TOLEDO FIRE & RESCUE DEPARTMENT

C-120 The 360 Survey

Emergency Manual

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PURPOSE

Before we commit a firefighter's life inside a structure fire or an ILDH atmosphere, the first officer on scene shall take the time to conduct a scene size using their training, good judgment and experience, to assign resources based upon their findings.

SCOPE

This will be accomplished by the first arriving fire department member taking "Command." An initial size up shall given by radio from the street. Following this, they shall perform a 360 Survey by physically walking the perimeter and assessing the structure. Once complete, update the initial size up and make appropriate assignments.

The Battalion Chief, the Safety Sector and the RIT officer shall also perform a physical 360 Survey upon their arrival to the incident.

TACTICAL CONSIDERATIONS

Upon arrival, the first officer onscene is expected to conduct an initial size up. This is accomplished by the engine pulling past the structure to allow a visual of 3 sides before giving a general report via radio.

- "Engine 16 is at 1842 Palmwood. This is a working fire. Engine 16 is Command. Command conducting a 360. All crews stage until directed."

While the crew readies their response, Command shall circumnavigate the structure as completely as possible. If the size of the structure or an obstacle such as fencing negates the ability to complete a full 360 Survey, this fact must be relayed so that subsequent 360's and/or arriving crews will make completion of the 360 survey a priority.

In the instance of a High Rise, incoming crews will work together upon arrival to get an eye on all sides of the structure. For more on this see the **High-Rise Procedure**. If the structure is a 'Big Box' or large residential/commercial/Industrial structure, don't hesitate to send a rig around the building to assist in the 360.

1. Officers are required to carry and use a Thermal Imager Camera (TIC) during the 360 Survey.

2. When the officer walks around the structure they shall look critically at:

    1. Life Safety – to include rescue and/or search operations for visible victims and/or potential victims.

    2. Building construction – to include construction type, stability of structure, number of divisions, door locations, basements, and knee walls.

    3. Smoke and fire conditions – to include location of fire, flow paths, wind speed and direction, and reading smoke (volume, velocity, density, color).

    4. Entrance – determine the safest, most efficient point of entry to reach the fire.

    5. Fire ground hazards – such as wires down, exposure issues, dogs, hazards not seen from side Alpha and holes in the lawn.

There are two very dangerous structural features that should be announced during the size up of a residential structure; **kneewalls** and **basements**.

- **Knee walls:** Are announced by stating that the structure has a ½ story (i.e., 2 ½ story). The ½ story is a key indication that the structure likely has knee walls and awareness is critical. It is imperative the officer understand the relation of soffits, knee walls and attics when judging fire flow. By stating that the structure has no ½ story, it appears that there are no knee walls from the exterior.
- **Basements:** The officer must look from the foundation (basement or crawl space) up. This tactic is to prevent putting crews above fire unless it is vitally necessary such as in a VEIS situation. If there is a thermal threat in the foundation (basement or crawl space), the first Attack crew should be directed there. If the foundation is clear look to Division 1. If there is a thermal threat on Division 1 then the first Attack crew should be directed there. If no thermal threat exists on Division 1 then move up to Division 2 and so on.

Thermal threats in foundations can be difficult to detect. Foundations are made of brick, cement, or cement block. They may have small windows that are blocked or covered. Should an officer suspect a thermal issue in the foundation, the TIC can be used to look at a crack in the foundation, a dryer vent or even a small window. The TIC may detect a heat signature that the officer can not see.

As the officer completes the 360 Survey, they will try to decide if a fire exists, its location, likely path of travel, and the best tactic to employ to put water safely and proficiently on that fire. They shall also take into consideration life safety and fire ground hazards while formulating the initial response plan.

Once the 360 Survey is complete, the officer shall update via radio the initial size up, add pertinent details and new findings, and make assignments based on the information gathered.

- “Command 360 complete. Two- and one-half story residential structure on a basement. Heavy fire showing Division 2 Bravo side/Charlie corner. E16 will be Attack, enter side Alpha…”

The officer will then brief the attack and/or rescue crews with any relevant issues **and give them the TIC** before they commit to their assignment. See **Thermal Imaging Camera C-108** for the benefits of having a TIC.

Command will then run the incident according to their plan, adjusting tactics as objectives and conditions change, until relieved by higher authority.

See Also:
High-Rise Procedure
Thermal Imaging Camera C-108
