BY FRANK C. MONTAGNA

The company officer makes a size-up when he arrives at the scene of the fire. Based on this size-up, he then decides which line to stretch and where to stretch it, which ladders are needed and where to place them, the best route to the fire, where the victims might be found, and what help is immediately necessary. His department's standard operating procedures (SOPs) help him to make these decisions.

THE CHIEF'S SIZE-UP CONSIDERATIONS

When the chief comes in, he, too, makes a size-up. His expanded size-up includes exposure problems, additional units needed, collapse potential, and the need for relief. He also evaluates the factics initiated by the first-in units and either sup-

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ports these efforts or, if conditions warrant, changes them.

When the chief pulls up to the scene of a working fire, he should take a few moments to collect his thoughts. Unless there is an obvious need for his immediate intervention, he should size up the building, noting the units on the scene, ascertaining where and how they are engaged, and determining whether reserve units are immediately available. It is prudent to have reserve personnel available to relieve working units, to stretch additional lines, to make additional examinations or searches, and to assist firefighters should they need to be rescued. The unit or personnel designated as the rapid intervention team (RIT) should not be used for any other purpose. If life safety dictates that the team be used, another team must replace it as soon as possible.

Positioning the Chief's Vehicle

The first-arriving chief can make his size-up before other units arrive. He can personally direct the placement of the first line and ladders. Arriving first also allows the chief to strategically place his vehicle. His is the least important vehicle at the fire and should neither block the truck's access to the front of the building nor the pumper's access to the hydrant. Parking the chief's car too close behind a ladder truck might prevent the ground ladders from being removed from the truck. Arriving



The chief should not park his car where it could interfere with operations. Parking it too close behind a ladder truck, for example, may make it difficult or impossible to remove the ladders from the truck. (Photos by author.)

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first, the chief might best position his vehicle by pulling past the building and parking close to the curb or even on the sidewalk. This leaves the front of the fire building and the hydrant free and doesn't hamper the movement of apparatus in the street.

The first-in chief should not be locked up in his car talking on the radio with the dispatcher or drawing on a command control chart. He needs to be in the vicinity of the fire, feeling the wind, the heat, and the cold; seeing the smoke; and personally watching the progress his units are making. He needs as much first-hand information as possible to avoid becoming a victim of tunnel vision himself. He needs accurate information to make intelligent decisions. Ted Goldfarb, in "Isolate the Incident Commander No More" (Fire Engineering, June 1996), correctly points out that the incident commander can personally gain a

wide spectrum of knowledge in a few seconds, whereas receiving the same information by radio might take several minutes. In addition, the information he receives by radio might be coming from a firefighter who has succumbed to tunnel

vision, and it may not be accurate. If every fire were over when

the first-due en- The chief should not be locked in his vehicle away from the gine officer fire scene.



Among the observations the chief must make while sizing up is to determine whether ventilation has occurred or is in progress.

announced that he "had" the fire, then firefighters would spend much less time chasing extending fire than they do. The chief processes information from many sources, and he may need to enter the fire area and evaluate it before placing the fire under control.

Make his presence known. Once he has done this quick size-up, or as he is doing it, he should announce his presence to the units on the scene. He can do this by simply contacting the first-due engine or truck and asking, "How are we doing?" or "What have we got?" His presence over the airwaves announces to all on the scene that the chief is present and is in charge.

He should also announce his arrival to the dispatcher. Announcing his presence establishes him as incident commander and makes him responsible for the incident's outcome. The firefighting forces inside should now direct their communications to him, as should the dispatcher. From this point on, he is responsible for initiating and implementing strategy and tactics. (For additional information on taking command of a fire, see "Command Presence," Vincent Dunn, Fire Engineering, May 1987; he addresses the necessity of establishing command presence and explains how to accomplish it.)

Tactics in Progress

Occasionally the chief finds that tactics, initiated by the first-arriving units, are less than desirable. He then must decide if he can live with these tactics or if he must change them. Consider the following scenario: An engine company lieutenant stretches a 1½-inch line to a fire in a supermarket even though his department's SOP dictates that a 2½-inch line be stretched to all commercial occupancy fires. The engine officer, however, feels that this fire is small and that he can "get" it by quickly attacking with the smaller line. Unfortunately,

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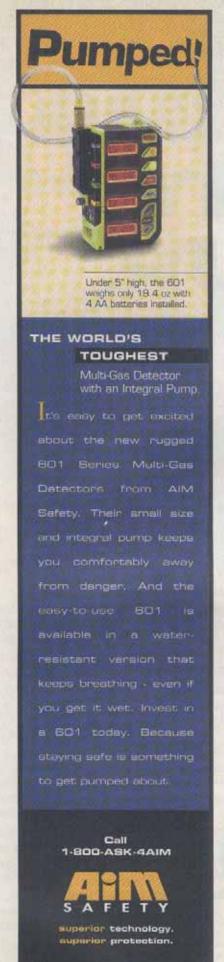
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however, the fire proves to be larger than the engine officer suspected, or a problem with the hydrant caused a delay in obtaining water, and, consequently, the fire spreads. Now, the 1%-inch line is stretched to the door of the store and is about to be charged.

The chief then must decide whether to allow the attack to proceed with the smaller line or to have the company drop its 1%-inch line and stretch the prescribed 2%-inch line. Management principle might suggest that the chief correct the mistake immediately, but doing so at this time would mean an even greater delay in putting water on the fire.

On the other hand, if he allows the smaller line to attack, it might be overwhelmed by the fire. He must consider the ramifications of the small-stream attack. How much longer will it take the charged 1%-inch line to quench the flames? How much deeper into the burning building must the firefighters advance the smaller line as a result of its shorter reach? Would it be wise to order the initial line to take a defensive position while waiting for another company to stretch a 2%-inch line, or will the delay result in rapid fire extension and a larger property loss, or even a loss of life? Faced with such a dilemma, you might have a good 10 seconds in which to make your decision. Which would you choose?

Entering the Building to Search

When the first to arrive at the scene, the chief might be tempted to enter the building to search for victims or fire. If he perceives a life to be in immediate danger, he will naturally try to save it, even though he may be the only firefighter on the scene. While his is a natural reaction, an interior rescue attempt could be ill-advised at this time. The chief is not equipped to make a search. He has no hoseline for protection or a ladder for escape, and no one is there to help him should he encounter trouble. Under such conditions, a rescue attempt by the chief might constitute an unwarranted risk, one that he would not want his firefighters to take. He must realize his limitations and not become one of the victims by placing himself in a position where he must be rescued. Although life in immediate danger demands immediate action, the chief as well as all firefighters must realize that just because someone needs to be rescued, it does not necessarily follow that he can be rescued. Initiating sound basic firefighting operations will best protect all on the fireground. It allows rescues to be made and the fire to be extinguished safely.

If the chief arrives just after the first-in units, he will have time to make his size-up while the first line and ladders are being placed. He can intervene in this placement at any time but should not have to in most cases. Prior training enables the companies to set up for most routine fires without his intervention.

Assessing the Status of the Fire and Operations

- Fire location. The chief must try to determine the fire's location. His knowledge of building construction should enable him to mentally undress the building and, in doing so, predict the likely directions of fire spread. What he cannot determine visually from the exterior he must learn from his firefighters inside the building.
- Water supply. He should consider the water supply. Is there a continuous supply of water, or is the engine company working off its booster tank? Is the supply adequate to extinguish the fire, or will it have to be augmented? What if the primary water source or pumper fails? Is there a backup? Are other pumpers positioned on a hydrant or other water source, and are they ready to supply water?

If the water supply must be augmented, he must ensure that the necessary resources arrive in time. He should observe the exposures and determine whether they need immediate investigation or protection. Are the apparatus well-positioned? If not, can they be moved? This quick size-up can be done as the chief steps out his car and walks toward the building. It should not take long. He must determine what the fire conditions are, what the potential for spread is, and what additional resources are needed to control and extinguish the fire.

• Obtain information from working companies. The chief will need additional information from the working companies to effectively manage the fire. He should contact the engine and truck officers to determine the following: Has the fire been located? Is water being applied to it? Are there impediments to getting water on the fire? Is forcible entry a problem, or are the rooms so cluttered that the line can't be advanced? The units moving in on the fire should tell him how much fire is present. For example, Is the room filled with fire? Is the whole floor burning? Is there intense heat with no visible fire? This information will help the chief decide if he has enough resources on the scene, if he must call for additional units, or if he must change his strategy.

The chief must be aware of the areas searched and ensure that the search is complete and thorough. The truck officer should inform the chief of the status of the searches. Is the primary search on the fire floor completed, or will it be delayed because of heavy fire in the rear of the building? Has a secondary search been conducted, or will all searches be delayed because several rooms are filled to the windows with boxes of old newspapers? The latter condition might warrant assigning more personnel to search. Sometimes more than two searches will have to be made. If the area is complex or cluttered, it may take more than two searches to ensure thoroughness. If a family member tells the chief that someone is missing, he may have to order additional searches even though both the primary and secondary searches had been performed and proved negative. Firefighters other than those who conducted the primary search should perform the secondary search. A

victim missed on the first search might well be missed again if the same firefighters perform the secondary search.

Sometimes it is necessary to search the room with a shovel. If the fire condition was intense, there may be little left in the room that is recognizable. Anyone trapped in this total burnout will at best resemble a mannequin or doll or even have been reduced to just so many charred body parts. It may be necessary to sift through the rubble and ashes for hard-to-identify body parts. Using a shovel will allow the firefighter to remove the debris right down to the bare floor. In this way, a small victim hidden by rubble or a badly burned, barely recognizable victim can be located.

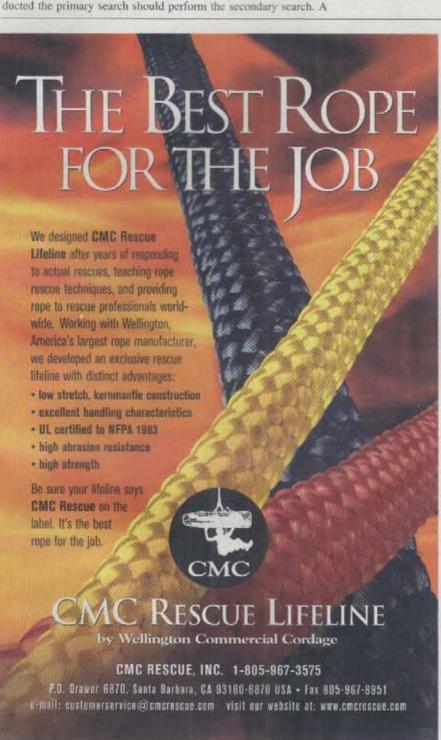
PROCESSING INFORMATION

The chief, unless he arrives first or simultaneously with the other units, faces circumstances different from those faced by the first-arriving officers. Time has passed since the first units have made their size-up and started their attack on the fire. The hoseline is stretched. Firefighters have placed and are climbing ladders, making searches, and venting the fire. They may have the fire knocked down, or it may still be raging.

The first-in officer, now inside directing the advance of his company, can no longer see the exterior of the building. He cannot see the intensity of fire blowing out of a window or note changes in the color of venting smoke. Engulfed in blinding smoke, his vision is obscured as he attempts to perform his narrowly defined task, moving his line down a hallway or conducting a search of the smoke-filled building. These tasks require concentration and an awareness of his immediate surroundings, but the company officer is in no position to observe the overall effect his attack is having on the fire. An officer moving in with the line and knocking down the visible fire in a particular apartment could easily think that the fire was extinguished. He could be wrong.

The engine officer might not know that fire has extended up the pipe chase to the floor above or to the cockloft or that it has autoexposed to the floor above him. He might not know that the fire actually started in the cellar and is now blowing out of the cellar windows and consuming the floor joists under his feet. The truck officer might not know that extending fire has cut off his means of egress. Unavoidably deprived of an exterior view of the building and narrowly focused on their particular task, each suffers from tunnel vision.

To notice this fire extension, an officer would have to be outside the fire building, not inside with his company, or he must be receiving reports from others who see the changing conditions from their vantage point. The officer moving a line down the hallway, however, is not ensured of accu-



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Personal entry must be used sparingly.

rately receiving radio transmissions. Neither is he always able to deliver the transmissions necessary to run the fire safely and effectively. Frankly, his hands are full putting out the fire and keeping his firefighters safe. The noise and confusion surrounding an advancing line, the sounds of water against plaster, power saws cutting the roof, and the metal-on-metal sound of doors being forced might well prevent him from receiving a crucial message. To effectively manage this fire, the incident commander must be in a position to perceive the need for additional units and be able to call for them. Mask-equipped and physically engrossed in the firefight, the company officer is at a distinct disadvantage. On the other hand, if he takes a position outside of the building acting as incident commander, his firefighters are not receiving the benefit of his direct supervision.

- Positioning additional units. The chief must know where to strategically place additional units to stop the advance of the spreading fire. He must also be in a position to perceive the need to pull out his units should the hazard to them increase to such a point that the risk of an aggressive interior attack will not be worth the benefit. He must constantly perform a risk-benefit analysis and be willing to change his tactics according to the changing conditions.
- Smoke. The chief officer should be experienced. He must recognize when the color of the smoke emanating from the windows indicates that the room is about to light up and must know how fire travels in a particular building as well as what the present assignment is capable of accomplishing. He must monitor the attack and decide if progress is being made or if it is a lost cause. When the engine officer radios that the fire is knocked down, the chief outside should be looking for the telltale smoke whitened by steam, indicative of water on the fire. If the smoke remains dark and nasty, or if fire is still venting, something is amiss. The engine officer's report that the fire is knocked down is not accurate, and the chief had better find out why.
- Structural collapse. The chief must recognize the signs of structural collapse. He must process information from the firefighters on the scene and piece this often disjointed information together. From this information and from what he can see, and what he has experienced at past fires as well as what he has learned from his studies, he must perceive the danger and make a decision. If he decides that the building is not safe, he must pull everyone not only out of the building but out of the collapse zone as well. Then he must make sure they do not reenter the danger zone. All of these skills and this knowledge take time to acquire. The more fire experience the chief has had, the more likely he will perform his job well.
- Pursuing needed information. If the needed information is not forthcoming from the operating units, the chief will have to ask for it. He must be persistent, since he may not receive an immediate answer from all units on the scene. At the same time, he must be patient. It takes time to get a line into position or force a door. It takes time to search or vent a roof. The chief must remember that time seems to slow down for him as he is waiting for the line to be charged, a door to be forced, or a search to be completed. A minute

spent waiting in the street for a response can seem like an eternity. Time, however, does not slow down for the interior firefighting forces. Constantly badgering for answers will frustrate the firefighter or officer trying to perform a task and will not speed up the process. The chief should be experienced enough to realize that some things just take time, but at the same time he must ensure that all information gets to him in a timely manner.

If the chief cannot contact an officer or firefighter or understand a radio transmission, he should try to contact a unit or firefighter operating near the unresponsive firefighter or try using a different radio. His radio or the radio of the firefighter he is trying to contact might be defective or inadequately charged. To remedy this situa-

tion, the chief can send a radio-equipped firefighter to gather the required information and have him relay the message and report the response back to the chief. The chief must also consider the possibility that the firefighter did not respond because he was in trouble or injured. Such a firefighter must be located and assisted if necessary. Any indication of a missing firefighter must trigger an immediate roll call and search. After his initial size-up, and after calling for any additional needed units, the chief becomes an information processor. He hears all radio transmissions and enters them into the computer that is his brain. The color and intensity of the smoke and flame are entered into his biological personal computer. He subconsciously reviews all of his past fires and all that he has studied. He

compares his database of past fires with what he sees and hears at this fire and issues orders to support or change present strategy and tactics.

• Providing relief. He must determine if the units actively attacking the fire need relief or backup, and he must be ready to supply either as the need arises. He must be proactive. When a unit needs relief, it is needed now—not in five or 10 minutes when the relief companies arrive. A unit pushing a line into the cellar to extinguish heavy fire there needs backup now. It is too late to call for additional units when the first-due units' PASS alarms are sounding or when their egress is cut off by spreading fire. Additional units must be on hand and ready to go before they are needed.

The chief must relieve his companies before they are too debilitated to continue the firefight. The weather, the dehydrating effect of bunker gear, the length of time they have been working, and how hard they have been working at the present task as well as at their prior activity must be considered in the decision to give relief or assistance. If a company has just come from a previous structural fire and is now working hard at the present fire, early relief should be considered, even if they don't want it. Company pride or the excitement of the moment may cloud their judgment. As a result, they may not request relief and may even resist it. The chief must be perceptive enough to relieve them. Relieving firefighters early means that they will be available to him later in the fire or later in the day to go to work again. Not relieving them may mean exhaustion and injuries that could result in the loss of their services. The chief must also consider whether he needs to be relieved. He may not be pulling hose or forcing doors, but he, too, is suffering the debilitating effects of smoke and heat. Unfortunately, the fire does not always cooperate with the chief's plan to relieve his firefighters.

A chief may have the personnel available for relief or backing up the engine company but be prevented from doing so. At a cellar



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fire in a two-story multiple dwelling I was commanding, the first engine was operating in the cellar on a large area of fire. I wanted the second-due engine to back up the first engine, but a report of victims trapped on the rear fire escape and threatened by venting fire necessitated that the second line be used for their protection. The third line had to be stretched to cover fire extending out of a first-floor apartment and up the interior stairs. By the time the fourth engine arrived, the first engine needed relief, and their PASS alarms were sounding. I relieved the first-due engine with the fourth-due engine, and they completed extinguishment in the cellar. I never did back up the first line even though it was my intention to do so.

FIRSTHAND OBSERVATION OF CONDITIONS

At times, the chief will have to reconnoiter himself. There is no substitute for a firsthand observation of conditions inside the fire building. Briefly entering the building for a firsthand view will give a better perspective of the firefighter's condition and the need for relief. It will show the chief firsthand the severity of the fire and smoke condition and whether or not progress is being made. Personal entry, however, must be used sparingly.

Taking a walk around the building will show the chief the conditions at all of the windows and reveal possible exposure problems. Observing the siding of a house may disclose the path of extending fire. Smoke pushing out from under aluminum siding or a dry stucco

wall on a rainy day may indicate that fire is spreading under the siding. This personal exterior survey will also show the chief the suitability of the rear and sides of the building for apparatus, stream, or ground ladder placement. He will see whether adequate ladders have been placed. Although it is important for the chief to receive reports from firefighters assigned to the roof and the rear, these reports do not replace "walk-around" when it is feasible.

CHIEF'S LOCATION

What is the chief's position at a fire? It varies with the structure and the fire. There are, however, some basic guides to follow. Initially, the chief's position is in front of and close to the fire building. When he arrives, he must establish a command post. As previously mentioned, he should not be locked in his vehicle away from the front of the fire. Depending on the complexity of the fire, it may be advisable to physically set up and announce the location of the command post. Establishing a formal location for the command post will serve as a focus for all units/agencies reporting to the scene and create a reference point for exposure designation at complex operations. The more complex the incident, the more useful the ability to diagram the fire and track personnel and resources. At less complex incidents, the chief's standing in front of the building will suffice as a command post [see "The Portable Command Post: 'Command Friendly'" by Ted Goldfarb (Fire Engineering, September 1993) for information on the use of the portable command postl.

Positioning himself in front of the fire building allows the chief to get an overall view of the fire's progress while still being in a position to make quick forays into and around the building. As the fire or building increases in size and complexity, the chief will have to step farther back to get the overall picture. At a private dwelling, for example, the chief should be in the front of the building. From here he can quickly get a view of the sides and, if he deems it necessary, step into the fire area to personally monitor progress and operating conditions.



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At fires in larger buildings, it is possible that a position in front of the building will not allow the chief to observe fire conditions. If, for instance, the fire is in the rear of a multistory apartment building, the chief may see little, if anything, from the front; he might better supervise operations by positioning himself on the floor below the fire. From here, he can ensure communications with operating companies and will be able to personally monitor progress and operating conditions. He may even be able to view the rear of the building by looking out a rear window or standing on a rear setback. Once the chief is inside, however, it is important that a capable and experienced firefighter, officer, or chief remains in front of the building, observing and reporting conditions there directly to him. This firefighter, the eyes and ears of the

chief, must inform the chief of the presence of incoming units and relay his instructions to them.

In a high-rise building, the chief should set up his command post in the lobby or fire control room for overall command of the fire. From here, he may be able to control the heating, ventilation, air-conditioning, and other building systems; receive advice from building personnel; and use the building's communication system. Additional chief officers will need to be positioned closer to the fire to direct the attack and stage resources below the fire. If the building is a one-story factory or other commercial occupancy, the chief should be in front of the building, far enough away to get an overall view. The sizes of some of these buildings may not always make this possible. If the fire is such

that its complexity, its size, or the hazards involved in fighting it may be beyond the first chief's span of control, it is time to call additional chiefs to the scene and to sector off the building. If the building is a multistory commercial building, it may be wise for the chief to take a position on the floor below operations. Again, he will need to be fed information from the exterior.

It is true that no two fires are the same. It is also true that no two buildings are the same. Even buildings built identically can vary as a result of occupancy type, renovations, or damage. The wise chief will assess each situation prior to picking his position at the fire. His department's SOP can make the choice of position easier for him, but it cannot eliminate the need for his evaluating each situation individually. The City of New York (NY) Fire Department (FDNY) published such an SOP for its chief officers. FDNY Division Circular order #36, published in 1978, offers advice for battalion chiefs in fire situations. This advice covers not only positioning but also communications and guidelines for calling additional alarms. It is not meant to be followed blindly but as a general guide. It covers most typical buildings found in the five boroughs of New York City.

The chief officer makes life-and-death decisions daily, based on incomplete information at best. A skilled, trained, and experienced chief officer is needed, because he has the knowledge and ability to gather quality information for decision making and will make the best use of this information and of the firefighting forces.

When the chief is on the fireground, the decisions he makes are his alone. Even if he elicits expert advice on an exposed propane storage tank or on the construction of the fire building, the ultimate responsibility for a decision rests with him. If the propane tank explodes or the building falls down and firefighters or occupants are injured as a result, all eyes will turn to the chief—not to his advisers. His advisers will have stepped back into the crowd, silently shaking their heads at the chief's poor judgment.





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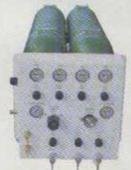
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