OSFM TFL SYMPOSIUM

2017

STRUCTURE TRIAGE, PREP, AND TACTICS
Structures need to be triage into one of the four following categories:

- **Defensible – Stand Alone (Low Risk)**
- **Defensible – Prep and Hold (Moderate Risk)**
- **Non-Defensible – Prep and Go (High Risk)**
- **Non-Defensible – Check and Go (Extreme Risk)**

**Defensible – Stand Alone (Low Risk):**
- Safety zone present
- Requires little or no attention
- Will require patrol or homeowner presence after fire passage
**STRUCTURE PROTECTION - TRIAGE**

- **Defensible – Prep and Hold (Moderate Risk)**
- Safety zone present at or near structure for apparatus and firefighters
- Structure has a higher probability of ignition without firefighter intervention
STRUCTURE PROTECTION- TRIAGE

- Non-Defensible – Prep and Go  (High Risk)
- No safety zone present
- If time allows, rapid mitigation, apply foam or gel
- Set trigger point for safe retreat
- Go to nearest safety zone, return to area after fire passage
STRUCTURE PROTECTION - TRIAGE

- **Non-Defensible – Check and Go** (Extreme Risk)
- No safety zone present, often adverse topography
- Rapidly check for occupants
- Set trigger point for safe retreat
- Go to nearest safety zone, return to area after fire passage
STRUCTURE PREP- PRIORITIES

Surface Prep
• Completed first
• Implemented based on time, resources and fire conditions

Full Prep
• Completed after surface prep, or...
• ...when time, resources, and fire conditions allow.

STRUCTURE PREP- PRIORITIES

Surface Prep
• Should always be completed first. Allows crews to conduct initial prep work without physically altering structures or property providing crews opportunity to conduct work if fire front is not imminent and it is unclear if fire front will affect the area.
STRUCTURE PREP- PRIORITIES

Priority #1-ROOF

(critical ignition component)

- Clean out gutters and ember traps at the vertical intersections and horizontal surfaces, remove receptive fuel beds, leaves, needles, debris and any other flammable materials on or attached to the roof.

Note roof and debris at base of building

Priority #2-INTERIOR

- Close windows.
- Turn lights on, close interior doors and unlock and shut exterior doors.
STRUCTURE PREP- PRIORITY

Priority #3-EXTERIOR

• Clear decks, walkways and other areas of light receptive fuels (leaves, needles etc.). Consider base of exterior walls, decks or other areas of adjoining combustible surfaces of the structure.

STRUCTURE PREP- PRIORITY

Priority #3-EXTERIOR-cont.

• Relocate easy to move flammable/combustible items surrounding structure (lawn furniture, toys, propane cylinders, gas cans etc.) to an area of cover or outside preparation perimeter (garage, shed, barn etc.).
One of our firefighter used a leaf blower during a conflag in 2015 and said he cleaned the roof and gutters very quickly.

We drilled with both of these tools last year and they were very effective.

We used both precut string and a metal blade while cleaning around a house - very efficient.

**STRUCTURE PREP - TOOLS**

OSFM - limited numbers

- Kombi motor
- Trimmer head
- Regular wire line
- Serrated wire line
- Gas can
- Engine oil
- Spark plug
- Brush cutting head
- Blower attachment
STRUCTURE PREP - TOOLS

Some items to consider

• Heavy Duty Foil
• Metal door screen
• Hand Staplers
• Stinger Staplers
• Broom/yard rake
• Blower
• Weed eater

STRUCTURE PREP - PRIORITIES

FULL PREP

• Complete Surface Prep priorities first and then determine which of the following Full Prep tasks need to be/can be completed.
STRUCTURE PREP - PRIORITIES

Priority #4 - EXTERIOR

- Remove receptive fuels adjacent to the structure 5-10 feet (fine dead fuels, leaves, grass, bark dust, firewood, etc).
- Limb trees 5 to 7 feet from ground.
- Cover attic and basement vents. (metal window screen is preferable, you will need a hand stapler).
- Shut off gas, LP/NG.

Note clean roof, base of walls and limbed trees

STRUCTURE PREP - PRIORITIES

Priority #5: SECONDARY PRIORITIES

- Remove debris and ember traps around structure. Consider covering with heavy duty foil. You will need a Stinger Cap Stapler
Structure Prep - Priorities

Priority #5: Secondary Priorities - cont.

- Remove vegetation within 30 feet of structure scatter flat.
- Remove lawn furniture and toys- place in home if possible.
- Remove and scatter wood pile or cover to avoid ignition by ember shower.
- Move cars if possible
- Construct handline around structure, outbuildings, or immovable fuel sources/hazards.

Priority #5: Secondary Priorities - cont.

- Consider burn out operations, make your plan-but don't start without supervisor approval.
- Consider use of sprinkler kits. Only if adequate structural prep has been obtained.
- Consider use of structure wrap.
STRUCTURE PREP- PRIORITIES

Priority #5: SECONDARY PRIORITIES- cont.

• Consider extreme prep tactics (additional limbing or falling of trees).
• Consider egress preparation. Limbing/brushing 5 to 10 feet on either side of road/driveway.
• Consider the need for a Safety Zone preparation.

STRUCTURE PREP- PRIORITIES

FIRE IMMINENT

Consider when fire front is imminent and structure is categorized as defensible.

• Determine defensible action.
• Stretch hose lines.
• Ladder roof, hose to roof.
• Initiate Structural Prep Checklist if not already complete- Complete as much as possible before initiating defensible stand.
STRUCTURE PREP- PRIORITIES

FIRE IMMINENT

Consider when fire front is imminent and structure is categorized as defensible.

- Remove attached fences 10 feet from structure for access and removal of combustibles.
- Flush gutters with water and plug downspouts
- Consider burn out operations.

STRUCTURE TACTICAL ACTION

Primary Tactical Action
- Stand Alone
- Prep and Defend
- Prep and Go
- Check and Go

Secondary Tactical Actions
- Retreat and Return
- Anchor and Hold
- Bump and Run
- Tactical Patrol
**Primary Tactical Action**

- Primary tactical actions are based on the triage category and level of structure prep accomplished prior to arrival of fire front. Primary tactical action may be supplemented or transition to another primary action or secondary tactical action as needed.

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**STAND ALONE**

*Triage Category: Defensible (Low Risk)*

- **Purpose:** Adequate safety zones and escape routes allow for safe and effective preparation and defensible stand.
- **Indicators:** Structure requires little or no preparation or protection.
- **Actions:** Ensure adequate structural preparation measures are in place. If needed make defensible stand as fire front approaches.
- **Considerations:** Situational awareness. Tactical patrol before and after fire front. Increased possibility of occupants holding in place.
**STRUCTURE TACTICAL ACTION**

- **PREP & DEFEND**

*Triage Category: Defensible (Moderate Risk)*

- **Purpose:** A tactic used when it is possible for fire resources to stay and defend structures as the fire front arrives.

- **Indicators:** Safety zones and escape routes are present and adequate time allows for safe preparation of structure for defense prior to fire front impact.

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**STRUCTURE TACTICAL ACTION**

- **PREP & DEFEND**

*Triage Category: Defensible (Moderate Risk)- cont*

- **Actions:** Aggressive structure prep following Structure Prep Checklist. Adequate time, resources and conditions to make a defensible stand as fire front approaches.

- **Considerations:** Situational awareness, escape routes and safety zones must be identified and maintained. Utilization of PACE planning in case of adverse fire behavior changes. Fire behavior must allow for firefighters to safely remain in place and engage the fire.
**STRUCTURE TACTICAL ACTION**

**PREP & GO**

*Triage Category: Defensible (High Risk)*

- **Purpose:** No safety zone present.
- **Indicators:** Time allows for rapid mitigation measures.
- **Actions:** Rapid triage, prep and retreat to Safety Zone.
- **Considerations:** Set trigger point for safe retreat and re-engage secondary tactical action.

**CHECK & GO**

*Triage Category: Non-Defensible (Extreme Risk)*

- **Purpose:** Inadequate defensible space prohibits safe defense actions.
- **Indicators:** Extreme fire behavior, compressed time constraints.
- **Actions:** Rapid evaluation to check for occupants who may require removal or rescue, then withdraw to a Safety Zone.
- **Considerations:** Retreat and re-engage tactical action when able.
Secondary Tactical Action

- Secondary tactical action should be utilized to supplement and support the primary tactical action.

RETFREAT & RE-ENGAGE

- **Purpose:** Follow up tactic used when Check and Go, Prep and Go or Bump and Run tactics are initially used.
- **Indicators:** When there is insufficient time to safely set up ahead of the fire or the intensity of the fire would likely cause injury to personnel located in front of the fire.
- **Actions:** After retreating to Safety Zone, return behind the fire front to search for victims, minimize property loss, effect perimeter control, extinguish hot spots around structures, control hot spots and reduce ember production.
- **Considerations:** Adequate safety zone
**STRUCTURE TACTICAL ACTION**

**ANCHOR & HOLD**

- **Purpose:** Defend exposures, stop structure to structure ignitions, reduce ember production and extinguish structure fires.

- **Indicators:** Primary mechanism of fire spread is STRUCTURE to STRUCTURE in common neighborhoods or commercial areas.

- **Actions:** Tactical utilization of control lines and large water streams from fixed water supplies.

- **Considerations:** Only utilized when water supplies are abundant. Utilization of gels and class "A" foams to assist in mop-up and prevent secondary ignitions.

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**STRUCTURE TACTICAL ACTION**

**BUMP & RUN**

- **Purpose:** Often used when inadequate resources are available to conduct perimeter control or other structure defense tactics.

- **Indicators:** Defensive tactic when fire front impact is imminent. Offensive tactic when resources are attempting to steer the fire to an established end point where other resources have prepared control lines. Structure prep is minimal due to compressed time constraints.
STRUCTURE TACTICAL ACTION

BUMP & RUN, cont.

- **Actions**: Resources move ahead of the fire front to extinguish spot fires, hot spots and defend structures. Resources remain mobile, able to maneuver quickly, leapfrogging from one structure to another.

- **Considerations**: Situational awareness and utilization of PACE Planning. May involve direct attack with fireline and firing operations. FFs must move if structures become involved and quick knockdown cannot be achieved. Utilization of additional resources behind “bump and run” for perimeter control and tactical patrol.

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**STRUCTURE TACTICAL ACTION**

**TACTICAL PATROL**

**Purpose**: Tactic used before or after fire front that relies on mobility of assigned resources to continually monitor assigned areas.

**Indicators**: Before or after fire front in which the fire may pose a risk to structures from fire brands or smoldering combustibles in void spaces, roofs, in rain gutters and stored material near buildings. Also, in areas away from the fire in which there is predicted to be significant ember showers and there is an accumulation of receptive fuels.

**Actions**: Patrol area where the fire has passed but there is still a risk to structures from fire brands.

**Considerations**: Patrol areas downwind of potential ember showers. This tactic should also be considered to extinguish hot spots or secondary structure ignitions, and address safety issues such as power lines, hazard trees and other hazards.