



The Overriding Concern for ALL Fireground Operations is **SAFETY**

SAFETY

- Safety must be an organizational value
- You can't put a value on safety
- You can put a price on the consequences

Common Operation Casualties

Fatalities

- 2009: 93 FG 28 MVA 18
- 2008: 118 FG 29 MVA: 24
- 2007: 118 FG 36 MVA: 24

Injuries

- 2008: 40,000
- 2007: 44,000

Structural Fire Risk Analysis

Building Characteristics

- Construction Type & Size
- Structural Condition
- Occupancy & Contents

Structural Fire Risk Analysis

Fire Factors

- Location and Extent of Fire
- Estimated Time of Involvement
- What are Smoke Conditions Telling Us?
- How Far can Fire Spread?

10 Rules of Engagement for Structural Firefighting

- Acceptability of Risk
- 1. No Building or Property is Worth the Life of a Firefighter
 - 2008 – 28 LODD's -- fireground
 - 2007 – 36 LODD's -- fireground
 - 2007 – 44,000 inj -- fireground

Mother of all Mistakes

- Attempting to fit your "common operation" to all situations
- The 2 -1/2 story frame mentality
 - Lightweight Construction
 - Vacant Structures
 - Large Structures

How Many Multiple FF LODD's?



How many multiple civilian deaths?

Fire Service Fact

- **NO** firefighters are tougher than:
 - Fire
 - Electricity
 - Buildings that fall down
 - Moving vehicles

Tactical Mistakes

- **Prior to the Incident**
- **Failure to Enforce PPE Policy**
 - A direct CO responsibility
 - Is it enforced?

Safety must be a Dept. value

Violations can NEVER be overlooked

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- **Wear PPE Properly**
 - Connect your Waist Straps
 - Wear your Hood
 - Chin Strap belongs Under Your Chin, NOT on the Back of Your Helmet
 - When should this be addressed???



video

Tactical Mistakes

- Arrival and Operations
- Failure to Respect that the fire can actually Burn and Kill you

10/25

10 Rules of Engagement for Structural Firefighting

- Acceptability of Risk
2. All Interior Firefighting Involves an Inherent Risk
- Risk Minimized by:
 - SOP's / Training / Education
 - Structured Command
 - Discipline
 - Recognition of Hazards
 - Accountability System
 - Tactical Reserve
 - DON'T BE AFRAID TO CALL MORE PEOPLE!!!

10 Rules of Engagement for Structural Firefighting

- Acceptability of Risk
3. Some Risk is Acceptable in a Measured and Controlled Manner
- Monitoring Risk Allows for a Continuous Evaluation of Operational Tenability

10 Rules of Engagement for Structural Firefighting

- Acceptability of Risk
- 4. NO Level of Risk is Acceptable Where There is NO Potential to Save Lives or Save Property
- Fully Involved Buildings are Usually not the Place where Live Victims Will be Found

10 Rules of Engagement for Structural Firefighting

- Acceptability of Risk
- 5. Firefighters Shall NOT be Committed to Interior Offensive Firefighting Operations in Abandoned or Derelict Buildings
- Consider presence of Squatters
 - IC Must decide on case-by-case basis
- Building Marking Systems Minimize Amount of Unknown Hazards

Vacant Bldgs

18.1 LODD's
per 1,000 fires in
vacant buildings

WHY SO HIGH??

Vacant Buildings

- Open them up before entering
- Strict control
- Multiple means of egress
- Pessimistic approach
- Don't risk your neck tonite for something that will be put in a dumpster tomorrow

10 Rules of Engagement for Structural Firefighting

- Risk Assessment
6. All Feasible Measures Shall be Taken to Limit or Avoid Risks Through Risk Assessment by a Qualified Officer
- ALL Officers and Firefighters MUST Make Safety Their Business
 - Unsafe Actions and Conditions are Absolutely UNACCEPTABLE

It goes back to
SETTING EXPECTATIONS

10 Rules of Engagement for Structural Firefighting

- Risk Assessment
- 7. It is the Responsibility of the I.C. to Evaluate the Level of Risk in Every Situation
- The IC's Decision Making Process is only as Good as the Info Being Received from Operational Areas
 - Informed Decisions are Safe Decisions
- GET REPORTS

Unsafe actions

- The most unsafe action on the fireground is FREELANCING
- How do you prevent it?????

Task Assignment Model (Decentralized Command Ops)

1. Stay Together as a Unit
2. Report to C.P. for Assignment
3. Report to Assigned Operational Area
 - Report Progress to Area Supervisor
4. Operate in Assigned Area
5. When Relieved, Report Back to C.P. for Reassignment or Rehab
6. If Reassigned, Go Back to Step #3
7. When Rehab is Complete, Go to Step #2

10 Rules of Engagement for Structural Firefighting

- Risk Assessment
- 8. Risk Assessment is a Continuous Process for the Entire Duration of the Incident
 - Essentially Size Up
 - Consider the Fireground Extremely Hazardous from Arrival to Termination
 - If You Can't Make Things Better, At Least Make Them Safe

10 Rules of Engagement for Structural Firefighting

- Risk Assessment
- 9. If Conditions Change and Risk Increases, Change Strategy and Tactics
 - Look for Strategy Change Cues.
 - DON'T Wait Change Strategy
 - You can Always Change Back
 - Being out of a Building 5 Minutes Early is Better than 5 Seconds too Late

10 Rules of Engagement for Structural Firefighting

- Risk Assessment
- 10. No Building or Property is Worth the Life of a Firefighter
 - Just in case you missed it the first time
 - SET THE EXAMPLE
 - DON'T BE THE EXAMPLE

Why?????

- Failure to set expectations
- Failure to care
- Failure to Train
- Failure to Be Responsible for your duties
- **FAILURE TO SUPERVISE!!!**

100%

100%

100%

Supervision

NEVER
turn your head

U R Accountable

Safety Officer Duties

- Should be "all over the fireground"
 - Not doing Job by Hanging out at the CP
- Monitor Radio Transmissions
 - Go to Where the Problems Are
- Should not be a Safety Cop
 - Disciplined Ops allow S.O. to see the Big Picture

Battle-Ready Training

- Teach first, ensure the skill
- Pressure next
- Above all, teach them to

**PAY
ATTENTION!!!!**

Training

- Safety is **ALWAYS** the first consideration
- Built into every drill

2007-09: 24 Training Fatalities
20,000 + Training injuries

Statistics exist for 1 reason:
So you don't become one

Discipline

- THE Backbone of the organization
- Company Integrity
- PPE regs
- SOP adherence
 - Initial scene assignments
 - If you are assigned somewhere, get there
- Lack of discipline makes ALL dept. safety mechanisms and SOP's not worth the paper they are written on

Your Plan

Must meet 3 primary objectives of the IC:

1. Get 'em in safe
2. Work 'em safe
3. Get 'em out safe

Tactical Mistakes

- Prior to the Incident
- Failure to Enforce Safe Driving Policy
 - Another direct CO responsibility
 - Is it enforced?

Tactical Mistakes

- Arrival and Operations
- Failure to Recognize Hazardous Exposure Potential

Tactical Mistakes

- Arrival and Operations
- Failure to pay attention to your surroundings

Safety must be a Dept. value
Violations can NEVER be overlooked

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 - When should this be addressed???



Fire and Smoke Conditions

- Volume & Density & Pressure
 - Deep Seated Hot Fire
 - May Indicate Flashover
 - Obscures true seat of fire
 - Victim survival improbable

The more Pressurized the Smoke is, the bigger the problem

Building Search Considerations

- **Size up the Building before entering**
 - Where fire is and where it can go
 - Secondary means of egress
- **Count Walls as You Move**
 - Most Rooms Have 4 Walls
 - If you Wind up on the 5th Wall, Something Unusual is Occurring or You Missed an Opening = Disorientation
- **Don't Lose Contact with Your Tool**
- **Probe but keep the weight off the tool**

Building Search Considerations

- **Know the Difference between a Wall and a Door**
 - Hinges / Stops / Moldings / Knobs
 - Resistance (Door Has Give, Wall Doesn't)
- **Victims are not always alone**
 - Probe area before leaving

Building Search Considerations

- **Use Cues to Orient Yourself**
 - Floor Seams
 - Change in Floor Coverings
 - Light from Windows
 - Apparatus Lights at Night
 - Residential Door Swing
 - Toward You
 - Closets / Level Changes (Cellar / Attic)
 - Away from You
 - Other Rooms

Building Search Considerations

- Know how to Manipulate SCBA
 - NEVER Lose Orientation with your SCBA
 - Take Only as Much off as Necessary
 - Reduced profile
 - Quick Release
 - Detroit Dive

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Building Search Considerations

- Not all exits are at Floor Level
 - Feel up for Windows
- Use a "Swimming" Motion to Clear Obstacles
 - Turn SCBA Toward Floor & in corner
 - "Swim" Sideways to Clear Snag
 - Use Back of Hand

Building Search Considerations

- If You Have to Bail out on a Peaked Roof, Consider Using Tool as Lifeline
 - Allows You to Await Rescue below Danger

Searching for Fire Location

- Safety Equipment to prevent disorientation
 - Light
 - Search line
 - PASS alarm – know how to activate it in the smoke
 - Escape rope – last resort – use is an indicator of failed size-up
- Never let fire get between you and your exit point
- Plan to return to the safe door by which you entered

Searching for Fire Location

- Ventilation & Flashover
 - Not as good as water (H2O kills Flashover)
 - Can be effective if done properly
 - Vertical can relieve or delay flashover
 - Horizontal may cause flashover
 - Better to close door, call for line, get to safe area
 - Horizontal vent must ALWAYS be coordinated with attack ops
 - Need to communicate or listen

WHEN THINGS GO BAD

- Utilize established FF Down transmission
- Know where your exit points are
 - IC – announce exit paths from bldg and roof via radio
- Use the PASS device to alert fireground
 - Muffled PASS device more easily distinguished than muffled MAYDAY
 - The idea is to draw attention

WHEN THINGS GO BAD

DON'T WAIT TO SOUND THE MAYDAY

Line Advancement Guidelines

- Check the entry point
- Hoseline Management
 - No kinks, man
 - Keep stretches short
 - Do we always have to stuff everything in the front door?????



Kinks

- Can cut off MORE THAN HALF of your volume
- Eliminating kinks is everyone's job
- 2nd due Engine – it is your primary job
 - Eliminating kinks – flake it out
 - Making sure line gets to fire area without delay – support operation

Operating Above the Fire

- Let someone know you are going up there
 - Dispatch
 - Com Tech / Accountability Officer
 - Attack Team
 - Interior Division Commander
- Size up for escape routes
 - Force additional apts as escape routes
- Create barriers between you and the fire
- Listen to the radio for reports

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Operating Above the Fire

- Size up the fire below you
 - Bldg construction
 - Paths by which fire can get you
 - Location / Size and intensity of fire
 - If searching with a 3 man team, may leave a FF at the foot of the stairs to warn the search team when things go bad
 - If fire appears beyond control of FF's on attack line, DO NOT GO ABOVE!!

Operating Above the Fire

- Ops MUST be coordinated
- Attack teams MUST control door to apt. – might have to delay attack
- Withdrawing attack teams MUST ensure anyone on floor(s) above are protected or out before evacuating

Operating Above the Fire

- Understand the priorities of risk taking:
 - The **ONLY** justification for a FF risking his life is when there is a **REAL** chance to make a save
 - Cries of help
 - Victim on floor or slumped in window
 - FF's searching above a fire **SHOULD NOT** risk life for report of missing person or even high probability of person trapped above a fire
 - Be careful of vague reports

Vent, Enter, Search

- Let someone know you are going in
- Size up for egress point
- Clear out **ALL** window glass
- Probe inside window for victim, **THEN** sound floor
- If, after venting, flames explode out window, **DON'T GO IN**
 - Sweep area below window
 - Try to VES adjoining rooms

Vent, Enter, Search

- **Once inside, immediately get to and close door to room**
 - Your window opening is a vent point. If there are no others, fire may be coming **YOUR** way!
- Search room **QUICKLY**
- If conditions permit, re-open door, then retreat quickly via entry window

Vent, Enter, Search

- DO NOT go into hallway to search other rooms
- Safer to move ladder than to enter hallway and put potential fire spread between you and your egress point
- Time frame of moving ladder vs. moving victim from remote rooms back to ladder at initial entry window
 - NOT WORTH THE RISK

Cornices

- Decorative Metal Cornices
 - Unsupported extended roof edge
 - Lateral fire spread danger
 - Indicators:
 - Raised or depressed lip at roof edge
 - Offset chimney
 - Preplanning is the key
 - Size up roof from ground level

Conclusion

- Scene Safety is Everyone's Business
 - Learn Something from Every Incident
- If you can't make it Better, at least make it safe
- Attention to Detail in Regard to Safety Helps Prevent Injury and Death on the Fireground
- We are All Each Other's Keepers
