

**IRIC AND RIC OPERATIONS
Table of Contents**

<u>Department Information</u>	<u>Section</u>
Table of Contents	900.00
Terminology	901.00
Introduction	902.00
IRIC “Two in –Two out”	903.00
Accountability	904.00
Trapped, Injured or Missing Personnel	904.00
IRIC / RIC Situational Awareness	905.00
Communications	905.00
IRIC Operational Guidelines	906.00
Tools and Equipment	907.00
RIC Operational Guidelines	908.00
RIC Equipment Cache	908.00
RIC Leader	909.00
RIC Group Supervisor	909.00
High Rise RIC Operations	910.00
Softening the Structure	911.00
RIC Search Techniques	912.00
Victim Removal - Firefighter Drags and Carries	913.00
References	914.00
Appendix A	915.00
Appendix B	916.00
Appendix C	917.00

TERMINOLGY

A.W.A.R.E. – An acronym used for deployment/rescue crew to organize operation:

A: Air- Air supply remaining in the SCBA bottle

W: Water – A charged hand line to enforce a defendable space/area for victim(s)

A & R: A portable radio for members and assess victim's ability to communicate

E: Extrication – Necessary tools/equipment needed to remove victim.

E.S.C.A.P.E. – A fireground communications acronym used to help pass consistent and relevant firefighter survival information:

E: Engine/Truck Assignment – Provide apparatus ID, Name and/or Assignment

S: Situation – Provide situation assessment (lost, trapped, entangled...)

C: Conditions – Provide environment conditions, "situation awareness"

A: Air Supply – Provide air supply amount in SCBA

P: Position – Provide location, description of surroundings or landmarks

E: Escape Plan or Efforts – Provide escape plan or efforts used in firefighter survivor techniques, (firefighter may choose to shelter in place).

FIREFIGHTER DOWN, FIREFIGHTER MISSING/LOST, FIREFIGHTER TRAPPED or "**MAYDAY**", – Clear text terms used for radio communications to notify personnel on-scene at an emergency that a firefighter accident or emergency has occurred. This activation can be transmitted by an individual in need of immediate life threatening help; supervisor who cannot account for personnel; **ANY** member who has witnessed or confirmed that firefighter(s) is lost or in danger.

HAZARD AREA/ZONE – Area of an incident and the immediate surroundings in which exposure to hazardous conditions is likely to occur. Hazardous conditions include fire, smoke where SCBA's are required, potential structural collapse, hazardous materials release, falling debris, confined space and trench rescues. The IC will identify all hazard areas and expand or update as needed during the incident.

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH) – Any atmosphere that poses an immediate hazard to life or produces immediate irreversible debilitating effects on health. Atmospheric concentration of any toxic, corrosive or asphyxiate substance that to an unprotected person, poses a threat to life, or causes adverse health effects, or interferes with the ability for escape. This includes, but not limited to: Interior structure fires, high rise fires, hazardous materials, building collapse, trench rescue and confined space rescue.

INCIPIENT FIRE – A fire limited to materials initially ignited, without excessively hot temperatures and without oxygen significantly reduced (cannot be below 19.5%); a fire that can be controlled by a fire extinguisher, Class II standpipe system (non fire department attack lines) and without the need for PPE. Any fire beyond this phase is to be considered an IDLH atmosphere.

INITIAL RAPID INTERVENTION CREW (IRIC) – Meets the required OSHA 2in / 2out mandates. Two members (part of the initial response) positioned in a “stand-by” situation, to be used as a temporary rescue team for the first arriving company engaged in fireground operations in an IDLH or potential IDLH atmosphere. One IRIC member must be dedicated to tracking and accountability of interior personnel. This function is to maintain contact via radio, visual or tag line of entry team(s), account for location, work cycle, air management and initiate firefighter rescue. The second member outside the IDLH may be assigned to additional duties such as: Incident Commander, apparatus operator, and adjunct/aid. This individual must be able to perform assistance or rescue activities without jeopardizing the safety or health of any of the personnel working on the incident. **Refer to Appendix A for Flow Chart**

PERSONNEL ACCOUNTABILITY REPORT (PAR) – A rapid **accountability** of all personnel assigned to crews, groups, division or branches that are working in the hazard area and assessment of adequate exit air supply. For the Division Supervisor, a PAR is an accounting for all crewmembers of all companies assigned to his/her division. For the company officer, a PAR is an accounting of all crewmembers assigned to his/her company. Reports should be conducted face to face with the division or company whenever possible. Example: Fire Attack from Division 3, requesting a PAR – “Fire Attack, PAR of 3, air is full”

PAR is recommended under the following situations:

- Any report of a missing or trapped firefighter
- Any change from offensive to defensive fire attack
- Any sudden hazardous event – Flash Over, Back Draft, Collapse, Mayday – etc.
- As companies report an all clear and fire under control
- At every 30 minutes of elapsed time
- Any time the Incident Commander deems necessary

P.P.P.N. – A situation status report acronym used while performing fireground operations within the hazard zone.

- **P – Personnel/Air**
- **P – Position/Conditions**
- **P – Progress/Actions**
- **N – Needs**

RAPID INTERVENTION CREW (RIC) – A crew or company designated to stand by in a state of readiness to perform a rescue effort of firefighters. This “Formal” designated crew of a three or more with a (Captain-RIC Leader) will relieve or combine IRIC through a face-to-face briefing. An exchange of information will take place between IRIC and RIC Leader.

RESCUE EXCEPTION - per CFR 1910-134(g)(4)(iii) and CCR Title 8 sec5144 (g)

The only exception to the “Two-in / Two-out” rule is when the first arriving personnel determine that their immediate entry into the hazard area is necessary to save a life or prevent serious injury. When the “life-saving emergency rescue” exception is invoked, the circumstances must be investigated and documented on a Department “Rescue Exception Report” and submitted to the Department Emergency Services Chief.

RIC GROUP SUPERVISOR – This group supervisor is a functional position with the responsibility for supervising one or more RIC’s. This individual is to remain outside the structure or hazard area and manage the RIC Group, maintain contact (if possible) to the downed member(s) via EMER Channel, track accountability and air management of personnel engaged in RIC Operations.

RIC LEADER - The RIC Leader is normally a Company Officer who will report to the RIC Group Supervisor if established. The RIC Leader will command and supervise the RIC each RIC established will have a RIC Leader.

RIC STATUS BOARD – A board used to document the entry / exit and SCBA air status of personnel operating in the hazard area. (see appendix)

RIC TACTICAL CHANNEL – The tactical channel requested by the Rapid Intervention Company(s) and the IC or Rescue Group Supervisor to monitor rescue progress and communicate among the rescue personnel.

INTRODUCTION

NFPA 1500 AND 1561 OVERVIEW

In 1987, the National Fire Protection Association adopted NFPA 1500, Standard on Fire Department Occupational Safety and Health Program. This standard has been revised over the years and is a broad-based national standard which addresses firefighting safety in fire ground operations, as well as a number of safety and health issues. NFPA Standard 1561 has also been revised and establishes guidelines for Emergency Services Incident Management Systems.

One of the most important issues adopted by the NFPA was personnel accountability at the scene of emergencies. The North Zone has developed firefighter emergency guidelines and incorporated additional firefighter safety measures, emergency announcements, and accountability into the Incident Command System to ensure compliance with NFPA standards.

The NFPA 1500 and 1561 Standards contain specific requirements regarding accountability of members including but not limited to the following:

- Written guidelines shall be established that provide for the tracking and inventory of all members operating at an emergency incident.
- All members operating at an emergency are responsible to actively participate in the accountability system.
- The Incident Commander shall be responsible for overall personnel accountability for the incident. The Incident Commander shall initiate an accountability worksheet at the beginning of the incident and maintain the system throughout the operation.
- The Incident Commander shall maintain an awareness of the location and function of all companies assigned to an incident.
- Branch Director, Division, and Group Supervisors shall directly supervise and account for companies operating under their command.
- Company commanders are accountable for all company members: company members are responsible to remain under the supervision of their assigned Company commander. Members shall be responsible for following the personnel accountability system procedures, which shall be used at **ALL** incidents.

The Incident Command System shall provide for additional accountability based on size, complexity or needs of an incident; this can be accomplished by reducing span of control.

- The Incident Command System shall provide for control of access to the incident scene.
- The North Zone agencies shall adopt and routinely use a standard personnel identification system to maintain accountability for each member assigned to an incident.
- The Personnel Accountability System shall provide an accounting of all members once on scene of the incident.
- The Incident Command System shall include standard operating guidelines to evacuate personnel from an area where an imminent hazard is found to exist and to account for their safety.
- The Incident Command System shall prioritize the staffing and development of RIC, dependent on the severity and/or anticipated growth of the incident.

The following “**Two-in/Two-out**” rule is adopted and adhered to in the North Zone.

The basis for the “Two-in/Two-out” rule is found in [29CFR 1910.134(g)(3)(i) through (vi)] and [CCR, Title 8, Section 5144(g)(3)(A) through (F)]. At a minimum, one person must be outside the IDLH condition. There must be visual, voice, or signal line communication between the personnel in the IDLH condition and the personnel outside the IDLH condition. [29CFR 1910.134(g)(4)(i)(ii)(iii)] and [CCR, Title 8, Section 5144(g)(4)(A)(B)(C)]. For interior structural fire fighting, at least two personnel shall enter the IDLH condition and remain in visual or voice contact at all times. At Least two personnel shall be located outside the IDLH condition. All personnel in an IDLH shall wear an SCBA.

This will be considered IRIC/Initial Attack RIC in the North Zone

Note: One of the two personnel located outside the IDLH condition may be assigned to an additional role, such as Incident Commander, Safety Officer, etc. as long as this person is able to perform assistance or rescue activities without jeopardizing the safety or health of any of the personnel working on the incident.

Note: Nothing in this rule is meant to preclude personnel from performing emergency rescue activities before an entire team has assembled.

Rescue Exception- per CFR 1910-134(g)(4)(iii) and CCR Title 8 sec5144 (g)

“Life-Saving Emergency Rescue” – The only exception to the “Two-in/Two-out” rule is when the first arriving personnel determine that their immediate entry into the hazard area is necessary to save a life or prevent serious injury. When the “life-saving emergency rescue” exception is invoked, the circumstances must be investigated and documented on a Department “Rescue Exception Report” and submitted to the responsible Department Chief Officer.

Firefighter safety is a primary concern at all incidents. The rescue of trapped, injured or lost firefighters is especially time sensitive. An immediate and organized search and rescue response must be implemented to take advantage of the very limited survivable time elements. The goal is to have properly equipped and trained personnel available to take immediate action to rescue injured, lost, or trapped firefighters.

The basis for incident safety and Firefighter Accountability can be found in NFPA 1500, 1001 and 29 CFR 1910.134. These rules are covered in detail in Zone EOM policies 601.01 and 601.02

Past incidents and studies have shown that for a firefighter rescue incident, no fewer than 12 firefighters are needed to rescue 1 downed firefighter. Even the United States Fire Administration states, “Rescue teams with only 2 firefighters can be dangerously inadequate.”

In two incidents in particular, the Brett Tarver incident in Phoenix and L.A. City’s Whittier incident, it took at least 10 fire companies to perform the rescue. Tarver did not survive, L.A.’s downed firefighter did.

The Phoenix Fire Department conducted over 200 rapid intervention drills and concluded the following:

- 12 firefighters were needed to rescue 1 firefighter,
- Approximately 21 minutes were needed to rescue a downed firefighter,
- During the event, 1 in 5 rescue members got into trouble themselves,
- For every **“MAYDAY”** reported on the fireground, there are usually more that follow, and even more near misses that go unreported.

IRIC (Initial Attack RIC) – “Two-in / Two-out”

At every incident, the Incident Commander and Company Officers must determine whether IDLH conditions exist. If IDLH conditions are found to exist, entry into the hazard area will require at least four (4) personnel on the scene (“Two-in/Two-out”).



For interior structural firefighting “Two-in/Two-out” regulations require at least a minimum of two (2) personnel enter IDLH conditions and must remain in visual, voice, physical or safety guide rope/hose line contact at all times. At least two personnel must be located outside the IDLH condition fully equipped, in a ready state to immediately react and respond to rescue firefighters. One member on the outside must be dedicated to tracking and monitoring the interior personnel. This member’s function is to account for location of interior crew members. This monitoring can be accomplished by direct voice, visual, or radio contact with those firefighters operating in the IDLH atmosphere. The second member outside the IDLH may be assigned to additional duties such as Incident Commander, pump operator, aid, etc. as long as this person is able to perform assistance or rescue activities without jeopardizing the safety or health of any of the personnel working on the incident. The two members assigned to monitor outside the IDLH will be designated as IRIC. They should be considered a temporary rescue team during the initial stage of an emergency incident and not a full Rapid Intervention Crew.

As soon as resources are available, the Incident Commander should designate and assign at least three or more additional members to assume the responsibilities of a Rapid Intervention Crew (RIC) from the first alarm assignment.

Exceptions to the “Two-in/Two-out” IRIC Requirement at Structure Fires.

“Life-Saving Emergency Rescue” – The only exception to the “Two-in/Two-out” rule is when the first arriving personnel determine that their immediate entry into the hazard area is necessary to save a life or prevent serious injury. When the “life-saving emergency rescue” exception is invoked, the circumstances must be investigated and documented on a Department “Rescue Exception Report” and submitted to the responsible Department Chief Officer

ACCOUNTABILITY

Functional fireground accountability is everyone's responsibility. Ultimately, the value of an accountability system is based on its ability to track the movement of firefighters in the hot zone. Accountability systems are only as effective as the personnel assigned to control and manage them.

It is the responsibility of individual firefighters and other personnel at the incident to keep their supervisors informed of their activities and whereabouts. Freelancing of activities cannot be permitted and can lead to injury and death of firefighters.



See Appendix "C" for RIC Status Board

IRIC / RIC Monitored Accountability

In addition to the overall Fire ground Accountability System the unit assigned IRIC or RIC will dedicate a member at the entry point to track and monitor those firefighters entering the IDLH atmosphere. Their function is to account for the personnel and time of entry into the IDLH. This monitoring maybe accomplished by either direct voice, visual, or radio contact with those operating in the IDLH atmosphere.



As firefighters enter a controlled entry point, they must always remove their helmet nametag and give it to the IRIC / RIC tracking member. The IRIC / RIC tracking member will retain the helmet tags on a status board and note the time of entry, assignment, and air status. If no helmet tag is available the IRIC / RIC tracking member will note the firefighters name on the tracking board.

This member will also actively monitor interior conditions and crew advancement and location through radio traffic and PPPN's.

It will be the individual firefighter's responsibility to collect their nametag every time they leave the hazard. It is recommended, but not always possible to leave through the same entry point. In those cases where an individual has to exit using a different location then the IRIC / RIC controlled entry, they must either return to the original entry point and collect their nametag or advise IRIC / RIC by radio that they have exited the hazard.

These procedures do not preclude the responsibility of every firefighter to strictly adhere to crew integrity, unity of command and always working in teams of at least two.

Trapped, Injured, or Missing Personnel

In the event of personnel becoming trapped, injured, or missing firefighters (MAYDAY) shall follow EOM 601 and 601.01. The rescue of a trapped or lost firefighter(s) in a burning building is especially time sensitive. There is a narrow window of survivability for a firefighter who is either running out of air, out of air or trapped by an approaching fire.

Individual firefighters must not delay reporting if they become lost, trapped or in need of ANY assistance. Company Officers must also not delay the report of lost firefighters or inability to complete accountability reports. Command, Division or Group officers must always assume that the missing firefighter is lost in the building until the firefighter can be accounted for. The IC must also restructure the strategy and action plan to include a high priority rescue effort.

Personnel who are lost or down should take the following actions:

First, most of the reported “near misses” have found that the need for help was never given or delayed due to denial of the situation. Firefighters are known not to admit being lost or unable to fend for themselves which create a time delay in the rescue process.

- It is imperative that if you find yourself in the need of help for anything, utilize any means to communicate.
- If equipped with a radio, immediately announce “MAYDAY, MAYDAY FIREFIGHTER DOWN”, and transmit their situation, location, and number of personnel involved. Activate the orange EMER button.
- **DO NOT PANIC....** Establish an immediate orientation of your surroundings. Communicate a description of the area, sounds of nearby activity, or any other information that might direct rescue crews to their location. Be prepared to give your E.S.C.A.P.E. report. Control use of air through breathing techniques. **Activate your PASS**, however when transmitting updates on your portable, shut off the PASS for a more clear transmission, then reactivate.
- Utilize the **E.S.C.A.P.E.** acronym. If used this will provide the IC with consistent and relevant survival information.

EXAMPLE: IC – **MAYDAY, MAYDAY, MAYDAY:** Engine 2411, Firefighter Jones, I’m lost in heavy smoke and high heat. I’m unable to get a reading from my SCBA. I was on an attack line next to the stair case on the second floor. I’m staying in place for now, activating my PASS.....

- If you are about to become incapacitated, activate PASS device and take protective measures necessary to increase survivability. If trapped or disoriented as a crew, stay together. Focus on your breathing by using “skip” breathing techniques or other means of air conservation. Position your body so that it maximizes the audible affects of the PASS device and protect your face from heat. Maintain contact with the ICP on the EMER Channel or tactical channel, attempt to make noise with any small tools or solid objects and turn on flashlights.
- Continually assess air (use “Buddy Breathing” as a last resort), provide basic treatment and assist with entrapments. If area is unstable do not create more problems. Create or find a defensible space or room.
- If you are able to move, search for walls, windows, exits and/or look for light. Where means of egress are not available, firefighters should next attempt to reach an exterior wall. Once a wall is located, search for doorways, windows, and hallways, which generally lead outside. Rescuers should first search hallways, around walls, and around windows and doors, before sweeping large interior areas due to prior training and standardized firefighter actions. For this reason, firefighters should avoid large open spaces. Getting to these areas increases the chances of being rescued early.
- Attempt to follow a hose line (reading couplings) or life line to safety. However, control your pace and physical exertion since your air will be limited. Update the IC with any information to assist in the rescue efforts.
- Retreat to an area of safety. If you cannot find a way out, but there is a safe refuge (protected room or floor) away from the fire that you can retreat to, take advantage of this location. You may have to breach an interior wall, closing doors to isolate yourself from potentially being overrun by the fire.

IRIC/RIC SITUATIONAL AWARENESS

Situational Awareness is a fire ground trait needed for all personnel to develop their own “situational awareness profile”, based upon the task or objective in which they are given. Individuals must identify basic concepts of situational awareness based upon the specific task or assignment as part of the **overall** fireground component.

Given the dynamics of today’s fires and the events of extreme fire behavior in which we operate within, the understanding of Hostile Event Recognition and the understanding of pressure as it relates to rapid fire progression is important information to be relayed to the incident commander. Particular in High-Volume, Big Box and Wide-Rise type structures where hostile events occur in the overhead at explosive levels which can create structural failure in the roof assembly.

As a member of IRIC/RIC you will be tasked with a variety of objectives that deal in situational awareness. As stated, this awareness is the responsibility of **ALL** members. This job is really an important task in the overall success of the operation. However, as with other fireground tasks, we must look at building upon this assignment and utilize our ability to become a direct link of changing dynamics of the interior (or exterior) to the IC while providing him/her with accurate data to capture a better view of the situation, rather than someone from the exterior of the structure from a block away.

In the position of IRIC or RIC the following assessments should be made:

- An outside exterior scan or size-up of at least two sides of the structure, primarily the division or side in which the assignment of “fire attack” will be making access.
- Any immediate identifiable structural collapse considerations, hostile events recognition factors or roof assembly exposures should be immediately communicated to the IC and other companies operating within the hazard zone.
- Building profile identification is key and would include the age and type of the structure NOTE: This will determine fire spread and strengths and weaknesses based upon the Building Profile, and construction components and features.
- The conditions at the point of main egress must be taken into consideration and read - meaning, reading the rapid development and increase of smoke
- Pressurization at the access point. All of which should be considered and communicated if recognized as a threat to the safety of personnel on the interior.
- The use of a TIC should also be considered as a tool to determine fire in the overhead and potential collapse in the area of main egress from the structure. While making that determination it is important to identify the proper use of PPV.

Communications

Personnel assigned to RIC must pay careful attention to radio traffic during the entire incident. This discipline will allow the crew better cohesion as well as monitor the situation as the incident progresses. It also allows them to “anticipate” the needs of other tactical objectives being performed on the incident. For example, upon hearing a Truck Company is going to the roof, RIC should send personnel to assure (or assist) with a second ladder being positioned, providing a secondary means of egress.

In order to coordinate in mitigating specific hazards and perform overall RIC operations, (and not interfere with normal fireground operations) RIC may be assigned a separate RIC Tactical radio channel(s). At least one member of RIC (RIC Leader) must be assigned to monitor the Fireground Tactical Channel(s) as well as the EMER Channel. Be aware that the IC may switch or re-assign tactical channels in case the firefighter in distress cannot activate or has a defective EMER button.

The size and number of RIC Teams assigned to an incident are based on the needs and geography of the incident. The designator will be “RIC” or may reflect a geographic location if multiple RIC Groups are formed, i.e. “RIC - B” (Bravo) or “RIC – 3” (3rd Floor).

RIC shall monitor the Tactical radio channel for status reports requested by the IC. A status report or notification system known as; **Personnel/Air, Position, Progress and Needs (P.P.P.N.)** will be used. This phrase is used to periodically update crews’ status. It confirms the number of **personnel** arriving at scene or at the point of entry and amount of air, their **position** or location and their **progress** accomplishing the assignment, and any **needs** that they may have in completing the assignment.

EXAMPLE: When IC advises RIC to Deploy

RIC = “IC from RIC, A / Alpha, With Three / Air is Full;
We are deploying for the Mayday-FF Jones on E2311, Assigned to Fire Attack;
We’ve got heavy pressurized smoke, with minimal fire conditions;

Initiating search, advancing towards side B / Bravo, along the attack line;
Requesting additional manpower for RIC back-up, and provide vertical ventilation operations above the rescue area, establish evacuation exit on side B / Bravo

P – Personnel/Air, **P** – Position/Conditions, **P** – Progress/Actions, **N** – Needs

IRIC OPERATIONAL GUIDELINES

The IRIC will be a minimum of two individuals serving as the temporary rescue team during the initial stage of an emergency incident. Their function is to provide monitoring and tracking of interior personnel and to immediately react and respond to a rescue of firefighters operating in the IDLH atmosphere. One member must be dedicated at the point of entry to track and account for interior personnel. The second member may be assigned additional tasks as long as they are able to perform assistance or rescue activities without jeopardizing the safety or health of any personnel working on the incident. They maintain this readiness until resources are available to establish a formal RIC.

Initial RIC Actions

The IRIC needs to verify the accountability and determine names of those personnel working on the incident. At the very least, get a good idea of what companies' are assigned to certain groups, divisions or tasks, determine the crew strength of each company assigned (3 personnel or 4 personnel) and how long the companies have been working in the IDLH to establish a RIC status board. From an initial action standpoint, the unit or personnel assigned to IRIC shall establish a working plan.



That plan shall include:

- Communications
- Incident Command
- Air Management
- Accountability
- Size-Up
- Water Supply with Attack Line Deployment
- Mitigation
- **Initial** Equipment Cache
- Response Readiness (prepare to build the IRIC component with a Formal RIC, based upon the severity or complexity of the incident).

Once on scene IRIC (donned with full PPE / SCBA, TIC...) needs to quickly evaluate the structure (360°) and look for obvious hazards that exist. Items to think about include:

- Building Construction Type and Occupancy Usage.
- Roof Assembly Involvement.
- Pressurized Smoke or the observance of an impending Hostile Event.
- Overuse of Single Access Points.
- Confirm Utility Stabilization.
- Identify or establish secondary means of egress (Entry points, ladder placement...).
- Exterior illumination - lighting
- Multiple Hose lines through a single access point.
- Identify any known or potential hazards to personnel or structure.
- Failure to establish or Follow the Command Strategy. (Is it Offensive or Defensive?)

These are just a few of the items that IRIC should be looking at upon arrival and making adjustments to their initial plan based upon these observations. Remember, as the incident escalates, this plan needs to be briefed with the IC and **ALL** information will also be shared with the Formal RIC assignment. The primary actions of the IRIC are important to establish the foundations for a potential RIC deployment and to establish an effective hazard mitigation plan.

IRIC Deployment

Should deployment of IRIC be required the following is a list of their priority functions.

- Communicate and confirm deployment with the IC
- Request additional companies to support deployment
- Execute the search plan
- Monitor personal air supply
- Locate the firefighter
- Assess the firefighter and environment
- Provide the IC with P.P.P.N
- Transfill air and package firefighter
- Prepare to extricate the firefighter if possible

TOOLS AND EQUIPMENT

Equipment considerations for Rapid Intervention Companies are incident specific. Equipment that is required for a particular rescue may not be needed for another mission. In some cases, trying to use equipment that is not necessary for the mission indicated may delay deployment of RIC. This is especially true when responding into a known rescue situation. Only the minimum tools necessary to initiate a rescue should be taken. Practice and training in the different rapid intervention scenarios will make equipment selection for different rapid intervention deployments easier.

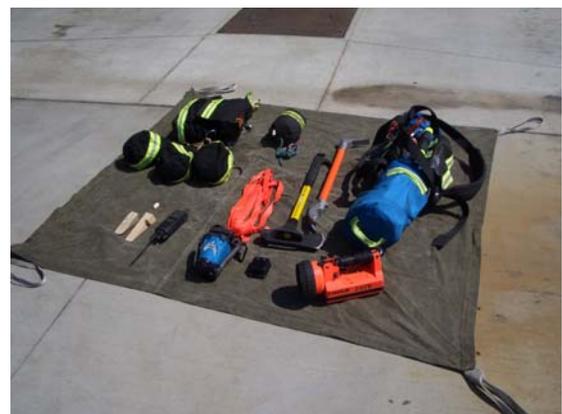
RIC should consider the following tools and equipment for use, the list of considerations is not all encompassing; it is intended to be a starting point.

IRIC / Cache Equipment

- Full PPE with SCBA
- Thermal Infrared Camera, with spare battery
- RIC Bag(s) / Escape Canisters

Recommendation

(Note: The **RIC SCBA Bag** should consist of the following: Nylon reinforced bag with sling, pockets and carrying handles, 45/60 minute air bottle – 1st stage pressure reducer with 20' of intermediate pressure hose, face piece(mask) with regulator, 200' rescue rope/line with optional directional rings and distance knots, flashlight(s), strobe lights, forcible entry tools, assorted rescue hardware and assorted small tools – webbing, door wedges, wire cutters and cutting tools).



RIC OPERATIONAL GUIDELINES

The Incident Commander will be responsible for assuring that personnel are assigned to perform the duties of a Rapid Intervention Crew (RIC) during first alarm incidents and other hazardous incidents where personnel are operating in IDLH conditions. The composition and outfitting of Rapid Intervention Crew (RIC) will be permitted to be flexible based on the type of incident and the size and complexity of operations. The Incident Commander shall evaluate the situation and the risks to operating crews, and will provide one or more appropriately equipped Rapid Intervention Crew(s) (RIC) commensurate with the needs of the situation.

RIC Actions

The RIC will have a Leader who is normally a company officer will report to the IC and / or the Operations Section Chief for an initial briefing to assess incident strategy, resource / situation status and safety concerns. The RIC Leader will then obtain a briefing from the IRIC. RIC will assure monitoring and tracking of resources in the hazard area and develop and / or approve the rapid intervention plan from IRIC.

Responsibilities

- Confirm RIC assignments and communications plan
- Monitor all incident tactical / command radio channels
- Maintain RIC Status Board – monitor entry / exit times and SCBA air management
- Monitor the exterior and interior for rapid fire spread, development or deteriorating conditions not identified by the IC
- Confirm utilities are secured
- Identify or establish secondary means of egress (entry points, ladder placement....)
- Identify and remove potential hazards to personnel (soften the structure)
- Assemble the appropriate equipment / tools for the hazard
- Request and monitor PPN reports

RIC Deployment

- Communicate and confirm deployment with the IC
- Request additional companies to support deployment
- Execute the search plan
- Monitor personal air supply
- Locate the firefighter
- Assess the firefighter and environment

- Provide the IC with P.P.P.N
- Transfill air and package firefighter
- Prepare to extricate the firefighter if possible

RIC Equipment Cache

This equipment may be added to the complement of IRIC cache. This suggested list is comprised of items needed according to the specific incident and hazards.

- Identified salvage cover
- Lightweight Forcible Entry Tools
- Pick Headed Axe
- Bolt Cutters
- Pike Poles / Closet and Rubbish Hook ("D" handles or wrapped)
- Power Saws (Chain / Rotary)
- Rescue / Search Drop Bags (30' to 40')
- Chalk / Markers
- Box / Personal Flash Lights, and Door Wedges
- Light Sticks
- Rescue Webbing / Carabineers
- Quartz lights to entrances and windows identified as possible exit
- Additional Search Bags and/or RIC Bags (be aware of different systems used in the zone)
- Inside ladder (12' or 14")
- Ground Ladders
- Stokes basket – Carrying device



Optional equipment:

- Lifting air bags several sizes w/ air regulator & hoses
- Cutting torch
- Power tools
- Blowers
- Portable generators

RIC LEADER

The RIC Leader is normally a Company Officer who will report to the RIC Group Supervisor if established. The RIC Leader will command and supervise the RIC each RIC established will have a RIC Leader.

Prior to the RIC Supervisor's arrival, the RIC Leader shall assume the roll of RIC Group Supervisor and report to the IC and/or Operations Chief, when implemented. When more than one entry point is assigned to an incident, radio designations shall coincide with the geographical Division. For example, a RIC Team Leader assigned to an entry point on the "A" Alpha side of structure will be designated as RIC Leader, Division "A."

Responsibilities

Enroute

- Monitor the apparatus MDC for resource and information updates
- Note Initial Size-Up and Situational Reports (PPPN's)
- Unit, Name and Location of ICP
- Confirm RIC assignment(s) and communication plan
- Monitor ALL Incident Tactical Channel(s) and Establish Times
- Initiate RIC Status Board – Accountability

On Scene

- Report to the IRIC (if established), RIC Group Supervisor or IC
- Obtain briefing from RIC Group Supervisor or IC – Confirm Comm. Plan
- Situation Status-Awareness / Resource Status (Accountability and Location)
- Building Layout, Construction, Occupancy Use, Age and Safety Concerns

Standby Mode

- Brief Entry Team (normally three or more member teams for safety)
- Obtain Critical (all hazard) information
 - Rescue Plan – Accountability of personnel in Hazard Area(s)
 - Safety Concerns – Assess Entry Points and Control
 - Communication Plan
- Ensure hose-lines are identified/ marked
- Monitor Radio Channels – (Command, Tactical, RIC and EMER Channel 16)
- Document and monitor entry/exit times and SCBA air management
- Maintain RIC Status Board
- Confirm operational readiness of entry and extraction teams – (Has structure been softened?)
- Review Equipment and Tactical Search Options
- Request PPPN Reports

Deployment Mode

- Deploy Entry Teams
- Coordinate rescue
- Identify and communicate search option(s) being used
- Request additional companies to support deployment
- Communicate with Entry Teams and Exterior Extraction Teams
- Locate firefighter - confirm and communicate identity
- Manage S.C.B.A. air supply for Entry Team and victim
- Communicate PPPN to RIC Group Supervisor
- Package and rescue victim
- REHAB all personnel and debrief

Rapid Intervention Group Supervisor (Chief Officer or Fire Officer)

The Rapid Intervention Group Supervisor will normally be the closest available Chief Officer. The Rapid Intervention Group Supervisor reports to the IC or Operations Chief, when implemented.

Responsibilities

- Confirm RIC assignment and communication plan
- Obtain initial briefing from the IC to assess:
 - Incident strategy
 - Resource status
 - Situation status
 - Safety concerns
 - Confers with Safety Officer regarding safety concerns and fire conditions
 - Normally co-locate in proximity to the Incident Command Post (ICP)
 - Develop and/or approve rapid intervention plan from RIC
 - Communicate incident strategy and anticipated rescue plan to RIC Leader(s) and Entry Team(s)
 - Track all incident resources
 - Maintain Situational Status (SITSTAT) and Resource Status (RESTAT) for all assigned RIC personnel
 - Modify rescue plan as needed
 - Maintain operational readiness and/or deploy RIC as needed
 - Request additional personnel and equipment to augment RIC operations
 - Develop RIC demobilization plan for IC
 - Demobilize RIC resources, as directed

HIGH RISE RIC OPERATIONS

It is imperative that all firefighters become familiar with Rapid Intervention Standard Operating Guidelines specific for high rise operations.

Rapid Intervention at a high rise incident will include special challenges in regards to equipment, travel, preparation, and rescue procedures.

Rapid intervention at a high rise incident should involve multiple alarms. Most high rise incidents will use up to 10 alarms. RIC should consist of at least an Engine, Truck and an ALS resource at minimum. Resources assigned to rapid intervention will initially report to IC/Operations. RIC will report to all areas of accountability and check in at Staging (two floors below the fire floor). RIC standby position will be determined by the location of the fire and the IDLH. They should not be in a position to breath air or breath smoke.

- Check in with the IC/Operations – Review the tactical worksheet for resources assigned to the IDLH. Consider a RIC TAC channel.
- Check in with Lobby – Identify yourself as the Rapid Intervention Company, then proceed to Staging.
- Ascent – Ascend and report to Staging. Remember, you are not a firefighting team. You are a RESCUE COMPANY designated for the sole purpose of rescuing downed firefighters.
- Reconnaissance and Standby Mode – RIC staging is positioned one floor below the fire floor, at the entry point of the stair shaft. This is the most appropriate standby position will be determined by the location of the fire and the IDLH. They should not be in a position to breath air or breath smoke; this will facilitate a rapid deployment to an emergency and will assist the RIC in locating and identify which firefighting companies occupy the floors and stairwells. This information should be documented and may also be written on the adjacent walls for quick reference.

Checking the floor below staging before reporting to the staging area may provide an opportunity for RIC resources to become familiar with the floor plan. If the building inventory was not available, the floor plans required on each floor at the exits and in the elevator lobby may be utilized for an overview.

Equipment

The first challenge facing the high-rise RIC Company will be the selection and delivery of the necessary equipment to their area of operation. Consideration should be given to a minimal amount to begin operations. Additional equipment can be requested, and delivered to staging. Refer to list of recommended equipment cache.

SOFTENING THE STRUCTURE

Structure, whether residential or commercial, are constructed with many design factors taken into account. Some of these factors are designed to keep things from entering the building, such as inclement weather, privacy and security factors. As a result, building construction may include; hurricane windows, heavy-duty doors, walls, locks, tempered glass, and various forms of security bars, gates, grates, screens etc. These same factors not only make it hard for firefighters and the RIC from entering a structure, but can make it difficult for firefighters to exit the structure as well. One of the key functions of RIC is to provide a means of efficient means of egress to assist in firefighter safety and survival. This effort includes **reducing the risk on the fireground by creating opportunities for firefighter extraction and/or self-rescue**. The operation that provides this systematic approach is known as **Softening the Structure**.

It is imperative that personnel assigned to RIC aggressively work to soften the building and help make the fireground safer for those operating. This includes completing some of the tasks listed while in the Stand-By mode. This may include, but is not limited to:

- Providing additional means of egress for roof operations or companies operations above the ground floor
- Removing security bars/devices
- Coordinating the opening of doors and windows
- Illuminating entrance and exits
- Confirming utilities are secured
- Providing External RECON information (Situational Awareness) to the IC
- Assess for fire extension in the overhead and concealed areas
- Assist in attack line deployment (straighten hose lines, assess friction points)

These are jobs that can easily be performed by the RIC, as long as it will not delay the response to a firefighter emergency. As additional egress points (large opening for commercial structures) are created, they should be announced to all interior personnel over the tactical channels to benefit of those who may need them.

For example:

“Command from RIC, we have placed a ladder on the second floor window on the Bravo side.”

Note: Care and coordination must be taken when creating additional openings (access points) due the adverse and dangerous affects it may have on ventilation efforts. Incident intensity, discretion, common sense, and professionalism should be considered determining how much destructive action could take place at an incident. For example; food on the stove should not result in cutting metal roll - up doors.

RIC SEARCH TECHNIQUES

Searching for a lost, down or trapped firefighter is different than searching for a civilian. Since a significant event has taken place that has already put at least one firefighter in danger, the RIC may face many obstacles and adverse conditions. The following are recommendations that can be used to help Search and Locate the Firefighter, Protect the Firefighter in Place or Extricate them.

The need for rapid intervention cannot be overemphasized. As members of a Rapid Intervention Crew, your mission to rescue a firefighter victim will come without warning. Factors such as the time a member has been “on air” or a delay in the notification that a member is in need of rescue will significantly reduce the amount of time that RIC will have to affect a successful rescue.

The “Golden Time” is that period of time that a downed, missing or trapped member will have the greatest chance of survival if he or she is in need of rescue. Longer rapid intervention evolutions or even the slightest delay in deploying RIC could impact rescue attempts.

The Golden Time and the fact that your rapid intervention mission will come without warning are the reasons that you must accept this mission seriously. Getting involved in the fire ground operations, not focusing on your mission, and not knowing Rapid Intervention Standard Operating Guidelines may jeopardize someone’s life!

Crew Discipline is an important factor in the overall management and effectiveness of the ICS and will prevent the need for rapid intervention rescue operations at an incident. When assigned the duties for rapid intervention staying together with members of your crew, following the direction of the RIC Leader will reduce the potential for rescuers becoming victims. It is important to understand the principle of potential rescuers becoming victims. This phenomenon is seen in many technical rescues such as haz mat, swift water and trench rescues.

When operating on the fireground and notification for rapid intervention rescue operations becomes apparent, company officers or members in the immediate area of the situation should take whatever action is necessary to safely affect a rescue, without compromising fire attack. Companies working nearby may have the best opportunity to affect a quick rescue.

Search and Locate the Firefighter

The goal of searching and locating a firefighter is:

- To conduct a planned, rapid and effective search if the firefighter's position is not known.
- To gain access to the firefighter in a way that can be tracked and monitored from the point of entry (proper use of PPPN's).
- To gain access in a way that can be followed easily by subsequent incoming search teams.
- To remove obstacles so that the search for the firefighter in need is facilitated.

To establish an anchor point for search operations, it is recommended to initiate at the entry point. This entry/egress location should provide RIC with vital RECON information via the RIC Status Board. Also, understand that typically there are additional egress sites or potential egress sites (wall or window breach) that may be used for a quicker extrication process.

The main entry point used for initial operations will have deployed hose lines that will aid in tracking the location and area of the victim(s). If there are no hose lines in place, RIC can either utilize a RIC pre-connected hose line or a large area search line/rope (attached at the entry point) to initiate RIC search operations.

Searchers must maintain contact with the hose, search line, attachment by drop bag/personal rope, or by voice contact (not radio) with another member who is physically on the hose or rope.

The search is conducted based on available information on the most likely location of the downed firefighter. The TIC should be used. Searchers must remain alert to relay and mark, if possible, any significant hazards, changes in conditions, or obstacles that would affect the intervention. The RIC may need to wait for more RIC teams if additional resources are required to continue progress.

Intervention resources should be aware of the possibility that there may be multiple firefighters in need of assistance. When the downed firefighter is located they will be removed if possible. If removal is not possible due to entrapment or the search team is running low on air, the hose or search line should be secured to the downed firefighter. This will expedite the search time of subsequent RIC teams who will arrive to remove the firefighter. Operating PASS devices should be silenced in order to hear other devices sounding in the area.

Once the downed firefighter is found, the primary objective is to support the downed firefighter with breathable air. This may be done by either transfilling the SCBA if their

SCBA mask and cylinder are still intact, or by placing the mask from the RIC bag on them, allowing them to breathe from the RIC bag air cylinder.

The RIC Leader will supervise the entire operation, and keep the IC informed of PPN's. This information should include distance and direction of travel, significant landmarks or hazards, structural stability, and any pertinent information reported by initial RIC operations. It is recommended that the officer **NOT** get involved with the actual extrication process. It is imperative that the RIC Leader stay in a "heads-up" position, responsible for fireground LCES and situational awareness.

In cases where locations such as basements, hospitals, X-Ray rooms, tunnels (confined space), vaults and other known radio trouble areas present communication problems, RIC members should consider using rope lines for communicating (**OATH**).

Large Area Searches

Searching a large area presents unique problems for the RIC. The method of using a hose line or search line with two tag lines can cover a large amount of space in a relatively quick amount of time. This "SYSTEM" relies on strict cohesion of crew responsibilities and assignments. Equipment will consist of: Full PPE, Radios, Hoseline or Large Area Search System w/ Drop Bags, TIC, RIC Bag and Forcible Entry Tools. Large area searches without a means of a quick retreat are discouraged.

Three Member Crew

RIC Leader – (Officer)	Coordinates rescue operation, TIC operations
RIC Member #1	Sweeper or Hound, move obstacles, Rescuer
RIC Member #2	Sweeper or Hound, Air person (RIC Bag), Rescuer
RIC Member #4 (if applied)	Lead Position with a TIC. Scout/Recon in front of search team (attached to search line). Assist with rescue procedures.

Large Area Search Procedure with Search Lines

- **Initiate an Anchor Point**

An anchor point is a point of entry into the structure or area where the search will be initiated. If at a commercial occupancy, try to utilize a large door opening, (double door entries, and roll up doors) for larger means of easy ingress and egress. The anchor point location should be at a location closest to the hazard area within the hazard zone to accommodate a rapid search of the priority search area(s). If a search rope line is to be utilized, anchor the “lead” search line at least 8’ to 10’ from the entry point and with a height of no less than 5’ on a **fixed** object. Large area search procedures can also be accomplished utilizing the initial or any deployed hose lines.



- **Establish Search Priorities**

In most fireground situations, fire attack, search operations and venting operations are simultaneous. Therefore, in a report of a firefighter down with an unknown location, the area most threatened or “last known location” must be searched first, and work



back to the less threatened areas of the occupancy. This operation may be referred to as “**Direct Destination**”, in which a hose or rope “lead” search line is used as an anchor point. It is recommended that a three or four person search team be utilized for large areas with a back up team to support evacuation/rescue operations. Search leader shall perform all size-up and recon detail prior to operation. All team members shall be informed of operation, any hazards and position assignments (if applicable). ALWAYS determine a second means of egress prior to deployment.

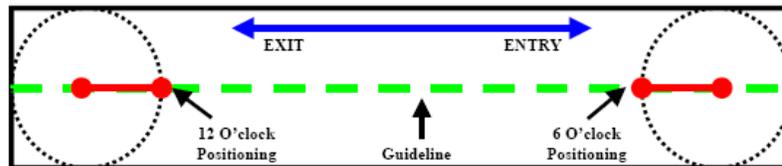
- **Position Assignments**

Upon entry through the anchor / entry point, the search leader must “aim” for the center of the large area. This person should operate the thermal camera (TIC with spare battery) to guide the search team and provide better visibility. The two search members shall position themselves on right and left of the lead search line. The search leader must keep tension on the rope at all times. All members must maintain contact with the rope



or hose line. Once a depth has been determined by leader (usually 50 to 100 feet) to begin the search pattern, the two other search personnel anchor themselves to the line (via ring, figure 8 w/ bite or hose) with their drop bags (carabineers), and are directed by the leader to begin a “fan” search pattern.

The search members begin the pattern by going past the leader 5 to six feet, towards the 12 O'clock position and “fan” back to the 6 O'clock position on both right and left sides of the lead line (rope or hose). Once at this position the drop bag is extended an additional 5 to six feet and the members repeats the fan or sweeping pattern back to the 12 O'clock position.



This procedure is continued until approximately 30 to 45 feet of drop bag is used. Once completed, search members (known as “hounds”) manage their drop bag ropes and return to the search leader. The line anchors (carabineers) are detached and the search team progresses into the occupancy with the assistance of the thermal camera (TIC). If the search pattern was deployed at the depth of 50', the next area to search would be at the 100' depth mark. Skipping 75' is suggested so that search areas are not duplicated. However, the search leader can position at length of the search line as deemed necessary. In-line anchor points (loops) can be placed in the search line to act as an attachment ring. If air management dictates that search members must exit, the lead search line is attached to stationary object, (support beam, wall stud or secured anchor point – or even the downed firefighter). The back-up search team (or RIC) is then deployed to continue search operations. Back-up team enters the building on the **left side** (holding the rope or hose with the **right hand**) of the lead search line or hose, while the search team exits using the same method. As both teams meet, search leaders exchange information (conditions found, conditions anticipated, known hazards and/or needs) and then continue with operations. The IC must initiate additional entry points and search teams in cases where the area is too large and will exceed the limitations of the rescue team’s capability.



In-Line Position: The illustrations shows a three person search pattern maintaining contact with a reference point (escape route) while conducting a search. The first person

(RIC Leader w/ TIC) on the line is responsible for leading the company and maintaining contact with reference point(s). The RIC Leader is also the person tethered (webbing or drop bag) to the outside with anchor line. RIC personnel should maintain contact with each other to ensure company effectiveness and integrity. This can be accomplished by physical contact, voice, or tether.



Parallel Position: This configuration allows members to temporarily reposition their position, (Orientate Right) to increase their area of search. This technique requires the RIC Leader to remain in contact with the tether, which is anchored to the outside. To maintain contact, the RIC is using a tether. When using a tether, ensure that it provides constant contact between the company members, yet is easily detachable if necessary.

Tether Between Personnel: There are several methods used to tether between personnel, utilizing webbing or strap. Below illustrates the utilization of a half-hitch around the palm of the hand, (allows to grasp and release as necessary) and the half-hitch around each wrist. This method is more secure and will leave your hands free to grasp or move objects in front of RIC members.





Below illustrates the use of carabineers to secure RIC members to the RIC Leader, directly to a hose line or main large area search line. The use of carabineers allows for a quick detachment should any of the RIC members become entangled. If a rope system is used (knots and rings), carabineers are connected to the rings. Rings also indicate the exit direction, “**Knots In, Rings Out**” - while the knots indicate length (typically 25' per knot).



Hose/ Rope Line Fan: This is an effective method when following a hoseline or main search line. Tethers or drop bags can be attached to either the RIC Leader, hose Line or main search lines, (note: all attachments with tether should be made with a carabineer for ease of detachment). Remaining RIC members then fan out the length of tether and together the company searches the area around the hoseline and advances towards the nozzle.



Nozzle Fan: This procedure requires RIC to conduct a search using a nozzle as a reference point. First, RIC follows a hoseline (hose fan) to the nozzle end. The RIC Leader stays at the nozzle to maintain a point of orientation. The RIC leader then utilizes nozzle fan with drop-bags. If a **Search System** is used, the Large Area Bag can be secured to the nozzle and extended the length of the bag by the RIC Leader.



Approach of the Downed Firefighter



RIC Leader – Coordinate all Operations (PPPN) (Unless needed to assist in rescue)

Have sufficient resources (Extraction Team) and ALS resources at the exit portal for immediate ALS intervention and transfer of downed member(s) to hospital.

Prior to the actual extrication of a downed firefighter, the following procedures should be accomplished if conditions permit:

- **RIC Leader** – Advise RIC Group Supervisor/IC: contact has been made, location and landmarks, condition of mayday firefighter, stabilize the area (any immediate hazards) and assess all needs, allow members to view extrication scene through the TIC if visibility is poor or non-existent. Maintain PAR within the immediate area and prioritize air management and search line management (secure all tag lines) to prevent entanglement. Request rescue support from all other fireground operations, (fire attack, search groups and ventilation groups). If possible, create a defensible area between all hazards and threats to the rescue/extrication area.
- **RIC Member** – Remove possible hazards, entanglements or fallen objects from the immediate area. Assist with victim packaging. During extraction, clear debris for rapid egress.
- **RIC Member (Air Person)** - Prepare RIC bag prior to getting “hands-on” with the firefighter.
- Get assessment from RIC Leader, via TIC on whether the transfill or mask replacement procedures are needed
- **BE AWARE** that the downed firefighter may panic and reach for your mask!!
- If firefighter is conscious, maintain verbal instructions, calm the situation shut down P.A.S.S. device and reset
 - **Assess** the firefighter for the following:
 - Breathing/Conscious/Air Supply (assess by operating the **red bypass valve** on second stage regulator). If unconscious, assure that the mask is fully functional.
 - Make sure that the member’s waist strap is secured to the member’s waist, if not; try to reposition the waist strap so as to capture one leg.
 - If the member is conscious but trapped, contact the Rescue Group Supervisor and depending on the time needed for extrication, connect the rescued member into the RIC bag - one-hour air supply.



VICTIM REMOVAL

Moving the Downed Firefighter: Carries and Drags

The process of rescuing a downed firefighter can become extensive and may involve multiple decisions and choices related to techniques that will be necessary in extraction. Often, these operations will take place under severe fireground conditions. These conditions can include the inability to stand up due to high heat, limited or zero visibility, and working in restricted or confined areas. The conditions present as well as the weight of the downed firefighter will dictate the methods utilized in moving the downed firefighter. A 180-lb firefighter may weigh well over 300 lbs. with turnout gear, SCBA and water from firefighting operations absorbed into the gear. Many of the difficulties experienced in moving the downed firefighter result from the extra weight of the gear. Limited “grab points,” bulkiness, and entanglement points are just a few problems that may be encountered. Moving a downed firefighter is a definite challenge.

Rescue Plan

It is important that the RIC leader develop a rescue plan and ensure that each member of the RIC understands what that plan in place prior to initiating a deployment. Communication among the RIC members is a necessity but should be kept in simple and understandable terms. Too much communication will cause confusion, waste time, use up valuable air supply, and slow the rescue process. Communication must also allow the rescuers to be synchronized in their efforts. For example, a firefighter pulling up on one side of the downed firefighter before the rescuer on the other side is ready will result in the downed firefighter not being moved and a wasted effort. Simple terms such as “Ready-Go” or “Set-Lift” should be used. A pause after the first command will give the other rescuer an opportunity to stop the operation if he is not in position or to acknowledge it and proceed. The words, “Stop” or “Ready” should be used for this acknowledgement. Remember, wasted efforts result in wasted time, make certain that members understand each other!

Drastic and unconventional measures may need to be taken to remove the downed firefighter. Safety and the imagination are the only limiting factors when removing a downed firefighter in an expedient manner. The key to all of the methods discussed for moving a downed firefighter is technique. Rescuer brute strength is a great asset but is not required. Rescuers must make certain that they keep their backs straight and use their leg muscles to move the downed firefighter to avoid injury to themselves.

Carries

Carrying a downed firefighter will be easier than dragging if conditions will permit. Carrying instead of dragging the firefighter will allow obstacles and debris located at the floor level to be navigated successfully without slowing down the removal process. Again, conditions will dictate if this is even possible.

Blanket Carry/Tarp Carry

The use of a small salvage tarp or specialty blanket will be required to utilize the blanket carry technique. Advantages of the blanket carry are that it provides a means for the rescuer to be able to hold onto the downed firefighter and can be used in tight or confined spaces. Some manufacturers have even produced specialty blankets that provide carrying handles as well as heat protection.

To perform the blanket carry:

1. Locate and assess the downed firefighter, placing them on their back.
2. Two rescuers will position themselves to each side of the downed firefighter.
3. The blanket or tarp is placed to one side of the downed firefighter opposite the side that the downed firefighter will initially be rolled toward.
4. The downed firefighter is rolled to one side by rescuer 1 while rescuer 2 gathers the blanket or tarp beneath the downed firefighter.
5. The downed firefighter will then be rolled back toward rescuer 2, who will take control while rescuer 1 pulls the blanket or tarp from beneath the downed firefighter.
6. Rescuer 1 will gather and take hold of the material on each side of the head (or handles if equipped) while rescuer 2 does the same at the feet of the downed firefighter.
7. The downed firefighter is then lifted and carried over obstacles and debris.

Other Alternative Carry Methods

There are numerous possibilities for carrying a downed firefighter utilizing equipment such as a rescue litter, backboard, or attic ladder. These are difficult to use in situations requiring maneuvering within tight or confined spaces. Of the three listed, the rescue litter provides the most secure measure for removal because its raised sides prevent the downed firefighter from rolling off.



A rescue litter is not designed to hold a firefighter wearing an SCBA. When placing the downed firefighter with SCBA into a rescue litter, the RIC can position the victim in several different ways, depending on time available as well as the surrounding conditions that are present. Removing the downed firefighter SCBA completely is very time consuming and should be avoided unless it is absolutely necessary. A simple solution is to loosen or disconnect the waist belt and loosen the shoulder straps of the SCBA harness in order to shift the pack to one side of the downed firefighter. This will enable the downed firefighter to be placed into the rescue litter on the left or right side depending on to which side the pack has been shifted. The RIC can also consider the use of a backboard with this type of packaging if time and conditions permit.

The rescue litter is placed behind the downed firefighter with the rescuers rolling the victim into the litter while maintaining the SCBA and securing it to the top of the downed firefighter's body using the litter straps or webbing. It is not necessary or realistic to take time to strap the victim into the basket by lacing webbing in and through the rails and bars of the litter as you would normally do for a high-angle rescue. Connecting clips, straps, or minimal webbing to accomplish the task of keeping the downed firefighter in the litter is all that is required.

Dragging Downed Firefighters

Dragging a downed firefighter may be necessary when conditions dictate that rescuers remain low or when manpower is limited. Certain types of drags will require the rescuers to stand while others will allow the downed firefighter to be moved from the crawling position. Dragging a downed firefighter from the upright position will be easier than dragging from a crawl. Using leg muscles and principles of physics will make the task of dragging a downed firefighter more manageable.



The most predominant challenge when dragging a downed firefighter is attaining a solid grip on the victim. Turnout gear is especially difficult to grasp when wet. Some manufacturers of turnout gear are now outfitting their gear with handles sewn into the gear that can be easily pulled out for the purpose of rescue.



The SCBA can provide a place to hold onto the downed firefighter while moving them. When moving a downed firefighter a harness can become a necessity, especially in cases where firefighters must be moved up or down stairs or above/below grade. The back harness on the SCBA can be converted very easily into a body harness when time does not permit or an approved harness is not readily available. This technique of converting the SCBA into a harness, called harness conversion, will also prevent the SCBA from “riding up” or coming off of a downed firefighter who is being dragged.

To perform an SCBA harness conversion:

1. Unbuckle and elongate waist strap of the downed firefighter's SCBA harness.
2. Lift one leg of the downed firefighter, putting the waist strap on that side behind or underneath the raised leg and running the strap through the crotch. The shoulder straps of the SCBA may have to be loosened to facilitate this step with larger-framed firefighters.
3. Buckle the repositioned waist strap and tighten if possible.
4. Tighten and secure shoulder straps with half-hitch knots to prevent the harness from slipping.
5. If removing the firefighter with rope, be sure to secure the rope or carabiner to the back frame assembly of the SCBA.

Not all SCBA harnesses will be able to be configured in this manner due to their design. Some manufacturer's units will not have waist and shoulder straps that are long enough to be re-buckled when performing the harness conversion. In these cases, it is recommended to just tighten down the shoulder straps and go.

A **Multiple Application Service Tool (MAST)** is another quick and useful piece of equipment that can be utilized for helping to move a downed firefighter. The MAST is five large loops connected together in a daisy chain. These loops can be placed over a downed firefighter's turnout gear. The loops of the manufactured MAST are color-



coded to designate which loop is placed where. The center loop of the MAST is the most important because it will provide the handle for lifting or pulling. If inside an environment where visibility is limited, the center loop can be easily located by counting the loops.

Side-by-Side Drag

The side-by-side drag is very basic and consists of two firefighters moving the downed firefighter by utilizing the shoulder straps of the downed firefighter's SCBA.

To perform the side-by-side drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The rescuers will locate themselves at the head of the downed firefighter on opposite sides.
3. Each rescuer will grasp a separate shoulder strap
4. On command, the rescuers will sweep with the free hand forward while driving forward with their legs to move the downed firefighter.



Lift-and-Lead Drag

The lift-and-lead drag is a basic drag that utilizes one firefighter to drag the downed member while a second rescuer provides safety by leading the way out. Conditions must allow the rescuers to stand up to use this method.

To perform the lift-and-lead drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The rescuer will locate himself at the head (rescuer #1) of the downed firefighter.
3. Rescuer #1 will wrap his arms around the downed firefighter, grasping the downed firefighter's wrists.
4. The rescuer will utilize their legs to stand up while lifting the downed firefighter.
5. Once the downed firefighter is lifted, rescuer 2 will place a hand on rescuer 1 to guide them around obstacles to safety.



Tool Drag

Two rescuers dragging a downed firefighter by pulling on the SCBA straps may be difficult due to the rescuers being too close to one another. A tool drag enables rescuers to be spaced apart while allowing a secure place to grip the downed firefighter. A tool such as a Halligan bar or closet hook works best for the tool drag. However, the tool must not be so big that it prevents extraction through tight spaces, narrow hallways, and staircases.



To perform the tool drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The rescuers will locate themselves at the head of the downed firefighter and place the downed firefighter in a seated position.
3. The tool is inserted through the shoulder straps of the SCBA, providing a handle for both rescuers to hold onto. Make certain that the pick end of any tool is rotated away and facing down toward the floor to avoid injury in case the rescuer slips or falls.
4. On command, the rescuers will drag the downed firefighter to safety.

Blanket Drag

The use of a small salvage tarp or specialty blanket will be required to carry out the blanket drag. Similar to the blanket carry, advantages of the blanket drag are that it provides a means for the rescuer to be able to hold onto the downed firefighter and can be used in tight or confined spaces.



To perform the blanket drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The blanket or tarp is placed to one side of the downed firefighter, opposite the side that the downed firefighter will initially be rolled toward.
3. The downed firefighter is rolled to one side while gathering the blanket or tarp beneath the downed firefighter.
4. The downed firefighter will then be rolled back. The blanket or tarp is then pulled from beneath the downed firefighter.

5. The rescuer will gather and take hold of material on each side of the head (or handles if equipped).
6. The downed firefighter's torso is then lifted off the floor, enabling him to be dragged.

Webbing and Drags

Webbing is a versatile piece of equipment for the RIC. It can be used in establishing anchor points, tying rescue harnesses, performing emergency escape maneuvers, setting up search tethers can also be used to create handles and slings assist in removing a downed firefighter. A 15 to 20 foot piece of looped webbing secured by a girth hitch to a downed firefighter's SCBA harness can provide a sling to pull the downed firefighter like a horse would pull a cart. Whenever webbing is used as a sling, it important to keep in mind that the longer the distance from the downed firefighter to the rescuer, the more difficult controlling and dragging the downed firefighter will be.

Webbing tied into a harness or formed into a girth hitch around the chest is a very effective option when an SCBA is not present or able to be used on the downed firefighter for any reason.

Webbing as well as rope can be used to tie a handcuff knot on the downed firefighter for dragging. When used in this manner, the downed firefighter's arms are raised above the head, lowering their profile and thus allowing them to fit through a tight opening such as wall studs or obstacles in a collapse area. Again, when using the handcuff knot, make certain that it is cinched down on the forearms of the downed firefighter—injuries to the wrist can occur if secured improperly.

Rescue Loops

An 8-mm Prussik cord tied into loops utilizing the double fisherman's knot can be very useful in helping to move the downed firefighter. Rescue loops are only limited in use by the imagination. The Phoenix Fire Department began experimenting with the concept of utilizing these loops to establish handles and grab points to move downed firefighters. Placing the loops into a girth hitch on the extremities of the downed firefighter provides points that enable multiple rescuers to move a downed firefighter above obstacles and debris. The loops can also be used to form a sling for dragging the downed firefighter, as is done with webbing.



Staircases

Moving a downed firefighter up or down a set of stairs can be one of the most challenging scenarios presented to a RIC on the fireground. The strongest rescuers will be unable to move a downed firefighter up or down stairs unless proper technique is used. Teamwork and clear communication will be required to move a downed member up or down a flight of stairs.

The cylinder valve of the SCBA is the most common piece of equipment that can cause difficulties when moving a downed firefighter up or down stairs. Consider what difficulties can arise when moving on staircases and make the necessary adjustments to overcome them.

Multiple Rescuer Staircase Lift

To move a downed firefighter up a staircase using the multiple rescuer staircase lift:

1. Locate and assess the downed firefighter, placing them on their back.
2. Convert the SCBA into a body harness if possible. If the SCBA harness is unusable for any reason, a looped piece of webbing can be wrapped under the downed firefighter's arms to provide a lifting point.
3. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs on the third tread. A rescuer may have to lift the downed firefighter to accomplish this.
4. Rescuer 1 will be positioned behind the downed firefighter on the stairs. This rescuer will lift the downed firefighter from the straps of the SCBA. The downed firefighter should be pulled straight up to clear the SCBA cylinder valve from being caught on the stairs.
5. Rescuer 2 will be positioned at the feet to the inside of the downed firefighter's legs with their face high into the groin area; the downed firefighter's legs will need to be positioned over the rescuer's shoulders. Do not let the downed firefighter's legs slip off the shoulders.
6. Rescuer 1, who is located at the head of the downed firefighter, will give the command for the extraction. They should be kept in simple terms such as, "Ready?—Go!" with a pause in between to give the other rescuer the opportunity to stop the procedure if not ready.
7. On command, rescuer 1 will pull the downed firefighter up while rescuer 2 will push.



Moving the downed firefighter will be difficult and it will be necessary to stop every few steps. Just remember that if conditions in the lower level were bad, the staircase will be even more formidable so move quickly but in a controlled manner.

If the staircase is wide enough and a third rescuer is available, they can be positioned at the head with rescuer 1. Each rescuer at the head will then have the ability to each grab a shoulder strap of the downed firefighter's SCBA harness.

Stair Raise with a Tool

If the width of the staircase will allow, a tool can be used as a handle for two firefighters to lift and carry the downed firefighter using the stair raise with a tool technique.

To perform the stair raise with a tool:

1. Locate and assess the downed firefighter, placing them on their back.
2. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs.
3. The rescuers will locate themselves at the head of the downed firefighter and place the downed firefighter in a seated position.
4. The tool is inserted through the shoulder straps of the SCBA, providing a handle for both rescuers to hold onto. Make certain that the pick end of any tool is rotated away and facing down toward the floor to avoid injury in case the rescuer slips or falls.
5. On command, the rescuers will pull the downed firefighter up above the stair treads with the downed firefighter's lower extremities dragging behind. It is important to make certain that the downed firefighter is lifted high enough to have the SCBA cylinder valve clear the stair tread. If a third rescuer is available, they can control the lower extremities by being positioned at the feet to the inside of the downed firefighter's legs with their face high into the groin area and with the downed firefighter's legs positioned over the rescuer's shoulders. They will drive the downed firefighter up, helping to clear the stair treads.



Stair Raise Using the Handcuff Knot

The handcuff knot can be utilized in moving a downed firefighter up stairs. It is especially useful when the staircase is narrow.

To perform the stair raise with the handcuff knot:

1. Locate and assess the downed firefighter, placing them on their back. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs.
2. Rescuer 1 will locate themselves at the head of the firefighter and place the handcuff knot on the forearms.
3. Rescuer 1 will then pay out the rope or webbing until they are located at the landing or top of the staircase. Keep in mind that conditions can be horrific at the landing or top of the staircase as heat and products of combustion will be present if the fire in the lower level has not been controlled.
4. Rescuer 2 will be positioned at the feet to the inside of the downed firefighter's legs with their face high into the groin area; the downed firefighter's legs will need to be positioned over the rescuer's shoulders. The downed firefighter should be rotated slightly to one side to allow the SCBA to slide up the stairs.
5. Rescuer 1 will call out the command and take up slack in the rope or webbing, pulling the downed firefighter up the stairs.
6. Rescuer 2 will use his legs to drive the downed firefighter up the stairs, making certain that the cylinder valve of the SCBA clears the stair treads.

Using Rescue Loops to Carry a Downed Firefighter up Stairs

Rescue loops are another option to assist the RIC in moving a downed firefighter up a staircase. A minimum of two firefighters will be needed to use rescue loops.

To use rescue loops to help move a firefighter up a staircase:

1. Locate and assess the downed firefighter, placing them on their back.
2. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs in a seated position.
3. Rescuer 1 will take position behind the downed firefighter and will grasp both shoulder straps of the downed firefighter's SCBA.
4. Rescuer 2 will take a rescue loop and place it in a girth hitch on the downed firefighter's leg as high up in the groin area as possible. This will be repeated for the second leg also.



5. Rescuer 2 will position themselves inside the downed firefighter's legs, grasping a rescue loop in each hand.
6. On command, rescuer 1 will pull straight up on the SCBA shoulder straps while rescuer 2 will pull straight up on the rescue loops. At this point, the SCBA of the downed firefighter should be up high enough to clear the stair treads easily.

The rescuers should be able to navigate the stairs quite easily with proper execution of this maneuver. If needed, they can stop periodically to regroup or get a better hold. Just remember, once committed to going up the staircase, it must be performed quickly—the staircase is a ventilation outlet for any conditions on the lower level!

Using 2-to-1 Mechanical Advantage to Move a Downed Firefighter

A simple mechanical advantage system can be an aid in moving a downed firefighter. The simplest mechanical advantage system can be made using just one rope and a carabiner, however, for a more efficient system consider adding a pulley to reduce friction.

To raise a downed firefighter up a staircase using a simple 2-to-1 mechanical advantage:

1. Rescuer 1 will position the downed firefighter in the best position and attach a carabiner to a suitable point on the firefighter.
2. Rescuer 2 will find a suitable anchor point at the top of the staircase and attach the end of the rescue rope to the anchor point
3. Form a bight in the rescue rope and place the bight into the carabiner on the downed firefighter. If a pulley is available run the rope through the pulley and attach the pulley to the downed firefighter.
4. Rescuer 2 and 3 pull on the free end of the rescue rope while Rescuer 1 assists positioning the downed firefighter as needed as they are raised.



Moving a Disabled Firefighter Down a Flight of Stairs

Moving the downed firefighter down a flight of stairs is not as difficult as going up because gravity will assist to a degree, but it is still not an easy task by any means. The most important thing to consider when going down stairs with a downed firefighter is to prevent the downed firefighter from sustaining additional injuries to the head and neck

The simplest way of removing a downed firefighter from an upper floor using a flight of stairs is to drag the firefighter headfirst.

1. To drag a downed firefighter down a flight of stairs: Locate and assess the downed firefighter, placing them on their back. Drag the downed firefighter to the top of the staircase, positioning them face up. Rescuer 1 will position themselves on the stairs behind rescuer 2. Rescuer 1 will guide rescuer 2 and the downed firefighter.
2. Rescuer 2 will roll the downed firefighter slightly to the right or left to keep the SCBA from getting caught on the stairs when dragging.
3. Rescuer 2 will lift on the SCBA shoulder straps of the downed firefighter while cradling the back of the head and neck on their forearm.
4. The rescuers will proceed down the stairs with the upper body of the downed firefighter supported by rescuer 2. The downed firefighter's lower body will drag down along the stairs.



Another option when moving the downed firefighter down a flight of stairs is to use a tool to assist in lifting the downed member over the stairs. Two rescuers can be positioned at the head of the downed firefighter while a Halligan bar or other tool is placed through the shoulder straps of the SCBA. This will allow the team members to grasp each side of the Halligan bar while raising the head and upper torso of the downed firefighter when bringing him down the stairs. If a third rescue member is available, he can help guide the rescuers down the stairs.

Summary

Extracting a downed firefighter from a hazard area may require the utilization of multiple techniques— such as the extremity, cradle, or blanket carry and the lift-and-lead, or blanket drag; depending on the circumstances. Drastic and unconventional measures, such as the harness conversion, may need to be taken to remove the downed firefighter. Safety and the imagination are the only limiting factors when removing a downed firefighter in an expedient manner. The key to all of the methods discussed for moving a downed firefighter is technique. Practice and training is the only way to find out what works best and what adjustments can be made to make the operation more efficient.

References

Firetown Training Specialist, Situational Awareness on the Fireground, Retrieved from Web Site on 11/28/2007, <http://www.firetowntrainingspecialist.com>

IFSTA – Fire Protection Publications (2005). Fire Ground Search and Rescue. (7th ed.) Fire Service Search and Rescue (pp. 379-409). Oklahoma State University

IFSTA – Fire Protection Publications (1999). Rescue and Extrication. (4th ed.) Essentials of Fire Fighting (pp. 175 – 188). Oklahoma State University

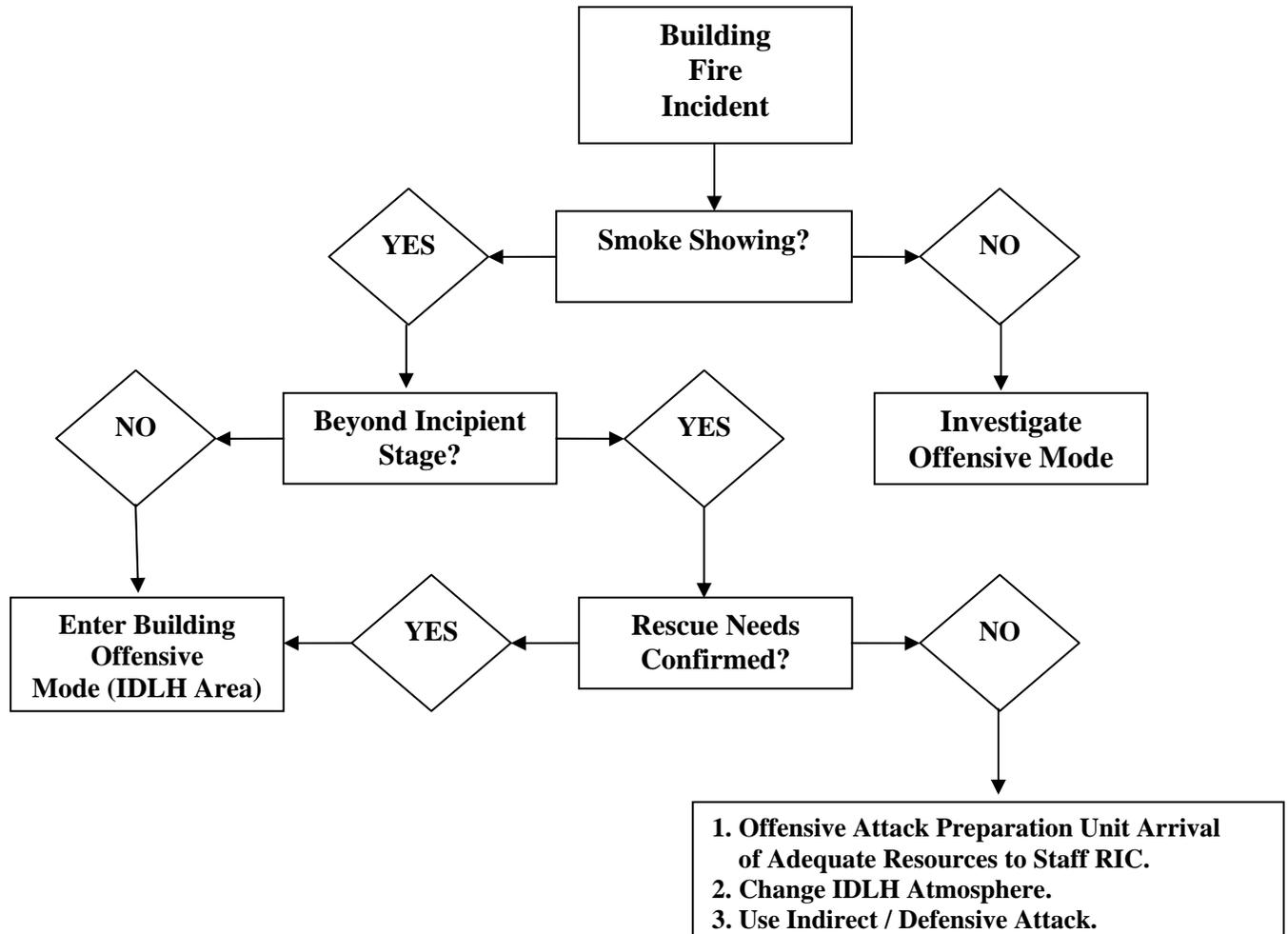
Jakubowski, G. & Morton, M. (2003). Rapid Intervention Teams (1st ed.) Fire Publications – Oklahoma State University

Mason, R. Michael & Pindelski, S. Jeffrey (2006). Rapid Intervention Company Operations (1st ed.) Thomson Publications – Delmar Learning

Richman, H. (1986). Truck Company Fireground Operations (2nd ed.) National Fire Protection Association

Appendix

Appendix: A
IRIC FLOW CHART



Offensive Attack Preparation Activities

- Size Up
- Evacuations
- Water Supply
- Exterior Hoseline Deployment (Exposure Protection)
- Forcible Entry
- Ventilation
- Ladder Deployment
- Tools & Equipment Staging
- Utility Control

Appendix: B

Using the E.S.C.A.P.E. Method

When operating under duress in a survival situation, consistent and relevant information must be passed between the downed firefighter and the Incident Commander. To help the firefighter and the IC communicate effectively, the acronym E.S.C.A.P.E. can be used. Following this acronym, the IC (or whoever is in direct communication with the downed firefighter) can ensure they receive pertinent information.

The point of the E.S.C.A.P.E. acronym, like all acronyms, is to act as a prompt of specific and important information. Even if only a few points are remembered by the firefighter under duress, command or dispatch can prompt them on the rest using a tactical worksheet with E.S.C.A.P.E. written on it.

E - Engine or Truck assignment: “E2411 Captain” or “Truck 2471 Firefighter Jacobs”

Due to personnel working on various apparatus and shifts due to overtime etc., it is important to know exactly which assignment the downed firefighter is on at the time of the emergency for accountability purposes.

S – Situation: “fell through the floor”; “lost”; “trapped in a collapse”; “tangled in wires”

A brief description lets everyone know what happened. There is no need for a lengthy description, but if the building has been compromised in some way, everyone on the fireground should know for safety reasons.

C – Conditions: “heavy smoke, high heat”; “zero visibility”; “light smoke”

A brief report of fire conditions at the downed firefighter's present location. This helps in locating the downed firefighter. If the RIC Team is in a light smoke area and the firefighter is reporting zero visibility, the RIC Team knows they are not yet in the correct area of operation.

A - Air Supply: “air low”; “unable to get a reading”; “SCBA dislodged”; “alarm ringing”

There are two types of firefighters in distress, those who have no air, and those about to run out of air. This is a reminder to the downed firefighter to conserve air, which is easily forgotten in the heat of the moment, and let command know the urgency of the situation.

P - Position/Present Location: “in the basement”; “next to a staircase”; “on D side”

The more detailed the information the better. Any relevant details are helpful. (lights, objects, furniture, fans, air horns, saws) etc.

E - Escape Plan: “staying in place”; “working my way toward chainsaw sound”

The most important thing is for the downed firefighter to communicate if they are changing locations. Having their PASS activated, and keeping all their flashlights on will help those searching. Communication is the key.

Appendix: C

EXAMPLE / RIC STATUS BOARD

FRONT

Clock Attachment

RIC STATUS BOARD					
Name	Assignment	Time IN	Time OUT	Air Supply (circle)	PPPN
BROWN	FIRE ATTACK	1700		Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
MILLER		1700		Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
SMITH		1700		Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
WEBBER	S & R	1710		Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
JONES		1710		Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
ADAMS		1710		Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
				Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
				Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:
				Full - $\frac{3}{4}$ $\frac{1}{2}$ - $\frac{1}{4}$	Unit:

North Zone Training Manual Engine Module

RIC Operations Section 917.00

August 13, 2008

Page 2 of 1

Incident Name:	IC:
Radio Channels: Command:	Tactical:
	Tactical:
	Tactical:
<input type="checkbox"/> OFFENSIVE	
<input type="checkbox"/> DEFENSIVE	
<input type="checkbox"/> TRANSITIONAL	

BACK

<ul style="list-style-type: none"><input type="checkbox"/> Document specialized tools or equipment taken into Hazard Area<input type="checkbox"/> Determine maximum interior time allowed (Air Management)<input type="checkbox"/> Ensure crews exit with sufficient time and air for safe egress<input type="checkbox"/> Monitor ALL radio traffic assigned to incident<input type="checkbox"/> Obtain and document recon information regarding tasks, hazard areas, area layout as crew exit<input type="checkbox"/> Keep IC, Division/Group Supervisor advised of entry status, time elements and situational awareness information
