
	<b>STANDARD OPERATING GUIDELINE</b>				
	OPERATIONS				
	SQUAD COMPANY OPERATIONS				
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**1.0 Objective**



- 1.1 The purpose of this guideline is to maximize the effectiveness of Squad Company operations by creating an organized, safe, and efficient set of operating guidelines.
- 1.2 The protection of life is the foremost objective of the Squad Company at the scene of an emergency. This priority not only includes the general public, but firefighters as well.
- 1.3 These guidelines will address both strategic and tactical procedures for Command and Squad Company personnel.

**2.0 Responsibility**

- 2.1 It is the responsibility of all Department personnel to understand the procedures documented in this Standard Operating Guideline.

**3.0 General Operations**

- 3.1 The functions and responsibilities of the Squad Company are many and varied. They include, but are not limited to:
  - 3.1.1 Search and rescue
  - 3.1.2 Size-up
  - 3.1.3 Forcible entry
  - 3.1.4 Communications
  - 3.1.5 Extinguishment
  - 3.1.6 Overhaul
  - 3.1.7 Salvage
  - 3.1.8 Ventilation
  - 3.1.9 Lighting and electrical power
  - 3.1.10 Utility control
  - 3.1.11 Extrication - Vehicular, Industrial, and Construction
  - 3.1.12 Technical Rescue including above and below-grade rescue
  - 3.1.13 Trenching and shoring operations
  - 3.1.14 Water rescue and recovery
  - 3.1.15 Hazardous Materials Response
  - 3.1.16 Hazardous atmosphere and confined space air monitoring
  - 3.1.17 E.M.S. Operations
  - 3.1.18 Breathing air support
  - 3.1.19 Support of Command functions
- 3.2 These duties are not listed in order of importance, nor is it intended that they be performed in the order listed. The course of action will be determined by the Company Officer or the Incident Commander based upon size-up factors on the scene.

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### 3.3 Roll Call

3.3.1 Necessary information will be passed on at the daily Roll Call concerning out-of-service equipment, street closings, apparatus and equipment condition, and any particular information applicable to the Squad Company that should be checked during shift change. Other items to check are:

- 3.3.1.1 Scheduled apparatus maintenance
- 3.3.1.2 Modified response routes
- 3.3.1.3 Weather and road conditions
- 3.3.1.4 Road construction and detours

### 3.4 Squad Company assignments are to include:

- 3.4.1 Company Officer
- 3.4.2 Apparatus Operator
- 3.4.3 Firefighter #1
- 3.4.4 Firefighter #2

3.5 The apparatus and associated equipment will be thoroughly checked and inspected at the start of each shift.

3.6 Personal protective clothing should be checked and inventoried by all personnel while placing it on the apparatus.

3.6.1 S.C.B.A. shall be checked in accordance with the daily check-out procedures.



3.7 All personnel assigned to the Squad Company will be familiar with both the operation and location of all tools and equipment carried on the apparatus.

3.8 Teamwork among Squad Company members is essential to the successful outcome of an operation. Only through a concerted effort can the Squad Company become a highly efficient unit. Members may, at times, be required to operate apart. It is imperative that everyone is aware of their own duties, the duties of other Company members, and the overall responsibilities of their unit.

## 4.0 Personnel Responsibilities

### 4.1 Company Officer

- 4.1.1 Tools - S.C.B.A., portable radio, hand light, and a tool as deemed necessary for the task.
- 4.1.2 Take Command (if first on the scene).
- 4.1.3 Complete size-up; if necessary and practical, perform walk-around for exterior size-up.
- 4.1.4 Order placement of apparatus.
- 4.1.5 Order immediate rescue if necessary.
- 4.1.6 Maintain accountability of personnel at all times.
- 4.1.7 Communicate with Command to provide updates of action taken and progress made with:
  - 4.1.7.1 Fire location
  - 4.1.7.2 Rescue attempts / outcomes
  - 4.1.7.3 Victims
  - 4.1.7.4 Area involved
  - 4.1.7.5 Fire extension
  - 4.1.7.6 Need for additional hose lines, manpower, etc.
  - 4.1.7.7 Forcible entry

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4.1.7.8 Extinguishment and ventilation

4.1.7.9 Check for extension

4.1.7.10 Salvage and overhaul operations

4.1.8 Coordinate actions of Company members.

4.1.9 Check tools and equipment.

4.2 Apparatus Operator

4.2.1 Positions apparatus.

4.2.2 Tools - S.C.B.A., portable radio, hand light, Halligan tool and flat head axe, or any specialized tool that may be needed.

4.3 Firefighter #1: Seated behind the Officer

4.3.1 Tools - S.C.B.A., portable radio, hand light, pressurized water extinguisher or other appropriate extinguisher, any specialized tool that may be needed.

4.4 Firefighter #2: Seated behind the apparatus operator

4.4.1 Tools - S.C.B.A., portable radio, hand light, hand tool, any specialized tool that may be needed.

## 5.0 Squad Company Operations

5.1 Size-up

5.1.1 Size-up will be completed in accordance with S.O.G. O-303 Incident Management System - Command Procedures.

5.1.2 An exterior size-up of the back and sides of the structure shall be conducted when feasible.

5.1.3 Conditions observed shall be communicated to the Incident Commander.

5.1.4 Conditions continually change, so the Company Officer must continually re-evaluate the size-up so that operations are effective and safe.

5.2 Forcible Entry

5.2.1 Forcible entry and the removal of obstructions shall be performed as needed to support rescue efforts and hoseline advancement.

5.2.2 Immediate forcible entry shall be initiated in the following situations:

5.2.2.1 Fire or smoke showing

5.2.2.2 Life hazards

5.2.2.3 Fire extension

5.2.2.4 As circumstances dictate

5.2.3 Size-up will determine the forcible entry method to use.



5.2.3.1 Axe, Halligan, or other forcible entry tool.

5.2.3.2 Through-the-lock method.

5.2.3.3 Saw or other power tool.

5.2.3.4 Keep damage to a minimum. This not only preserves the integrity of the door, but also demonstrates professionalism.

5.2.4 The cardinal rule in forced entry is try before you pry. If a door must be forced, the Company Officer must size-up the door to determine:

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5.2.4.1 Type of door

5.2.4.2 Door construction

5.2.4.3 Type of lock

5.2.5 When forcible entry can be delayed, alternative means can be utilized which may be more efficient and less damaging.

5.2.6 The Company Officer must notify the Incident Commander of any forced entries. This is necessary for proper security and accountability.

### 5.3 Rescue

5.3.1 A life hazard, visible upon arrival, must be dealt with immediately. Immediate rescue without simultaneous and coordinated fire attack should only be attempted in extreme cases.

5.3.2 Rescue decisions for the Squad Company include:

5.3.2.1 Are occupants endangered by being in the immediate vicinity of the fire?

5.3.2.2 How many people are trapped?

5.3.2.3 Are occupants threatening to jump?

5.3.2.4 Are exits cut off by smoke, heat, and / or fire?

5.3.2.5 Can occupants be removed by ground ladders or aerial devices?

5.3.3 Interior Search

5.3.3.1 Defined as the systematic and orderly examination of a building or area for the purpose of locating persons in order to save lives.

5.3.3.2 Priorities when searching:

5.3.3.2.1 Fire area and the fire floor.

5.3.3.2.2 All floors above the fire floor.

5.3.4 Two general search categories:

5.3.4.1 Primary Search - The immediate search for life. It is a rapid and systematic search.

5.3.4.2 Secondary Search - A thorough and painstaking search to insure that no possible victims are overlooked. The secondary search must include the entire perimeter of the building and all areas of the interior. It is recommended that different personnel perform the primary and secondary searches.

5.3.5 The search is a planned operation. The following factors must be considered:

5.3.5.1 Type of occupancy

5.3.5.2 Time of day

5.3.5.3 Information already received



5.3.5.4 Building layout

### 5.4 Ventilation

5.4.1 Ventilation is the systematic release of fire, smoke, heat, and toxic gases from a building or fire area. Proper ventilation can provide survival time for occupants, facilitate easier search and rescue operations, and allow for the advancement of hose lines by the Engine Companies.

5.4.2 There are three types of ventilation.

5.4.2.1 Vertical Ventilation

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5.4.2.1.1 Prevents byproducts of combustion from accumulating at upper levels of a structure.

5.4.2.1.2 Prevents mushrooming or lateral extension.

5.4.2.1.3 Allows easier access to upper floors for search operations.

5.4.2.1.4 Increases survival times for victims.

5.4.2.1.5 Allows for hoseline advancement.

5.4.2.2 Horizontal Ventilation

5.4.2.2.1 Horizontal ventilation provides openings at the same level as the fire.

5.4.2.2.2 Relieves the room / area / floor of toxic gases.

5.4.2.2.3 Permits visibility for search.

5.4.2.2.4 Allows visibility for hoseline advancement.

5.4.2.3 Mechanical Ventilation. Company Officer should initiate this.

5.4.2.3.1 Smoke ejectors.

5.4.2.3.2 Positive pressure blowers.

5.4.2.3.3 Hose streams.

5.4.3 Safety considerations

5.4.3.1 Do not ventilate so that people or members above the fire may be placed in jeopardy.

5.4.3.2 Venting should not unnecessarily extend the fire.

5.4.3.3 Falling glass from a window or sky light removal can cause injury to those below, especially in high rise buildings.

5.4.3.4 Be aware of wind conditions. Wind conditions can negate ventilation operations if they create acceleration or unwanted fire spread.

5.4.3.5 When opening roofs, safe practices dictate that fire crews operate from the windward side.

5.5 Extinguishment

5.5.1 Fire extinguishment is the primary function of an Engine Company but fires are often extinguished or at least held in check by the actions of the Squad Company or the Truck Company. With the ability to utilize the pump on Squad #33 and/or Truck Co. #33, both of these functions are possible.



5.5.2 If a portable extinguisher is to be utilized, determine what is burning and utilize the proper extinguisher.

5.6 Salvage

5.6.1 Salvage work consists of the methods and procedures that further reduce fire, water, and smoke damage during and after fires. A portion of these damages are caused by the application of water, ventilating the building, and checking for fire extension. Although these damages cannot be eliminated, good salvage procedures can help minimize these losses.

5.6.2 The Squad Company Officer must include a salvage size-up before and during his overhaul size-up. Note what is already heavily damaged by fire, what is partially damaged and might be salvageable, and what will be damaged if something is not done before opening the walls and ceilings.



5.6.3 Although something may appear to have little value, it might have great sentimental value to the owner. The protection of property by care, use of salvage covers, etc. will require little additional time but it will be remembered for a lifetime by the owner.

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## 5.7 Overhaul

- 5.7.1 Overhaul includes the opening of walls, ceilings, partitions, etc. to identify and expose hidden fires. Overhaul is performed after the fire has been brought under control.
- 5.7.2 Before beginning the overhaul operation, plan and re-evaluate the situation. Survey the situation and plan:
  - 5.7.2.1 Will overhaul interfere with the fire investigation?
  - 5.7.2.2 What has to be done?
  - 5.7.2.3 How many personnel are needed?
  - 5.7.2.4 What tools are needed?
  - 5.7.2.5 Who is to do what overhaul tasks?
  - 5.7.2.6 If items have to be moved, where will they be moved to?
- 5.7.3 Overhaul Considerations
  - 5.7.3.1 It is a good practice to take care of smoldering mattresses and upholstered furniture early. If they are not removed to the outside, they will continue to smolder and generate smoke, making overhaul operations more difficult.
  - 5.7.3.2 If the furniture is not moved prior to pulling the ceilings, the debris will accumulate on top and make moving it more difficult.
  - 5.7.3.3 Determine the location where burned debris will be moved. It should be away from the structure and in a safe location.
  - 5.7.3.4 There is no need to rush during overhaul operations. Safety is a prime consideration.
- 5.7.4 Safety can be improved by:
  - 5.7.4.1 Ventilation. It improves visibility and rids the area of toxic gases. Open doors, clear out windows, or use mechanical means if necessary.
  - 5.7.4.2 Utilize adequate lighting in the hazard area. Use building lights or set up portable lighting to create a safe working environment.
  - 5.7.4.3 Identify and protect hazardous areas such as holes in floors and roofs, open shafts, missing stairs, etc. Isolate these areas by using ropes, boards, lighting, barricade tape, etc. as needed.
  - 5.7.4.4 Recognize signs of exhaustion in firefighters and advise the Incident Commander if rehab is needed.
  - 5.7.4.5 Members shall wear the proper protective equipment while overhauling. S.C.B.A. shall be worn in accordance with S.O.G. O-319.
  - 5.7.4.6 Protection of property. Remember that the building contents are someone's property. How we handle them will make a life-long impression on the owner. Treat their property as if it were your own. Some ways to reduce property damage are:
    - 5.7.4.6.1 Place unburned contents found on top of dressers and desks inside drawers.
    - 5.7.4.6.2 Unburned furniture can be covered or placed in another room.
    - 5.7.4.6.3 Expensive and hard to replace items should be treated with care.
    - 5.7.4.6.4 Excess water can be channeled or removed from the building.
    - 5.7.4.6.5 Use salvage covers as soon as possible, when needed.

## 5.8 Lighting and Electrical Power



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- 5.8.1 Consider the use of existing lighting first.
- 5.8.2 The use of lighting can make a difficult and dangerous job of fighting fires easier and safer.
- 5.8.3 Each member of the Squad Company should be equipped with a properly operating handlight.
- 5.8.4 On the fireground, apparatus spot lights can be utilized to pinpoint victims at windows. This will facilitate the rescue and may also calm the victim as they realize that the Fire Department has seen them. Spot lights can also be utilized to pinpoint hazards such as loose or hanging building sections, loose signs, electric wires, etc.
- 5.8.5 Quartz lights will be used to light up the exteriors of fire buildings, providing greater safety in which to conduct operations.
- 5.8.6 Portable lighting shall be placed prior to beginning overhaul operations, and will be used to provide general illumination as well as highlight unsafe areas such as missing stairs or holes in the floors.
- 5.8.7 Adequate lighting will be provided when working in areas without natural lighting, such as windowless buildings, below grade levels, elevator shafts, etc.
- 5.9 Utilities Control
  - 5.9.1 An important function that may be assigned to the Squad Company or the Truck Company is shutting down the utilities. Systems required to be shut down are:
    - 5.9.1.1 Gas
    - 5.9.1.2 Electricity
    - 5.9.1.3 Water
    - 5.9.1.4 Air handling systems
  - 5.9.2 A firefighter with a portable radio will be assigned to shut down these systems. He will notify a Company Officer in the event of problems. Controls should not be indiscriminately shut down. Make sure you know what area(s) of the structure are being shut down. Make a note of what was shut down so the Incident Commander can pass this on to the property owner and the investigation team.
  - 5.9.3 Once the utilities have been shut down, only the utility companies can turn them back on.
  - 5.9.4 When shutting down the electricity, attempt to isolate the affected area through the use of breakers or fuses. The removal of electric meters will only be done in extreme emergency conditions, and only by Commonwealth Edison.
  - 5.9.5 Water supplies to the building can be shut off at the main feed line. If this is not accessible, Public Works may be notified to shut off the water at the street.
  - 5.9.6 When shutting down an automatic sprinkler system, a firefighter should be assigned (with a portable radio) to the valve in case the system has to be re-charged due to the fire flaring up.
  - 5.9.7 Air handling systems will not be reactivated until a building engineer and/or Incident Commander is consulted.
- 5.10 Extrication
  - 5.10.1 Extrication involves the removal of a victim trapped or entangled in a vehicle, machinery, etc.
  - 5.10.2 The Squad Company may be called upon to perform many different types of extrications. They may include:
    - 5.10.2.1 The extrication of a victim from an automobile that was involved in an accident.
    - 5.10.2.2 The extrication of a worker trapped or entangled in machinery at a factory or industrial site.
    - 5.10.2.3 The extrication of a construction worker trapped in debris from a building collapse.

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- 5.10.2.4 The extrication of a victim that has fallen on or into an object.
- 5.10.3 Extrication operations are performed through the use of a wide variety of tools and equipment. They include, but are not limited to:
  - 5.10.3.1 Hydraulic cutting and spreading tools
  - 5.10.3.2 Pneumatic chisels
  - 5.10.3.3 Air bags
  - 5.10.3.4 Power saws
  - 5.10.3.5 Winch
  - 5.10.3.6 Various hand tools
- 5.10.4 Safety considerations
  - 5.10.4.1 Insure that the vehicle or equipment has been stabilized prior to any rescue intervention.
  - 5.10.4.2 Use caution when using flame or spark producing equipment when the possibility of a flammable or explosive atmosphere exists.
  - 5.10.4.3 When working near moving traffic, position apparatus so as to provide protection to those working on the scene. Also, use caution when walking about a scene that is near moving traffic.
  - 5.10.4.4 Always use personal protective equipment when operating power tools or when the potential for exposure to a hazardous environment or atmosphere may exist.
- 5.11 Technical Rescue Specialties
  - 5.11.1 Situations may occur that require assistance beyond the training levels of the normal first response companies. We have this expertise available to us through the Technical Rescue Team of M.A.B.A.S. Division III.
  - 5.11.2 Technical rescue may involve the following three areas:
    - 5.11.2.1 Vertical Rescue - These are operations that involve the rescue of a victim from a height, such as a disabled platform or rigging like those used by window washers, workers on water towers, sign company personnel, various construction jobs, etc.
    - 5.11.2.2 Confined Space Rescue - This involves the rescue or removal of a victim from a below grade vault, construction site, storage tank, sewer, etc.
    - 5.11.2.3 Trench Rescue - This involves the rescue of victim(s) who may be trapped as a result of a collapse in a below grade trench.
  - 5.11.3 If responding on a call for a rescue that the Company Officer or Battalion Chief may classify as technical, do not hesitate to have the dispatcher group telephone page members the Technical Rescue Team from the Highland Park Fire Department. These members can provide assistance in the handling of these specialized alarms.
- 5.12 Water Rescue and Recovery
  - 5.12.1 The Squad Company may be called upon to assist in the rescue of victim(s) from a wide variety of water rescue incidents. Due to Highland Park's close proximity to Lake Michigan and the large number of ponds and swimming pools within the City limits, it is important to maintain a high level of readiness, adequately trained personnel, and proper equipment to perform water rescues.
  - 5.12.2 The Department has a strong commitment to the M.A.B.A.S. system, as well as a commitment to providing a local Dive / Rescue team.



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5.12.3 All water-related rescue and recovery operations shall be conducted within the guidelines established by the M.A.B.A.S. Division III Underwater Rescue and Recovery Team.

5.13 Hazardous Materials Response

5.13.1 The Squad Company serves as the focal point for the Department's hazardous materials mitigation process.

5.13.2 The apparatus is equipped with a limited amount of protective equipment, monitoring equipment, reference materials, and mitigation equipment and supplies that are necessary to safely and effectively contain and control these situations.

5.13.3 The safe and successful handling of a hazardous materials incident requires a thorough, timely, and coordinated effort of actions not normally performed at other hazardous incidents. To assist Company Officers and Chief Officers with their decisions at the scene of a hazardous materials incident, please follow the guidelines as established in S.O.G. O-324.

5.13.4 The primary operational goals of the Highland Park Fire Department when dealing with hazardous materials shall be isolation, containment, and stabilization of the product without exposure or injury to Fire Department personnel or the public.

5.13.5 All available specialized tools, equipment, personal protective clothing and apparatus shall be used to provide maximum protection.

5.13.6 If there are any questions about dealing with a particular product at the scene of an emergency or a product found in an occupancy, on-scene personnel should not hesitate to have the dispatcher contact a department Hazardous Materials Team member.

5.13.7 All hazardous materials operations shall be conducted within the guidelines as established in O-324, Hazardous Materials Operations.

5.13.8 Life safety of all parties is the number one priority. Lives should not be risked to save property.

5.14 E.M.S. Operations

5.14.1 E.M.S. support can be provided by any member of the Squad Company with the equipment carried on the vehicle.

5.14.1.1 Squad Company personnel can provide support where needed at operations involving multiple trauma, mass casualty incidents, and a wide variety of other E.M.S. related events.

5.14.2 The Squad Company will be first due to many E.M.S. alarms and will provide scene stability and patient care functions pursuant to protocols while awaiting arrival of an Ambulance to transport the patient(s).

5.15 Breathing Air Support

5.15.1 The extensive use of Self-Contained Breathing Apparatus requires that support be provided for the refilling of empty cylinders on the scene of an incident.

5.15.2 The low pressure cascade system carried on the apparatus enables the Squad Company to provide the necessary support at the scene of an incident.

5.15.3 The apparatus is also equipped with a regulated system that is designed to provide air for pneumatic equipment such as air chisels and air bags.

**6.0 Reference**

6.1 Highland Park Fire Department



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