

Lessons Learned Document

For

West Metro Fire Rescue

Concerning:

14194 West Evans Circle

January 19, 2009 at 0231 hours

By:

Dan Pfannenstiel, Division Chief of B-Shift

Peer Review:

Wayne Keith, Captain of Station 4

Brendan Finnegan, SaM Officer of B-Shift

Tony Wilkins, District 1 Chief of B-Shift

Scott Rogers, District 3 Chief of B-Shift

Bruce Kral, Division Chief of C-Shift

Michael Murphy, Deputy Chief of Operations

Steven Aseltine, Division Chief of Training

March 14, 2009

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1. Initial Response

- 1.1. Engine 4, Engine 9, Medic 4, Medic 6, Tower 3, Rescue 10, Squirt 8 (RIT), SaM 1, District 1, District 2, Bureau 7, PIO 3
- 1.2. Second Alarm: Engine 10, Engine 11, Engine 3, Medic 7, Tower 12, Air 3, District 3, Chief 2, Chief 3, Chief 6, PIO 1, and PIO 2
- 1.3. Third Alarm: Engine 5, Squirt 2, Medic 10, Engine 12, Chief 4, Chief 5

2. Weather

- 2.1. Weather was unseasonably warm, winds (20 mph with gusts), and dry.

3. Building

- 3.1. Single family residence, two story, type five (wood frame)
- 3.2. Building orientation: Alpha (north), Bravo One (east), Charlie (south), Delta (west)

4. Conditions

- 4.1. Fire on Charlie side of the house, all levels working inward and spreading laterally. Lateral spread was greater to the east (Bravo One) than to the west (Delta) exposure.

5. Classification

- 5.1. High Risk / Low Frequency
 - 5.1.1. Rapidly expanding

6. Investigative Status

- 6.1. Origin: below the lower deck of the house of origin (Charlie side near Delta end)
- 6.2. Cause: electrical in nature; specific failure unknown.

7. Synopsis

Dispatch information was clear that this was a working fire that was spreading fast to more than one house. Dispatchers received confirmation that everyone was out of the house of origin except for the dog. All information was transmitted and acknowledged by responding units. Dispatch continued to handle a tremendous call volume from citizens and police officials. Dispatch had the remaining units from the Holman fire go to another channel in order to free up TAC 3.

Engine 4 arrived first and provided the following size-up: “Engine 4 is on scene of a two story, single family structure, we have flames showing from – through the roof of the second story, Engine 4 will be command on the A side, this will be Evans Command”. Engine 4 was on TAC 4 and after they were brought back to TAC 3, the size-up was aired again. Engine 4 caught the hydrant just west of the fire unit. Captain Keith conducted a rapid analysis of the scene by walking to the rear of the fire unit as best he could. They were presented with the fire unit fully

involved on the Charlie side with heavy extension into the interior (see photo for additional view); the Bravo One exposure (east) with heavy exterior extension extending to the interior; the Delta (west) exposure with some exterior extension.

Engine 4 aired that the area in front of the fire unit was becoming congested from onlookers and people in the streets. Captain Keith arranged for Tower 3 to set up in front of the fire unit for defensive operations. Captain Keith made the following assignments from here: Engine 9 to the scene for manpower, Rescue 10 to the scene, Medic 6 arrived on scene, Squirt 8 RIT duties, Medic 7 arrived shortly thereafter.

Engine 4 and other arriving crews stretched the following lines: 1 ¾" hand line to the Delta exposure, 1 ¾ inch hand line to the Delta side of the fire unit, 2 ½ inch hand line to the Bravo side of the fire unit, and a 2 ½ inch hand line to the Bravo One exposure.

The neighborhood to the south and east was heavily congested with traffic leaving the area and emergency vehicles coming in. Visibility from smoke and fire embers hampered the ingress and egress.

District 1 arrived on scene (Alpha side) after driving around the back. SaM Officer (Finnegan) arrived on scene and was generally on the west side. District 2 arrived on scene to the south, one block behind the fire scene. Initially, District 2 asked for an additional Engine and Tower due to embers and extension to the Charlie exposure and then ordered a second alarm and announced staging as Warren Drive and Warren Circle. District 2 and District 1 coordinated that Command would be on the Alpha side under District 1 and that District 2 would assumed Charlie Division Supervision.

Rescue 10 (team of two) searched the Delta exposure; Rescue 10 (team of 2), Engine 9 and Medic 7 searched the Bravo One exposure and began an interior fire fight; Medic 4, Medic 6 and Engine 4 began exposure protection on the Delta side of the fire unit. All units (fire unit, Delta exposure, Bravo One exposure) were searched and negative.

Sam Officer Finnegan, after consultation with IC Wilkins directed Squirt 8 to establish a water supply on the west (off of Fig). Not all of Squirt 8 was committed to the above and a partial RIT crew remained; however, their capabilities were lessened. Incoming units (Engine and / or Tower 12) were asked to supplement RIT.

District 2 and citizens searched / evacuated the three structures on the Charlie side of the fire unit and prepped the house directly to the south. Charlie Division directed Engine 10 and Engine 3 into the scene. Two separate water supplies were secured and two 2 ½ inch hand lines were stretched to the rear of the Charlie exposure for fire attack on the back side of the Bravo One exposure. Collapse was occurring on the Charlie side of the fire unit and announced.

Tower 3 set up on the Alpha side; a water supply was provided from the north (600 feet). The water supply was eventually run through the pump of Tower 3. Tower 3 began to operate over the fire unit and the Bravo One exposure. An announcement was made from the Charlie side to Command that there were people operating in the Bravo One exposure and recommend redirection. This was not followed up on. Tower 3 did direct their stream on to and thus into the Bravo One exposure. One fire fighter sustained a minor injury. Tower 12 arrived on scene and was positioned on the west side.

The aerial operations did significantly control the body of the fire. From there, the Charlie Division broke down the 2 ½ inch lines and extended a 1 ¾ inch hand line into the Bravo One exposure to extinguish hidden fire that could not be reached from above. This was discussed with Command; however, this was not well coordinated with the Alpha Division.

Secondary searches were conducted; crews were being rotated and relieved as needed; extensive overhaul operations were being conducted; some salvage work was being coordinated. The water department was on scene; fire prevention was on scene; Ray Barnett from Fleet was on scene; overhead staff was in the office / dispatch to staff the remainder of the district and coordinate contingency plans for rest, investigations, etc. Houses on the block to the south were checked for carbon monoxide and people were allowed to return. During the extended overhaul operations, another member had a close call when he stepped through the floor of the fire unit. No injury resulted. It was determined that poor internal communications between the Division Supervisor and Company Officer partially led to this mishap. Units were rotated through the fire scene for the next 24 hours and held for investigations.

Strengths:

1. Response / Ordering of Resources / Apparatus

- 1.1. Good information from Dispatch about the call and occupants being out of the structure.
- 1.2. Initial placement of apparatus.
- 1.3. Second alarm staging area announced; however, due to the rapid assignment of incoming resources and residential area congestion still occurred.
- 1.4. Public Information and Community Outreach was outstanding.

2. Command Structure (Initial and Extended Operations)

- 2.1. Command established early by Engine 4 and transferred to District 1.
- 2.2. A walk around size-up (as practical as possible was conducted by initial officer which led to valuable information).
- 2.3. Division Supervisors established Alpha, Charlie, and Delta.

3. Communications

3.1. Technical

3.1.1. Dispatch handled an overwhelming amount of calls, radio traffic, were forward thinking with the water department, etc.

3.1.2. No overwhelming technical issues noted.

4. Safety

4.1. Some announcements of collapses occurring and misdirected streams.

4.2. Company Officer oversight in some tactical areas.

4.3. Personal Accountability Reports (PAR) were conducted.

5. Mode of Action

5.1. Command Mode and Incident Command Post (ICP) noted across the street on the Alpha side.

6. Operational Principals / Objectives

6.1. Incident Stabilization, but not clearly stated (see missed opportunities for further details).

7. Strategy

7.1. Initially the strategy was defensive, but not clearly stated (see missed opportunities for further details).

8. Tactics

8.1. In support of the Strategy:

8.1.1. Early recognition of rapidly expanding incident and need for Tower placement, water volume and aerial operations.

8.1.2. First Engine secured water supply.

8.1.3. All sides were considered and covered.

8.1.3.1. Multiple lines used.

8.1.4.2 ½ inch lines were used.

8.1.4.1. Later broken down to 1 ¾ inch lines.

8.1.5. A total of four water supplies were secured.

8.2. Basic Skills:

8.2.1. Rapid active searches of both exposures were conducted.

8.2.2. Hose management

8.2.3. Overhaul

8.2.4. Salvage

Missed Opportunities:

1. Response / Ordering of Resources

- 1.1. Don't piece additional alarms together.
- 1.2. Additional RIT for subsequent alarms must be ordered through IC or his designee.

2. Command Structure (Initial and Extended Operations)

- 2.1. Initial size up was on wrong channel.
- 2.2. The assigned resources within the Alpha Division were not clearly defined.
- 2.3. Tower 3 was unaware of who they reported to. This led to confusion and ultimately a master stream being deployed / operated on the Bravo One exposure with firefighters inside.
- 2.4. Alpha was established, Delta was established and Charlie was established. The Bravo One exposure was managed by both the Alpha and Charlie Divisions. Creating a separate division would have minimized confusion. This was especially evident when the fire was under control and there was less than a coordinated effort in the Bravo One exposure. Announcing who is assigned in each division is valuable.
- 2.5. A Medical Group must be established based on the scope and nature of the incident.

3. Communications

3.1. Technical

- 3.1.1. Consider separate radio channels for Divisions, aerial operations and water supply.

3.2. Internal

- 3.2.1. On more than one occasion the communication cycle failed. The sender must be clear as to what they are asking or informing others about. The receiver must acknowledge what was said and expected. An example of this occurred when Division Charlie announced that there was a master stream being applied on the Bravo One exposure with people operating inside. While this was acknowledged, follow up did not occur. Communications must be clear and concise. For instance, cease the aerial operations immediately or remove the firefighters from the interior.

4. Safety

- 4.1. The SaM (SO) was absorbed early on by the rapidly expanding nature of this fire. The SO is a key command staff position and must remain intact and / or replaced immediately. This incident demanded more than one SO and this did not occur.
- 4.2. RIT was reassigned early and acknowledged by the IC. RIT is a key operational assignment. This fire had exterior and interior RIT potential. While RIT was in some regards replaced, the

IC and other Chief Officers must make RIT a priority. This fire could have demanded more than one RIT based on the scope and nature.

- 4.3. Formal rehab not established. Crews were tired based on the work load and this being the second multiple alarm fire of the night.
- 4.4. Proper personal protective equipment (PPE) was not worn all of the time. Division Supervisors must have SCBA on to be effective and available for proper recon, size-up, etc. At times hoods, gloves and eye wear was not used.
- 4.5. Aerial operations into a structure where firefighters are operating is dangerous (see Operational Principals and Strategies for further).
- 4.6. Accountability tags must be used by Division Supervisors.
- 4.7. More PARs must be conducted, especially when we transition between strategies, or when we announce that a collapse has occurred.

5. Operational Principals / Objectives

- 5.1. Operational Principals / Objectives must be announced early and when they change.
 - 5.1.1. Intuitively everyone probably understood that the fire unit was lost; however, this must be announced. For example, “all occupants are out of the fire unit, we will search the exposures and then operate under the Incident Stabilization principal”.

6. Strategy

- 6.1. Strategy in support of the Operational Principals / Objectives should be announced early and when they changed.
 - 6.1.1. Intuitively everyone probably understood that the overall strategy was defensive; however, this must be announced. In the case of this fire, when crews were assigned to search the Bravo One exposure they took a hand line (appropriately so). Once inside they not only searched but were faced with a fire that extended from the exterior to the interior and they began an interior fire fight. This became problematic and dangerous when aerial operations began. This resulted in an injury of a fire fighter operating in the Bravo One exposure.
 - 6.1.2. This is what it should look like: “the overall strategy will be defensive, aerial operations will go into play when firefighters are accounted for after the search in the Bravo One exposure”. Another option with the same effect would be “the Alpha Division will be defensive with aerial operations, Delta will remain offensive with handlines, and Bravo One will be transitional”. Everyone must copy this transmission. A PAR prior to placing aerial master streams into operation is wise.

6.1.3. In the case of this fire the IC was aware that there were 2 ½ inch hand lines operating on the Charlie side of the Bravo One exposure; this information must be relayed to the Tower Officer.

6.1.4. In the case of this fire, it can be appropriate to have aerial operations on the fire unit and interior operations in the Bravo One exposure. This must be done in a calculated manner, with accountability and oversight. What must take place prior to this is clear objectives and confirmation from supervisors. For example, “from Command we will be using aerial operations on the fire unit and interior hand lines in the Bravo One exposure to prevent further fire spread. Tower 3, your stream must only be deployed on the fire unit, do you copy?” After confirmation, then the supervisor managing the crews in the Bravo One exposure can enter and must provide constant feedback to the IC.

6.1.5. Transitional strategies must be announced and coordinated if used.

7. Tactics

7.1. In support of the Strategy:

7.1.1. Water supply was not initially secured for Tower 3. The initial IC directed Tower 3 in to position and should have had Engine 9 secure a water supply for them immediately. There was a delay in providing Tower 3 with water.

7.1.1.1. When Tower 3 was supplied with water there was not a source engine; however, the water was run through the pumps on Tower 3.

7.1.2. Consider the deck gun on Engine 4 to manage the Delta exposure. This provides more water and can be left unstaffed if needed.

7.1.3. Consider a portable master stream on the Charlie side that could provide more volume and left unstaffed if needed.

7.1.4. Aerial operations are less effective when the fire is under the roof. Two options exist; lower the boom and direct the stream up under the roof, or cease the aerial operations and “transition” in to a direct interior fire attack.

7.2. Basic Skills:

7.2.1. Some 2 ½ inch hand lines were using a one inch tip. If you choose to use a 2 ½ inch hand line then get the most gallons available.

7.2.2. Officers must provide oversight to their crews. Nozzles are better suited in the hands of a fire fighter so that Officers can manage accountability and provide oversight in precarious positions, etc.

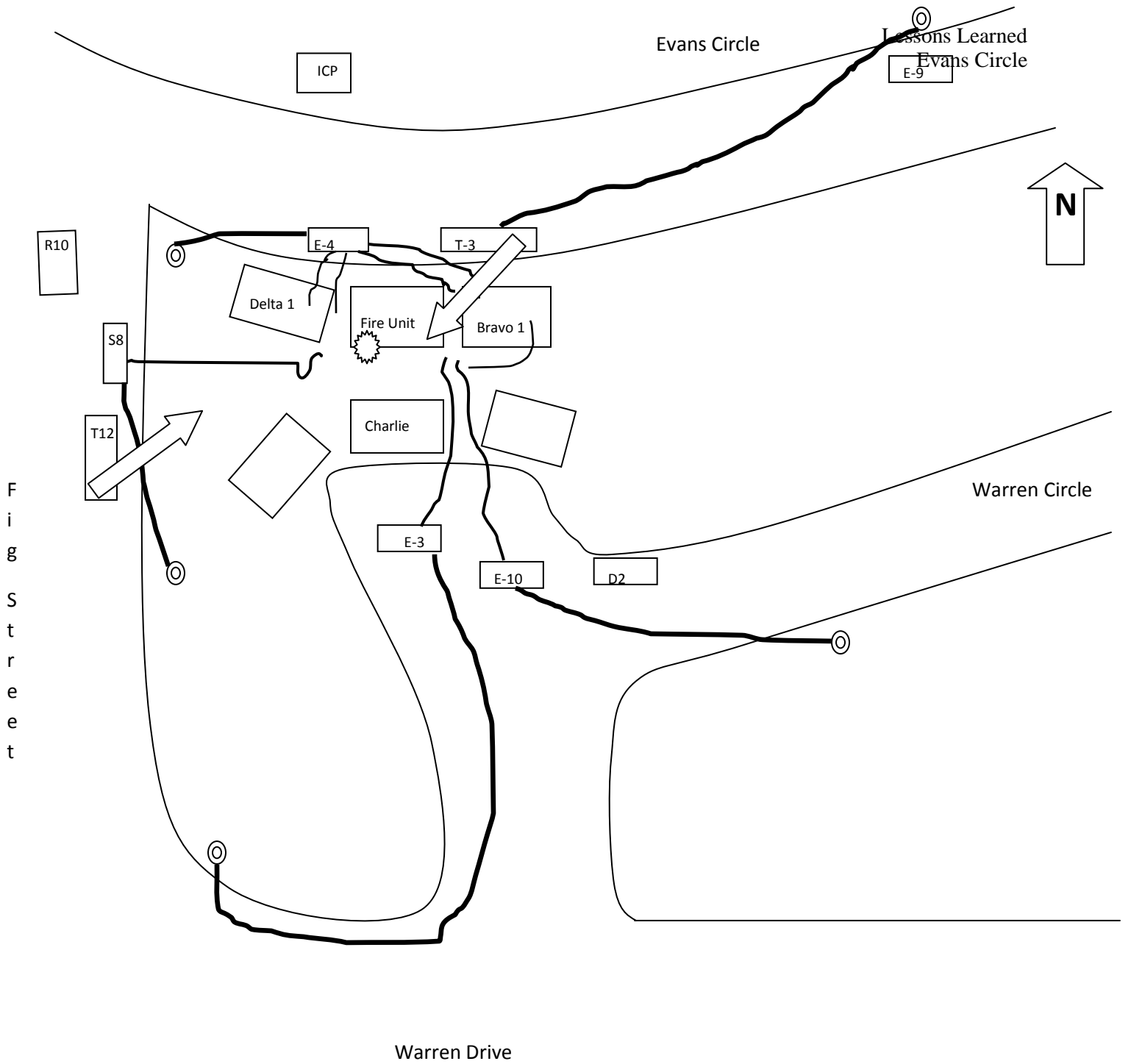
Recommendations to Operations and Training:

1. Operations

- 1.1. Consider SOP rewrite to address the following:
 - 1.1.1. Second and third alarm responses.
 - 1.1.1.1. Automatic dispatch of additional RIT on additional alarms.
 - 1.1.2. Incident Management Team concept within our organization.
 - 1.1.3. Automatic response for rehabilitation on taxing incidents.
- 1.2. Multiple radio channels use and / or simplex channels.
 - 1.2.1. Explore with Communications Division.

2. Training


- 2.1. On-going size up reports; announcements of objectives and strategies; dynamic fire scenes.
- 2.2. Transitioning from Defensive to Offensive; effectively communicating the same and ensuring accountability in the effected division.
- 2.3. Source Engine in support of Tower / Aerial operations.
- 2.4. Gallons for tip selection, portable master streams, etc.

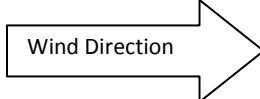


14194 West Evans Circle

January 19, 2009 0231 hours

Diagram Not to Scale

 Area of Origin

 Wind Direction



Front and rear of the house at 14194 West Evans Circle; photos courtesy of homeowner.



Rear of fire unit (fully involved) and Delta exposure. Photo Courtesy of Micki Trost.



14194 West Evans Circle from the front. Photo courtesy of Micki Trost.



Fire spreading to Bravo One Exposure. Photo Courtesy of Micki Trost.

Dispatch Traffic - Evans Fire

0231 Initial Reports of fire – massive flames, trees, fence and back side of the house is on fire behind us. Multiple reports continue to come in. Confirmed that everyone is out (except for the dog) of the house by owner; address is confirmed.

0233 Call dispatched; updates given while units responding. Units on Holman Way moved off of TAC3. LPD continues to provide information that the fire is spreading, etc.

0238 From Engine 4: Engine 4 is on scene of a two story, single family structure, we have flames showing from – through the roof of the second story, Engine 4 will be command on the A side, this will be Evans Command (this was aired on TAC4 and thus only heard by incoming units if they were scanning).

Engine 9 on scene staged at the hydrant.

Engine 4 from Engine 9 – no answer

Dispatch – Standby Engine 9 he (Engine 4 is on TAC4).

Dispatch from District 2: Are we on TAC3 or TAC4?

Dispatch: We will be on TAC3 – we are trying to get Engine 4 back to TAC3.

0240 From Engine 4: Dispatch and all incoming units, we have two involved structures on this fire, the fire is on the exterior and moving up to the attic space area on both, we have a lot of congestion in front and we need to leave room for the Tower down by this fire scene – stand by for more information.

From Engine 4: Engine 9 can you park down from the structure and bring your crew to command?

From Engine 9: Engine 4 do you need water?

From Engine 4: That is negative at this time; we need to leave room for the Tower to get down here though.

From Engine 4: Rescue 10 when you get on scene we need you on the A side reporting to Command. Rescue 10 Copy – 30 seconds out.

From Engine 4: All incoming units, we will repeat the size-up since we were on the wrong channel. Two structures involved, at this time it is exterior from the ground up to the attic, Rescue 10 report to command and we will need you to search both structures, we will need the Tower down in front of the A structure, we will need a water supply to the Tower.

0241 Medic 6 and Squirt 8 on scene – Squirt 8 assuming RIT.

From Engine 4: Tower 3 did you copy – Tower 3 copy about 20 seconds out.

0243 District 1 on scene –

Dispatch this is District 2 – I will need another Engine and another Tower and bring them in off of Warren Drive and Warren Circle – break District 1 from District 2.

Tower 3 on scene

District 1 from District 2: I need you to take command on your side, I am on the Charlie side, and this fire will be extending to the other block if we do not get a handle on this soon. I will order up some resources for this side and be Division Charlie.

From District 1: Copy I will take command from Alpha

From District 2: Dispatch – scratch the additional Engine and Tower just make it a second alarm and stage them down the block from Warren Drive and Warren Circle.

Command from SaM 1: I am at Fig and Warren Circle and there are embers all over the roof tops on the block behind us.

District 2 from Dispatch: Confirming you want the resources to the south of your location?

0245 From District 2: That is affirmative – we want to try and hold this thing (fire) to two structures maybe three.

0245 Second alarm aired and advised to enter off of Warren Drive and Warren Circle.

Command from Tower 3: We need a water supply and then we can knock this thing down.

Tower 3 from Command (Wilkins): I will see what I can do to get you water Richie we do not have any more Engines over here.

From Tower 3: Copy – I have Engine 8 behind me if you can get a crew to help them hump hose to the east of them.

Command: Copy – do it

Command from SaM 1: If Tower 3 is already committed, we can have Tower 12 come in to Fig Street and Warren Place; we have a good spot for them to set up and get both blocks here.

Command: Copy – Once they come on the air go ahead and direct them in SaM.

Command from Charlie Division: 14181 West Warren Circle, I need a couple of Engines on this Charlie side to prep this house or we will lose this one as well it starting to auto ignite.

Tower 3 from Command: Go ahead, looks like we are getting a hose laid to us from Engine 9.

Command: Copy that is what I needed – we need you as soon as you can. Copy Boss!

Command from SaM1: I have Sqrts 8 laying a line to Fig Street and Warren in preparation for Tower 12 – I need Tower 12 at that location.

Command: Copy – I will allow you to handle all resources on the Charlie side yourself.

SaM 1: Copy

Command: Let's start three more Engines as we have extensive spread –

Dispatch: That will be a third alarm.

Command: Go ahead and do it – break Charlie Division do you have a good staging area on your side?

Dispatch from Engine 10: We are four minutes out I heard District 3 (2) calling for an address, what house do you have us going to?

Engine 10 from Charlie Division: 14800 West Warren Circle – have the house prepped already – I need a couple of 2 ½'s stretched around the sides.

Tower is ready for water –

Dispatch from Engine 10: Do you have a cross street for us?

Charlie Division: Shifty this is a little cul-de-sac where Warren Circle and Warren Drive meet up, there is a cop down there and that is where I need you to come in at and bring in your water supply.

Engine 10: Gotcha Chief – we will bring a plug in from Warren and Fig – does that sound right?

Charlie Division: I can't tell ya –

Engine 10: We got it – thanks

Alpha Division from Command:

Emergency traffic from the Charlie Division: We have collapse on the Charlie side, you guys operating with hand lines on the Delta and Bravo – back off now – right now.

Tower 3 water is coming –

From Tower 3: Give me a lot of pressure

District 2 (Charlie Division) from Engine 10: We are right down the street from you –

Charlie Division: Copy – I need 2 ½ around the right side, the house is prepped, I am taking down fences, we are going to attack this house on the Bravo side of the working fire.

Command from SaM: Can we put Squirt 8 into operation since Tower 12 Is extended?

Command: Go ahead I am good with that.

Engine 10B: Let Charlie know that we are stretching a line.

SaM: Command Tower 12 can be RIT when they get here.

Dispatch: Command will you need the water department to increase pressure.

Command: Yes

Engine 10A: Toddler and Engine 3 – let's light up the scene.

Command from Charlie Division: Okay I have Engine 10 and Engine 3 with an independent water supply back here with me we will be working the back side of the Bravo exposure – I think we might be able to put it out there. That is the Bravo One Exposure.

Command Copy: Information only – we have primaries complete on Bravo One and Delta One.

Charlie Division: Copy – you do have crews operating in Bravo One and I am going to recommend that you pull them out with that master stream up there.

Command: Copy that – there main objective is the fire in the attic area and they are working that up there.

SaM from Tower 12: We are on scene where do you want us?

SaM: Right up here Capt.

Engine 10A: Toddler clear that hose bed and we are ready for water – 300 feet, 1 ¼" tip.

Command from Medic 6A: I am operating a handline in the Delta side looking inside the door and it looks like most of the fuel feeding this fire is from the garage.

Command: Copy

Command from Engine 11: We are in the area, where would you like us?

Engine 11 from Charlie Division: Leave your engine, bring your crew, tool and PPE and report to the Charlie Division. Break – Command, I now have Engine3, Engine 10 and Engine 11 reporting to me on the Charlie side.

Command: Copy that – Information only, the Alpha side is looking good so let me know what you need over there.

From Charlie Division: The main house on the Charlie side is down and we are working on your Bravo One exposure, we will take care of search and rescue on the block behind the fire.

Engine 11A from Charlie Division: Upon your arrival at Engine 3 if you can make sure the people are evacuated out of 14181 and the two doors down?

Engine 11: Copy

Command from SaM on the Delta Division: We have Squirt 8 with a water supply and 2 1/2 handlines. We have Medic 4 with us too. We are looking good here.

Command: Copy thanks

Squrt 2: two minutes out where do you need us?

Command: Stage 2 blocks out and you will be assigned as needed.

Dispatch: 25 minutes on scene