



STANDARD OPERATING GUIDELINE			
OPERATIONS			
ENGINE COMPANY OPERATIONS			
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1.0 Purpose

- 1.1 The purpose of this guideline is to provide for an organized, safe, and efficient plan of operation for the Engine Company to follow in the extinguishment of fires.
- 1.2 The protection of life and property is the foremost objective of an Engine Company at the scene of an emergency. The protection of life addresses firefighting personnel as well as the general public.
- 1.3 This guideline will address both strategic and tactical procedures for Command and Engine 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 This guideline will provide information about Engine Company operations as they pertain to the Highland Park Fire Department.

3.2 Roll Call

- 3.2.1 A roll call will be completed as outlined in Standard Operating Guideline A-104, Fire Station Management. In addition, the following information will be discussed with regards to Engine Company operations:

- 3.2.1.1 Information will be passed on daily concerning out of service apparatus and equipment, apparatus and equipment condition, and any other pertinent information applicable to the Engine Company that should be checked during shift change. Other information discussed should be:

- 3.2.1.1.1 Scheduled apparatus maintenance

- 3.2.1.1.2 Modified response routes

- 3.2.1.1.3 Weather and road conditions

- 3.2.1.1.4 Road construction or detours

- 3.2.1.1.5 Hydrants out of service in your first due still district and other districts

- 2.2.1.1.6 Information passed on from the previous engineer

- 3.2.2 Apparatus assignments are to include:

- 3.2.2.1 Officer

- 3.2.2.2 Engineer

- 3.2.2.3 Nozzleman

- 3.2.2.3.1 Based on the staffing levels of the Highland Park Fire Department, the nozzleman position may be assigned to a person assigned to another apparatus. This apparatus may include A-32, A-34, or T-34. The Officer should assign this position to someone at Roll Call.

- 3.2.2.3.2 It is recommended that the nozzleman position be assigned to the firefighter riding the above apparatus and the back-up position be assigned to the driver of the apparatus.

- 3.2.2.4 Back-Up (If a fourth firefighter is available)



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- 3.3 After roll call and apparatus assignments are completed, the apparatus will be thoroughly checked and inspected at the start of each tour of duty per daily inspection procedures.
- 3.4 Personal protective clothing should be checked by all personnel while placing it on the apparatus.
 - 3.4.1 SCBA shall be checked in accordance with the daily check-out procedures.
- 3.5 Passport helmet shields will be placed on the helmet.
- 3.6 Passport name tags will be placed on the three Passports located in the cab.
- 3.7 All personnel assigned to the Engine Company will be familiar with both the operation and location of all tools and equipment carried on the apparatus.
- 3.8 Nozzles shall be checked as follows:
 - 3.8.1 Nozzles and tips to be securely hand fastened to the hose.
 - 3.8.2 Combination nozzles are checked to ensure that they are not clogged by debris, are set in the straight stream position, and the bales are shut off.

4.0 Response to Emergencies

- 4.1 The response to emergency calls is determined by the type of alarm received based on dispatch information. The Engine Company should be prepared to control or assist in the control of the emergency scene.
 - 4.1.1 Code 1: Response - Requires the Engine Company to initiate patient care upon arrival, to assist the Ambulance crew in emergency medical care, checking for hazards, stabilizing the scene and/or any involved vehicles, providing access to and/or extrication of patients, and patient movement.
 - 4.1.2 Code 2: Response - The knowledge that one Engine Company is responding to the incident should prepare the company to request additional assistance, as needed.
 - 4.1.3 Code 3 and 4: Responses - Knowing if your Engine Company is first, second, or third due for responses prepares personnel for certain tactics upon arrival.
 - 4.1.3.1 First Due Engine Company
 - 4.1.3.1.1 Initiate strategy and tactics according to conditions and size-up.
 - 4.1.3.1.2 Responsible for preliminary radio reports.
 - 4.1.3.2 Second Due Engine Company
 - 4.1.3.2.1 Evaluate position and tactics established by first due Engine Company, then assist and/or back up as required by Command.
 - 4.1.3.2.2 Establish water supply to first due Engine Company, if assigned by Command.
 - 4.1.3.2.3 Supply fire sprinkler system, if assigned by Command.
 - 4.1.3.3 Third Due Engine Company
 - 4.1.3.3.1 Back up the first and second due Engine Companies as assigned by Command.
 - 4.1.4 Code 13 Response - Responding on mutual aid requests should alert the Engine Company to the possibility of the following:
 - 4.1.4.1 Long hose lead outs
 - 4.1.4.2 Relay operations
 - 4.1.4.3 Supplying master stream operations

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4.2 Response Communications

4.2.1 Upon arrival, a verbal size-up is completed on the radio. This information should include:

- 4.2.1.1 Occupancy type (Office, Store, Apartment Building, Single-Family Residence, Commercial Building, etc.)
- 4.2.1.2 Dimensions
- 4.2.1.3 Number of stories
- 4.2.1.4 Construction type (ordinary frame, non-combustible, truss roof, etc.)
- 4.2.1.5 Location of occupants, if known
- 4.2.1.6 Any other pertinent information that would assist incoming responders such as changing the location of the first due Engine Company to begin the initial attack (moving to the rear of the structure, etc.)

4.2.2 Upon arrival and in accordance with Standard Operating Guideline O-303, Incident Management System - Command Procedures, the first Engine Company to arrive on the scene has several options available to him. These modes are:

- 4.2.2.1 Nothing Showing - investigating
- 4.2.2.2 Fast Attack - utilized with smoke or fire showing
- 4.2.2.3 Command - nature and size of call determine large scale offensive or defensive tactics
 - 4.2.2.3.1 If additional resources are needed, request them now.

4.3 On-scene Personnel Responsibilities

4.3.1 Officer Responsibilities:



- 4.3.1.1 S.C.B.A., hand light, keys, portable radio, thermal imager
- 4.3.1.2 Initial size-up
- 4.3.1.3 Take Command
- 4.3.1.4 Order initial attack considerations based on size-up
- 4.3.1.5 Maintain accountability of Company personnel

4.3.2 Engineer Responsibilities

- 4.3.2.1 Locate and check operation of closest hydrant, if applicable
- 4.3.2.2 Prepare the Engine for pump operations, if necessary, and maintain any initiated operations
- 4.3.2.3 Be prepared to relay any radio information that may be necessary
- 4.3.2.4 Maintain an inventory of all equipment removed from the apparatus during operations
- 4.3.2.5 Other duties as required

4.3.3 Nozzleman Responsibilities

- 4.3.3.1 S.C.B.A., hand light, forcible entry tool(s)
- 4.3.3.2 Pressurized water or portable extinguisher as necessary for the type of material involved
- 4.3.3.3 Highrise pack in all multi-story occupancies
- 4.3.3.4 Lead out hose as necessary on all fires
- 4.3.3.5 Other duties as assigned by the Officer

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4.3.4 Back-up Responsibilities

- 4.3.4.1 S.C.B.A. and hand light, forcible entry tool(s)
- 4.3.4.2 Pressurized water or portable extinguisher as necessary for the type of material involved
- 4.3.4.3 Highrise pack in all multi-story occupancies
- 4.3.4.4 Lead out hose as necessary on all fires
- 4.3.4.5 Other duties as assigned by the Officer

4.4 Apparatus Placement

- 4.4.1 The Engine Company should be placed in the best tactical position to extinguish the fire. The Officer will determine this position.
- 4.4.2 Whenever possible, the Engine Company will be placed in such a location as to not impede the movement of any other equipment.
- 4.4.3 Other factors to consider when placing the Engine Company are:
 - 4.4.3.1 Orders of the Incident Commander
 - 4.4.3.2 Type of incident
 - 4.4.3.3 Availability of water
 - 4.4.3.4 Type of structure
 - 4.4.3.5 Installed fire protection systems
 - 4.4.3.6 Extent and travel of fire
 - 4.4.3.7 Extent, travel, and type of hazardous material
 - 4.4.3.8 Life hazard
 - 4.4.3.9 Truck Company placement
 - 4.4.3.10 Exposures

5.0 Emergency Scene Operations

- 5.1 All members will be familiar with, and be prepared to implement, Standard Operating Guideline O-303, Incident Management System - Command Procedures, in accordance with their duty assignment.
- 5.2 The primary objectives of firefighting are to protect life and property, perform rescues, locate, confine, and extinguish fires, and assist the general public in other emergency and non-emergency situations.
- 5.3 Strategy defines the overall plan or course of action to reach the objectives.
- 5.4 Tactics is described as the operations or actions implemented to carry out the strategy.
 - 5.5.1 Size-up starts upon receipt of the alarm and continues until the emergency is over and companies return.
 - 5.5.2 The initial responsibility for size-up lies with the Company Officer and is transmitted by a preliminary radio report to dispatch. Everyone that responds to an emergency call should complete a size-up.
- 5.6 Rescue occurs when an Engine Company is confronted with lifesaving operations upon arrival. This becomes the most serious factor of any fire operation.
- 5.7 Lifesaving operations are placed ahead of firefighting when firefighters are not available to perform both (no additional Truck and Engine Company on the scene).



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- 5.7.1 Judgment is necessary for decision-making at this stage. Sometimes the best life saving measure may be a prompt attack on the fire, which if allowed to spread would trap occupants. Life hazards, visible upon arrival, have to be dealt with.
- 5.7.2 Immediate rescue with simultaneous and coordinated fire attack should be attempted by Engine Companies only in extreme cases because of manpower limitations.
- 5.7.3 Rescue decisions for Engine Company operations include:
 - 5.7.3.1 Are the occupants endangered by being in the immediate vicinity of, or directly over the fire?
 - 5.7.3.2 How many people are trapped?
 - 5.7.3.3 Are occupants threatening to jump?
 - 5.7.3.4 Are exits cut off by smoke, heat, and / or fire?
 - 5.7.3.5 Can the occupants be removed by ladder or aerial device?
- 5.7.4 Actions to protect the occupants include:
 - 5.7.4.1 Position a hoseline between the occupants and the fire
 - 5.7.4.2 Provide ventilation to draw fire, heat, and smoke away from the occupants
 - 5.7.4.3 Remove victims using ground ladders and / or building exits
 - 5.7.4.4 Provide visual and verbal contact to instruct victims to an escape area or remain in their positions of safety
- 5.8 Locating the fire as an Engine Company.
 - 5.8.1 An exterior size-up shall be made immediately upon arrival at the scene of the emergency. This size-up shall include:
 - 5.8.1.1 Location and endangerment of any occupants
 - 5.8.1.2 Type of occupancy
 - 5.8.1.3 Building construction and dimensions
 - 5.8.1.4 Building entrances and exits, second means of egress
 - 5.8.1.5 Window size, type, and location
 - 5.8.1.6 Location of smoke and / or fire
 - 5.8.1.7 Obtaining information from people evacuating the building
 - 5.8.1.8 Exposure problems
 - 5.8.2 An interior size-up shall be made immediately upon gaining access to the interior. The size-up shall include:
 - 5.8.2.1 Visible smoke, heat, and / or fire
 - 5.8.2.2 Sensed heat or sound of fire (concealed areas of a structure)
 - 5.8.2.3 Occupants who may have information
 - 5.8.2.4 Stairways leading to that part of the building in which the fire is known or believed to exist
 - 5.8.2.5 Locations of standpipes
 - 5.8.3 It is paramount that the Engine Company exercise caution when stretching handlines into buildings when the fire has not been located. Valuable time may be lost stretching handlines into areas where fire does not exist.

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- 5.9 Confinement of the fire.
- 5.9.1 Confining the fire means to “Stop “any further advancement beyond the area involved upon arrival.
- 5.9.2 The decision to confine the fire must be made by the first arriving Company Officer or the Incident Commander, if on the scene.
- 5.9.3 Confinement must take into account the intensity and direction of travel of the fire. Also:
- 5.9.3.1 Closing a door or window may act to confine the fire allowing for trapped occupants to escape and an attack line to be stretched
- 5.9.3.2 An Engine Company arriving alone should consider the fact that ventilation (horizontal), if done properly, can confine the fire and limit its spread
- 5.9.3.2.1 Caution shall always be exercised by members ventilating so as to not cause any fire extension or otherwise impede the advancement of the attack line
- 5.9.4 The first line stretched and operated is not necessarily the line that extinguishes the fire. The first line in a serious fire may be committed to containing the fire and preventing its extension throughout the building involved or nearby exposures.
- 5.9.5 Hose streams at a fire should be positioned:
- 5.9.5.1 Between the occupants and the fire when human life is endangered. When human life is not endangered, the first stream is positioned between the fire and the most severe exposure.
- 5.9.5.2 The second and/or third lines are utilized for:
- 5.9.5.2.1 Immediate back-up for the previous line(s)
- 5.9.5.2.2 Positions different from the first lines, such as above the fire or in a common stairwell
- 5.9.5.2.3 Covers for a secondary means of escape
- 5.9.5.2.4 Covers for an adjoining or near-by structure.
- 5.9.5.2.5 Preventing vertical extension
- 5.9.5.2.6 Covers for other priorities as determined by the Incident Commander
- 5.10 A rapid exterior attack is defined as briefly directing a straight stream into the structure from an outside position.
- 5.10.1 The attack is done to affect a rapid knockdown without pushing the fire beyond its area of origin.
- 5.10.2 The attack serves to make an interior attack possible under difficult fire conditions as follows:
- 5.10.2.1 Rapidly spreading fire due to an accelerant
- 5.10.2.2 Rapidly spreading fire immediately endangering human life
- 5.10.2.3 Rapidly spreading fire immediately endangering another part of the building or an exposure
- 5.11 Post fire scene operations
- 5.11.1 Overhaul operations and a careful and systematic examination of the scene.
- 5.11.2 The overhaul phase is generally the most dangerous in terms of firefighter injuries and deaths.
- 5.11.3 Ensure that hose lines, tools, etc., do not get buried in the overhaul wash-down and debris removal.
- 5.11.4 Salvage will be performed prior to the overhaul wash-down.

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- 5.11.5 When picking up to leave the scene, make sure that all the equipment is accounted for and placed back on the apparatus.
- 5.11.6 The Company Officer shall report to the Battalion Chief the level of service available from the Engine (in or out of service).
- 5.11.7 An informal Post Fire Critique involving members of the Company should be held immediately after placing the Engine back in service. Review what went right or what went wrong and what improvements can be made. The Officer should document the Company's findings and bring these points up at a formal critique, if one is held.

6.0 Roles and Responsibilities for Company Personnel

- 6.1 Each person assigned to the Engine Company is responsible for carrying out certain tasks. The following guidelines are offered based on the position assigned on the Engine.
 - 6.1.1 The Engine Company Officer's crew should be able to complete the following tasks once the Officer gives the orders to:
 - 6.1.1.1 Lead out hose to the fire
 - 6.1.1.2 Place master streams into service, when warranted
 - 6.1.1.3 Perform proper hydrant hook-up
 - 6.1.1.4 Begin foam operations
 - 6.1.1.5 Begin standpipe operations
 - 6.1.2 While the attack line is being led-out, the Officer must be gathering information relative to the location and extent of the fire. The Officer and his crew must also:
 - 6.1.2.1 Monitor radio transmissions
 - 6.1.2.2 Force entry and go to the fire area
 - 6.1.2.3 If no Truck Company is present, enter and search for victims
 - 6.1.2.4 Determine interior layout of structure
 - 6.1.3 The Officer can advance ahead of the attack crew (if conditions warrant) and complete the interior size-up and fire location. When he returns to his crew, he can pass on useful information as to the fire's location.
 - 6.1.4 It is the responsibility of the Engine Officer to see that all interior attacks initiated begin with the attack team down at floor level regardless of the conditions.
 - 6.1.5 While the hose is being advanced, the Officer will monitor the radio. This will afford him knowledge of any hazardous conditions developing, i.e. fire venting, collapse potential, mayday, or urgent messages.
 - 6.1.6 The Officer will communicate with the Incident Commander as to progress made or changes in conditions.
 - 6.1.7 Once the fire is knocked down, the Officer should order the stream shut down and check for extension. Placing the stream out of a window to assist in ventilation may begin at this time.
 - 6.1.8 The Officer should evaluate the condition of his crew and request relief, if needed.
- 6.2 Engine Company Operators (Engineers)
 - 6.2.1 The apparatus should be placed as close to the fire as possible to reduce time, effort, and the length of the lead out. This requires a coordinated effort between the driver and the Officer. The driver should:
 - 6.2.1.1 Place the Engine at a location that affords the Officer a view of at least two sides of the building



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6.2.1.2 Place the Engine at a location that allows the Truck Company tactical access to the building, usually the front

6.2.1.3 Place the Engine in a location that allows additional Engine Companies to lay supply lines to supply water

6.2.2 The driver should be completely familiar with all equipment on the apparatus and hose bed layouts. The driver must monitor how much hose has been removed from the hose bed, what diameter hose is being used, and what nozzles are attached to those hose lines to supply the proper operating pressure.

6.3 Nozzleman

6.3.1 The nozzleman stretches the first length of hose to a safe area in proximity to the fire under direction of the Officer. The Officer orders the line to be charged after the line is flaked out properly so that rapid advancement can be made into the fire area.

6.3.2 The nozzleman never enters the fire area without water. He should bleed the air from the line before entering the area to be extinguished.

6.3.3 Before the door to the fire area is opened, the nozzleman, backup man (if available) and the Officer should all be on the same side of the entrance and remain low.

6.3.4 The line is ready to be advanced as soon as the water reaches the nozzle.

6.3.5 Once inside the fire area, move to one side of the entrance if possible since the door acts as a flue. If conditions permit, advance towards the fire without placing water on it.

6.3.6 After reaching the fire, hit the base of the fire with a straight stream, shutting off the nozzle once the fire has been put out. Note - Not all fires will be extinguished in this method. Other fire conditions may warrant the use of a fog stream, thirty degree angle stream, or utilizing the stream from a remote location. If the stream is moved from side to side or whipping motion, it should be done so in a clockwise rotation.

6.3.7 After the fire is extinguished, the Company Officer will determine the next course of action.

7.0 Single Family Dwelling Fires

7.1 All fire ground operations in all structures during an aggressive interior attack will utilize the "Vent and Enter" method when at all possible, or as described in 7.3 below.

7.2 If two personnel are initiating an interior attack, there should be two additional personnel on the outside of the structure for back-up unless there is the possibility that life hazards exist.

7.3 When the first line is charged, the appropriate windows and doors will be opened before the interior attack begins. This coordinated effort will reduce the chances of flashover, backdraft, extreme heat levels, and it will assist in the initial movement towards fire attack and citizen rescue.



7.4 Size up will be conducted in accordance with the provisions of Standard Operating Guideline O-303, Incident Management System - Command Procedures.

7.4.1 The decision on what type of attack to be made on the fire must be made based on the size-up. A "quick attack" is an operation where the first due engine stops just past the front of the structure, leads out with a pre-connected line, and attacks the fire.

7.4.2 If a "quick attack" operation is utilized, the second due Engine Company must be prepared to secure a hydrant line.

7.5 A hydrant lead out will be used at the discretion of the Company Officer when the volume of fire is such that the first due Engine Company will likely use more than 300 gallons of water.

7.5.1 The engineer of the second due Engine Company will drop a supply line to the first due Engine Company and proceed to the hydrant if the hydrant is farther than 250 feet from the first due Engine Company. If the hydrant is closer than 250 feet, the engineer from the second due Engine Company

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will skulk drag a supply line from the first due Engine Company to the hydrant and make the hook-up. The remaining crew members from the second due Engine Company should be prepared to stretch a back-up line or any other objective determined by the Incident Commander.

7.5.1.1 The engineer will check the hydrant first before breaking the hose

7.5.1.2 Tank water can be sent first when it is determined that the supply hydrant is functional

7.6 First line for an interior attack.

7.6.1 Generally advanced through the unburned portion of the structure, but not always the case. Look for the most rapid means of gaining access/control of the fire and also access/control of the staircase.

7.6.2 The typical lead-out for an involved structure is a 150 feet or 200 feet 1 3/4" pre-connect from a crosslay. For more advanced fires, the 2 1/2" pre-connect can be deployed.

7.6.3 The objectives of the first line are to:

7.6.3.1 Protect and control the open stairway (if present) to the upper floors

7.6.3.2 Position the stream between the possible victims and the fire

7.6.3.3 Commit to an aggressive interior attack in order to confine the fire

7.6.4 Second line objectives:

7.6.4.1 Advanced through the unburned portion of the structure, or as directed by the Incident Commander

7.6.4.2 Back-up the first line if it is inadequate for the main body of fire, or if multiple fires exist

7.6.4.3 Position at an upper floor for fire extension and / or overhaul

7.6.4.4 Position the line at an entrance to the basement to back-up and protect the first line during a basement fire

7.6.5 Third line objectives:

7.6.5.1 Purpose and objective usually determined by the Incident Commander

7.6.5.2 Utilized when numerous concealed spaces are throughout the structure

7.6.5.3 Utilized if a primary attack or second line bursts or is placed out of service

7.6.5.4 Covers any exposure situations

7.7 Exterior Attack

7.7.1 Objectives of the first line in an exterior attack are:

7.7.1.1 To effect any obvious rescues

7.7.1.2 To protect any exposures

7.7.1.3 To provide exterior attack on the structure

7.7.1.3.1 Line of choice as directed by the Company Officer.



7.7.2 Second line objectives:

7.7.2.1 Concentrate on another part of the exposure or second exposure

7.7.2.2 Concentrate on the fire building while the first line is protecting exposures

7.7.2.3 Add to the water flow of the first line to confine the fire to the building of origin

7.7.2.3.1 A "blitz attack" utilizing an Engine Company deck gun may be appropriate when faced with these types of fire conditions.

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7.7.3 Deck gun “blitz attack”.

7.7.3.1 Used as an initial rapid exterior attack and also provides:

7.7.3.1.1 Immediate high water flow on a fast spreading fire for 10 to 20 seconds

7.7.3.1.2 Used to slow or stop a fast spreading exterior fire, usually from a fully involved structure fire

7.7.3.1.3 Provides a rapid flow of water on an involved exposure

7.7.3.1.4 Before the first due Engine Company runs out of water, an immediate hydrant lead-out should be made, or a second Engine Company relay should be ordered

7.7.3.1.5 Used in conjunction with adequate hose lines to further confine and extinguish the structure after the “blitz attack”

7.7.3.2 Concerns to be noted for the “blitz attack ”:

7.7.3.2.1 When a possible life hazard exists and a chance for rescue is available

7.7.3.2.2 No hydrants are immediately available

7.7.3.2.3 Must be used with a solid stream only

7.7.3.2.4 Must be alert to interior attack companies

8.0 Multiple Family Dwellings

8.1 Any multiple family structure no greater than 3 stories in height. (Any structure greater than 3 stories in height may require high-rise operations).

8.1.1 Duplex, condominium, townhouse, and apartment structures are considered multiple family dwellings.

8.2 All fire ground operations in all structures will utilize an aggressive interior attack using “vent and enter “tactics.

8.3 In most cases, multiple family dwelling fires will require multiple hose lines and multiple Truck Company operations.

8.4 Size-up

8.4.1 The first-in Company Officer will attempt an exterior size-up of all sides of the structure. In most cases (due to the size of the building) a complete exterior size-up may not be possible.

8.4.2 Information will be obtained from civilians, maintenance personnel, and police concerning the location, extent of fire, and any trapped victims.

8.5 A hydrant operation will be utilized in all multiple family dwelling fires. A quick attack utilizing a preconnect will only be used when:

8.5.1 The hydrants in the complex are found inoperable

8.5.2 There are no hydrants in the immediate area

8.5.3 The involved area is on ground level and readily accessible to the Engine Company.

8.6 An interior size-up should be attempted if practical or possible. During an interior size-up, the following should be checked:



8.6.1 Most accessible means to the fire area

8.6.2 Most appropriate stairwell to reach the fire area



8.6.3 Length of the lead-out

8.6.4 The smoke, heat, and fire conditions

8.7 Request for additional help and / or orders for incoming companies via the radio.

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- 8.8 Interior attack.
 - 8.8.1 First line:
 - 8.8.1.1 Committed to the fire floor via the interior stairwell
 - 8.8.1.2 If the stairwell is not needed or available (first floor fire), the line is generally advanced through the unburned portion of the structure
 - 8.8.1.3 Objectives of the first line:
 - 8.8.1.3.1 Protect and control the stairwell and landings nearest to the fire
 - 8.8.1.3.2 Position the stream between the possible victims and the fire
 - 8.8.1.3.3 Commit to an aggressive interior attack to confine the fire
 - 8.8.1.3.4 Consider the use of 2 1/2" line if the fire appears to be well advanced at the time of arrival
 - 8.8.2 Second line (interior attack).
 - 8.8.2.1 Committed to follow the lead-out of the first line, or as directed by the Incident Commander
 - 8.8.2.2 Objectives of the second line:
 - 8.8.2.2.1 Cover additional rooms or apartments involved in fire
 - 8.8.2.2.2 Position the line to an upper floor for fire extension and overhaul. If the second line is moved to back-up the first line, the Incident Commander must be notified
 - 8.8.2.2.3 Position the line at an entrance of a basement to back-up and protect the first line during a basement fire
 - 8.8.2.2.4 If medium or heavy fire conditions are sized up, the second line should be a 2 1/2" line
 - 8.8.2.2.5 For possible extension or overhaul, the second line is typically a 1 3/4" line
 - 8.8.3 Third line (interior attack).
 - 8.8.3.1 The third line may generally be committed to the floor above the fire, or as directed by the Incident Commander.
 - 8.8.3.2 The objectives of the third line:
 - 8.8.3.2.1 Confine numerous confined space fires
 - 8.8.3.2.2 Assist with any mishaps of the first two lines
 - 8.8.3.2.3 Assist with interior exposure problems
- 8.9 Exterior Attack
 - 8.9.1 The first line objectives in an exterior attack are:
 - 8.9.1.1 Affect any obvious rescue situations
 - 8.9.1.2 Protect any involved exposures
 - 8.9.1.3 Begin an exterior attack on the fire building
 - 8.9.1.4 2 1/2" attack line is the hose of choice
 - 8.9.2 The second line objectives are:
 - 8.9.2.1 Attempt an interior attack if the first line had an effective knockdown from the exterior



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8.9.2.2 Provide a supply of water for ground or aerial operations. The first line can also be converted into a supply line if needed

8.9.2.3 Other exterior lines

9.0 Industrial/Commercial Fires

- 9.1 All fire ground operations in all structures during an aggressive interior attack will use the “Vent and Enter” method when at all possible.
- 9.2 In most cases, an interior fire may be difficult to locate. If the building is equipped with a sprinkler system, utilize the system as a way to help locate the fire, if the system is activated.
- 9.3 Most structure fires of this type may require multiple hose lines, sprinkler system connections, multiple Truck Company operations, and use of documented pre-plans, so be prepared for all of these situations.
- 9.4 Size-up
 - 9.4.1 The first due Officer will attempt to see all exterior sides of the structure. In most cases this may not be possible due to the size of most industrial and commercial structures.
 - 9.4.2 The Officer of the first due Engine Company will obtain any available information from civilians, building engineers, or police concerning location, extent of fire, and any trapped victims.
 - 9.4.3 Any industrial and some commercial structure fires must be considered as potential hazardous materials incidents.
- 9.5 Hydrant lead-outs will be utilized on all fire involving industrial/commercial fires.
- 9.6 The “fast attack” operation will only be used in special circumstances such as:
 - 9.6.1 Non-functioning hydrants are found in the complex (broken, frozen, etc.).
 - 9.6.2 No available hydrants.
 - 9.6.3 Easy access to a fire area from the Engine's location
- 9.7 Interior size-up should be attempted if practical or possible. During the interior size-up the following should be checked:
 - 9.7.1 The most accessible route to the fire.
 - 9.7.2 The length of the lead-out from the standpipe system.
 - 9.7.3 The smoke, heat, and/or fire conditions, i.e.:
 - 9.7.3.1 Light
 - 9.7.3.2 Moderate
 - 9.7.3.3 Heavy
 - 9.7.4 The condition of the roof should be assessed for:
 - 9.7.4.1 Interior visual signs of weakness
 - 9.7.4.2 Size-up from the Truck Company for roof operations
 - 9.7.4.3 If the Truck Company cannot operate on the roof, then the Engine(s) should not operate under the roof
- 9.8 First due Engine Company operations:
 - 9.8.1 Committed to attacking the fire with hand lines or heavy caliber streams.

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9.8.1.1 The first due Engine Company will initially position to the side of the structure that is most advantageous for the fire attack.

9.8.2 The objectives of the first line or heavy caliber stream are:

9.8.2.1 Position the stream between the possible victims and the fire

9.8.2.2 Position the stream to slow or stop the fire

9.8.2.3 At the discretion of the Company Officer, commit to an aggressive interior attack to confine and extinguish the fire

9.8.2.3.1 Be aware of the structural integrity and collapsing interior contents.

9.9 The objectives of the second due Engine Company:

9.9.1 At the discretion of the Company Officer or the Incident Commander commit to supplying the sprinkler/standpipe system. If possible, utilize a City of Highland Park fire hydrant for your water supply.

9.9.2 Manpower from the second Engine Company will:

9.9.2.1 Assist with the first line or heavy caliber stream

9.9.2.2 Relieve manpower on the first interior line

9.9.2.3 Provide a second line to:

9.9.2.3.1 Back up the first line

9.9.2.3.2 Provide another location to attack the fire

9.10 Third, fourth, and any additional Engine Companies:

9.10.1 Position and assignments will be made at the discretion of the Incident Commander. Staging is to be used until apparatus are deployed.

10.0 Vehicle Fires

10.1 Safety precautions to be addressed:

10.1.1 Inherent dangers of burning vehicles such as fuel, exploding tires, air bags, alternate fuel vehicles.

10.1.2 Passing traffic during extinguishment.

10.1.3 Possible electrical hazards both from the vehicle and overhead wiring.

10.1.4 Magnesium parts (water reactive materials).

10.1.5 Hazardous materials.

10.2 Size-up.

10.2.1 The Company Officer is to determine the extent of the fire.

10.2.1.1 Most small, contained fires in vehicles can be extinguished with a pressurized water extinguisher



10.2.1.2 Well involved vehicle fires will require a pre-connect

10.2.2 The Company Officer will determine the safest approach for extinguishment based on:

10.2.2.1 Position of the burning vehicle taking into account topography and wind direction

10.2.2.2 Direction and closeness of passing traffic

10.2.2.2.1 Place your apparatus between the fire and the passing traffic. Angle your apparatus to provide the maximum safety for the operator and the crew.

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10.2.2.3 Possibility of heated vehicle parts creating missiles (bumpers, wheel rings, gas cylinders, etc)

10.2.3 The overall volume of water needed will be based on:

10.2.3.1 Type of vehicle burning

10.2.3.2 Extent of fire

10.2.3.3 Amount (if any) fuel spilled

10.2.3.4 If any magnesium parts are involved

10.2.3.5 Hazardous materials being carried in vehicle or in a trailer

10.2.4 If the vehicle is well involved in fire, the initial stream should be directed from a distance using a straight stream.

10.2.5 After initial knockdown, the vehicle should be approached for final extinguishment and overhaul.

11.0 Rubbish and Dumpster Fires

11.1 Safety precautions to be addressed:

11.1.1 Location of dumpster or burning pile of rubbish.

11.1.1.1 Construction area, residential or commercial property, roadway

11.1.1.2 Exposure considerations must be included in the size-up

11.1.2 Contents of the rubbish - is it a haz-mat?

11.1.2.1 Medical waste

11.1.2.2 Industrial waste

11.1.2.3 Chemical waste

12.0 High-rise Operations

12.1 All Engine Company operations in high-rise buildings will be conducted in accordance with S.O.G. O-321.

13.0 Non-Hydranted - Relay Water Supply Operations



13.1 Water supply in areas where there are no hydrants will require an Engine relay operation to an available hydrant.

13.1.1 The relay operation will consist of one or more Engine Companies supplying the first due Engine from a hydrant.

13.1.2 During a relay operation, the first due Engine Company being supplied will always maintain a full booster tank for a back-up water supply.

13.1.3 The second due Engine Company will be responsible for supplying a four inch supply line to the first due Engine Company, and leading out to closest available hydrant.

13.1.4 If a supply line cannot be led-out due to distances, a water relay operation may be implemented.

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14.0 Reference

- 14.1 Highland Park Fire Department
- 14.2 NFPA 1710: 5.2.3 Deployment: Initial Full Alarm Assignment Capability

Approved:  Fire Chief