**RESIDENTIAL STRUCTURAL FIREFIGHTING STRATEGY AND TACTICS**

Purpose

The purpose of this guideline is to provide a consistent approach to structural firefighting

strategies and tactics in residential structures from single family dwellings up to fourplexes. These concepts are written as guidelines to provide firefighters

the ability to adjust tactics to a specific emergency. These guidelines are in no way

intended to replace one of the most important assets on the fire ground, the thinking

firefighter.

These guidelines are written to provide a standardized vision of strategies that will be

used on the fire ground. Crews are allowed to deviate from the guidelines when conditions or situations warrant and should immediately notify the Sector / Division Officer or the Incident Commander of their actions.

Expectations

All firefighters should be intimately familiar with these tactical guidelines. Members should understand all crew assignments and how each unit works within the larger fire ground picture. All personnel should know the guidelines well enough, so that when they have to deviate from the guidelines, they realize the impact their actions will have on other operating companies, and communicate accordingly.

Common Terminology

Defensive Mode – Employed when the fire or incident hazard exceeds the capabilities and firefighter safety systems of an offensive attack. The primary focus of defensive fires is cutting off the main body of the fire and protecting exposures.

Door Control – The process of ensuring doors that access the fire area is controlled and closed as much as possible after teams enter the structure. Steps must be taken to prevent the door from locking behind the entering members. By controlling the door, we are controlling the flow path of fire conditions from the high pressure of the fire area towards the low pressure area on the other side of the door. Door control also limits fire development by controlling the flow path of fresh air at the lower level of the open door towards the seat of the fire.

Flashover - A transition in the development of a compartment fire when surfaces

exposed to thermal radiation from fire gases in excess of 1100°F reach ignition

temperature more or less simultaneously. This causes the fire to spread rapidly

throughout the space, resulting in fire involvement of the entire compartment or

enclosed space.

Flow Path - The movement of heat and smoke from the higher pressure within the fire

area towards the lower pressure areas accessible via doors, window openings and roof

structures. As the heated fire gases are moving towards the low pressure areas, the

energy of the fire is pulling in additional oxygen from the low pressure areas. Based on

varying building design and the available ventilation openings (doors, windows, etc.),

there may be several flow paths within a structure. Any operations conducted in the

flow path will place members at significant risk due to the increased flow of fire, heat

and smoke toward their position.

Flow Path Control - The tactic of controlling or closing ventilation points which will:

Limit additional oxygen into the space thereby limiting fire development, heat release

rate and smoke production. Control the movement of the heat and smoke conditions out

of the fire area to the exterior and to other areas within the building.

Investigative Mode - Command option where the first-in unit investigates and other

apparatus stage. This is when there is NO visible or apparent emergency upon arrival.

Example: Responding for a fire alarm with nothing showing upon arrival.

Mayday – A standard three-word distress call to indicate that a firefighter, emergency

medical technician, or team is in immediate danger and requires assistance.

Offensive Mode – Structure fire situation in which the incident commander determines that the best course of action to contain the fire is to commit crew into the building. An offensive strategy is usually employed when civilian lives are at risk or the fire has not yet consumed a large portion of the building.

S.L.I.C.E.R.S. – An acronym for tactics used in this policy for structural firefighting.

VENT-ENTER-ISOLATE-SEARCH (V.E.I.S.) –is the approved tactic when entering a

structure through an opening (door or window) to search an area for the location of the

fire or to locate possible victims. The priority upon entering the area via a window is to

close the door to that room or area in order to isolate that area being searched from the

fire area. When entering a fire area via a doorway entrance, the door needs to be

controlled until the fire area is further isolated or a charged hose line is advancing on the fire. By isolating the area, we are controlling the flow path of the fire, heat and smoke towards the ventilation point as well as controlling the air flow from the ventilation point towards the fire area.

Guideline and Concepts

This policy is based on a standard risk management plan, stated below, that is to be used at all structure fires.

**WITHIN A STRUCTURED RISK MANAGEMENT PLAN**

* WE MAY RISK OUR LIVES A LOT TO PROTECT *SAVABLE* LIVES.
* WE MAY RISK OUR LIVES A LITTLE TO PROTECT *SAVABLE* PROPERTY.
* WE WILL NOT RISK OUR LIVES AT ALL TO SAVE WHAT IS ALREADY LOST.

Considering the level of risk, the Incident Commander will choose the proper strategy to be used at the fire scene. The strategy can change with conditions or because certain benchmarks are obtained.

**INCIDENT SIZE UP**

It is critical that the first arriving unit communicate a concise size up of every situation.

This information sets the tone for the incident and prompts the dispatcher to ensure the

appropriate resources are allocated based on the incident type.

The initial radio report should include the follow:

• Unit Number

• Conditions

• Building Description

• Establish Command

• Declare operational mode

*Requesting Additional Resources:*

Ensure conditions reported to the dispatcher are accurate so that the correct units can

be dispatched. The incident commander can either request specific units as needed; however, the preferred method is to request a greater alarm. A second alarm doubles the resources currently assigned to the appropriate situation type.

**INCIDENT PRIORITIES**

The following priorities will guide decision making during the incident:

• Life Safety

• Incident Stabilization

• Property Conservation

When operating at structure fires, the following tactical goals apply:

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**SEQUENTIAL ACTIONS: To take place in order:**

Size Up

Size-up must occur at every fire, and as a result of the size-up, the resources available

and situational conditions; weather, fire location, size, structure, construction etc. A

tactical plan for that fire must be developed, communicated and implemented. First

arriving incident commanders are responsible for obtaining a 360 degree view

of the structure involved. Where impractical because of building size or obstructions,

the incident commander should delegate other arriving units to view parts of the

structure unseen by the incident commander.

 *Radio Benchmarks*

 *Initial Radio Report*

 *Declare Operational Mode*

*360 Degree Completed*

Locate the Fire

The location and extent of the fire in the building must be determined. Crews should

use all means available to make this determination. If possible, Thermal Imagers should be used for the initial 360 degree lap of the structure. The location of the fire and current conditions will dictate the best location to attack the fire.

Identify the Flow Path

The incident commander should identify the presence and/or location of the flow path.

Effort should be taken to control ventilation and the flow path to protect potential

building occupants and limit fire growth. If a flow path is visible, consider closing doors

and windows to limit air flow. When closing doors and windows, firefighters should be

aware of any potential rescues readily accessible via doors/windows.

Cool the Space from the Safest Location

Given information obtained during the size up, locating the fire and identifying the flow

path, the incident commander will determine if high heat conditions exist inside the

structure. When high conditions are present, the incident commander will determine the

safest and most direct way to apply water to the superheated space, or directly on the

fire when available. The primary goal in this step is to reduce the thermal threat to

firefighters and potential occupants as soon as reasonably possible.

 *Radio Benchmarks*

*Fire has been “Reset” (State location)*

 *Communicate method of continued operations*

Extinguish the Fire

Once the thermal threats have been controlled, the fire should be extinguished in the

most direct manner possible. The incident commander should recognized the potential

for the thermal threat to return and should move to extinguish the fire quickly. The

incident commander should ensure the proper initial “two in two out” rule is followed prior to initiating interior fire attack operations.

 *Radio Benchmarks*

 *“Water on the Fire,” when water is applied to seat of fire*

 *“Fire Under Control” fire is no longer advancing*

**ACTIONS OF OPPORTUNITY: May occur at any time**

Rescue

The incident commander should consider the potential for rescues at all times.

Firefighters should be prepared to remove occupants. It should be reinforced that often

the best action the fire department can take is to suppress the fire. The incident

commander and fire ground leaders must make a rapid and informed choice on the

priority and sequence of suppression activities verses occupant removal. As life safety

is the highest tactical priority, rescue shall always take precedence. The incident

commander must determine the best course of action to ensure the best outcome for

occupants based on the conditions at that time.

Salvage

Firefighters should use compartmentalization to control fire spread and smoke

whenever possible.

 *Radio Benchmark*

 *Loss Stopped property conservation completed*

**Special Considerations:**

Ventilation

Ventilation (horizontal and vertical) should be managed, and the openings to the structure controlled in an effort to limit fire growth and spread and to control the flow path of inlet air and fire gases during tactical operations. All ventilation must be coordinated with suppression activities. Uncontrolled ventilation allows additional oxygen into the structure which may result in a rapid increase in the size and hazard of the fire due to increased heat release rates.

Search

Primary and secondary searches shall be completed in all offensive firefighting operations in accordance with the Offensive Structural Firefighting Search SOP

 *Radio Benchmark*

 *All Clear primary search complete*

Focus

Command must not lose sight of the very simple and basic fire ground reality that the rescue and fire control problem is solved in the majority of cases by a fast, strong and well placed water stream, either from an offensive or defensive position.

Hose Line Selection

Hose lines that shall be used by members of this department for interior structural firefighting are 1 ½ “, 1 ¾” and 2 ½” with appropriate nozzles. V.T.F.D. apparatus are equipped with different hose lay configurations, members operating on the fire ground should determine the appropriate configuration for the initial and subsequent hose line deployments.

Class “A” Foam

Attacks being mounted on offensive structure fires should utilize Class A foam solution with the initial and subsequent hose streams.