Boone County Fire Protection District

Operations Manual

Version 3

Introduction

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Success in any team setting requires all members of the team to be clear on and operate from the same playbook. Without such a playbook, team effectiveness decreases while risk of injury dramatically increases. The lack of a playbook with clear, standardized expectations also creates frustration as members receive direction that deviates from their training. Fire District members have experienced this issue and expressed their desire to have a universal, standard set of expectations created and clearly communicated. This revised Operations Manual is the answer to their request.

The purpose of the Operations Manual is to detail the organization's expectations for each tactic. It is written to ensure it applies to all members, from recruit to the Fire Chief. This revision was created with input from four primary sources: 1) Current research, 2) National line of duty death (LODD) reports, 3) Lessons learned from our own hotwashes, and 4) Input solicited from all Fire District members.

From the beginning of the Operations Manual's creation, the Fire District has embraced the results of numerous studies from the National Institute of Science & Technology (NIST) and Underwriter's Laboratories (UL). This research has driven significant changes in tactics that make us more effective and also increase our safety. In addition, the Fire District has made a conscious effort to learn from the experiences from departments across the nation. Specifically, we want to honor firefighters that have paid the ultimate sacrifice by embracing the recommendations from LODD investigations so that those experiences will not be repeated.

This document has also been revised to ensure it meets the specific needs of our department. The first version of the Operations Manual had a full year of testing in both training and real operations. Following each training session and significant incident, we validated that each tactic achieved the desired expectations. We also noted when our tactics were not as effective as desired, be it due to fireground factors or equipment needs. Finally we also sought feedback from all members to ensure that the manual met your needs. Where you saw needed improvement, we made changes to ensure it was clear to all members of all ranks and experiences.

Moving forward, the tactics outlined in this manual will be the expectation for all incident operations. All members, from new recruit to the Fire Chief, will be trained on and expected to perform based on the tactics described in this manual. Additionally, future officers will be evaluated based on their understanding of these tactics and the process for their development. Should encounter necessary changes to the current Operations Manual, those changes will be communicated to all members via email.

Our future success hinges on your willingness to provide input and recommendations to ensure we continuously improve. All members, regardless of rank or experience, must be active participants (not passengers) for this to occur. I want to extend my sincere appreciation to each of you that provided your input and recommendations that led to this revised edition.

Josh Creamer

SEEKING HELP IS NOT A SIGN OF WEAKNESS

Boone County Fire Protection District, Employees Assistance Program – **(573) 446-6290**
(First 6 visits are paid by BCFPD and you never have to worry about confidentiality)

Boone County Fire Protection District, Command or Admin Staff - **(573) 447-5000**
(Any of us would be willing to offer you an ear or connect you with assistance)

First Responder, Safe Call Now – **www.safecallnow.org , (206) 459-3020**

Firestrong Online – **www.firestrong.org**

National Programs on Suicide – **www.suicide.org** , **1-800-SUICIDE**

National Suicide Prevention Lifeline – **1-800- 273-8255**

Standards of Success

Be Positive

- Own your attitude
- Build up, don't tear down
- Have fun
- No egos
- Be grateful, not entitled
- Be a good follower
- Be respectful
- Hold energy vampires accountable

Communicate

- Listen
- Cultivate deep relationships
- Don't be a vacuum - share what you know
- Participate - be teammates not passengers
- Encourage discussion, not dissension
- Check in regularly

Be Present

- Be engaged at the station
- Run calls
- Play your position
- Take care of Ms Smith
- Take initiative
- Give your best effort
- Own station coverage

Be Safe

- Be prepared
- Follow our rules & guidelines
- Use standard problem solving methods
- Take ownership
- Work as a team
- Don’t pass kinks

Grow

- Keep an open mind
- Be humble, be hungry
- Be receptive to feedback
- Embrace change/respect past
- Attend trainings
- Consistently improve skills
- Ask!

POSITION DESCRIPTION: Squad Member

ADMINISTRATIVE

Overview

Squad members serve as the foundation of the Fire District. This group ensures that we are prepared and capable of accomplishing our mission. Squad Members provide support with public education, minor maintenance of apparatus, equipment and facilities, and maintenance of the station in accordance with department policies and procedures.

Reports to:

- ☐ Squad Leader

Minimum Qualifications:

- Be 18 years of age
- High school diploma or GED
- Be capable of reading and writing the English language
- Possess a valid Missouri driver's license
- Be insurable by the Fire District's vehicle insurance provider

Core Expectations and Responsibilities:

- ☐ Uphold & enforce the Fire District Standards of Success
  - Be positive
  - Be present
  - Be safe
  - Communicate
  - Grow
- ☐ Operate according to BCFPD rules, policies, & protocols
- ☐ Fulfill requirements of your operational position description
- ☐ Complete administrative requirements
  - Provide station staffing coverage to improve FD response times
  - Complete incident reports within 7 days of the incident
  - Care for and maintain assigned equipment and PPE
  - Maintain skills & knowledge of BCFPD operations by participating in drills & attending monthly training sessions
  - Get checked off on apparatus at assigned station
  - Complete annual administrative and training requirements
- ☐ Assist station leadership with ensuring station readiness, to include:
  - Complete chores as necessary to ensure station is neat and orderly
  - Attend truck checks each month to ensure equipment and apparatus are operational
  - Complete work orders for damaged or non-operational equipment
  - Ensure station has sufficient supplies
  - Assist in staffing PR events as available
  - Support the Fire District in efforts to recruit and retain members
  - Assist with other annual station requirements
- ☐ Maintain the public trust and positive image of the department
- ☐ Provide input and feedback to help improve Fire District operations
- ☐ Communicate regularly with your assigned Squad Leader
- ☐ Perform other duties as assigned

Key Character Traits:

☐ Positive	☐ Accountable	☐ Honest
☐ Caring	☐ Empathetic	☐ Critical Thinker
☐ Self-motivated	☐ Mature	☐ Good communicator
☐ Responsible	☐ Follows directions	☐ Committed
☐ Gritty	☐ Coachable	☐ Team oriented

Selection & Appointment Process:

☐ Interview panel	☐ Reference check	☐ Drug screen
☐ Physical agility test	☐ Background check	☐ Medical evaluation

POSITION DESCRIPTION: Squad Leader

ADMINISTRATIVE

Overview

Squad leaders are critical members of the Fire District's leadership team. Their job is to motivate, organize and keep our membership moving forward. They are the "first line of defense" in heading off issues within our active membership and are the first link in the chain-of-command for station operations. Squad leaders are integral to maintaining and improving department and individual morale.

Reports to:

- ☐ Station Manager

Appointment:

Squad Leaders will be appointed for a term of 1 year. Selections will be based on an interview, resume, and the member's history with the department. Squad Leaders who meet the requirements of this position description will be allowed to continue in their position. Squad Leaders must reside in the station's first due area or in the immediate surrounding area.

Expectations and Responsibilities:

In addition to meeting all expectations of a squad member, Squad Leaders shall also:

- ☐ Uphold & enforce the Fire District Standards of Success
  - o Be positive
  - o Be present
  - o Be safe
  - o Communicate
  - o Grow
- ☐ Supervise members of squad
  - o Ensure Squad Leaders are aware of mission, vision, and actions of the Fire District
  - o Ensures squad members receive Fire District communications
  - o Develops growth plan for each assigned member
  - o Communicates with squad members on a regular basis
  - o Provides makeup training for squad members unable to attend
  - o Provide appropriate recognition and feedback for each member
  - o Counsels members not fulfilling requirements of their position
  - o Recommends disciplinary action to Station Manager
- ☐ Support Station Manager in managing the station
  - o Create and maintain a positive culture at the station
  - o Work with staff to maximize station staffing coverage
  - o Ensure apparatus and equipment are maintained and operationally ready
  - o Ensure station remains neat and orderly
  - o Complete projects and assignments as directed by the Station Manager
- ☐ Communicate regularly with the Station manager

Minimum Training and Experience Qualifications:

- ☐ Completed Fire District probationary requirements
- ☐ Demonstrated history of leadership and helping/working with others
- ☐ History of maintaining BCFPD Standards of Success
- ☐ Awareness of Fire District operations and policies
- ☐ Fire District Leadership Development Program *(recommended)*

Knowledge, Skills, Abilities and Personal Characteristics:

Passionate about making positive progress in the Fire District; gritty perseverance to continue positive progress in the face of adversity; committed to serving assigned squad, effective interpersonal communications skills; good professional judgment & problem solving skills; able to assume responsibility and authority to act on behalf of the fire department.

Time Commitments:

Squad Leaders can expect to commit 5 hours per week on average with managing station and personnel responsibilities.

POSITION DESCRIPTION: Station Manager

ADMINISTRATIVE

Overview

Station Managers hold the critical responsibility of managing and maintaining the culture and vision of the Fire District at their respective fire station. Their mission is to maintain a positive culture and maximize the operational capability of their station. Achievement of this mission ensures that personnel are engaged, communicated with, positive, and active in Fire District operations.

Reports to:

- Operations & Training Bureau Director

Appointment:

Selections will be based an interview, resume, and the member's history with the department. Station Managers will be appointed for a term of 2 years. Individuals who meet the requirements of this position description will be allowed to continue in their position. Station Managers must reside in the station's first due area or in the immediate surrounding area.

Expectations and Responsibilities:

In addition to meeting all expectations of a squad member, Squad Leaders shall also:

- Uphold & enforce the Fire District Standards of Success
  - Be positive
  - Be present
  - Be safe
  - Communicate
  - Never stop growing
- Supervise and mentor Squad Leaders (or station staff if no Squad Leaders assigned)
  - Ensure Squad Leaders are aware of mission, vision, and actions of the Fire District
  - Develop growth plan for each Squad Leader
  - Provide regular recognition and feedback for each Squad Leader
  - Counsel members not fulfilling requirements of their position
  - Recommends disciplinary action to Operations & Training Bureau Director
- Manage daily station operations
  - Create and maintain a positive culture and environment within the station
  - Work with staff to maximize station staffing coverage and report any deficiencies
  - Ensure apparatus and equipment are maintained and operationally ready
  - Ensure station remains neat and orderly at all times
  - Ensure station supplies are acquired
  - Collaborate with station personnel on use of station funds
  - Articulate and enforce member expectations
    - Ensure personnel meet requirements of position and operate within organizational guidelines (Operations Manual, Protocols, SOP's, etc)
    - Manage routine personnel issues including initial discipline (verbal, written warnings)
    - Keep records regarding any personnel issues
    - Report any policy violations to Operations & Training Bureau Director
- Ensure completion of routine station requirements
  - Ensure hose testing is completed on all apparatus at station within deadline
  - Ensure station staff complete their annual VFIS Driving Refresher requirements
  - Ensure station staff are meeting operational and training requirements
  - Ensure coverage for requested PR events in the community
- Work to improve department effectiveness
  - Enact station level actions that improve operations and support the overall mission and vision for the Fire District
  - Advocate and coordinate delivery of station drills and training
  - Identify issues and recommend ideas to Ops & Training Bureau Director
  - Participate in opportunities to provide input and feedback on department changes
- Communicate biweekly with the Operations & Training Bureau Director

Minimum Training and Experience Qualifications:

- Completed Fire District probationary requirements
- Demonstrated leadership and communication skills
- Demonstrated history of helping and working with others
- History of maintaining BCFPD Standards of Success
- Awareness of Fire District operations and policies
- Fire District Leadership Development Program *(recommended)*

Knowledge, Skills, Abilities and Personal Characteristics:

Passionate about making positive progress in the Fire District; gritty perseverance to continue positive progress in the face of adversity; committed to serving assigned squad, effective interpersonal communications skills; good professional judgment & problem solving skills; dependable; empathy; concern for the safety of others; able to assume responsibility and authority to act on behalf of the fire department.

Time Commitments:

Station Managers can expect to commit 10 hours per week on average with managing station and personnel responsibilities.

POSITION DESCRIPTION: EMS Responder

OPERATIONAL

Overview

EMS Providers respond to emergency incidents in the following areas: emergency medical services, vehicle accidents, land search, natural cover firefighting, and structure fire support. Additionally, members also provide support with public education, minor maintenance of apparatus, equipment and facilities, and maintenance of quarters in accordance with department policies and procedures.

Minimum Qualifications:

- Be 18 years of age
- High school diploma or GED
- Be capable of reading and writing the English language
- Possess a valid Missouri driver's license
- Be insurable by the Fire District's vehicle insurance provider

Core Expectations and Responsibilities:

- ☐ Uphold & enforce the Fire District Standards of Success
  - ☐ Be positive
  - ☐ Be present
  - ☐ Be safe
  - ☐ Communicate
  - ☐ Grow
- ☐ Fulfill requirements of your administrative position description
- ☐ Complete annual administrative and training requirements
- ☐ Fulfill the following functions on incident scenes:
  - ☐ Respond to emergency incidents within the scope of members training
  - ☐ Serve as an initial Incident Commander until relieved by an officer
  - ☐ Operate according to BCFPD rules, policies, operations manual, & protocols
  - ☐ Maintain crew accountability throughout the incident
  - ☐ Maintain situational awareness
  - ☐ Report any issues or injuries to crew leader and/or the Incident Commander
- ☐ Attend 70% of BCFPD monthly Fire & EMS trainings to maintain skills and knowledge
- ☐ Maintain licensing in State of Missouri as EMT-B or higher
- ☐ Maintain the public trust and positive image of the department
- ☐ Provide input and feedback to help improve Fire District operations
- ☐ Perform other duties as assigned

Key Character Traits:

☐ Positive	☐ Accountable	☐ Honest
☐ Caring	☐ Empathetic	☐ Critical Thinker
☐ Self-motivated	☐ Mature	☐ Good Communicator
☐ Responsible	☐ Follows Directions	☐ Committed
☐ Gritty	☐ Coachable	☐ Team Oriented

Recruit Training Curriculum:

☐ BCFPD Orientation	☐ Haz Mat Operations	☐ EMT-B
☐ ICS 100/200/700/800	☐ Natural Cover Fire	☐ Water Supply
☐ BLS Healthcare Provider	☐ Wide Area Search	☐ Offensive Exterior Attack
☐ Respiratory & Bloodborne	☐ Vehicle Extrication	☐ Ladder Rescue
☐ VFIS EVDT	☐ Roadway Operations	☐ Scene Rehab

Selection & Appointment Process:

☐ Interview panel	☐ Reference check	☐ Drug screen
☐ Physical agility test	☐ Background check	☐ Medical evaluation

Probationary Requirements:

Remain active with the organization for 1 year from the start of the Recruit Academy and be licensed as a Missouri EMT-B or higher or exhaust all written testing opportunities for licensing as an EMT-B. Must also meet all requirements of this position description with following exception: must be checked off on at least the assigned brush truck (if applicable) and engine.

POSITION DESCRIPTION: Firefighter

OPERATIONAL

Overview

Firefighter's respond to emergency incidents in the following areas: fires, hazardous materials incidents, rescues, emergency medical services, vehicle accidents, land search, and natural cover firefighting. Additionally, members also provide support with public education, minor maintenance of apparatus, equipment and facilities, and maintenance of quarters in accordance with department policies and procedures.

Minimum Qualifications:

- Be 18 years of age
- High school diploma or GED
- Be capable of reading and writing the English language
- Possess a valid Missouri driver's license
- Be insurable by the Fire District's vehicle insurance provider

Core Expectations and Responsibilities:

- ☐ Uphold & enforce the Fire District Standards of Success
  - ☐ Be positive
  - ☐ Be present
  - ☐ Be safe
  - ☐ Communicate
  - ☐ Grow
- ☐ Fulfill requirements of your administrative position description
- ☐ Complete annual administrative and training requirements
- ☐ Fulfill the following functions on incident scenes:
  - ☐ Respond to emergency incidents within the scope of members training
  - ☐ Serve as an initial Incident Commander until relieved by an officer
  - ☐ Operate according to BCFPD rules, policies, operations manual, & protocols
  - ☐ Maintain crew accountability throughout the incident
  - ☐ Maintain situational awareness
  - ☐ Report any issues or injuries to your crew leader and/or the Incident Commander
- ☐ Attend 70% of BCFPD monthly Fire & EMS trainings to maintain skills and knowledge
- ☐ Maintain licensing in State of Missouri as EMT-B or higher
- ☐ Maintain the public trust and positive image of the department
- ☐ Provide input and feedback to help improve Fire District operations
- ☐ Perform other duties as assigned

Key Character Traits:

☐ Positive	☐ Accountable	☐ Honest
☐ Caring	☐ Empathetic	☐ Critical Thinker
☐ Self-motivated	☐ Mature	☐ Good Communicator
☐ Responsible	☐ Follows Directions	☐ Committed
☐ Gritty	☐ Coachable	☐ Team Oriented

Recruit Training Curriculum:

☐ BCFPD Orientation	☐ VFIS EVDT	☐ Roadway Operations
☐ ICS 100/200/700/800	☐ Haz Mat Operations	☐ EMT-B
☐ BLS Healthcare Provider	☐ Natural Cover Fire	☐ Water Supply
☐ Respiratory protection	☐ Wide Area Search	☐ Basic Firefighter
☐ Bloodborne pathogens	☐ Vehicle Extrication	☐ Tactical Evolutions

Selection & Appointment Process:

☐ Interview panel	☐ Reference check	☐ Drug screen
☐ Physical agility test	☐ Background check	☐ Medical evaluation

Probationary Requirements:

Remain active with the organization for 1 year from the start of the Recruit Academy and be licensed as a Missouri EMT-B or higher or exhaust all written testing opportunities for licensing as an EMT-B. Must also meet all requirements of this position description with following exception: must be checked off on at least the assigned brush truck (if applicable) and engine.

POSITION DESCRIPTION: Lieutenant

OPERATIONAL

Overview:

Commands single company responses to emergency fire, EMS, vehicle accident, hazardous material, rescue or other situations and functions as the incident commander, responsible for situation assessment, tactic and strategy development and implementation, and the deployment of personnel and equipment; makes determinations regarding requests for additional personnel, equipment and resources; personally performs a wide variety of fire suppression and medical treatment tasks in emergency situations.

Expectations and Responsibilities:

In addition to meeting all expectations of a BCFPD Firefighter, Fire Lieutenant's shall also:

- ☐ Uphold & enforce the Fire District Standards of Success
  - ☐ Be positive
  - ☐ Be present
  - ☐ Be safe
  - ☐ Communicate
  - ☐ Grow
- ☐ Complete annual administrative and training requirements
- ☐ Fulfill the following functions as needed on incident scenes:
  - ☐ Serve as Incident Commander on routine incidents
  - ☐ Serve as the initial Incident Commander on critical and/or complex incidents
  - ☐ Serve as the Command Aide or Division/Group Supervisor as requested by the Incident Commander
  - ☐ Serve as a Crew Leader for a crew on an incident scene
  - ☐ When serving as operational supervisor, ensure the following:
    - Maintain accountability of assigned personnel at all times
    - Personnel operate safely & according to BCFPD Operations Manual
    - Personnel are aware of tactical assignment
  - ☐ Maintain situational awareness
  - ☐ Identify, stop, and/or correct safety issues
- ☐ Utilize crew resource management principles to create an environment on scenes where crew members are comfortable sharing critical safety related information
- ☐ Attend 70% of BCFPD monthly Fire & EMS trainings to maintain skills and knowledge
- ☐ Get checked off on all apparatus at assigned station
- ☐ Maintain awareness of emerging trends and research regarding incident operations
- ☐ Mentor Firefighters and EMS Responders on incident scenes
- ☐ Report any operational issues to the Incident Commander or Operations & Training Bureau Director
- ☐ Maintain licensing in State of Missouri as EMT-B or higher
- ☐ Other duties as assigned

Training and Certification Requirements:

- ☐ Meet all requirements of the BCFPD Firefighter position description
- ☐ Attend minimum of 70% of fire training offerings over previous 3 years
- ☐ 5 years with BCFPD *(variance may be requested prior to process for outside experience)*
- ☐ Missouri EMT-B license
- ☐ Thorough knowledge of BCFPD Operations Manual and EMS Protocols
- ☐ Checked off on an engine, tanker, and brush truck
- ☐ ICS 300
- ☐ BCFPD Operational Development Program
- ☐ Incident Safety Officer
- ☐ Successful completion of BCFPD Lieutenant Assessment Center

Appointment:

Selections will be made following an annual promotional process. An eligibility list will be created and promotions made to fill all open and budgeted Lieutenant positions.

POSITION DESCRIPTION: Captain

OPERATIONAL

Overview

Commands single and multiple-company responses to emergency fire, EMS, vehicle accident, hazardous material, rescue or other situations and functions as the incident commander, responsible for situation assessment, tactic and strategy development and implementation, and the deployment of personnel and equipment; makes determinations regarding requests for additional personnel, equipment and resources; personally performs a wide variety of fire suppression and medical treatment tasks in emergency situations.

Expectations and Responsibilities:

In addition to meeting all expectations of a BCFPD Lieutenant, Captains shall also:

- ☐ Uphold & enforce the Fire District Standards of Success
  - ☐ Be positive
  - ☐ Be present
  - ☐ Be safe
  - ☐ Communicate
  - ☐ Grow
- ☐ Complete annual administrative and training requirements
- ☐ Fulfill the following functions as needed on incident scenes:
  - ☐ Serve as Incident Commander on routine incidents
  - ☐ Serve as the initial Incident Commander on critical and/or complex incidents
  - ☐ Serve as the Command Aide or Division/Group Supervisor as requested by the Incident Commander
  - ☐ Serve as a Crew Leader for a crew on an incident scene
  - ☐ When serving as operational supervisor, ensure the following:
    - Maintain accountability of assigned personnel at all times
    - Personnel operate safely & according to BCFPD Operations Manual
    - Personnel are aware of tactical assignment
  - ☐ Maintain situational awareness
  - ☐ Identify, stop, and/or correct safety issues
- ☐ Utilize crew resource management principles to create an environment on scenes where crew members are comfortable sharing critical safety related information
- ☐ Attend 70% of BCFPD monthly Fire & EMS trainings to maintain skills and knowledge
- ☐ Get checked off on all apparatus at assigned station
- ☐ Maintain awareness of emerging trends and research regarding incident operations
- ☐ Mentor less experienced personnel on incident scenes
- ☐ Report any incident related issues to the Operations and Training Bureau Director
- ☐ Maintain licensing in State of Missouri as EMT-B or higher
- ☐ Other duties as assigned

Training requirements and expectations:

- ☐ Meet all training and certification requirements in the Lieutenant position description
- ☐ Attendance at 70% training attendance over last 3 year period
- ☐ 5 years of experience as a Lieutenant with the Boone County Fire Protection District
- ☐ Thorough knowledge of BCFPD Operations Manual and EMS Protocols
- ☐ Knowledge and understanding of Crew Resource Management principles
- ☐ Checked off on a squad
- ☐ ICS 400
- ☐ Blue Card *(online components at minimum)*
- ☐ Instructor I *(recommended)*
- ☐ Successful completion of BCFPD Captain Assessment Center

Appointment:

Selections will be made following an annual promotional process. An eligibility list will be created and promotions made to fill all open and budgeted Captain positions.

General Tactics

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Gear Drill

Standard - NFPA 1001-2013: 5.1.2	Video Link - https://goo.gl/at1bFU

Unzip gear bag
Take off shoes
Take boots/pants out of gear bag
Clear suspenders
Place right foot in right boot
Place left foot in left boot
Pull up bunker pants
Pull up right suspender
Pull up left suspender
Close pant fly
Close pant buckle
Put on hood
Tuck hood under right suspender
Tuck hood under left suspender
Place right arm in right arm of coat
Place left arm in left arm of coat
Close zipper
Secure Velcro
Close storm flap
Put on helmet
Tighten chin strap
Put on right glove
Put on left glove

SCBA Drill

Standard: NFPA 1001-2013: 5.3.1	Video Link: http://bit.ly/2vmtnTX

Open cylinder valve all the way
Confirm PASS alarm function
Confirm cylinder pressure
Don SCBA
Adjust both shoulder straps
Buckle waist strap
Adjust waist strap
Attach regulator to facepiece
Remove helmet
Pull back hood
Detach regulator from facepiece
Don facepiece
Tighten facepiece straps
Check facepiece seal (5 second negative pressure check)
Pull hood over facepiece webbing
Put on helmet
Tighten chin strap
Put on gloves
Apply regulator to facepiece
Check Heads Up Display for two green lights

5 Step Radio Process

Standard - NFPA 1001-2013: 5.2.3	Video Link -

1	Sender: Hey you, this is me.
2	Receiver replies: Hey you, this is me.
3	Sender: Deliver the message.
4	Receiver: Repeat the message.
5	Sender: Acknowledge if the message was received correctly (affirmative or negative)
1	Crew Smith: *Command, this is Crew Smith.*
2	Incident Commander: *Crew Smith, this is Command.*
3	Crew Smith: *Command, Crew Smith is entering the structure side alpha for offensive fire attack.*
4	Incident Commander: *Crew Smith is entering the structure side alpha for offensive fire attack.*
5	Crew Smith: *Affirmative.*
1	Incident Commander: *Crew Smith, this is Command.*
2	Crew Smith: *Command, this is Crew Smith.*
3	Incident Commander: *Crew Smith, recycle and report to Command.*
4	Crew Smith: Crew Smith r*ecycle and report to Command.*
5	Incident Commander: *Affirmative.*

Assigning a Crew

Face to Face

Standard - NFPA 1001-2013: 5.2.3	Video Link -

Identify crew leader
Identify crew members
Assign tactic or task and/or who they report to if not the Incident Commander
(crew leader repeats crew members and assignment)
Confirm assignment is received
You will be crew Molina
You will have Wainwright, Martinez, Wacha
Offensive fire attack enter alpha side
“Copy crew Molina with Wainwright, Martinez, Wacha, assigned offensive fire attack enter alpha side”
Affirmative
You will be crew Moss
You will have Wong, Peralta, and Carpenter
Report to Molina who is Division 1
“Copy crew Moss with Wong, Peralta, and Carpenter, report to Molina who is Division 1”
Affirmative

CAN Report

Standard - NFPA 1001-2013: 5.2.3	Video Link -

Announce the conditions around you
Announce the actions you are currently taking
Announce your current or projected needs based on your conditions
Crew Smith: *Command, this is Crew Smith.*
Incident Commander: *Crew Smith, this is Command.*
Crew Smith: *Command, Crew Smith is on the second floor with heavy fire conditions in the attic. We are pulling ceiling and applying water to the fire. We need a second crew to assist with fire attack on second floor, delta side.*
Incident Commander: *Crew Smith is on the second floor with heavy fire conditions in the attic. Crew Smith is pulling ceiling and applying water to the fire. Requesting a second crew to assist with fire attack on second floor, delta side.*
Crew Smith: *Affirmative.*
Incident Commander: *Crew Smith, this is Command.*
Crew Smith: *Command, this is Crew Smith.*
Incident Commander: *Crew Smith, CAN Report*
Crew Smith: *Command, Crew Smith has light smoke conditions in the basement. We are searching for victims. We have no needs.*
Incident Commander: *Crew Smith has light smoke conditions in the basement. Searching for victims. No needs.*
Crew Smith: *Affirmative.*

Personnel Accountability Report

Standard - NFPA 1001-2013: 5.2.3	Video Link -

Incident Commander
Announce on tactical channel that you will perform a PAR check
Call each crew to verify PAR, start with the crew in the area of highest danger and end with the crew in the lowest area of danger (don’t forget apparatus
Have command aide verify the command board matches the PAR
All units on the fire ground stand by for a PAR
Command to Crew Smith, PAR
“Crew Smith PAR times 3 in the kitchen, air is yellow”
Copy crew Smith is PAR times 3 in the kitchen, air is yellow
“Affirmative"
Command to Crew Musial, PAR
“Crew Musial PAR times 2 in the basement, air is one green”
Copy crew Musial is PAR times 2 in the basement, air is one green

Command Transfer

Standard -	Video Link -

Outgoing Incident Commander
State current incident strategy
Provide C.A.N. report to oncoming incident commander

Oncoming Incident Commander
Give radio report to BCJC
Assume command
Declare incident strategy
Additional resources
Command post location

<u>Outgoing Incident Commander</u>

We are operating in the offensive strategy

We have active fire in the attic

Crew X and crew Y are assigned offensive fire attack and are in the Bravo Charlie corner

We need another crew on deck

<u>Oncoming Incident Commander</u>

Boone County from 124 command

“124 command go ahead”

Chief 10 is assuming command, we are in the offensive strategy, no additional resources needed, command post is on the alpha side in the white pick up truck

Calling a Mayday

Standard - NFPA 1500-2013: 8.2.3.2 NFPA 1001-2013: 5.2.4	Video Link -

Press “Emergency Alert” button
Press “Push to Talk” button
State “Mayday Mayday Mayday”
Wait for reply from command
Provide UCAAN report
Unit
Conditions
Actions
Air
Needs
Await response from Incident Commander
Activate PASS device as directed

Managing a Mayday

Standard - NFPA 1561-2014: 6.3.2.1	Video Link -

Restrict traffic on the channel to mayday traffic only
Request UCAAN report (Unit, Conditions, Actions, Air, Needs)
Inform personnel calling the mayday to activate their PASS device
Request “SECOND ALARM” from Boone County Joint Communications
Assign resources
Staff an additional Command Aide
Consider a PAR
Notify all units on scene and Boone County Joint Communications when the mayday has ended

Lines Down

Standard -	Video Link -

Firefighter	Crew Leader
Ensure no one approaches the line	Ensure no one approaches the line
	Notify the Incident Commander of the presence of the line and it's location
	If the line is in contact with a vehicle and the vehicle is occupied communicate with the occupants to stay in the vehicle
Establish a perimeter around the downed line at least two full spans (length of two good poles)	Establish a perimeter around the downed line at least two full spans (length of two good poles)
Be cautious of step potential and conductive material that may be energized	Be cautious of step potential and conductive material that may be energized

Utility Control

Standard -	Video Link -

Firefighter	Crew Leader
	Receives orders from incident commander to “secure the utilities”
Gather the lock out / tag out kit	
Gather a halligan bar	
	Find the main circuit breaker(s)
	Move the main breaker to the “OFF” position on all panels
Secure the main switch with the tool from the lock out / tag out kit	
Natural Gas	
	Find the natural gas meter
Use the forked end of the halligan bar to turn the valve to the off position	
Secure the natural gas valve with the tool from the lock out / tag out kit	Notify incident commander the tactic is complete
Propane	
	Locate propane tank
Open hood	
Close service valve	
Secure the service valve with the lock out /tag out kit	Notify incident commander the tactic is complete

Landing Zone

Standard -	Video Link -
Firefighter	**Crew Leader**
	Receive and verify assignment to establish a landing zone
Gather portable radio	Gather portable radio
Verify tactical channel	Verify tactical channel
Gather a fire extinguisher	
Gather a flashlight to light LZ	
Monitor tactical channel	Monitor air to ground channel (VFIRE21 Red)
	Identify a landing zone location (100 ft X 100 ft)
Verify that the LZ is a solid surface	Verify that the LZ is a solid surface
Identify any overhead power lines or other obstacles higher than 2 feet off ground	Identify any overhead power lines or other obstacles higher than 2 feet off ground
Remove any debris from landing zone	Remove any debris from landing zone
	Wait for contact from arriving helicopter
	Advise helicopter of any hazards in the vicinity of the LZ and describe the LZ
Secure landing zone and ensure no one enters the area	Secure landing zone and ensure no one enters the area
Turn off flashlight as helicopter descend	
	Switch to tactical channel and notify command that the helicopter has landed
	Only approach the helicopter if the crew indicates they need assistance
	Advise command that helicopter has departed the scene and your crew is ready for reassignment

Wide Area Search

Standard -	Video Link -

Establish unified command
Begin Lost Person Questionnaire (short form)
Determine urgency
Define search area
Hasty search
Begin Lost Person Questionnaire (long form)
Primary search
Grid/Area search

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Response and Arrival

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POV Response

Standard - NFPA 1001-2013: 5.2.1, Missouri Revised Statutes: 304.022, 307.175	Video Link -

Receive dispatch
Enter vehicle and fasten seat belt
Secure personal pagers/cell phones
Secure fire pager to passenger side visor in open position
Find location, route, and water supply in map book
Respond to the fire station/scene
Stage
Arrive on scene
Don PPE in a safe location
Secure vehicle

Officer POV Reponse

Standard - NFPA 1001-2013: 5.2.1, Missouri Revised Statutes: 304.022, 307.175	Video Link -

Receive dispatch
Enter vehicle and fasten seat belt
Secure personal pagers/cell phones/fire pager
Find location, route, and water supply in map book
Respond to the fire station/scene
Stage
Arrive on scene
Announce on scene
Provide initial size up
Establish command

Apparatus Response

Single member structure fire initial IC

Standard - NFPA 1001-2013: 5.2.1, 5.2.3, 5.3.2 Missouri Revised Statutes: 304.022, 307.175	Video Link -

Receive dispatch
Retrieve CAD printout from station printer
Secure personal pagers/cell phones
Don PPE
Place all other personal protective equipment in the apparatus
Ensure all compartment doors are secured
Remove shore lines
Enter vehicle and fasten seat belt
Start the apparatus
Open apparatus bay door
Pull apparatus out of bay
Close apparatus bay door
Find location, route and water supply in map book
Respond and acknowledge any further information
Activate warning equipment
Stage
Transmission to neutral
Engage parking brake
Announce “on scene”
Give initial size up
Establish command

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Apparatus Response

2 or more members structure fire initial IC

Standard - NFPA 1001-2013: 5.2.1, 5.2.3, 5.3.2 Missouri Revised Statutes: 304.022, 307.175	Video Link -

Operator	Front Seat Passenger	Rear Seat Passenger
Receive dispatch	Receive dispatch	Receive dispatch
	Retrieve CAD printout from station printer	
Secure personal pager/ cell phone	Secure personal pager/ cell phone	Secure personal pager/ cell phone
Don PPE	Don PPE	Don PPE
Place all other personal protective equipment in the apparatus	Place all other personal protective equipment in the apparatus	Place all other personal protective equipment in the apparatus
Ensure all compartment doors are secured		
Remove shore lines		
Enter vehicle and fasten seat belt	Enter vehicle and fasten seat belt	Enter vehicle and fasten seat belt
Turn on apparatus		
	Find location, route, and water supply in map book	

Operator	Front Seat Passenger	Rear Seat Passenger
Open apparatus bay door		
Ensure all passengers have their seat belts on		
Pull apparatus out of bay		
Close apparatus bay door		
	Respond and acknowledge any further information	
Activate warning equipment		
Stage		
	Announce “on scene”	
	Provide initial size up	
	Establish command	
Transmission to neutral		
Engage parking brake		

EMS Protocols

Joint EMS Protocols
Boone County FPD
Boone Hospital EMS
Centralia Fire Dept
Columbia Fire Dept

Universal Care

Joint EMS Protocols
Columbia Regional Airport
Southern Boone County FPD
University Hospital EMS

History

- S – Signs / Symptoms
- A – Allergies
- M – Medication
- P – Past Medical History
- L – Last Meal
- E – Events Leading Up To Now

* Scene Size-Up

- Scene Safety/Situational Awareness
- PPE (consider splash, droplet, airborne)
- Determine the Number of Patients
- Determine Need for Additional Resources
- Determine the Mechanism of Injury/ Nature of Illness
- Take the appropriate equipment to the patient

Signs and Symptoms

- O – Onset
- P – Provokes or Relieves
- Q – Quality
- R – Radiates
- S – Severity (0-10 Scale)
- T – Timing

Primary Assessment/Resuscitation

E M R

Evaluate and correct any of the following:

Control C-spine (if injury suspected)
Assess LOC (AVPU)
Assess Airway (correct, if needed)
Assess Breathing (correct, if needed)
Assess Circulation (support, if needed)
Determine Chief Complaint

E M R

* Treatment Protocols

- Airway Management (U2)
- Altered Mental Status (U3)
- Cardiac Arrest (U4)
- Chest Pain (U5)
- Childbirth (U6)
- Trauma

Secondary Assessment/History

E M R

Vital Signs
Pulse (rate, rhythm)
Respiratory (rate, depth, effort)
Oxygen saturation
Blood pressure
Temperature
Head-to-Toe Physical Exam
History (OPQRST/SAMPLE)

B Blood glucose B

E M R

* Treatment Protocols

- Airway Management (U2)
- Altered Mental Status (U3)
- Cardiac Arrest (U4)
- Chest Pain (U5)
- Childbirth (U6)
- Trauma

Monitor and Reassess

Clinical Guidelines:

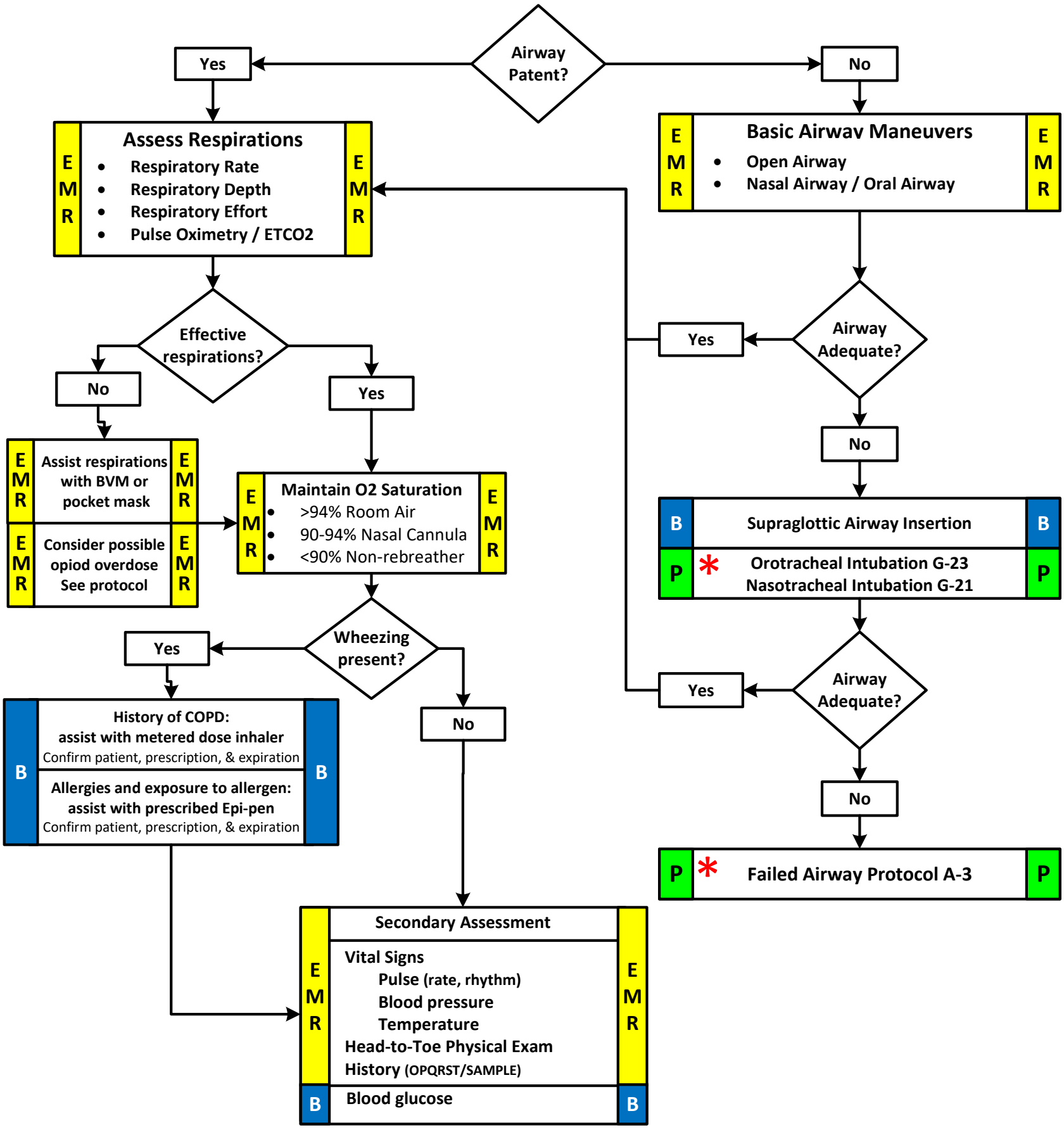
- First Responders on scene should upgrade/downgrade responding EMS units as needed.
- Upon arrival of ALS transport, patient care should be transitioned between care teams. Arriving personnel should receive a handoff from first responders or family on scene during assessment.

Provider Legend	E M R Emergency Medical Responder	B EMT	FP Fire Paramedic	P Paramedic	M Medical Control

Joint EMS Protocols
Boone County FPD
Boone Hospital EMS
Centralia Fire Dept
Columbia Fire Dept

Airway Management

Joint EMS Protocols
Columbia Regional Airport
Southern Boone County FPD
University Hospital EMS



Provider Legend	EMR Emergency Medical Responder	B EMT	FP Fire Paramedic	P Paramedic	M Medical Control

Joint EMS Protocols
Boone County FPD
Boone Hospital EMS
Centralia Fire Dept
Columbia Fire Dept

Altered Mental Status / Neurological Deficit

Joint EMS Protocols
Columbia Regional Airport
Southern Boone County FPD
University Hospital EMS

History

- Known diabetic, medic alert tag
- Drugs, drug paraphernalia
- Past medical history
- Medications
- History of trauma
- Change in condition

Signs and Symptoms

- Decreased mental status or lethargy
- Change in baseline mental status
- Bizarre behavior
- Hypoglycemia (cool, diaphoretic skin)
- Hyperglycemia (warm, dry skin; fruity breath; Kussmal resps; signs of dehydration

EMR * Universal Care Protocol U-1 EMR

B Blood Glucose? B

over 70 mg dL

Less than 70 mg dL

B Administer glucose paste (if awake and no risk of aspiration) B

FP * Diabetic Emergencies Protocol A-9 FP

EMR

Consider other causes:

- Trauma / Head Injury
- Overdose / Toxic Ingestion
- Stroke
- Hypothermia
- Cardiac
- Seizure

EMR

Stroke

EMR

Prehospital Stroke scale

- Facial Droop
- Arm Drift
- Speech

EMR

Determine onset of symptoms

Overdose

EMR

If opiod related, administer
0.5 mg Narcan IN
Reevaluate 3-5 min
Repeat dose if necessary

EMR

Hypothermia

EMR

- Remove from environment
- Remove any wet clothing
- Passive warming

EMR

Other

EMR

Secondary Assessment/History

Vital Signs
- Pulse (rate, rhythm)
- Respiratory (rate, depth, effort)
- Oxygen saturation
- Blood pressure
- Temperature

Head-to-Toe Physical Exam
History (OPQRST/SAMPLE)

B Blood glucose B

EMR

Clinical Guidelines:

- Be aware of AMS as presenting sign of an environmental toxin or Haz-Mat exposure and protect personal safety.
- It is safer to assume hypoglycemia than hyperglycemia if doubt exists.
- Do not let alcohol confuse the clinical picture. Alcoholics frequently develop hypoglycemia and may have unrecognized injuries.
- Low glucose (< 60), normal glucose (60 - 120), high glucose (> 250).
- Consider chemical/physical restraints if necessary for patient's and/or personnel's protection per the Restraint Procedure.

Provider Legend	EMR Emergency Medical Responder	B EMT	FP Fire Paramedic	P Paramedic	M Medical Control

BLS Trauma

Joint EMS Protocols
Boone County FPD
Boone Hospital EMS
Centralia Fire Dept
Columbia Fire Dept

Joint EMS Protocols
Columbia Regional Airport
Southern Boone County FPD
University Hospital EMS

History

- Mechanism of injury
- Events leading up to injury
- Pain level
- Medications and Allergies
- Seat belt/protective equipment use

Signs and Symptoms

- Pain, swelling
- Deformity, fractures, bleeding
- Respiratory distress
- Hypotension or shock
- Traumatic Arrest
- Decreased mental status/LOC

EMR Scene Size-Up / * Universal Care Protocol U-1 **EMR**

Suspected Spinal Injury?

Yes → **EMR** * Take Manual Control of C-Spine (don't allow patient to move) **EMR**

No

EMR Rapid Trauma Assessment/Resuscitation **EMR**

- Assess LOC (AVPU)
- Determine Chief Complaint/Life Threats
- Assess Airway, Breathing, Circulation (correct any issues, if needed)
- Notify receiving facility of Trauma Alert (if identified)

EMR Burn Care **EMR**

- Expose area
- Remove constricting items
- Cool burn and cover with a dry dressing
- Keep patient warm

EMR Bleeding Control **EMR**

- Apply direct pressure using gauze
- Elevate limb
- Apply CAT tourniquet
- Apply appropriate hemostatic agent

Go directly to tourniquet for serious bleeding

EMR Splinting **EMR**

- Locate, expose, manually stabilize the injury
- Control hemorrhage and assess distal pulse/motor/ sensation
- Splint joints above and below injury
- Reassess pulse/motor/ sensation

EMR Secondary Assessment/History **EMR**

- Vital Signs
  - BP, pulse, resp. rate, oxygen saturation, temperature
- Head-to-Toe Physical Exam
- History (OPQRST/SAMPLE)
- Patient packaging (C-collar, long back board)

B Blood glucose **B**

Monitor and Reassess

Clinical Guidelines:

- First Responders on scene should upgrade/downgrade responding EMS units as needed.
- Upon arrival of ALS transport, patient care should be transitioned between care teams. Arriving personnel should receive a patient care hand-off from first responders or family on scene during assessment.

Provider Legend	EMR Emergency Medical Responder	B EMT	FP Fire Paramedic	P Paramedic	M Medical Control

Joint EMS Protocols
Boone County FPD
Boone Hospital EMS
Centralia Fire Dept
Columbia Fire Dept

Cardiac Arrest

Joint EMS Protocols
Columbia Regional Airport
Southern Boone County FPD
University Hospital EMS

History
- Events leading to arrest
- Bystander CPR / AED use
- Estimated down time
- DNR / Hospice status
- Medications
- Past medical history

Signs and Symptoms
- Unresponsive
- Abnormal breathing
- Pulselessness
- Lividity / rigor
- Cold skin
- Decomposition
- No pupillary response

* Universal Care Protocol U-1

Are criteria for withholding resuscitation present?
- Lividity
- Rigor Mortis
- DNR
- Obvious mortal wound

Yes →
- Reduce units
- Confirm Medical Examiner response
- Customer service

No ↓

EMR
- Begin compressions
- Apply AED
- Ventilate patient
  - Pocket mask
  - OPA/NPA
  - BVM

B
- Supraglottic airway

FP
* Medication Access Procedure G-20
Epinephrine 1:10,000 1mg IV/IO, q 3-5 minutes

2 Minutes ↓

Pulse?

← NO

Consider reversible causes

If suspected opioid overdose, administer Narcan following Altered Mental Status protocol

YES →

EMR

Secondary Assessment/History

Vital Signs
- Pulse (rate, rhythm)
- Respiratory (rate, depth, effort)
- Oxygen saturation
- Blood pressure
- Temperature

Head-to-Toe Physical Exam
History (OPQRST/SAMPLE)

B
Blood glucose

Clinical Guidelines:
- Prioritize chest compressions and defibrillation over other interventions.
- Limit the interruption of chest compressions while performing airway maneuvers, giving ventilations, or administering medications to no more than 10 seconds.

Provider Legend	EMR Emergency Medical Responder	B EMT	FP Fire Paramedic	P Paramedic	M Medical Control

Joint EMS Protocols
Boone County FPD
Boone Hospital EMS
Centralia Fire Dept
Columbia Fire Dept

Chest Pain/Cardiac Issues

Joint EMS Protocols
Columbia Regional Airport
Southern Boone County FPD
University Hospital EMS

History

- Age
- Medications
- Erectile Dysfunction Medication
- Past medical history (MI, Angina, Diabetes, post menopausal)
- Allergies (Aspirin, Morphine, Lidocaine)
- Recent physical exertion
- Palliation / Provocation
- Quality (crampy, constant, sharp, dull, etc.)
- Region / Radiation / Referred
- Severity (0-10)
- Time (onset /duration / repetition

Universal Care Protocol U-1

Focused assessment:

- Start of and total duration of pain
- Location of pain (substernal, arm, jaw, neck)
- Quality (cramping, sharp, dull, pressure)
- Radiation
- Exertion prior to pain
- Anything make pain better/worse
- Pain on scale 0 - 10

EMR **Oxygen therapy (maintain between 94-99%)** EMR

B **Administer 324 mg aspirin PO if:** B
- patient has not already taken
- patient does not have allergy

EMR **Secondary Assessment/History** EMR

Vital Signs
- Pulse (rate, rhythm)
- Respiratory (rate, depth, effort)
- Oxygen saturation
- Blood pressure
- Temperature

Head-to-Toe Physical Exam
History (OPQRST/SAMPLE)

B **Blood glucose** B

B FP **12-Lead ECG (within 5 min of contact)** B FP
ALS Interpretation of 12 Lead ECG

STEMI?
- No
- YES → Limit scene time < 10 min, Notify receiving hospital

FP * **IV Access Protocol** FP
Nitroglycerin 0.4 mg SL

Monitor and Reassess

Signs and Symptoms

- CP (pain, pressure, aching, vicelike tightness)
- Location (substernal, epigastric, arm, jaw, neck, shoulder)
- Radiation of pain
- Pale, diaphoresis
- Shortness of breath
- Nausea, vomiting, dizziness
- Time of Onset

Clinical Guidelines:

- Avoid Nitroglycerin in any patient who has used erectile dysfunction medication (Viagra or Levitra <24 hours; or Cialis <36 hours) due to the potential for severe hypotension.
- Monitor for hypotension after administration of nitroglycerin and narcotics.
- Diabetics and geriatric patients often have atypical pain, or only generalized complaints.

Provider Legend	EMR Emergency Medical Responder	B EMT	FP Fire Paramedic	P Paramedic	M Medical Control

Joint EMS Protocols
Boone County FPD
Boone Hospital EMS
Centralia Fire Dept
Columbia Fire Dept

Childbirth

Joint EMS Protocols
Columbia Regional Airport
Southern Boone County FPD
University Hospital EMS

History
- Number of pregnancies
- Number of births
- Prenatal care
- Expected due date
- Previous complications
- Hx of cesarean section
- Last baby checkup
- Confirm # of babies

Universal Care Protocol U-1

Is birth imminent?
- Presentation
- Urge to push
- Short duration between contractions

APGAR
- Appearance
- Pulse
- Grimace/Reflex
- Activity
- Respirations

Yes

No

Check presentation?

Normal

Abnormal
- Limb presentation
- Breech
- Prolapsed cord

Prepare for delivery
Deliver:
- Head
- Check for nuchal cord & reduce
- Suction mouth/nose
- Shoulders
- Keep baby at level of vagina until cord stops pulsing
- Stimulate/dry
- Swaddle/bundle

EMR

Delay delivery:
- Keep baby off cord
- Encourage not to push
- Elevate mother's hips
- Prepare for transport

EMR

Baby - Assessment

EMR

APGAR
1-minute
5- minute
Physical Exam

EMR

Prepare for afterbirth

Mother – Primary Reassessment

EMR

Reassess LOC (AVPU)
Reassess airway
Reassess breathing
Reassess circulation

EMR

Mother - Secondary Assessment

EMR

Vital Signs
Pulse (rate, rhythm)
Respiratory (rate, depth, effort)
Oxygen saturation
Blood pressure
Temperature
Head-to-Toe Physical Exam
History (OPQRST/SAMPLE)

EMR

B **Blood glucose** B

Clinical Guidelines:
- Inspect the perineum for crowning; do not perform a digital vaginal exam
- Duration between contractions measured from beginning of one contraction to the beginning of next contraction
- Cutting the cord is not an urgent consideration. Cut 4" from baby once assessment complete and cord stops pulsing
- Consider fundal massage in cases of post partum hemorrhage more than 500 cc
- Watch for signs of pulmonary embolism (cough, rapid heart rate, chest pain, dyspnea)
- Watch for signs of uterine rupture (rigid abdomen, tearing pain)
- Consider a second ambulance if the pregnancy or delivery are high risk (multiple births, preeclampsia signs)

Provider Legend	EMR Emergency Medical Responder	B EMT	FP Fire Paramedic	P Paramedic	M Medical Control

Structure Fire

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Size Up

Standard - NFPA 1021-2009: 4.6., NFPA 1001-2013: 5.3.10	Video Link -

Primary Size Up
Describe the structure
Describe the problem and location
Assume and name command
Have all units level one stage
Secondary Size Up
Announce 360 complete
Announce working fire
Announce location of the fire
Announce any changes from the primary size-up
Announce presence of a basement type
Declare the incident strategy
Announce command post location and describe the vehicle
Assign a tactical channel

Primary Size Up

Boone County this is Engine 801

“Engine 801 go ahead”

Engine 801 is on scene with a two story residential structure, smoke showing from the Charlie side, Engine 801 will be Route K command, have all units level one stage

Secondary Size Up

Boone County from Route K command

“Route K command go ahead”

360 complete, working fire, fire located in the Bravo Charlie corner, two story residential structure, no basement, we are in the offensive strategy, command post will be located at Engine 801, all units check in on Gold upon arrival

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Initial Engine Company Operations
Structure Fire

Standard - NFPA 1001-2013: 5.3.10	Video Link - http://bit.ly/2hNBft1

Apparatus Operator	Nozzle Firefighter	Crew Leader
Place apparatus in “Pump”		
Transmission to Drive		
Gather portable radio		
Exit the apparatus		
Tag in with the Incident Commander/Command Board	Tag in with the Incident Commander/Command Board	Tag in with the Incident Commander/Command Board
Place wheel chocks	Don SCBA	Don SCBA
Open “Tank to Pump”	Gather portable radio	Gather portable radio
Prime the pump	Choose hose line	Gather married set and 6 foot pike pole
Open "Tank Fill” half way	Advance the hose line to the point of entry	

Apparatus Operator	Nozzle Firefighter	Crew Leader
Gather thermal imaging camera		Stage tools at the entry point
Perform 360	Flake the hose line to remove kinks and place in-line with the entry point	Flake the hose line to remove kinks and place in-line with the entry point
Announce secondary size-up on the main dispatch frequency	Call for water	If the Apparatus Operator is not at the pump panel, charge the hose line when water is called for
	Bleed air out of the hose line and set the nozzle pattern	
	If fire is showing through an opening, apply water to the fire	Announce to the Incident Commander “Water on the fire.”
Announce “Water on the fire.” on the main dispatch frequency		Announce to the Incident Commander that your crew is standing-by with your location

Initial Engine Company Operations
Structure Fire - Sprinkler Operations

Standard - NFPA 1001-2013: 5.3.15	Video Link -

Apparatus Operator	Firefighter
Place apparatus in “Pump”	
Transmission to Drive	
Gather portable radio	
Exit the apparatus	
Tag in with the Incident Commander/ Command Board	Tag in with the Incident Commander/ Command Board
Place wheel chocks	Gather portable radio
	Gather Knox cap key
Open “Tank to Pump”	Deploy 4” LDH from the rear hose bed
Prime the pump	Advance hose to the FDC
Open "Tank Fill” half way	Remove Knox cap
Disconnect LDH from rear hose bed	Connect LDH to FDC
Connect LDH to discharge outlet	Flake the hose to remove kinks and place in-line with the FDC
Announce to the Incident Commander that the sprinkler is ready to be supported	
	If fire is showing through an opening, apply water to the fire
Announce “Water on the fire.” on the main dispatch frequency	

Ladder Rescue

Standard - NFPA 1001-2013: 5.3.6	Video Link - http://bit.ly/2wLmVE6

Firefighter	Crew Leader
Tag in with the Incident Commander/ Command Board	Tag in with the Incident Commander/ Command Board
Gather portable radio	Gather portable radio
Deploy ladder (Butt End)	Deploy ladder (Tip End)
Advance the ladder to the area for rescue	Advance the ladder to the area for rescue
Check for overhead obstructions	Check for overhead obstructions
Stabilize ladder	Raise the ladder to a vertical position
Extend fly section	Hold the beams of the bed section
	Set the ladder into position for rescue under window sill
	Evaluate the angle and stability of the ladder
Butt the ladder with helmet shield down	Ascend the ladder
	Assist the victim on to the ladder
	Perform the rescue
Call out the last 5 steps of descent	Descend the ladder with victim
	Notify the Incident Commander that the rescue is complete and your crew is PAR

Offensive Exterior Fire Attack

1 Person Crew

Standard - NFPA 1001-2013: 5.3.8	Video Link -

Gather portable radio
Don SCBA
Deploy the hose line
Advance the hose line to fire attack location
Flake the hose line to remove kinks
Call for water
Bleed air out of the hose line and set the nozzle pattern
Apply water to visible flames
Announce to the Incident Commander “water on the fire”
Continue to apply water until fire has been extinguished

Offensive Exterior Fire Attack

2 Person Crew

Standard - NFPA 1001-2013: 5.3.8	Video Link -

Nozzle Firefighter	Crew Leader
Gather portable radio	Gather portable radio
Don SCBA	Don SCBA
Deploy the hose line	Gather married set and pike pole
Advance the hose line to fire attack location	When operating inside the collapse zone be aware of potential structural collapse and other hazards
Flake the hose line to remove kinks	Flake the hose line to remove kinks
Call for water	
Bleed air out of the hose line and set the nozzle pattern	
Apply water to visible flames	Announce to the Incident Commander “water on the fire”
Continue to apply water until fire has been extinguished	

Defensive Exterior Fire Attack

2 Person Crew

Standard - NFPA 1001-2013: 5.3.8	Video Link -

Nozzle Firefighter	Crew Leader
Gather portable radio	Gather portable radio
Deploy the hose line	
Advance the hose line to fire attack location outside the collapse zone	
Verify position is outside of the collapse zone	Verify position is outside of the collapse zone
Flake the hose line to remove kinks	Flake the hose line to remove kinks
Call for water	
Bleed air out of the hose line and set the nozzle pattern	
Apply water to visible flames	Announce to the Incident Commander “water on the fire”
Continue to apply water until fire has been extinguished	

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Offensive Fire Attack

Standard - NFPA 1001-2013: 5.3.10	Video Link -

Nozzle Firefighter	Crew Leader
	Receive and verify the assignment from the Incident Commander for Offensive Fire Attack
Verify tactical channel	Verify tactical channel
	Secure thermal imaging camera to coat
Don SCBA mask	Don SCBA mask
Verify that all crew members are ready for entry	Verify that all crew members are ready for entry
	Notify the Incident Commander that the crew is entering the structure
Turn on flashlight	Turn on flashlight
Apply air	Apply air

Nozzle Firefighter	Crew Leader
	Open and control the entry point
Enter and advance the hose line into the structure	
	Advance the hose line into the structure
	Gather hand tools and enter the structure
Maintain visual, verbal, or physical contact with all crew members or the hoseline	Maintain visual, verbal, or physical contact with all crew members or the hoseline
	Scan the rooms as you advance
Continually monitor conditions	Continually monitor conditions
Apply water to the fire	Announce to the Incident Commander that the fire is located and your crew has water on the fire
Overhaul materials and check for extension	Announce to the Incident Commander that the fire is knocked down and you are checking for extension

Primary Search 1

Standard - NFPA 1001-2013: 5.3.9	Video Link -

Nozzle Firefighter	Crew Leader
	Receive and verify the assignment from the Incident Commander for Primary Search 1
Verify tactical channel	Verify tactical channel
	Secure thermal imaging camera to coat
Don SCBA mask	Don SCBA mask
Verify that all crew members are ready for entry	Verify that all crew members are ready for entry
	Notify the Incident Commander that the crew is entering the structure
Turn on flashlight	Turn on flashlight
Apply air	Apply air
	Open and control the entry point

Nozzle Firefighter	Crew Leader
Enter and advance the hose line into the structure	
	Advance the hose line into the structure
	Gather hand tools and enter the structure
Maintain visual, verbal, or physical contact with all crew members or the hoseline	Maintain visual, verbal, or physical contact with all crew members or the hoseline
	Scan the rooms as you advance for potential victims
Continually monitor conditions	Continually monitor conditions
Quickly search each room in the search area	Quickly search each room in the search area
Locate the victim	Locate the victim
Maintain control of the nozzle	Announce to the Incident Commander where the victim has been located and where you are exiting
Remove the victim from the structure	Remove the victim from the structure
	Announce the Incident Commander that your crew has exited the structure with a victim and are PAR

Primary Search 2

Standard - NFPA 1001-2013: 5.3.9	Video Link -

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
	Receive and verify the assignment from the Incident Commander for Primary Search 2		
Don SCBA	Don SCBA	Don SCBA	Don SCBA
Gather portable radio	Gather portable radio	Gather portable radio	Gather portable radio
Choose hose line	Secure thermal imaging camera to coat		
Advance the hose line to the point of entry	Gather pike pole and married set		
Call for water			
Bleed air out of the hose line and set the nozzle pattern			

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
If the Tool Firefighter and Ladder Firefighter roles have not been assigned, complete their tasks beginning with “Deploy 24’ extension ladder”			
Deploy 24’ extension ladder (Butt End)	Deploy 24’ extension ladder (Tip End)	Deploy 24’ extension ladder (Butt End)	Deploy 24’ extension ladder (Tip End)
Advance the ladder to the area for egress	Advance the ladder to the area for egress	Advance the ladder to the area for egress	Advance the ladder to the area for egress
Check for overhead obstructions	Check for overhead obstructions	Check for overhead obstructions	Check for overhead obstructions
Stabilize the ladder	Raise the ladder to a vertical position	Stabilize the ladder	Raise the ladder to a vertical position
Extend the fly section	Hold the beams of the bed section	Extend the fly section	Hold the beams of the bed section
Secure the halyard	Set the ladder into position for rescue	Secure the halyard	Set the ladder into position for rescue
	Evaluate the angle and stability of the ladder		Evaluate the angle and stability of the ladder
Assemble at the point of entry	Assemble at the point of entry		
Don SCBA mask	Don SCBA mask		
Verify that all crew members are ready for entry	Verify that all crew members are ready for entry	Be “On Deck” near the ladder to assist with rescue	Be “On Deck” near the ladder to assist with rescue
	Notify the Incident Commander that the crew is entering the structure		
Turn on flashlight	Turn on flashlight		

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
Apply air	Apply air		
	Open and control the entry point		
Enter and advance the hose line into the structure			
	Advance the hose line into the structure		
	Gather hand tools and enter the structure		
Maintain visual, verbal, or physical contact with all crew members or the hoseline	Maintain visual, verbal, or physical contact with all crew members or the hoseline		
Scan the rooms as you advance for potential victims	Scan the rooms as you advance with the thermal imaging camera for potential victims		
Quickly search each room in the search area	Quickly search each room in the search area		
Maintain control of the nozzle	Locate the victim		

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
	Announce to the Incident Commander where the victim is located and where you are exiting		
Remove the victim from the structure	Remove the victim from the structure		
Remove victim from Hot Zone and handoff to crew assigned patient care	Announce to the Incident Commander that your crew has exited the structure with a victim and PAR report, include percentage of assigned search area complete		

Vent, Enter, Isolate, Search

Standard - NFPA 1001-2013: 5.3.6	Video Link -

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
	Receive and verify the assignment from the Incident Commander for Vent Enter Isolate Search Entry Crew		Receive and verify the assignment from the Incident Commander for Vent Enter Isolate Search Ladder Crew
Tag in with the Incident Commander/ Command Board	Tag in with the Incident Commander/ Command Board	Tag in with the Incident Commander/ Command Board	Tag in with the Incident Commander/ Command Board
Don SCBA	Don SCBA	Don SCBA	Don SCBA
Gather portable radio	Gather portable radio	Gather portable radio	Gather portable radio
Choose hose line	Secure thermal imaging camera to coat		
Advance the hose line to the point of entry	Gather pike pole and married set		
Call for water			
Bleed air out of the hose line and set the nozzle pattern			

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
If the Tool Firefighter and Ladder Firefighter roles have not been assigned, complete their tasks beginning with “Deploy 24’ extension ladder”			
Deploy 24’ extension ladder (Butt End)	Deploy 24’ extension ladder (Tip End)	Deploy 24’ extension ladder (Butt End)	Deploy 24’ extension ladder (Tip End)
Advance the ladder to the area for rescue	Advance the ladder to the area for rescue	Advance the ladder to the area for rescue	Advance the ladder to the area for rescue
Check for overhead obstructions	Check for overhead obstructions	Check for overhead obstructions	Check for overhead obstructions
Stabilize the ladder	Raise the ladder to a vertical position	Stabilize the ladder	Raise the ladder to a vertical position
Extend the fly section	Hold the beams of the bed section	Extend the fly section	Hold the beams of the bed section
Secure the halyard	Set the ladder into position for rescue	Secure the halyard	Set the ladder into position for rescue
	Evaluate the angle and stability of the ladder		Evaluate the angle and stability of the ladder
Don SCBA mask	Don SCBA mask		
Verify that all crew members are ready for entry	Verify that all crew members are ready for entry		

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
	Notify the Incident Commander that the crew is entering the structure		
Turn on flashlight	Turn on flashlight		
Apply air	Apply air		
Ascend the ladder with halligan		Butt the ladder from the front side	Assist with hose line
Force entry through window			
Safety the window			
Sound floor inside of the window with halligan	Ascend the ladder to the window with the hose line		
Enter the window			
Locate the door to the room			
Shut the door			
Search for potential victims	Scan the room with the thermal imaging camera for potential victims		
Locate victim and remove to the window			

Entry Crew		Ladder Crew	
Nozzle Firefighter	**Crew Leader**	**Tool Firefighter**	**Crew Leader**
	Notify the Incident Commander that a victim has been located and is being removed from the structure		Ascend the ladder to assist with rescue (may receive the victim if the crew leader must enter the structure or maintain the nozzle if they remain on the ladder)
Lift the victim to crew leader	Descend the ladder with victim		Descend the ladder
Hold the ladder tip against the building while the Crew Leader descends the ladder		Call out the last 5 steps of descent	
Descend the ladder			
	Announce to the Incident Commander that your crew has exited the structure with a victim and PAR report, include percentage of assigned search area complete		Remove victim from Hot Zone and handoff to crew assigned patient care

Pitched Roof Ventilation

Standard - NFPA 1001-2013: 5.3.12	Video Link -

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
			Receive and verify the assignment from the Incident Commander for Pitched Roof Ventilation
Gather portable radio	Gather portable radio	Gather portable radio	Gather portable radio
Verify tactical channel	Verify tactical channel	Verify tactical channel	Verify tactical channel

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
Don SCBA	Don SCBA	Don SCBA	Don SCBA
			Secure thermal imaging camera to coat
Gather chain saw	Gather pickhead axe		Gather 6’ Pike Pole
Start and run chainsaw and set brake			Deploy roof ladder
Set chain guard depth	Deploy extension ladder (tip end)	Deploy extension ladder (butt end)	Advance the ladder to the area for vertical ventilation operation
Advance chainsaw to area for vertical ventilation operation	Advance the ladder to the area for vertical ventilation operation	Advance the ladder to the area for vertical ventilation operation	
	Check for overhead obstructions	Check for overhead obstructions	

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
	Stabilize the ladder	Raise the ladder to a vertical position	
	Extend the fly section	Hold the beams of the bed section	
	Secure the halyard	Set the ladder into position for roof access	
		Evaluate the angle and stability of the ladder	
			Check for overhead obstructions
			Place roof ladder next to extension ladder
			Raise roof ladder
			Notify the incident commander that you are accessing the roof

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
Apply air			
Ascend the extension ladder until you are even with the roof line		Butt the ladder	
Set roof ladder hooks			
Place roof ladder on the roof			
	Hand pike pole to saw firefighter		
Sound the roof with the pike pole			
Place pike pole on the roof ladder			
Transfer to the roof ladder	Apply air		
	Ascend the extension ladder with chain saw		

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
	Hand chainsaw to saw firefighter		
	Descend the ladder		
	Ascend the extension ladder with the pickhead axe		
	Transfer to the roof ladder		Apply air
Identify footing location	Drive pickhead axe into roof		Ascend the extension ladder
Perform top 3 cuts of hole			Scan the roof with thermal imaging camera
Reposition footing for lower hole cuts	Reset pickhead axe		Continually monitor conditions
Perform bottom 4 cuts of hole			
Set chainsaw brake			
Turn off chainsaw			
Hand chainsaw to tool firefighter			

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
Apply air			
Ascend the extension ladder until you are even with the roof line		Butt the ladder	
Set roof ladder hooks			
Place roof ladder on the roof			
	Hand pike pole to saw firefighter		
Sound the roof with the pike pole			
Place pike pole on the roof ladder			
Transfer to the roof ladder	Apply air		

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
	Ascend the extension ladder with chain saw		
	Hand chainsaw to saw firefighter		
	Descend the ladder		
	Ascend the extension ladder with the pickhead axe		
	Transfer to the roof ladder		Apply air
Identify footing location	Drive pickhead axe into roof		Ascend the extension ladder
Perform top 3 cuts of hole			Scan the roof with thermal imaging camera
Reposition footing for lower hole cuts	Reset pickhead axe		Continually monitor conditions
Perform bottom 4 cuts of hole			
Set chainsaw brake			
Turn off chainsaw			
Hand chainsaw to tool firefighter			

Saw Firefighter	Tool Firefighter	Ladder Firefighter	Crew Leader
Knock in roof and ceiling materials with pike pole			Descend the ladder
	Transition to the extension ladder	Call out the last 5 steps of descent	
	Descend the ladder		
		Call out the last 5 steps of descent	
Transition to the extension ladder			
Hand pike pole down to the crew leader on the ground			
Lower roof ladder to the ground			
Descend the ladder			
		Call out the last 5 steps of descent	
	Lower extension ladder to the ground	Lower extension ladder to the ground	
			Announce the Incident Commander that your crew has exited the roof, that the tactic is complete, and you are PAR

Flue Fires

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Flue Fires

Standard -	Video Link -

Initial engine company operations (if needed)
Fire box crew to remove fire from fire box
Check the attic and all concealed spaces near the flue for heat build up and fire
Attack fire from fire box and/or assign crew to access roof
Check building for carbon monoxide
Notify property owner to have the flue inspected prior to using

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Fire Box Crew - Attack from Fire Box

Standard -	Video Link -

Firefighter	Crew Leader
Don SCBA	Don SCBA
	Gather thermal imaging camera
Gather galvanized trash can and shovel from tanker	
Gather floor runner and tarps	
	Notify the Incident Commander that the crew is entering the structure
Deploy floor runners and tarps to prevent damage	Deploy floor runners and tarps to prevent damage
Deploy canvas tarp in front of fire place	
Deploy two 4x4 blocks on the canvas tarp to sit the galvanized trash can on	
	Set galvanized trashcan on the 4x4 blocks
Remove the contents of the fire box into the galvanized trash can	
	Keep the lid of the galvanized trash can closed when not being used

Firefighter	Crew Leader
Close the damper on the flue	
	Notify the Incident Commander that the crew is exiting the structure
Empty contents of galvanized trash can in a safe location	
Extinguish contents with hoseline or water can	
Gather ventilation fan	Gather 20 pound ABC dry chemical extinguisher
Set up ventilation fan at opening	
	Notify the Incident Commander that the crew is entering the structure
Close all doors and windows to allow ventilation fan to pressurize structure	Close all doors and windows to allow ventilation fan to pressurize structure
Start ventilation fan	
Open damper on the flue	
	Ensure draft is traveling up the flue pipe
Place nozzle of dry chemical extinguisher as close to the flue pipe opening as possible	
Discharge dry chemical extinguisher in short one second bursts	
	Verify with exterior crews the dry chemical agent is exiting the flue pipe
	Notify the Incident Commander that the crew is exiting the structure

Fire Box Crew - Attack from Roof

Standard -	Video Link -

Firefighter	Crew Leader
Don SCBA	Don SCBA
	Gather thermal imaging camera
Gather galvanized trash can and shovel from tanker	
Gather floor runner and tarps	
	Notify the Incident Commander that the crew is entering the structure
Deploy floor runners and tarps to prevent damage	Deploy floor runners and tarps to prevent damage
Deploy canvas tarp in front of fire place	
Deploy two 4x4 blocks on the canvas tarp to sit the galvanized trash can on	

Firefighter	Crew Leader
	Set galvanized trashcan on the 4x4 blocks
Remove the contents of the fire box into the galvanized trash can	
	Keep the lid of the galvanized trash can closed when not being used
Close the damper on the flue	
	Notify the Incident Commander that the crew is exiting the structure
Empty contents of galvanized trash can in a safe location	
Extinguish contents with hoseline or water can	

Roof Crew

Standard -	Video Link -

Firefighter	Crew Leader
Don SCBA	Don SCBA
	Gather thermal imaging camera
Gather flue fire dry chemical bag	
Gather hand tools	
Deploy ladder(s)	Deploy ladder(s)
Advance the ladder to the area for roof operations	Advance the ladder to the area for roof operations
Check for overhead obstructions	Check for overhead obstructions
Stabilize the ladder	Raise the ladder to a vertical position
Extend the fly section	Hold the beams of the bed section
Secure the halyard	Set the ladder into position for roof access

Firefighter	Crew Leader
	Evaluate the angle and stability of the ladder
	Notify the Incident Commander that the crew is accessing the roof
Climb ladder to access roof	Climb ladder to access roof
Inspect roof and chimney for signs of extension	Inspect roof and chimney for signs of extension
Remove protective covering from the top of the flue	
	Coordinate with interior crew when deploying dry chemical bag
Drop dry chemical bag into flue (repeat as needed)	
Descend ladder to exit roof	
	Notify the Incident Commander that the crew is off the roof

Vehicle Fire

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Vehicle Fire

Standard - NFPA 1001-2013: 5.3.7	Video Link -

Apparatus Operator	Nozzle Firefighter	Crew Leader
Place apparatus in “Pump”		
Transmission to Drive		
Exit apparatus		
Tag in with the Incident Commander/Command Board	Tag in with the Incident Commander/Command Board	Tag in with the Incident Commander/Command Board
Place wheel chocks on apparatus		Receive and verify the assignment from the Incident Commander
Open “Tank to Pump”	Don SCBA	Don SCBA
Prime the pump	Gather portable radio	Gather portable radio
Open "Tank Fill” half way	Choose hose line	Gather married set
	Advance the hose line	Gather second set of wheel chocks
	Flake hose line and remove kinks	Stage tools
	Call for water	Don SCBA mask
Charge the hose line		Apply air
	Bleed air out of hose line and set nozzle pattern	

Apparatus Operator	Nozzle Firefighter	Crew Leader
	Apply water to the fire from a distance until fire is knocked down	Await the fire to be knocked down
Announce “water on fire” on main dispatch channel	Don SCBA mask	Approach the vehicle at a 45 degree angle
	Apply air	Place wheel chocks on vehicle
Perform 360		Retreat back to the hose line
Announce secondary size-up on main dispatch channel		
Establish traffic control	Verify tactical channel	Verify tactical channel
Monitor the fire attack crew		
	Approach the vehicle at a 45 degree angle	
Assign incoming personnel	Apply water to the main body of fire	Force entry into involved areas
	Maintain visual, verbal, or physical contact with all crew members or the hoseline	Maintain visual, verbal, or physical contact with all crew members or the hoseline
	Apply water until fire has been extinguished	Check for hazards
	Overhaul the vehicle	Overhaul the vehicle

Fire Extinguisher

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Fire Extinguishers

Standard - NFPA 1001-2013: 5.3.16	Video Link -

Deploy the correct fire extinguisher for the materials on fire
Approach the fire
Pull the pin on the handle
Aim the nozzle at the base of the fire
Squeeze the handle to discharge the extinguishing agent
Sweep over the fire area
Advance toward the remaining fire
Extinguish hot spots
Ensure that the fire is extinguished
Notify the incident commander that the fire is extinguished and await an assignment

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Roadway Incident

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Size Up

Standard -	Video Link -

Primary Size Up
Number of vehicles
Vehicle position
Lane closure
Assume and name command
Secondary Size Up
Announce 360 complete
Status of extrication (squad?)
Update vehicle count
Number of patients
Hazards
Announce command post location and describe the vehicle
Assign a tactical channel

Primary Size Up

Boone County this is Engine 801

“Engine 801 go ahead”

Engine 801 is on scene, two vehicles, upright off the roadway, southbound lane of Route K will be closed, Engine 801 will be Route K command.

Secondary Size Up

Boone County from Route K command

“Route K command go ahead”

360 complete, no extrication return the squad, one vehicle, two patients, no hazards, command post will be located at Engine 801, all units check in on Gold upon arrival

Inital Engine Company Operations

Standard -	Video Link -

Incident Commander	Crew Leader	Fire Fighter
Initial size up		
Tag in on command board	Tag in on command board	Tag in on command board
Gather radio	Gather radio	Gather radio
	Gather long spine board	
Gather wheel chocks		
Conduct 360		
Chock wheels		
	Gather 20 pound fire extinguisher	Gather medical bag and c-spine bag
	Stage equipment in the warm zone	Stage equipment in the warm zone
	Wait for assignment	Wait for assignment
Assign crews		
Provide secondary size up on main dispatch channel		
If extrication or other hazard deploy 1 3/4 inch hose line		
Establish command post		

Extrication Preparation

Standard - NFPA 1001-2013: 6.4	Video Link -

Stabilization	Remote Patient Access	De-energize the Vehicle	Glass Removal	Hazard Control
Ensure vehicle is off and transmission in park	Make patient contact from outside the vehicle and begin initial assessment	Verify seats are moved fully to the rear and windows rolled down	Gather extrication bag	Access vehicle for leaking fluids
Engage emergency brake	Roll down windows if possible, leave one inch exposed	Gain access to 12 volt battery	Verify patient and responders in the vehicle are protected	Advise command of any leaking flammable liquids
Crib vehicle (minimum three points of contact)	Ensure seats are moved fully to the rear	If extrication is needed cut the ground cable(s) in two places (black cable)	Use center punch in the corner of a tempered glass windows to break it	If compressed natural gas vehicle, turn off the fuel cell

Stabilization	Remote Patient Access	De-energize the Vehicle	Glass Removal	Hazard Control
Continually monitor cribbing	Begin patient care from a safe location	If no extrication is needed use hand tools to remove the ground from the battery	Remove glass from window	
		Secure the ground in a manner it will not make contact with the battery terminals	Use glass master to saw around the perimeter of laminated glass windows	
			Remove glass from vehicle and place outside the hot zone	

Door Removal

Standard - NFPA 1001-2013: 6.4.1, 6.4.2	Video Link -

Verify Extrication Preparation tactic is complete
Don eye protection and PPE
Gather spreader/combi-tool, hydraulic hoses, power unit
Verify patient and responders in the vehicle are protected
Remove plastic molding and visualize air bags, pretensioners, or other hazards
Create purchase point on hinge side of the door
Spread near the top hinge and separate from vehicle
Cut or disconnect wiring between hinges
Spread near the bottom hinge and separate from vehicle
Remove door from nader pin
Move door outside of the hot zone

Roof Removal

Standard - NFPA 1001-2013: 6.4.1, 6.4.2	Video Link -

Verify Extrication Preparation tactic is complete
Don eye protection and PPE
Gather spreader/combi-tool, hydraulic hoses, power unit
Verify patient and responders in the vehicle are protected
Remove plastic molding and visualize air bags, pretensioners, or other hazards
Monitor cribbing through out extrication
Cut A post near the level of the dash
Cut the vehicles roof around the B post
Cut the C post at its thinest point
Move roof outside of the hot zone

Dash Lift

Standard - NFPA 1001-2013: 6.4.1, 6.4.2	Video Link -

Verify Extrication Preparation tactic is complete
Don eye protection and PPE
Gather cutter, spreader/combi-tool, hydraulic hoses, power unit, and wedges
Verify patient and responders in the vehicle are protected
Cut the A Post near dash
Cut the A Post near the roof
Make a pie cut at the lower half of A Post just above the lower hinge
Construct box crib under relief cut
Gather spreader/combi-tool
Place spreader tips in the pie cut on the A Post
Engage the spreader to lift the dash
Fill pie cut gap with cribbing wedges
Displace dash until patient is no longer trapped

Dash Roll

Standard - NFPA 1001-2013: 6.4.1, 6.4.2	Video Link -

Verify Extrication Preparation tactic is complete
Don eye protection and PPE
Gather cutter or combi-tool, hydraulic hoses, power unit, ram, L-Backet, and wedges
Verify patient and responders in the vehicle are protected
Cut the A Post near dash
Cut the A Post near the roof
Make a relief cut at the lower half of A Post just above the rocker panel
Place the L-Bracket on the rocker panel butted up to B Post
Place butt end of ram into L-Bracket
Place traveling end of the ram at a 45 degree angle
Engage hand wheel to open ram
Make contact with the ram on the A Post
Ensure that the butt end is secure in the bracket
Begin spreading
Fill relief cuts with cribbing wedges
Displace dash until patient is no longer trapped

Traffic Control Zone

Standard - NFPA 1001-2013: 5.3.3	Video Link -

Gather road cones and emergency scene ahead signage
Deploy cones (1 foot per mph of the speed limit apart)
Deploy emergency scene ahead sign at the beginning of the traffic control zone
Return empty bags to apparatus

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Natural Cover Fire

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Size Up

Standard -	Video Link -

Primary Size Up
Describe the fuel type
Describe the amount of active fire line in feet
Describe flame length in inches or feet
Assume and name command
Have all units level one stage
Secondary Size Up
Announce “360 complete” or “Recon Assigned” (If determined to be a controlled burn you can disregard the secondary size up.)
Direction of fire travel
Exposures threatened
Resources Needed
Declare the incident strategy
Announce command post location and describe the vehicle
Assign a tactical channel

Primary Size Up

Boone County this is Engine 601

“Engine 601 go ahead”

Engine 601 is on scene short grass, 75 feet of fire line with two foot flame length, Route V command, all units level one stage.

Secondary Size Up

Boone County from Route V command

“Route V command go ahead”

360 complete, fire traveling north, no exposures, no additional resources needed, we are in the offensive strategy, command post will be located at Engine 601, all units check in on Gold upon arrival

Recon

Standard -	Video Link -

Receive and verify the assignment from the Incident Commander
Gather portable radio
Verify the tactical channel
Identify wind - direction, velocity
Identify projected path of the fire
Identify hazards - propane tanks, farm equipment, power lines
Identify structures in danger
Identify fuel types ahead of the fire
Identify natural barriers
Identify projected fire behavior
Report findings to the incident Commander and recommend resource needs/ allocation

Exposure Protection

Standard - NFPA 1001-2013: 5.2.3	Video Link -

Position apparatus for quick egress
Perform 360 of structure
Identify natural barriers
Identify if the building is defendable or not defendable
Put down wet/foam line if needed
Evacuate people from the home if needed
Notify the Incident Commander with CAN report

Direct Attack

Standard - NFPA 1001-2013: 5.3.19	Video Link -

Water Pack Firefighter	Blower Firefighter	Crew Leader
		Receive and verify the assignment from the Incident Commander
		Verify tactical channel
Gather Indian Pack/pump pack	Gather blower and wand	Gather portable radio
	Gather hearing protection	
Fill reservoir with water	Start and run blower	Gather rake
Go to assigned area	Go to assigned area	Go to assigned area
Cool or knock down fire	Extinguish remaining hot spot blowing back into burned area	Rake remaining hotspots toward the black
Maintain visual and verbal contact with all crew members	Remain between Water Pack Firefighter and Crew Leader	Maintain visual and verbal contact with all crew members
Continually monitor conditions	Maintain visual and verbal contact with all crew members	Continually monitor conditions
	Continually monitor conditions	Announce to the Incident Commander your CAN report

Indirect Attack

Standard - NFPA 1001-2013: 5.3.19	Video Link -

Firefighter	Crew Leader
	Receive and verify the assignment from the Incident Commander
	Verify tactical channel
	Gather portable radio
Gather drip torch	
Gather flare	
Gather rake	Gather rake
Go to assigned area	Go to assigned area
	Identify anchor point
	Establish or find natural barrier
	Notify the Incident Commander that you are starting backfire operations
Light drip torch	
Begin backfire operations	
	Watch for fire crossing the line
Continually monitor conditions	Continually monitor conditions
	Notify the Incident Commander that backfire operations are complete

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Hazardous Material

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Emergency Response Guidebook

Standard - NFPA 472-2013: 4.1.2.2	Video Link -

Ensure you are positioned uphill and upwind
Deny entry of vehicles or people into the warm zone
Locate the the name of material or product number in index
Determine the correct guide number
Identify the isolation distances for spill or fire
Identify PPE requirements
Identify initial action procedures

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Emergency Decontamination

Standard - NFPA 472-2013: 5.1.2.2	Video Link -

Firefighter	Crew Leader
	Receive and verify the assignment from the Incident Commander for emergency decontamination
	Verify PPE requirements with Incident Commander
Gather portable radio	Gather portable radio
Deploy or reassign 1 3/4 in hoseline to decon area	
Call for water	
Bleed air out of the hose line	
Set nozzle pattern to fog	
Receive the victim without contacting the product or the victim	Ensure crew members do not contact the product and perform thorough head-to-toe wash

Firefighter	Crew Leader
Rinse all visible contamination	
Remove or have victim remove clothing	
Rinse head-to-toe with copious amounts of water	
Transfer to EMS	
	Notify the Incident Commander that the victim has been decontaminated and has been transferred to EMS

Entrant Level C PPE Donning

Standard - NFPA 1581-2015: 7.1.1, 7.2.1, 7.2.5.1	Video Link -

Select suit, record suit size
Visually inspect all PPE to ensure that all equipment is in serviceable condition
Remove shoes / boots
Empty pockets. Remove keys, FD pager, cell phone, wallet
Don nitrile medical gloves
Don the suit
Don boots over the suit. Use uniform/fire boots if disposable boots are unavailable
Don 11 mm outer glove and duct tape cuff
Don Scott SCBA facepiece and do facepiece seal check
Attach Scott cartridge adapter w/filters
Create 1" duct tape tab on hood of suit
Don the hood for the suit
Zip up the suit and seal the zipper (velcro or taped seam)
Seal neck opening with tape. Layer the tape, starting low and working up to the mask. This usually takes 2 pieces of tape

Decon Personnel Level D PPE Donning

Standard - NFPA 1581-2015: 7.1.1, 7.2.1, 7.2.5.1	Video Link -

Don suitable long-sleeved outer garment to protect arms
Select appropriately sized inner and outer gloves
Don 11 mm outer glove
Don N95 mask
Don goggles

Entrant Level C PPE Doffing

Standard - NFPA 1581-2015: 7.1.1, 7.2.1, 7.2.5.1	Video Link -

1 - Record Start Time
2 - CLEAN empties PPE bucket and sets it aside to remain clean
3 - CLEAN sets up one large, clear zip-loc bag for "Save" items (Save Bag)
4 - CLEAN sets up a large, Clear Containment Bag with an absorbent pad inside
5 - ENTRANT steps into the Containment Bag
6 - Boone County Infectious Disease Response Kit
7 - CLEAN gives ENTRANT a Clorox wipe/ENTRANT cleans hands with Clorox wipe. (Wait 3 minutes)
8 - Are GROSS CONTAMINANTS present? YES NO If NO skip to step 12.
9 - DIRTY wipes off visible contaminants, working head to toe (Wait 3 minutes)
10 - CLEAN applies "spritz" of Clorox spary solution SPARINGLY on areas where contaminants were visible (Wait 3 minutes)
11 - DIRTY wipes off visible contaminants with Clorox wipe. (Wait 3 minutes). DIRTY cleans hands with Clorox wipes (Wait 3 minutes)
12 - DIRTY uses clean Clorox wipe to wipe face piece and a separate Clorox wipe to wipe the zipper cover (Wait 3 minutes.)
13 - DIRTY removes tape from neck working from RIGHT ear to LEFT ear and removing the top tape layer first. DO NOT TOUCH BARE SKIN
14 - DIRTY opens zipper cover to expose zipper
15 - CLEAN unzips the suit
16 - DIRTY lifts hood tab and inverts the hood

17 - DIRTY removes tape from outer glove and the removes outer glove by fingertips
18 - ENTRANT and DIRTY wash gloved hands with Clorox wipes once outer gloves are off. (Wait 3 minutes)
19 - DIRTY and CLEAN work suit off shoulders
20 - DIRTY spreads sleeve cuff (if possible) and ENTRANT removes hands from suit
21 - CLEAN and DIRTY roll suit down below knees
22 - ENTRANT sits on bucket
23 - ENTRANT removes inner gloves, washes hands with gel for 3 minutes and dons clean gloves
24 - CLEAN and DIRTY remove boots into Containment Bag
25 - DIRTY removes rest of suit into Containment Bag
26 - ENTRANT removes facepiece / DIRTY assists by holding filter
27 - DIRTY places facepiece and filter adapter in Equipment for Decon Bag (held by CLEAN) and discards filters in Containment Bag
28 - ENTRANT removes gloves and washes hands with gel for 3 minutes
29 - ENTRANT stands and is surveyed for potential exposure during doffing process
30 - CLEAN provides clean black trash bag for ENTRANT's feet
31 - ENTRANT showers at earliest convenience
32 - Record Stop Time:

Containment - Under 50 Gallons

Standard - NFPA 472-2013: 5.1.2.1, 5.2.3, 5.2.4, 5.3.1	Video Link -

Firefighter	Crew Leader
	Receive and verify the assignment from the Incident Commander for containment
Tag in with the Incident Commander/ Command Board	Tag in with the Incident Commander/ Command Board
Gather portable radio	Gather portable radio
Gather Oil-Away absorbent	Gather push broom
Stay out of the product	Stay out of the product
Spread Oil-Away on the product	
	Sweep Oil-Away to soak up the product
	Notify the Incident Commander the amount of Oil-Away used
	Notify the Incident Commander that the spill has been contained and await a new assignment

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Containment - Over 50 Gallons

Standard - NFPA 472-2013: 5.1.2.1, 5.2.3, 5.2.4, 5.3.1	Video Link -

Firefighter	Crew Leader
	Receive and verify the assignment from the Incident Commander for diking and damming
	Verify PPE requirements with Incident Commander
Gather portable radio	Gather portable radio
Gather shovel	Gather shovel

Firefighter	Crew Leader
	Gather 4 gas meter and complete fresh air calibration
Move to control area	Move to control area
Stay out of the product	Stay out of the product
Construct a dam or dike	
Place materials to block the flow of product spreading	
	Notify the Incident Commander that the product has been contained and await a new assignment

Class B Foam Operations

Standard - NFPA 1001 - 2013: 6.3.1	Video Link -

Fire Fighter	Crew Leader
Gather Class B Foam	
	Gather foam eductor
Deploy 1 3/4” hoseline	
	Disconnect hose at the last coupling before the nozzle
	Connect the foam eductor and reassemble hose line
Place foam buckets near the eductor	
	Place eductor “pick up tube” into the first bucket of foam
	Adjust proportioner on eductor to appropriate setting (3% for hydrocarbons, 6% for polar solvents)
	Monitor foam buckets and move “pick up tube” to a new bucket as needed
Adjust nozzle flow rate to 95 GPM	
Bleed air from the line	
Continue to bleed the line until a foam solution is present	
Apply foam solution to the liquid	

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4 Gas Monitoring

Standard - NFPA 472: 6.7	Video Link -

Firefighter	Crew Leader
	Receive and verify the assignment from the Incident Commander
Gather portable radio	Gather portable radio
Don SCBA	Don SCBA
Gather 4 gas meter	
Move away from the apparatus and other vehicles to an area of clean air	
Turn on 4 gas meter	
When prompted to perform fresh air calibration press the “Y/+” button	
Wait for fresh air calibration to finish	
Assemble at the door	Assemble at the door

Firefighter	Crew Leader
	Notify the Incident Commander that the crew is entering the structure
IF AT ANYTIME THE MONITOR ALARMS EXIT THE STRUCTURE	***IF AT ANYTIME THE MONITOR ALARMS EXIT THE STRUCTURE***
Evaluate each room on each floor	Evaluate each room on each floor
Evaluate all vents and gas appliances	Evaluate all vents and gas appliances
Evaluate the garage	Evaluate the garage
Exit the structure	Exit the structure
	Notify the Incident Commander where the highest reading was located and what the reading was
	Notify the Incident Commander that your tactic is complete and await a new assignment

Apparatus Operator

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Attack Engine

Standard - NFPA 1001-2013: 5.2.3, 5.3.8 NFPA 1002-2014: 5.2.1, 5.2.3	Video Link -
Place apparatus in “Pump”	
Transmission to Drive	
Gather portable radio	
Exit apparatus	
Place wheel chocks	
Open “Tank to Pump”	
Prime the pump	
Open "Tank Fill” half way	
Tag in at Command Board	
Perform 360	
Announce secondary size-up	
Deploy the attack hose line	
Advance hose line to fire attack location	
Flake hose and remove kinks	
Charge the line	
Adjust the pump pressure	
Engage foam system	
Engage pressure control device	
Bleed air out of the hose line and set nozzle pattern	
Apply water/foam solution to visible flames until fire is extinguished	
Announce “water on the fire” on main dispatch channel	
Deploy 3” supply line	
Connect 3” supply line to driver side intake	
Monitor pump operations	
Deploy second attack hose line	
Open compartment doors	
Establish tool cache	
Attach 6” NST to 4" Storz appliance to Keystone	

Tanker - First Arriving

Standard - NFPA 1001-2013: 5.3.15	Video Link -
Level 1 Stage at last water source	
Announce that you are on scene on the main dispatch channel with your staging location	
Announce to the Incident Commander that you are on scene and your staging location on tactical channel once tactical channel is assigned	
Receive assignment from the Incident Commander to lay in	
Lay 4” LDH from end of driveway or from hydrant	
Position behind the attack engine	
Set parking brake	
Transmission to Neutral	
Place apparatus in “Pump”	
Gather portable radio	
Exit apparatus	
Place wheel chocks	
Open “Tank to Pump”	
Prime the pump	
Open "Tank Fill” half way	
Connect 3” supply line from engine to discharge	
Verify that the attack engine is ready to receive water	
Charge the line	
Disconnect 4” LDH from back of tanker	
Connect 4” LDH to attack engine	
Monitor pump operations	
Tag in with Incident Commander/command board	

Standard: NFPA 1901, 2016, 5.3.15	Video Link

Level 1 Stage at last water source
Announce that you are on scene on the main dispatch channel with your staging location
Announce to the Incident Commander that you are on scene and your staging location on tactical channel once tactical channel is assigned
Receive assignment from the Incident Commander to be supply engine
Place apparatus in “Pump”
Transmission to Drive
Gather portable radio
Exit apparatus
Place wheel chocks
Open “Tank to Pump”
Prime the pump
Open "Tank Fill” half way
Attach 4” LDH that has been laid by previous apparatus to discharge
Verify that the attack engine is ready to receive water
Charge the line
Deploy 4” supply line
Gather hydrant bag
Flush the hydrant
Connect 4.5” NST to Storz adapter to hydrant steamer connection
Connect 4” supply line to hydrant steamer connection
Connect gate valve to hydrant
Connect 4” supply line to intake
Open the hydrant
Monitor pump operations

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Supply Engine - Non Hydranted Area

Standard - NFPA 1901 2013: 5.3.15	Video Link
Standard	Video Link

Level 1 Stage at last water source
Announce that you are on scene on the main dispatch channel with your staging location
Announce to the Incident Commander that you are on scene and your staging location on tactical channel once tactical channel is assigned
Receive assignment from the Incident Commander to be supply engine
Place apparatus in “Pump”
Transmission to Drive
Gather portable radio
Exit apparatus
Place wheel chocks
Open “Tank to Pump”
Prime the pump
Open "Tank Fill” half way
Attach 4” LDH that has been laid by previous apparatus to discharge
Verify that the attack engine is ready to receive water
Charge the line
Deploy 3” supply line
Connect 3” supply line to driver side intake
Connect 3" supply line to discharge on next arriving tanker
Gather hard suction

Gather low level strainer
Attach low level strainer to hard suction
Attach hard suction to 6” intake on engine
Deploy fold-a-tank from tanker
Place low level strainer/hard suction into fold-a-tank
IF DRAFTING OPERATIONS ARE NEEDED CONTINUE TO THE NEXT STEP, OTHERWISE MONITOR PUMP OPERATIONS
Fill fold-a-tank with water from a tanker
Slowly open 6” intake to pull a draft
Slowly close "tank to pump”
Ensure water tank is full
Monitor pump operations

Fill Site Engine

Standard - NFPA 1001-2013: 5.3.15	Video Link -

Level 1 Stage at closest hydrant or water source
Announce that you are on scene on the main dispatch channel with your staging location
Announce to the Incident Commander on the tactical channel that you are on scene and your staging location
Receive assignment from the Incident Commander to be fill site engine
Place apparatus in “Pump”
Transmission to Drive
Gather portable radio
Exit apparatus
Place wheel chocks
Open “Tank to Pump”
Prime the pump
Open "Tank Fill” half way
Gather hydrant bag
Deploy 4” supply line
Flush hydrant

Connect 4.5” NST to Storz adapter to hydrant steamer connection
Connect 4” supply line to hydrant steamer connection
Connect gate valve to hydrant
Connect 4” supply line to intake
Open the hydrant
Prepare for incoming tankers
Deploy quick fill line from tanker
Connect quick fill line to an outlet on engine
Connect quick fill line to quick fill intake on tanker
Fill the tanker
Monitor pump operations

Appendix

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Incident Rehab

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Boone County Fire Protection District
Rehabilitation Worksheet

Transport to a Medical Facility for Treatment
Shortness of breath
Dizziness
Altered mental status
Severe nausea

Full Assessment by EMS
Weak or Fatigued WITH
Pale Clammy Skin
Hypotension
Nausea
Headache
Dizziness

Crew assigned to Rehab

Crew doffs PPE in a designated location away from the rehab area

Personnel "Tag In" with rehab manager as they enter rehab. Rehab Manager places tag on command board for accountability and logs the time in on the Rehabilitation Worksheet

Personnel begin to rehydrate

Initial set of vital signs obtained and documented on Rehabilitation Worksheet

- Blood Pressure
- Pulse
- Respiratory Rate
- Pulse Oximetry
- Temperature
- CO Oximetry
- Mental Status
- General Complaints

Personnel rest for ten minutes

Incidents lasting less than one hour

Incidents lasting over one hour

Provide sports drink to replace electrolytes

Incidents lasting over 4 hours

Provide sports drink to replace electrolytes

Provide food/snack

After 10 minutes recheck vital signs

Vital Signs
Pulse greater than 100
Blood Pressure systolic greater than 160 mmHg **or** diastolic greater than 100 mmHg
Respirations greater than 20
Pulse oximetry less than 95%
Temperature greater than 100°F
CO oximetry greater than 5% for non-smokers and 10% for smokers

Continue to rest with frequent monitoring for another ten minutes

Reassess Vital Signs

Vital Signs
Pulse greater than 100
Respirations greater than 20
Pulse oximetry less than 95%
Temperature greater than 100°F
CO oximetry greater than 5% for non-smokers and 10% for smokers

Full medical evaluation by EMS
Advise Command of Status

Vital Signs
Pulse less than 100
Blood Pressure systolic less than 160 mmHg **and** diastolic less than 100 mmHg
Respirations less than 20
Pulse oximetry greater than than 95%
Temperature less than 100°F
CO oximetry less than 5% for non-smokers and 10% for smokers

Return to command post for assignemnt

Vital Signs
Pulse less than 100
Respirations less than 20
Pulse oximetry greater than than 95%
Temperature less than 100°F
CO oximetry less than 5% for non-smokers and 10% for smokers

Return to command post for assignemnt

Incident # ____________________ **Rehabilitation Worksheet** Date____________________

Name	Time In		Pulse	Blood Pressure	Respiratory Rate	Pulse Oximetry	Temperature	CO Oximetry	Time Out	Disposition
		Initial Vital Signs								☐ EMS
		10 Minute Vital Signs								☐ Command ☐ EMS
		20 Minute Vital Signs								☐ Command ☐ EMS
		Initial Vital Signs								☐ EMS
		10 Minute Vital Signs								☐ Command ☐ EMS
		20 Minute Vital Signs								☐ Command ☐ EMS
		Initial Vital Signs								☐ EMS
		10 Minute Vital Signs								☐ Command ☐ EMS
		20 Minute Vital Signs								☐ Command ☐ EMS
		Initial Vital Signs								☐ EMS
		10 Minute Vital Signs								☐ Command ☐ EMS
		20 Minute Vital Signs								☐ Command ☐ EMS
		Initial Vital Signs								☐ EMS
		10 Minute Vital Signs								☐ Command ☐ EMS
		20 Minute Vital Signs								☐ Command ☐ EMS

Rehab Manager____________________ Boone County Fire Protection District Modified - January 29, 2015

Fire Ground Hydraulics

Crosslays Pump Discharge Pressure	
Crosslay 1 (foam - 0.3%)	150 psi
Crosslay 2 (foam - 0.3%)	150 psi
Crosslay 3	150 psi
Task Force Tip Blitzfire	225 psi

Length	Pump Discharge Pressure	
	1 3/4" 125 gpm	2 1/2" 250 gpm
100 feet	125 psi	112 psi
200 feet	150 psi	124 psi
300 feet	175 psi	136 psi
400 feet	200 psi	148 psi
500 feet	225 psi	160 psi
600 feet	250 psi	172 psi
700 feet		184 psi
800 feet		196 psi
900 feet		208 psi
1000 feet		220 psi

Engine Tanker Redline Pump Discharge Pressure
3" - 50 feet
60 psi

Smooth Bore Nozzle Pump Discharge Pressure
100 psi

Deck Gun Pump Discharge Pressure	
Smooth Bore	80 psi
Tips Size	**GPM**
1 3/8"	500 gpm
1 1/2"	600 gpm
1 3/4 "	800 gpm

Fire Department Connection
150 psi

CAFS Pump Discharge Pressure 100 psi	
Supply Engine	
4" Hose	
Length	**Pump Discharge Pressure**
100 feet	55 psi
200 feet	60 psi
300 feet	65 psi
400 feet	70 psi
500 feet	75 psi
600 feet	80 psi
700 feet	85 psi
800 feet	90 psi
900 feet	95 psi
1000 feet	100 psi

High Rise Pack	
125 psi - One 1 3/4" hose line	
Length of 2 1/2" hose	**Pump Discharge Pressure**
Two 1 3/4" hose lines flowing 125 gpm each	
100 feet	142 psi
200 feet	154 psi
300 feet	166 psi
400 feet	178 psi
500 feet	190 psi
Appliances - 5 psi per appliance	

Rules of Thumb

Hose Diameter	Flow Rate	Friction loss per 100 feet of hose
1 3/4"	125 gpm	25 psi
2 1/2"	250 gpm	12 psi
2 1/2"	500 gpm	50 psi
4"	500 gpm	5 psi

Elevation Gain - **INCREASE** pump discharge pressure by 0.5 psi per foot or 5 psi per floor

Elevation Loss - **DECREASE** pump discharge pressure by 0.5 psi per foot or 5 psi per floor

Foam
200 psi at the eductor
150 feet maximum distance from eductor to nozzle - nozzle must be set to 95 gpm and the bail must be fully open
Hydrocarbon/Polar Solvent - 3% solution

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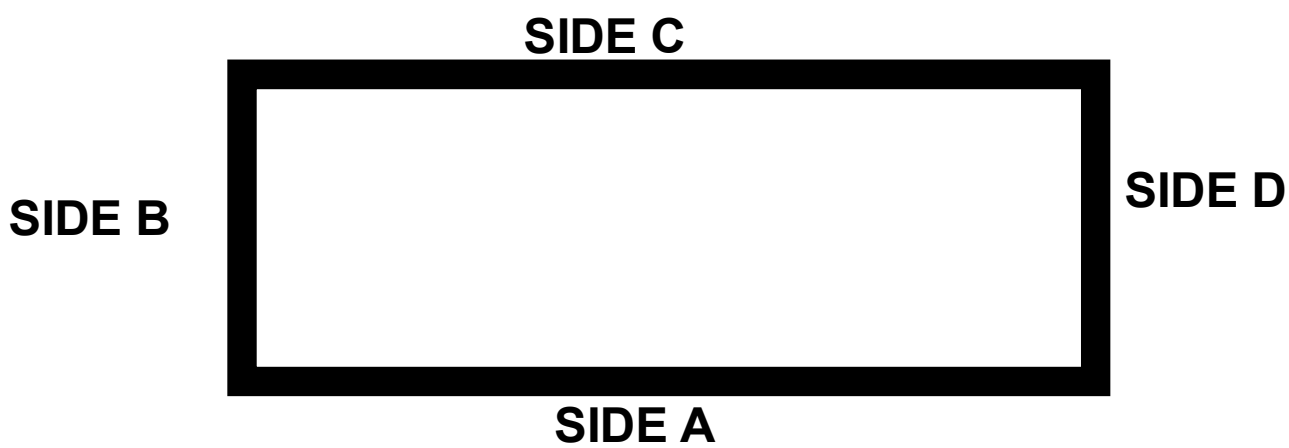
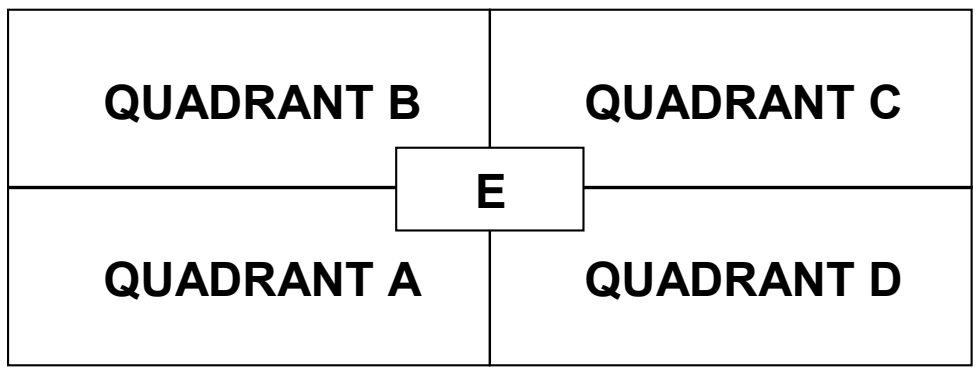
STRUCTURE I.D. MARKING (continued)

It is also important to identify locations within a single structure. The address side of the structure shall be defined as SIDE A. Other sides of the structure shall be assigned alphabetically in a clockwise manner from SIDE A.



The interior of the structure will be divided into QUADRANTS. The quadrants shall be identified ALPHABETICALLY in a clockwise manner starting from where the SIDE A and SIDE B perimeter meet. The center core, where all four quadrants meet will be identified as Quadrant E (i.e., central core lobby, etc.).



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700 BLOCK ALPHA STREET

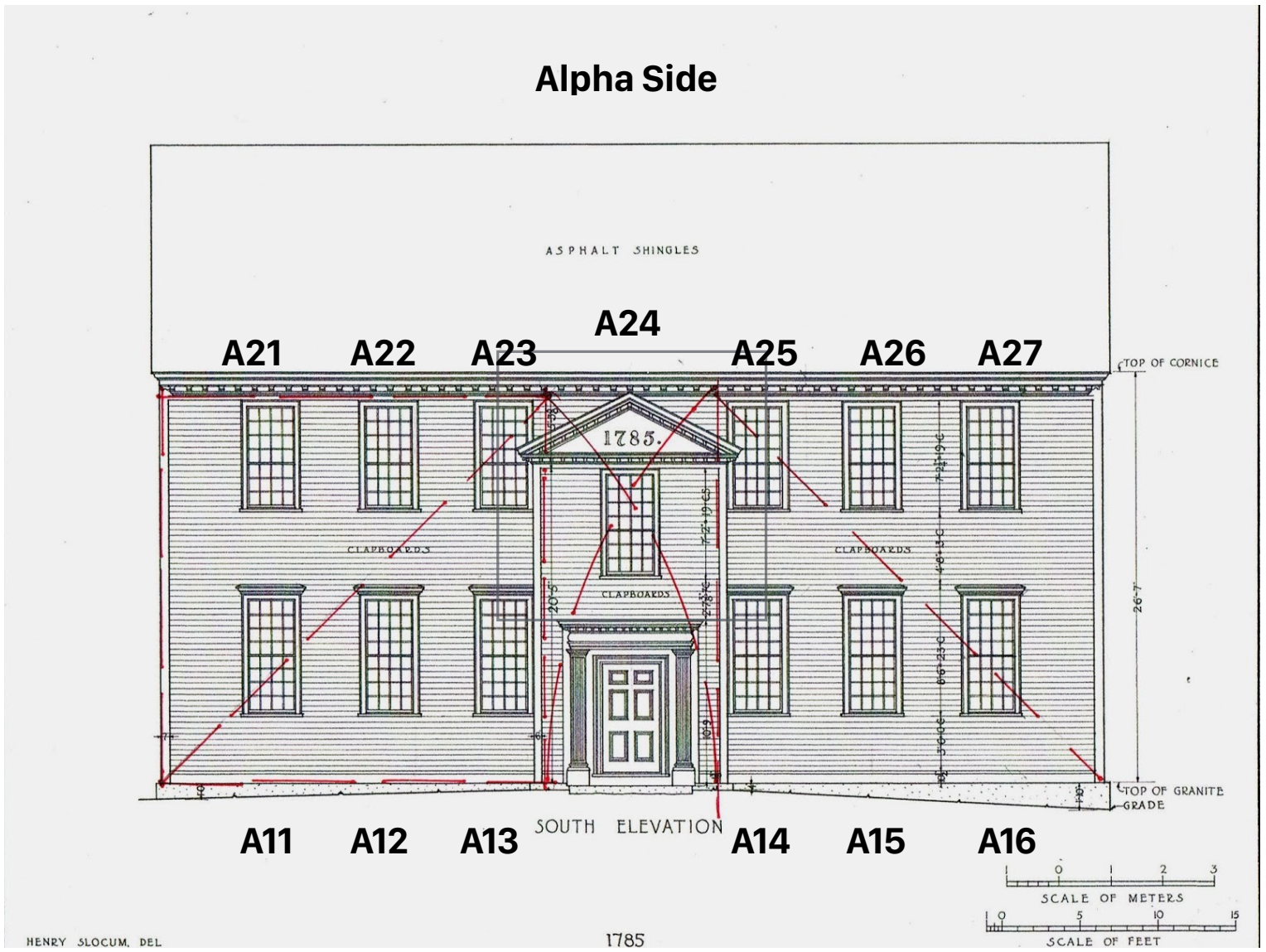
Window Naming

Windows will be named with an alpha character followed by a two digit number

The alpha character represents the side of the structure the window is on

The first number is the floor of the structure the window is on

The second number is the number of the window from left to right on that side of the structure (first window is one, second is two, third is three, etc...)



Command Board

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INCIDENT COMMANDER	STRATEGY	
VELCRO	VELCRO	VELCRO
COMMAND AIDE	PIO	
VELCRO	VELCRO	
SAFETY	INVESTIGATOR	VELCRO
VELCRO	VELCRO	

BOONE COUNTY FIRE PROTECTION DISTRICT
(573) 447–5000

VELCRO

VELCRO

VELCRO	VELCRO	VELCRO	VELCRO	VELCRO

Command Transfer

Outgoing IC
- State Strategy
- C.A.N Report

Oncoming IC
- Give radio report to BCJC
  - Assume Command
  - Declare Strategy
  - Additional Resources
  - Command Post Location

MAYDAY

****Restrict the Channel****

Ascertain from MAYDAY caller: UCAAN

U–UNIT
- Name
- Crew/Group that you are assigned to
- Separated or with Crew

C–Condition
- Last known location
- Trapped, lost, low on air
- Any other notable events

A–Actions
- What are you doing?

A–Air
- Green Yellow Red Low Air Alarm
- PSI: _____

N–Needs
- Air, lifting equipment, extrication, directions

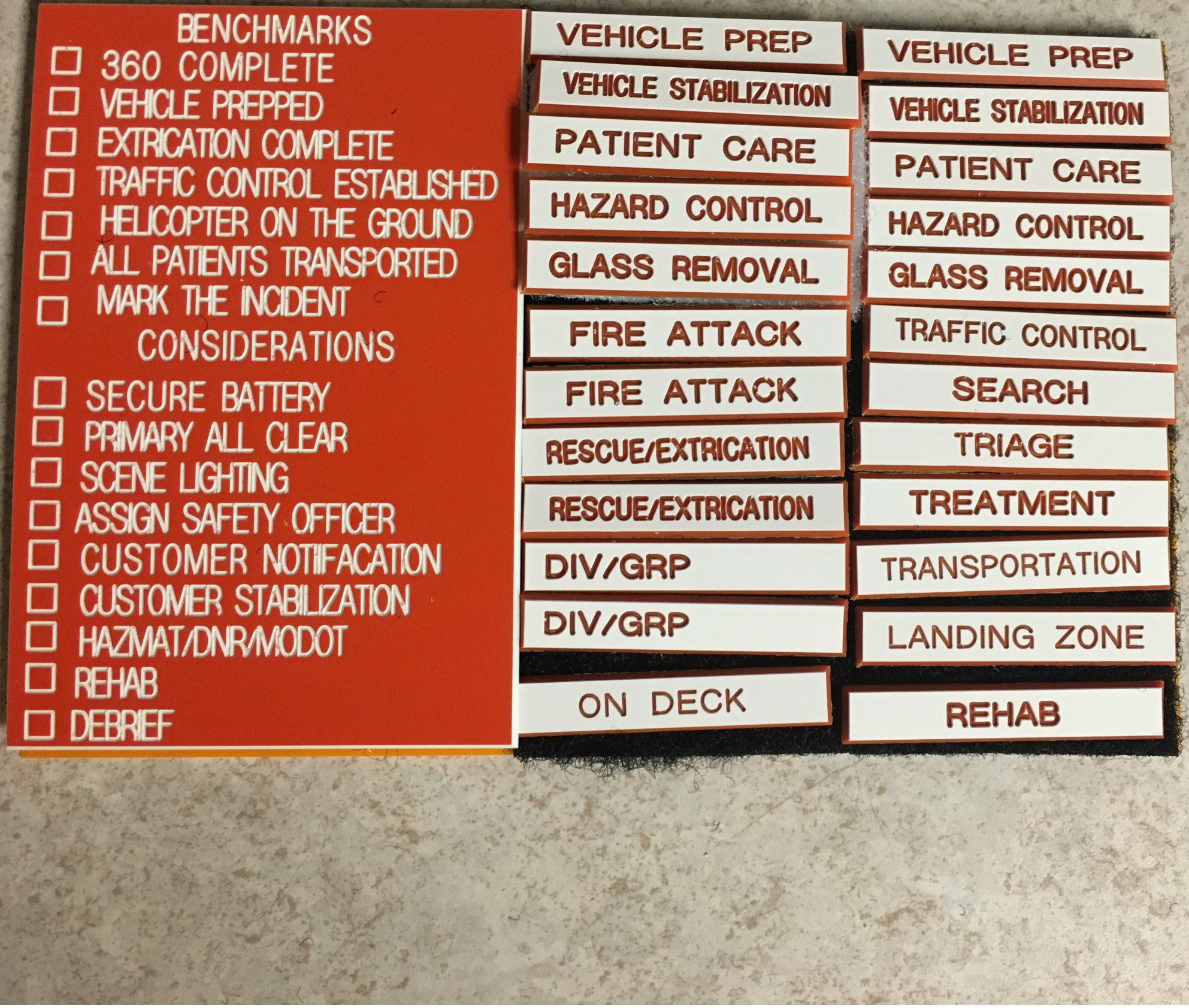
- ☐ Order PASS Activation
- ☐ Deploy/Redirect Crews for Rescue
- ☐ Reinforce/Backfill Crews
- ☐ Notify Boone County and Request 2nd Alarm
- ☐ Reinforce Command Staff/Command Aides

HOTWASH

(start each question with the least experienced members)
- Describe conditions on first arrival (initial size–up)
- Strategy decision (critical factors)
- Describe initial actions and tactical priorities
- Discuss command and accountability (initial & transfer, crew integrity)
- Any unique problems or challenges (communications, fire behavior, water, etc)
- Any injuries, equipment failures, policy deviations, or near–misses?
- Ideas for improvements? (training, policies, equipment)
- Has our customer been taken care of?
- Positive outcomes and reinforcement

Version Nov. 2016


BENCHMARKS
☐ 360 COMPLETE
☐ PRIMARY ALL CLEAR
☐ WATER ON FIRE
☐ WATER SUPPLY ESTABLISHED
☐ SECONDARY ALL CLEAR
☐ LOSS STOPPED/ FIRE CONTROL
☐ MARK THE INCIDENT
CONSIDERATIONS
☐ SECURE UTILITIES
☐ LADDERS
☐ SALVAGE/LOSS CONTROL
☐ CUSTOMER NOTIFICATION
☐ CUSTOMER STABILIZATION
☐ REHAB
☐ INVESTIGATION
☐ DEBRIEF
OFFENSIVE
DEFENSIVE
FIRE ATTACK
FIRE ATTACK
PRIMARY SEARCH
PRIMARY SEARCH
ON DECK
ON DECK
VENTILATION
UTILITIES
LADDERS
SECONDARY SEARCH
RESCUE
RESCUE
RECYCLE
RECYCLE
REHAB
REHAB
SALVAGE
SALVAGE
OVERHAUL
OVERHAUL
DIV/GRP
DIV/GRP


BENCHMARKS
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VEHICLE PREPPED
EXTRICATION COMPLETE
TRAFFIC CONTROL ESTABLISHED
HELICOPTER ON THE GROUND
ALL PATIENTS TRANSPORTED
MARK THE INCIDENT
CONSIDERATIONS
SECURE BATTERY
PRIMARY ALL CLEAR
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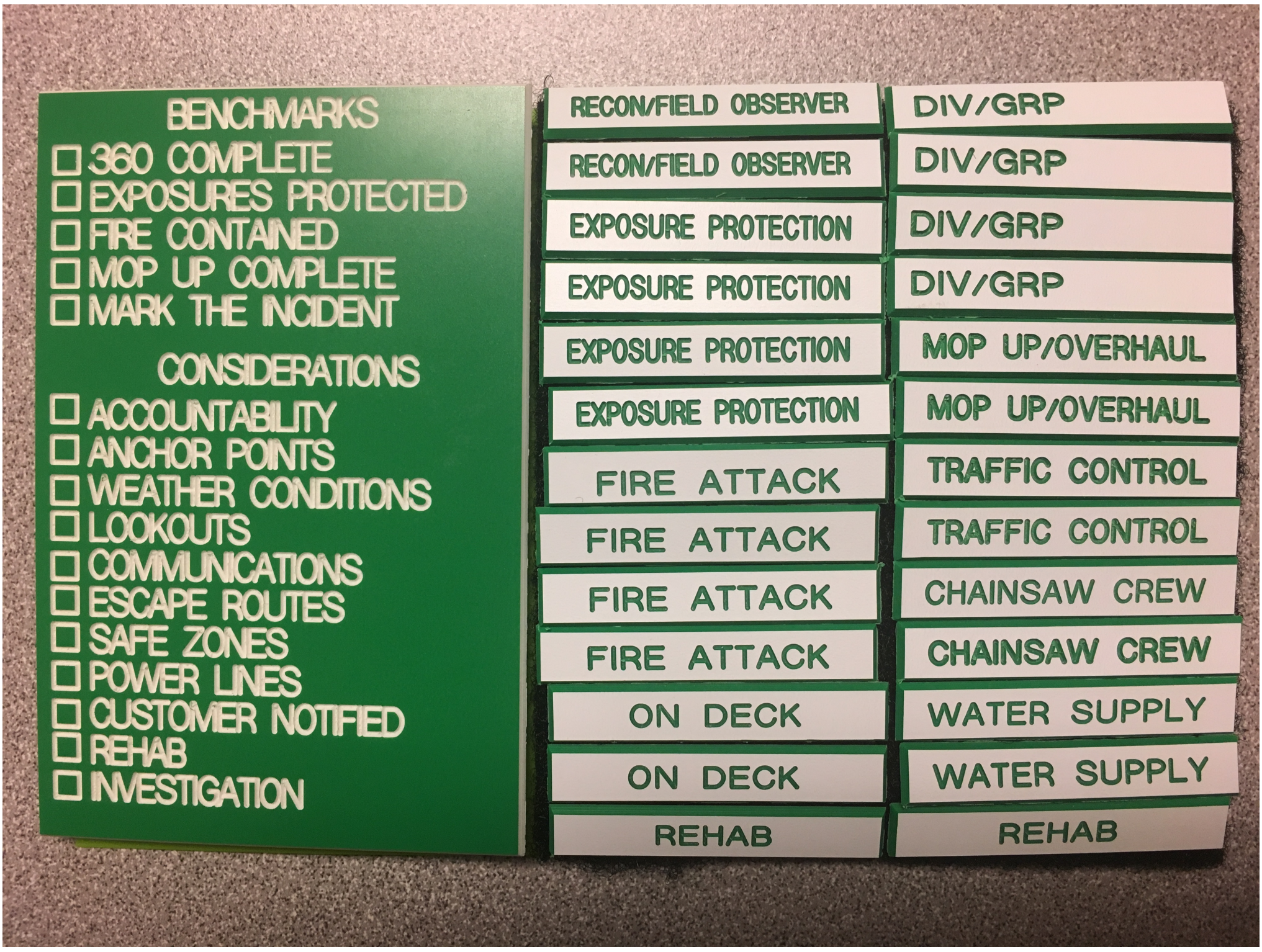
ASSIGN SAFETY OFFICER
CUSTOMER NOTIFACATION
CUSTOMER STABILIZATION
HAZMAT/DNR/MODOT
REHAB
DEBRIEF
VEHICLE PREP
VEHICLE STABILIZATION
PATIENT CARE
HAZARD CONTROL
GLASS REMOVAL
FIRE ATTACK
FIRE ATTACK
RESCUE/EXTRICATION
RESCUE/EXTRICATION
DIV/GRP
DIV/GRP
ON DECK
VEHICLE PREP
VEHICLE STABILIZATION
PATIENT CARE
HAZARD CONTROL
GLASS REMOVAL
TRAFFIC CONTROL
SEARCH
TRIAGE
TREATMENT
TRANSPORTATION
LANDING ZONE
REHAB


BENCHMARKS
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EXPOSURES PROTECTED
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COMMUNICATIONS
ESCAPE ROUTES
SAFE ZONES
POWER LINES
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RECON/FIELD OBSERVER
DIV/GRP
RECON/FIELD OBSERVER
DIV/GRP
EXPOSURE PROTECTION
DIV/GRP
EXPOSURE PROTECTION
DIV/GRP
EXPOSURE PROTECTION
MOP UP/OVERHAUL
EXPOSURE PROTECTION
MOP UP/OVERHAUL
FIRE ATTACK
TRAFFIC CONTROL
FIRE ATTACK
TRAFFIC CONTROL
FIRE ATTACK
CHAINSAW CREW
FIRE ATTACK
CHAINSAW CREW
ON DECK
WATER SUPPLY
ON DECK
WATER SUPPLY
REHAB
REHAB

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Portable Radios

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FD Radio Programming

	Z1 - Home	Z2 - Interop	Z3 - Mut Aid
1	County Fire	County Fire	County Fire
2	Gold	VFIRE21 Red	Cooper County
3	Yellow	VFIRE22 White	Howard County
4	Orange	VFIRE23 Blue	Randolph County
5	VFIRE21 Red	VFIRE24	Little Dixie
6	VFIRE22 White	VFIRE25	Callaway County
7	VFIRE23 Blue	VFIRE26	Cole County
8	JCIC	VCALL10	Moniteau County
9	VTAC11	VTAC11	Jefferson City
10	Centralia	VTAC12	Mexico
11	SBCFPD	VTAC13	State EMS
12	Ruby	VTAC36	Main Law
13	VLAW31	VLAW31	CPD2
14	Gray	VMED28	Sherrif2
15	Brown	MTAC	NWS Jamestown
16	City Fire	City Fire	City Fire

Programming notes:

Apparatus portables assigned to SCBA: Only programmed with Zone 1 and do not have scan capability.

Engineer & officer portables and all mobile radios: programmed with all 3 zones and have the ability to scan.

XTS 5000

Buttons and Controls

Index	Description	Conventional
1		Power/Volume
2	Two Position Concentric	
	Position A	Blank
	Position B	Blank
3	Three Position Toggle	
	Position A	Zone One
	Position B	Zone Two – engineer radio only
	Position C	Zone Three – engineer radio only
4	Rotary Control	Channel Select
5	Top Button	Emergency (EAB)
6	Side Button - Top	Light
7	Side Button - Middle	Scan – engineer radio only
8	Side Button - Bottom	Channel Announce

XTS 5000

Index	Description	Conventional
1		Power/Volume
2	Two Position Concentric	
	Position A	Keypad Lock
	Position B	Keypad Unlock
3	Three Position Toggle	
	Position A	Zone One
	Position B	Zone Two
	Position C	Zone Three
4	Rotary Control	Channel Select
5	Top Button	Emergency (EAB)
6	Side Button - Top	Light
7	Side Button - Middle	Scan
8	Side Button - Bottom	Channel Announce
9	Data Button	Blank

MOTOROLA
intelligence everywhere

APX 6000XE

Buttons and Controls

Index	Description	Conventional
1		Power/Volume
2	Two Position Concentric	
	Position A	Keypad/ Controls
	Position B	Lock Unlock
3	Three Position Toggle	
	Position A	Zone One
	Position B	Zone Two – engineer radio only
	Position C	Zone Three – engineer radio only
4	Rotary Control	Channel/Sub Select
5	Top Button	Emergency (EAB)
6	Side Top Button	Light/Flip
7	Side Middle Button	Monitor
8	Side Bottom Button	Channel Announce

Helicopter Emergencies

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FIRST RESPONDERS' GUIDE TO HELICOPTER EMERGENCY SHUTDOWN PROCEDURES

Brought to you by the

Missouri Association of Air Medical Services

Numerous agencies collaborated to provide the most up-to-date information regarding air frame specific shutdown procedures.

Utilize pilot and crewmember instructions first

If occupants are incapacitated, dead, or otherwise unable to provide direction this tool should be useful making the aircraft safer to conduct emergency operations.

If occupants are incapacitated and the aircraft rotors are still rotating under power emergency responders can consider directing a stream or streams of water into the air intake of the aircraft to drown and force an engine shutdown.

Each airframe has different air intake manifolds but usually forward of the rotor mast on the top of the aircraft.

Emergency Contact

Air Evac Lifeteam: 1-800-247-3822

Arch Air Medical: 1-800-325-5400

Cox Air Care: 1-800-325-5400

LifeFlight Eagle: 1-800-422-4030

(Air Methods) LifeNet: 1-800-325-5400

Mercy Life Line: 1-800-433-5433

Survival Flight: 1-877-581-5558

University of Missouri Staff for Life: 1-800-325-5400

You will speak to the dispatch center for the designated aircraft

Please leave a call back number and a representative will call.

Emergency Contact

Suggested Communication Format:

This is (caller's name) with (caller's service)

I am on scene with your downed aircraft (tail number).

We are located at (gps coordinates or compass directions from major roadway)

The aircraft has been secured.

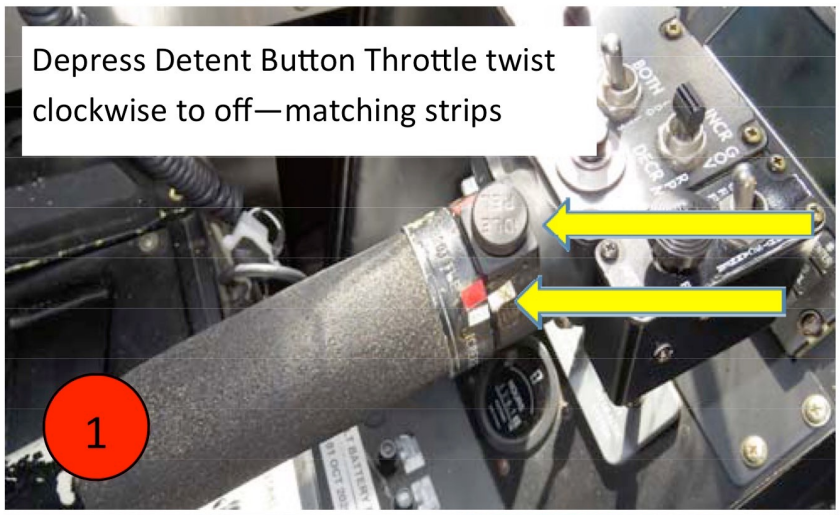
Your crew are: (Only to be given out if you are calling via phone from the scene.)

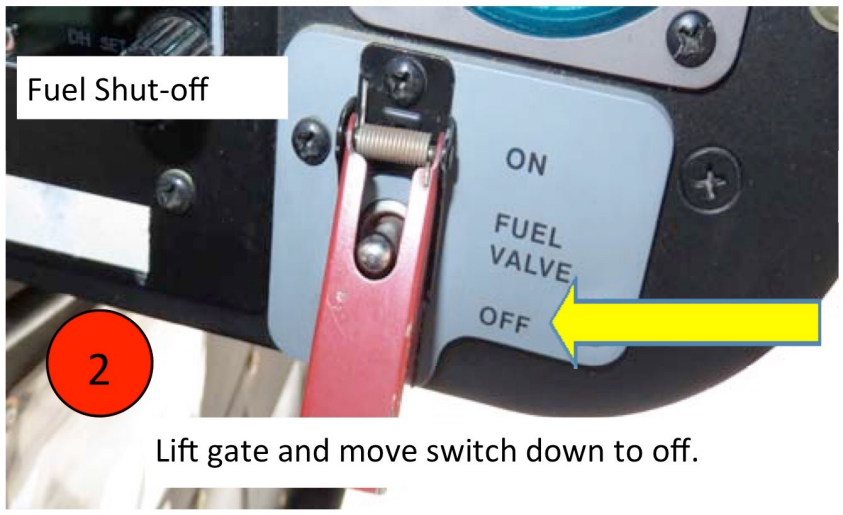
Pilot- (black or red) Nurse- (black or red) Medic- (black or red) Patient- (black or red)

(If you have to relay information over the radio please avoid using staff or patient designations when giving black or red triage status.)

Bell 206 Long Ranger Emergency Shut Down

From Pilot's Seat





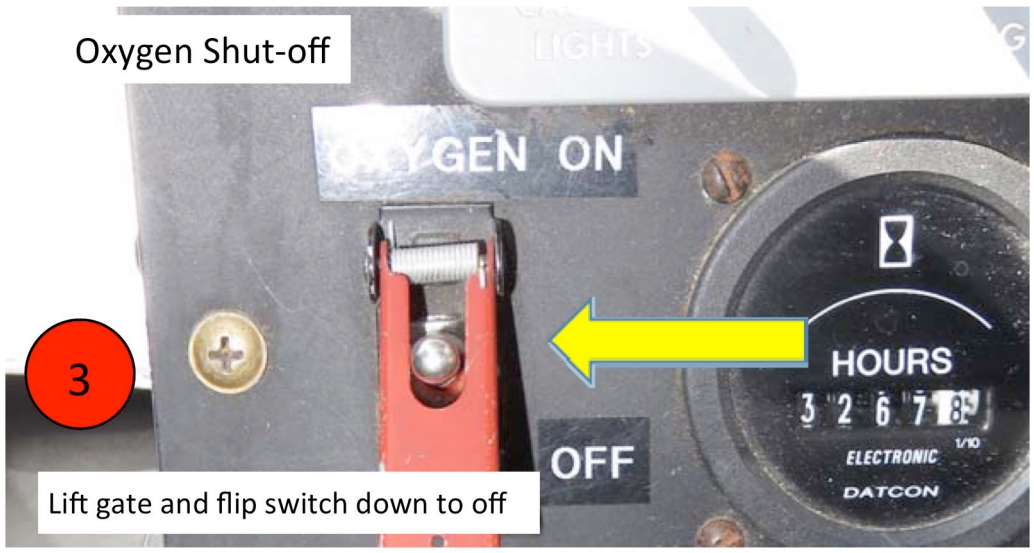
Lift gate and move switch down to off.

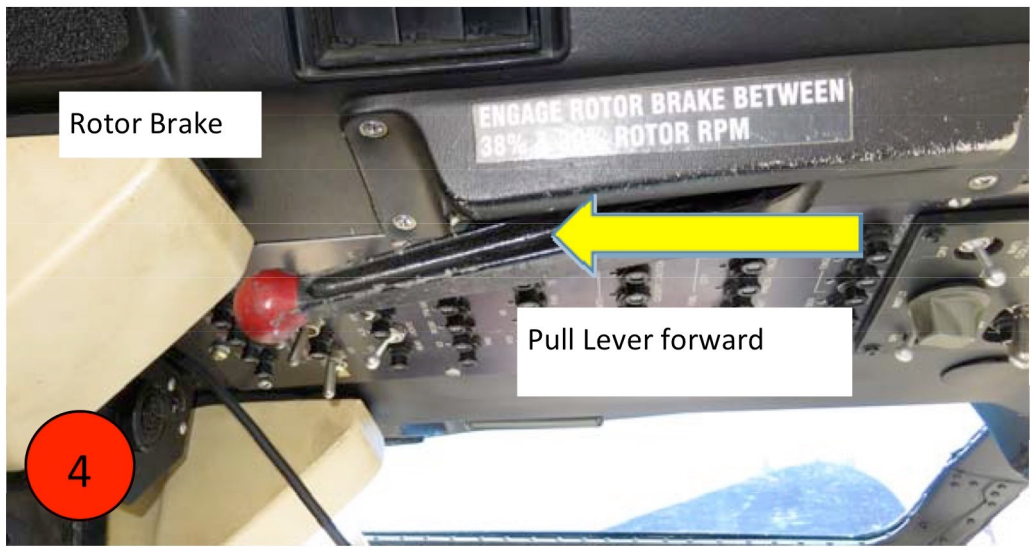
AIR EVAC LIFETEAM

SURVIVAL FLIGHT

Bell 206 Long Ranger Emergency Shut Down

Oxygen Shut-off

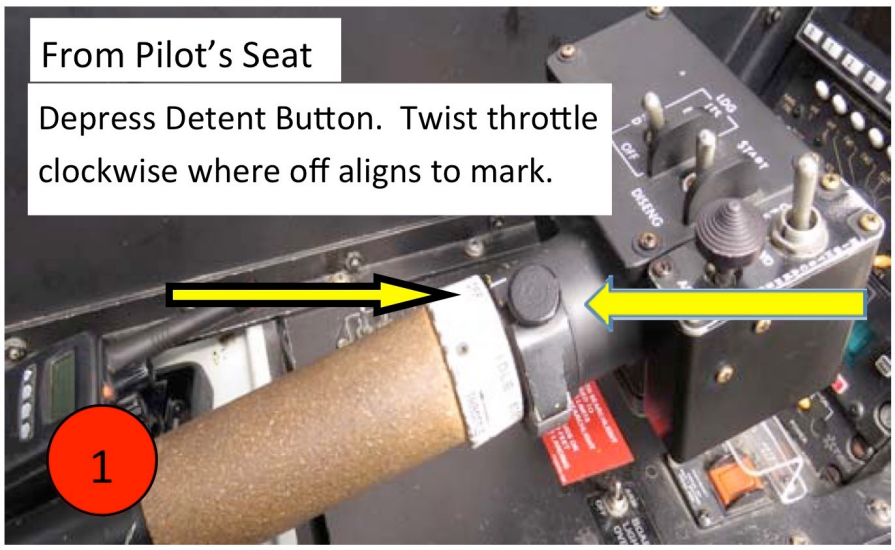


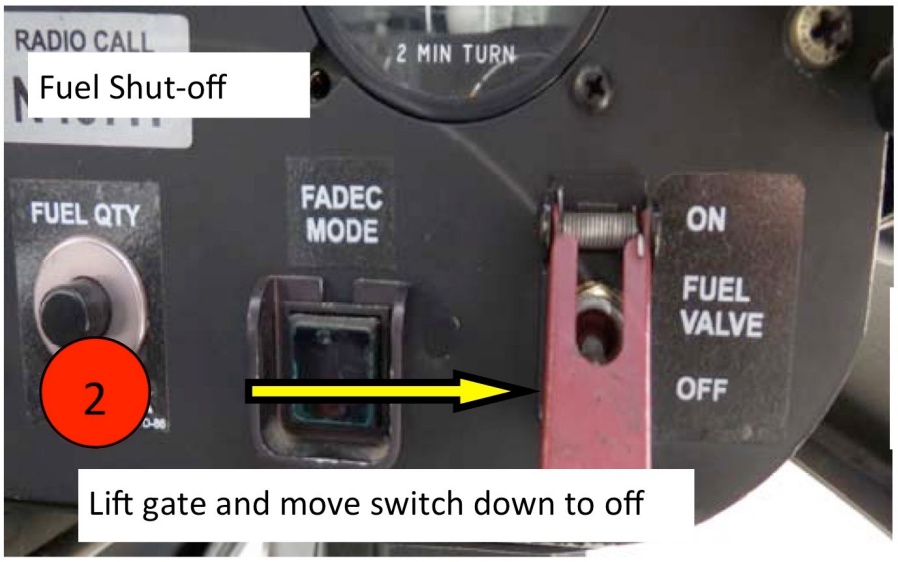


Battery Power Shu-off

Move Batter Switch up to off and Generator switch to center off.

Bell 407 Emergency Shut Down





LifeFlight Eagle℠

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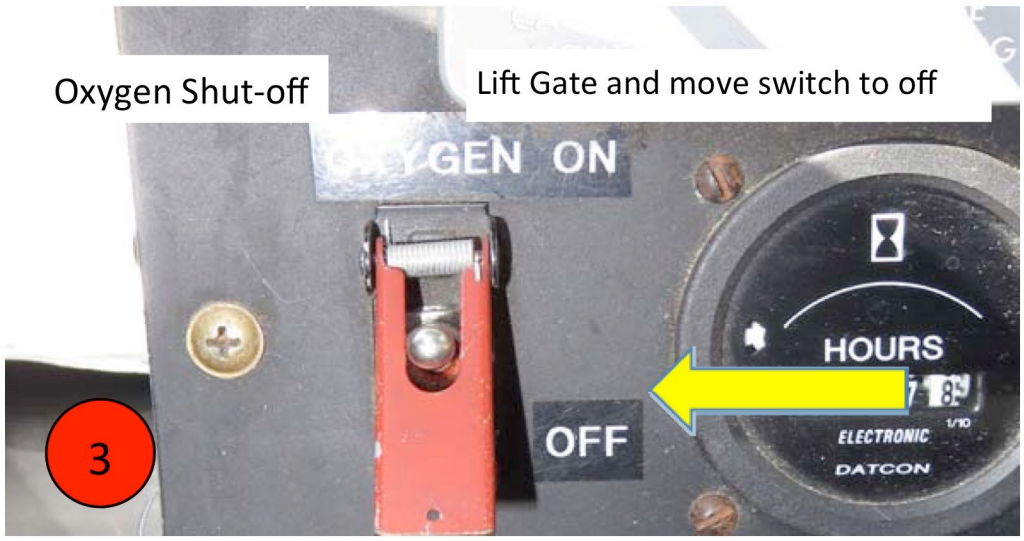
SURVIVAL FLIGHT

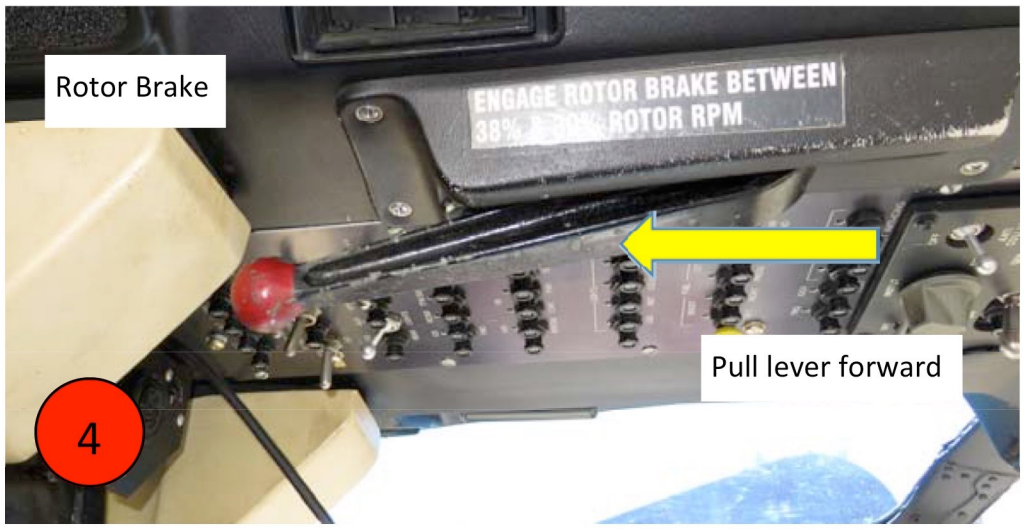
Bell 407 Emergency Shut Down

Oxygen Shut-off

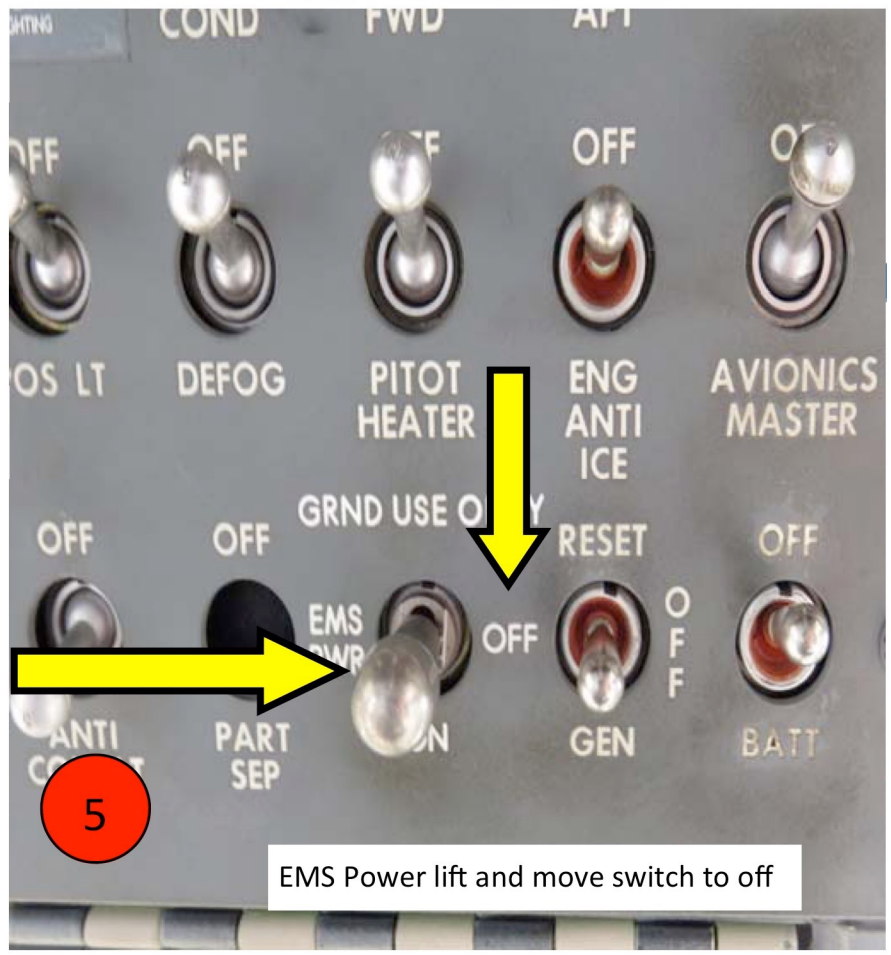
Lift Gate and move switch to off



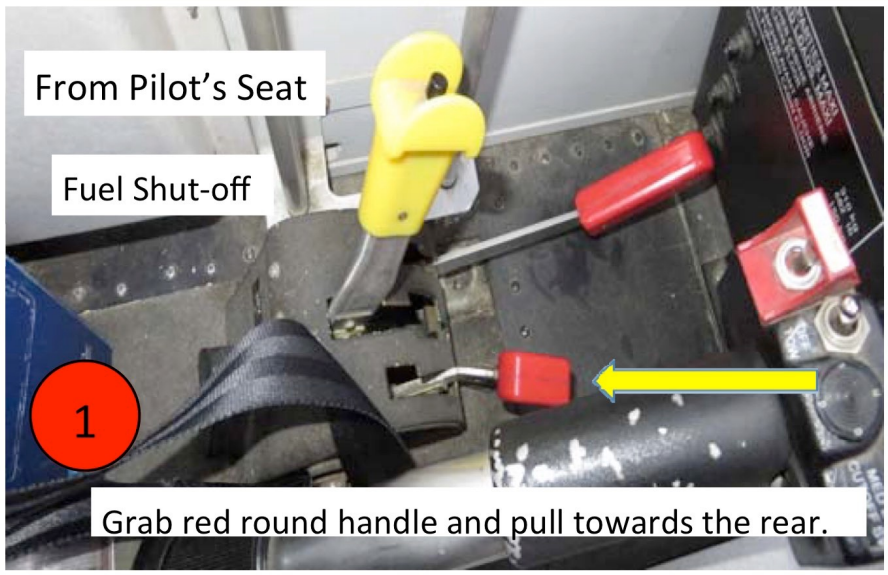
Rotor Brake

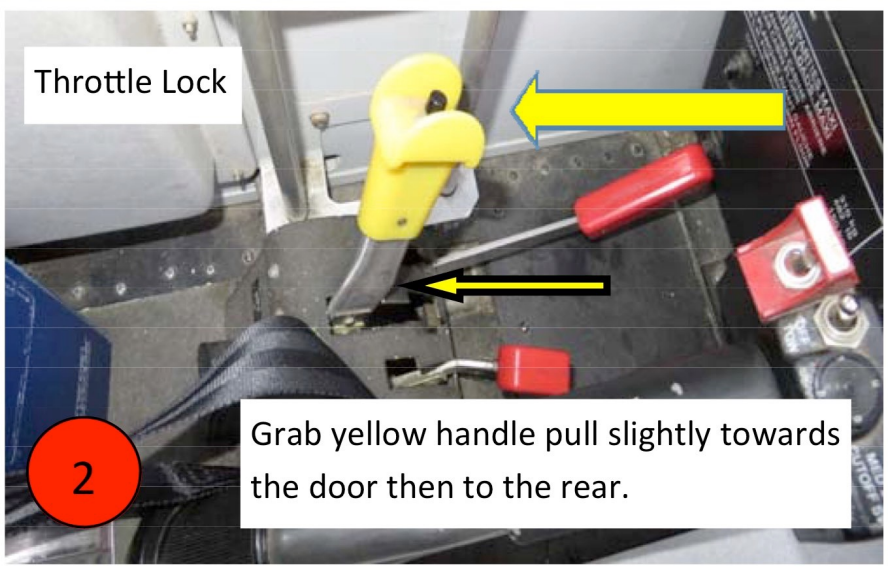


Battery Power Shut-off



AS 350 A-Star Emergency Shut Down





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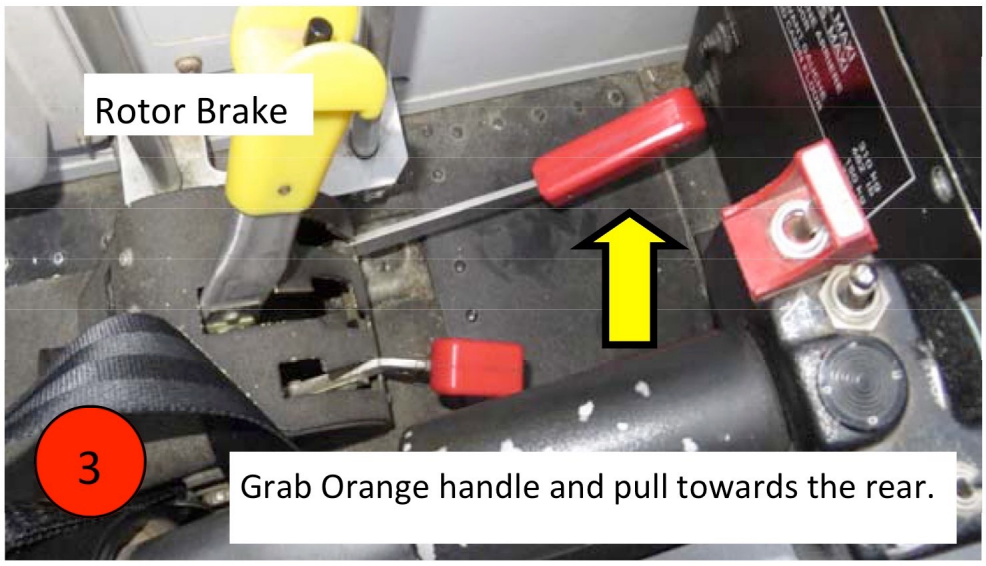
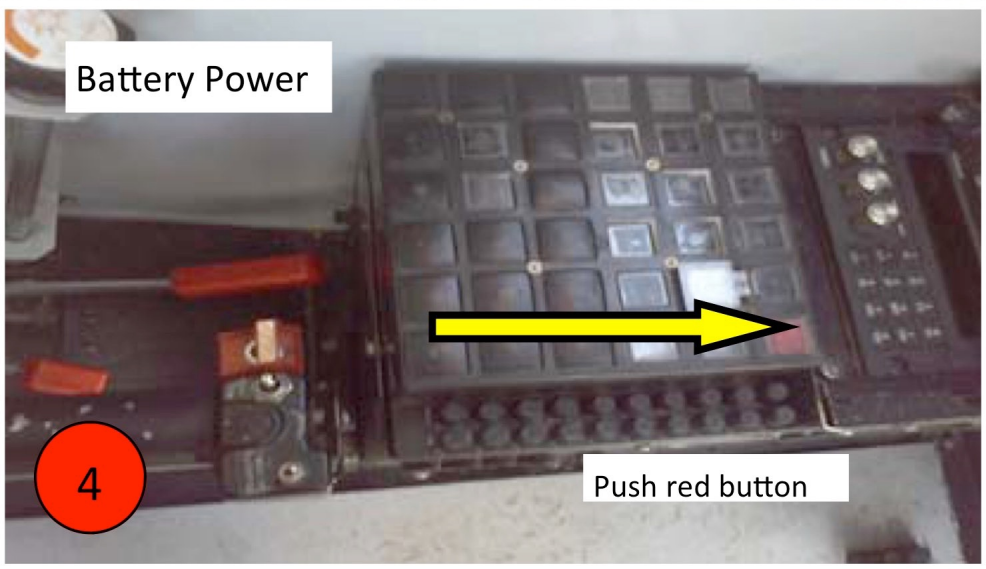
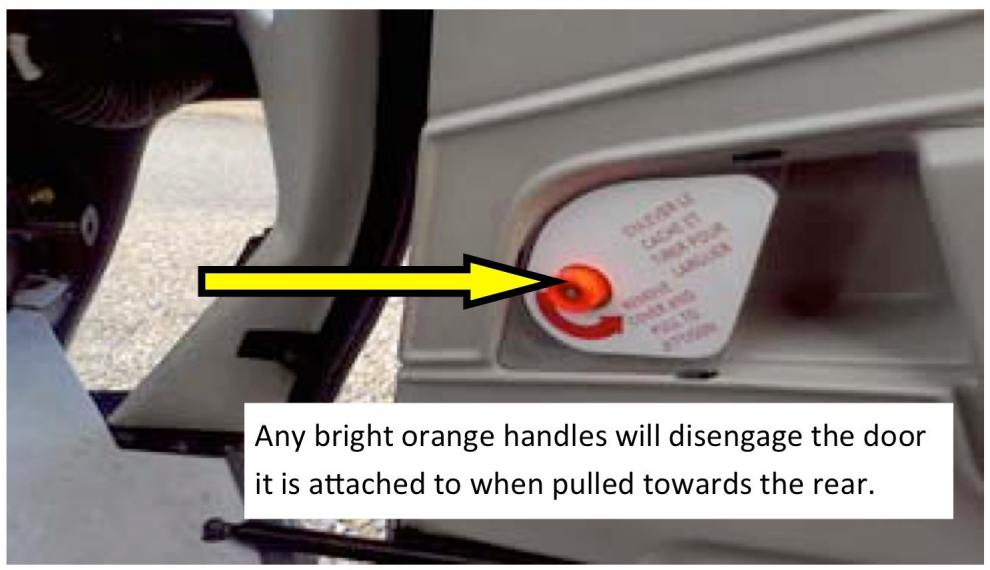
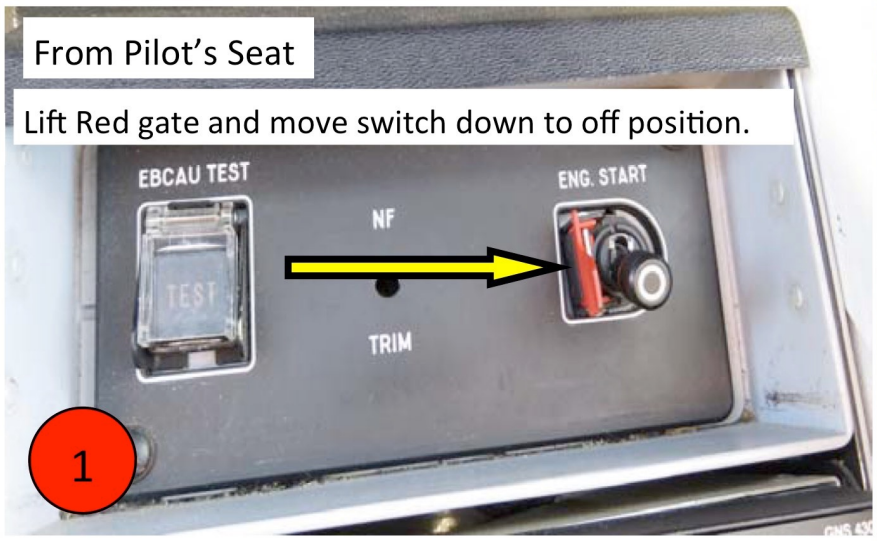
AS 350 A-Star Emergency Shut Down

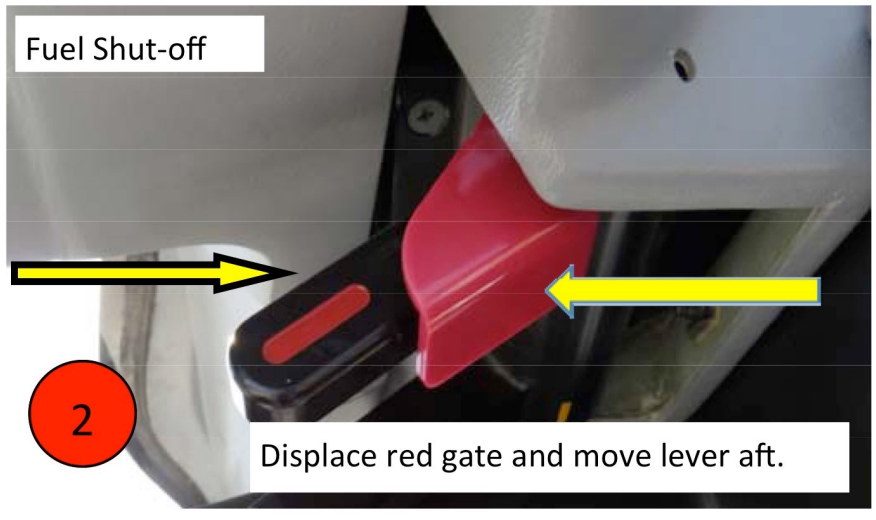






EC 130 Emergency Shut Down





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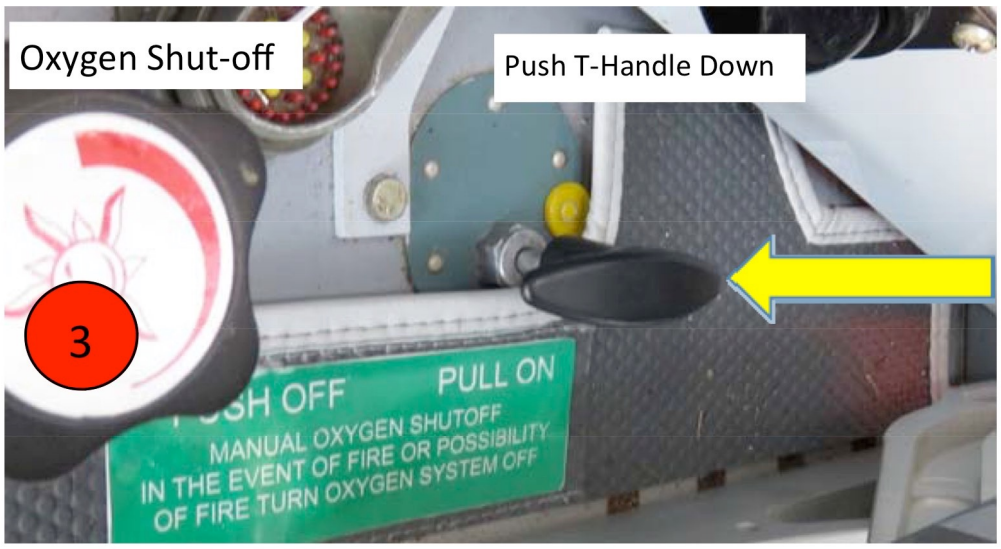
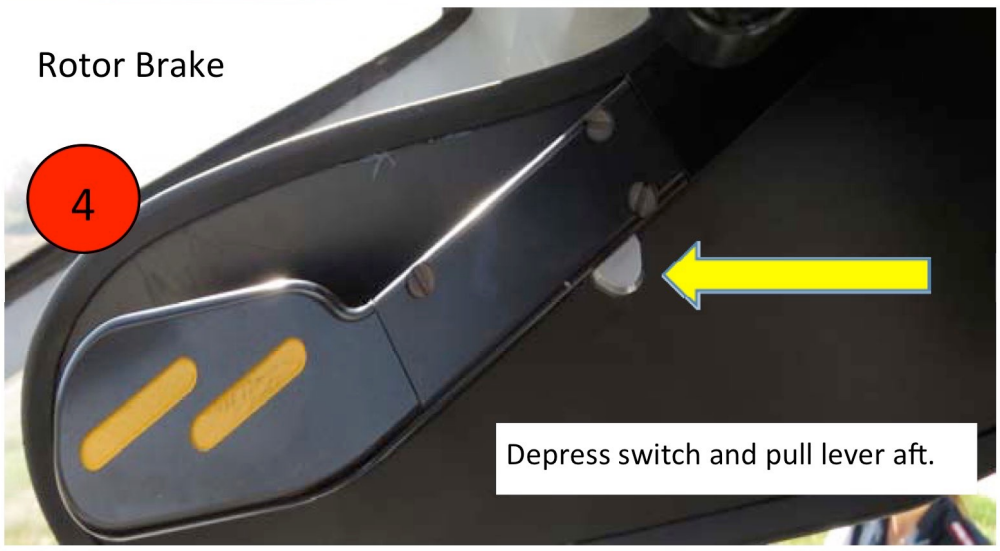
EC 130 Emergency Shut Down

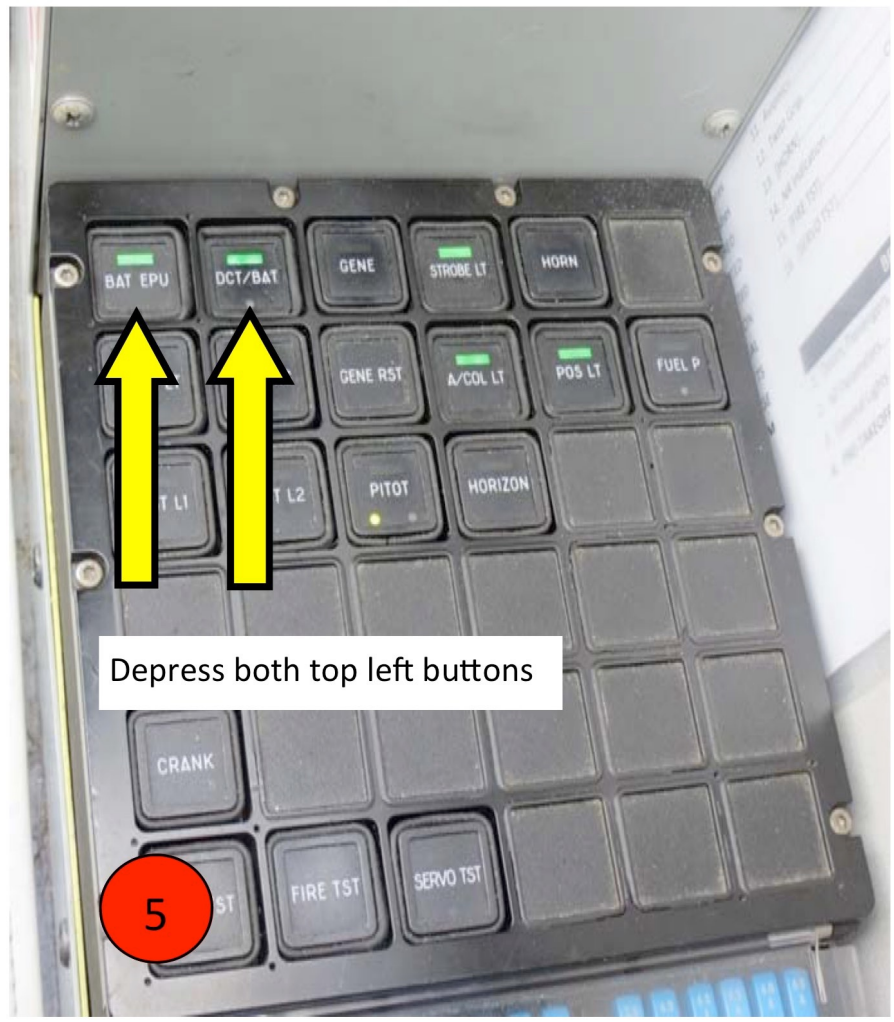
Oxygen Shut-off



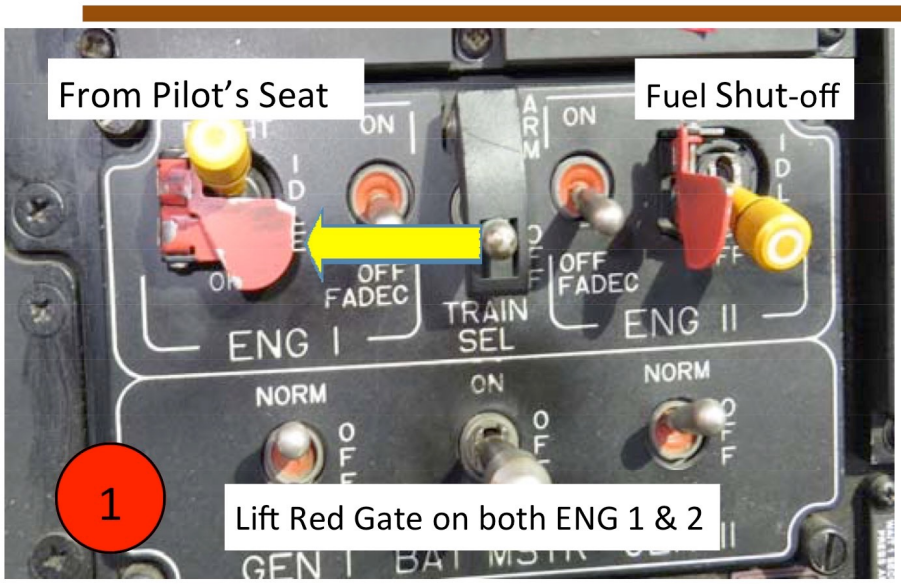
Rotor Brake

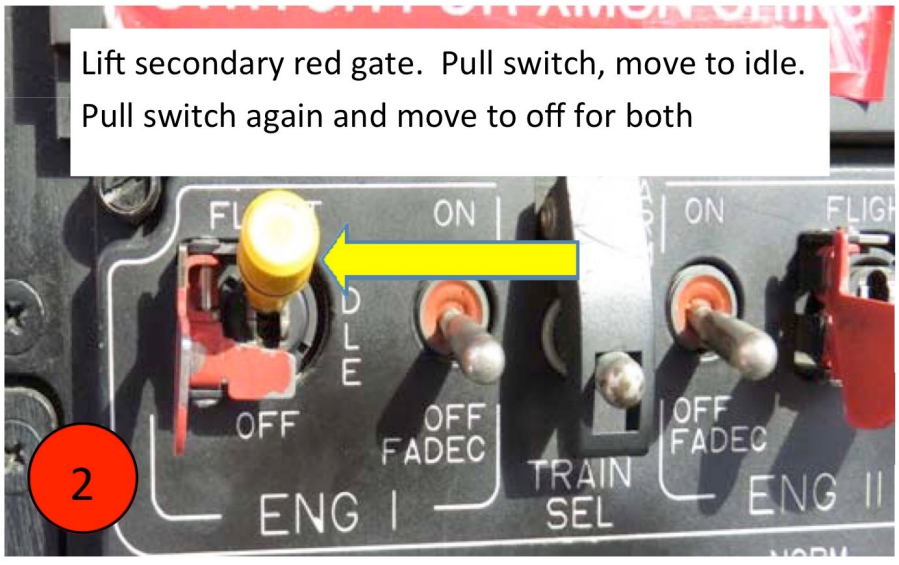


Battery Power Shut-off

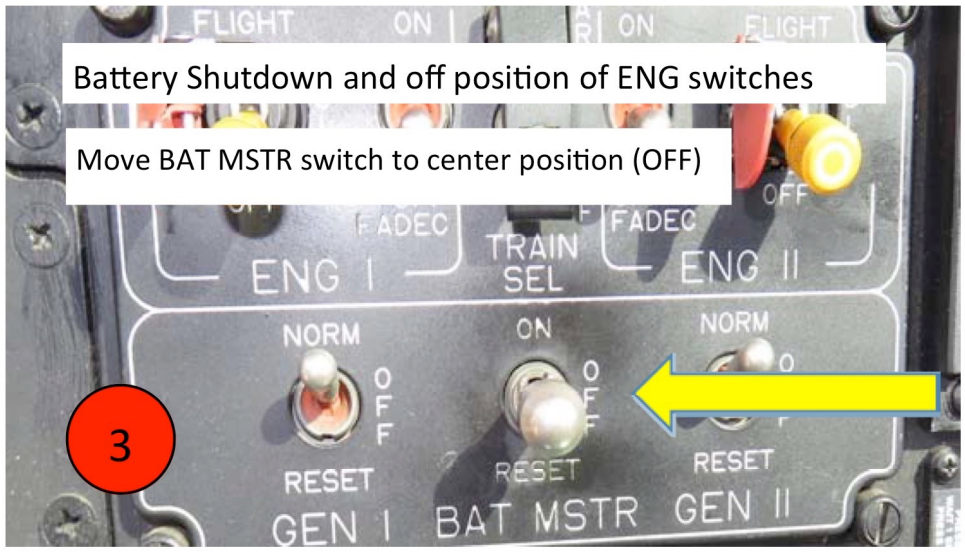


EC-135 Emergency Shut Down



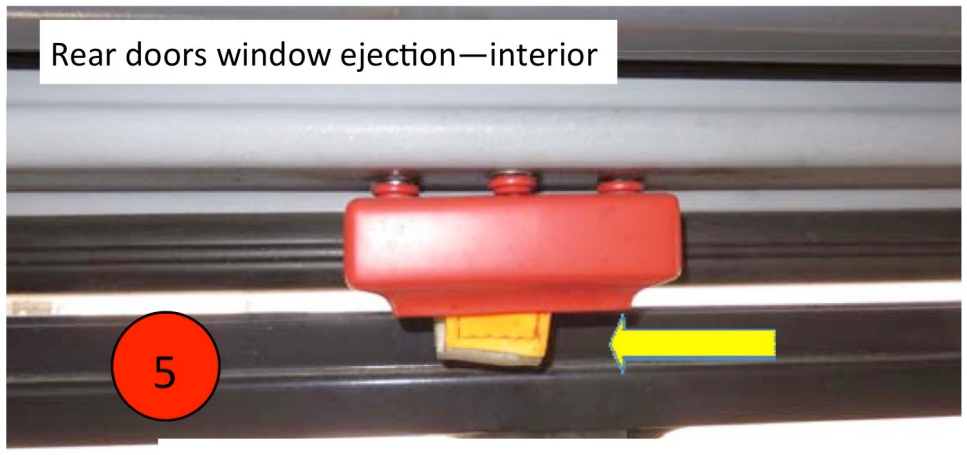


EC-135 Emergency Shut Down



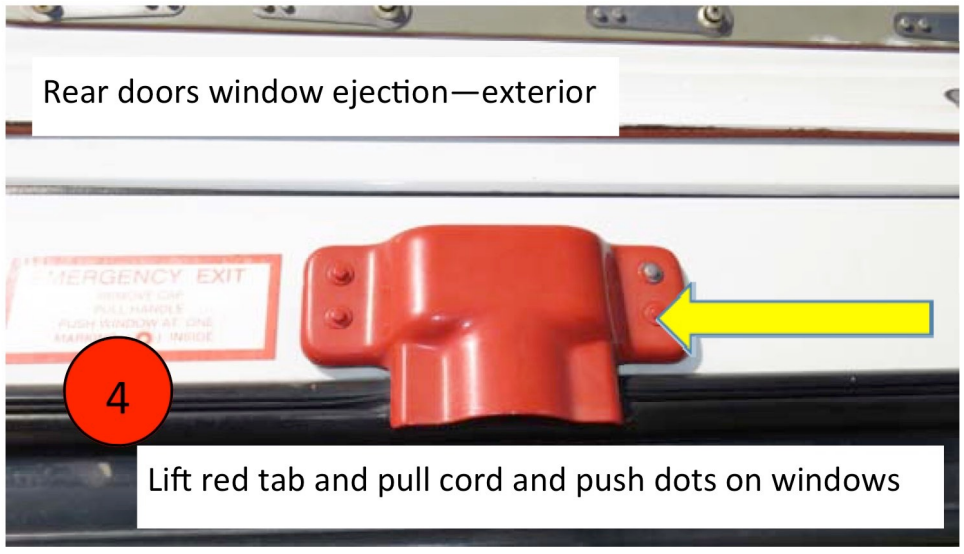
Battery Shutdown and off position of ENG switches

Move BAT MSTR switch to center position (OFF)



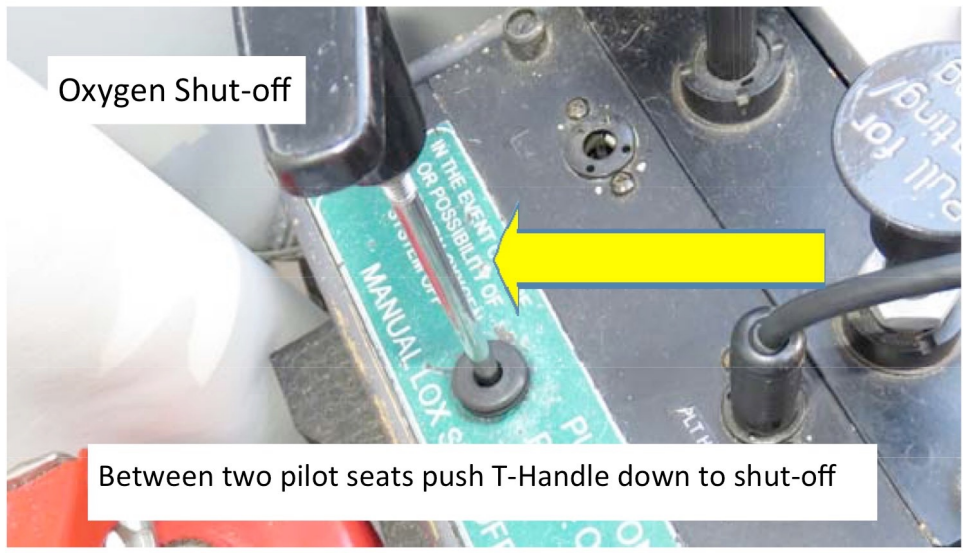
Rear doors window ejection—interior

Pull cord and push on dots on bottom of window



Rear doors window ejection—exterior

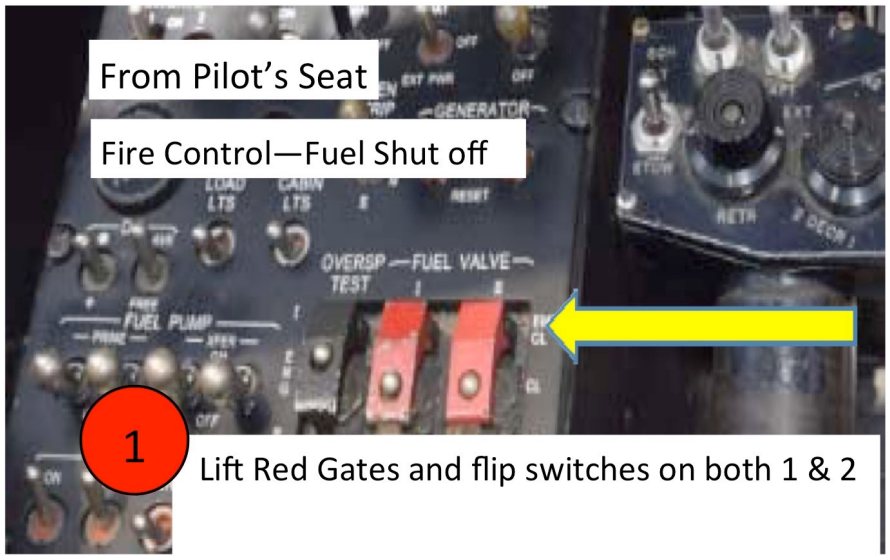
Lift red tab and pull cord and push dots on windows

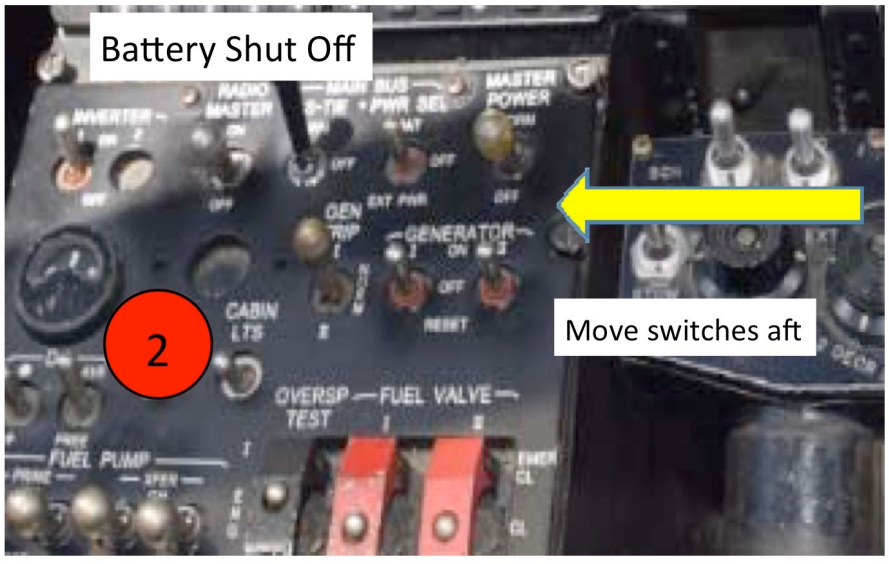


Oxygen Shut-off

Between two pilot seats push T-Handle down to shut-off

BK-117 Emergency Shut Down





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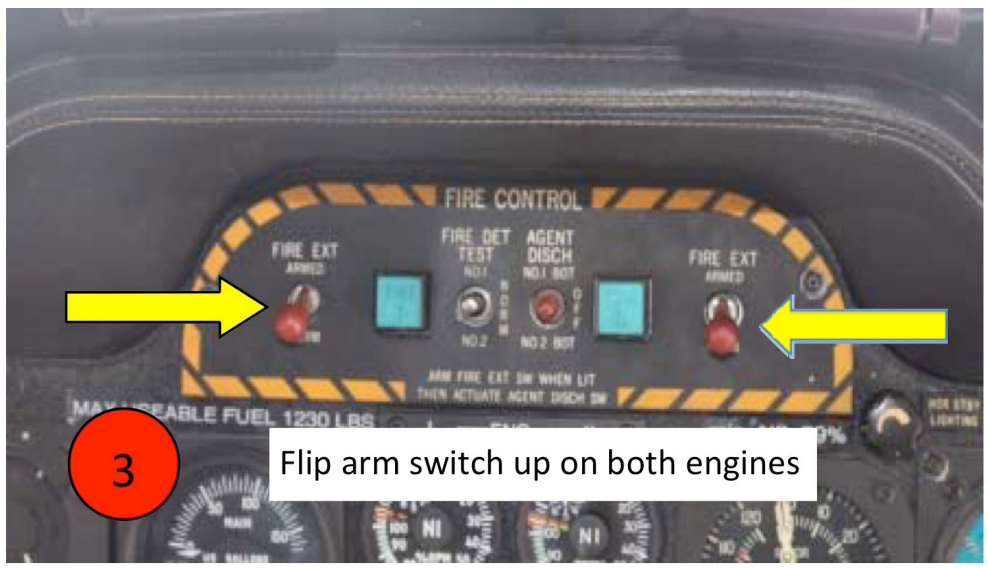
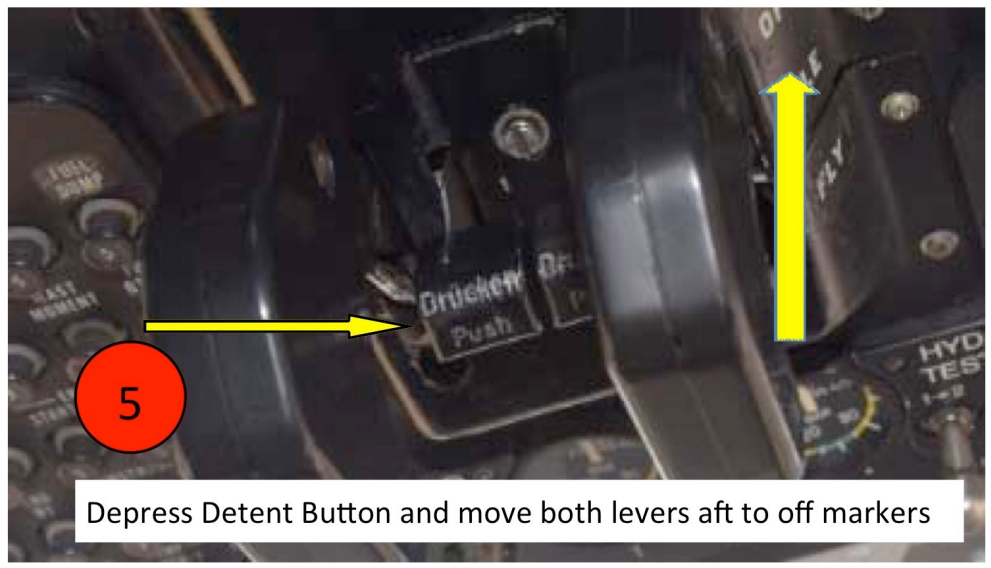
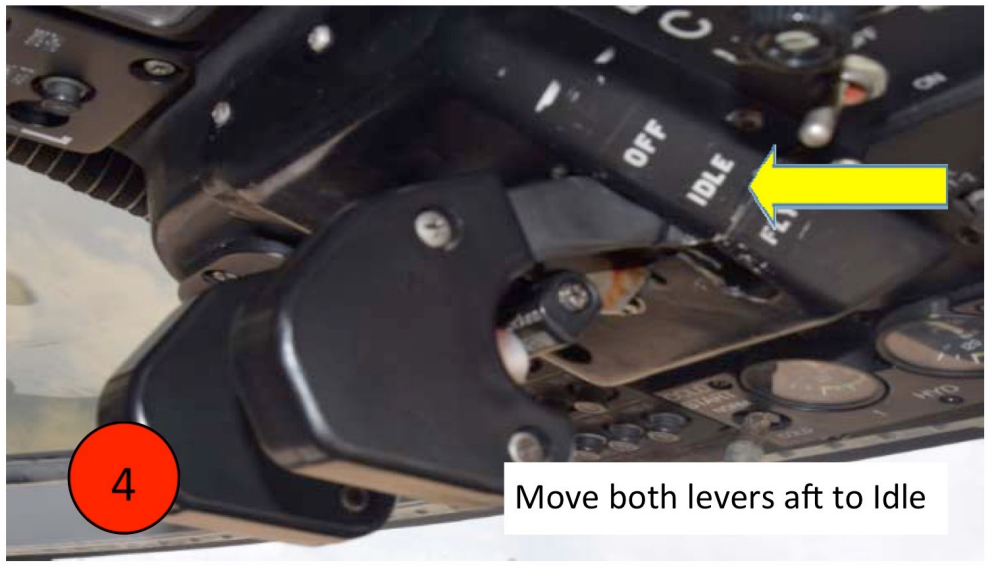
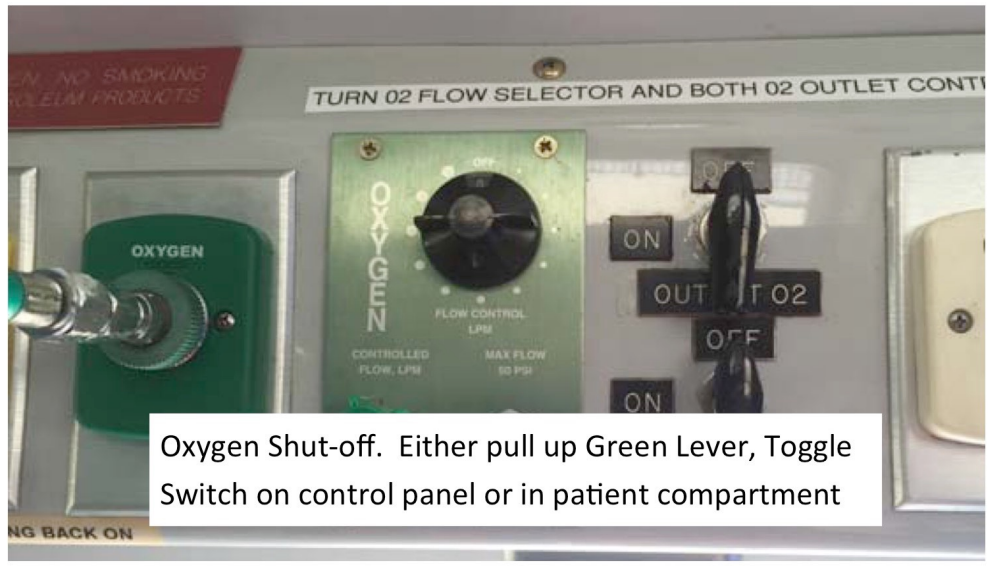
BK-117 Emergency Shut Down

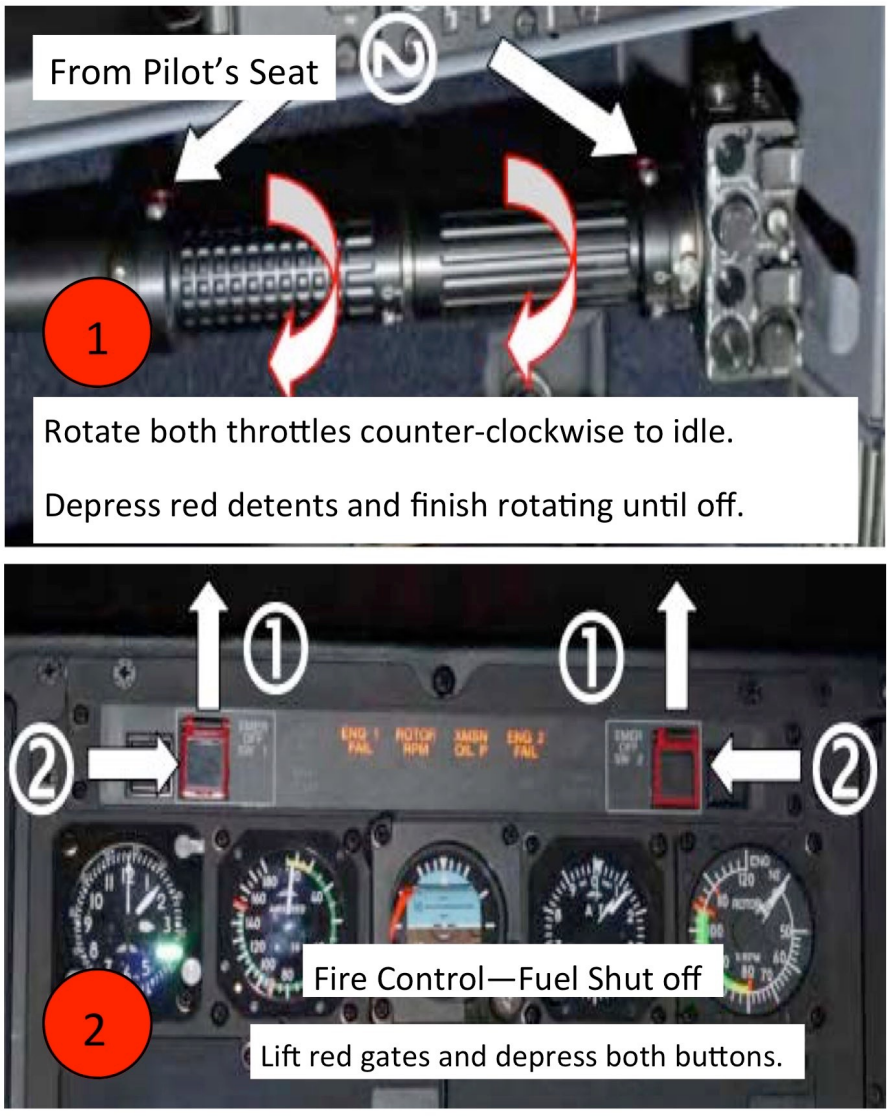






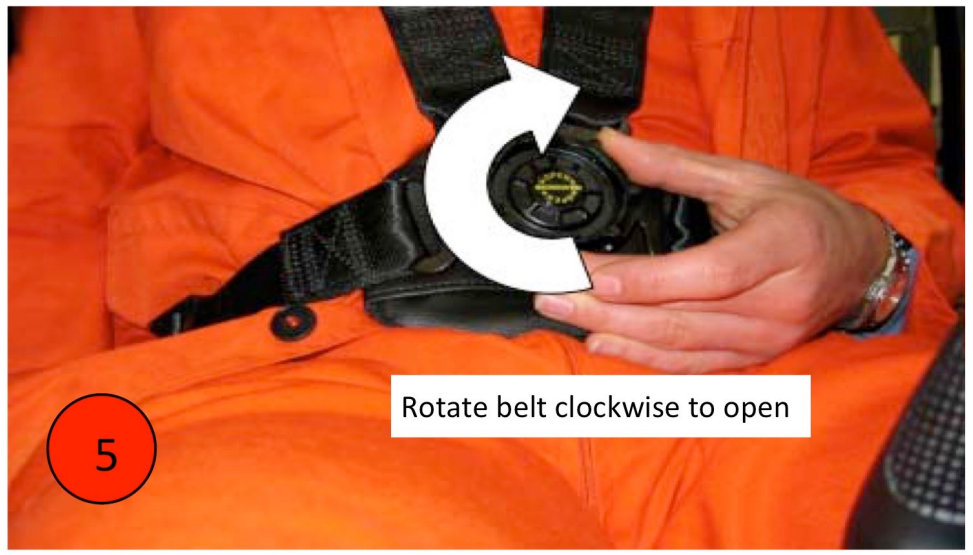


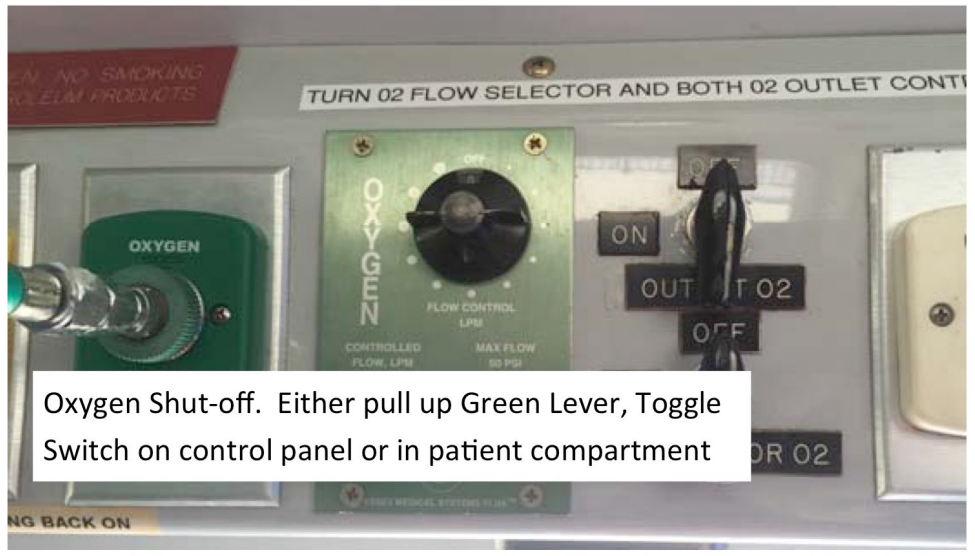
EC-145 Emergency Shut Down



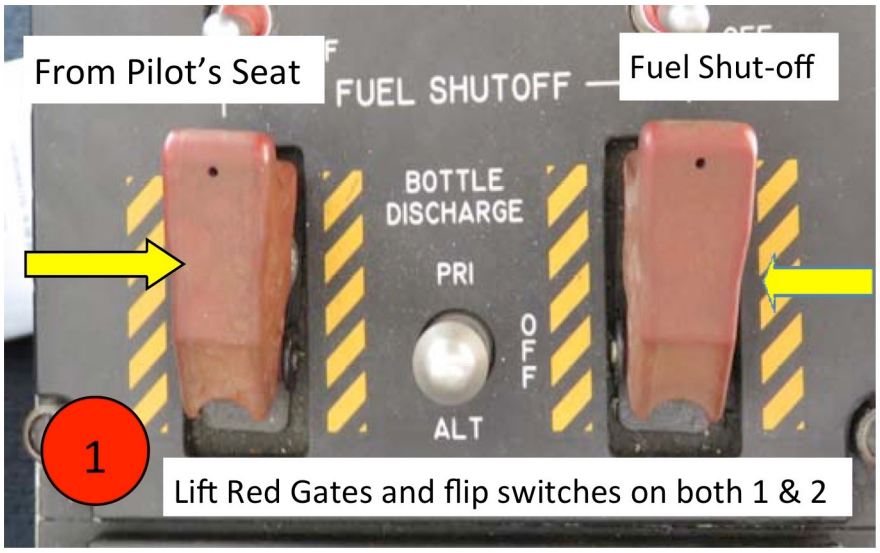
Children's Mercy HOSPITALS & CLINICS Kansas City SM

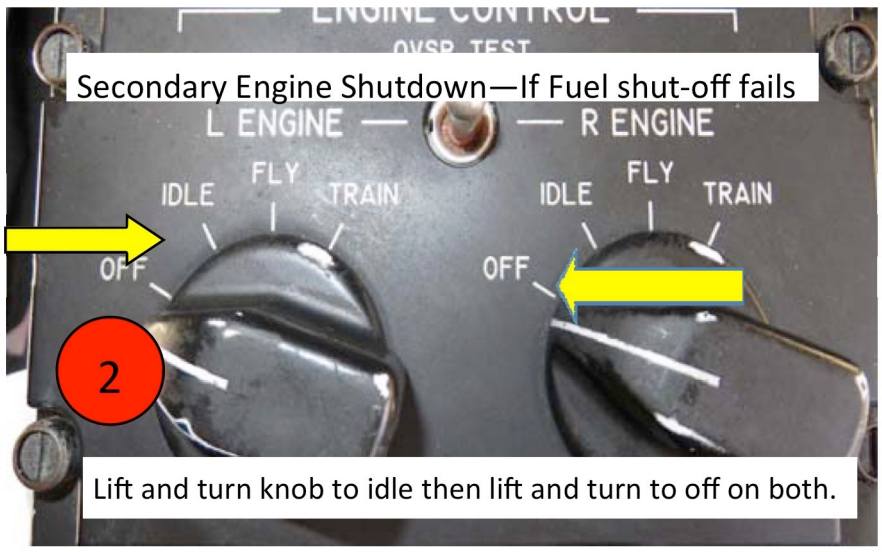
EC-145 Emergency Shut Down





MD-902 Emergency Shut Down





CoxHealth

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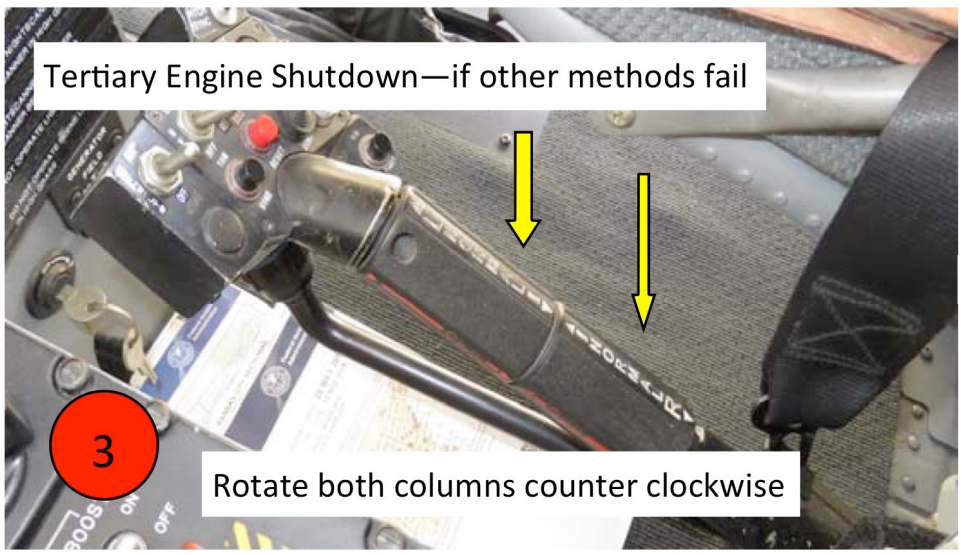
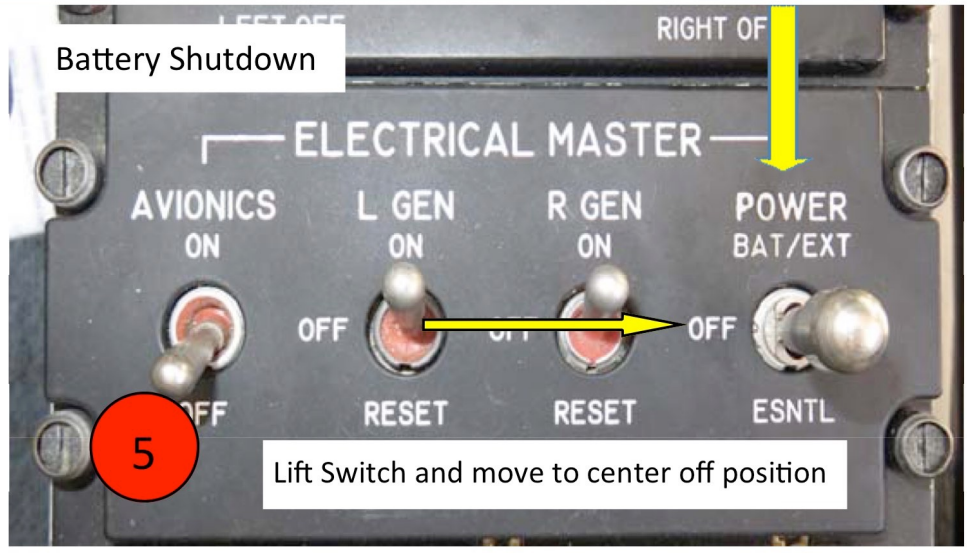
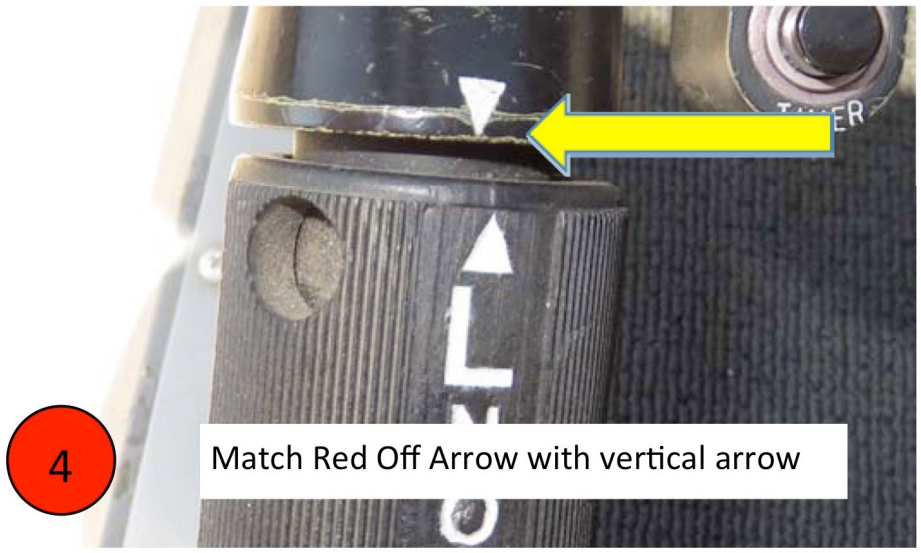
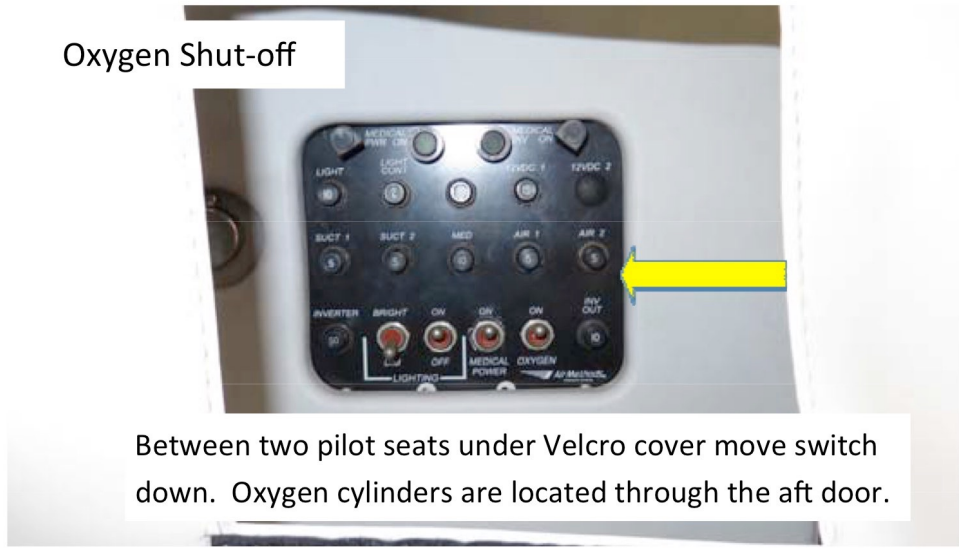
MD-902 Emergency Shut Down









Carbon Monoxide

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oone County Fire Protection District

Carbon Monoxide Evaluation Report

2201 I-70 DR NW

Columbia, MO 65202

www.bcfdmo.com

(573) 447-5000

The Boone County Fire Protection District is responding to your request to evaluate a carbon monoxide detector sounding or a concern about the possible presence of carbon monoxide in your residence. There are many potential sources of carbon monoxide production. These include: a running automobile in an enclosed garage, running gasoline-powered equipment (generators, chain saws, etc) inside a structure, natural gas-powered appliances (furnaces, hot water heaters, etc.), a blocked chimney or furnace vent, etc. The National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) have established the following threshold limits for an exposure to carbon monoxide:

1. Ambient Air Quality: 9 ppm (EPA) This is for an average over 8 hours.

2. Time Weighted Average (TWA): 35 ppm (OSHA) This is the 8-hour day, 40-hour work week limit. If not otherwise stated TWA's are for an 8-hour exposure period.

3. Immediately Dangerous to Life and Health (IDLH): 1500 ppm This is the exposure limit that would produce serious impairment or death after 30 minutes of exposure. (OSHA)

The highest reading that was taken in your home was:

_____ ppm

This reading was taken in the following area:

_____

_____

If levels are above 9 ppm we strongly recommend that the building not be occupied until the source is determined and the problem corrected.

The Boone County Fire Protection District will not assess mechanical equipment for carbon monoxide production. You need to contact a reputable service company to evaluate the mechanical systems in your home. Following any corrective action by a reputable service company, we will be happy to perform atmospheric monitoring for carbon monoxide in your home. Please call the Fire District Office at 573-447-5000 (Monday - Friday, 8 am - 5 pm) to make an appointment.

Completed by: _____

Date: _____

Owner/Occupant:_____

Preventing Carbon Monoxide Problems

Quick Facts...

- Hundreds of Americans die every year from carbon monoxide (CO) poisoning.
- Carbon monoxide in the home can come from many sources.
- If you experience CO poisoning symptoms, get fresh air immediately and go to an emergency room.
- Prevention is the key to protecting you and your family.
- Make sure your CO alarm meets the requirements of Underwriters Laboratories (UL) or International Approval Service (IAS).

What Is Carbon Monoxide?

- You cannot see or smell carbon monoxide (CO), but at high levels it can kill a person in minutes. It is the leading cause of poisoning death, with over 500 victims in the United States each year.
- Carbon monoxide is produced whenever a fuel such as gas, oil, kerosene, wood or charcoal is burned. The amount of CO produced depends mainly on the quality or efficiency of combustion. A properly functioning burner, whether natural gas or liquefied petroleum gas (LPG), has efficient combustion and pro-

duces little CO. However, an out-of-adjustment burner can produce life-threatening amounts of CO without any visible warning signs.

• When appliances that burn fuel are maintained and used properly, the amount of CO produced usually is not hazardous. But if appliances are not working properly or are used incorrectly, dangerous levels of CO can collect in an enclosed space. Hundreds of Americans die accidentally every year from CO poisoning caused by malfunctioning or improperly used fuel-burning appliances. Many more people are harmed to some degree each year.

Common Sources of CO in Homes

• Accumulation of combustion gases can occur when a blocked chimney, rusted heat exchanger or broken chimney connector pipe (flue) prevents combustion gases from being exhausted from the home. CO also can enter the home from an idling car or from a lawnmower or generator engine operating in the garage.

• Another source for CO is backdrafting. When ventilation equipment, such as a range-top vent fan, is used in a tightly sealed home, reverse air flow can occur in chimneys and flues. An operating fireplace also can interact with the flue dynamics of other heating appliances. Again, backdrafting may result.

• Other common sources of CO include unvented, fuel-burning space heaters (especially if malfunctioning) and indoor use of a charcoal barbecue grill. CO is produced by gas stoves and ranges and can become a problem with prolonged, improper operation -- for example, if these appliances are used to heat the home. Flame color does not necessarily indicate CO production. However, a change in the gas flame's color can indicate a CO problem. If a blue flame becomes yellow, CO often is increased.

• While larger combustion appliances are designed to be connected to a flue or chimney to exhaust combustion byproducts, some smaller appliances are designed to be operated indoors without a flue. Appliances designed as supplemental or decorative heaters (including most unvented gas fireplaces) are not de-

signed for continuous use. To avoid excessive exposure to pollutants, never use these appliances for more than four hours at a time.

• When operating unvented combustion appliances, such as portable space heaters and stoves, follow safe practices. Besides observing fire safety rules, make sure the burner is properly adjusted and there is good ventilation. Never use these items in a closed room. Keep doors open throughout the house, and open a window for fresh air. Never use outdoor appliances such as barbecue grills or construction heaters indoors. Do not use appliances such as ovens and clothes dryers to heat the house.

• Inspect heating equipment. To reduce the chances of backdrafting in furnaces, fireplaces and similar equipment, make sure flues and chimneys are not blocked. Inspect metal flues for rust. In furnaces, check the heat exchanger for rust and cracks. Soot also is a sign of combustion leakage. When using exhaust fans, open a nearby window or door to provide replacement air.

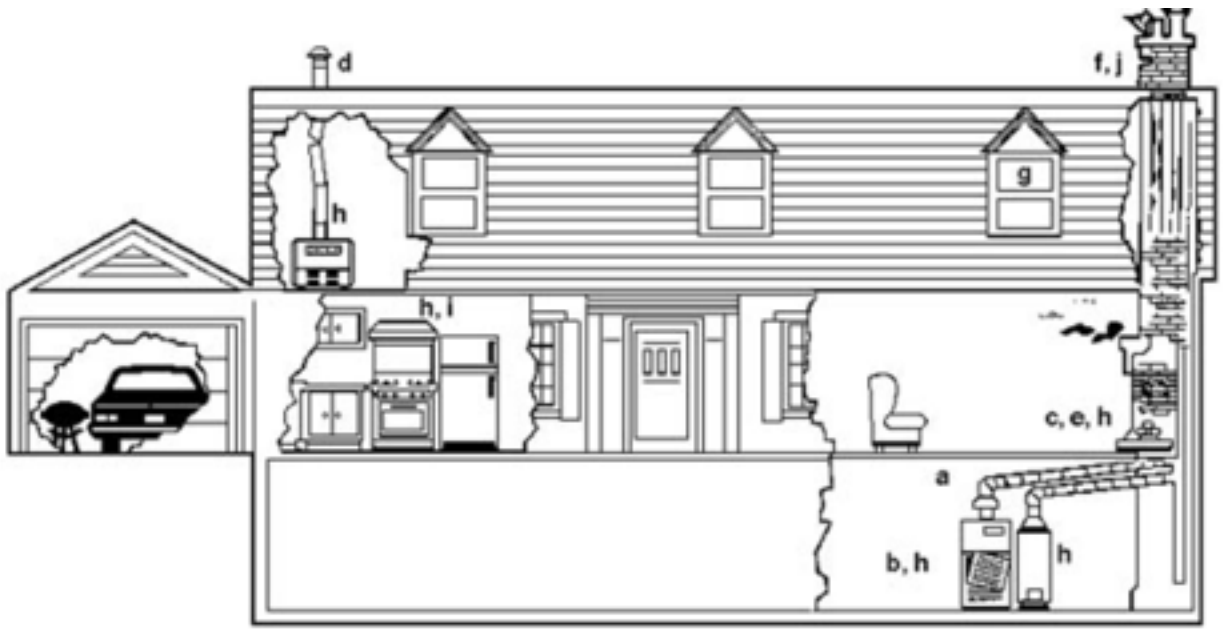

Figure 1: Sources of and clues to a possible carbon monoxide problem.

CO clues you can see:

a. Rusting or water streaking on vent/chimney.

b. Loose or missing furnace panel.

c. Sooting.

d. Loose or disconnected vent/chimney connections.

e. Debris or soot falling from chimney, fireplace or appliance.

f. Loose masonry on chimney.

g. Moisture inside of windows.

CO clues you cannot see:

h. Internal appliance damage or malfunctioning components.

i. Improper burner adjustment.

j. Hidden blockage or damage in chimney.

Only a trained service technician can detect hidden problems and correct these conditions!

Warnings:

- Never leave a car running in a garage, even with the garage door open.
- Never burn charcoal in houses, tents, vehicles or garages.
- Never install or service combustion appliances without proper knowledge, skills and tools.
- Never use a gas range, oven or dryer for heating.

• Never operate unvented gas-burning appliances in a closed room or in a room in which you are sleeping.

Adapted from "The Senseless Killer," U.S. Consumer Product Safety Commission, Washington, D.C.

CO Poisoning Symptoms

• The initial symptoms of CO poisoning are similar to the flu but without the fever. They include headache, fatigue, shortness of breath, nausea, dizziness, vomiting, disorientation, and loss of consciousness.

• In more technical terms, CO bonds tightly to the hemoglobin in red blood cells, preventing them from carrying oxygen throughout the body. If you have any of these symptoms and if you feel better when you go outside your home and the symptoms reappear when you go back inside, you may have CO poisoning.

• If you experience symptoms that you think could be from CO poisoning, get fresh air immediately. Open doors and windows, turn off combustion appliances, and leave the house. Go to an emergency room and tell the physician you suspect CO poisoning.

• If CO poisoning has occurred, it often can be diagnosed by a blood test done soon after exposure.

• Be prepared to answer the following questions for the doctor:

Do your symptoms occur only in the house?

Is anyone else in your household complaining of similar symptoms?

Did everyone's symptoms appear about the same time?

Are you using any fuel-burning appliances in the home?

Has anyone inspected your appliances lately?

Are you certain these appliances are properly working?

- Because CO is a colorless, tasteless, and odorless gas that is quickly absorbed by the body and the symptoms often resemble other illnesses, it is often known as the “silent killer.”

Prevention Is the Key

- At the beginning of every heating season, have a trained professional check all your fuel-burning appliances: oil and gas furnaces, gas water heaters, gas ranges and ovens, gas dryers, gas or kerosene space heaters, fireplaces and wood stoves. Make certain that the flues and chimneys are connected, in good condition and not blocked.

- Whenever possible, choose appliances that vent fumes to the outside. Have them properly installed, and maintain them according to manufacturers' instructions. Read and follow all instructions that accompany any fuel-burning device. If you cannot avoid using an unvented gas or kerosene space heater, carefully follow the cautions that come with the device. Use the proper fuel and keep doors to the rest of the house open. Crack a window to ensure enough air for ventilation and proper fuel burning.

- These problems could indicate improper appliance operation:

  Decreasing hot water supply.

  Furnace unable to heat house or runs constantly.

  Sooting, especially on appliances and vents.

  Unfamiliar or burning odor.

  Increased condensation inside windows.

Proper installation, operation and maintenance of combustion appliances in the home are most important in reducing the risk of CO poisoning. Some rules are:

- **Never** idle the car in a garage, even if the garage door is open. Fumes can build up very quickly in the garage and living area of your home.
- **Never** use a gas oven to heat your home, even for a short time.
- **Never** use a charcoal grill indoors, even in a fireplace.
- **Never** sleep in a room with an unvented gas or kerosene space heater.
- **Never** use any gasoline-powered engines (mowers, weed trimmers, snow blowers, chain saws, small engines or generators) in enclosed spaces.
- **Never** ignore symptoms, particularly if more than one person is feeling them. You could lose consciousness and die if you do nothing

Install Carbon Monoxide Alarms

In recent years, CO alarms have become widely available. When selecting a CO alarm, make sure it meets the stringent requirements of Underwriters Laboratories (UL) or International Approval Service (IAS). Modern CO alarms can provide warnings for even nonlethal levels of this dangerous pollutant. However, do not think of the alarm as the "be all, end all" to alert you to dangerous CO levels. The U.S. Consumer Product Safety Commission recommends having at least one CO alarm in every home, placed outside of the sleeping area. Homes with several sleeping areas require multiple alarms.

Look for an alarm with a long-term warranty and one that easily can be self-tested and reset to ensure proper functioning. Consumer organizations such as Consumer Reports occasionally evaluate these devices. Some general points to consider before buying a CO alarm:

- Some inexpensive alarms consist of a card with a spot (spot detectors) that changes color in the presence of CO. The absence of an audible signal does not

meet UL or IAS requirements for alarms, so these devices do not provide adequate warning of CO.

- Some CO alarms have a sensor that must be replaced every year or so. The expense of this part should be a factor in purchase decisions.

- Battery-operated alarms are portable and will function during a power failure, which is when emergency heating might be used. Batteries must be replaced, although some alarms have long-life batteries that will last up to five years.

- Line-powered alarms (110 volt) require electrical outlets but do not need batteries. They will not function during a power failure. Some line-powered alarms have battery backups.

- Some alarms have digital readouts indicating CO levels. Alarms with memories can help document and correct CO problems.

If the CO detector alarm sounds:

- Make sure it is your CO detector and not your smoke detector.

- Check to see if any member of the household is experiencing symptoms of CO poisoning. If you suspect poisoning, get everyone out of the house immediately and seek medical attention. Tell the doctor that you suspect CO poisoning.

- If no one is feeling symptoms, ventilate the home with fresh air. Turn off all potential sources of CO: your oil or gas furnace, gas water heater, gas range and oven, gas dryer, gas or kerosene space heater, and any vehicle or small engine.

- Have a qualified technician inspect your chimneys and fuel-burning appliances to make sure they are operating correctly and that nothing is blocking the fumes from being vented out of the house.

If you have any concerns or questions regarding our services or the manner in which they were delivered, please do not hesitate to contact us.

The Boone County Fire Protection District is here to offer you

“A helping hand”

Boone County Fire Protection District

Carbon Monoxide Evaluation Checklist

Part I. Incident Information

Incident Address: _____

Time of Alarm: _____ Time of Actual Atmospheric Monitoring: _____

Monitor ID #:_____ Was Fresh Air Calibration Completed □ Yes □ No

Part II. Questions To Ask The Occupant

Is the home/business CO detector alarm sounding? □ Yes □ No

If “Yes”, since when: _____

Are any of the occupants experiencing:

□ Headache? □ Fatigue? □ Nausea? □ Dizziness? □ Confusion?

Since the CO detector activated have you shut off CO sources: □ Yes □ No

Have you ventilated the home by opening doors/windows since you called: □ Yes □ No

If the answer is yes, the carbon monoxide levels will probably be reduced.

1. Monitor CO levels and record findings.

2. Close the house up and monitor again in 15 minutes.

Do you have a natural gas, propane or fuel oil furnace: □ Yes □ No If the possible source of the carbon monoxide build up is from the furnace, strongly recommend that their furnace be checked by a qualified service company.

Have any vehicles been running in the garage of the home/building: □ Yes □ No

Have you been using other heating sources, such as a wood stove or portable kerosene heater: □ Yes □ No

Have you been using any ventilation or exhaust fans: □ Yes □ NoThis could produce low pressure inside the occupancy causing down drafts to occur in flues.

Part III. Atmospheric Monitoring Results

The highest reading that was taken in the structure was: _____ ppm

This reading was taken in the following area:

_____

Part IV. Completed By:

□ Check box to verify that the BCFPD Carbon Monoxide Evaluation Report was given to:

Owner/Occupant: _____

Checklist Completed By: _____ Date: _____

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Change Log

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Change Log

Standard -	Video Link -

Date	Change
2017-07-01	Version 2.1
2017-08-10	Added Helicopter Emergency Shutdown section to appendix
	Updated SCBA Drill
	Updated Natural Corer Fire Passport
	Updated OFA, PS1, and PS2 tactic wording for consistence
2017-08-14	Removed duplicate wording in roadway incident checklists
2017-12-18	Added EMS Protocol Section
	Added Carbon Monoxide Appendix
	Added US&R side naming graphic
	Added Position Description
	Added EAP contact information
2018-01-01	Version 3.0

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Glossary

1800 Hours Radio Test - Daily radio test at 1800 hours. Important announcements for the evening like training locations and times are broadcast then.

360 Complete - Tactical benchmark signifying all sides of the area of operations have been visualized and a secondary size up transmitted.

4 Gas Monitor - Equipment used to detect levels of four gases in air. Oxygen, Carbon Monoxide, Hydrogen Sulfide, and Lower Explosive Limit calibrated to Methane.

A Post - Post closest to the front of a motor vehicle that connects the main body of the vehicle to the roof.

ABC Dry Chemical - A dry chemical powder used in fire extinguishers suitable for using on a class A, B, or C fire.

Adjustable Gallonage Nozzle - Fire nozzle that allows for the adjustment of the GPM flow rate using a dial on the nozzle. Default position for 1 3/4” hotline should be 125 gpm and for 2 1/2” hose lines 250 gpm.

All Call - A tone that opens all Fire District pagers. Happens each time a squad is dispatched to an emergency, during the 1800 hours radio test, and when a request for more personnel occurs at an incident scene.

Alpha Side - Front side of the fire building, usually front door facing the street, but may be facing parking area where first apparatus arrives

Apparatus Operator - Individual that is tasked with driving and operating any piece of fire apparatus

Attack Engine - The first arriving Engine on a structure fire

Authorized Cancel - Originates from an alarm company that there is first hand information that there is no emergency at the location where the alarm was activated after joint communications received the call.

B Post - Next post after the A post of a motor vehicle. This post connects the main body of the vehicle to the roof.

Battalion - Radio identifier for rank of Battalion Chief

BCJC - Abbreviation for Boone County Joint Communication

Boone County - Boone County Joint Communications radio identifier

Box Crib - Temporary wooden structure used to support heavy objects, typically used during vehicle accidents and structural collapse

Bravo Side - Designator for the second side of the building when lettering clockwise from the Alpha Side.

C Post - Next post after the B post of a motor vehicle. This post connects the main body of the vehicle to the roof.

CAD - Computer Aided Dispatching

CAFS - Compressed Air Foam System

CAN Report - Report from a crew to command describing the current **C**onditions at their location, **A**ctions they are currently taking, and any logistical **N**eeds.

Captain - Radio Identifier for rank of Captain

Car - Radio identifier for the rank of Lieutenant or Firefighter. Numbers 16-19 are Lieutenants, 20-60 are Firefighters.

Carbon Monoxide (CO) - A colorless, odorless gas, caused by incomplete combustion. Exposure to carbon monoxide decreases the ability of the blood to carry oxygen to the tissues. Inhalation of carbon monoxide may cause headache, nausea dizziness, weariness, rapid breathing, unconsciousness, and death. High concentrations may be rapidly fatal without producing significant warning symptoms.Vapor density (Air =1) - 0.97

Charlie Side - Designator for the third side of the building when lettering clockwise from the Alpha Side. This is typically the rear of a structure.

Chief - Radio identifier for Chief Officers (Fire Chief, Deputy Chief, and Assistant Chief)

Class A Fire - A fire involving combustibles such as wood, paper, and other natural materials.

Class A Foam - Foam product use on class A fires. Class A foam is used in all CAFS systems. Supplied in a square bucket.

Class B Fire - A fire involving flammable liquids such as gasoline or other fuels.

Class B Foam - Foam product used on class B fires. Supplied in a round bucket.

Class C Fire - A fire involving energized electrical equipment such as motors, transformers and appliances.

Class D Fire - A fire involving combustible metals such as lithium, potassium, or magnesium.

Cold Zone - Area furthest from the hot zone and free from contamination. Operations in the cold zone include the command post, staging, rehab, and treatment.

Collapse Zone - The area around a structure that would contain debris if the building were to collapse. This is generally 1.5x the height of the structure.

Command Aide - Individual assigned to assist the incident command in the command post. When in a vehicle the command aide is to be positioned in the front passenger side seat. Responsibilities of the command aide include: handling all radio traffic on the main dispatch channel, forming crews, managing the command board, keeping notes, anticipate needs of the

incident, assist incident commander in critical thinking, and act as buffer between personnel in staging and the incident commander.

Command Board - System for identification and tracking of personnel at an incident, especially those entering and leaving an IDLH area; intended to permit rapid determination of who may be at risk or lost during sudden changes at the scene.

Command Post - Designated area where the Incident Commander is located. This is the check-in/accountability location where tactical assignments are given.

Complainant - Person who called 911 and reported the emergency.

Crew - A group of between two and five members working together to accomplish an assigned tactic to task. Crew members report to the crew leader.

Crew Leader - Individual identified to lead a crew. The crew is identified using the crew leaders last name. The crew leader is responsible for maintaining accountability of the crew members, monitoring radio traffic, knowing who the crew reports to, and ensuring the assigned tactic or task is completed.

Cross Streets - Roads on either side of the incident address.

Decontamination - The act of removing contaminants from a surface.

Defensive Strategy - Overall strategy of an incident that will involve crew operating outside of the collapse zone. Used when fighting the fire directly or from within a structure is not feasible due to dangers from direct flame, heat, structural collapse or the presence of hazardous materials. Often structures which are fully involved are attacked defensively with the main goal being the protection of nearby exposures.

Delta Side - Designator for the fourth side of the building when lettering clockwise from the Alpha Side.

Direct Attack - Method of attacking a natural cover fire that consist of using rakes, blowers, and water packs to attack the fire directly.

Division - A supervisory level that divides the incident into geographic areas of operational responsibility.

Drafting - The act of using a engine to draw water out of a static water source including a fold-a-tank or pond using specialized equipment for use in fire fighting operations.

Eductor - Piece of equipment that allows the proportioning and introduction of foam into a hose line

Emergency Alert Button (EAB) - Orange button located on the top of portable radios and remote speaker mics used in a mayday or emergency situation. Pressing the EAB will cause an

alert tone to be heard and the radios identifier to be shown on the display screen of all other radios on that frequency including Boone County Joint Communications.

Engine - Radio Identifier for an Engine Carries 750 gallons of water, extrication equipment, and an assortment of other tools. 1250 gpm pump capacity. Example: E101 is the Engine at Station 1.

Entry Point - Location used by a crew to enter a structure.

Exposure - People, properties, systems, or natural features that are or may be exposed to the harmful effects of a fire or hazardous material.

Extrication - Act of removing a vehicle from around a patient involved in a motor vehicle collision that is unable to be removed or exit the vehicle using conventional methods.

Fill Site - Location used to fill tankers during a tanker shuttle operation.

Fill Site Engine - The third arriving engine to a fire event. Utilized at a location to fill tankers during a tanker shuttle operation.

Fire Box - The part of a fire place where fuel is combusted

Fire Department Connection (FDC) - Point of interface between fire department apparatus and a buildings fire suppression system.

First Hand Information - A reported emergency called in by a person who is on scene.

Flue Fire - A fire involving the flue pipe connecting a fire box to the exhaust point. Flue fires are typically fueled by the creosote lining the flue pipe but can easily extend out of the flue to the structure.

GPM - Gallons Per Minute

Grass Rig (G*06) - Small fire apparatus mounted on a pick up truck chassis. Typically used for natural cover fires and medical calls. Radio identifier is Truck.

Group - Organization level that divides the incident according to functional levels of operation. Groups perform special functions, often across geographic boundaries such as search, water supply, or ventilation.

Hazardous Material - Any item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.

Hot Zone - Area of actual or potential contamination from a hazardous substance.

Immediately Dangerous to Life and Health (IDLH) - An environment where airborne contaminants are likely to cause

death, immediate, or delayed permanent adverse health effects or prevent escape from such an environment.

In Service - Available for dispatch to an emergency.

Incident Commander (IC) - The officer in charge of all activities at an incident. When positioned in a vehicle the incident commander will be positioned in the drivers seat.

Indirect Attack - Method of attacking a natural cover fire using a back fire to stop the progress of an approaching fire by creating a burned area in its path, thus depriving the fire of fuel.

Knox Cap - A cap used to secure a FDC that requires a special key to open

Large Diameter Hose (LDH) - Fire hose 4 inches in diameter or larger. Typically used for supply purposes.

Level I Stage - Staging near the incident location in a position not committed to the incident scene and typically near the closest water source.

Level II Stage - Staging away from the incident, usually at a set location with other apparatus.

Loss Stopped/Fire Control - Tactical benchmark signifying the fire has been brought under control and will cause no further property loss.

Mark the Incident Under Control - The incident has de-escalated and no additional resources are needed.

Married Set - Tool package consisting of a flat head axe and a halligan bar.

Mayday - ANY situation where a firefighter's life or safety is in jeopardy and she/he is unable to definitively remove him/herself from the threatening situation or IDLH environment.

Medic - Refers to the ambulance unit. There are two ambulance services in Boone County, University Ambulance and Boone Ambulance.

University Ambulance - numbers start with (2) - M211, M221, M231, M241, etc.

Boone Ambulance - numbers start with (1) - M111, M121, M131,

M151, etc.

National Standard Thread (NST) - American standard fire hose coupling thread, also known as National Hose Thread. Used on all 1", 1 3/4", 2 1/2" and 3" fire hose.

NFPA 472 - National Fire Protection Association Standard for Competence or Responders to Hazardous Materials/Weapons of Mass Destruction Incidents

NFPA 1001 - National Fire Protection Association Standard for Fire Fighter Professional Qualifications

NFPA 1002 - National Fire Protection Association Standard for Fire Apparatus Driver/Operator Professional Qualifications

NFPA 1500 - National Fire Protection Association Standard on Fire Department Occupational Safety and Health Program

NFPA 1561 - National Fire Protection Association Standard on Emergency Services Incident Managment System and Command Safety

NFPA 1581 - National Fire Protection Administration Standard on Fire Department Infection Control Program

Nozzle Pattern - Characteristics of the water as it leaves the nozzle changed by adjusting the pattern selector on the end of the nozzle.

Offensive Strategy - Overall strategy of an incident that will involve crew operating inside of the collapse zone and may include entering the structure to extinguish a fire.

On Deck - Forward-staging position located just outside the immediate hazard zone, safely distanced from the entrance of a tactical position.

On Scene - Radio term identifying that the unit has arrived at the incident

Out of Service - An apparatus is not in service for a call due to a specific issue such as maintenance or mechanical issues.

Overhaul - Opening walls, ceilings, voids, and partitions to check for fire extension.

Personal Alert Safety System (PASS) - A personal safety device used primarily by firefighters entering a hazardous (IDLH) environment such as a burning building. The PASS device sounds a loud (95 decibel) audible alert to notify others in the area that the firefighter is in distress. the PASS device is integrated in the Scott 5.5 Airpak.

Personal Protective Equipment (PPE) - Protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection.

Personally Owned Vehicle (POV) - A motor vehicle licensed and registered to a member or members.

Personnel Accountability Report (PAR) - Status check of all crews initiated by the incident commander. When calling a PAR begin with crews in the area of highest hazard and work to crews in non-hazard areas. Crew leaders should report PAR when asked by stating the crew name number of members currently in the crew, location, and air status. “Crew X is par with 2 in the kitchen, air yellow”

Portable Radio - Handheld radio with a battery power supply capable of transmitting and receiving radio communications. Portable radios typically have a transmit power of 5 watts.

Primary All Clear - Tactical benchmark signifying a primary search has been completed on the entire structure.

Primary Search - Initial rapid search of a designated area of a structure for victims.

Primary Size Up - Initial observations of an incident from the cab of a vehicle provided on the main dispatch channel.

Priority Dispatching - Listed from least severe to highest severe -Omega, Alpha, Bravo, Charlie, Delta, Echo. Omega - less severe, Echo - most severe

Public Service - A request to contact an individual by private phone (typically Boone County Joint Communications). Example: “E101, public service Joint Communications.”

Quarters - Refers to the apparatus bay.

Quint - Columbia Fire Department fire apparatus. The term quint means that it has a pump, water, aerial device, ground ladders, and fire hose. Example: Q7 is a quint housed at city Station 7.

Recycle - Recycling is defined as a timely and efficient means of air replacement and re-hydration.

Reduce - Radio term to continue response to the scene without lights and siren.

Rehab - A process by which a member, operating on incident scenes or participating in training exercises, are either restored to a pre-event healthy condition which allows them to continue operating at that scene/event or they are evaluated and referred for more definitive medical care.

Report - Individual who is going to write the incident report. Typically completed by the Incident Commander.

Responding - Radio term identifying that the unit is en route to the incident with the number of personnel in the apparatus. “Boone County, E701 is responding times two.”

Rush Traffic - Radio term identifying emergent radio traffic that takes priority over all other traffic.

Second Alarm - Requested when a mayday is called on a scene. Consists of an engine, tanker, squad, and medic unit.

Secondary All Clear - Tactical benchmark signifying a secondary search has been completed on the entire structure.

Secondary Search - Methodical, detailed search of a designated area of a structure for victims.

Secondary Size Up - A 360 degree survey of a scene to allow the incident commander a better assessment of conditions and hazards.

Shore Line - Power and electrical lines attached to apparatus and equipment in a station to keep the air reservoir full and electrical equipment and batteries charged. Must be removed before moving the apparatus.

Squad (S*04) - Radio identifier for apparatus that caries specialized equipment for technical rescues and motor vehicle collisions. This apparatus carries no water for fire suppression.

Status Check - Once Command has been established at an incident scene, the dispatcher will check the incident status every 20 minutes. This is a safety check for on scene personnel and gives the IC an indication of how long operations have taken place.

Storz - Type of hose coupling that utilizes hooks and flanges. Used on all 4” fire hose.

Strategy - Overall operational strategy is divided into only two categories: offensive or defensive. We conduct offensive operations inside the hazard zone, and we conduct defensive operations out of the hazard zone. The two separate strategies create a simple, understandable and position-based game plan that describes in practical (and primitive) terms how close the emergency responders will get to the hazard area. Simply: “Understandable” means we only have to know, remember and apply two options. We either operate on the inside or from the outside, and we never do both at the same time, in the same place. Also referred to as Incident Strategy

Supply Engine - The second arriving engine on a structure fire. This engine will supply the attack engine from a hydrant or fold-a-tank.

Tactical Benchmark - The tactical objectives that must be completed in order to stabilize any fire situation. These benchmarks should be regarded as separate, yet interrelated, activities which must be dealt with.

Tactical Channel - A simplex (non-repeated) channel used to coordinate activity on an incident scene. Typical tactical channels include Gold and Yellow.

Tanker (T*05) - Radio identifier for apparatus designed to transport large quantities of water. Tankers hold 1500 gallons of water and are equipped with a 500-750 gpm fire pump.

Terminate Command - Radio term to identify the incident is closed and all units are clearing the scene.

Third Party Caller - A reported emergency that was called in by a person not on scene. A passerby at a vehicle accident.

Traffic Control Zone - The entire section of roadway between the first advance warning sign through the last traffic control device, where traffic returns to its normal path and conditions. Most temporary traffic control zones can be divided into four areas: the advance warning area, the transition area, the activity area, and the termination area.

Trauma Alert - A trauma patient that has a potentially life threatening traumatic injury. Requires transport to the University Trauma Center.

Truck - See Grass Rig

UCAAN - Mayday communication sequence for Unit, Conditions, Actions, Air, and Needs

Warm Zone (Active Assailant) - An area where a potential threat exists, but there is no direct or immediate threat.

Warm Zone (Haz-Mat) - Transitional zone between the hot zone and the cold zone. This is where crews enter and exit the hot zone and decontamination takes place.

Water on the Fire - Tactical benchmark signifying suppression activities have begun.

Water Supply - The process of retrieving water from a remote location and delivering it to the scene.

Water Supply Established - Tactical benchmark signifying a water supply has been establish.