

7741 Liberty Row Drive

May 18, 2023



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We Are Not Alone



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7741 Liberty Row Dr.

The building was designed to be a 239-unit luxury apartment building.

355' long x 120' deep



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The Fire

- On May 18, 2023, the Charlotte Fire Department was dispatched to a trailer on fire in a parking deck of a building under construction.
- The building was a seven-story mid-rise. The first two stories of concrete parking structure and five stories of wood construction.
- No fire suppression systems had been installed in the building and no drywall had been installed.
- There was an open elevator shaft, so the entire building was open to air flow
- 13-14 MPH winds at the time of the fire
- High-heat fire with temperatures reaching 2,000 degrees



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CFD Response

- First CFD unit arrived 5 minutes after 911 calls
- Total of 90 units and 200+ firefighters responded
- Fire was under control in 5 hours and 47 minutes
- 15 people rescued
- No significant injuries to CFD staff

Other city support:

- CMPD assisted with traffic management and crowd control
- Charlotte Water boosted water pressure in South Park



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Timeline

- 9:02am – Initial 9-1-1 calls start**
- 7 minutes after fire was discovered
- 9:07am – Ladder 16 first to arrive.**
- Initial call corrected to mid-rise structure fire
- 9:09am – 2nd Alarm Declared**
- Calls come in from trapped people
- 9:20am – 3rd Alarm Declared**
- Crane operator trapped
 - Cannot access the source of the fire
 - Mayday call for lost firefighters – Ladder 01 is disoriented on the 6th floor



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Timeline

9:31am - 4th Alarm Declared

- Crane is in jeopardy of collapse
- Ladder 2 master stream on the crane
- Ladder 1 finds its way to safety

9:56am - 5th Alarm Declared

- Rescue 10 climbs crane and helped the operator to safety
- Spot fires popping up around the area

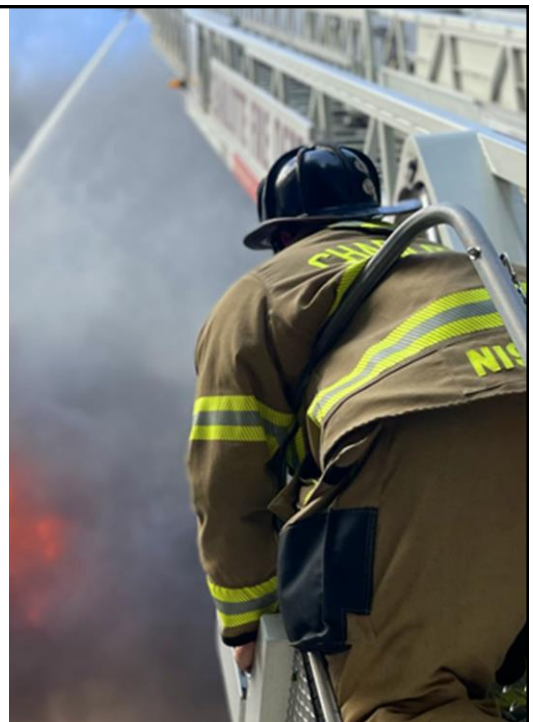


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The After-Action Report

Elements of After-Action Report (AAR)

- Strategic and Tactical Operations Analysis
- Mayday/Rapid Intervention Crew (RIC) Review
- Fire Investigation Taskforce Report
- Fire Communications Response Report



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Key Challenges

Site issues:

- Seven-minute delay in calling 911 lead to rapid fire escalation
- Vertical lumberyard: absence of fire suppression systems including no fire barriers, lack of operational sprinkler system and standpipes
- Fire origin in vehicle within structure contributed to rapid and uncontrollable spread
- Three contractors subsequently cited/fined by NC Dept. of Labor for safety violations

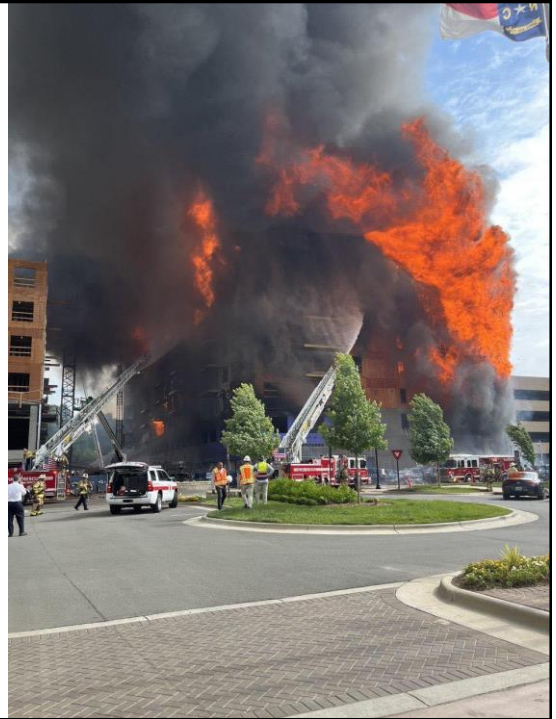
Wind conditions:

- 13-14 MPH wind increased spread fire and fire intensity

Confusion of trapped workers location

Rescued crane operator – no crane collapse

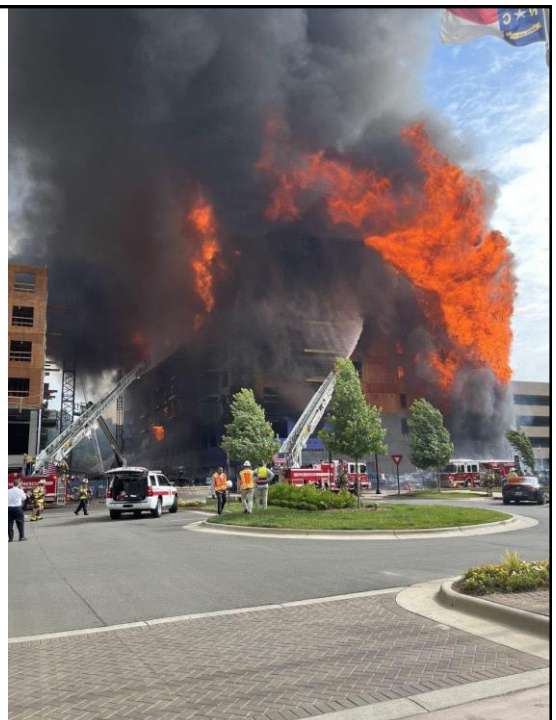
Spot fires at surrounding buildings including an additional working fire



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Key Conclusions

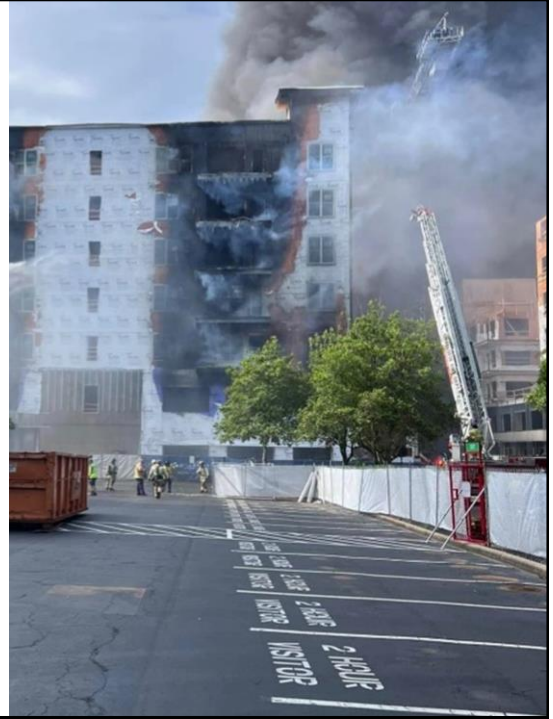
- **Fire load and spread rate made it nearly impossible to save the building**
- **Extraordinary heroism: Courageous efforts to reach and rescue victims**
- **Importance of mutual aid agreements**
- **CFD staff performed at a high-level**
 - CFD actions saved lives and prevented significant fire spreading to other buildings
- **Need for state-level regulation updates in fire prevention and construction safety**
- **Identified areas for additional training, communications protocol, need for additional standard operating guidelines and technology solutions**
 - In-progress



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CFD Lessons Learned

- Fire spread faster than our current incident command set-up could manage
- Radio and PAR (personnel accountability report) discipline
- Control of additional resources and use of a Department Operations Center
- Water supply and master stream nozzle selection



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Key Recommendations

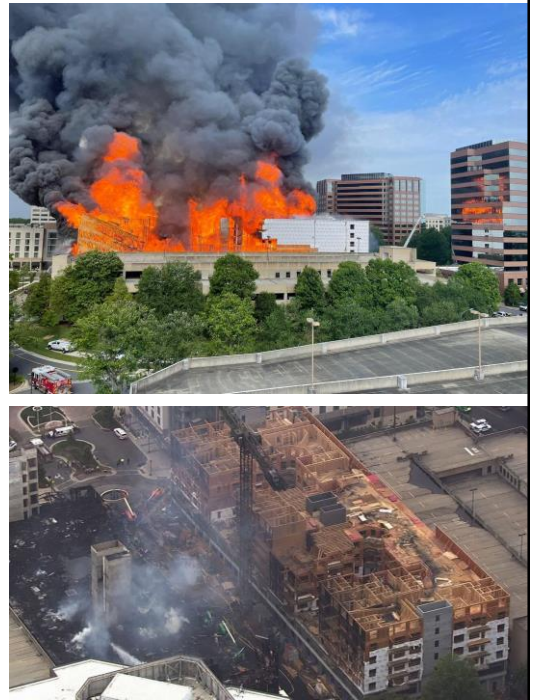
- Implement Command Field Technicians and additional command post operations training
- Staff the Field Communications Unit and provide training
- Self-Survival Training: navigation aids, calling the mayday, communications
- Develop a mutual aid SOG and unit tracking
- Develop (research/purchase) technology solutions that enhance our unit tracking and citywide coverage
- Consider the development of a consolidated CFD/CMPD/Medic dispatch center



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Actions Taken

- NFPA supported building code changes at the state level
- Fire Prevention changes and regular meetings with construction representatives
 - 12 additional fire inspection staff
 - New construction inspection team
- National Fire Academy Training for Incident Commanders
- Field Technician pilot program
- MAYDAY training with ALARM
- Demo software for unit tracking and citywide coverage
- All master stream nozzles changed



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We Are Committed to Implementing These Recommendations and Continuous Improvement



CFD is both internationally accredited by the Center for Public Safety Excellence and holds an Insurance Services Office Class 1 rating.

Combination is achieved by less than 1% of US fire departments.

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Questions?