

# Structural fire fighting: Two plus one response

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*"When the ladders go up, the walls come down"*

**T**wo engines and one ladder. The standard first turn out to any structural fire. It should be common sense. But is it? A good friend of mine who worked in a neighbouring fire service some years back, made a point of responding his ladder truck on all structural fires to the great irritation of his rather 'traditional' chief and every time he was chastised about this practice, his retort was, "When the ladders go up, the walls come down".

This somewhat humorous story really goes to the heart of what I want to get across in this month's article. Could you imagine playing rugby against a full 15-man team if you only have 10 players

in your own team, yet we expect our fire crews to respond to fires without the adequate staffing levels to effectively deal with them? This is not only bad practice but it is also unsafe.

Remember, a fire doesn't respect or reputation, religion or race. It respects your skills and knowledge and how you use them to confront it.

I have frequently written about staffing levels and effective response in the past. This month, however, I want to focus on how it is all put together. What does each responding unit do, how do they complement each other. In the aviation industry there is a saying that any landing you walk away from was

a good landing. In the fire service any shift that everybody gets to go home at its end was a good shift. We need to ensure that through proper recruitment, training, equipment, standard operating procedures and incident command we give our fire fighters the maximum chance to do just that.

So how does a 2 + 1 response work?

Generally, your first engine will have the responsibility of the initial attack. This will include a rapid assessment, which will inform the strategy, either offensive or defensive mode, deploying an initial attack-line, secure a water source and protect exposures. They will only be able to perform a number

of support activities for the initial attack. This will include limited forcible entry (to provide entry for the hose team), positive pressure ventilation and possible search and rescue. Considering that you only have a crew of four on this engine, it will be ludicrous to expect them to do more than that.

The initial incident commander will most likely be the officer on this unit, which means that he/she will have to free themselves up to establish command and inform the next arriving units of the prevailing situation and their assignments. I have often advocated that the first arriving engine should always do a three-quarters drive-by ie drive past three sides of the structure and then place itself on a corner of the structure. This will allow the front of the structure to be used for siting the aerial device. The second arriving engine should always arrive after the aerial device and site itself in the most advantages position for establishing a sustained water supply and providing an additional attack line(s). The second engine, therefore, has more time to spend on situational awareness.

We all know that the decisions made in the first few minutes after arrival will set the tone for the entire rest of the operation. This will generally be done by the first arriving officer.

If you have the incident commander responding in a command car and he/she arrives at the same time as the first-in engine, these decisions will be able to be made with more insight and be able to be carried through to the next arriving units with greater continuity. You notice that I didn't say 'with greater authority'. Simply explained, the decisions made by the first officer must have as much authority as if it were made by the fire chief. The first-in officer is the first incident commander and the incident will escalate from the decisions made at this point. It is therefore vital that the person assigned to command the first arriving unit, must be trained and qualified to make the necessary decisions that will positively influence the entire operation.

The common practice in most of our cities of having a senior officer respond from home after hours is probably the worst decision ever made. Release



*The second arriving engine consider ventilation requirements*

them from shuffling papers all day and use them for what they are employed for, fire command.

If we assume that the first arriving incident commander has done his/her rapid assessment, decided on a plan of action, communicated the plan and initiated fire fighting activities, the next arriving units should complement that strategy and not change it. A few minor tweaks might be necessary and this should not be a problem. The second unit is there to support the initial attack, not change it. This does not, however, mean that if this crew has noticed any changing conditions or picked up on something the first arriving incident commander has not seen, it should not be passed on.

The initial incident commander will stay in that position until such time as a formal transfer of command has taken place. Just because the chief has arrived on scene it does not mean that command has been transferred to him/her. Hopefully your department's command system will allow for a seamless transfer of command in which all operational

crews are clear on from whom to receive their orders. The old adage that the word CHAOS is merely an acronym for "Chief Has Arrived on Scene" need not necessarily always be true.

If your department employs a 2 + 1 response, your standard operating procedures (SOPs) will generally contain a list of functions that need to be carried out by the truck company and second arriving engine. These should not be seen as 'cast-in-stone' and it is important to rather see these functions as a list of options available to you. The second-arriving engine should facilitate or support the first-arriving engine by employing those activities, which will make the largest, immediate impact on the operation and that are needed to facilitate the initial strategy.

In most fire incidents, this will be in support of the deployment of the primary attack line. If the first arriving engine has entered the structure and engaged the fire without securing a sustained water supply, it should be your first priority. If they are struggling to control the fire with a single line,



Often we will be confronted with a complex operation requiring more and more varied resources

- ▶ you should prioritise getting a second line onto the fire.

The truck company function should be fairly confident that all their functions will be utilised and therefore their arrival should see the commencement of forcible entry, ventilation and laddering.

## Considerations

A number of factors will inform the second arriving engine which activities to perform. These include the following:

- Has a sustained water supply been established?
- How many lines are you going to deploy. A standard deployment of three lines –front entry, rear entry and roof entry should always be your first consideration; you can then work from there.
- Entry challenges: Is forcible entry required? Are there sufficient egress routes?
- Roof construction: collapse possibility? Will it be necessary to apply Class A foam to the loft opening to prevent fire spread and a possible flashover in the roof?
- Rescue requirements: Any possibility of persons still in the structure and, if so, how many?
- Location of the fire: How easy will it be to access the fire? Can you see the fire? And, if so, can you apply water to the seat of the fire?
- Ventilation considerations? Is it possible for the hose teams to hydro ventilate or do openings have to be made? The same goes for positive pressure ventilation. Can

your truck company get to the roof to initiate vertical ventilation?

- Is it feasible to continue with the strategy initiated by the first arriving engine or should a rethink be done?
- Will you be required to take over command? If so, this will not necessarily have to unduly influence the decisions made at this stage.

## Escalation

Up to this point I have outlined the initial response of 2 + 1. Often we will be confronted with a complex operation requiring more and more varied resources. We all recall the old first arriving engine radio call of "Make pumps many". How many you might need and how you will deploy them, should be made clear before you start calling for them. You must decide on your strategy and calculate what resources you need before deciding what to call for. Also decide on the positioning of a secondary staging area before calling for them. In an age where most cities have mutual aid agreements, I place you should not have a problem getting extra assistance.

Calling in these additional resources must be done in a calculated manner. Just calling extra resources could complicate your command system and quickly overwhelm your incident, something akin to General Custer calling for more Indians.

So, what should your second alarm standard response be? I would

recommend one additional engine and one additional ladder truck. We now have a 3 + 2 response. Your third arriving engine can then focus mainly on stretching additional lines while the second ladder truck can perform additional support functions. For example, if you have a heavily steel reinforced security challenge of windows above ground level, your entire first truck company will be tied up removing these barriers ie one cutter and one (or two) for the laddering. This will mean that the other support functions may be compromised. This is where your second truck company comes in. I will in a future article discuss the concept of 'riding positions' and the importance thereof.

A situation might dictate that all you need for additional support is another aerial apparatus. If that's all you need, call for only that. It is, however, important for me to have a pre-determined call out procedure with each arriving unit having no doubt as to what will be required of them upon arrival.

## In closing, a word on incident command

Most of my day job currently is spent in the wildland fire fighting environment. I also spend a lot of time as chairperson of the National Incident Command Working Group (SAICS) in spreading the gospel of incident command to various organisations and people. At one such a discussion a fire chief of a town with only a single fire station mentioned that with his limited staff it would be impossible to implement an effective incident command system.

Soon thereafter we experienced a massive fire in one of our districts and a chief in a similar role had to assume the role of incident commander over more than one thousand fire fighters and eighty fire fighting vehicles. The chief in question had previously attended a range of our ICS courses and was able to do a fantastic job. This is a fine example of the flexibility of incident command and the level of thinking and planning that should go into a fire service when it is establishing its operational planning.

It is all about you pre-planning, pre-determining your attendance and working according to your plan. ▲