

**Release: 1.0**  
**Effective: 06/05/02**

**Derby Fire Department**  
**Standard Operating Procedure Number 05**  
**Engine Company Operations**

**1. Introduction**

- 1.1. This standard operating procedure applies to apparatus and members responding to Box Alarm assignments. For engine company operations, the intent of this procedure is to provide general guidelines for operating within Department Accountability and Incident Command parameters. Safety for both department members and civilians is of paramount importance and should always be the number one priority.
- 1.2. Due to the volunteer make up of the department, and the fact that response crews are usually not stationed at their respective companies, it is important that all members be fully trained in basic fire-fighting skills and tactics so that appropriate (prioritized) action will be taken as members arrive on scene. This may require engine company members not assigned engine company assignments to perform truck company functions and vice versa.

**2. Response Considerations**

- 2.1. Box Alarm Response - Knowing if the unit is first or second due prepares the engine operator and responding members for certain procedures that may be employed upon arrival. The first due engine can expect to initiate strategy and tactics according to the conditions found and to transmit the **appropriate** preliminary radio reports. The second due engine must ascertain if the first due is on scene and if not, assume those duties. If the first due engine has arrived, the second due engine will augment and assist the first engine in the tactics initiated, unless otherwise assigned by the Incident Commander.
- 2.2. The following actions and considerations are important to insure an effective outcome:
- 2.3. The driver of the engine should consult the DFD map book prior to responding, or the company officer should review it enroute, to pinpoint the exact building location, to identify cross-streets, and to locate the best hydrant. This will determine the best possible route of travel, the direction in which to enter the block/complex, and the fastest (most effective) hose-lay.

- 2.4. If no specific address is given, the first due engine should slow down upon approaching the box location in order to avoid passing the fire building. The driver should look for any indicators that might identify the location of the incident or for persons attempting to gain the department's attention. Be careful not to pass through an intersection where a turn into the block may be necessary.
- 2.5. In order to facilitate an efficient and coordinated operation, the first due engine should strive to enter the block ahead of the ladder company and from the same direction of travel. The first due engine should proceed past the incident building. This is particularly important where street width or parked cars would prevent the engine to pass the ladder apparatus to reach the desired hydrant. This order of arrival allows the engine firefighters to initiate a back stretch and accurately estimate and remove enough hose by hand to reach to entrance of the fire building and adequately cover the fire area. The engine may then proceed forward to the next hydrant. The engine may forward lay from a hydrant before the incident building and proceed to a point past the building; however, care must be taken so that the feed lines do not interfere with the placement or operation of the truck apparatus.
- 2.6. The second due engine may enter the block from the same direction behind the ladder apparatus to support a continuous water supply or may choose to enter the block from beyond the first due a work back to the first due, however, caution and coordination must be a priority to prevent blocking an access to the first due water supply. The second due engine may forward or reverse lay an additional water supply if requested or required. Communication between first, second due engine, and ladder truck must occur to coordinate approach routes to the incident.
- 2.7. Multiple Alarm Response - When responding to a multiple alarm, the engine operator should anticipate long hose stretches, the need to supply large caliber streams, and to provide relief for the Box Alarm engine companies.

### **3. Apparatus Positioning**

- 3.1. Apparatus radios, mobile radios and portable radios should be monitored while responding and at the scene. Orders or information may be received that will directly effect the placement of apparatus or the unit's operation at the scene.
- 3.2. The operator will decide where to position the apparatus once the fire location has been determined. This decision must be based on several factors, such as overall objectives, water supply, type of incident, collapse zone, the type of hose stretch to be made, and if the apparatus will block out or be blocked out by other incoming units.

- 3.3. The third and fourth-due engines will stage at an area at least one block from the incident area and remain uncommitted, to await direction from the Incident Commander

#### **4. General Procedures**

- 4.1. The company Officer(s)/crew leader(s) and engine company crews have many responsibilities that require knowledge, practice, experience and a unified team effort. A great deal of planning and training of the unit is needed. Frequent practice will lead to proficiency.
- 4.2. The engine driver/operator must have the ability to evaluate a problem and then make a sound decision to cope with it. He/she must have a working knowledge of the duties and responsibilities of all first alarm companies and how they are likely to execute their assignments under different fire conditions,. For this reason, training of the engine driver/operator must be part of an ongoing program.
- 4.3. The engine operator should remain at the pump panel when members have entered the building with hose lines off his/her engine and are in precarious positions such as a floor over a fire or in a building with heavy fire conditions. The operator should keep alert as to who, when and where members are that have hand lines of his/her engine.
- 4.4. Upon arrival of the team, the officer/crew leader should insure that each fire fighter is properly equipped with bunker gear, helmet, gloves, hood, TPASS (activated) and SCBA before initiating fire fighting activities.

#### **5. Size-up**

- 5.1. The engine company officer/crew leader should begin gathering information that will assist the crew(s) in stretching lines rapidly and accurately to the fire area:
  - a) Incident scene radio transmissions from IC-Truck Crew
  - b) Type and location of stairways
  - c) Occupants location and best means of egress
  - d) Search area for victims
  - e) Attempt to determine the seat of the fire
- 5.2. While gathering information concerning the hose line stretches for the primary and secondary attack lines, the company officer/crew leader should be alert to building occupants with information relative to persons trapped or distressed. Removing victims in immediate danger shall take precedence over advancing an attack line. Whenever possible, advancement of the attack line should be conducted simultaneously with the rescue of victims.

5.3. The selection of the size of the initial attack line shall be determined by the conditions evaluated on arrival. A back up line should be put into operations as soon as possible, preferably the next larger hose line in case the initial line cannot flow the necessary water to control the fire. (see section 7.0)

## **6. Operations**

6.1. Primary and secondary attack lines are recommended to be deployed with a crew of not less than two DFD interior firefighters per each line. Refer to DFD SOP Number 3 for Firefighter Accountability. Attack lines are recommended to be deployed according to the following priorities:

- a) Between trapped occupants and/or rescuers and the fire.
- b) Protect the primary means of egress, including the interior stairway
- c) Protect interior exposures
- d) Protect exterior exposures
- e) Fire Control and extinguishment
- f) Operation of Master Streams

6.2. Upon arrival of the nozzle team at the entrance of the incident building, the officer/crew leader should assure that each firefighter is properly equipped with bunker gear, helmet, gloves, TPASS (activated), and SCBA.

6.3. Prior to opening a closed door for advancement on the fire, the officer/crew leader must insure that no firefighters or occupants will be exposed in the hallway (or on the stairs above) when the fire attack is initiated. He/she must also identify an area of safe refuge for protection from roll-over or flash over. The attack should be coordinated with portable radio or by face to face direct communication. This is particularly true in buildings with thermal pane windows that have not self-vented.

6.4. The attack line teams must begin every interior fire attack through the door of the fire area crouched low, near the floor, regardless of conditions. After entry is made to the fire area, the company officer/crew leader can evaluate conditions and adjust the method of advance used.

6.5. Two-way radio communications should utilize short and concise wording and, as always, acknowledgment of all transmissions must be made. Conditions must be constantly monitored of environment, structure and crewmembers during advance of attack lines.

6.6. Communication during the fire attack will be difficult at best due to the noise of streams striking walls, ceilings and furnishings. However, the company officer/crew leader must monitor the portable two-way radio for critical

information that may effect the crew. This includes ventilation delays, water supply difficulties, collapse potential, and "may day" transmissions. Communication within the crew should be made directly via visual, verbal or personal contact means. The I. C. shall be kept up to date on the progress of the crew, updates should include but are not limited to: difficulty or failure to complete the assignment, the assignment has been completed or the teams location has been changed and the reason why.

- 6.7. Upon darkening down of the main body of fire, the crew should begin checking for extension and initiating a fog or broken stream to assist in removal of heat & smoke conditions.
- 6.8. The high level of physical activity required for fire fighting is well documented and the debilitating effects in fire fighters must be recognized by officers and crew leaders, who should evaluate the members of their crew(s) during and after the fire attack and promptly relieve individual members or request relief of the entire crew(s) through the Incident Commander.

## **7. Guidelines for Selecting "Attack" Lines**

7.1. At any building fire, the firefighting strategy and the selection of hose lines must be based on the unique conditions encountered, both upon arrival and as conditions change. Following is a guideline to assist in the initial selection of "attack" lines:

7.1.1. PRIVATE DWELLING – One or two family with possible basement or attic apartment:

0 to 25% involvement

1<sup>st</sup> attack line 1¾"

2<sup>nd</sup> attack line 1¾"

25% to 100% involvement

1<sup>st</sup> attack line 2½"

2<sup>nd</sup> attack line 2½" or portable monitor

7.1.2. MULTIPLE DWELLING – Three or more family dwelling with possible basement apartments and larger apartment buildings:

Single dwelling unit fire

1<sup>st</sup> attack line 1¾"

2<sup>nd</sup> attack line 1¾"

Multiple dwelling units, or fire on upper floor driven by high winds

1<sup>st</sup> attack Line 2½"

Greater than 50% involvement

1<sup>st</sup> attack line 2½”

2<sup>nd</sup> attack line 2½” or portable monitor, fixed, apparatus mounted monitor

- 7.1.3. COMMERCIAL – Row stores one or two story, big box store (strip mall, taxpayer).

Smoke visible

1<sup>st</sup> attack line 2½”

2<sup>nd</sup> attack line 2½” or portable monitor

Fire visible

1<sup>st</sup> attack line 2½”

2<sup>nd</sup> attack line 2½” or 2<sup>nd</sup> portable monitor with 2 supply line

Fixed, apparatus mounted monitor

- 7.1.4. INDUSTRIAL – Factory type, mill construction multi-story

1<sup>st</sup> attack line 2½”

2<sup>nd</sup> attack line 2½”

Back-up line 2<sup>nd</sup> 2½” or portable monitor, if possible

*Greater than 25% involvement will require going directly to portable monitors or fixed, apparatus mounted monitor.*