](#).

(4) Time for implementation. Within 30 days from the date of AHJ acceptance of the emergency action plan, an owner shall have in place trained EAP staff and otherwise be capable of implementing the emergency action plan at the premises and otherwise complying with the requirements of this section.

(k) Periodic Review and Amendment. The owner shall cause a building's emergency action plan to be reviewed and amended in accordance with the standards, requirements and procedures set forth in [chapter xxxx](#).

(l) Emergency Action Plan Education and Drills

1) Distribution of emergency action plan. The owner shall provide a copy of the emergency action plan for the building, and any amended emergency action plan, to each employer of a building occupant within the time set forth for implementation of the emergency action plan set forth in [chapter xxx](#). The owner may delete from the emergency action plan distributed to such employers the floor plans, building information card or any other information that would compromise building security or personal safety. Thereafter, the owner shall provide a copy of the emergency action plan to each new employer prior to its employees occupying the building.

(2) Distribution of educational materials to building occupants. The owner shall provide to each employer of building occupants, for distribution to all building occupants, educational materials approved by the fire safety/EAP director explaining the emergency action plan.

(3) EAP drills

(A) The owner shall conduct EAP drills on a regular basis, during business hours, in accordance with this section, to familiarize all building occupants with the procedures for total evacuation, in-building relocation, partial evacuation and sheltering-in-place, and the reasons for implementing each type of action.

(B) Types, scope and frequency of EAP drills

(1) Types. EAP drills shall consist either of instruction or stairwell familiarization, as follows:

(a) Instructional drills. Such drills shall serve to familiarize building occupants with the requirements and procedures of the emergency action plan by means of informational sessions approved by the fire safety/EAP director. Such sessions shall address implementation of the emergency action plan both during regular business hours, and at other times, when EAP wardens and other EAP staff may be absent from the building. Such sessions may be conducted by any qualified person, at any appropriate

location, including but not limited to stairwell entrances or in-building relocation areas.

(b) Stairwell familiarization drills. Such drills shall serve to familiarize building occupants with the process of in-building relocation or building evacuation via building stairwells. A stairwell familiarization drill shall require building occupants, other than building occupants who request and are granted exemption Pursuant to **chapter xxxx**, to enter a building stairwell and be escorted down at least **five (5)** floors of stairs (or to ground level, if below the **seventh (7)** floor), during which time stairwell safety features and safe evacuation procedures shall be reviewed.

(2) Scope. EAP drills (involving instruction or stairwell familiarization) may be conducted by individual floor or groups of floors, or building-wide.

(3) Frequency. EAP drills shall be conducted on a regular basis, as follows:

(a) At least two (2) EAP drills shall be conducted within one (1) year of the date of AHJ acceptance of the building's initial emergency action plan, the first of which shall be conducted within six (6) months of such date of acceptance. At least one (1) of these initial EAP drills shall involve stairwell familiarization.

(b) Beginning one (1) year from the date of AHJ acceptance of the building's initial emergency action plan, an EAP drill shall be conducted on each floor or **a collective group of floors** of the building at least once a year. An EAP drill involving stairwell familiarization, and an EAP drill in which all floors participate simultaneously, shall be conducted at least once every three (3) years.

(4) Participation. All building occupants present on the affected floors at the time the EAP drill is conducted, including visitors, shall be required to participate in such drill.

(C) EAP drills shall be conducted separately from fire drills required for the building pursuant to **chapter xx xx**, and shall highlight the differences between the building's fire safety and evacuation plan and emergency action plan, and the appropriate actions to be taken by building occupants upon implementation of each plan.

(4) Total building evacuation drills

(A) Except as otherwise provided in this paragraph, total building evacuation drills, in which all building occupants evacuate the building, are not required. Any owner wishing to undertake a total building evacuation drill shall:

(1) notify the local AHJ not less than 72 hours in advance of any full building evacuation drill;

(2) notify the owners of neighboring buildings not less than 72 hours in advance of any full building evacuation drill. The owner of a neighboring building, upon receipt of such a notification, shall notify the occupants of such neighboring building of the drill, to prevent the evacuation from causing alarm; and

(B) The AHJ may direct a building to conduct a total building evacuation drill should it determine that there is a need to evaluate the adequacy of the building's emergency action plan or its compliance with the requirements of the plan or of this section.

(5) The obligations of owners of buildings and employers of building occupants pursuant to this subdivision shall be construed to apply to building occupants who are visitors in the building, except that visitors shall be required to participate in any EAP drill being conducted at the time of their visit.

(m) EAP Logbook

(1) An EAP logbook shall be maintained at the building's fire command center for purposes of recording all EAP related events, staffing and educational and training matters. The EAP logbook may be consolidated with the recordkeeping required pursuant to chapter xxxx with respect to fires and other incidents, implementation of the fire safety plan, conduct of fire drills, and training of FSP staff.

(2) The EAP logbooks shall be a bound journal with consecutively numbered pages, unless the AHJ has authorized or approved an alternative form of electronic recordkeeping.

(3) A record shall be maintained in the EAP logbook of all training provided to EAP staff and building occupants, including EAP drills.

(A) Entries for EAP-related events shall include:

(1) any implementation of the emergency action plan; and

(2) any emergency action plan-related notifications to the AHJ or other agencies.

(3) EAP staff changes, EAP on-site examinations, EAP amendments and EAP acceptance by the AHJ



(4) Availability of EAP staff members during business hours.

(B) Entries for EAP staff training sessions conducted shall include:

(1) the date of training session;

(2) the person(s) conducting the training session;

(3) the persons attending the training session; and

(4) the type of training session conducted (live or computerized instruction).

(C) Entries for EAP drills shall include:

(1) the date and time of drill;

(2) the person(s) conducting the drill;

(3) the date and time that required notifications (to AHJ and other agencies) were made, and persons receiving such notifications;

(4) the EAP staff members participating in the drill;

(5) the type of drill conducted (stairway familiarization, or instructional (live or computerized instruction));

(6) identification of the floors and the number of building occupants participating in drill;

(7) the emergency scenario simulated;

(8) **People with a disability** addressed;

(9) the problems encountered; and

(10) for a partial evacuation or evacuation, the weather conditions and time required to accomplish complete evacuation.

(D) The EAP logbook shall be kept at the premises for a period of five (5) years, and made available for inspection by AHJ representatives upon request

(n) Obligations of Building Occupants and Employers of Building Occupants

(1) Building occupants. All building occupants:

- (A) shall comply with the directions of the fire safety/EAP director and EAP staff upon an announcement that the emergency action plan has been implemented, including any shelter in place, in-building relocation, partial evacuation or evacuation directed by the fire safety/EAP director;
- (B) shall familiarize themselves with the requirements of the emergency action plan, and cooperate with and participate in EAP drills;
- (C) shall request an exemption from the fire safety/EAP director if participation in a EAP drill involving stairwell familiarization, in-building relocation, partial evacuation or evacuation would cause injury or serious hardship; and
- (D) are encouraged to identify themselves in accordance with the procedures of the emergency action plan if they would require assistance in the event of an in-building relocation, partial evacuation or evacuation.

(2) Employers of building occupants. All employers of building occupants shall:

- A) promptly distribute to building occupants who are their employees the educational materials regarding the emergency action plan provided to the employer by the owner;
- (B) comply with the requirements of the emergency action plan and R404-02(n)(1), and instruct their employees who are building occupants to do so;
- (C) assign or allow responsible employees to serve as EAP wardens, deputy EAP wardens and members of the EAP brigade, and require such employees to conscientiously perform their duties under the emergency action plan;
- (D) establish and maintain a system of assigning responsibility for accounting for employees present in the building so that an accounting can be made in the event of an in-building relocation, partial evacuation or evacuation; and
- (E) identify any of their employees performing a public safety function or essential service for the employer in which there is a compelling public interest in maintaining even in the event of an emergency and request that they be designated as critical operations staff for purposes of the emergency action plan.

## **Chapter 6 - Building Components or Systems**

Access to and egress from the building, including entrances, exits and stairwells.

Provide such information in [Annex xxxx](#), and make reference to such table in this section. Also, provide in this section any applicable information not included in such table.

Elevator operation. Provide such information in [Annex xxxx](#) and make reference to such table in this section. Also, include statements that all elevators will be recalled to their lobby level where they will be assessed by EAP staff for safe use; that only elevators provided with two-way voice communication to the fire command center in accordance with the Building Code requirements will be used; and that such elevators, if deemed necessary, will be operated only in manual mode by trained EAP staff. Identify specific elevator(s) (bank letters and car numbers) which will be used for such purpose.

[Make reference to the Building Information Card in Annex- xxxx](#)

Ventilation system operation. Make reference to [the Building Information Card in Annex- xxxx](#)

Operable windows. Include a statement regarding the securing of operable windows and provide 6 set of keys at the fire command center

Interior doors, including fire doors. Include a statement that the electro-magnetic door release mechanisms (if present) will be manually released to ensure all re-entry doors are unlocked.

Utility Systems (electrical, natural gas, steam, water and other utility operations. [Make reference to the Building Information Card in Annex- xxxx](#)

Fuel oil storage systems and associated pumps and piping. Provide such information and [Make reference to the Building Information Card in Annex- xxxx](#)

## **Chapter 7 Emergency Action Plan for Biological Incident**

### General Statement

Set forth below are the procedures that will be implemented during business hours in the event of a biological incident in or proximate to the building, or the threat thereof. Follow the instructions for a biological incident that are provided in the corresponding sections of this plan. Add any information and detail any changes necessary for planning a biological incident.

### **Evacuation Modes**

#### **Total and/or Partial Building**

##### General Procedures

##### Building Components (Refer to Chapter 6)

##### Specific Evacuation Requirements

- Location of exits, stairwells and elevators.
- Primary and alternate exit routes.
- Assembly areas.
- Procedures for accounting for building occupants after completing an evacuation.

#### **In-Building Relocation**

##### General Procedures

##### Building Components (Refer to Chapter 6)

##### Specific In-Building Relocation Requirements

- Designated in-building relocation areas
- Designated routes by which building occupants would be directed to in-building relocation areas.
- Procedures for accounting for building occupants after completing in-building relocation.

#### **Shelter-in-Place**

##### General Procedures: Occupants

##### Building Components (Refer to Chapter 6)

## **Chapter 8 Emergency Action Plan for Chemical Incident**

### **Evacuation Modes**

**Total Building**  
**In-Building Relocation**  
**Partial Building**  
**Shelter-in-Place**

## **Chapter 9 Emergency Action Plan for Explosions**

### **Evacuation Modes**

**Total Building**  
**In-Building Relocation**  
**Partial Building**  
**Shelter-in-Place**

## **Chapter 10 Emergency Action Plan for Natural Disaster**

### **Evacuation Modes**

**Total Building**  
**In-Building Relocation**  
**Partial Building**  
**Shelter-in-Place**

## **Chapter 11 Emergency Action Plan for Nuclear Incident**

### **Evacuation Modes**

**Total Building**  
**In-Building Relocation**  
**Partial Building**  
**Shelter-in-Place**

Address: 236 Overlook Avenue	
AKA Name: Metropolitan Building	
Primary entrance / Side-A	
Secondary entrance / Side-D	
<b>Type of Occupancy:</b>	Multi-Occupancy Residential Business

**FIREGROUND** (Exposures: If a building give height, construction & type of occupancy - A=attached / S=separate+ distance)

Side-A (street) 236 Overlook Avenue		Side-C (rear) City Park	
Side-B (left) 4-story / non-combustible / attached		Side-D (right) 2 ½ -story / wood frame / detached 15 feet	
No of stories: 4	Bldg. const. type:		
Length: 100 feet	Width: 50 feet	=	1650 GPM per division

### WATER SUPPLY / Urban/Suburban Area

Fire hydrant locations: Primary:	295 Bloomfield St.	Size of main: 12
Secondary:	500 2 <sup>nd</sup> St.	Size of main: 8

### BUILDING FIRE PROTECTION SYSTEMS

<b>FDC connection:</b>	Combination SPKR. / STDP. ( C )		
FDC location(s):	Side-A	Fire pump:	Side-A 500 GPM

<b>Sprinkler System:</b>	Wet	Full building		
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<b>Standpipe (STDP) &amp; Hose System</b>	<b>Class III</b>		
Standpipe Riser & Hose Connections:	Stair-A		Stair-B
STDP. Riser Isolation Valves:	Stair-A	Div. # Basement	Stair-B Div. # Basement

<b>Chemical Extinguishing Systems:</b>	Wet Chemical	Division # 1	Side-D	
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<b>Fire Alarm System Main Panel Location:</b>	Division # Basement	Side-C	
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<b>Fire Wall(s):</b>	N/A	<b>Fire Partition(s):</b>	Division # 1	Side B
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### LIFE SAFETY

<b>Occupancy Load:</b>	Low		
<b>Stair(s):</b>	Enclosed	Side-B	Roof access off Stair-B
		Side-D	Basement access off Stair-A
<b>Person(s) with Disability Location:</b>	N/A		

SAMPLE - AHJ PRE-INCIDENT PLAN / BUILDING INFORMATION CARD Page 2  
236 Overlook Ave.

### BUILDING DATA

Key box location	Side-A		
<b>Roofing Structural Members:</b>	Truss: Metal (lightweight)		
Concrete: pre-cast			
Cockloft access:	Side-B		
Roof Vent(s):	Side-A & C		
<b>Flooring Structural Members:</b>	Truss: Metal (lightweight)		
<b>Floor Decking:</b>	Concrete: pre-cast		
<b>Basement:</b>	Basement Access:	Interior: Side-B	
Crawl Space: N/A			
<b>Elevator Banks</b>			
Elevator No.	1	2	

Floors Served	1-5	B-5				
Elevator Mach Rm. Floors	Roof	Roof				
<b>Heating System:</b>	Gas					
<b>Emergency Shut-Off</b>	Roof level	Side-C				
<b>HVAC Controls:</b>	Division # each floor	Side				
Mechanical Equipment Rm. (MER)	Each floor	Side A				
<b>Utility Main Shut-Offs:</b>						
ELECTRIC	Division # Basement	Side-C	NATURAL GAS	Division # Basement	Side-A	
WATER	Division # Basement	Side-A				

### HAZMAT

MSDSs location	Level 'C' (low)			
Right To Know facility:	yes			
Hazmat locations:	Interior	Division # Basement	Side-D	

### EMERGENCY CONTACT INFORMATION

Emergency Contact Person(s)	Business Telephone	Mobile Telephone
Property Manager/Supervisor (name)	1-988-123-7890	1-888-746-1924
Chief Engineer (name)	1-988-123-0345	1-888-434-8043
Safety/Security Director (name)	1-988-123-4567	1-888-165-3016

Date: 0606/08 Company # 14 / Officer: Capt. Neal Murphy Battalion No: 3

### Annex XXX Building Profile Card

Develop a Building Profile Card in vertical columns for the following building components: floor numbers, stair risers (indicate which stair has a standpipe riser), elevator banks, HVAC system and zone coverage, occupant load per floor, person with a disability indicate floor, floor evacuation checklist.

### D.1 (a) Blank pre-incident plan/building information card

### PRE-INCIDENT PLAN / BUILDING INFORMATION CARD Detailed Information

**No. of stories:** A whole number represents the number of stories with a flat roof, a whole number plus a half (½) number indicates the number of stories with a sloping/pitch roof. If all four sides of the building do not have the same equal number of stories indicate the sides of the building that have different division levels (I.e. side-A (3) / side-C (4)).





FLOOR NO.

**FIRE SAFETY AND EAP WARDEN**

Name \_\_\_\_\_

Phone Number **DEPUTY FIRE SAFETY**

**AND EAP WARDENS**

\_\_\_\_\_  
Name

Phone

\_\_\_\_\_  
Name

Phone

Name

Phone

Name

Phone

**FIRE SAFETY AND EAP SEARCHERS**

MALE

FEMALE

\_\_\_\_\_  
Any \_\_\_\_\_ person \_\_\_\_\_ discovering fire,  
smoke or other emergency conditions should without delay cause the transmission of a fire alarm by  
calling 911 or activating a fire alarm box. Notify the Fire Safety/EAP Director or Fire Safety Warden that  
an alarm has been transmitted.

In the event that it becomes necessary to implement the building's Fire Safety and Evacuation Plan or  
the Emergency Action Plan, listen for and follow the directions given by the Fire Safety/EAP  
Director/staff and emergency response personnel. Elevators should never be used in a fire. In all other  
emergencies, use the elevators only if and when directed to do so by the Fire Safety Director/staff or  
emergency response personnel.

If the Fire Safety Warden and EAP Wardens; Deputy Fire Safety Warden and Deputy EAP Wardens; and  
Fire Safety Searchers and EAP Searchers are different individuals, provide the names of all such individuals  
in the chart and indicate the plan for which such individual is designated.

Date

prepared: \_\_\_\_\_

**ATTACHMENT B**

**ELEVATORS FOR FIREFIGHTER  
USE**

**JUNE 29-30, 2010 MEETING  
MINUTES**

**HIGH RISE BUILDING SAFETY  
ADVISORY COMMITTEE**

## 5.08 Elevators for Firefighter Use (effective 10/9/08)

TEXT      FONT SIZE

Reference: 2007 SFFC, Section 511.1

1. **Purpose.** The purpose of this bulletin is to provide for safeguards and fire safety features in high rise buildings such that the fire department has a more efficient means than stairs, safer means than Phase II elevators, for reaching and fighting fires on upper floors.
2. **Scope.** This bulletin applies to all new high-rise buildings more than 200 feet in height as defined by the California Building Code. For those buildings covered by the scope of this document, Firefighter Elevators designed for firefighter use during fire emergencies are required to be provided in accordance with paragraphs 2 through 6 of this bulletin.
  - Exception:** New buildings with multiple bank elevators that serve no more than 20 consecutive floors each, whereby firefighters may ascend the building in 20 floor intervals separated hoistways.
3. **Firefighter Elevators, Number and Capacity.** Where required, a minimum of one 4500 lb. capacity elevator or two 2500 lb. capacity elevators shall be provided for use as Firefighter Elevators but are not intended to be for exclusive use of the fire department. Each Firefighter Elevator shall serve every floor of the building, or shall be arranged every floor of the building may be reached by a series of simple transfers to adjacent banked elevators that are protected under these guidelines.
4. **Protection from fire, smoke and water.** Firefighter Elevators shall be designed so that they are protected from the effects of fire, smoke, or water. This will be accomplished through an approved performance-based design. All features under this section shall have a minimum duration of eight hours. The design may include, but is not limited to, the following:
  - Pressurization of the firefighter elevator shaft, its associated machine room, and associated enclosed lobbies as one zone. Normally, such zones are pressurized to 0.05 inch water column relative to adjacent zones such that smoke from a fire in an adjacent zone is restricted from flowing into the pressurized zone.
  - Sloping floors or floors of varying levels with strategically placed drainage. At a minimum, the drainage shall accommodate the calculated flow of the automatic fire sprinkler the remote design area or 100 gpm, whichever is greater. This design shall not violate accessibility requirements in regard to level landing or threshold height requirements. The required drainage is not intended to accommodate water from sprinklers flowing within the elevator lobby.
  - Provisions for keeping elevator equipment at the appropriate temperature to sustain operation for the length of time the building generator is designed to operate (8 hours minimum). This may require a careful review of the equipment, its operating temperatures, the HVAC system and standby power systems.
  - A means for firefighters to monitor fire conditions in elevator lobbies and machine rooms, such as smoke detection and analog heat detection announced at the fire control room. This is intended to provide fire fighters with more information to determine whether Firefighter Elevator protection has been compromised.
5. **Prescriptive requirements.** The design shall include the following prescriptive requirements:
  - All firefighter elevators shall be capable of operating on standby power simultaneously.
  - Elevator hoistway, lobby, and machine room pressurization mechanical components used to protect the fire fighter elevators shall be protected similarly to smoke control requirements as described in Section 909 of the California Building Code and shall be included in UTKL weekly self-testing of smoke control components. This system shall be illustrated and controllable at the firefighter's smoke control panel.
  - Elevator lobbies and shafts serving Firefighter Elevators shall be 2 hour fire barrier construction. The firefighter elevator lobby shall have an access door directly into the

- pressurized stair enclosure. Other openings in the elevator lobby walls shall be limited to those necessary to serve or access the space.
- Equipment located on the top of the elevator car and in the shaft shall be provided with sheetmetal covers as added protection from the effects of water falling into the shaft.
  - The elevator and its installation shall conform to the following sections of the American National Standards Institute ASME A17.1, 2004 edition, as well as the currently adopted California Elevator Code: Sections 2.27.3.2.6 Visual Signal, 2.27.7 Operating Procedures, and 8.4.10 Operation of Elevators Under Earthquake Emergency Conditions.
  - The elevator shall be capable of operating at a  go slow  speed after the seismic switch has been tripped, provided the counterweight displacement switch has not activated. The elevators shall be capable of this operation when placed in Phase II operation under the above conditions.
  - Power transfer switches for rescue elevators and their shaft pressurization fans shall be located as close as practicable to the motors and controls they supply. The normal power feeders and the stand-by feeders supplying the transfer switches shall be by independent routes, and shall comply with the San Francisco Electrical Code.
  - The entire hoistway shall be illuminated at not less than 1 foot-candle at each hoistway entrance when firefighters' emergency operation is active. This lighting shall be provided with standby power.
  - The layout of the central control station shall be such that the fire alarm annunciator panel and the elevator panel may be monitored while talking on the handset of the two-way communication system.
  - The central control station shall be located in an approved location proximate to the Firefighter Elevators. The approved location must be close to an entryway where Fire Department vehicle access is provided. The preferred location is near the main entrance.
  - Designated Firefighter Elevators shall be identified with the symbol for fire department access as defined by NFPA 170, Section 6.2.7. The symbol shall not be less than 3 inches in size, and shall be permanently attached to each side of the hoistway door frame on the portion of the frame at right angles to the elevator lobby. Each symbol shall be less than 78 inches, and not more than 84 inches above the floor level at the threshold.
  - Automatic fire sprinklers shall not be installed in elevator machine rooms, associated machinery spaces or the top of their associated hoistways. The storage of combustible materials in elevator machine rooms is prohibited. The San Francisco Fire Department will consider this building to meet the sprinkler requirements of the California Building Code for high-rise buildings if all other areas are sprinklered in accordance with the NFPA 13 standard.
- 6. Hoistway Venting.** Firefighter Elevator hoistways that comply with this bulletin are not required to comply with the requirements of Section 3004  Hoistway Venting.
- 7. Submittal Requirements.** All designs shall be described in narrative form either in the smoke control report or in a separate report at the site permit stage of the project. Such reports shall include a description of the proposed strategy and will include justification for the performance criteria. The report shall be written by either a design professional or a registered professional engineer who is licensed in the State of California. This individual shall take responsibility for describing the safety features of the building that will protect the elevator under this requirement.

Contact SFGov

Accessibility

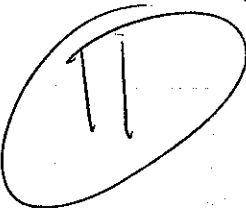
Policies

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**ATTACHMENT C**

**CTBUH UPDATE**

**JUNE 29-30, 2010 MEETING  
MINUTES  
HIGH RISE BUILDING SAFETY  
ADVISORY COMMITTEE**



CTBUH - Fire Safety Working Group  
Dan O'Connor & Jose L. Torero

**Fire Safety Working Group Overview**

The Fire Safety Working Group has a unique mix of members that included those from academia, structural engineers, practicing architects, fire engineers and code applications practitioners. The Co-Chairs believe this cross-mixing of practice areas will bring a diversity of thought and development of best practice ideas forward in the development of several new documents useful for designers in the tall building design community. The following is the current Committee membership.

**Existing Members**

Dan O'Connor, Co-Chair	Schirmer Engineering
Jose Torero, Co-Chair	The University of Edinburgh
Adam Bittern	Astute Fire
Wayne Bretherton	WSP Group
Steve Burchesky	U.S. Life Safety
Neal Butterworth	Buro Happold
Kim Clawson	Goettsch Partners
Matthew Davy	Schirmer Engineering
Russell Gilchrist	Skidmore Owings & Merrill
Josh Greene	RJA Group
Ray Grill	Arup
Jeff Harper	RJA Group
Simon Lay	WSP Building
Tom Long	Exponent
Kevin Morin	Code Consultants, Inc
Leo Rzdolsky	LR Structural Engineering, Inc.
David Scott,	Arup
Robert Solmon	National Fire Protection Association
Igor Tartakovsky	CB Engineers
Nate Witasek	Arup
Steven D. Wolin	Code Consultants, Inc.
Neil P. Wu	Exponent
<b>NEW MEMBER ADDITIONS</b>	
Brad Greinzer	JBA consulting Engineers
Craig English	Hoare Lea
Charlie Carter	American Institute of Steel Construction

In the last 12 months a revitalized Fire Safety Working group has met twice in Chicago. The working group has an extended composition and has taken the task of establishing a series of Guidelines for the Design of Tall Buildings for adequate behavior in Fire.

In its first meeting the fire safety working group decided that the first step towards the production of such a guideline was the review of the available literature in the area of structural fire resistance. A review of more than 2000 publications was conducted and a summary was presented at the second meeting. An archive is being prepared of all this documentation to make it available to the CTBUH.

### Fire Safety Working Group Planned Projects

Two basic projects were collectively agreed upon as the initial focus of efforts for the Fire Safety Working Group. Two subgroups have been formed that are working towards developing best practice documents in the following two subject areas:

- **Structural Subgroup** – this subgroup is being led by Jose Torero and will be addressing structural behavior in fires. Key topics will be fire loading and resulting fire threat exposure, framing systems, joints and connections and geometrical considerations, such as may occur in atrium buildings. Initially, the group agreed to be working to compile literature sources key to the topics and issues discussed. The Structural Subgroup did identify a need for additional participation on the Structural Subgroup. Structural engineers practicing tall building design are invited to submit their interest and qualifications to participate in this effort.

Following a presentation at the Second meeting of the FSWG it was agreed by the Working Group that two tasks could be undertaken:

- The first was to produce a review of structural behavior in fire that enabled to establish groups of buildings whose structural characteristics allowed them to be designed with simple prescriptive methodologies, those who require some further detailing and those who required a detailed structural review – this task is in progress.
  - It was identified that currently there is no adequate methodology or validation data to establish the “fire load” on modern tall buildings. This is an unavoidable first step in the design of tall buildings for fire, thus it was agreed that the Working Group was to produce a proposal to a government funding agency to conduct the required research. This research was to be reported as a CTBUH Guideline – The proposal has been developed and circulated among members of the working group. The proposal includes a summary of the literature that in itself provides a clear statement of the state of the art. The proposal is to be submitted before the next meeting. Jose Toreo has sought support for funding for further research work in this area, but the economic downturn has negatively impact the ability to obtain financial support at this time.
- **Emergency Egress Subgroup (egress)** – this subgroup will be led by Kim Clawson and supported by Dan O’Connor and will be developing a best practice document to address a wide variety of approaches and elements that may factor into an emergency egress methodology for any given tall building. Preliminarily, the Subgroup has listed elevators, refuge areas, stair size and number, evacuation strategies, evacuation training, and emergency preparedness plans as items to be addressed. A significant topic to be address is the use of elevators and refuge areas.

One topic area of interest and concern for several members of the FSWG has been the concerns for the use of helipads on tall buildings. Generally, the concerns are that helipads should not be used and that significant dangers involved in requiring and relying on helicopter rescue from the top of buildings. The topic are of helipads is one that will be addressed by the FSWG in the form of an article or special publication of the CTBUH. Dan O’Connor has initiated a literature search for document on historical incidents involving helicopters and tall buildings.

- **Emergency Egress Subgroup (smoke protected stairs and refuge areas)** – this subgroup area of interest will address concepts and principles related to the mechanical approaches to pressurizing stairs, elevator shaft, and associated refuge areas in tall buildings. Brian Hadfield has provided an initial outline of specific topic areas to be addressed for this task. The planned outcome is the development of a CTBUH guide on this subject.

#### **Fire Safety Working Group - plans for the group during 2010-2011**

The Co-chairs plan to convene a third meeting of the FSWG during the mid to late summer months of 2010 and a fourth meeting late 2010 or the first quarter of 2011.

#### **Fire Safety Working Group Expected Outputs**

Potential Articles for CTBUH magazine (Titles are tentative and will likely be revised)

- What we do and don't know about structural fires in tall buildings
- Tall buildings and issues of helicopters and helipads

Potential Guides (Titles are tentative and will likely be revised)

- Egress Concepts and Methods for Tall Buildings
- Guide for the Pressurization/Ventilation Design of Stairs, Elevators and Refuge Areas
- Guide on Structural Fire Considerations

#### **Fire Safety Working Group – strategy to get there**

The face-to-face meetings of the FSWG will continue. The Co-Chairs need to exert more effort on getting work product promised by several of the working group members. To date only a few of the members have delivered on their assignments.

Dan and Jose may need to take a straw man approach to developing some of the articles for the CTBUH magazine, which can then be peer reviewed by the committee in order to push the article deliverables to completion.

#### **Fire Safety Working Group – Additional Support Required from the CTBUH**

A letter from CTBUH staff or leadership outlining Task Group Member responsibilities when serving on a Committee, and noting that the Chair may eliminate any member from a Task Group for non-participation. The intent here is get TG members to fulfill a need for the Committee rather than simply attend meetings for informational purposes while not contributing. Dan O'Connor has attempted to communicate this to the members of the FSWG, however, it may be helpful and reinforcing for a more definitive statement on this from CTBUH staff or leadership.

Funds or fund raising by CTBUH staff or leadership that would help support the research proposals of the FSWG Structural Subgroup.



## Panel Summary #1

**Proposal Number:** 1000217

### **Panel Summary:**

Panel Summary

#### Objectives

The overall objective of this research proposal is to increase the level of safety in tall buildings through the improvement of emergency evacuation procedures including evaluating, selecting and modifying existing egress simulation programs which do not include a capability to accurately represent the impact of elevators or sky bridges on evacuation. Key strategies to be considered include: (i) wider and more exit stairs, (ii) elevators for evacuation and (iii) sky bridges between tall buildings.

#### Intellectual Merit

The completion of this study and development of simulations could provide the academic and professional communities with a useful comparison of evacuation methods. This research proposal compares and evaluates existing evacuation techniques with realistic alternative methods to be developed by the research team. The panel noted that few architects have been engaged in past building evacuation research.

The focus of this research is limited to egress and might be expanded to deal with more complex issues facing growing cities worldwide. The proposal fails to examine what we know and do not know about egress systems and how this proposed study would contribute to our understanding of tall buildings. The proposal fails to address many questions including: How does this proposal differ from past simulation tools? What is the advantage of the proposed approach over past research methods? What are the advantages of the proposed methods as related to those used in the past? The role of the principle investigator (PI) is not well defined beyond overall project management. A Senior Research Fellow (SRF) will be the primary person undertaking the research tasks, however, the proposal does not identify the SRF which makes it impossible to comment on the qualifications of the research team. Approximately 50% of the project budget is allocated for other professionals and it is not clear how this funding is allocated between the SRF and other support personnel.

#### Broader Impact

The evacuation of tall buildings in extreme events is certainly a very topical and important area of concern in the post 9/11 era. The proposed research has the potential to examine existing plans and physical structures to provide recommended best practices and structural changes that would improve tall building egress. The project may define best practices that can reliably determine the impact of these strategies in both future designs, and the retrospective incorporation in existing buildings. The project builds upon prior research by members of the Council on Tall Buildings and Urban Habitat (CTBUH) on building dimensions and attributes. The proposal

includes the engagement of an "International Project Advisory Group" (8 US, 4 International) to provide guidance and review the project. The development of a manual for best practices and a simulation will be a positive contribution to research associated with hazards and tall buildings.

The proposal does not mention the inclusion of any students in the research, nor does it include any funding for students. The proposal does not include any mention of outreach to underrepresented groups. The examination of safety issues should be explored, but many groups including local governments and professional associations should be engaged in this process.

#### Panel Summary Statement

The goal of increasing the level of safety in tall buildings is timely, but the work seems incremental rather than proposing something fundamentally novel.

The summary was read by / to the panel and the panel concurred that the summary accurately reflects the panel discussion.

Review #1

**Proposal Number:** 1000217  
**Performing Organization:** Illinois Inst of Tech  
**NSF Program:** Infrastructure Management and Extreme Events  
**Principal Investigator:** Antony, Wood  
**Proposal Title:** Investigating Systems for the Total Evacuation of Tall Buildings  
**Rating:** Poor

**REVIEW:**

What is the intellectual merit of the proposed activity?

Intellectual merit

Aims to improve the life safety of tall buildings through investigation of occupant relocation and evacuation strategies involving the use of exit stairs, elevators and skybridges. Enhanced modeling simulation is used and the output will be a manual of best practice that can reliably determine the impact of various evacuation strategies in both future designs, and for retrospective incorporation in existing buildings. The simulation data produced and examined in this proposal will provide vital insight into the effects and factors of emergency evacuation systems.

What are the broader impacts of the proposed activity?

The broader impacts

Impact life safety issues in these types of buildings and put the US as the forefront of this research/work.

Summary Statement

Interesting proposal, and timely, but the work seems incremental rather than proposing something fundamentally novel. The researchers are well-qualified to carry out the work. Weak case for education integration and efforts to include under-represented groups.

Review #2

**Proposal Number:** 1000217  
**Performing Organization:** Illinois Inst of Tech  
**NSF Program:** Infrastructure Management and Extreme Events  
**Principal Investigator:** Antony, Wood  
**Proposal Title:** Investigating Systems for the Total Evacuation of Tall Buildings  
**Rating:** Poor

**REVIEW:**

What is the intellectual merit of the proposed activity?

The project will build upon prior research by members of the Council on Tall Buildings and Urban Habitat (CTBUH) on building dimensions and attributes. The investigators will evaluate, select and modify, as appropriate, existing egress simulation programs which do not include a capability to accurately represent the impact of elevators or skybridges on evacuation. The inclusion of these two options is thus considered novel. The proposal includes the engagement of an "International Project Advisory Group" (8 US, 4 International) to provide guidance and review the project through teleconferences and a minimum of two physical meetings. No funding is included for the travel of members of the group with the assumption that their organizations will cover these costs. The validity of this assumption is questionable. The role of the PI is not well defined beyond overall project management. A Senior Research Fellow (SRF) will be the primary person undertaking the research tasks, however, the proposal does not identify the SRF which makes it impossible to comment on the qualifications of the research team. Approximately 50% of the project budget is allocated for other professionals and it is not clear how this funding is allocated between the SRF and other support personnel.

What are the broader impacts of the proposed activity?

The evacuation of tall buildings in extreme events is certainly a very topical and important area of concern in the post 9/11 era. The proposed research has the potential to examine existing plans and physical structures to provide recommended best practices and structural changes that would improve tall building egress. The proposal does not mention the inclusion of any students in the research, nor does it include any funding for students. The proposal does not include any mention of outreach to underrepresented groups. The research results would be disseminated via collaboration with the International Advisory Group, and publication of the final research report to the professional and academic community.

Summary Statement

# **ATTACHMENT D**

## **SUMMARY OF SYMPOSIUM OF ELEVATOR EMERGENCY USE BY OCCUPANTS AND FIREFIGHTERS**

### **JUNE 29-30, 2010 MEETING MINUTES HIGH RISE BUILDING SAFETY ADVISORY COMMITTEE**



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## ASME Symposium on Elevator Emergency Use By Occupants and Fire Fighters

December 1-2, 2010

Orlando, Florida

Since 2004, a project has been underway to establish what changes could be made to elevator design concepts in order to allow them to be used for occupant evacuation under certain conditions. In addition, establishing a set of design changes to allow certain elevators to be enhanced in order to designate them as fire service access elevators was also an integral part of the project. The symposium will provide a series of presentations on this work effort of the last six years, how the applicable codes and standards have been changed to accommodate these concepts and what the next steps in this process are anticipated to be.

The following topics will be covered in this two day event.

- Overview of the ASME A17 task groups' work
- Occupant evacuation elevators (model building codes)
- Fire service access elevators (model building codes)
- ASME A17.1 proposed changes:
  - Fire service access elevators
  - Occupant evacuation elevators
- Design developments in other regions of the world
- Human factors - the paradigm shift for the public
- Opportunities for additional research and study
- Related standards
  - A17.4 Guide for Emergency Personnel
  - NFPA72 (relating to occupant notification)
  - IBC/ADAAG (relating to accessible means of egress)
- Jurisdiction experiences post WTC
  - San Francisco
- Vision of developing evacuation plans around the use of elevators
- Fire service response and training
  - Robust fire service elevators
  - Occupant evacuation