COMPLEX TERROR ATTACKS

FIRE AS A WEAPON

Urban Fire Forum
September 6, 2014

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Changing Threat Environment

Major Disasters:
Threat - Vulnerability - Consequence
What does a Crisis Response look like?
The Future is URBAN

London-July 7, 2007
Mumbai-Nov. 26, 2008
New York-May 1, 2010
Boston-April 15, 2014
Evolving Threat Environment

- Mumbai Style Attack
  - Swarming
    - Multiple Attackers (mobile)
    - Multiple Locations
  - Combined Weapons
    - Active Shooters
    - Explosives
    - Fires
  - Media Focus
    - For widespread coverage & fear

Mumbai

Benghazi

Ukraine
Partnerships
Vulnerability

Combination Statepipe/Sprinkler

Threat

- IED
  - Fire suppress systems compromised
- Active shooter
- Smoke/fire spread
- Stairs compromised
New Roles for Fire, EMS & LE

- Integrated Operations with Law Enforcement
  - Clear Language
  - Unified strategy and tactics
- Clear Common Objectives
  - Threat suppression
  - Mass casualty care
  - Fire control
How Do We Achieve Our Mission?

- #1 Life Hazards
- Interagency Objectives
  - Threat Suppress
  - Hemorrhage, airway control
  - Rapid Extrication
  - Assessment by medical providers
  - Transport to medical facilities
  - Site security
- Unified Command
  - Tactical Operational Center
    - LE Threat Suppression
    - Fire and Medical Branch
      - Share Building System Knowledge
- Communications
  - More than interoperability
Lobby Control

Fire Service Adds Value for LE
Operating Zones Language

Visual Understanding and Clear Common Language
Based On Hazmat
Hot—Warm—Cold
Secure the Warm Zone

- Secured by LE teams or tactical support element
  - Warm Zone
  - Warm Corridor
  - Warm Entrance and exits

Warm Triage-Treatment-Transfer Point

- Staffed by EMS personnel
  - Lifesaving
  - Medical Triage

- Support from FF (CFR & EMT)
  - Movement
Exercise The Concepts

- How would this Interagency Concept work....
Preparing For Urban Complexity
Protective Measures

- Review SOP’s for target occupancies
- Operations for advanced fires
- Identify critical infrastructure and review procedures for access, communications
- Coordinate with LE for force protection
- Coordinate with EMS for Triage, Treatment, Removal and Transport
Review SOP’s For Target Occupancies
Operations for Advanced Fires
Identify Critical Infrastructure
Coordinating Fire Suppression With Law Enforcement
Coordinate With EMS
Protective Measures

- Coordinate with local fire safety and emergency evacuation directors
- Review plans for smoke control
- Alert fire and EMS to report suspected acts of vandalism to fire protection systems
- Ensuring adequate water supply for fire control and suppression
Coordination with Fire Safety Directors

The North Building - Floor Plan

The South Building
Smoke Control
Suspicious Activity

**If you see something, say something™**

- Collection of information on a number of potential targets, gathered from diverse resources.
- Potential targets screened based on the intended objective, assessing symbolic value, critical infrastructure, points of failure, expected mass casualties, and media attention.
- Targets considered vulnerable/further terrorist goals selected for next phase of intel collection.
- Cultural symbols (monuments, tourist destinations, landmarks).
- Symbols of government (courthouses, city halls, post offices).
- Symbols of authority (police stations, fire stations, military recruiting offices).

**Broad Target Consideration**

- Selection of target for actual operational planning.
- Selection based on factors such as the success of attack affecting a larger audience than immediate victim(s), attracting media attention and consistent with the goals of the group.
- Detailed surveillance of target for several weeks or even months.
- Determining best location and time for attack.
- Observable indicators for first responders include possession of maps/blueprints with no valid reason, prolonged interest in security measures, access points, perimeter barriers, observing drills/exercises, security reactions to unattended packages.

**Specific Target Selection**

- Gathering information about the target organization.
- Accessing personal, sensitive or proprietary data by penetration of the target organization's network or via open source internet access.
- Requires a facility's specific security procedures and personnel including schedules for shift changes or variations in the level of security.
- Persons, without a need to know, seeking knowledge about evacuation procedures.
- Observable indicators for first responders include inquiries into response times, response routes and procedures used by emergency response personnel.
- Persons may appear nervous, refuse requests for identification and become agitated when questions are not answered to their satisfaction.

**Pre-Attack Surveillence**

- Targets use a variety of tactics to test the strengths and vulnerabilities of security systems and personnel.
- Measures may include setting off alarms to measure both response times and routes used by emergency responders and security personnel.
- Removing secured areas, tampering with mechanisms such as cameras and locks.
- Abandoning packages in heavily traveled areas.
- May use their own operatives and/or unsuspecting people to test target reactions.

**Attack Stages Are Not Linear...**

**Intelligence Gathering**

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**Training**

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**ATF**

- “All members of New York City Fire Department must be able to recognize the signs of criminal or terrorist activity and the signs of planning and support for those activities.”

- “This is a general guide for quick reference and is not exhaustive.”

- “The presence of one or more of these indicators does not necessarily mean that the activity is related to terrorism or a crime is occurring.”

- “However, that combined presence may merit further inquiry.”
Water Supply and Suppression
Using The Tools That Are In Place
To identify technologies that can be applied to the repair or partial repair of a standpipe or combination standpipe fire sprinkler riser in a high-rise building.

This will allow firefighters use or partial use of a standpipe and or fire sprinklers for fire operations.
Fire Protection Features
What Was Already Available?
The repair methods we shall be looking at are:

- Crushing
- Capping
- Plugging
- Valving-Off
- Inserting Plates
High Pressure Plugs
Victaulic Coupling, Caps and Valves

Roust-A-Bout Coupling

Butterfly Valve and Cap
Standpipe Repair Plates
Couplings
Standpipe Testing

Stage #1—Low Pressure

- For stage #1 there are 17-30 tests planned.

- The number of tests will vary depending on how successful the tools carried by Rescue and Haz-Mat are at crushing and crimping different sections of pipe.

- During this round of testing the water shall be pumping up to and maintaining 250psi.

Stage #2—High Pressure

- The repair methods being tested here shall be the methods that were successful in the first round of testing.

- The number of tests to be done here will be only be determined after analyzing the data from stage one. Only then will we know what can deemed successful and subjected for further testing.

- During this round of testing the water shall be pumping up to and maintaining 650psi.
Testing

- Testing will be broken off into different segments.

- This will allow us the time to analyze the data collected and to be sure that the repair method used was successful or not.

- If found that the method is successful further testing at higher pressures shall be done.
Measurements
Turning Theory Into Practice
Turning Theory Into Practice
Missing Element – Damage Data

- Partnering with NYS
NYS Preparedness Center
Bin Blocks For Enclosure and Shielding

Pre-Cast, High Strength Concrete Steel
Reinforced Platform

6 Inch Sch. 40 at 100 PSI
Next Steps

IED, Standpipe Project and Gear
More To Come....