



# Montgomery County Fire and Rescue Post Incident Analysis



Second Alarm Building Fire  
The former Farqhair Middle School  
17017 Batchellors Forest Rd  
January 29, 2017

Submitted by Chief Mitch Dinowitz

## I. Introduction

Units were dispatched at 0116 hours on Sunday January 29th 2017 for the reported "school on fire" at the Old Farquhar Middle School, 17017 Batchellors Forest Rd. Two minutes after the initial dispatch, Montgomery dropped the Rapid Intervention Dispatch (RID) and notified units responding of "County Police on scene with fire from the roof of the gym."

Paramedic Engine 704 was the first due engine and arrived on scene reporting a school under renovation with fire through the roof of the gym on the Alpha/Bravo corner. Chief 704 Bravo arrived on scene as Engine 704 was giving their report. Chief 704 Bravo relayed that he was direct on the report and took Command with the command post on the Alpha/Bravo corner behind Paramedic Engine 704. He immediately called for the second alarm.

The building was an abandoned middle school slated for demolition and had construction fencing around the exterior of the school. The school was ordinary construction and the Alpha/Bravo corner was two stories. The majority of Side Alpha appeared to be only one floor.

Due to the time of the incident and the building being under renovation, Command quickly made the decision to make this a defensive attack. Aerial master streams were utilized due to the volume of fire from the roof in the Alpha/Bravo corner. Paramedic Engine 704 began hitting the fire with the deck gun from tank water, while Truck 740 set up for aerial ladder pipe operations. During the first minutes of the incident, crews from stations 4 and 40 along with Chief 705 Charlie attempted to gain access to the main hallway of the school which was not affected at that time by fire or smoke. Their plan was to establish an interior attack with a blitzfire and a 2 ½ inch line, however Command instructed the building be evacuated due to the flowing of water from the aerial master streams.

It was quickly realized multiple aeriels would be needed to get the fire under control. Aerial Tower 724 split their crew of five between the Rapid Intervention Group (RIG) and aerial operations on Side Alpha. Water supply quickly became an issue with the need for dual lines and heavy water hookups. Chief 705 was assigned as the Water Supply Officer and coordinated water supply efforts. All engines from the first and second alarm were used to complete water supply. Four hydrants were used and due to the amount of water used some low pressure issues were encountered.

Crews operated for nearly three hours. Around 0330 Command began releasing units and attempting to scale back

- a. Indicate unique circumstances/problems, etc.

Water supply was an issue. The fourth due engine laid over 1000 feet of 4-inch hose with no relay engine. There was a hydrant on Side Alpha of the building, however, they stated they did not have water maps for the box area of the call. Most crews did not utilize heavy water hookups, which reduced the available water supply the master streams. Later into the incident a hydrant on Old Vic Boulevard was tested for use and found to be capable of less than 5 psi. It was believed this was because the crews were using so much water from the other hydrants they were operating from and the system was used to capacity.

## II. Building Structure/Site Layout

- a. Review type of structure  
School – Concrete/block construction; gymnasium with steel truss roof
- b. What construction or design features contributed to the fire spread, or prevented fire spread, i.e. sprinklers, fire doors, etc.  
The building was slated for demolition. If a fire suppression system existed, it was not activated. The bulk of fire was contained to the gym. There was old furniture stacked very high in there and is what was burning. The roof collapse of the gym made it difficult to hit the fire with water from aerial devices as there was debris blocking the burning material from being hit with water.
- c. Did the topography and/or type of fuel affect fire control efforts?  
No.
- d. Did fire alarm and/or suppression devices work properly?  
Unknown, it is assumed that these devices were non-operational as building was slated for demolition.
- e. Did personnel or apparatus encounter any problems in gaining access?  
There was a construction fence surrounding the building. In order to position apparatus, aerial devices and hose lines, crews had to gain access through the fence by moving sections.
- f. What is needed to correct these problems?  
Update running routes and water maps to correctly show hydrants. Ensure all surrounding companies have access to maps via hard copy or Mobile Data Computer (MDC) to ensure proper water supply can be established. Ensure all drivers take the time to create heavy water hookups even if

they believe they will not be needed. Encourage drivers to consider leaving room for other apparatus to appropriately position instead of parking as close as they can.

### III. Communications

- a. Did dispatcher verbally provide all information available at the time of dispatch?  
Yes. And relayed information from on scene County Police
- b. Was the fire ground channel adequate?  
Yes. Utilization of 7 Charlie talkgroup was adequate. 7 Delta was used for expanded water supply and staging.
- c. Were proper communications procedures followed?  
Yes.
- d. Were there problems communicating with Mutual Aid companies?  
No.
- e. Was the communication network controlled to reduce confusion?  
Yes.
- f. Did units, division/groups/branches and Montgomery communicate effectively?  
Yes. There were no communications issues.
- g. Was radio discipline effective?  
Yes.
- h. Did Incident Commander provide timely updates to Communications?  
Yes.

### IV. Pre-emergency Planning

- a. Were pre-fire or other plans needed on the scene?  
No, other than map books as indicated above.
  - i. Were they available?  
Yes.
  - ii. Should they be updated?  
Yes.

V. On Scene Operations

- a. What was the structural integrity of the building based on fire conditions on arrival, at 10 minutes, 20 minutes, 30 minutes, etc.

The structural integrity of building was compromised prior to arrival based on fire load and heavy fire conditions. Fire was through the roof upon arrival. The gym roof collapsed fairly early into the incident. Safety 700 established a collapse zone on the Alpha/Bravo quadrant of the building. This was relayed to all on scene via radio.

- b. Was command identified and maintained throughout the incident?  
Yes. Command was initiated by Chief 704 Bravo who arrived a few seconds behind Paramedic Engine 704. Battalion Chief 704 assisted as part of the command team and Duty Chief 700 joined later.
- c. Was a command post established and readily identifiable? Flag, Green Light, or other?

Stationary Command was initiated in Chief 704 Bravo's car and relocated to Battalion Chief 704 upon arrival with the location announced.

- d. Size up decisions by command.  
Chief 704 Bravo arrived the same time as Paramedic Engine 704 was giving a report and immediately declared defensive master stream aerial operations and requested the second alarm.
- e. Was additional apparatus requested in a timely manner?  
Yes. Chief 704 Bravo requested the second alarm upon establishing command.
- f. Strategy/action plan.  
Defensive aerial master stream. Although Command declared this a defensive exterior operation, the first units made entry into the main hallway to put water on the seat of the fire. They were eventually being pulled out.
- g. Did personnel/units, and teams execute tactics effectively?  
Yes. Once water supply was established, aerial operations were initiated and continued until the fire was controlled.
- h. Were any training needs identified? Provide examples.  
Engine drivers need to continue to practice heavy water hookups.

- i. Were Standard Operating Procedures used? Were they adequate? Do they need to be updated? If not used, why?  
The SOP for safe structure firefighting was used and was adequate.
- j. What offensive/defensive decisions were made by command?  
Defensive operations were utilized from the start and throughout.
- k. How was risk analysis applied to the incident?  
It was quickly determined the building was slated for demolition. This meant there was no need to risk anything to save a building that was being torn down in the next few days.
- l. Were the divisions/groups used appropriate to the incident's type and complexity?  
Yes.
- m. Was apparatus properly positioned? If not, why?  
Initial arriving apparatus was positioned appropriately. There was a need to reset later into the incident to get more aerials in better position. In order to do this, excess apparatus such as Command Post 700 and Canteen 740 had to be repositioned.
- n. Attack line selection and positioning.  
Paramedic Engine 704 chose to initiate blitzfire and deck gun operations from the initial arrival as heavy fire was showing from the roof.
- o. Ventilation operations.  
N/A
- p. Salvage operations.  
N/A
- q. Night time and interior lighting operations.  
The scene was adequately lit. No interior lighting was needed.
- r. Were Mutual Aid companies effective in operation?  
Howard county units arrived in staging as additional units after the second alarm but were quickly placed in service.
- s. Was water supply adequate?

No. The fourth due engine did not utilize the closest fire hydrant resulting in over 1000ft of 4-inch on the ground and no relay engine which led to 300 gpm to their engine. This resulted in inadequate supply for aerial operations. Heavy water hookups were not utilized. WSSC was contacted after and verified that the two hydrants in front of the property on the 12" main where the old building is located had normal working pressures and no indication of any closed valves. Generally, for commercial buildings, available water supply is required to be 1000 gpm at 20 psi at the nearest hydrant and only 500 gpm at the second closest hydrant. If during operations, you had 1000 gpm flowing from each tower your combined flow exceeds the required minimum from the two nearest hydrants by at least 500 gpm. The water flow and 5 psi residual pressure, although not ideal, may be a reasonable expectation considering the size of that main.

VI. Staging

- a. Location adequacy  
Good location, Good Counsel High School close by and had adequate room.
- b. Site Access  
No access issues

VII. Support Functions

- a. Was a rehab group established?  
Yes, located on Side Alpha of the school
- b. Were fire/rescue personnel provided with food/drinks?  
Yes, Canteen 740.
- c. Was adequate shelter provided for fire/rescue personnel?  
N/A
- d. Were crews relieved by fresh crews regularly and frequently?  
This incident was primarily a driver/operator incident with operators controlling aerial devices and master streams. There was very limited crew in the tower buckets and most crews were not engaged throughout a lot of the incident.
- e. Were there any equipment or apparatus failures? Did these failures have a detrimental effect on the incident outcome?

No

- f. Were functions with outside agencies properly coordinated? (i.e. Red Cross, power company, gas company)

N/A

VIII. Safety Group

- a. Was a standby team established? If not, why?

Yes, however this was eventually released as there were no crews in IDLH environments.

- b. Were any fire/rescue personnel injured?

No.

- c. Were all safety SOPs and regulations enforced?

Yes.

- d. If there was a Safety Dispatch, were they used for Safety, Accountability or RIC? If not, why?

Battalion Chief 701 was assigned as the Incident Scene Safety Officer (ISSO). Upon arrival of Safety 700 and due to the size of the building, it was determined there should be two safety officers. Battalion Chief 701 and Safety 700 performed these roles.

- e. What actions are necessary to change or update current safety and health programs to improve the welfare of members?

N/A

IX. Accountability

- a. Were actions taken to ensure accurate personnel accountability?

A Personnel Accountability Report (PAR) was conducted.

- b. Was the status of units/ divisions/groups/branches and support personnel maintained?

Yes.

- c. Did personnel provide adequate feedback?

Yes. During the incident personnel provided regular updates. A hotwash was held before the initial units were released.

- d. Was the incident continuously controlled and monitored?

Yes.

X. Investigations

- a. Was the fire's origin and cause determined?

The cause of the fire remains listed as "Undetermined".

- b. What factors contributed to the fire's spread?

A heavy fire load in an abandoned building with old furniture stacked in the gymnasium which was the source of fire load. It is unknown if the building was sprinklered, however, it is assumed if it was, these were no longer functional as building was slated for demolition.

XI. Lessons Learned

- a. Were specific training needs identified?

Crews need to continue to focus on the importance of heavy water hookups.

- b. Recommended improvements.

Improve crew discipline: Some crews or personnel entered the structure after the announcement of "exterior operations".

Crews need to ensure they have proper street and water maps for areas they respond to.

- c. Overall Analysis of Incident

A defensive attack was declared immediately upon arrival and sustained throughout the incident.

It took some time to get units in correct positions and adequate water supply established.

An ISSO was assigned to monitor operations. A second Safety Officer was added due to the size of the building

Good use of apparatus on the scene. Although this was a two-alarm fire, all apparatus called to the scene was used effectively. Crews were not utilized as well because there were not many tasks for them to perform.

## Summary

The incident was quickly determined to be a defensive operation. This resulted in the quick need to utilize master streams. Although there were issues with water supply due to lack of heavy water hookups, crews eventually overcame this. Upon realizing the incident did not involve risk to life or property, a reset was required. This allowed crews to step back, correct mistakes and move forward.