


BUILDING COLLAPSE

The IC should consider the following priorities;

- **Recovery vs Rescue**
- Consider if **Mass Causality Incident** -
- Identify **Fire /Explosion Hazards** & need for additional resources
- Evaluate **further collapse** potential
- Securing **Utilities**
- **Special Equip or Resources** needs SPLOPS, Heavy Equip
- **Securing the area**
- **Length of Operation** - May need relief units
- **Law Enforcement** for Crowd Control
- **Notifications** - Local engineering, Building Dept, EOD, etc.

	Palm Beach County Fire Rescue Standard Operating Guideline	
	SOG 710-04	Structural Collapse
	Issue Date: 06/15/2003	Effective Date: 07/15/2003

PURPOSE:

To provide standard operating guidelines for operations at a collapse of a building or any other structure that has trapped or injured victims and / or presents a hazard to occupants or rescuers.

AUTHORITY:

- Fire Rescue Administrator

SCOPE:

These guidelines shall apply to all Fire Rescue personnel and reservists.

ATTACHMENTS:

Attachment A: Collapse Incident Checklist

PROCEDURE:

1. **General**

- a. A collapse incident may be a single wall collapse of a building, the collapse of a radio tower, bridge or any other erected structure. The collapse may be due to a structural failure, an accident, fire, bombing, etc. These incidents can range from a collapse with no victims or hazards to a catastrophic incident where the collapse area is extremely large with a combination of emergencies; fire, further collapse potential, victims trapped, and a Mass Causality Incident.

2. **First Arriving Units**

- a. The first arriving unit must avoid committing itself to a dangerous situation which it is not equipped or trained to deal with.
- b. First arriving unit shall follow *SOG 200-02 Incident Command Sequence*
- c. The IC should consider the following priorities as part of the initial size up:
 - Recovery vs Rescue – Perform a Risk vs Benefit analyze.
 - Mass Causality Incident - Follow *SOG 500-03 Mass Casualty Incidents*, during initial operations concentrate on victims that are accessible.
 - Fire or Explosion Hazards - Need for fire suppression or the potential of explosion due to an explosive device or the uncontrolled release of utilities.
 - Further collapse potential - Identify potential collapse area as Exclusion Zone. Restrict area to essential personnel.

- Securing Utilities - Shutting off gas, water, and electrical utilities.
- Special Equipment or Resources needed - Special Operations, heavy equipment, search dogs, State and/or Federal assistance.
- Securing the area - Identifying the control zones.
 1. Refer to *SOG 420-01 Fire Attack Operations*.
 2. No personnel or other individuals shall be allowed to enter the building or site without the authorization of the Incident Commander.
- Length of Operation - May be one hour or days. Need for relief company, rest, food, shelter, and restrooms for rescuers. Night time operations present the need for lighting.
- Need for Evacuation and Shelters - Is there a need to evacuate people from their homes, obtaining shelters and transportation. Palm Beach County Emergency Operations center should be notified.
- Law Enforcement for Crowd Control - The entire area shall be secured to restrict entry into the area. Law Enforcement should respond to the scene to assist in the securing of the building or area, as needed.
- Notifications - Local engineering, County Building Department, Department of Labor if work site is involved, Fire Investigator, Law Enforcement EOD, and other agencies as needed.
 - d. Gaining control of the incident shall be difficult but is essential for the safe and efficient outcome of the incident. Establishing the IC framework, securing area, and implementing *SOG 500-03 Mass Casualty Incidents* are the bare essentials. Every precaution should be taken to ensure safety of personnel. Collapsed structures or objects should be stabilized prior to Fire Rescue personnel entering.

3. Special Operations Team

- a. A Collapse Incident Checklist (*SOG 710-04 Attachment A*) shall be used for the purpose of documenting the incident and assignments given during the incident.
- b. Special Operations shall generally be assigned as the Hazard Group.
- c. The Special Operations Captain should perform a secondary size up of the incident.
- d. Special Operations shall assume technical tasks such as:
 - Evaluating building or structure for stability, weak areas, stress cracks, collapse area, overhead objects, etc.
 - Re-evaluating established control zones and adjusting as necessary.
 - Shoring and stabilizing collapsed structure or object prior to entering unstable area.
 - Marking unsafe areas.
 - Marking path of travel.
 - Monitoring environment for hazardous conditions.
 - Establishing rigging and mechanical advantage systems as needed.
 - Utilizing specialized equipment; air bags, jacks, port-a-power, saws, confined space blower, air tools, surface supplied air units, shoring material, etc...

4. **Basic Safety Procedures**

- a. Any incident involving a collapse or partial collapse may present a number of problems not usually found in a single incident.
- b. It is absolutely imperative that personnel recognize and identify hazards as they proceed with the incident.
- c. An Incident Safety Officer shall be appointed by the IC.

5. **Personal Protective Equipment**

- a. Consider the following hazards when determining level of protection for personnel;

- Fire
- Explosions
- Overhead objects falling
- Hazardous atmospheres
- High level of airborne particles
- Bio hazards
- Climate temperatures
- Confined spaces
- Presence of hazardous materials.

- b. Level of personal protection shall be dependent upon hazards present. Follow usual standards for use of Bunker gear and Self Contained Breathing Apparatus (SCBA). At times the use of Bunker gear shall not be appropriate and shall actually become a hindrance to a safe and efficient operation.

- c. Personnel must at all times adhere to the level of personal protection set forth by the Incident Commander.

- d. At the bare minimum all personnel working in the hot zone should be equipped with:

- Helmet
- Eye protection
- Gloves
- A PASS device.

6. **Stabilization**

- a. Personnel must stabilize the area as they proceed to allow for a safe path of travel. Work should begin in safe area and work towards the hazard area. Shoring material must be able to support the load being stabilized. Hazards should be marked and/or cleared as rescuers progress into the hazard area.

7. **Personnel Accountability**

- a. All personnel on scene shall follow the *SOG 220-01 Personnel Accountability*.
- b. The entire area should be secured with all entry and exits points identified and monitored.

- c. Only personnel with an assignment shall be permitted to enter the hot zone.

8. **After emergency operations are completed**

- a. It may be necessary for Fire-Rescue personnel to stand by on the scene until arrangements for building security and/or clearance are determined by the Fire Investigator, Building Department representative, and the building representative.
- b. All pertinent information regarding the incident, including whatever arrangements were made regarding security of the site, shall be documented according to Incident Reporting (PPM FR-M-201).

Supersession History

1. SOG #2411, issued 08/27/1992
2. SOG #2411, issued 07/15/2003
3. SOG 710-04, clerical 05/01/2018