



ANN ARBOR FIRE DEPARTMENT

Standard Operating Procedures – 3.14 Strategy & Incident Action Plan



COMMAND FUNCTION #4 – STRATEGY AND INCIDENT ACTION PLAN

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 Replaces: 803 Incident Management and Command Procedures
 809 Salvage Cover Operations
 Approved: Fire Chief Mike Kennedy

I. COMMAND FUNCTION #4 – STRATEGY AND INCIDENT ACTION PLAN

This is the core of the command system and is the launching pad for all operations. Standard conditions are identified as the incident’s current and forecasted critical factors. We must:

- Identify the incident’s critical factors before taking any action.
- Our initial and ongoing size-up of the incident’s critical factors must produce the information that becomes the basis for the current incident strategy and incident action plan (IAP).
- Current, accurate and relevant information provides the informational foundation for effective initial and ongoing action.

This systematic evaluation process continually produces standard, safe, well-managed incident outcomes.

II. RISK MANAGEMENT PLAN (RMP)

Fireground operations will fall in one of two strategies, offensive or defensive. These two strategies are based on a standard risk management plan that is to be employed on ALL IDLH hazard zones.

The following Risk Management Plan (RMP) will be used at all times whenever a hazard zone exists:

- We will risk our lives a lot, to save savable lives.
- We will risk our lives a little, to save savable property.
- We will NOT risk our lives, at all, for lives or property that are already lost.

The above three levels of risk can only be assumed in a highly calculated and controlled manner. Highly calculated and controlled refers to effective application of department SOPs, training, and the safety systems, e.g., PPE, radios, apparatus, supervision/organization, water, that must be used/followed at all times, in order to take any level of risk.

We must always begin our operational response with the assumption that we can make a difference for our customers by conducting standard incident operations. Our risk-management approach is based on us always conducting operations within standard operational and safety SOPs.

Rescue operations in the hot zone are the only place where, based on the possibility of saving a threatened customer, the RMP allows workers to take a significantly higher level of risk. High risk rescue operations are based on a deliberate situation evaluation, a conscious decision by the IC, and the continual application of the safety SOPs.



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The offensive/defensive strategy should again be re-evaluated and re-declared after primary and secondary “all clears” has been achieved. Both are critical decision points for the IC.

III. DETERMINE THE OVERALL INCIDENT STRATEGY

A hazard zone consists of the overall zones identified which determine the level of risk to civilians and emergency workers in relationship to the incident's problems. The hazard zone is divided up into three (3) separate, distinct areas:

- A. Hot zone - An IDLH environment due to heat, lack of oxygen, and/or the presence of the products of combustion. Workers inside of the hot zone must be in the proper PPE for the hazards identified
- B. Warm zone - A defined area just outside of the hot zone that has the potential to become IDLH contaminated with the incident's products. Workers inside of the warm zone must also be in the proper PPE for the hazards identified
- C. Cold zone - A safe area outside of the warm zone that has little or no chance of becoming IDLH contaminated with the incident's hazards. Workers in the cold zone require no PPE. The cold zone typically contains the strategically positioned command post, staging, rehab, logistical support, etc.

Overall operational strategy is divided into only two categories: offensive or defensive.

- Offensive operations are conducted inside the hot zone to control the incident's problems
- Defensive operations are conducted outside of the hot zone - in safe locations - to control the incident's problems

An IC properly managing the incident's strategy has the #1 – GREATEST overall impact on responder safety.

The two separate strategies create an understandable plan that describes in simple terms how close the emergency responders will get to the incident's hazards.

The overall strategic decision is based on the critical factors weighed against the RMP.

The IC must avoid taking unnecessary risks to save property when our members are the only life safety threat in the hazard zone.

Do NOT combine Offensive & Defensive operations in the same fire area.

IV. DECLARE THE INCIDENT'S STRATEGY AS PART OF THE INITIAL RADIO REPORT (IRR)

Declaring the incident strategy up front, as part of the initial radio report will:

- Announce to everybody the overall incident strategy.
- Eliminates any question on where we will be operating on the incident scene (inside or outside the hazard zone).



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V. CONFIRM ONGOING STRATEGY AS PART OF THE ELAPSED-TIME NOTIFICATIONS (ETN)

When an offensive working fire is declared, it will prompt Central Fire Dispatch to begin Elapsed Time Notifications (an IC can also request ETN's whenever they feel it is necessary).

Central Fire Dispatch will announce over the tactical frequency an elapsed time notification every ten (10) minutes until the incident is placed under control, or until command requests to discontinue or restructure the ETN's.

The IC must verbally acknowledge each 10-minute notification by re-announcing the incident's strategy over the assigned tactical radio frequency until the incident is placed under control, or until command requests to discontinue or restructure the notifications.

VI. USE THE INCIDENT ORGANIZATION & COMMUNICATIONS TO IMPLEMENT THE STRATEGY/IAP

Using the strategy to control incident operations allows the IC Incident operations begin under control and stay under control when everyone operates within the incident management system and the overall strategy.

The IC uses the radio to manage incident operations. This starts with the initial radio report where the initial strategy is declared. After subsequent arriving units Level 1 stage, the IC orders them into action with an assignment that includes a specific task, location and objective(s). The status of the critical factors in each companies' locations serves as the foundation for the CAN reports companies provide to the IC. These actions connect everyone together on the incident site and help the IC manage the proper strategy based on the current conditions.

The IC decentralizes the hazard-zone by assigning S/D responsibility to later arriving officers. S/D officers operating in forward positions give the IC the following strategic advantages:

- They control access into and out of the hazard zone based on the current strategy.
- They have a better view of conditions in their S/D than the IC.
- They are in a much better position to directly manage the tactics, safety, and accountability of assigned personnel in their S/D.
- These officers are in the strongest position to manage and supervise expanding incident operations.

The IC provides the S/D officers with the overall strategy and objectives for their area. This becomes the starting point for conducting operations within that S/D. As progress is made, objectives are met or conditions change (good or bad), the S/D officer reports this information to the IC along with any resource needs.

The IC must process reports from all the operating S/D's to continually manage both the overall incident strategy and the corresponding IAP.



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VII. STANDARD COMPANY FUNCTIONS

Standard company operations assign basic fireground functions and activities to companies based upon the capability and characteristics of each type of unit.

Standard company operations assign fireground functions to the particular company who can best accomplish the task/operation. Standard company operations integrate the efforts of engine and ladder companies to effectively complete the chosen strategy's tactical priorities.

Standard company operations should reduce the amount of detail in the orders from the IC that is required to get companies into action on the fireground. This greatly reduces radio traffic.

The following items represent the standard task/skill sets performed by engine and ladder companies. These basic functions will provide the framework for field assignments for these companies.

VIII. STANDARD ENGINE COMPANY FUNCTIONS

An engine company's primary responsibility is to extinguish fires by applying water onto what is burning as quickly and as safely as possible.

- Establish water supplies
- Stretch hoselines
- Operate nozzles
- Search, rescue, and treatment
- Open up concealed spaces
- Deploy ground ladders
- Pump supply lines
- Supply master streams
- Loss control activities

IX. STANDARD LADDER/TRUCK COMPANY FUNCTIONS

- Fire control
- Search and rescue
- Ventilation (post fire control)
- Forcible entry
- Raise ladders
- Provide access into concealed spaces/check for fire extension
- Utility control
- Provide lighting
- Deploy aerial devices
- Operate ladder pipes (aerials and platforms)
- Perform overhaul
- Extrication
- Loss control activities
- Provide roof reports on smaller commercial and strip mall occupancies



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Each company is expected to perform all basic functions safely within the limits of their capability. It is the on-going responsibility of Command to integrate company tasks and objectives as required with the capability of on-scene units.

X. STRATEGIC LEVEL WATER SUPPLY CONSIDERATIONS

An uninterrupted water supply shall be established (400+ gpm produced the first 30 minutes of the operation) using a fire hydrant or a portable water tank shuttle supply operation whenever an offensive “working fire” is declared.

Command is ultimately responsible for managing attack positions in either offensive or defensive locations. The key to effective attack positioning is WATER. Water not only extinguishes the fire; it protects firefighters from the lethal products of combustion (heat). The IC must have an acute awareness of the following water supply factors:

- The required fire flows for the incident
- The projected fire flows that can actually be produced
- Is there enough water available to safely extinguish the fire?
- What are the water supply options (hydrants, natural sources, tankers)?
- Are key tactical areas adequately supplied with water?

When assigning an engine company to deploy and operate a handline(s) in the hazard zone, it is very important for the IC to specify what to do with the unit’s apparatus and where their handline and/or water supply comes from. This manages attack positioning and prevents unnecessary congestion around the incident scene.

XI. OFFENSIVE INCIDENT ACTION PLANNING

When an incident’s critical factors and the risk-management plan indicate the offensive strategy, firefighting forces will enter the structure (hot zone), in the appropriate PPE, to attempt to control the incident hazards inside of the hot zone. An offensive IAP is based on the standard offensive tactical priorities.

Standard offensive strategy tactical priorities and their corresponding completion benchmarks:

- Fire Control – “Fire Control” (F/C)
- Life Safety – Primary and Secondary “All Clear(s)” (A/C)
- Loss Control/Property Conservation – “Loss Stopped” (L/S)
- Customer Stabilization – Short term

The offensive tactical priorities establish the major operational activities, in the order they should be addressed, when selecting the offensive strategy.

XII. OFFENSIVE ATTACK POSITIONING AND PERFORMING 360’S

When arriving to the scene, the initial size-up is usually performed and then transmitted from inside the cab of the apparatus. The initial size-up and strategic decision made on the IRR is NOT an affidavit of the overall incident conditions. Whenever possible, prior to making entry into a structure fire, a fast attacking IC shall perform a 360-degree assessment of the fire building/area to further determine:

- A. The fire’s size, location, and extent
- B. Verify basement type (if present) and the stories from the Charlie side



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- C. The ventilation profile of the structure (the identification of flow paths – or potential flow paths)
- D. Identify the safest, most appropriate attack position
- E. Life safety profile of the incident
- F. Confirmation of the initial Strategy and IAP

Some fire area arrangements prohibit fast attacking IC's from performing a full 360-degree assessment of the structure (larger buildings, long apartment/row house/town house complexes, large strip malls, etc.). The IC must announce on the Follow-Up Report when a 360-degree assessment of the structure cannot be performed on the initial size-up, e.g., "360 not performed due to the buildings size/arrangement."

Incidents where a 360-degree assessment cannot be performed by the initial IC, Command must insure that a unit be assigned to assess any unviewed sides of the structure as soon as possible into the incident (usually the "Charlie" side). This is especially critical for structures that have any type of basements or sloping grade elevations in their overall arrangement.

One of the most critical size-up items when performing a 360-degree assessment is determining the fire's size, extent, and location. When visible fire is located (observed), water should be applied onto it as quickly and as safely as possible. All fire research indicates that putting water into a compartment that is hosting a fire makes everything better. Water application onto visible flames and/or hot smoke prior to final extinguishment of the actual burning fuels does nothing but IMPROVE interior conditions for the:

- Civilians
- Firefighters
- Building's contents
- Building's structural components

The thickness, density, and pressure of the smoke should also be assessed and are good indicators of the fires stage and location. High pressure smoke escaping a structure usually indicates the fire has enough oxygen to continue to build pressure. Entry crews can expect higher interior temperatures when these conditions are visible from the exterior.

Fires that have entered into a ventilation controlled state (due to consuming all of the available oxygen in the compartment) can present themselves with light smoke or nothing showing conditions upon arrival. Ventilation controlled fires can rapidly accelerate to extreme fire behavior conditions (temps over 1,800 F) when enough oxygen is introduced into the fire area with the absence of water being applied to control the fire and/or to reduce interior temperatures. Providing any tactical ventilation prior to obtaining fire control at this stage in fire control operations will intensify the fire and MUST be avoided.

Fast attacking ICs must verify the basement type (if present) of the structure and the stories that are present from the Charlie side. The number of stories from the Charlie side of the structure will need to be announced in the follow-up report if the stories don't match up to side Alpha. This does not include the basement.



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Basement type and conditions must be identified before entering the structure whenever possible. Basement involvement must be considered and validated whenever there are smoke/fire conditions presenting from upper floors (in response areas that have basements). The initial IC MUST confirm the conditions in the basement prior to making entry into the structure whenever possible.

An assessment of the outside openings and determining the overall ventilation profile of the structure shall be made prior to any offensive entry whenever possible. Critical items to size-up when assessing a structure's ventilation profile are:

- 100% High pressure exhaust vent(s) – very hot, convection heat currents. Worst place to be in a burning structure
- 100% Low pressure inlet vent(s) – cool air inlet. Best place to be in a burning structure
- Bi-direction vent – Upper portion of the opening is the high-pressure exhaust vent; lower portion of the opening is the low-pressure inlet vent. These two (2) layers separate themselves at the “neutral plane”. A well-defined neutral plane usually indicates the fire is located on that level of the structure
- Puffing/alternating exhaust/inlet vent – usually caused when the pressure of the fire gasses cannot escape the opening/compartment because high pressure is impacting the opening (possibly caused by high winds or PPV on the opening)
- The ventilation profile will change throughout the incident based on; changes to wind direction and speed, changes in fire conditions, water application, as well any “tactical” ventilation performed by operating units

A major element of the IC's IAP is determining the safest location(s) for making an offensive attack (the physical location where firefighters will initiate flowing water onto the fire). Whenever possible, attack offensive fires in the following manner:

- Perform quick hits (exterior water application) to improve interior conditions whenever possible prior to making offensive entry into the fire area/structure
- Always avoid entering into an exhaust (high pressure) vent or flow path
- Always attempt to make an offensive entry from an inlet (low pressure) vent of the structure (or a neutral opening)
- Always attempt to operate from the upwind side of the structure (critical with wind speeds over 6-8 mph)
- Always operate on the same level or below the fire **WHENEVER** possible
- **ALWAYS AVOID** working above a working fire

Use the 360-degree assessment to size-up the Life safety profile of the incident. Immediate life safety issues are one of the primary reasons 360 degree assessments are performed. If there are any rescue issues during the 360-degree assessment, the IC will need to announce the situation during the follow-up report and re-adjustment the IAP as necessary to address the life safety issue(s) present.

Performing a 360-degree assessment provides the initial fast attacking IC a view of all sides of the structure prior to transmitting the Follow-Up report and making entry into the structure. Most of the time, the initial strategy reported on the IRR will not change.



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But there are some incidents where the 360-degree assessment will require a change to the incident's overall strategy or an adjustment to the IAP. Regardless if your IAP changes, the overall incident strategy must be re-confirmed as part of the Follow-Up report. Situations that will require changing the original strategy and/or IAP may include:

- Immediate life safety issues(s) not seen from the initial command position
- Basement fires where the initial attack efforts must be re-directed to a different area/location on the fireground
- Fires located in a different area or part of the structure not seen from the initial command position where entry or initial water application will be made from a different location as stated in the IRR
- Conditions after a 360-degree assessment indicate the fire's size, location, or extent requires changing from the offensive to a defensive strategy

XIII. OFFENSIVE FIRE STREAM CONSIDERATIONS

Fire control forces must consider the characteristics of fire streams and choose the most effective nozzle/stream for the task:

- Smooth bore nozzles: Greater penetration, reach and striking power. Can be used on 1¾" and 2½" handlines. Less steam conversion.
- Fog nozzles: Increased heat absorption/expansion. Shorter reach. Can be used on 1¾" and 2½" handlines. Most effective nozzle for protecting exposures.

Choose the proper sized attack line:

- 1¾" lines: Fast to deploy, the most mobile handline when charged and flowing water, good volume, 150-200 GPM
- 2½" lines: Slowest deployment speeds, difficult to advance and move once charged and flowing water, 200-300 GPM. Usually used with smooth bore nozzles
- Engine Mounted Master Streams: Fast to set up and operate, large volume, great reach and penetration, 500 to 1,000 GPM
- Elevated Master Stream: Slow to set up – maximum water, 500 to 2,000 GPM

Offensive attack hose evolutions/stretches must be highly mobile—as mobility is slowed, attack activities begin to become more defensive in nature and effect.

XIV. STRATEGIC LEVEL ATTACK LINE PLACEMENT CONSIDERATIONS

When operating in the offensive strategy, attack hose lines of adequate volume should be used to put water on the fire, to control access through doors, halls, stairways, or other vertical and horizontal channels/shafts through which people and fire may travel. General attack line placement guidelines include:

- Always establish an early, uninterrupted water supply for all fire-suppression activities
- Consider mobility vs. GPM when selecting the properly sized hose line
- All initial FD efforts must be directed towards controlling the fire
- Controlling the fire supports rescue efforts and hose lines must be placed in a manner to control interior access, confine/control the fire, and protect avenues of escape
- Water should be applied to the fire as quickly and as safely as possible. Safely is defined as: the further away from the fire that you can apply water on it, the safer it is for the occupants, the property, and the firefighters (use the reach of the stream)



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- Many times, it is much quicker and safer to apply water onto offensive fires through outside horizontal openings using a straight stream or smooth bore nozzle. This is true for all fires, but especially true for fires that are visible on upper floors or higher elevations
- Always avoid applying a fog pattern into/onto an outside opening
- When required, entry teams must use their handline streams to cool hot smoke (to reduce interior temperatures) prior to direct water application onto the actual burning fuels
- Once fire knockdown has been achieved, fire control crews must continue to reduce the interior temperatures of the structure to below 200 degrees F to improve occupant and firefighter survivability. This is done by direct water application (using a semi-fog pattern or broken solid stream) onto the ceilings, walls, and other surfaces/objects directly exposed to the combustion process
- Be prepared to back up in place hose lines if requested
- Always try to operate from one (1) attack position whenever possible. Operating from multiple attack positions on offensive fires can increase risks to firefighters
- No uncharged hoselines past the entry point of the structure
- All hoselines entering the hazard zone must have adequate GPM (150+ GPM) to protect entry crews
- All members working in the hazard zone must be operating under the protection of a charged hoseline in their immediate geographic/work area
- Interior work times must be tied to SCBA air supplies, and the decision to exit the structure (hot zone) must be based on exiting with an air reserve (33%)

Once initiated (flowing 150+ GPM) an offensive attack should quickly have a positive effect on the fire. Consequently, backup plans should be developed quickly. If you apply water to an offensive attack position and the fire does not go out – react quickly. Back it up or re-deploy to a more effective position.

Predict where the fire is going to go and put crews in positions ahead of the fire. This is especially true when fighting fires in compartmentalized structures such as strip malls, apartments or any compartmentized structure with common attic/void spaces. Beware of hose lines that have been operated in the same place for long periods. Fire conditions should quickly change after applying water to the seat of the fire (for the better). The IC must continually evaluate the effect of hose line operations. If the operation of such lines becomes ineffective, move, adjust, or redeploy them.

Normal means of egress most often times will give control forces the fastest access points into the structure while protecting these avenues of escape for occupants and firefighters. In some instances, (upper floor occupancies with long handline stretches) it may be faster using alternate means of egress to apply water on the fire (ground ladders, aerial devices, fire escapes, drop bags, etc.). When using alternate means of egress to quickly put water on the fire, command must quickly cover and protect the normal means of egress for both the occupants and firefighters to safely utilize.



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A strategically positioned IC is in the best position to evaluate the overall effectiveness of the fire attack, while interior crews are sometimes in the worst position to evaluate their effect on the fire. Command must continually compare interior control reports to what they can see from the command post (CP). Whatever the IC sees with their own eyes from the CP outweighs interior reports of “we’re getting it” when fire conditions haven’t changed for the better.

Company officers and S/D Officers must assume responsibility for the effectiveness of their fire streams. Officers must maintain an awareness of where fire streams are going and the overall effect they are having on controlling/eliminating the fire.

Command must avoid backing up handlines that are already in place when operating crews don’t request back-up when providing CAN reports. Always ask a company if they require back-up before backing them up. That is why a CAN report includes “needs”.

XV. OFFENSIVE FIRE CONTROL STRATEGIC CONSIDERATIONS

The IC manages the Fire Control tactical priority by getting companies around all seven (7) sides of the fire and overwhelming it with water. The seven sides of the fire are:

- The interior/inside
- The top includes ceilings, joist spaces, attics, and floors above
- The bottom includes the floor below, crawl spaces, joist spaces and basements
- All four sides includes adjacent rooms, occupancies, or other buildings and the concealed spaces of all those sides includes walls, joists, attics, utility chases, void spaces, build-over’s, etc.

The term “Working Fire” indicates a situation that will at least require the commitment of all initially responding companies. This report advises dispatch that the companies will be engaged in tactical activities and will be held at the scene for an extended time period.

The term “Knockdown” indicates that the main body of fire has been controlled in a unit’s assigned geographic work area, but the seven sides of the fire have NOT been validated for any fire extension.

The term “Fire Control” will be transmitted when the main body of fire has been extinguished and all seven sides of the fire have been confirmed as having no fire extension (or when extension has been controlled) in an assigned unit’s geographic/operational area.

When all areas exposed to the products of combustion report fire control, primary and secondary all-clears, and no other resources are required to complete the remaining tactical priorities, the IC will transmit an “Under Control” radio report to dispatch/alarm.

XVI. OFFENSIVE VENTILATION OPERATIONS

Fire research has conclusively demonstrated that the current fuel loads found in present day structure fires quickly consumes all the available oxygen in the fire compartment and becomes “ventilation controlled”. In the early stages of this fire decay, the fire still has enough heat energy (high temperatures) to continue to break down solid fuels into combustible vapors (pyrolysis).



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This process continues to load the compartment with fuel and heat; at this point in the fire's progression, the only factor limiting the fire's growth is the lack of oxygen.

Based on the fire research (performed by highly qualified engineers) the following is the Blue Card policy and procedures for managing ventilation on offensive structure fires:

- Until the fire control benchmark has been achieved and transmitted, the entire response team's objective is NOT to supply the fire with any additional air (oxygen) while Command's primary objective is to coordinate an overwhelming force of the proper water application required to control the fire and cool the fire compartment
- Any flow paths (or potential flow paths) identified in the 360-degree assessment should be closed prior to entry whenever possible
- Door control must be provided for entry crews whenever necessary
- **NO TACTICAL VENTILATION SHALL BE PERFORMED PRIOR TO FIRE CONTROL** (unless hydraulic)

XVII. OFFENSIVE SEARCH AND RESCUE OPERATIONS

One of the major tactical priorities to accomplish (especially in a residential setting) is the protection of any customers exposed to the incident hazards.

The NUMBER ONE (#1) method to be used in completing the Life Safety tactical priority in working fire situations is to control the fire as quickly and as safely as possible. The fire research shows that there is a zero chance of occupant survivability if occupants are directly located in a compartment that has flashed over and has become ventilation controlled (high temps, lack of oxygen, toxic atmosphere).

The fire research also shows that the survivable areas connected to a fire compartment that have become ventilation controlled (flash over) have a barrier between the occupant and the fire area (closed door(s) or wall(s)). Therefore, it is imperative that occupants be protected in place (behind their barriers of protection) while all initial efforts are directed towards fire control. Any barriers directly connected to the fire area shall NOT be opened prior to fire control and post fire control ventilation.

The IC will use the following methods to address the Life Safety tactical priority on offensive structure fires.

- A. Protect in place. A life safety tactic of leaving people indirectly exposed to a fire compartment behind their barrier of protection while control forces control and then ventilate the fire area.
- B. Primary searches. Are performed in the immediate fire area in conjunction with fire control and are for the purposes of locating victims directly exposed to the products of combustion (very lethal).
- C. Secondary searches. Are performed after fire control has been achieved and the atmosphere has been properly ventilated. This involves the process of opening barriers and searching any survivable compartments directly exposed to the fire area, along with a secondary, more thorough search of the original fire compartment.



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XVIII. RESCUE ORDER

The IC uses the standard rescue order to prioritize and manage searches. The rescue order is the standard order that we use to search a hazard zone:

- A. Most endangered
- B. Largest group
- C. Remainder of the fire area/structure
- D. Exposures

The IC initiates the completion of the offensive tactical priorities by ordering companies to advance attack lines to the interior of burning structures. This supports the Rescue Order by:

- Placing initial lines directly to the most hazardous area of the building—the burning or burnt part (if a quick hit was used) – places crews in the same area as the most endangered group.
- Initial interior crews will be searching and protecting the same corridors that the occupants in the building would use to evacuate.
- The hand line protects FF's, it starts to control the problem, and it gives the operation an “anchor point” to control the fire
- All other tactical priorities should be addressed AFTER fire control has been achieved and ventilation has taken place
- All initial attack efforts must be directed towards fire control and verifying the 7 sides of the fire prior to opening any barriers protecting any survival compartments.

The IC is responsible for assigning all incident resources in order to achieve quick and effective primary searches of the areas directly exposed to the fire. The IC must assign companies to search specific geographical areas of structure. This eliminates searching the same area multiple times, while other critical areas remain unsearched. The most urgent reason for calling additional alarms is for the purpose of covering life safety.

Command must develop a realistic (and pessimistic) rescue size-up as early as possible. When encountering larger, high density, compartmentized, multi-unit/room residential structures, it is more effective to implement a “protect in place” life safety operation as opposed to removing multiple people from a structure who are not directly exposed to the incident hazards. These actions should:

- Contain, control and eliminate the incident problem
- Secure and protect normal means of egress
- Remove the products of combustion
- Search and clear the immediate areas of involvement
- Systematically clear the remainder of the fire area/exposures

When primary search companies encounter, and remove victims, Command must assign other companies to continue to cover the interior search positions vacated by those companies. Command must also request and provide the necessary medical resources to treat any patients encountered on the incident site.

Command must obtain Secondary All Clears of all affected areas once fire control has been achieved and the structure has been adequately ventilated (temps below 200°F and the O₂ level above 19%).



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Occupancy type will many times drive the IC's search priorities. Residential occupancy types must have a high life safety focus because these structures can be occupied 24/7/365. Strip mall, commercial and big box fires typically have lower life safety requirements.

Primary searches should not be conducted in large, non-residential spaces where companies will outwork their air supplies. Again, all initial actions should be directed towards putting water on the fire and ventilating the structure unless there is credible information of survivable occupants located inside the hazard zone.

XIX. OVERHAUL

The goal of overhaul is to reduce the incidence of secondary fires, control loss, and stabilize the incident scene while providing for firefighter safety. Overhaul activities include thoroughly searching the fire scene to detect and extinguish any hidden fires or "hot spots". Effective overhaul activities reduce the potential for secondary fires. When addressing overhaul operations, the IC should:

- Ensure overhaul is conducted safely.
- Ensure proper PPE is worn for the conditions
- Ensure allied overhaul and salvage equipment are utilized when necessary.
- Insure all fire is extinguished by addressing the 7 sides
- Ensure at least two firefighters with a charged hoseline remain in the fire area to detect any possible hidden fire and/or re-ignition during the overhaul phase of the operation.
- Use early and continuing positive pressure ventilation when appropriate to maintain an acceptable working environment and reduce loss.
- Fire companies must evaluate and monitor conditions when operating fans.
- Meet with the property owner/occupant concerning overhaul operations.
- Closely coordinate overhaul with fire investigators.

Suppression crews should open any construction voids that were exposed to fire to check for and verify fire control. Floor, wall or ceiling areas showing evidence of extensive decomposition due to fire exposure should be thoroughly examined during overhaul. Plenum spaces, soffits and pipe chases should receive careful inspection as they provide possible routes for fire to spread throughout a structure.

XX. SALVAGE

Salvage includes the activities required to stop direct and indirect fire damage in addition to those required to minimize the effects of firefighting operations. This includes losses from water, smoke and firefighting efforts.

Salvage operations must be aimed at aggressively controlling loss by the most expedient means. Salvage objectives are:

- Stop or reduce the source of damage
- Protect or remove contents

Command will provide for salvage at all fires or other incidents posing potential damage to property.



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Salvage operations most often involve smoke removal and covering building contents with salvage covers or plastic. In some cases, the contents of threatened areas, where appropriate, can be removed to a safe location. When removal is not practical, contents should be grouped in the center of rooms, raised off the floor and covered to provide maximum practical protection.

The following items should be considered when addressing salvage:

- Type, value and location of contents
- The extent and location of the fire
- Recognition of existing and potential damage sources
- Estimate of required resource

Salvage efforts should begin in areas most severely threatened by damage. In most cases that will be areas directly adjacent to or below the fire area. Additional salvage activities should expand outward until all areas of potential loss are secured.

All firefighting activities have the potential to damage property and contents. The key to successful salvage is to distinguish between excessive damage, and damage that is required to reduce potential fire damage. All members must avoid creating excessive damage to the structure. The best philosophy to follow is to treat the customer's property as if it is yours. Only do what's necessary to stop loss.

The IC will transmit a report of "loss stopped" once all of the affected areas have been properly overhauled, salvaged, ventilated and the incident conditions have ceased causing damage to the structure and its contents.

XXI. OFFENSIVE STRUCTURAL FIREFIGHTING DECONTAMINATION (DECON)

Decon happens after somebody or something (PPE, equipment, etc.) has had an exposure to something that is toxic. The goal of decon is to avoid or to reduce all exposures before they happen.

- Avoid letting toxins get on you in the first place
- When toxins are present, reducing your exposure to the toxins by wearing the proper PPE
- Limit your exposure to toxins to the shortest duration as possible
- Decon as soon as possible after being exposed to toxins
- Prior to removing firefighting PPE worn in the hot zone, a gross decontamination shall be performed to remove potentially harmful toxins.
- Personnel recycling should consider a quick neck, hand and face wipe using baby-wipes
- Personnel should wash / wipe their hands after; suppression activities and overhaul
- Personnel should wash their hands before; entering Rehab, returning to their apparatus, and entering their living quarters

XXII. DEFENSIVE INCIDENT ACTION PLANNING

A defensive situation is where the incident problem has evolved to the point that lives and property are no longer savable, and offensive tactics are no longer effective or safe. The entire defensive strategy is based on protecting both exposures and firefighters.



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Firefighter safety is the number one defensive priority. No firefighter should be injured on a defensive fire.

Defensive Strategy Tactical Priorities and their corresponding completion benchmarks:

- Define the Hazard Zone
- Establish Cut-offs – Forward progress stopped
- Search exposures - Primary and Secondary “All Clears”
- Protect exposures - “Fire Control” - Loss Stopped

Defensive operations represent the standard organizational response to situations that cannot be controlled utilizing offensive tactics. When conditions go beyond the safety systems required for interior operations, the IC must conduct defensive operations from outside of the hazard area. The IC must write off lost property and decide where the cut-off will take place (if there are exposures).

If defensive operations are conducted from the onset of the incident, Command must notify Central Fire Dispatch that there will not be a primary search completed for the involved structure(s).

Basic Defensive IAP

- Identify critical fireground factors
- Quick determination on the need for additional resource
- Evaluate fire spread/write-off lost property
- Search exposures
- Protect exposures
- Prioritize fire streams, provide big, well placed streams, pumped water
- Surround and drown

XXIII. TRANSITIONING FROM AN OFFENSIVE STRATEGY TO A DEFENSIVE STRATEGY

When the offensive strategy is chosen on our initial arrival, most of the time, a well-placed initial attack solves the incident’s problem. But there are many times (for many reasons) that our initial, and sometimes reinforced attack efforts, do not solve the incidents problems and conditions continue to deteriorate to the point where the critical factors indicate switching from an offensive to a defensive strategy.

IC’s must be very pessimistic in these types of situations, especially if the structure has a primary “All Clear”. Command must change strategies before the fire causes the building to collapse. When this happens, Command is very late in the strategy shift and on the receiving end of the building's decision governing the new strategy. The IC must make the defensive decision, NOT the building coming apart.

The announcement of a change to a defensive strategy will be made as follows:

Announce to all hazard zone units:

- “Shifting to the Defensive Strategy”
- All Unit’s “Exit” or “Abandoned” the structure
- All Units report PAR’s upon exit



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“Exit the Structure” will be defined as: an orderly withdrawal where interior lines and equipment will be withdrawn and repositioned when changing to a defensive strategy.

“Abandoned the Structure” will be defined as: an emergency retreat where all hoselines and heavy equipment will be left in place and all members in the hazard zone will exit the structure as quickly and as safely as possible.

A PAR (Personnel Accountability Report) shall be obtained for all units exiting the hazard zone after any switch from an offensive to a defensive strategy.

Command’s greatest priority once a strategic shift has been initiated is the safe exit of all units located in the hazard zone. Level 1 Staged units and other units working outside of the hazard zone shall maintain radio silence until all PAR’s have been tallied on all interior units (unless they have priority traffic).

Company officers will account for their crews and advise their S/D Officer or Command on the status of their crew upon exiting.

S/D Officers will notify Command of the status of the individual crews assigned to their S/D upon their exit.