# Truck Company Standard Operating Guide Fire Academy

# 26

Section III - Truck Company Operations

**Structure Fire Suppression**

**Rescue Applications**

**Additional State Fire Training Skills**

**Communications For Air Management Policy**

**Truck Drill Equipment Set-Up**

SAN DIEGO FIRE–RESCUE DEPARTMENT

# FIRE ACADEMY STANDARD OPERATING GUIDE

TRAINING & EDUCATION DIVISION

## TRUCK STANDARD OPERATING GUIDE

JANUARY 2021

# CSFM FFI/FFII 2019 VERSION

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(*) = Core Academy Skill

# SECTION 1:
# Structure Fire Suppression

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #1: SCBA** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 2-6** | **1-3, 1-5, 1-6, 1-8** | **1:00** | **SCBA** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| SCBA Spiel. | | |
| Check cylinder gauge and call out PSI. | | |
| Open cylinder valve fully. | | |
| Acknowledge Vibralert/PAK-Alert. | | |
| Check remote pressure gauge and call out PSI. | | |
| Check that area is clear and announce, *"Stand clear, donning BA."* | | |
| Place hands through both shoulder straps and swing SCBA overhead. | | |
| Lower SCBA onto shoulders and pull down on shoulder straps to tighten. | | |
| Connect waist belt- weight of cylinder should be carried on hips. | | |
| Remove helmet and place chin in chin pocket of face piece. | | |
| Pull head harness up and tighten straps. | | |
| Perform Fit Check by covering mask opening with hand and inhaling. | | |
| No leakage of air shall be detected, and the face piece shall be drawn slightly to the face. | | |
| Pull Nomex hood up to cover all exposed skin areas from heat. | | |
| Replace helmet on head and tighten chin strap. | | |
| Don gloves over jacket gauntlets. | | |
| Attach regulator and clap hands signifying completion. | | |
| Reference **Drill Manual Chapter 6.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #2: Conventional Forcible Entry** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 5-10** | **3-4** | **N/A** | **Conventional F/E** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| **Definition of Forcible Entry:** The act of entering a building or occupancy via a door, window, or through a wall by the use of force. | | |
| **Forcible Entry Considerations:**<br>1) What is the urgency?<br>2) Where is the emergency in relation to the entry point?<br>3) Can entry be made by conventional methods?<br>4) What method of forcible entry will be the quickest?<br>5) What method of forcible entry will cause the least damage?<br>6) Do conditions indicate the need for ventilation prior to entry?<br>7) Do conditions indicate the need for a charged hose line prior to entry? | | |
| **Door Size Up:**<br>1) Building construction<br>2) Door and door frame construction<br>3) Direction of swing<br>4) Lock mechanisms (location, type, quantity, quality and weakest link). | | |
| Always try before you pry. | | |
| **Gap-> Set-> Force:**<br>1) **Gap**- Place the Adz in between door and frame then cam to create a gap<br>**a.** Gap can be held with a door wedge or axe blade (Gain Saver)<br>2) **Set**- Place the Claw into the gap and drive to desired depth by using a striking tool<br>3) **Force**- Apply force by pushing or pulling on Halligan Bar. | | |
| **Outward Swinging Door (two-tool):**<br>1) Insert the Adz between door/frame and cam down to create a gap<br>2) Set the Claw until the tips wraps the door<br>3) Force outward. | | |
| **Inward Swinging Door (two-tool):**<br>1) Insert the Adz between door/frame and cam down to create a gap<br>2) Set the Claw until the tips wrap the frame<br>3) Force door inward. | | |
| **Inward Swinging Door (one-tool):**<br>1) Stick the pick of the Halligan or a pick-headed axe into the wooden jamb with a baseball style swing.<br>2) Push the tool inward to force the door. | | |
| Reference **Drill Manual Chapter 21.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #3: Commercial Forcible Entry** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 5-10** | **3-4** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| Rescue Saw Spiel. | | |
| Describe operating and maintenance procedures for two-stroke equipment **(see Drill Manual Chapter 5).** | | |
| Describe various ways of forcing commercial doors (cutting deadbolt, hinges, pie cut). | | |
| Demonstrate cutting deadbolt. | | |
| Demonstrate shearing carriage bolts. | | |
| **Overhead/Rollup Doors:** | | |
| **Teepee Cut Method:**<br>1) Start high and at the center of the door, make a 60-degree side cut.<br>2) Make a second 60-degree side cut in opposite direction (do not cross first cut).<br>3) Cross cuts 1 and 2 then push the door inwards.<br>4) Will create a triangular, or Teepee shaped opening for entry. | | |
| **Drop Cut Method:**<br>1) Start 1' from the frame and make a vertical cut from high to bottom.<br>2) Make a horizontal top cut across the door (do not cross your cuts).<br>3) Make a vertical cut from high to bottom on opposite side.<br>4) Return to cross your two vertical cuts with the top cut.<br>5) Allow door to drop down<br>6) Can cut the angle iron on the bottom to pull the door material out of the way. | | |
| **Peel Back Method:**<br>1) Start high at the center of the door and make a long vertical cut.<br>2) Make a small angular cut at the bottom to create an opening large enough for the rescue saw to fit<br>3) Cut the angle iron at the bottom in line with the first cut.<br>4) Make a horizontal top cut from the center to the frame (do not to cross cuts).<br>5) Connect the center and top cuts.<br>6) Grab the center section and peel it back making a door. | | |
| **Center Cut and Pull Method (Interlocking Slat Doors only):**<br>1) Start high at the center of the door and make a long vertical cut.<br>2) Use channel locks or vice grips to pull a slat out of the track.<br>3) The portion of the door below the slat will fall and create an opening.<br>4) To enlarge the opening, repeat the process of pulling slats on the opposite side. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #4: Search and Rescue** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 2-7** | **3-1A, B** | **N/A** | **Below** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| **Firefighter #3- Searcher** | | |
| Secure SCBA, hand light and forcible entry tool. | | |
| **Entry procedures** (mask up, tag out, click in, glove up). | | |
| **Door Procedures** | | |
| Confirm air status and enter after 3/5 count. | | |
| Sound the floor with boot/tool. | | |
| Announce, *"San Diego Fire Department, anyone in here?"* | | |
| Listen for response and begin search staying oriented to wall. | | |
| **Search** | | |
| ***Must maintain strict wall orientation on way IN (search)** | | |
| Keep low and in constant contact with designated wall (left/right hand). | | |
| You may leave wall to search area by maintaining contact with tool or partner. | | |
| Aggressively feel under, behind, and on top of furniture for victims. | | |
| Follow **Air Management Policy** during operations in an IDLH. | | |
| **Interior Doors** | | |
| Locate all interior doors and have partner bump up. | | |
| Search passed the jamb and repeat Door Procedures. | | |
| Perform primary search in room. | | |
| Close doors to searched rooms if no victim found. | | |
| **No Victim Found** | | |
| If no victim is found in a room, exit and close the door behind you. | | |
| If no victim found after entire floor/building is searched, return to entry door and notify IC/Division Primary Search is complete with no victims. | | |
| **Victim Located** | | |
| Notify partner victim located. | | |
| Anchor victim to wall. | | |
| Search off victim for entanglement and additional victims. | | |
| Note location of last place searched to turn over to incoming crews. | | |
| **Victim Removal** | | |
| Drag victim back to point of entry. | | |
| By-pass rooms with closed doors (already searched). | | |
| Can leapfrog (or jump) to wall-oriented partner on way OUT (rescue). | | |
| Drag victim at least 10' from IDLH. | | |

| | | |
|---|---|---|
| If Vibralert sounds during victim removal and air supply is not sufficient to exit: | | |
| Take note of current location and anchor victim to wall. | | |
| Give IC PPN and exit. | | |
| Obtain a fresh air cylinder, re-enter and complete rescue. | | |
| **Outside Procedure** | | |
| Remove PPE and assess victim status. | | |
| Perform first aid/CPR. | | |
| Secure accountability tag. | | |

| | | |
|---|---|---|
| **Firefighter #4- Anchor** | | |
| Secure SCBA, hand light, forcible entry tool, thermal imager. | | |
| **Entry procedures** (mask up, tag out, click in, glove up). | | |
| **Door Procedures** | | |
| Door size up and communicate search direction. | | |
| Confirm air status, do 3/5 count to open the door. | | |
| Allow partner to enter room. | | |
| Scan with TIC for 4 L's (Life, Location, Layout, Lift). | | |
| Close/control entry door after partner enters (no hose line present). | | |
| **Search** | | |
| Acknowledge/maintain door control at all entry ways. | | |
| Use TIC and communicate 4 L's (life, location of fire, layout of room and lift). | | |
| Can leapfrog (or jump) to partner on way IN to provide shortcuts. | | |
| **Victim Found** | | |
| Give IC PPN and request EMS to exit point (see **Sample Radio Scripts**). | | |
| **Victim Removal** | | |
| Reverse direction to guide partner and victim out. | | |
| ***Must maintain strict wall orientation on way OUT (rescue portion).** | | |
| Lead partner around obstructions and provide shortcuts. | | |
| **Outside Procedure** | | |
| Request EMS (PPN) and assist with first aid/CPR. | | |
| Secure accountability tag. | | |

| | | |
|---|---|---|
| Both firefighters must remain in voice/visual contact at all times. | | |
| If team becomes lost/disoriented, initiate **GRABLIVES** and call a mayday. | | |
| See **Communications for Air Management Policy** | | |
| See **Search and Rescue Sample Radio Scripts** | | |
| Reference **Drill Manual Chapter 18.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #5: Ground Extension Ladders** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 5-8** | **3-6** | **N/A** | **24' GEL** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| 24' GEL Spiel. | | |
| **High Shoulder Carry (24'):**<br>1) Announce, *"no overhead obstructions, preparing for High-Shoulder Carry."*<br>2) Raise ladder on one spur to find balance point, with bed facing you (bed to head).<br>3) Place one palm on the lower beam and squat to load the ladder on your palm and shoulder (opposite arm secures top beam).<br>4) Lift the ladder off the ground horizontally on your palm and shoulder. | | |
| Announce, *"no overhead obstruction, raising ladder."* | | |
| **Raise ladder** by spiking spurs at objective and move to vertical position. | | |
| **Up the Fly**<br>1) Announce, *"no overhead obstructions, upping the fly*."<br>2) Lean ladder 2 to 3 degrees past vertical away from you (do not allow ladder to lean towards you).<br>3) Steady ladder with shin and knee on beam.<br>4) Pull on halyard using downward motion with forearms facing beam.<br>5) When fly reaches desired height, ensure locks engage and announce, *"locks locked."* | | |
| **Lower ladder into building** while placing one foot on lowest rung and hands on beams. | | |
| **Slide out on butt**<br>1) Grasp beam with one hand and rung with the other.<br>2) Lift spurs off the ground and move bottom of ladder away from building.<br>3) Line rung up with roof line when possible. | | |
| **Rotate ladder** 180 degrees (can be slipped with two-person evolutions). | | |
| Verify and announce, "*proper climbing angle* (75 degrees)." | | |
| Verify and announce, *"four points of contact."* | | |
| **Climbing ladder**<br>1) Verify and announce, *"partner foot my ladder."*<br>2) Maintain three points of contact.<br>3) Grasp rungs with hands (span beams when carrying equipment).<br>4) Use instep of foot on rungs (not toes).<br>5) Avoid stepping on rungs above roofline. | | |
| To remove ladder, reverse the process (rotate, slide in on the butt, remove from building, down the fly, lower ladder, High Shoulder Carry). | | |
| *Ladders > 24' require partner to foot ladder. | | |
| Reference **Drill Manual Chapter 19.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #6: Vertical Ventilation Residential** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 4-3** | **3-21, 3-12** | **N/A** | **Vert Vent Residential** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| Chain Saw Spiel. | | |
| Describe operating and maintenance procedures for two-stroke equipment (see **Drill Manual Chapter 5).** | | |
| **Describe Size Up Considerations**<br>1) Locate fire (highest, hottest point).<br>2) Identify smoke conditions (volume, density, velocity, color).<br>3) Identify building construction type and roof construction.<br>4) Are there any covered exterior walkways or cantilevers to avoid cutting over?<br>5) Select ladder size and placement. | | |
| **Describe Diagnostic Cuts**<br>1) **Kerf Cut-** blade width puncture through roofing material.<br>a. If smoke detected, expand to Smoke Indicator Hole.<br>2) **Smoke Indicator Hole-** small (blade width) triangle to monitor smoke conditions.<br>3) **Inspection Hole-** triangular cut to expose/identify structural members/orientation. | | |
| Reference **Drill Manual Chapter 20.** | | |

| **Firefighter #3- Sounder** | | |
|---|---|---|
| Secure TIC, portable radio and announce, *"Training T-1 recruits ready for assignment."* | | |
| Secure SCBA and Roof Hook. | | |
| Remove **28' GEL** from truck safely with partner. | | |
| Select ladder placement/location and give commands. | | |
| Entry procedures (mask up, tag out, click in, glove up). | | |
| Climb ladder safely/efficiently. | | |
| Sound roof for self, sound for crew and TIC (structural members, fire location). | | |
| Signal partner to come up and communicate direction of travel. | | |
| Travel along structural members to desired hole location sounding appropriately. | | |
| Communicate with officer, then louver roof panel and punch through ceiling. | | |
| Verify ventilation effectiveness with officer. | | |
| Descend ladder and prepare for next assignment. | | |

| **Firefighter #4- Cutter** | | |
|---|---|---|

| | | |
|---|---|---|
| Exit procedures. | | |
| Secure SCBA and **chain saw.** | | |
| Remove and place **28' GEL** safely with partner. | | |
| Entry procedures (mask up, tag out, click in, glove up). | | |
| Follow partner to desired hole location staying on structural members. | | |
| Perform **5-Step Center Rafter Louver**. | | |
| Descend ladder and prepare for next assignment. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #7: Vertical Ventilation Commercial** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 4-13** | **3-12** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| Review **Vertical Ventilation Residential** | | |
| **Method 1** | | |
| Perform two separate 4'x4' center rafter louvers next to each other as described in Drill #5 | | |
| **Method 2** | | |
| Perform push cut to locate fire-side rafter. | | |
| Place a long head cut moving away from the fire rolling multiple rafters (approximately 8'). | | |
| Insert a downward, or vertical cut, along the inside of the fire-side rafter (#1). | | |
| Working back towards your ladder make a bottom cut, rolling the next rafter (#2) and stop when you contact rafter #3. | | |
| Make another downward or vertical cut on the fire-side of rafter #3, completing a 4x4 Center Rafter Louver. | | |
| Repeat the previous three cuts to add a second 4x4 Center Rafter Louver. | | |
| Bottom, or Louver cut sequence (again) = Roll rafter #2→ stop→down cut **inside** of rafter #3 → down cut **outside** of rafter #3 → repeat for multiple louvers. | | |
| Simply stated: "Roll, Stop, Down, Down" then repeat for multiple louvers to achieve desired overall width. | | |
| Sounder to louver the holes starting with fire side and working back towards the ladder after all cuts completed. | | |
| **Additional concepts for consideration-** expanding an existing hole with/against construction and dicing. | | |
| Reference **Drill Manual Chapter 20**. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #8: Natural Ventilation/PPV/Scene Lighting** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 4-2, 3-3, 5-3** | **3-17, 3-11** | **N/A** | **Below** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| Gas Powered Ramfan, Electric Powered Ramfan, Portable Generator Spiels. | | |
| Describe operating and maintenance procedures for four-stroke equipment (see **Drill Manual Chapter 5).** | | |
| Secure SCBA. | | |
| Entry procedures (mask up, tag out, click in, glove up). | | |
| **Natural Ventilation** | | |
| Open all windows and doors following a left/right wall orientation. | | |
| Isolate uncontaminated areas. | | |
| **Positive Pressure Ventilation (PPV)** | | |
| Coordinate with Fire Attack prior to starting blower. | | |
| Place gasoline powered blower at entrance approximately 10' from door. | | |
| Check air flow at door with ungloved hand feeling for air movement over opening. | | |
| Use one exhaust opening at a time to systematically remove smoke from structure. | | |
| Exhaust opening should be 3/4 size of intake (if practical). | | |
| **Scene Lighting** | | |
| Start generator. | | |
| Plug lights directly into generator to test. | | |
| Tie connections together to avoid pulling apart. | | |
| Keep extension cords along walls to avoid trip hazards. | | |
| Keep electrical connections elevated out of water (tie off if necessary). | | |
| Consider electric blower to assist smoke channeling (if necessary). | | |
| Reference **Drill Manual Chapter 20.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #9: Salvage Covers** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 5-15** | **3-14A, B, C, D** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Shut down sprinkler system to mitigate water flow. | | |
| Demonstrate covering property by ballooning. | | |
| Demonstrate protecting property by enveloping. | | |
| Demonstrate two-person salvage cover deployment. | | |
| Build appropriate size Catch-All | | |
| Build chutes | | |
| Connect chutes together before deploying. | | |
| Connect chutes to Catch-All. | | |
| Demonstrate folding a salvage cover for storage. | | |
| Reference **Drill Manual Chapter 23.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #10: Utilities** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 5-7** | **3-18** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| **Water Shut-Off** | | |
| Secure service shut off key, battery kit. | | |
| Attempt to turn off local water valve at fixture. | | |
| Check all additional water-based appliances. | | |
| If unable to turn off at fixture, locate and turn off at service entry. | | |
| Lastly turn off at meter usually located at curb in a vault. | | |
| Service side = homeowner's responsibility, Supply side = utility company. | | |
| Shutting down a water heater (after water has been secured to building) | | |
| Shut down cold-water valve to heater | | |
| Turn off heater controls | | |
| Turn gas valve off or breaker | | |
| Bleed pressure from tank by opening a hot water faucet. | | |
| **Electrical Shut-Off** | | |
| Isolate appliance (unplug and place cord over appliance for identification). | | |
| Check other electrical sources in area. | | |
| Shut off wall switch that may control power to plug (place tape over switch). | | |
| Shut off at circuit panel (always check for sub-panels). | | |
| Note breakers that may be tripped. | | |
| Throw breaker for desired circuit. | | |
| If unable to determine correct breaker(s) for isolation, throw main breaker. | | |
| Notify owner and SDG&E | | |
| **Natural Gas Shut-Off** | | |
| Turn all gas appliances switches to off position. | | |
| Secure gas valve behind appliance. | | |
| Check for other gas appliances in area and other room. | | |
| Shut off at meter (turn bar valve 1/4 turn perpendicular to the pipe). | | |
| If unsure of correct meter (multiple buildings) shut off main and individual meters. | | |
| Notify owner and SDG&E. | | |
| **Valves** | | |
| Turn bar valve from parallel on incoming pipe to perpendicular on incoming pipe | | |
| Turn stem valve in clockwise direction until it stops | | |

| | | |
|---|---|---|
| Turn "J" valve from parallel to perpendicular position | | |
| Once any utility is turned off, we do NOT turn them back on. | | |
| Reference **Drill Manual Chapter 22.** | | |

# SECTION 2:
# Rescue Applications

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #11: Vehicle Rescue** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FFII- 4** | **4-1, 4-2** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Amkus Spiel, R-42 Strut Spiel. | | |
| Describe starting, operating and maintenance procedures for four-stroke equipment (see **Drill Manual Chapter 5).** | | |
| Identify vehicle anatomy: ABC Posts, Fender Rail, Roof Rail, Transverse Beam, Kicker/Rocker panel, Nader Pin/U-Bolt. | | |
| **Stabilize the Scene** | | |
| Control/address traffic | | |
| Place cones and flares as needed | | |
| Bring a source of extinguishment/hose line | | |
| **Vehicle Size-Up** | | |
| Seven-sided approach (perform 360). | | |
| Identify electrical, chemical and other hazards. | | |
| Determine the number of patients and acknowledge them. | | |
| Type of car and location of accident. | | |
| Assess simple extrication: cut steering wheel, move seat back, move pedals. | | |
| Assess need for additional resources. | | |
| **Stabilize the Vehicle** | | |
| Place transmission in park, turn off ignition and set emergency brake. | | |
| Use step chocks and cribbing at proper contact points (A, B, C posts). | | |
| Remove air from tires. | | |
| Consider Trucker's Hitch or Rescue 42 Struts. | | |
| Locate and secure battery | | |
| Use power as needed prior to disconnecting battery. | | |
| Place hazards on. | | |
| Disconnect the battery, negative (black cable) first. | | |
| Verify hazard lights are off. | | |
| **Stabilize the Patient** | | |
| Check patient status (ABC's). | | |
| Confirm number of patients (consider ejected patients). | | |
| Follow "5, 10, 20 Rule" for airbag clearance. | | |
| Maintain C-Spine as needed (Ked Sled). | | |
| Cover patient with debris carrier or equivalent. | | |
| **Peel and Peek** | | |
| Remove plastic covering with a small pry tool wherever you plan on cutting. | | |

| | | |
|---|---|---|
| Identify pressurized cannisters, sensor modules and any hardened metal. | | |
| See **Drill Manual Chapter 25.** | | |

| **Core Vehicle Extrication Operations** | | |
|---|---|---|
| **Glass removal:**<br>Roll down windows if able.<br>**Laminate** (windshield): minimize cuts to prevent exposure to dust and consider respiratory protection for self and patient. Axe and Sawzall can be used.<br>**Tempered** (passenger and rear): use striking tool and protect patient.<br>**Polycarbonate**: need to cut with reciprocating saw or cutters. | | |
| **Door Removal:**<br>Create purchase point using **Vertical Lift** or **Door Pinch** with spreaders.<br>Pop door at Nader Pin/U-Bolt with spreaders.<br>Cut Door Limiter, hinges and wire harness with cutters. | | |
| **Dash Push:**<br>Place cribbing under the B-Post<br>Make relief cut on Kicker Panel and on A-post (if roof not removed).<br>Crunch/cut Fender Rail.<br>Place Ram foot at bottom of B Post<br>Place Ram head against A Post above door hinge to engage transverse beam.<br>Extend Ram to push dash forward. | | |
| **Dash Lift:**<br>Place cribbing under A-Post<br>Make two relief cuts on kicker panel between hinges then grab with spreaders and peel back creating a gap.<br>Relief cut on A-Post (if roof not removed).<br>Crunch/cut Fender Rail.<br>Place spreaders in gap created between hinges.<br>Spread until cribbing under A Post and transverse beam are engaged. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #12: Ropes and Knots (Tool Ties)** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 4-1** | **3-10A, B** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Tie a figure eight follow through as an anchor. | | |
| Tie off a pick headed axe (figure eight on a bight, half hitch). | | |
| Tie off a halligan bar (clove hitch, half hitch). | | |
| Tie off a tool box (handcuff knot). | | |
| Tie off a roof hook (bowline on a bight, half hitch). | | |
| Tie off a pike pole (clove hitch, half hitch). | | |
| Tie off chainsaw (bowline on a bight, half hitch). | | |
| Tie off a nozzle with a shutoff butt (clove hitch, two half hitches). | | |
| Tie a running bowline on unstable object. | | |
| Tie a **Trucker's Hitch** on a bight. | | |
| See **Drill Manual Chapter 24.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #13: RPM** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 4-1** | **3-10A, B** | **N/A** | **Below** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Ropes and Knots Spiel. | | |
| Construct **Tandem Prussik Belay System**. | | |
| Operate **Tandem Prussik Belay System**. | | |
| Construct RPM Rope Rescue System for **Rappel**/**Lower.** | | |
| **Utilize Wrap Three Pull Two and Three Bight anchors**. | | |
| **Convert RPM from a Rappel/Lower to a Haul.** | | |
| **Operate 3:1 Haul System.** | | |
| **Convert system from a Haul to a Lower**. | | |
| Operate lowering system to lower Rescuer and Victim. | | |
| **Rebuild a Load Releasing Device.** | | |
| See **Drill Manual Chapter 24.** | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| ***Drill #14: Personal Escape System** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 4-1** | **3-10A, B** | **N/A** | **PES** |

| PERFORMANCE MEASURES: | PASS | FAIL |
|---|---|---|
| PES Spiel. | | |
| **System Connection** | | |
| Ensure carabiner is attached to rescue belt with PES in right pant pocket. | | |
| **Pre-Bailout Considerations (DICE)**<br>Determine you're in an emergency.<br>Isolate (close doors and windows).<br>Call a Mayday.<br>Exit. | | |
| **Remote Anchor** | | |
| Select suitable anchor (wall stud, structural member). | | |
| Remove hook and HALO device from pack and pull slack. | | |
| Wrap the hook around selected anchor point. | | |
| Wrap the escape rope around the gated hitching slot twice and test anchor. | | |
| Pull the handle toward you and move toward the exit while facing your exit. | | |
| Measure to ensure the HALO extends just past the sill. | | |
| Roll out into a window hang to load the system. | | |
| **Sill Anchor** | | |
| Locate and clear windowsill for PES deployment. | | |
| Pull hook up away from body with both hands. | | |
| Grasp the rope with one hand and cup the hook with your other. | | |
| Position hook straight on sill so it does not move when loaded. | | |
| Maintain tension on the hook with hand, forcing the tip to bite into the structure. | | |
| Punch down with rope until hook is set. | | |
| **Descent** | | |
| Position body flush against the wall with feet pointed down. | | |
| Extend arm with rope to 2 o'clock position. | | |
| Pull the HALO device downward and descend smoothly. | | |
| **Inspection** | | |
| Feel rope for dents, bumps, cuts, abrasion over entire length of rope. | | |
| Ensure sewn eye stitches intact and not frayed. | | |
| Test HALO auto-stop function. | | |
| Ensure hook is not deformed and gate operates properly. | | |
| **Packing System** | | |
| Zig zag rope into segments the width of the bag. | | |

| | | | |
|---|---|---|---|
| | Bundle 4-6 flakes at a time, place into bag and repeat. | | |
| | Leave about 6 inches of free rope between HALO and hook. | | |
| | Slide HALO and hook into bag. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #15: Victim Down a Ladder** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 5-11** | **3-9C** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| As a team perform VEIS (Vent, Venter, Isolate, Search). | | |
| Position tip of ladder beneath windowsill for rescue. | | |
| Ascend ladder and break window. | | |
| Enter room and isolate by closing any doors (control flow path). | | |
| Search room for occupants. | | |
| Drag victim back to window for extrication down the ladder. | | |
| **Firefighter #3 (Rescuer)** | | |
| Climb footed ladder until in position for receiving victim. | | |
| **Conscious victim** | | |
| Receive victim feet first and facing the building. | | |
| Rescuer forearms under victim's armpits. | | |
| Hands on ladder beams in front of victim. | | |
| Descend ladder one rung at a time reassuring victim. | | |
| **Unconscious victim** | | |
| Receive victim feet first facing rescuer. | | |
| Rest victim weight on knee with forearms under armpits. | | |
| Rescuer's hands grasp rungs. | | |
| Victim's feet positioned outside of beams. | | |
| Descend ladder one rung at a time supporting victim on knee. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #16: Air Bags** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF2A-4-1** | **4-1** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Air Bags Spiel. | | |
| **Set Up** | | |
| Connect the high-pressure regulator to the air bottle. | | |
| Slowly open cylinder fully and set pressure regulator to 135 PSI. | | |
| Connect pressure regulator to the dual dead man controller. | | |
| Connect air bag to dual dead man controller (in-line relief valve on bag). | | |
| Do not inflate the bag over 30 PSI without a load. | | |
| **Two Bag Stacked Lift** | | |
| The larger bag shall always be on the bottom. | | |
| Stacked bags must be centered under object to be moved. | | |
| Physically inspect that there are no sharp edges contacting bag. | | |
| Alternate partially inflating bottom bag, then partially inflating top bag. | | |
| Always crib as object is being raised/lowered. | | |
| Partially deflate the top bag first, then partially deflate lower bag to lower. | | |
| **Safety Considerations** | | |
| Personnel involved in air bag operations should always be alert for load shifts. | | |
| Personnel should work in a squatting position with defined escape route. | | |
| Loads must be securely cribbed prior to working under a moved or lifted load. | | |
| Never place hands under load during airbag operations. | | |
| Review cribbing Information in Spiel Book. | | |
| See **Drill Manual Chapter 5.** | | |

# SECTION 3:
# Additional State Fire Training Skills

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #17: Don Personal Protective Equipment (PPE)** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 2-5** | **1-4, 1-7** | **1:00** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Don turn-out pants and boots with all fasteners secured and suspenders in place. | | |
| Don hood, covering ears, head and neck. | | |
| Don coat with storm flap closed and collar up and secured. | | |
| Don helmet and secures with chinstrap. | | |
| Don gloves with no skin exposed. | | |
| Complete within 60 seconds. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #18: Doff, Inspect and Prepare PPE for Reuse** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 2-5** | **1-4, 1-7** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Remove PPE. | | |
| Inspect all elements of PPE for damage and cleaning needs. | | |
| Describe SDFD cleaning and decontamination policies and procedures. | | |
| Clean equipment as needed. | | |
| Remove damaged equipment from service and report to officer. | | |
| Place PPE back into service. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #19: Air Monitoring Instrument (Gas Detector)** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 4-4** | **3-22** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Isolate area and deny entry. | | |
| Evacuate unnecessary personnel. | | |
| Request appropriate resources. | | |
| Place monitor into service and describe gasses detected. | | |
| Describe interventions for various alarm functions. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #20: Rescue Downed Firefighter** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A 5-11** | **3-9A, B, C** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Obtain information from Mayday. | | |
| Confirm order with officer and size-up structure (exit points, hazards). | | |
| Begin search with last known location of victim. | | |
| Locate and assess downed firefighter, establish airway. | | |
| Perform PPN and extricate victim. | | |
| Remove victim from IDLH, assess and initiate first aid/CPR. | | |
| Perform PPN. | | |

| DESCRIPTION: | | | |
|---|---|---|---|
| **Drill #21: Overhaul** | | | |
| SFT TOPIC: | SFT SKILL SHEET: | TIME STANDARD: | VIDEO LINK: |
| **FF1A- 5-16** | **3-13A, B** | **N/A** | **N/A** |

| PERFORMANCE MEASURES: | **PASS** | **FAIL** |
|---|---|---|
| Secure SCBA, pike pole, scoop shovel, debris carrier, charged hose line. | | |
| Expose and extinguish hidden fire in walls, ceilings and sub-floors. | | |
| Preserve evidence of arson and point of origin. | | |
| Constantly survey environment for safety. | | |
| Remove appropriate items from structure. | | |
| Extinguish charred materiel to prevent reignition. | | |

# Communications for Air Management Policy

Please use the following as a guideline for communications during **ALL INTERIOR** evolutions during the academy as they relate to the SDFD Air Management Policy.

**SCBA Bottle reaches 50% capacity**

- Have **not** found victim or seat of fire
  - *Notify IC* via radio report and exit immediately
  - Recruit *may* be continued by proctor for sake of drill repetition.

- Located victim and/or seat of fire
  - *Notify PROCTOR* verbally of air status to acknowledge air management policy
  - Continue evolution.

**Vibralert Activation**

- Have **not** located victim or fire
  - *Notify IC* via radio report and leave immediately
  - Potential MAYDAY depending on location in building.

- Rescuing viable victim but **too far into building** to make it out safely
  - *Notify IC* via radio report and leave immediately
  - Potential MAYDAY depending on location in building.

- Rescuing victim but **close enough** to make it out
  - *Notify PROCTOR* verbally
  - Display knowledge of exit location and proximity
  - No radio report to IC needed (unnecessary delay).

## Sample Radio Scripts:

**At entry door**: "partner we have an outward/inward swinging door from my right to my left. Checking door for heat. Door is hot. Partner mask up. Opening door on 3/5 count."

**Radio report at victim (PPN):** "IC/Division___ from Recruit_____, we found one victim on the second floor. We are bringing them to the _____ side of the structure, have EMS on standby."

**PPN after victim extrication:** "IC/Division____ from Recruit____ we have one victim outside the structure on the _____ side. Send EMS to my location."

# Truck Drill Equipment Set-Up Needs

**VERTICAL VENTILATION:**
Two chainsaws
Two roof hooks
Chaps
TIC
28' GEL
Screw gun, screws, blower (on roof prop)

**POSITIVE PRESSURE VENT (PPV):**
Two gas RAMFANS (4-stroke blower)
Smoke-O spray container
One-gallon fuel container (TruFuel straight gas – gray can) and funnel
Portable generator
Extension cords (at least two) with adapters
Electric blower
Two lights
Cord reel (simulated truck reel)
Junction box

**GROUND EXTENSION LADDERS (reference Drill by Repetition Manual for specifics).**

**SEARCH AND RESCUE:**
One SCBA and extra bottle per firefighter
One radio per firefighter with collar mic
TIC
One hand light per firefighter
Set of Irons

**CONVENTIONAL FORCIBLE ENTRY:**
Irons (Pro-Bar and Flat headed axe)
Sledgehammer
Dowels, wedges and strike plates for door prop
Bucket with water
Hammer (for resetting prop)
Hearing/Eye protection

**COMMERCIAL FORCIBLE ENTRY:**
Rescue Saw
Irons
Rescue saw tools
Extra blades
Mix fuel
Extinguisher
Debris carrier

Hearing/Eye protection
Extra carriage bolts with wing nuts

**AIR BAGS:**
Assorted airbags
Regulator
Dual dead man
Air bottle
Pry bar
Crow bar
Cribbing
Debris carrier

**VEHICLE EXTRICATION (reference Drill by Repetition Manual for specifics):**
AMKUS power unit
AMKUS tools
Straight unleaded fuel and rags
Rescue axe
Irons
Pry bar
Crow bar
Debris carrier
Source of extinguishment
Fuel and filter funnel
Battery pack
R-42 struts and straps
EZ-Up for Gravel Lot

**SALVAGE COVERS:**
Salvage covers and hall runners
Corn broom
Bucket/sponge
Sprinkler tool box
Two pike poles

**UTILITIES:**
Utility shut off key
Gas detector
Battery pack
TIC

**PERSONAL ESCAPE SYSTEM (PES):**
Portable radio with collar mic
Forcible Entry tool
Verify Odd/Even day PES systems
Rescue belts
Fall pad, Auto-belays

**ROPES AND KNOTS:**
RPM systems bag
Two bags of 150' lifeline rope.

# Cribbing Information

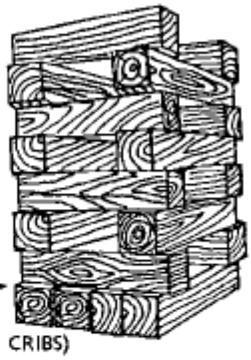
## US&R SHORING OPERATIONS GUIDE
## CONSTRUCTING VERTICAL SHORING SYSTEMS

DESIGN STRENGTH is BASED on CROSSGRAIN BEARING
(VARIES FROM 200 PSI TO 1000 PSI DEPENDING ON WOOD SPECIES
500 PSI IS USED HERE - EXAMPLE 500 x 3.5 x 3.5 x 4 = 24,000)

FOR 2 MEMBER x 2 MEMBER LAYOUT

4 x 4 CRIB DESIGN LOAD = 24,000 LBS (12 TONS)
6 x 6 CRIB DESIGN LOAD = 60,000 LBS (30 TONS)

FOR 3-MEMBER x 3-MEMBER CRIB, DESIGN LOAD IS 9/4 AS MUCH
500 x 3.5" x 3.5" x 9 = 55,000, 500 x 5.5" x 5.5" x 9 = 136,000



- BOTTOM LAYER SHOULD BE SOLID TO SPREAD THE LOAD ESPECIALLY ON SOIL OR ASPHALT PAVING
- LIMIT HEIGHT TO 3 TIMES WIDTH (SHORTEST WIDTH FOR NON-SQUARE CRIBS)
- OVERLAP CORNERS BY 4 INCHES TO ASSURE SLOW CRUSH TYPE FAILURE