



POST INCIDENT ANALYSIS

March 8, 2014



Box Area 08-04

2-Alarm Townhouse Fire
19625 Club Lake Road
Gaithersburg MD 20886
Incident # F14-0027716

Submitted by Battalion Chief John J. Gallo

19625 Club Lake Road

Incident Overview

Note: This post incident analysis is based upon the review of the incident audio tape, interviews with crews who operated at the emergency scene and the review of completed RMS Unit Reports.



On March 8, 2014, shortly before 1430 hours, Montgomery County Fire and Rescue units responded to 19638 Club Lake Road, Gaithersburg, Maryland for a report of a townhouse on fire. While units were still responding the Emergency Communications Center (ECC) dispatched the Rapid Intervention Dispatch, (RID) based on credible information of a working structure fire. ECC received multiple calls from by-

standers indicating an advanced fire involving an end unit townhouse. Weather conditions at the time of the incident were dry and clear with temperatures in the mid 50's. Winds were light and variable from the northwest at 5 to 10 miles per hour.

While units are still responding, ECC announces an address correction of 19625 Club Lake Road. Engine 753 makes a short radio transmission visualizing a column of smoke.

Paramedic Aerial Tower 708 initial on-scene report (IOSR) from the Alpha side of the structure describes an end unit townhouse with heavy fire conditions on the Alpha, Delta, and Charlie sides. Paramedic Aerial Tower 708 requests a 2nd Alarm and establishes Command in the attack mode. Paramedic Aerial Tower 708 announces a hydrant at 19610 Club Lake Road and indicates the end unit townhouse is fully involved and the priority is to attend to the Bravo Exposure (19627 Club Lake Road).



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Battalion Chief 705 arrives with Truck 734 and as Paramedic Aerial Tower 708 completes their initial on-scene report (IOSR). Battalion Chief 705 establishes Level 2 Command on the Alpha side in the Battalion 705 vehicle. At this time, the end unit townhouse is heavily involved in fire with extension into the Bravo attic area, threatening the Bravo 1 exposure. The first arriving engine company is the fifth due engine, Paramedic Engine 717. The arrival

order for the engine companies is delayed due to units returning from previous calls for service and conducting the Safety-In-Our-Neighborhood program away from the center of the incident box area.

Due to the delay of the normal arrival order, Command orders Paramedic Engine 717 to take first due with the objective to control the fire on the Alpha side, and check the Bravo exposure. This change is to prioritize the need to apply water to the fire as soon as possible in the attempt to control fire advancement and to re-set the fire. At that moment, Paramedic Engine 708 arrives and due to apparatus position, Paramedic Engine 708 is directed to control the fire on the Alpha side, with Paramedic Engine 717 to advance to the Charlie side to control the fire and protect auto-exposure to the Bravo exposure. Truck 734 provides an update from the Charlie side stating the end unit townhouse is fully involved with confirmed extension to the Bravo and Bravo 1 exposures. Truck 734 also communicates an uncontrolled arcing electric meter on the exterior Charlie wall of the end unit townhouse. Subsequent tactical assignments are provided to units based on their arrival and incident needs.



The Alpha Division is established at the original fire building with Paramedic Engine 708 as the Division Supervisor along with Paramedic Engine 728; their objective was to control and extinguish the fire in the main fire building. Units operated and extinguished the bulk of the fire from the exterior with a line operating on the ground level and Paramedic Engine 728 operating on an extension ladder directing hose streams into the second floor. Eventually Chief 717 Bravo assumes the supervisory responsibilities of the Alpha Division and Paramedic Aerial Tower 708, Paramedic Engine 717, and Paramedic Engine 734 rotates through that Division.

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The Charlie Division is established with Paramedic Engine 717 as the Division Supervisor; their objective is to control and extinguish the fire on the Charlie side and auto- exposing to the Bravo Exposure.

The Charlie Division encountered heavy fire involving the end unit townhouse, the rear shed, the fence line, and two trees, along with fire extension into the Bravo Exposure.



Engine 753 is assigned as the Rapid Intervention Group Supervisor along with Truck 731, Rescue Squad 703, and Medic 708. The Rapid Intervention Group located and operated from the Alpha/Delta side of the original fire building. Safety 700 is assigned as the Incident Scene Safety Officer (ISSO).

The Bravo Exposure Division is established with Truck 734 as the supervisor along with the crew of Paramedic Aerial Tower 708. Their objective was to determine if any extension occurred in 19627 Club Lake Road and report their needs to command. Paramedic Engine 735, Paramedic Engine 703, and later Engine 753 all rotate through the division. Crews controlled and extinguished fire on the second floor and attic area of the exposure unit. Extinguishment occurred by crews operating inside the exposure and by Paramedic Aerial Tower 708 extinguishing the exterior surface fire with their elevated stream.



The Bravo 1 Exposure Division is established with Paramedic Engine 734 as the Division Supervisor along with Paramedic Engine 732, and Aerial Tower 735. Their objective was to determine, control, and extinguish any fire in 19629 Club Lake Road. Crews operating discovered fire breached the firewall and fire extended into the attic area.

The Bravo 2 Exposure Division is established with Paramedic Engine 722 as the Division Supervisor along with Aerial Tower 703. Their objective was to determine if any fire had penetrated into 19631 Club Lake Road. Crews found no fire extension, only light smoke conditions.

Rescue Squad 717 is assigned to complete a primary and secondary search of all exposure buildings except 19625 Club Lake Road.

These searches were all negative. The survivability profile and early collapse of the original fire structure made a search impossible. A visual inspection from the outside via ladders, aerials, and door openings revealed no known victims. Later information

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concluded that 19625 and 19627 Club Lake Road were both vacant and unoccupied at the time of the fire.

Chief 729 is assigned as the Humanitarian Group Supervisor with the objective of identifying at-risk occupants and determining what services they may require. Chief 729 worked along with Inspector 710, the American Red Cross, and Minkoff Restoration Company. The group worked closely with the Home Owners Group and was able to assist family's re-occupy 19631 and 19635 Club Lake Road. This group also oversaw a massive smoke detector check and installation campaign throughout the neighborhood. The American Red Cross provided assistance and housing to five adults and three children displaced by the fire.

The fire was declared under control and the incident downsized to hold the original box alarm. Fire Code Compliance evaluated the fire building and exposures and condemned three structures – 19625, 19627, and 19629 Club Lake Drive.

The Fire Explosives and Investigation Group responded to the scene and initiated an Origin and Cause of the fire. The investigation was hampered because of the collapse hazard that existed in the rear of the end unit townhouse and a thorough dig of the structure was not possible. Because of the very rapid-fire growth, an accelerant detection canine is ordered from Howard County Fire and Rescue Department; however, no accelerants were detected at the time of this writing. The fire is listed as undetermined at this time and the investigation is ongoing.

Structure/Site Layout



End unit
Townhouse

1,370 sqft.

Built in 1973

Lightweight
engineered
construction

Composite roof
shingle/Brick
Veneer

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Alpha Side – Prior to MCFRS Arrival



Alpha Side – AT708 First Arriving



Alpha Side – Fire Re-Set in Main Bldg.



Command Post – 19631 Club Lake Rd



Charlie Side – Solution Application



Charlie Side – Structural Failure

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Charlie Side – Ground Ladders



Charlie Side – Post Fire Control



Alpha/Delta Side Corner



Delta Side – Failure Indicators

Fire Code History

A review of the past and current fire code requirements for the structure revealed no recent code compliance history for this townhouse complex. The structure is a non-sprinklered building with non-operational battery powered smoke detectors on each level. There was no indication that activated smoke detectors were heard by response personnel or neighbors.

Communications

The incident was dispatched for a townhouse on fire with multiple calls. ECC dispatches the Rapid Intervention Company based on credible information of a working fire.

The incident is assigned to 7-Charlie talk group with second alarm and staged units on 7-Delta. The 7-Charlie operator did an exceptional job of communicating a complex expanding incident with an overwhelming queue of pertinent radio communiqués requiring updates or repeating. Radio reception was good and the Vehicle Repeater System (VRS) was not needed or engaged.

Battalion 705's MDC had stopped working prior to dispatch which caused an inaccurate dispatch of Battalion Chief's, and delayed receipt of messages and access to information.

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Pre-Emergency Planning

There is no pre-fire plan for the structure other than the Town House Map drawn and revised by Fire Station 8's personnel on September 13, 2011 (Town House Map 08-014). Once the Mobile Data Computer was rebooted, this map was available and utilized during the incident in the Command Post via the Mobile Data Computer.

Support Functions

Incident Rehab is initiated early into the incident at the Delta side near Club Lake Road and Blue Tee Terrace. Emergency Medical Services 703 (EMS703) coordinated with Ambulance 708 and Medic 729, to ensure all personnel rotated and cleared Rehab. Mobile Air Unit 716 (MAU716) and Canteen 708 worked in unison with the Rehab Group to ensure personnel are hydrated and SCBA cylinder are available for service.

Functions with outside agencies were properly coordinated (i.e. MCPD, Red Cross, and Power Company). This townhouse complex was an all electric service neighborhood. No natural gas service found to any affected structures. The power company pulled the outside electrical meters from 19625, 19627, and 19629 Club Lake Road.

Safety

Paramedic Aerial Tower 708 did not announce a Stand-by Crew on arrival. A risk analysis by Paramedic Aerial Tower 708 determined the survivability profile of the end unit townhouse to be incompatible with life. Engine 753 assigned as the RIC unit and transitioned to the Rapid Intervention Group (RIG) Supervisor with Rescue Squad 703 and Medic 708; the Rapid Intervention Group (RIG) units were situated on the Alpha/Delta corner able to respond quickly to either incident side quickly. Safety 700 assumed the Incident Scene Safety Officer (ISSO) functions covering the Alpha, Charlie and Bravo exposures.

Accountability

Crews are accounted for utilizing the Incident Tactical Worksheet and the Daily Line-Up form carried in the Battalion 705 vehicle. Additionally, crews are accounted for utilizing the required Personal Accountability Report (PAR) based on the required Incident Duration Reminders (IDR) timeline.

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Resources

1st Alarm

Paramedic Engine 708	Paramedic Aerial Tower 708	Ambulance 708
Paramedic Engine 734	Truck 734	Battalion 705
Engine 753	Rescue Squad 717	Battalion 703
Paramedic Engine 728		
Paramedic Engine 717		

RID

Truck 731	Medic 708
Rescue Squad 703	

2nd Alarm

Paramedic Engine 732	Aerial Tower 735	Medic 729
Paramedic Engine 722	Aerial Tower 703	
Paramedic Engine 735		
Paramedic Engine 703		

Other

Duty Chief 700	Safety 700
Chief 729	Emergency Medical Services 703
Chief 717 Bravo	Inspector 710
Mobile Air Unit 716	Canteen 708
Fire Explosives Investigations 758	
Fire Explosives Investigations 762	

Lessons Learned

The 2011 Fire Chief's Training Initiative regarding Risk/Benefit analysis is still contributing in a positive way regarding initial tactical action by first arriving crews in a well developed, rapidly expanding incidents. These incidents do not fit into the standard operating procedures that govern unit officer's normal decision-making processes. When faced with these challenging scenarios, the first unit officer must initiate the command sequence and then communicate immediate tactical priorities to other arriving units. The officer on Paramedic Aerial Tower 708 provided a "textbook" initial on-scene report and clearly communicated his tactical action plan.

It is clear that unit officers and their drivers must anticipate and understand the need to provide heavy flow, gallons per minute and elevated streams immediately upon arrival. It also is understood that in a Type V, lightweight, engineered structure with limited access, that transitioning from an exterior high flow defensive attack to stabilize fire growth and rapidly transitioning to an interior offensive attack is an effective strategy. Failure to take into consideration the high thermal release and the effects it's having on structural elements will continue to place firefighters in harm's way.

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Because the arrival order of the engine companies was different than their dispatched order challenged crews in the need to adjust apparatus positioning and water supply responsibilities. This disproportionate occurrence was mainly due to companies being away from their normal response because of prior incidents or participation in the Safety In Our Neighborhood (SION) program. Company officers did an exceptional job in adjusting to emergent priorities and listening to the radio for their strategic assignments.



Later arriving engine companies must ensure and expand the water supply to support fire attack. Regardless if the first or fourth due engines reports having its own hydrant; the later arriving engines that are charged with this mission must not fail to deliver. This methodology ensures redundancy of supply and increases tactical solutions when faced with a well developed, rapidly expanding fire environment.

Drivers of Paramedic Aerial Tower 708 and Truck 734 quickly identified the need to achieve a sustained water source to the base of their units. This initial action allowed Paramedic Aerial Tower 708 to utilize their elevated stream to control the fire in the main structure as well as the involved exposure building roof assembly. This singular action provided the time to assemble and assign crews to the interior exposure buildings to control and extinguish all fire extension.

This fire demonstrates the value of 4-person staffing and its increased effectiveness. Both the engine and tower from the first due fire station responded with 4-person staffing. This allows for simultaneous tactical operations which successfully stabilized the fire ground. This is also true for other crews that operated with more than required staffing.

This staffing decision is helping with the division of labor and is providing better oversight of crews by their officers. Hose line management during the initial attack was rapid and well disciplined. Paramedic Engine 717 simultaneously deployed and placed in- service both the BlitzLite and a pre-connect attack line. This early and aggressive attack by initial crews accomplished immediate improvement to interior conditions in both the fire building and its exposures.

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The use of CAFS or foam solution proved effective during the overhaul phase of the fire. The main fire building suffered heavy fire damage to the roof assembly and structural failure to the second floor joist assembly. This coupled with a large amount of furniture and storage items made safe access to remove all items affected by fire impractical. The hard work of crews to search for extension and the effectiveness of the foam solution allowed a level of confidence that the fire was completely extinguished.

The Battalion 705 Mobile Data Computer (MDC) failed to operate and still showed Battalion 705 moved up to Fire Station 14's first due area. This caused Battalion Chief 704 to be recommended prior to Battalion 705, even though Battalion 705 was located at Fire Station 34. Battalion 705 verbally responded from Fire Station 34. This technology failure also meant that messages and resources could not be communicated between the Command Post and the Emergency Communications Center other than on the tactical talk group.

Conclusion

The successful outcome of this incident was driven by the positive initial action of the first arriving units to effectively conduct a proper risk analysis on a well developed, rapidly advancing fire involving three townhouses. The first arriving officer delivered a calm and clear on-scene report that established a tone for the entire incident. Crews executed basic skills to accomplish their tactical objectives. Companies demonstrated the discipline to initiate a quick defensive fire attack while positioning themselves to transition to an aggressive interior attack on exposures once conditions warranted the change.

The first alarm companies controlled this fire with second alarm units providing support and relief as units rotated through rehab. No civilian or firefighter injuries were sustained during this incident.