



Fire/EMS Safety, Health and Survival Week:

“Dynamic Risk Assessment-It’s More Than Just Size-Up”

Protect Yourself: *Your Safety, Health and Survival Are Your Responsibility*

Prepared By; Christopher J. Naum, SFPE

Chief of Training, Command Institute, Washington, DC

Second Vice President, International Society Fire Service Instructors

IAFC Safety Health & Survival Section, Board of Directors

Supportive media photo images used throughout this informational program are derived from a variety of sources, and are used herewith for educational support to advance firefighter safety & health. The copyright owners of these materials hold all rights and privileges.



What's Working For or Against Us?



- **Our Culture**
- **Staffing-Resources**
- **Safety System**
- **Timing-Sequencing**
- **Suppression Capabilities**
 - Initial & Sustained
 - Skill Sets & Competencies
 - Training & Knowledge
 - Experience
 - Risk Management
 - Natural/ RPDM
 - Command & Control
 - Near Miss & Close Calls
 - History Repeating Events



What can you DO?
Is Engagement an option?

Structural Fire Engagement



- Are we committing to battle plans that are faulted?
- We Don't have Effective and expandable Battle Plans (IAP)
- Time is not (really) considered... *"We almost have it chief...just a few more minutes..."*
 - We're in places we shouldn't be- wrong place, wrong time, without a good reason...
 - Think about "Predictability of Performance"
 - Officers & Crews fail to recognize crucial situational awareness cues and factors...and don't React
 - Respect and understand the building, occupancy and inherent systems
 - Recognize and understand fire behavior, physics and science principles that affect your Decisions
 - Implement Dynamic Risk Assessment
 - Look beyond "basic" Size-Up
 - Think about the Engineered Systems or renovations that impact the bldg. performance or integrity



15 minutes later, Structural Collapse ?

Where are your companies?

BECOME SAFE.....



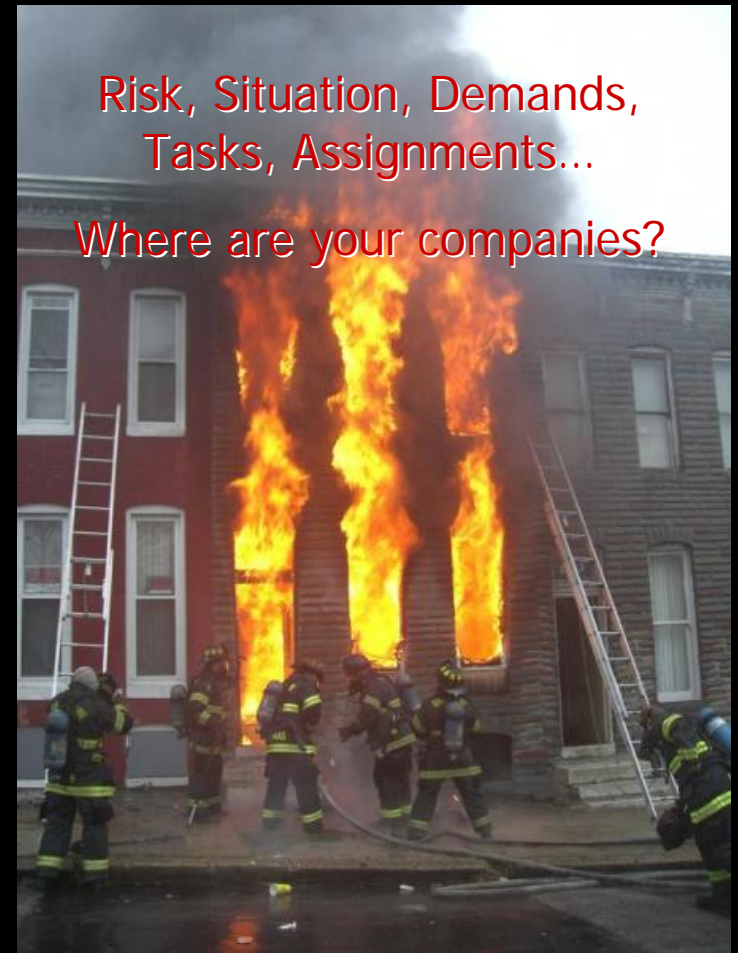
- **B**uilding
- **E**valuation
- **C**onstruction/Occupancy
- **O**perational Hazards
- **M**anage-Time & Elements
- **E**ngagement
- **S**ituational Awareness
- **A**ssessment & Analysis
- **F**ire Behavior & Effects
- **E**valuate & Execute



Dynamic Engagement



- **Risk Assessment Activities**
 - Use these activities to generate discussion and dialog
 - Promote and foster different view points based upon job duties and functions
 - Expand and add other questions to the images
 - Discuss alternatives, expand the incident based upon other defined factors
 - Use this opportunity to identify gaps and issues affecting your organization that may be brought out during discussions
 - Think in different terms, think more about safety and not about the entertainment of fire suppression
 - Think about that's the worst that can happen
 - Think about this as if your life depended on it...



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Immediate issues that are obvious.
- What don't you know?
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- There are residential structures to the right of the intersection
 - How will this factor affect your IAP and tactics?
- How will fire dynamics (behavior) affect this evolving operation?
- What is the smoke and fire profile?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For an injured firefighter?
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations

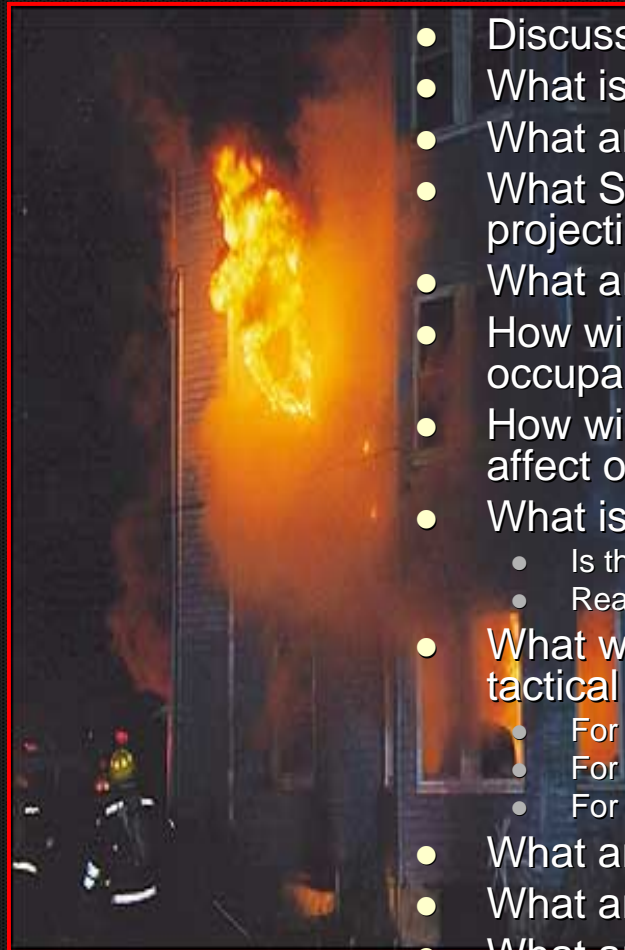


- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the roof operational factors?
- How will fire extend within a given roof system?
- How will fire dynamics (behavior) affect roof or interior operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a partial roof failure or collapse?
 - For a conventional versus trench roof cuts?
- What are the limiting factors?
- What resource are needed for a long gable roof (apt. bldg.) with no fire stops?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/ smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire extension?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



Side 1 of 2



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?

Side 2 of 2



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?
- What are the concerns at construction sites and partially built structures?
- What changes if this was night time?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are your decision points?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?
- What do NIOSH reports tell us about these types of situations?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Incident Profile?
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will the fire affect structural stability of the bridge system?
- How will fire dynamics (behavior) affect overall operations?
- What is the structural stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?
- Discuss large area fire operations?
- Structural Collapse Considerations?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For the extending Fire?
 - For multiple exposures extension?
- What are the limiting factors?
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Or Fire and/or smoke movement?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- How will this incident affect structural stability of the building?
- How will fire dynamics (behavior) affect operations?
- What would be the key strategic and tactical concerns;
 - If a Fire occurred?
 - A gas leak?
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?
- What if there were multiple trapped victims' in the vehicle?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will this incident evolve if there are rescues to be made in the rubble pile?
- How will fire dynamics (behavior) affect operations, if a fire broke out?
- What is the building stability profile?
 - What are the operational issues?
- What would be the key strategic and tactical concerns;
 - For a Fire?
 - For a gas leak?
 - For trapped occupants?
 - For a trapped firefighter/mayday situ
- What are the technical rescue/ USAR needs?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - IF there was fire impingement?
- What would be the key strategic and tactical concerns;
 - For a Fire?
 - For a trapped worker, Tech Rescue OP?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will this incident evolve if there are rescues to be made in the rubble pile?
- How will fire dynamics (behavior) affect operations, if a fire broke out?
- What is the building stability profile?
 - What are the operational issues?
- What would be the key strategic and tactical concerns;
 - For a Fire?
 - For a gas leak?
 - For trapped occupants?
 - For a trapped firefighter/mayday situ
- What are the technical rescue/ USAR needs?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



Dynamic Risk Assessment • Operational Size Up

Safety and Deployment Considerations



- Discuss the Construction Type.
- What is the Risk Profile?
- What are the operational concerns?
- What Safety considerations are you projecting?
- What are the Life safety factors?
- How will fire extend within this occupancy?
- How will fire dynamics (behavior) affect operations?
- What is the building stability profile?
 - Is there a concern with fire impingement?
 - Read the fire/Smoke, what's it telling you?
- What would be the key strategic and tactical concerns;
 - For an extending Fire?
 - For a trapped occupant?
 - For a trapped firefighter/mayday situ
- What are the limiting factors
- What are the fire flow requirements?
- What are your resource needs?



10 Rules of Engagement



- **Acceptability of Risk**

1. **No Building or property is worth the life of a fire fighter**
2. All interior fire fighting involves inherent risk
3. Some risk is acceptable, in a measured & controlled manner
4. No level of risk is acceptable where there is no potential to save lives or savable property
5. Fire Fighters shall not be committed to interior offensive operations in abandoned or derelict buildings

- **Risk Assessment**

6. All Feasible measures shall be taken to limit or avoid risks through assessment by a qualified officer
7. The responsibility of the IC is to evaluate the level of risk in every situation
8. Risk assessment is a continuous process for the entire incident
9. If Conditions change, and risk increases-change the strategy & tactics
10. **No Building or property is worth the life of a fire fighter**



Five Star Command™



Integrated Operational Safety

Christopher J. Naum, SFPE

Chief of Training, Command Institute, Washington, DC

Second Vice-President International Society of Fire Service Instructors

Board of Directors, IAFC Safety Health & Survival Section

Instructor, National Fire Academy, MD

Christopher.naum@gmail.com 315.247.7237





Buildingsonfire.com

*An Informational, Reference and Training web site
Dedicated to the Art & Science of Building Construction,
Firefighting and Command Risk Management*

Buildingsonfire.com

*An Informational, Reference and Training web site
Dedicated to the Art & Science of Building Construction,
Firefighting and Command Risk Management*

Advancing Training, Knowledge, Skill Development and
Safety Focus for the Fire Service, and Supporting
the NFFF Firefighter Life Safety Initiatives & ERII program

Developed and Hosted by

Christopher J. Naum, SFPE, BFRM, IAFB
Command Institute, Washington, DC
Contributing Editor, Firehouse Magazine & Firehouse.com
Adjunct Instructor, National Fire Academy
Second Vice President, NFFF

Editorials
Multimedia
Articles & News
Podcasts & Webcasts
Training Support Media
Case Studies & Reports
Research & Reference Links
Comprehensive Documents & Files
Forums & Interactive Simulations
Seminars and Lecture Series
Training Aides and Drills
On-Line Training
Downloads



Launching Early 2009

Watch for announcements on Firehouse.com

Building Knowledge - Firefighter Safety™

© 2009 Christopher J. Naum, New York, USA • Buildingsonfire.com • Structuresonlinenews.com • 01-916-242-7207 • cnaum@twosixty.com

Launching Mid-2009

Multimedia
Articles & News
Podcasts & Webcasts
Training Support Media
Case Studies & Reports
Research & Reference Links
Comprehensive Documents & Files
Forums & interactive Simulations
Seminars and Lecture Series
Training Aides and Drills
On-Line Training
Downloads

