Fire Fighter Rescue and Rapid Intervention Crew (RIC) Operations (2023)

Course Plan

Course Details

Description: This hands-on course provides the knowledge and skills needed to perform fire fighter rescue to reduce fire fighter injuries and deaths. Topics include the fire fighter rescue mindset; size up, tool assembly, and softening the structure; search, assessment, air delivery, and rescue; and Rapid Intervention Crew (RIC) roles, responsibilities, strategies, and operations.

Designed For: All fire service suppression and rescue personnel

Prerequisites: Fire Fighter 1A: Suppression (SFT) **or** Fire Fighter 1 certification

Fire Fighter Survival (SFT)

- The Fire Ground Survival Awareness (IAFF online course) component of this course must be completed within three years prior to the Fire Fighter Rescue and RIC Operations course start date.

Standard: Attend and participate in all course sections

Successful completion of all skills identified on the Training Record

Hours: 32 hours

(5.5 lecture / 26.5 application)

Max Class Size: 50

Instructor Level: SFT Registered Fire Fighter Rescue and RIC Operations Instructor

Instructor/Student Ratio: 1:50 (lecture)

1:10 (application/skills proficiency)

Restrictions: This course requires a site with adequate space, materials and equipment, and training props to deliver the training according to the course outline. See Facilities, Equipment, and Personnel under Required Resources.

All instructors counted toward student ratios, including application components, must be SFT Registered Fire Fighter Rescue and RIC Operations Instructors.

SFT Designation: FSTEP

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Required Resources

Instructor Resources

To teach this course, instructors need:

- PPE – complete structural ensemble
- SCBA – complete ensemble with an additional cylinder
- General knowledge of Project Mayday (www.projectmayday.net)
- General knowledge of IAFF Fire Ground Survival Awareness (online)
    - Current edition
    - https://www.iaff.org/fire-ground-survival/
    - Content available after course registration
- A site-specific training action plan
- AHJ policies and procedures and best practices
    - For all Enabling Objectives that include "determined by AHJ", teach the AHJ-specific policy, process, or procedure.

Additional supporting texts and references:

- Textbooks
    - *Fire Fighter Safety and Survival* (D. Zimmerman, Jones & Bartlett Learning, 3rd edition)
    - *Fire Service Rapid Intervention Crews: Principles and Practice* (J. Nedder, Jones & Bartlett Learning, 2015)
    - *Rapid Intervention Teams* (G. Jakubowski and M. Morton, Fire Protection Publications, 2nd edition)
- Books and DVDs
    - *Brannigan's Building Construction for the Fire Service* (F. Brannigan and G. Corbet, Jones & Bartlett Learning, 6th edition)
    - *Building Construction: The Firefighter's Battlespace* (V. Dunn, FDNY Foundation, 2018)
    - *ICS 910: Firefighter Incident Safety and Accountability Guidelines* (FIRESCOPE, 2019)
    - *The Art of Reading Smoke* (D. Dodson, Fire Engineering, 2007)
- Case Studies / Articles
    - Case Study – Whittier Incident (10.29.00)
    - Case Study – State Incident (01.09.91)
    - Confined Space Claims Denver Firefighter in a Tragic Building Fire (D. McGrail, Fire Engineering, 1993)
    - The Murder of Columbus Firefighter John Nance (M. Norman, Columbus Monthly, 1987)
    - Firefighter Fatalities in the United States (FEMA – U.S. Fire Administration)
    - Firefighter Close Calls (www.firefighterclosecalls.com)
    - Fire Fighter Fatality Investigation and Prevention Program (NIOSH)

- Standards
    - NFPA 101: Life Safety Code (2021 or current)
    - NFPA 1404: Standard for Fire Service Respiratory Protection (2018 or current)
    - NFPA 1407: Standard for Training Fire Service Rapid Intervention Crews (2020 or current)
    - NFPA 1500: Standard on Fire Department Occupational Safety and Health Program (2021 or current)
    - NFPA 1584: Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises (2022 or current)
    - NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents (2017 or current)
    - NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (2020 or current)
    - NFPA 1852: Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA) (2019 or current)
    - NFPA 1971: Standard on Protective Ensembles for Structural Firefighting and Proximity Firefighting (2018 or current)
    - NFPA 1981: Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services (2019 or current)
    - NFPA 1982: Standard on Personal Alert Safety Systems (PASS) (2018 or current)
    - NFPA 1983: Standard on Life Safety Rope and Equipment for Emergency (2017 or current)
    - Occupational Health and Safety Administration (OSHA)

Online Instructor Resources

The following instructor resources are available online at https://osfm.fire.ca.gov/divisions/state-fire-training/fstep-curriculum/

- Appendix K: Mayday & Emergency Traffic
- Appendix T: Rapid Intervention Crew
- Case Study - State Incident (01.09.91)
- Case Study - Whittier Incident (10.29.00)
- Drill Ground Activity 1: Size Up and Soften a Structure
- Drill Ground Activity 2: Assemble a Mobile Tool Cache
- Drill Ground Activity 3: Search Line Deployment
- Drill Ground Activity 4: Oriented Search
- Drill Ground Activity 5: Assess a Downed Fire Fighter (PAC CAN)
- Drill Ground Activity 6: RIC Air Delivery
- Drill Ground Activity 7: SCBA Conversion to Drag a Downed Fire Fighter
- Drill Ground Activity 8: Remove PPE from a Downed Fire Fighter
- Drill Ground Activity 9: Drag a Downed Fire Fighter
- Drill Ground Activity 10: Drag a Downed Fire Fighter Up/Down Stairs
- Drill Ground Activity 11: Head-first Ladder Carry

- Drill Ground Activity 12: Feet-first Ladder Carry
- Drill Ground Activity 13: Rescue without a RIC
- Drill Ground Activity 14: Rescue Using VES
- Drill Ground Activity 15: Window-to-Door Conversion
- Drill Ground Activity 16: Below Grade Rescue Using Rope
- Drill Ground Activity 17: Below Grade Rescue Using Ladders
- Drill Ground Activity 18: Seated Carry with SCBA Removal
- Drill Ground Activity 19: High Point Window Rescue
- Drill Ground Activity 20: Attic Rescue
- Drill Ground Activity 21: Confined Area Rescue
- Drill Ground Activity 22: Roof Rescue
- Drill Ground Activity 23: Tarver Evolution
- Drill Ground Activity 24: Pittsburg Evolution
- PTS, SCD, PTSD – What's the Difference (IAFF 2018)
- Selecting RIC Tools

Student Resources

To participate in this course, students need:

- PPE – complete structural ensemble
- SCBA – complete ensemble with an additional cylinder

Facilities, Equipment, and Personnel

Facilities

The following facilities are required to deliver this course:

- Standard learning environment or facility, which may include:
  - Writing board or paper easel chart
  - Markers, erasers
  - Amplification devices
  - Projector and screen
  - Laptop or tablet with presentation or other viewing software
  - Internet access with appropriate broadband capabilities
- A training site with the facilities, structures, work areas, materials, props, tools, and equipment of adequate size, type, and quantity to fully and safely support the cognitive and psychomotor training required to deliver the curriculum

Equipment

Student safety is of paramount importance when conducting the type of high-risk training associated with this Machinery Rescue Technician (2021) course.

- The equipment listed below is the minimum for the delivery of this course.
- The student is responsible for providing all PPE and ensuring that all PPE meets AHJ and site requirements.

- For all tools and equipment, ensure that you have the power source, operating supplies (blades, fuel, etc.), cleaning supplies, and appropriate PPE.

The following equipment is required to deliver this course:

Quantity Per 10-Person Module	Equipment
1	24’ extension ladder
1	14’ roof ladder
1	10’ attic ladder
1	Lifeline rope for belay
1	Fall protection belay device system
1	Hardware/software to establish anchors
12	Harness for fall protection
1	Search rope bag
1	300’ of hose each size (1”, 1.75”)
2	Thermal imaging camera
2	Sets of irons (flat head axe/Halligan)
1	Pumping apparatus w/ basic frontline equipment and hand tools.
1	RIC air pack (AHJ)
1	Drag tarp or carry all (AHJ)
4	Flashlights or box lights
1	Stokes basket
1	Chain saw
1	Circular saw
12	Handheld radios

Training Props

The following training props are required to deliver this course:

- Simulated structure
  - Minimum two stories with windows on each floor with ladder positioning access
  - Three or more rooms no less than 10’x10’
    - Must have movable furnishings that can be moved from room to room
    - Must be able to be darkened
  - Anchoring points must be available on each floor for securing belay systems
  - Two or more entrances/exits to structure
- Simulated roof prop
  - Elevated preferred with fall protection anchoring available
- Simulated attic prop
- Below grade prop

    - 8-10 feet between floors, access opening minimum 2'x2', fall protection anchoring
- Breaching and profiling prop
    - Simulated stud wall 16" on center, with drywall
- Confined area prop
    - Small or restricted space to perform rescue/disentanglement

Ensure that ropes and equipment used for safety belay system within elevated skills are consistent with NFPA 2500 as a minimum. Ensure upper floor egress belay systems are set-up and tended by trained personnel.

The course provider or agency assumes all responsibility, liability, and maintenance for the engineering design, strength, stability, and adequacy of all props, including anchor points and tie offs. The provider or agency further assumes all responsibility, liability, and maintenance for all tools, equipment, and supplies used at the site for the delivery of a Fire Fighter Rescue and RIC Operations class. This includes, but is not limited to, ladders, ropes, hardware, and software.

Personnel

The following personnel are required to deliver this course:

- Any instructor counted toward student ratios, including application components, must be an SFT Registered Fire Fighter Survival and RIC Operations Instructor.
- SFT strongly recommends the use of Skills Coaches as supplemental support to assist with application and skills proficiency practice.
- The use of Skills Coaches as supplemental support does not negate the 1:10 instructor/student ratio requirement.

Time Table

Segment	Lecture	Application	Unit Total
Unit 1: Introduction			
Topic 1-1: Orientation and Administration	0.5	0.0	
Topic 1-2: Course Safety Requirements	0.25	0.0	
Unit 1 Totals	**0.75**	**0.0**	**0.75**
Unit 2: Fire Fighter Rescue Mindset			
Topic 2-1: Common Causes of Fire Fighter Rescue Situations	0.25	0.0	
Topic 2-2: The Fire Fighter Rescue Mindset	0.25	0.0	
Unit 2 Totals	**0.50**	**0.0**	**0.50**
Unit 3: Fire Fighter Rescue Pre-Incident Activities			
Topic 3-1: Conducting Size Up	0.25	0.25	
Topic 3-2: Assembling Fire Fighter Rescue Tools	0.25	0.25	
Unit 3 Totals	**0.50**	**0.50**	**1.0**
Unit 4: Fire Fighter Rescue Operations			
Topic 4-1: Searching for a Downed Fire Fighter	0.25	1.0	
Topic 4-2: Assessing a Downed Fire Fighter	0.25	0.5	
Topic 4-3: Delivering Air to a Downed Fire Fighter	0.25	1.0	
Topic 4-4: Rescuing a Downed Fire Fighter	0.25	5.5	
Unit 4 Totals	**1.0**	**8.0**	**9.0**
Unit 5: Rapid Intervention Crews (RIC)			
Topic 5-1: RIC Roles and Responsibilities	0.25	0.0	
Topic 5-2: RIC Organization and Structure	0.25	0.0	
Topic 5-3: RIC Operational Cycles	0.25	0.0	
Unit 5 Totals	**0.75**	**0.0**	**0.75**
Unit 6: RIC Pre-Incident Activities			
Topic 6-1: Conducting RIC Size Up	0.25	0.25	
Topic 6-2: Selecting RIC Tools	0.25	0.25	
Topic 6-3: Positioning RIC on the Fire Ground	0.25	0.0	
Topic 6-4: Softening the Structure	0.25	0.25	
Unit 6 Totals	**1.0**	**0.75**	**1.75**
Unit 7: RIC Operations			
Topic 7-1: Searching for a Downed Fire Fighter	0.25	2.0	
Topic 7-2: Administering Air to a Downed Fire Fighter	0.25	1.0	
Topic 7-3: Rescuing a Downed Fire Fighter	0.25	14.25	
Topic 7-4: Caring for Personnel Involved in the Incident	0.25	0.0	
Unit 7 Totals	**1.0**	**17.25**	**18.25**

Formative Assessments			
Determined by AHJ or educational institution	**0.0**	**0.0**	**0.0**
Summative Assessment			
Determined by AHJ or educational institution	**0.0**	**0.0**	**0.0**
Course Totals	**5.5**	**26.5**	**32.0**

Time Table Key

1. The Time Table documents the amount of time required to deliver the content included in the course plan.

2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.

3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.

4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.

5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

Recommended Teaching Plan

Day 1	Time
Classroom Instruction	8a-12p
Lunch Break	12-1p

Drill Ground Activities
• SCBA Conversion and PPE Removal (35 min)
  ○ Drill Ground Activity 7: SCBA Conversion to Drag a Downed Fire Fighter
  ○ Drill Ground Activity 8: Remove PPE from a Downed Fire Fighter
• Basic Drags and Carries (35 min)
  ○ Drill Ground Activity 9: Drag a Downed Fire Fighter
• Webbing, Tarps, and MAST Loops (35 min)
  ○ Drill Ground Activity 9: Drag a Downed Fire Fighter
• Size Up, Softening, and Mobile Tool Cache (35 min)
  ○ Drill Ground Activity 1: Size Up and Soften a Structure
  ○ Drill Ground Activity 2: Assemble a Mobile Tool Cache
• PAC-CAN Assessments (35 min)
  ○ Drill Ground Activity 5: Assess a Downed Fire Fighter
• RIC Air Delivery (35 min)
  ○ Drill Ground Activity 6: RIC Air Delivery
	1-5p

Day 2	**Time**
Classroom Briefing • Fall protection • Safety harness demonstration	8-9a

Drill Ground Activities
• Oriented Search (1 hour)
  ○ Drill Ground Activity 3: Search Line Deployment
  ○ Drill Ground Activity 4: Oriented Search
• Breaching/Profiling (15-30 minutes)
  ○ Drill Ground Activity 15: Window-to-Door Conversion
• Moving FF Up and Down Stairs (1 hour)
  ○ Drill Ground Activity 10: Drag a Downed Fire Fighter Up and Down Stairs
• Head-first Ladder Rescue (45 min)
  ○ Drill Ground Activity 11: Head-first Ladder Carry
• Feet-first Ladder Rescue (45 min)
  ○ Drill Ground Activity 12: Feet-first Ladder Carry
• Below Grade Rescue with Rope (conscious & unconscious) (1 hour)
  ○ Drill Ground Activity 16: Below Grade Rescue Using Ropes
• Below Grade Rescue with Ladder (conscious & unconscious) (1 hour)
  ○ Drill Ground Activity 17: Below Grade Using a Ladder
	9:30a-5p

Lunch Break (within 9:30a-5p window)	1 hour

Day 3	Time
Classroom Instruction	8-9a

Drill Ground Activities
• Seated Carry (1 hour)
  ○ Drill Ground Activity 18: Seated Carry with SCBA Removal
• VES Rescue Methods (1 hour)
  ○ Drill Ground Activity 14: Rescue Using VES
• Non-RIC Fire Fighter Rescue (1 hour)
  ○ Drill Ground Activity 13: Rescue without a RIC
• Evolutions (3 hours)
  ○ Drill Ground Activity 23: Tarver Evolution
  ○ Drill Ground Activity 24: Pittsburg Evolution
	9:30a-5p

Lunch Break (within 9:30a-5p window)	1 hour
Day 4	**Time**
Classroom Instruction	8-9a

Drill Ground Activities
• Above Ground Rescues (1.5 hours)
  ○ Drill Ground Activity 19: High Point Window Rescue
  ○ Drill Ground Activity 20: Attic Rescue
  ○ Drill Ground Activity 21: Confined Area Rescue
  ○ Drill Ground Activity 22: Roof Rescue
	9:30a-5p

Lunch Break (within 9:30a-5p window)	1 hour

Unit 1: Introduction

Topic 1-1: Orientation and Administration

Terminal Learning Objective

At the end of this topic, a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, skills exercises, resources, evaluation methods, and participation requirements in the course syllabus.

Enabling Learning Objectives

1. Identify facility requirements
   - Restroom locations
   - Food locations
   - Smoking locations
   - Emergency procedures
2. Identify classroom requirements
   - Start and end times
   - Breaks
   - Electronic device policies
   - Special needs and accommodations
   - Other requirements as applicable
3. Review course syllabus
   - Course objectives
   - Calendar of events
   - Course requirements
   - Student evaluation process
   - Assignments
   - Activities
   - Required student resources
   - Class participation requirements

Discussion Questions

1. Determined by instructor

Application

1. Have students complete all required registration forms.

Topic 1-2: Course Safety Requirements

Terminal Learning Objective

At the end of this topic a student, given course safety requirements, AHJ policies and procedures, and NFPA standards, will be able to participate in the SFT Fire Fighter Survival RIC Operations course so that all skills and training evolutions are carried out in accordance with AHJ policies and procedures and applicable NFPA standards.

Enabling Learning Objectives

1. Identify risks and hazards associated with fire fighter rescue RIC operations training
2. Identify AHJ training safety policies and procedures
3. Identify appropriate PPE and SCBA for participation
4. Identify preventative measures to mitigate hazards and injuries
    - Arrive well rested
    - Inform instructor(s) of pre-existing injuries or conditions
    - Maintain situational awareness
    - Stay hydrated
5. Identify process for reporting injury or illness

Discussion Questions

1. Do you have the appropriate structural PPE to participate in this course?
2. Do you have the appropriate SCBA with a spare cylinder?
3. Who should you talk to if you are injured during this course?

Application

1. Determined by instructor

Instructor Notes

1. Familiarize yourself with the agency, academy, or training site safety plan. If there isn't one, develop a safety plan applicable to the skills presented in the course.

Unit 2: Fire Fighter Rescue Mindset

Topic 2-1: Common Causes of Fire Fighter Rescue Situations

Terminal Learning Objective

At the end of this topic a student, given fire fighter rescue case studies, will be able to identify common causes of Mayday situations so that rescue situations, injuries, and line of duty deaths are reduced in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Define the term "Mayday"
   - Any life-threatening situation that cannot be resolved within 30 seconds
2. Identify most common types of Mayday situations
   - Lost or separated from hose line
   - Fall into basement or through/off roof
   - Air problems
   - Entanglement
   - Collapse
3. Identify "16 Trigger Phrases of Mayday"
4. Identify most common causes of Mayday situations
   - Rapid change in conditions
   - Sudden unexpected events
   - Improper risk assessment
   - Lack of Incident Command
   - Lack of accountability
   - Inadequate communications
   - Lack of standard operating procedures (SOPs) or failure to follow
5. Identify common causes of line of duty deaths (LODD)
   - Complacency
   - Communication
   - Crew continuity
   - Circumstances beyond control

Discussion Questions

1. What are some common causes of fire fighter emergencies, injuries, and deaths?
2. When and how would you call a Mayday for another fire fighter?
3. Why do you think these emergencies and deaths continue to happen?
4. How can we mitigate these situations in the future?

Application

1. Determined by instructor

Instructor Notes

1. Use this topic to set the tone for the course.
2. ELO 2: Reference www.projectmayday.net for case studies and current statistics.
3. ELO 3: See Don Abbott's "Mayday Communications Clues".
4. ELO 5: Based on the NIOSH 5 Lessons Learned from LODD.

Topic 2-2: The Fire Fighter Rescue Mindset

Terminal Learning Objective

At the end of this topic a student, given fire fighter rescue statistics, will be able to develop the proper mindset and attitude to successfully rescue a downed fire fighter in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify how fire fighter rescue differs from RIC deployments and how they operate concurrently
    - Fire fighter self-rescues (35.5% of the time)
    - Fire fighters rescue fellow crew member (26.1% of the time)
    - Adjacent crew(s) performs fire fighter rescue (25.3% of the time)
        - Interior suppression crew(s)
        - Exterior personnel (per AHJ)
    - Rapid Intervention Crew(s) (RIC) performs fire fighter rescue (6.6% of the time)
        - Down and dirty
        - Single team (initial response / simple)
        - Multiple teams (extended response / complex)
2. Describe the importance of developing a fire fighter rescue mindset
    - How fire fighters take care of each other
    - Last line of defense
    - Deepest part of a fire fighter's calling
        - Everybody goes home
    - More than 85% of the time, someone other than RIC completes the fire fighter rescue
3. Describe how to develop a fire fighter rescue mindset
    - Begins long before incident
    - Build a solid foundation of fire fighter skills
    - Constantly develop individual knowledge, skill, and ability
    - Maintain high level of physical fitness
    - Maintain high level of mental preparation
    - Learn from the past
    - Understand that all fire fighter rescue decisions are situational (there are no absolutes)
4. Describe proactive fire ground functions that increase fire fighter survival
    - Learn everything possible about the situation
        - Structure
        - Fire conditions
        - Crews inside
        - Hazard or obstacles
    - Maintain continuous situational awareness
    - Take proactive steps to mitigate hazards and risks
    - Be dynamic, not static

5. Describe the significance of not becoming part of fire fighter rescue emergency
    - Becoming part of problem reduces chance of rescuing initial downed fire fighter(s)
    - Maintain composure and operational discipline (fulfill assignment)
    - Maintain crew accountability
6. Describe the psychological/emotional impact of fire fighter rescue events
    - Not all rescuers are involved in all phases of a fire fighter rescue
        - When to leave
        - How to leave
    - Not all fire fighter rescue operations are successful
        - Rescue vs. recovery
        - Available resources for support

Discussion Questions

1. How can you consistently prepare for rescue situations throughout your career?
2. What can you learn from past fire fighter rescue situations and fire ground tragedies?
3. What can happen if you don't maintain your composure and operational discipline during a fire fighter rescue situation?

Application

1. Determined by instructor

Instructor Notes

1. ELO 1 and 2: Statistics come from www.projectmayday.com. Update to current percentages when teaching the course.
2. ELO 3: Emphasize that this course is an introduction. Students should practice and train throughout their career.
3. ELO 7: Introduce the idea here to lay the foundation but expand in Topic 7-4 at the end of the course.

Unit 3: Fire Fighter Rescue Pre-Incident Activities

Topic 3-1: Conducting Size Up

Terminal Learning Objective

At the end of this topic a student, given an incident and background information, will be able to conduct a fire fighter rescue size up to develop an ongoing risk assessment, mitigate hazards, increase fire fighter safety, and strategically coordinate fire fighter rescue efforts in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Describe the importance of continual size up to fire fighter rescue
    - Increases fire fighter safety
    - Helps with strategic coordination efforts
    - Enhances situational awareness
    - Influences tactical decision making
    - Lays groundwork for RIC operations
        - Tools, positioning, timing, etc.
2. Identify main size-up components
    - Exterior
    - Interior
    - Fire ground operations
3. Identify elements to evaluate during exterior size up
    - Construction
        - CASE (condition, age, size, exits)
        - Potential for collapse
        - Burn time
        - Required tools
    - Building use and occupancy type
    - Fire behavior
        - Reading smoke (VVDC: volume, velocity, density, color)
        - Flow path
    - Special hazards
        - Weather
        - Topography
        - Structures on ascending/descending hillsides
        - Clutter/obstacles
        - HazMat 704 placard
    - Potential access and egress
        - Go over, around, and through if necessary
        - Consider using portable lights as indicators for interior crews
        - Openings requiring softening
4. Identify elements to evaluate during interior size up
    - Building use and occupancy type

- Interior layout
    - Large open areas
    - Shape and configuration
    - Compartmentalized
    - Type of search required
- Fire loading
- Fire conditions
    - Heat
    - Visibility
    - Ventilation/fuel limited profiles
- Smoke
    - VVDC
- Potential hazards
    - High-piled storage
    - Hoarding Disorder
    - Open shafts

5. Identify elements to evaluate during fire ground operations
    - Fire ground radio channels in use
    - Landmarks
        - Alpha-side, Bravo-side, Charlie-side, Delta-side, Divisions
    - Initial alarm assignments
    - Crew/hose line entry points
    - Current fire ground conditions
    - Air management
    - How long fire has been burning
        - Potential for collapse
        - Tenability
        - Changing conditions
6. Conduct a size up

Discussion Questions

1. Why is size up important for fire fighter rescue?
2. How does exterior size up influence interior size up?

Application

1. Drill Ground Activity 1: Size Up and Soften a Structure

Instructor Notes

1. This drill ground activity applies to Topic 3-1 (Fire Fighter Rescue Pre-Incident Activities) and Topics 6-1 and 6-4 (RIC Pre-Incident Activities). Adjust as needed to reflect rescue scenario.

Topic 3-2: Assembling Fire Fighter Rescue Tools

Terminal Learning Objective

At the end of this topic a student, given an incident and fire fighter rescue tools, will be able to identify the importance of assembling fire fighter rescue tools in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify fire fighter rescue activities that require tools
    - Access and egress
    - Search
    - Air delivery
    - Gaining access to a downed fire fighter
    - Packaging a downed fire fighter
2. Identify tools fire fighters carry on their person that can assist with fire fighter rescue
    - Portable radio
    - Extra flashlight
    - Wire cutters
    - Webbing sling
    - Door stops/chocks
    - Chalk
    - Bailout rope
    - Hand tools (axe, Halligan, etc.)
    - SCBA

Discussion Questions

1. What fire fighter rescue activities require tools?
2. What tools do you carry that can assist with fire fighter rescue?

Application

1. Drill Ground Activity 2: Assemble a Mobile Tool Cache

Instructor Notes

1. This drill ground activity applies to Topic 3-2 (Fire Fighter Rescue Pre-Incident Activities) and Topic 6-2 (RIC Pre-Incident Activities). Adjust as needed to reflect rescue scenario.

Unit 4: Fire Fighter Rescue Operations

Topic 4-1: Searching for a Downed Fire Fighter

Terminal Learning Objective

At the end of this topic a student, given a downed fire fighter scenario, tools and equipment, AHJ policies and procedures, and best practices, will be able to search for a downed fire fighter so that personal orientation is maintained, air consumption is managed, and downed fire fighter is located in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify information relayed during a Mayday call
   - Who, What, Where, Air
   - LUNAR – location, unit, name, assignment, resources needed
   - NUCAN – name, unit, conditions, actions, needs
   - HELP – handle (name), equipment (company assignment), location, problem
2. Identify external actions triggered by a Mayday call
   - Radio control and discipline initiated
   - Fireground operations and incident priorities continue
   - Crews working in proximity notified
   - Resources reassigned to that location
   - Rapid Intervention Crew (RIC) activated
   - Additional units activated
   - Rescue or removal
   - Incident strategy and priorities re-evaluated
3. Identify circumstances that might stop you from attempting to locate a downed fire fighter
   - Out of position
   - On a critical fire ground assignment
   - Not enough air (ROAM)
   - Imminent collapse
4. Describe communication requirements prior to search
   - Crew leader makes decision to leave current location and possibly an assigned (non-critical) task to search for a downed fire fighter
   - Clearly communicate decision to all crew members and Incident Command
5. Describe the importance of air management during search operations
   - Rule of Air Management (ROAM) determined by AHJ
   - May not have enough air to complete search assignment
6. Describe how to search the immediate area
   - Orient yourself in relation to downed fire fighter
   - Travel to last known or transmitted location
   - Maintain personal orientation during travel/search
     - Building layout

    - Hoseline
    - TIC
    - Rope
  - Look for flashing lights
  - Listen for PASS device or audible cues
  - Monitor radio communication for updates
  - Attempt to communicate with downed fire fighter
7. Describe the benefits and limitations of searching with a TIC
  - Uses
    - Locate downed fire fighter
    - Identify hazards and exits
    - Maintain PAR (personnel accountability report)
    - Maintain situation awareness
    - Assess fire behavior
    - Direct search activities
  - Benefits
    - Fast, quick assessment
    - Increases visibility
  - Limitations
    - Battery dependent
    - Can become too dependent
    - Tunnel vision on tool and ignore surroundings
    - Requires training
    - False readings (i.e., off reflective surfaces)
    - Doesn't read elevation change (stairs, holes, etc.)
8. Search using hose line for orientation
9. Search using rope for orientation
10. Search using building features for orientation
11. Search using avTIC for orientation

Discussion Questions

1. Why is it important to maintain personal orientation when searching for a downed fire fighter?
2. What might stop you from attempting to locate a downed fire fighter?
3. How can you use your senses to aid in searching for a downed fire fighter?

Application

1. Drill Ground Activity 3: Search Line Deployment
2. Drill Ground Activity 4: Oriented Search

Instructor Notes

1. These drill ground activities apply to Topic 4-1 (Fire Fighter Rescue Operations) and Topic 7-1 (RIC Operations). Adjust as needed to reflect rescue scenario.

Topic 4-2: Assessing a Downed Fire Fighter

Terminal Learning Objective

At the end of this topic a student, given a downed fire fighter scenario, tools and equipment, AHJ policies and procedures, and best practices, will be able to assess a downed fire fighter so that the downed fire fighter is assessed, and conditions, actions, and needs are communicated in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Define PAC CAN
    - PASS device/person
    - Air/assess
    - Communicate
    - Conditions
    - Actions
    - Needs
2. Describe steps to take (PAC CAN) when locating a downed fire fighter
    - Individual or crew initiates PAC steps
        - PASS device/person
            - Deactivate downed fire fighter's PASS device
                - Enables ability to listen for other PASS devices
                - Reduces yelling and confusion (yelling increases air consumption)
            - Identify downed fire fighter's name, rank, company identifier
        - Air/Assess
            - Assess downed fire fighter's air situation
                - Is MMR/face piece in place?
                - Is SCBA damaged?
                - Do they have enough air?
            - Assess for injuries
            - Assess structure and fire environment for any changes
            - Convert SCBA waist strap for rescue
        - Communicate
            - Communicate findings to appropriate individual
    - Individual receiving initial PAC information reports (CAN) through appropriate chain of command
        - Conditions
            - Downed fire fighter assessment (air situation, name, rank, company identifier)
            - Environment in area
            - Condition of structure
            - Location within structure
            - SCBA pressure of lowest member and PAR
        - Actions
            - Next steps to extricate or stabilize

    - Needs
        - Request necessary tools, equipment, personnel to complete fire fighter rescue
3. Identify factors that influence PAC CAN process
    - Number of fire fighter rescue personnel on site
        - Working alone vs. part of a crew
    - Complexity of fire fighter rescue
        - Rapid (grab and go) vs. extended (poor access, entrapment, injury, etc.)
    - Number of downed fire fighters
    - Structure and fire conditions
4. Assess a downed fire fighter
5. Communicate findings with appropriate parties

Discussion Questions

1. How does your AHJ delegate assessment tasks?
2. Why is it important to silence the downed fire fighter's PASS alarm?
3. Why is it important to convert the downed fire fighter's SCBA?
4. What are some considerations for "grab and go" criteria?

Application

1. Drill Ground Activity 5: Assess a Downed Fire Fighter (PAC CAN)

Instructor Notes

1. None

Topic 4-3: Delivering Air to a Downed Fire Fighter

Terminal Learning Objective

At the end of this topic a student, given a downed fire fighter scenario, tools and equipment, AHJ policies and procedures, and best practices, will be able to deliver air to a downed fire fighter so that air is delivered in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Describe the importance of SCBA familiarization
    - Your own SCBA
    - SCBA of automatic/mutual aid agencies
2. Describe how to reposition/reconnect MMR and face piece
3. Describe how to complete a systematic SCBA check
    - Check psi while silencing PASS device
    - Inspect SCBA for damage (working from face piece toward bottle pressure gauge)
        - Check for airflow to mask by cracking bypass valve
        - Check face piece and MMR for damage and compromised integrity
        - Check hose working back towards second stage regulator
        - Check second stage regulator gauge for psi and damage
        - Check high-pressure hose working back to SCBA bottle
        - Check psi of SCBA bottle pressure gauge
        - Inspect SCBA bottle for damage
4. Describe options for sharing air
    - Determined by AHJ and SCBA specifications
    - Buddy breathing via emergency breathing safety system (EBSS)
    - Trans fill via universal air connection (UAC)
5. Describe factors that impact the decision to share air
    - Downed fire fighter's air level
    - Rescuer's air level
        - Potential to compound or complicate fire fighter rescue efforts
    - Type and condition of downed fire fighter's SCBA
    - Time/distance to exiting structure
    - Time/distance to rendezvous with RIC
6. Deliver air to a downed fire fighter

Discussion Questions

1. How often should a rescuer check their own air levels during a fire fighter rescue?
2. What factors signal "go/no go" when making the decision to share air?
3. What are some common SCBA failures that can be addressed on site?
4. What would you do if you can't resolve air issues on site?
5. Why is it important to be familiar with automatic/mutual aid agency SCBAs?

Application

1. Determined by instructor

Instructor Notes

1. There is a drill ground activity for RIC Air Delivery in Topic 7-2 (RIC Operations).

Topic 4-4: Rescuing a Downed Fire Fighter

Terminal Learning Objective

At the end of this topic a student, given a downed fire fighter scenario, tools and equipment, AHJ policies and procedures, and best practices, will be able to rescue a downed fire fighter so that downed fire fighter is rescued in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify factors to consider before moving a downed fire fighter
    - Location
    - Fire conditions
    - Building conditions
    - Air management (ROAM)
    - SCBA conversion for rescue
    - Number of rescuers present
    - Time/distance to exiting structure
    - Time/distance to rendezvous with RIC
    - Shelter in place or safe refuge area
2. Describe strategies used to move a downed fire fighter
    - Reorient and assist to safety
        - If fire fighter can move independently
        - Maintain physical contact with fire fighter until they are removed from IDLH
    - Grab and go
        - Short distance to exit/safety
    - Drag
        - SCBA converted drag utilizing SCBA harness pull
        - Some turnouts equipped with drag rescue device (DRD)
        - Can use personal tools (webbing, hose strap, rope)
    - Carry
        - Can use personal tools (webbing, hose strap, hand tools)
        - Usually done with two or more rescuers
    - Drag/lift down or up stairs or ladder
        - Protect C-spine, face piece position if possible
3. Rescue a downed fire fighter using lifts, drags, and carries

Discussion Questions

1. What factors dictate how you move a downed fire fighter?
2. What personal tools can assist with moving a downed fire fighter?
3. Why is it important to escort a disoriented fire fighter to safety?
4. How do air consumption drills contribute to effective fire fighter rescue?

Application

1. Drill Ground Activity 7: SCBA Conversion to Drag a Downed Fire Fighter
2. Drill Ground Activity 8: Remove PPE from a Downed Fire Fighter
3. Drill Ground Activity 9: Drag a Downed Fire Fighter
4. Drill Ground Activity 10: Drag a Downed Fire Fighter Up/Down Stairs

5. Drill Ground Activity 11: Head-first Ladder Carry
6. Drill Ground Activity 12: Feet-first Ladder Carry
7. Drill Ground Activity 13: Rescue without a RIC

Instructor Notes

1. None

Unit 5: Rapid Intervention Crews (RIC)

Topic 5-1: RIC Roles and Responsibilities

Terminal Learning Objective

At the end of this topic a student, given AHJ policies and procedures and best practices, will be able to describe the purpose, roles, and responsibilities of a rapid intervention crew (RIC) so that RIC operations are carried out in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Describe the purpose of a RIC
    - Pre-designated rescue team for fire fighters
2. Identify the number of individuals on a RIC
    - NFPA 1407 (3.3.8)
    - OSHA 1910.156
    - AHJ policy
    - Number of individuals assigned to a RIC increases based on event complexity
    - Number of RICs assigned to an event increases based on event complexity
3. Describe RIC roles and responsibilities
    - Pre-deployment operations
        - Size up
        - Tool selection and placement
        - Structure softening
    - Initial/immediate intervention operations
        - Obvious fire fighter rescue (i.e., found quickly, grab and go)
        - Assist downed fire fighter with self-rescue
        - Position ladders for fire fighter in need of rescue
        - Replace or assist first-on-scene rescuer(s)
        - Timeframe usually limited to one SCBA cylinder (ROAM)
    - Extended intervention operations
        - Organized search for missing, trapped, or distressed fire fighter with unclear location
        - Fire fighter in trouble in need of immediate SCBA air
        - Entanglement
        - Extrication (floor or ceiling collapse)
        - Advanced life support (ALS) intervention
            - Traumatic injury
            - Significant medical emergency
            - Unconscious
            - Unable to assist in their own rescue
        - Initial RIC has consumed air supply and another team is needed to continue search or assist in fire fighter rescue/removal
        - Multiple fire fighters in need of rescue (i.e., ceiling or floor collapse traps company)

- Heavy equipment operations

Discussion Questions

1. What are the pre-deployment responsibilities of a RIC?
2. What is the difference between RIC and “two out”?
3. What is the difference between rapid intervention and extended intervention?
4. What factors trigger an increase in RIC or the number of RICs on an incident (IWI)?

Application

1. Determined by instructor

Instructor Notes

1. ELO 1: See examples from the Alameda County Fire Chiefs’ Association
   - Appendix K: Mayday & Emergency Traffic
   - Appendix T: Rapid Intervention Crew
2. ELO 2: Multiple NFPA standards reference RIC and some conflict. See also NFPA 1500, 1710, 1720, 1981.

Topic 5-2: RIC Organization and Structure

Terminal Learning Objective

At the end of this topic a student, given AHJ policies and procedures and best practices, will be able to describe the organization and structure of a RIC so that RIC operations are carried out in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Describe RIC positions
    - Crew leader
        - Overall situational awareness
        - Crew direction
        - Communications
            - IC or RIC Group Supervisor
            - Downed fire fighter
            - RIC members
    - Crew members
        - Search
        - Air delivery
        - Navigation
        - Packaging
    - Any RIC position may fulfill more than one function at a time
2. Describe RIC command structure
    - RIC leader determined by AHJ
    - RIC leader reports to
        - Incident Commander (simple/rapid intervention)
        - Operations Section Chief (more complex incident)
        - RIC Group Supervisor (complex incident, multiple RICs)
3. Identify when to assign a RIC Group Supervisor
    - If resource numbers allow
    - Based on number of personnel assigned to RIC (multiple teams)
    - Multiple staging locations/entry points of interior crews
    - Determined by AHJ

Discussion Questions

1. How does incident complexity impact the size of a RIC operation?
2. What are the benefits of having a RIC Group Supervisor?
3. What are some functional roles that RIC members fulfill?

Application

1. Determined by instructor

Instructor Notes

1. Show students an ICS organizational structure that includes RIC operations.

Topic 5-3: RIC Operational Cycles

Terminal Learning Objective

At the end of this topic a student, given AHJ policies and procedures and best practices, will be able to identify RIC operational cycles so that RIC operations are carried out in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify RIC operations cycle
    - Assignment
    - Pre-deployment (state of readiness)
    - Deployment
2. Describe components of assignment
    - Determined by AHJ
    - Assigned on-scene by Incident Commander
    - Based on incident priorities
    - Must acknowledge assignment
3. Describe components of pre-deployment
    - Communicate with IC or Operations (radio or face to face)
    - Conduct RIC operations size up
    - Conduct RIC briefing
        - Verify high state of readiness (PPE, SCBA, tools, radio, etc.)
        - Communications plan (command and tactical frequencies in use)
        - Chain of command
        - Positional task assignments
    - Select, assemble, and position tools
    - Identify access and egress points
    - Soften structure
    - Place ladders for access and egress
    - Monitor radio traffic

Discussion Questions

1. How is RIC assigned in your AHJ?
2. What actions can a RIC take to prepare for deployment?

Application

1. Determined by instructor

Instructor Notes

1. None

Unit 6: RIC Pre-Incident Activities

Topic 6-1: Conducting RIC Size Up

Terminal Learning Objective

At the end of this topic a student, given a fire fighter rescue scenario and AHJ policies and procedures and best practices, will be able to conduct a RIC operation size up to develop an ongoing risk assessment, mitigate hazards, increase fire fighter safety and accountability, and strategically plan fire fighter rescue efforts in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify main RIC size up components
    - Exterior
    - Interior
    - Fire ground operations
2. Identify RIC operations size up priorities
    - Number of companies inside structure
    - Where interior crews entered structure
        - Assists with RIC entry decisions
    - Where crews are currently assigned
        - Gives general idea of downed fire fighter location
        - Time needed to reach them
        - Extraction plan
    - Crew air management
        - Listen to PARs and CAN reports
        - Elapsed time since entry
    - Number of RICs assigned to incident
        - RIC identifiers (determined by AHJ)
        - Additional resource needs
    - Utilities
        - Location
        - Status
    - Hazard/risk mitigation
    - Additional information sources
        - Pre-incident plans
        - Building plans
        - On-site representatives
3. Conduct a size up

Discussion Questions

1. How do RIC operation size-up considerations differ from initial incident size up?

Application

1. Drill Ground Activity 1: Size Up and Soften a Structure

Instructor Notes

1. Use AHJ tactical worksheet and Mayday rescue worksheet as teaching tools. Bring

copies for students.

2. This drill ground activity applies to Topic 3-1 (Fire Fighter Rescue Pre-Incident Activities) and Topics 6-1 and 6-4 (RIC Pre-Incident Activities). Adjust as needed to reflect rescue scenario.

Topic 6-2: Selecting RIC Tools

Terminal Learning Objective

At the end of this topic a student, given a fire fighter rescue incident, tools, and AHJ policies and procedures and best practices, will be able to select and place RIC tools so that tools are selected and placed in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify RIC activities that require tools
    - Access and egress
    - Search
    - Air delivery
    - Gaining access to a downed fire fighter
    - Packaging a downed fire fighter
2. Identify AHJ-specific RIC tool requirements (if applicable)
3. Identify basic RIC tools (MTRAILS)
    - Medical equipment
    - Thermal imaging camera (TIC)
    - Rope/hoseline
    - Air (RIC pack)
    - Irons (forcible entry tools)
    - Lights
    - Saws
4. Identify other RIC tools to consider based on construction, fire ground conditions, and incident complexity
    - Access and egress tools
        - Irons (flathead axe, Halligan)
        - Chain saw
        - Circular saw
        - Reciprocating saw
        - Cutting torch
        - “Through the lock” tools
        - Bolt cutters
    - Search tools
        - Handled tools
        - Standard rope
        - Search lines
        - Webbing
        - Thermal imager
    - Air delivery tools
        - Spare SCBA
        - RIC air
        - Trans fill lines
        - Buddy breathing system
        - Plastic tubing

- Access tools
    - Wire cutters
    - Pneumatic lifting tools
    - Hydraulic lifting tools
    - Pry bars
    - Saw (chain, circulating, or reciprocating)
- Packaging
    - Tubular webbing
    - Rescue loops
    - Drag devices
    - Rescue litter
    - SKED

5. Identify RIC tool responsibilities
    - RIC tools and equipment can mean difference between life and death
    - Don't let other resources remove items from cache
    - Needs to be fully equipped and ready to deploy at all times
6. Identify where to place RIC tools on the fire ground
    - Place in strategic and advantageous positions
    - Structure corners are good staging locations
    - Need to be able to begin RIC operations from any point around or inside structure
    - May need to stage RIC tools in multiple locations
7. Identify how incident and conditions impact tool selection
    - Initial/immediate intervention
        - Must bring RIC pack
        - Don't overload with tools and equipment
        - Need to search and move in rapid fashion
    - Extended intervention
        - Bring tools appropriate to fire fighter rescue situation
        - Relocate tools closer to site (if possible)
8. Assemble a mobile tool cache

Discussion Questions

1. What RIC tools does your AHJ recommend?
2. How does building construction influence RIC tool selection?
3. What tools do you take if you're activated on arrival?

Application

1. Drill Ground Activity 2: Assemble a Mobile Tool Cache

Instructor Notes

1. ELO 4: See "Selecting RIC Tools" handout in Online Instructor Resources.
2. This drill ground activity applies to Topic 3-2 (Fire Fighter Rescue Pre-Incident Activities) and Topic 6-2 (RIC Pre-Incident Activities). Adjust as needed to reflect rescue scenario.

Topic 6-3: Positioning RIC on the Fire Ground

Terminal Learning Objective

At the end of this topic a student, given a fire fighter rescue incident and AHJ policies and procedures and best practices, will be able to position RIC on the fire ground so that the RIC is positioned in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify the factors that impact where RICs are positioned at an incident
    - Number of individuals assigned to a RIC
    - Number of RICs assigned to an incident
    - Construction
        - In high rise, position on floor below fire-fighting operations
        - Big box structure, position at point of entry on opposing Divisions
        - Single family dwelling, position near highest risk
    - Fire conditions
    - Incident complexity
2. Describe the benefits and limitations of positioning RIC at a designated location
    - Benefits
        - Resources located near entry point of interior crews
        - Remain near area of highest risk
        - Allows fast access to area of working crews while reserving air for rescuers
        - Structure corners provide ability to monitor two sides of structure
        - Ease of possible face-to-face communication with command (when command post located near primary entry point)
        - Can aid in accountability
    - Limitations
        - Limits view of structure and changing conditions
        - Reduces familiarity with access and egress points
        - Tendency to overload on excessive/unnecessary tools and equipment
3. Describe benefits and limitations of mobile RIC positioning
    - Benefits
        - Allows for continuous assessment of structure and changing conditions on all sides
        - Focuses tool selection to keep resources light/fast
        - Increases familiarity with access and egress points
        - Potentially positions resources near secondary/closer access points
    - Limitations
        - Reduces ability for face-to-face communications with IC or Operations (when command post located near primary entry point)
        - Can negatively impact ability to track resources entering structure (maintaining accountability)
4. Position a RIC on the fire ground

Discussion Questions

1. How does the size of a structure impact RIC positioning decisions?

2. When multiple RICs are assigned, what is the benefit of positioning on opposing divisions (sides) of a large structure?
3. What factors determine when to position RIC at a designated location?
4. What factors determine when to use mobile RIC?
5. What factors determine when to use a hybrid designated/mobile approach?
6. How does positioning influence your considerations for requesting additional RIC resources?

Application

1. Determined by instructor

Instructor Notes

1. There isn't a dedicated drill ground activity for this topic. The application can be worked into multiple drill ground activities.

Topic 6-4: Softening the Structure

Terminal Learning Objective

At the end of this topic a student, given a fire fighter rescue scenario, tools, and AHJ policies and procedures and best practices, will be able to soften the structure so that structures are softened in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify the importance of softening a structure
    - Identifies and creates multiple points of access and egress
    - Removes obstacles that hinder rapid deployment into structure
    - Identifies utility locations and shut offs
    - Reduces reflex time to access and remove downed fire fighter
    - Increases chance of survival
2. Identify existing points of access and egress
    - Doors
        - Type
        - Construction
        - Locking mechanism
        - Hinges (exposed vs. unexposed)
        - Security bars
    - Windows
        - Glass type
        - Height
        - Width
3. Describe how to soften a structure
    - Board ups
    - Security bars and gates
    - Obstacles
4. Identify additional considerations
    - Structure dictates complexity of softening operations
    - Exterior crews must always coordinate with interior crews to assure they do not change flow path and fire behavior, endangering personnel engaged in fire attack
    - Additional softening or breaching may be necessary during active fire fighter rescue
        - Performed by additional crews or secondary RIC
5. Soften a structure

Discussion Questions

1. What are the benefits of softening a structure?
2. What are some ways to soften existing doors?
3. Why is it important to shut off utilities and how does your AHJ do this?
4. How can softening activities negatively impact fire behavior or rescue operations?

Application

1. Drill Ground Activity 1: Size Up and Soften a Structure

Instructor Notes

1. This drill ground activity applies to Topic 3-1 (Fire Fighter Rescue Pre-Incident Activities) and Topics 6-1 and 6-4 (RIC Pre-Incident Activities). Adjust as needed to reflect rescue scenario.

Unit 7: RIC Operations

Topic 7-1: Searching for a Downed Fire Fighter

Terminal Learning Objective

At the end of this topic a student, given a downed fire fighter scenario, tools and equipment, AHJ policies and procedures, and best practices, will be able to search for a downed fire fighter as a member of a RIC so that personal orientation is maintained, air consumption is managed, and downed fire fighter is located in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify information relayed during a Mayday call
   - Who, What, Where, Air
   - LUNAR – location, unit, name, assignment, resources needed
   - NUCAN – name, unit, conditions, actions, needs
   - HELP – handle (name), equipment (company assignment), location, problem
2. Describe importance of air management during search operations
   - Rule of Air Management determined by AHJ
   - May not have enough air to complete search assignment
3. Identify basic search method options
   - Targeted search
   - Oriented search
     - TIC
     - Rope
     - Hose
   - Split search
   - Vent, enter, isolate, search (VEIS)
4. Describe how to search as part of a RIC
   - Identify strategic entry point
   - Travel to last known or transmitted location
   - Maintain personal orientation during travel/search
     - Building layout
     - Hoseline
     - TIC
     - Rope
   - Look for flashing lights
   - Listen for PASS device or audible cues
   - Monitor radio communication for updates
5. Describe benefits and limitations of searching with a TIC
6. Identify types of ropes used in search operations
   - Search line
     - 150-200 feet of rope in a rope bag
     - May include company identifier

- Search line system
    - 200, 210, 220 feet of Kevlar rope (3/8” or 7/16”) in a rope bag
        - 200 feet inside building (10 or 20 feet outside for anchor)
    - Pre-set knots at 20 feet indicate depth
    - Pre-set rings at 20 feet indicate direction
    - Load into bag so ring comes out first followed by knot(s)
        - During entry, ring comes before knot(s) on the line
        - During exit, ring comes after knot(s) on the line and lead to exit/egress
    - Tethered line
        - 20 feet with a knot at 10 feet, a non-locking carabiner at one, and a slip knot at the other end
        - Clips to search line system rings so RIC can search outward from search line
        - Can also use a drop bag/bailout rope

7. Describe how to conduct a point-to-point search using rope
    - Anchor rope or search line system outside structure
        - Anchor to a fixed object
        - Should be suspended three feet off ground
    - Deploy into structure following straightest path for egress
    - Tie off rope line at any potential exit/egress point between entry point and downed fire fighter
        - Keep rope between one to three feet off ground
    - When fire fighter is found, tie off rope line near location
    - Follow rope from downed fire fighter to nearest point of exit/egress
8. Describe advantages and disadvantages of using rope for search
    - Advantages
        - Provides an anchor for rapid search
        - Provides a reference for depth into structure
        - Provides directional reference for RIC inside structure
        - Provides multiple anchor points for RIC to work from
        - Provides reliable path of traffic for access and egress to/from downed fire fighter
    - Disadvantages
        - May cause entanglement hazard
        - Improper use or damage may cause evacuation delays
        - May be challenging to tie off inside structure
        - Cumbersome/awkward to carry
9. Describe how to follow an attack hoseline to a downed fire fighter
    - Locate hoseline
    - Search hoseline until locating coupling
    - Find male coupling (lugs are larger and run entire length)
        - “Smooth, Bump, Bump, to the Pump”

    - "Long Lugs Lead Out"
- Follow hoseline to exit structure

10. Describe advantages and disadvantages of searching using an attack hose line
    - Advantages of an established attack hoseline
        - May lead directly to downed fire fighter
        - May lead back to known entry location
        - May provide protection when reaching end of hoseline
        - May eliminate need for additional hoseline or search line as an anchor for access or egress
        - May extend search area using hoseline as additional anchor point
        - Couplings can serve as distance and directional markers
    - Disadvantages of an established attack hoseline
        - Multiple hoselines can cause confusion
        - Original path of travel may be compromised
11. Describe how to use 1" charged hoseline for search
    - Determined amount of hose needed
        - Multiple pre-determined lengths coupled together
    - Deploy hose to point of entry
    - Clip rescuer to hoseline
    - Travel to downed fire fighter
        - Designated fire fighter at entry point communicates distance travelled measured by coupling
    - Follow hoseline out
12. Describe advantages and disadvantages of searching using a 1" charged hose line
    - Advantages
        - Fire fighters use regularly and are comfortable maneuvering it through a structure
        - May lead back to known entry location
        - May provide protection during deployment
            - Not intended for fire attack
    - Disadvantages
        - May need to split up at corners/friction/pinch points
        - May be challenging to advance while carrying RIC pack and other tools
        - May lead to consuming more air than other options
        - Multiple hoselines may cause confusion
13. Identify factors that influence search decision making and process
    - Number of rescue personnel on site
        - Working alone vs. part of a crew
        - Larger or multiple search teams have ability to search larger or multiple rooms/areas simultaneously (center hallway, rope based, extension off an orienting wall or building feature, etc.)
    - Complexity of fire fighter rescue
    - Number of downed fire fighters

- Structure and fire conditions
- Access and egress points
    - RIC can enter structure at any access point, not just from downed fire fighter's point of entry
    - Initial path of travel may be blocked by collapse or fire conditions
    - May enter structure at alternate elevation using ground ladders or aerial device
    - Additional softening or breaching may be needed

14. Search using hose line for orientation
15. Search using rope for orientation
16. Search using building features for orientation
17. Search using a TIC for orientation

Discussion Questions

1. Why is it important to identify secondary egress points during the search process?
2. What are the advantages and/or disadvantages of using rope to search for a downed fire fighter?
3. What are the advantages and/or disadvantages of following an attack line to search for a downed fire fighter?
    - How can you extend that search area?
4. What are the advantages and/or disadvantages of using a 1" diameter hose line for search?

Application

1. Drill Ground Activity 3: Search Line Deployment
2. Drill Ground Activity 4: Oriented Search
3. Drill Ground Activity 14: Rescue Using VES

Instructor Notes

1. Drill ground activities 3 and 4 apply to Topic 4-1 (Fire Fighter Rescue Operations) and Topic 7-1 (RIC Operations). Adjust as needed to reflect rescue scenario.

Topic 7-2: Administering Air to a Downed Fire Fighter

Terminal Learning Objective

At the end of this topic a student, given a downed fire fighter scenario, tools and equipment, AHJ policies and procedures, and best practices, will be able to administer air to a downed fire fighter as a member of a RIC so that air is delivered and administered in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Describe a RIC pack
    - Large volume dedicated air source for downed fire fighter that does not impact rescuer's personal air supply
2. Describe RIC air delivery options (based on PAC-CAN findings)
    - Trans fill via RIC universal air connection (UAC)
        - No respiratory exposure to environment
        - Downed fire fighter not tethered to RIC pack
        - RIC pack available for multiple downed fire fighters or rescuer emergency
    - Using emergency breathing safety system (EBSS)
        - Downed fire fighter tethered to RIC pack, must move with SCBA and RIC pack
    - MMR swap
        - Allows removal if downed fire fighter's SCBA is damaged, but face piece is not
        - If downed fire fighter is only partially removed to exterior, they have no PASS device to guide next RIC
        - Respiratory exposure to environment
    - Full face piece swap
        - Only done if absolutely necessary (damage or missing/removed face piece)
        - Requires coordination of multiple RIC members in possible reduced visibility conditions
        - Respiratory exposure to environment
3. Deliver air to a downed fire fighter

Discussion Questions

1. What are the advantages and disadvantages of turning a RIC pack cylinder on before entering structure?
2. What risks and complications are associated with an MMR or face piece swap?
3. How often should a rescuer check their own air levels during a fire fighter rescue?
4. What are some common SCBA failures that can be addressed on site?
5. What would you do if you can't resolve air issues on site?
6. Why is it important to be familiar with automatic/mutual aid agency SCBAs?

Application

1. Drill Ground Activity 6: RIC Air Delivery

Instructor Notes

1. None

Topic 7-3: Rescuing a Downed Fire Fighter

Terminal Learning Objective

At the end of this topic a student, given a downed fire fighter scenario, tools and equipment, AHJ policies and procedures, and best practices, will be able to rescue a downed fire fighter as a member of a RIC so that the downed fire fighter is extricated, packaged, and moved to safety in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Identify factors to consider before rescuing a downed fire fighter
    - Location
    - Fire conditions
    - Building conditions
    - Air management (ROAM)
    - SCBA conversion for rescue
    - Amount of RIC resources
        - Number assigned
        - Number needed
        - Number requested/en route
    - Time/distance to exiting structure
    - Shelter in place or safe refuge area
2. Identify common fire fighter emergencies requiring RIC operations
    - Lost/separated from hose line
    - Fall into basement
    - Air problems
    - Fall through roof
    - Entanglement
    - Collapse
3. Describe specialized equipment used to rescue a downed fire fighter
    - Drag tarps
    - Extrication sled
    - Rescue loops
    - MAST loops (sling links)
    - Rope
    - Webbing
    - Ladders
    - Air bags
    - Extrication equipment
    - Additional resources by request
        - Heavy equipment
        - Technical rescue company
4. Describe how to rescue a downed fire fighter in need of air

5. Describe how to rescue a fire fighter lost or separated from hose line
6. Describe how to rescue a downed fire fighter that fell into a basement
7. Describe how to rescue a downed fire fighter that fell through a roof
8. Describe how to rescue a downed fire fighter from entanglement
9. Describe how to rescue a downed fire fighter from collapse
10. Describe how to rescue a downed fire fighter from a confined area
11. Rescue a downed fire fighter

Discussion Questions

1. What factors impact your plan to rescue a downed fire fighter?
2. What RIC tools and equipment can assist with rescuing a downed fire fighter?
3. How can exterior crews support RIC rescue operations?

Application

1. Drill Ground Activity 15: Window-to-Door Conversion
2. Drill Ground Activity 16: Below Grade Rescue Using Rope
3. Drill Ground Activity 17: Below Grade Rescue Using Ladders
4. Drill Ground Activity 18: Seated Carry with SCBA Removal
5. Drill Ground Activity 19: High Point Window Rescue
6. Drill Ground Activity 20: Attic Rescue
7. Drill Ground Activity 21: Confined Area Rescue
8. Drill Ground Activity 22: Roof Rescue
9. Drill Ground Activity 23: Tarver Evolution
10. Drill Ground Activity 24: Pittsburg Evolution

Instructor Notes

1. None

Topic 7-4: Caring for Personnel Involved in the Incident

Terminal Learning Objective

At the end of this topic a student, given AHJ policies and procedures and best practices, will be able to provide physical, psychological, and emotional support to personnel involved in an incident so that personnel needs are met in accordance with AHJ policies and procedures and best practices.

Enabling Learning Objectives

1. Describe how to personally prepare to engage in fire fighter rescue operations
   - Consistent training
   - Practice scenarios
   - Read case studies and articles
   - Talk about it
2. Describe how to care for personnel involved in an incident
   - Provide medical care (if needed)
     - Send someone to the hospital to be a patient advocate and provide support
   - Debrief with personnel
     - Out of view of media
     - Verbal review of incident timeline
   - Initiate appropriate communications (chaplain, Chief Officer, peer support, etc.)
   - Provide initial behavioral health and mental wellness support
     - Critical Incident Stress Management (CISM)
     - Peer Support
     - Chaplain or equivalent
     - Refer to IAFF Center of Excellence
     - Labor representative
     - AHJ-specific or supported programs
     - Employee Assistance Program (EAP)
   - Provide follow up care and evaluation

Discussion Questions

1. When might you need to leave a downed fire fighter?
   - What can you do to make that situation better?
2. What resources does your AHJ provide to support behavioral health and mental wellness for personnel involved in an incident?

Application

1. Determined by instructor

Instructor Notes

1. See “PTS, SCD, PTSD – What’s the Difference (IAFF 2018)” in Online Instructor Resources.
2. This topic may generate “war stories” among students. Keep conversation focused on topic.
3. This course may be triggering to the students. Come prepared with resources in the event a student shows signs of distress.
4. Be prepared to assess and manage negative attitudes among students.

Drill Ground Activities and Evolutions

The following components must be covered in the activities and evolutions but can be combined and completed in the order that best suites the props available and AHJ policies and procedures.

Pre-Deployment

- Conduct a Size Up
- Soften a Structure
- Assemble a Mobile Tool Cache

Search

- Oriented Search for a Downed Fire Fighter (formerly Search Line Deployment)

Assessment

- Remove PPE from Downed Fire Fighter
- SCBA Conversion to Drag a Downed Fire Fighter
- Assess a Downed Fire Fighter

Air Delivery

- RIC Air Delivery

Movement

- Drag a Downed Fire Fighter
- Drag a Downed Fire Fighter Up and Down the Stairs

Extrication

- Below Grade Using a Ladder
- Below Grade Rescue Using Ropes
- Rescue Using VES
- High Point Window Rescue
- Seated Carry with SCBA Removal
- Feet First Ladder Carry
- Head First Ladder Carry
- Attic Rescue
- Roof Rescue

Evolutions

- Rescue Without a RIC
- Confined Area Rescue
- Evolution: Tarver
- Evolution: Pittsburg

Optional

- Window to Door Conversion (optional)
    - The instructor needs to demonstrate this technique at least once, but the students can then use that entry/exit point for their work as if it had already been done.

How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

Course Details
The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

Required Resources
The Required Resources segment identifies the resources, equipment, facilities, and personnel required to deliver the course.

Unit
Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

Topics
Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

Terminal Learning Objective
A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

Enabling Learning Objectives
The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master to complete the TLO.

Discussion Questions
The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

Application
The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

Instructor Notes
The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

CTS Guide Reference
The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

Skill Sheet
The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.

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