Durham County April 2019 Gas Explosion

Considerations for Complex Coordinated Terrorist Attack Preparedness

Final Version | October 31, 2019

Executive Summary

Complex Coordinated Terrorist Attack Program

From 2018-2020, Durham County, Orange County, and Wake County have been participating in a regional preparedness effort to increase readiness for a Complex Coordinated Terrorist Attack (CCTA) through the development of a regional coordination plan, training, and exercises. The CCTA program is financially supported by a grant from the United States Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA).

As part of this effort, Durham County is assessing the region's response to the April 2019 gas explosion since the response and recovery included many similar elements of a CCTA. Lessons learned and recommendations are being analyzed with regards to future incidents that may pose similar operational challenges, including a CCTA.

Lessons Learned from Real World Events

This report details the initial and extended response to a recent real-world incident affecting the region. It outlines both immediate response and recovery efforts to support the long-term recovery of individuals and businesses impacted by the incident. The report is divided into the following topic areas:

- Command and Control
- Mass Casualty Response
- Resource Management
- Crisis Communications
- Recovery and Return to Normalcy

The information contained in these sections is informed by incident reports, stakeholder input provided during a facilitated workshop on June 6, 2019, phone interviews with additional stakeholders, and open source research.

Situation

Overview

Gas Leak

On April 10, 2019, a gas leak was reported to 8-1-1, followed 10 minutes later by a notification to 9-1-1 that a gas line had been hit. Durham Fire Department firefighters were dispatched to 115 North Duke Street and evacuated businesses in the immediate vicinity.

Explosion

During the evacuation, an explosion occurred at the Kaffeinate Coffee building, killing the shop owner and injuring 16 civilians and nine firefighters, of which five civilians and one firefighter were critically injured.

Reports indicate that Durham firefighters injured in the explosion continued to extricate victims despite their own injuries.
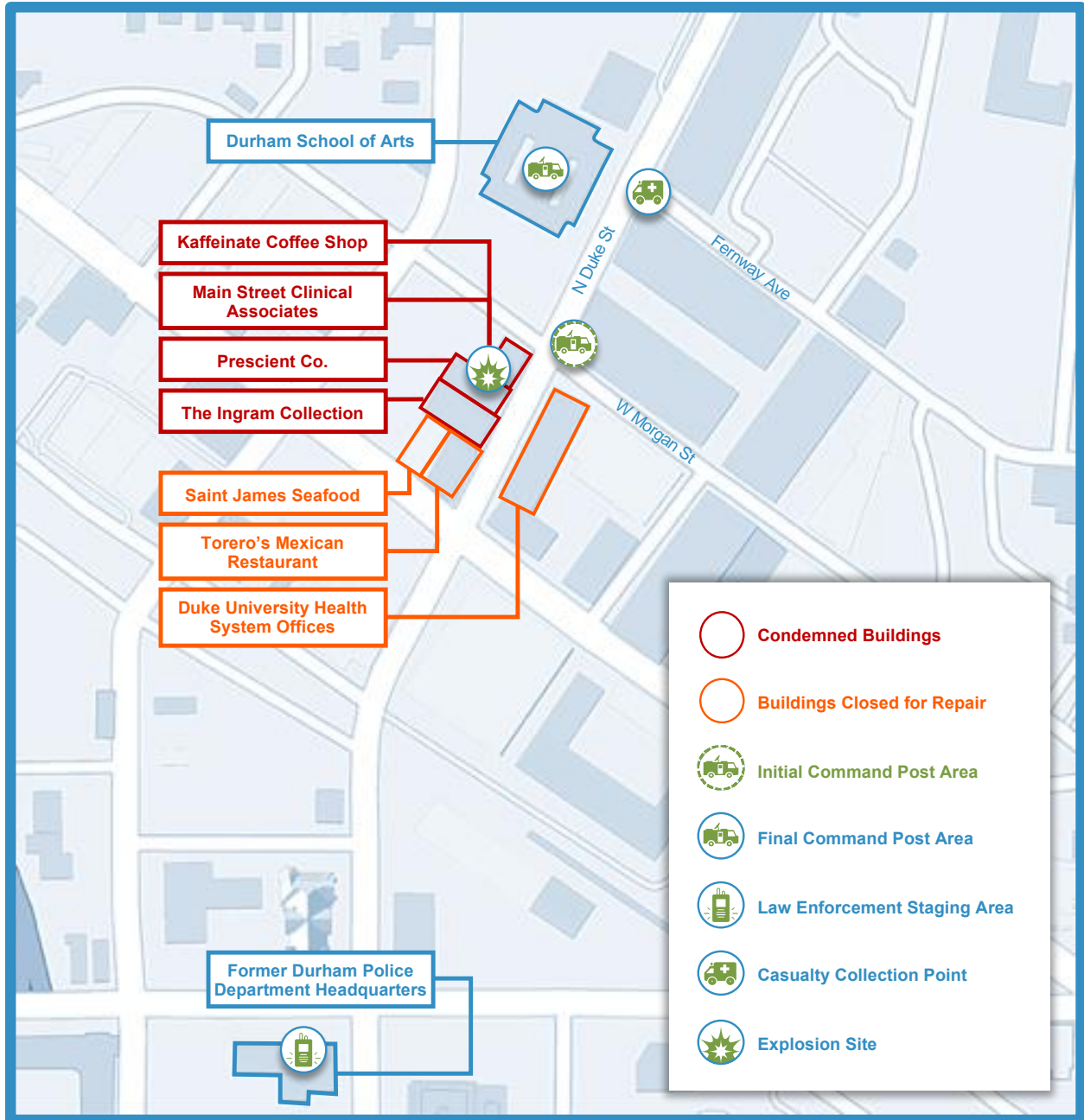
On April 25, 2019, a Dominion Energy first responder, who was dispatched to the incident to stop the gas leak, died from injuries at the University of North Carolina Burn Center.

Physical Damage

18 buildings, containing 23 businesses, were impacted by the explosion, with estimates of more than $100 million worth of property damage. The two buildings housing The Ingram Collection, Prescient, Main Street Clinical Associates, and Kaffeinate Coffee Shop were condemned. St. James Seafood, Torero's, and Duke University Health System offices were ordered to remain unoccupied while repairs are made.

Recovery efforts were later hindered by the structural integrity of a nearby wall and the presence of asbestos in some of the debris.
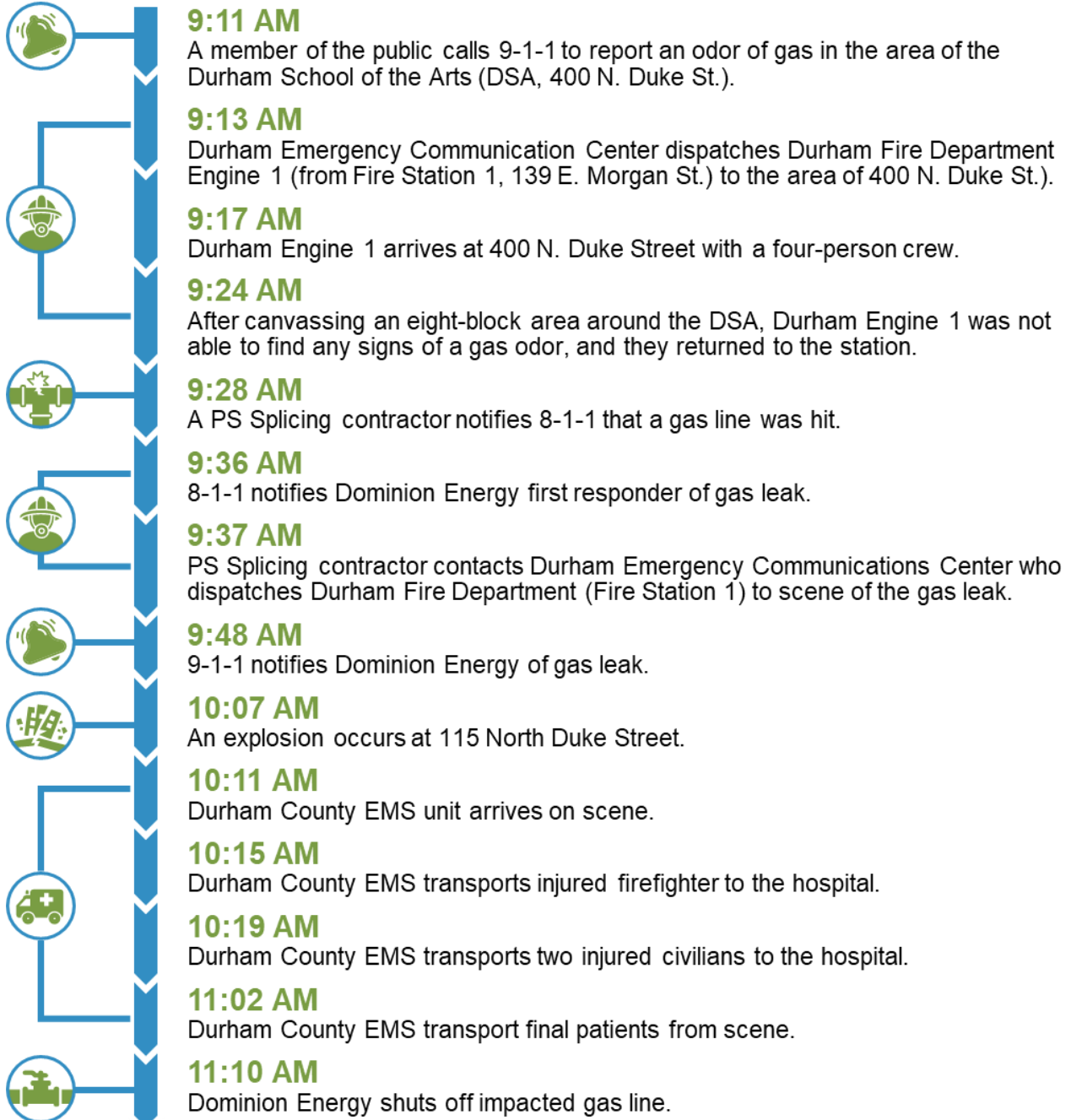
Incident Map

Map labels (left side):

- Durham School of Arts
- Kaffeinate Coffee Shop
- Main Street Clinical Associates
- Prescient Co.
- The Ingram Collection
- Saint James Seafood
- Torero's Mexican Restaurant
- Duke University Health System Offices
- Former Durham Police Department Headquarters

Street labels:

- N Duke St
- Fernway Ave
- W Morgan St

Legend:

- Condemned Buildings
- Buildings Closed for Repair
- Initial Command Post Area
- Final Command Post Area
- Law Enforcement Staging Area
- Casualty Collection Point
- Explosion Site

RESPONSE TIMELINE (April 10)

9:11 AM
A member of the public calls 9-1-1 to report an odor of gas in the area of the Durham School of the Arts (DSA, 400 N. Duke St.).

9:13 AM
Durham Emergency Communication Center dispatches Durham Fire Department Engine 1 (from Fire Station 1, 139 E. Morgan St.) to the area of 400 N. Duke St.).

9:17 AM
Durham Engine 1 arrives at 400 N. Duke Street with a four-person crew.

9:24 AM
After canvassing an eight-block area around the DSA, Durham Engine 1 was not able to find any signs of a gas odor, and they returned to the station.

9:28 AM
A PS Splicing contractor notifies 8-1-1 that a gas line was hit.

9:36 AM
8-1-1 notifies Dominion Energy first responder of gas leak.

9:37 AM
PS Splicing contractor contacts Durham Emergency Communications Center who dispatches Durham Fire Department (Fire Station 1) to scene of the gas leak.

9:48 AM
9-1-1 notifies Dominion Energy of gas leak.

10:07 AM
An explosion occurs at 115 North Duke Street.

10:11 AM
Durham County EMS unit arrives on scene.

10:15 AM
Durham County EMS transports injured firefighter to the hospital.

10:19 AM
Durham County EMS transports two injured civilians to the hospital.

11:02 AM
Durham County EMS transport final patients from scene.

11:10 AM
Dominion Energy shuts off impacted gas line.

RECOVERY TIMELINE (Post-April 10)

APRIL 19th
Governor Roy Cooper requests disaster declaration from U.S. Small Business Administration.

APRIL 25th
Dominion Energy first responder dies from his injuries.

APRIL 30th
The U.S. Small Business Administration makes Economic Injury Disaster Loans available to damaged businesses, with an application deadline of January 30, 2020.

Section 1: Command and Control

This section describes findings and recommendations specific to incident management and city and county leadership.

Incident Recap

- Durham Fire Department deployed to 115 North Duke Street in response to a report of a gas leak and established incident command approximately 30 minutes prior to the explosion.

- Once on scene, Durham County Emergency Medical Services (EMS), Durham Police Department, and Durham Fire Department established a unified command.
    - Unified Command also expanded to include non-traditional responders (e.g., utility providers and regulators).

- Unified Command initially selected the nearest open intersection, Duke Street and Morgan Street, as the command post location, utilizing a response vehicle as a gathering point.
    - Once the Durham School for the Arts was evacuated, Unified Command transferred the command post to a vacant school building.

- Over the duration of the incident, command transferred from Durham Fire Department to Durham Police Department to the Durham Department of Transportation.

- Incident command demobilized at the conclusion of initial response operations and investigations.

- City leadership deferred to public safety officials to make decisions during the response.

Stakeholder Feedback

Command Personnel

- Keeping unified command activated beyond the immediate response phase may help to promote coordination and collaboration amongst departments and agencies during the extended response and recovery phases.
    - While incident command is often led by Fire, EMS, or law enforcement personnel, other agencies such as public works or transportation agencies could assume command with support from first responder agencies.

- Fire, Police, and EMS command leadership participated in the initial incident response.
    - Command leadership hypothesized that this approach may be difficult to utilize for larger, more complex, or longer-duration incident. Additional discussion is needed to determine alternate strategies (e.g., embedding some personnel in Emergency Operations Center).

Command Post

- The physical co-location of unified command representatives at the Durham School for the Arts improved coordination and information-sharing.

- Some personnel were unable to find the command post and/or felt the location was difficult to secure (i.e., maintain perimeter access).

- Emergency response agencies do not have a mobile command post vehicle to support the co-location of representatives from all key agencies during a smaller-size incident.

City and County Leadership

- Elected officials have limited emergency management expertise and/or a limited understanding of their role during an emergency or disaster and indicated a desire for additional resources and training.

- Some city and county agencies with equities in the response and recovery phases did not have an on-scene presence. In some instances, this was due to parallel activities occurring for the city's 150th birthday celebration.

Recommendations for CCTA Readiness

Since a CCTA often involves multiple incidents across multiple locations it requires close coordination between disciplines and jurisdictions through a unified command. Recommendations to improve sustain or improve readiness for a CCTA include:

Preparedness

- Provide additional unified command training and exercise opportunities for traditional and non-traditional responders to enable them to perform incident command functions until they can be relieved by Incident Management Team personnel.

- Develop primer (or socialize existing examples from other jurisdictions) to clarify the anticipated role of officials during response and recovery operations.

- Convene an elected officials' workshop through Triangle J Council of Governments to prepare officials across the region for crisis leadership roles.

- Include elected/appointed officials in future emergency response exercises and seminars.

- Identify a mechanism (system or technology) and a process for comprehensive and timely notification of elected officials, senior leadership, and non-traditional first responders of an incident.
    - Notification processes should prioritize notifications (e.g., identify who needs to be notified and in what order).

Response and Recovery

- Once life safety and life-sustaining needs are addressed, empower non-public safety organizations to assume a command role and establish incident objectives, thus enabling public safety organizations to minimize their command role to prepare for the next incident.

- Request additional Incident Management Team resources when the depth of available emergency management personnel is limited.

- Involve recovery personnel in incident command during response operations to enable a seamless transition of command during recovery operations.

- Extend the duration of unified command beyond immediate response into extended response and recovery operations.

- Empower non-public safety personnel (e.g., public works, transportation) to assume command with support from public safety agencies.

- Utilize mobile command vehicle or fire apparatus light to indicate command post location (e.g., green light or green flag).

  o The location of the Command Post should be announced over the radio.

- Disseminate messaging to arriving personnel to direct them to the command post.

- Transition command post to an enclosed venue/location, as possible, to enable unified command personnel to easily co-locate.

Section 2: Mass Casualty Response

This section describes findings and recommendations specific to mass casualty response, including patient triage, transport, and tracking.

Incident Recap

Search and Rescue

- Durham Fire Department personnel injured in the explosion continued to extricate victims from the explosion site despite suffering injuries themselves.

- City of Durham Fire Marshal and the Urban Search and Rescue Team use similar markings to indicate clearance of a room/building. Though USAR personnel did not mark any buildings there may have been some confusion regarding building markings and their origin and meaning.

Casualty Collection Point

- Before a Casualty Collection Point was established, there was no mechanism for tracking the movement of patients from the incident scene to receiving hospitals. As a result, command personnel did not have a complete picture of patient whereabouts for the first 12 hours of the incident.

  - After a Casualty Collection Point was established, Durham County EMS utilized a scribe to track all patients that were transported from the Casualty Collection Point to receiving hospitals.

- Unified Command established an initial Casualty Collection Point at Duke Street and Morgan Street and then moved it a block further north to Duke Street and Fernway Street since road closures, which included abandoned response vehicles performing as barriers, initially blocked ambulances from reaching the Casualty Collection Point.

Triage, Treatment, Transport

- Durham County EMS utilized an abbreviated triage process, similar to the "Rapid Assessment of Mentation and Pulse (RAMP)" triage model, to expedite the patient transport.

  - As part of this abbreviated triage process, emergency Casualty Collection Points emerged due to geographic isolation caused by the explosion site. This allowed for a constant flow of patients from the Casualty Collection Point to hospitals.

- Durham County EMS transported critical/trauma patients to Duke University Medical Center, non-critical patients were transported to Duke Regional Hospital.

  - Duke University Medical Center later transferred burn patients to the North Carolina Jaycee Burn Center.

- Durham County EMS notified the Duke University Medical Center Emergency Department charge nurse of the explosion. Hospital personnel also found out through informal channels/relationships with response personnel.

- The first patient arrived at Duke University Medical Center within 10 minutes of the hospital receiving notification of the explosion.

- Duke established a triage area within the circle outside of its emergency room ambulance bay to triage walking wounded. More critical patients were unloaded about 30 feet away in the ambulance unloading dock, where a triage ward was located right inside.

- Duke University police implemented access control measures on ingress/egress routes into Duke University Medical Center.

Patient Tracking

- Duke University Medical Center issued armbands with disaster-specific identifiers to patients associated with the gas explosion (e.g., "Disaster – Street Name") and started a record for each patient using the same identifier.

- Many family members/loved ones went directly to Duke University Medical Center to solicit information about individuals who were in/near downtown Durham during the explosion.

Stakeholder Feedback

Casualty Collection Point

- Usage of the Casualty Collection Point was inconsistent, especially among law enforcement personnel, who have less familiarity with the concept since it is not used for regular response calls.

  - For example, some law enforcement personnel waved down ambulances to direct them to the location of critical patients rather than bringing them to a Casualty Collection Point.

- Some personnel felt there should have been two Casualty Collection Points, due to the geographic footprint of the incident (e.g., reduce walking distance for ambulatory patients).

- Durham County EMS personnel noted the effectiveness and value of assigning a scribe at the Casualty Collection Point to track critical information about patients (e.g., name, date of birth, physical description).

Triage, Treatment, Transport

- Response personnel identified the on-scene abbreviated triage process and dedicated walking wounded triage at Durham University Medical Center as successful methods for ensuring the most critically injured patients receive immediate care.

Patient Tracking

- Varied search and rescue markings and incomplete patient tracking records during the immediate response phase could have placed personnel in unnecessary danger if they entered the explosion site to search rooms/buildings that had already been cleared and/or searching for individuals who had already been extricated.

- On-scene personnel and hospital personnel found it difficult to reconcile disparate patient information since there was no patient tracking in place for the initial patients brought to Duke University Medical Center.

- On-scene personnel indicated difficulty obtaining information from Duke University Medical Center about patient whereabouts, which was needed to reconcile patient counts.

- Hospital personnel interpreted incoming requests as broader than what is permitted by HIPAA.

    o For example, requests from on-scene personnel for information about all patients transported to the hospital as part of the gas explosion could not be fulfilled since hospital personnel could only release information about patients transported by Durham County EMS (e.g., not individuals who arrived at the hospital by other means).

- An hour into the incident, hospital personnel received conflicting reports on whether additional patients would be transported to Duke University Medical Center. On-scene command personnel inaccurately stated there were additional casualties, while Durham EMS personnel arriving at the hospital with patients that stated there were no more casualties.

- Hospitals received calls and in-person visits from family/friends seeking information about the status and location of loved ones but did not have sufficient personnel to field the number of requests or pre-scripted messaging to respond to inquiries.

Recommendations for CCTA Readiness

Preparedness

- Conduct joint trainings and exercises to socialize triage concepts, including Casualty Collection Point concept, with law enforcement and fire personnel, since this concept is not utilized for regular response calls (i.e., where Durham County EMS will transport casualties directly from the incident scene to a hospital).

- Continue the collaborative effort between Duke Healthcare Preparedness Coalition, Durham County EMS, and the North Carolina Office of EMS to pilot a Disaster Management System to enable real-time tracking of patient whereabouts between the scene, receiving hospital, and any follow-on hospital/medical facility that provides care.

- Establish a single point of contact from Durham County EMS and a single point of contact from each receiving hospital to facilitate information-sharing between on-scene personnel and hospitals.

    o Exercise interim solution of sending one Durham County EMS provider to stage at the receiving hospital to support patient tracking.

- Continue development of the Duke University Medical Center protocol on sharing information on casualties between hospitals and first responders in a HIPAA-compliant manner.

- Identify opportunities to share the protocol—or similar guidance—with other hospitals in the region.

- During new employee orientation and annual fit testing, provide guidance to Durham Fire Department personnel on when to use personal protective equipment such as respiration protection (e.g., N95 masks, gas mask cannister).

- Exercise Duke University Medical Center Mass Casualty Incident Plan concepts (e.g., walking wounded triage area in ambulance bay, heightened security measures) with broader audiences (e.g., Durham EMS, additional hospital personnel).

- Clarify reunification roles and responsibilities across disciplines/organizations, recognizing that many family members/loved ones will likely seek information from hospitals (in-person or via telephone), if an alternate reunification mechanism is not provided (e.g., Reunification Center, hotline).

- Identify mechanism (e.g., Everbridge) to disseminate an incident notification to regional hospitals instead of individually notifying each hospital.

Response and Recovery

- Improve coordination amongst on-scene personnel and hospitals:
    - Utilize healthcare coalitions to coordinate with hospitals/medical facilities and field resource requests.
    - Consider effectiveness of sending hospital liaison to scene.
    - Conduct a post-response meeting to share approved information regarding casualties transported to assist with family reunification efforts.

- Announce Casualty Collection Point location(s) and ingress/egress routes to all responders over the radio to ensure response vehicles do not block patient transport.

- Consider establishing multiple Casualty Collection Points if patients are distributed across a broader geographic footprint.

- Designate an individual to serve as a scribe at the Casualty Collection Point to track patient transport. Ideal candidates for this role are those who have used an ICS-214: Activity Log for major incidents.

Section 3: Resource Management

This section describes observations, strengths, challenges, and recommendations specific to resource management, including personnel, equipment, and supplies.

Incident Recap

Staging Area

- Durham Police Department established a law enforcement staging area in the parking lot of the department's former headquarters building at 505 W. Chapel Hill Street.

- Durham Fire Department did not establish a staging area.

- Durham County EMS established a logistics management function to coordinate resources.

Personnel

- Durham County EMS mobilized on-duty and off-duty personnel to support patient triage, treatment, and transport.

- Durham Fire Department distributed units that were not responding to the incident to locations across Durham to ensure sufficient coverage for other response needs.

    o Durham Fire Department placed four additional staff on duty to return Engine 12 to service, operating out of Station Four while its original personnel remained on scene.

    o Durham Fire Department also placed surrounding mutual aid departments at City fire stations where they stood by.

- Durham Police Department requested all available units on call during the time of the explosion but did not recall personnel from other shifts in order to enable sufficient coverage for future shifts.

- Each responding organization maintained accountability for their own personnel, but there was no process or protocol to reconcile who was on-scene throughout the entire response, especially non-traditional responders.

Volunteers and Donation Management

- Local restaurants donated food for response personnel. Donated food was stored at the Command Post but was not tracked/documented.

- Bystanders, including an off-duty firefighter, rendered aid to those injured or trapped by the explosion.

Incident Support

- Jurisdictions across the region were immediately responsive to mutual aid requests.

- Ten states offered to send resources to support the incident.

- Durham City/County Emergency Management requested support from North Carolina Urban Search and Rescue Task Force 8. A team was fielded from Raleigh, Durham and Chapel Hill.

- North Carolina Hazardous Materials Regional Response Team 4 deployed to the scene completed its mission, asked if additional assignments were available, and then demobilized once it was confirmed that support was no longer needed.

  o North Carolina Emergency Management expressed concerns initially about identifying a responsible party to bill, since the Regional Response Team deployed before a billable party was confirmed.

- Durham Police Department engaged North Carolina's State Bureau of Investigation, which provided eight agents (including two canine officers).

- The North Carolina Office of the State Fire Marshal provided investigative support to Durham Fire Department.

- The North Carolina Utilities Commission's pipeline safety officials coordinated incident needs and information with the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration.

- Durham's Public Works Department deployed streetsweepers to remove glass from the sides of the road, deployed excavators and dump trucks to clear debris, and staged heavy equipment.

Stakeholder Feedback

Staffing

- Response personnel noted that critical incident stress management was prioritized throughout the incident to ensure the well-being of personnel.

- Some Durham Fire Department personnel worked shifts nearing 36 hours, which put them at risk for burnout.

- Non-public safety roles, such as public information, could be supported by other departments and agencies, freeing up public safety representatives to perform public safety functions.

Resources

- Response personnel noted the need for coordination between agency-specific logistics personnel to ensure a more organized ordering and tracking of resources (e.g., food), rather than having individual agencies process their own resource requests.

Recommendations for CCTA Readiness

Preparedness

- Develop protocols or procedures to outline:

    o Individuals authorized to issue resource orders
    o Mechanisms for tracking resource requests (e.g., WebEOC)
    o Necessary documentation to enable for post-incident reimbursement
    o Mobilization of a centralized staging area

- Pre-identify locations that can be used for large-scale staging, in coordination with the Durham Emergency Communications Center.

Response and Recovery

- Direct agency-specific logistics personnel to report to a Logistics Chief within Unified Command to ensure efficient adjudication of resources (e.g., supplies).

- Create a process to track personnel entering and leaving the incident and their location throughout the response (e.g., Resource Unit Leader, Computer-Aided Dispatch).

- While self-deployment of resources to an incident scene is discouraged, it is understood self-deployment will occur in response to an event of this nature. Guidance should be issued to self-deployed personnel such as personal protective equipment requirements and instructions to check-in at the staging area for credentialing and task assignments.

- Assign a Staging Manager to control staging area operations. If multiple staging areas are used instead of a centralized staging area, individuals will need to be assigned to each staging area to perform this function.

- Designate a single contact to coordinate and de-conflict resource requests and maintain resource procurement documentation.

- Ensure resource requests are written in plain language and provide detailed descriptions about desired resources (e.g., size, type).

Section 4: Crisis Communications

This section describes observations, strengths, challenges, and recommendations specific to crisis communications, including public messaging.

Incident Recap

Public Information Officers

- Durham City/County Emergency Management personnel were requested by Unified Command to perform public messaging and media relations functions, including coordination of press releases and media briefings.

    o Durham City/County Emergency Management requested that a City and County PIO report to the scene to assume control of these functions.

- As PIOs arrived on scene, there was confusion about where to report since no gathering place was identified. Some arrived at the Durham Police Department staging area, while others went to the incident command center.

- Public information needs exceeded the capacity of existing PIOs.

    o Some on-scene public information/affairs personnel left the incident scene to focus on events/activities related to the city's 150th birthday celebrations.

    o Durham Fire Department's Deputy Chief is designated as the department's PIO, but was unable to serve in this role due to being otherwise engaged in response operations. Similarly, other personnel with public affairs training were already fully engaged by their primary firefighting responsibilities.

- PIOs were responsible for gathering and synthesizing information to keep multiple audiences apprised of the incident: city and county leadership, direct reports (to ensure sufficient backfill capacity), and the general public.

- A GroupMe text thread was used throughout the duration of the incident to notify City and County PIOs of the explosion and to provide a mechanism for sharing situational updates.

Joint Information Center

- The Public Information Officer position of the Incident Command Structure was filled, and the Joint Information System provided virtual and in-person support, as needed. A formal Joint Information Center was not established.

Public Messaging

- County PIOs reposted information from authorized sources (e.g., law enforcement), but did not disseminate independent messaging (e.g., press release).

- The Durham County emergency hotline number (560-HELP) was not utilized for the incident as the hotline is difficult to activate without advanced notice. (The City of Durham does not have a pre-established emergency hotline.)

Stakeholder Feedback

Public Information Officers

- City PIOs were utilized in a reactive capacity, rather than being proactively involved in the development of a communications strategy.

- PIOs were not aware of the designation of a Lead PIO. It was assumed the Durham Police Department PIO was in a leadership role due to their engagement with the media.

    o The location of the incident traditionally dictates which jurisdiction is in charge of public messaging (e.g., within city limits, in unincorporated area), but there is no guidance about which specific department/agency's PIO will take the lead, causing confusion since multiple first responder agencies were involved in the response.

- Since there was no Lead PIO with authorization to assign tasks to other PIOs, there was no delegation or distribution of communication tasks/functions (e.g., media, social media, image collection) to avoid duplicative activity.

Joint Information Center

- There are no existing plans, policies, or procedures for the mobilization and operation of a JIC. Most PIOs rely on previous training and experience to establish a JIC.

    o Previously, Durham City/County Emergency Management has mobilized a JIC, including support services and resources (e.g., translators).

- Some PIOs found it difficult to utilize GroupMe text threads for continued situational awareness throughout response and recovery operations due to the large number of incoming messages from text thread participants.

Public Messaging

- An on-scene PIO handled media requests and issued messaging through official social media accounts but had limited bandwidth to monitor or respond to more granular public inquiries and reports (e.g., social media posts, NextDoor).

- During the incident, City PIOs shared social media posts from Durham Police Department and Durham Fire Department. In response, the City PIO accounts received questions that should have been directed to public safety officials.

    o City PIOs continue to receive inquiries from media and the public, including requests for public records, questions from impacted businesses, and requests from legal counsel.

- Elected officials disseminated incident-related updates on personal and official social media accounts and direct media engagement, including information that later proved to be inaccurate.

- PIOs did not coordinate messaging for the three-month anniversary of the explosion and noted this was a missed opportunity for unified messaging on the status of recovery efforts.

Recommendations for CCTA Readiness

Preparedness

- Pre-identify public affairs personnel from non-public safety organizations (e.g., library services, public health) and provide them with ICS training to enable them to support incident PIO functions.

- Conduct regular meetings (e.g., quarterly) of PIOs from across departments/agencies to improve coordination.

- Create a playbook that describes how to establish and operate a Joint Information Center, including:

  o Designation of a lead PIO
  o Roles and responsibilities of lead PIO
  o Phone tree/email tree
  o Authorized sources for information
  o Reporting guidance (e.g., location)
  o Distribution of tasks by function

- Develop regional reunification message templates and exercise reunification processes (e.g., information-sharing across Family/Friend Reunification Center(s), hospitals)

- Provide elected/appointed officials with training and guidance on crisis communications during an incident (e.g., social media use, unified messaging, approved sources of information, media briefings).

Response and Recovery

- Provide elected officials with guidance on sharing incident updates with the public via social media or in-person (e.g., press conference), including:

  o Authorized sources of information
  o Types of information that should be shared versus withheld (e.g., law enforcement sensitive or unconfirmed information)
  o Consequences of sharing inaccurate information (e.g., erosion of public trust, credibility)

- Designate specific times for officials to speak with media after official initial response messaging is disseminated.

- Coordinate messaging ahead of incident anniversaries (e.g., three-month, six-month, one-year anniversary).

Section 5: Recovery and Return to Normalcy

This section describes observations, strengths, challenges, and recommendations specific to short- and long-term recovery and return to normalcy.

Incident Recap

Site Access

- Individuals seeking site access included first responders, non-traditional response partners (e.g., North Carolina Utility Commission), business owners/operators, private interest parties (e.g., insurance companies, legal counsel), media personnel, and members of the general public.

- Durham Police Department provided perimeter security to prevent unauthorized access to the site but deferred to city and county management to determine access rights and restrictions.

- Elected officials and the Durham Transportation Department received requests from constituents to reopen closed roads (Main Street, North Duke Street, Morgan Street, and Gregson Street), but utility personnel required the road closures to complete repair work.

Environmental and Health Concerns

- During the initial response, personnel were unaware that explosion debris contained asbestos, and did not initially don personal protective equipment to mitigate exposure.

  o Durham Fire Department designated an individual to serve as an on-scene Safety Officer, but this individual was focused on identifying and mitigating direct hazards from the explosion (e.g., structural collapse).

- The North Carolina Division of Public Health confirmed the presence of asbestos-containing materials in the explosion debris. To mitigate risk to response and recovery personnel, air quality monitors were placed on site and water was sprayed on debris to prevent dust from spreading the fibers.

  o State-level asbestos experts provided technical expertise and guidance on asbestos exposure, mitigation, and long-term surveillance.

- The presence of asbestos required representatives from public safety (e.g., Durham Fire Department, Durham Police Department), permitting and building safety (e.g., City-County Inspections Department), and environmental agencies (e.g., U.S. Environmental Protection Agency) to determine when business owners/operators and the public could access the site.

- Local restaurants notified the Durham County Environmental Health Services of the presence of brown water in municipal water lines.

Impacts to Businesses and Local Economy

- 18 buildings, containing 23 businesses, were impacted by the explosion, with estimates of more than $100 million worth of property damage.

    o The two buildings housing The Ingram Collection, Prescient, Main Street Clinical Associates, and Kaffeinate were condemned.

    o St. James Seafood, Torero's Mexican Restaurant, and Duke University offices were ordered to remain unoccupied while repairs are made.

- Downtown Durham, Inc. (DDI) served as a clearinghouse for information from various business-oriented and economic development groups (e.g., Greater Durham Chamber of Commerce) to provide impacted businesses with a central point to seek information.

- Due to pre-existing relationships with businesses in the downtown area, many business owners and operators contacted DDI for information and guidance throughout the response and recovery efforts. In response, DDI:

    o Compiled a list of every business and residence that had impacts, including those that were not directly damaged (e.g., loss of revenue due to road closure).

    o Worked with property owners to identify temporary office space for displaced businesses at low to no cost.

    o Referred impacted businesses to the Office of Economic and Workforce Development, which established a satellite office in the area.

    o Utilized its communications mechanisms (e.g., social media accounts) to repost official messaging from the City of Durham's Public Information Officer to ensure only authorized/vetted information was being disseminated.

- DDI published a list of resources available to businesses on the DDI website and published donation mechanisms (e.g., GoFundMe) from vetted/trusted organizations only.

    o DDI connected larger donors directly with the United Way and Triangle Community Foundation, to provide these entities with a more formal donation structure for tax purposes.

- DDI "Clean and Safe" Ambassadors deployed to the area surrounding the incident to remove debris and make surrounding streets visually appealing (for pedestrians and vehicles).

- Greater Durham Chamber of Commerce member organizations offered available space to first responders (e.g., staging area/command needs) and impacted businesses (e.g., conference facilities, work stations).

- On April 30, the U.S. Small Business Administration made Economic Injury Disaster Loans available to damaged businesses, with an application deadline of January 30, 2020.

Stakeholder Feedback

- Some individuals re-entered damaged facilities/businesses soon after the explosion despite the presence of health hazards (e.g., asbestos). Stakeholders noted it was unclear who was responsible for permitting access to impacted buildings and recommended that Durham City/County Inspections Department and Durham County Environmental Health Services be involved in access decisions for future incidents.

- Businesses were not immediately able to open due to safety concerns, site clean-up efforts, road closures, and construction resource shortages (e.g., materials approved for use in historic buildings), resulting in revenue loss and potential workforce reduction.

- Stakeholders noted that some businesses' insurance policies do not provide funding for immediate needs/costs resulting from the disaster.

    o While banks have made loans available, some businesses are hesitant to take out loans (and resulting interest) until they understand what their insurance will or will not cover.

- There was no clear delineation of response and recovery roles and responsibilities for business, tourism, and economic development entities (e.g., Greater Durham Chamber of Commerce, DDI, Discover Durham).

Recommendations for CCTA Readiness

Preparedness

- Clarify recovery roles and responsibilities for agencies and organizations with recovery equities, including business, tourism, economic development organizations, and identify lead agencies for recovery functions.

    o Conduct training and exercises, including abbreviated refresher trainings, to ensure the lead agencies are prepared to implement their recovery roles.

- Consider utilizing a business liaison in the Emergency Operations Center to help organize private sector resources/services.

- Identify a mechanism to share information with the public regarding recovery efforts, such as road closures, debris pick-up, reunification information.

- Develop a checklist or tool to help risk management personnel assess an incident, identify potential hazards, and determine mitigation requirements based on the type of incident/hazard (e.g., smoke, asbestos, chemical).

- Integrate risk management personnel into public safety preparedness activities (e.g., trainings, exercises, fire department fit testing sessions) to increase first responder awareness of when personal protective equipment should be utilized.

Response and Recovery

- Include a public health liaison in the Emergency Operations Center to field questions about air and water quality and proactively provide guidance on potential health hazards (e.g., location of command post, hazards for clean-up personnel operating near incident area, determination of when businesses are safe for owners to re-enter).

- For future incidents involving a utility interruption or issue (e.g., reports of brown municipal water), consult Durham County Environmental Health Services to ensure unified and accurate public messaging and guidance (e.g., public health advisories).

- If additional testing is required to confirm the presence of a hazard, convene City and County risk management personnel to determine interim guidance and recommendations while waiting for testing results.

    o For example, if inhalation hazards are suspected, require personnel to wear personal protective equipment while formal testing/analysis is conducted.

- Personal protective equipment recommendations should extend to everyone within the incident area, not just first responders (e.g., clean-up workers, insurance adjusters, business owners).

- Involve Durham City/County Inspections Department and Durham County Environmental Health Services in decision-making processes for site access decisions (e.g., clearance for business or property owner to enter impacted facility).

- Invite the U.S. Small Business Administration to mobilize a temporary office for business owners/operators to seek support.

- Involve business-oriented/economic development organizations in response operations to increase awareness of impacts of decisions on businesses and the local economy.

- Engage the Chamber of Commerce in redevelopment efforts to help align investments and retain businesses.

Appendix 1: Report Contributors

Workshop Meeting Participants

Delma Allen, Durham Police
Randy Beeman, Durham Police
Amy Blalock, City of Durham Public Affairs
Mike Boyd, Durham Public Works
Gene Bradham, City-County Inspections
Sandi Bridges, Durham City/County EM
Jeff Cabe, Chapel Hill Fire
Ryan Campbell, Durham City/County EM
Kevin Cates, Durham Police
James Cole, Durham Fire
Dan Cremeans, Durham Fire
Taylor Davis, Durham City/County EM
Kelly Drayton, Chapel Hill EM
Brian Eaton, Durham Fire
Shawn Field, Durham Fire
Robert Gaddy, Durham Police
Faith Gardner, Durham Code Enforcement
Pat Gentry, Durham County Public Health
Wil Glenn, Durham Police
Teshea Grant, Durham County EMS
Brian Graves, Durham Fire
Angelica Greene, Durham Fire
Tommy Gregory, Town of Chapel Hill
Jim Groves, Durham County EM/FM
Joel Gullie, Durham Fire
Clarence Harris, Durham Code Enforcement
Vence Harris, Chapel Hill EM
Sofia Hernandez, Durham City Attorney

Anthony Horton, Durham County EMS
Touche Howard, Durham Fire
Michael Hummel, Durham County EMS
Chris Iannuzzi, Durham Fire
Dana Inebnit, City-County Inspections
Motiryo Keambiroiro, Durham General Services
Joseph Kelly, Durham Police
Philip Loziuk, Durham Transportation
David Marsee, Duke Healthcare
Jeremy McFalls, Dominion Energy
Rodney Medlin, Durham County EMS
Travis Melvin, Durham Fire
Jodi Miller, Durham County Management
Genavous Minor, Durham Police
Nicole Morales, Hagerty Consulting
Mitchell Morkunas, Durham Fire
Jody Morton, Durham Fire
Leslie O'Connor, Durham EM
Jerry O'Keeffe, Dominion Energy
Scott Parker, Dominion Energy
Gisele Parry, Hagerty Consulting
Dean Pike, Durham Fire
Brian Reitz, Durham Police
Jeff Roberts, Durham Fire
Chris Salter, Durham County Public Health
Ari Schein, Durham City/County EM
Jason Zivica, Duke University Health System
Robert Zoldos, Durham Fire

Stakeholder Interviews

Amy Blalock, City of Durham Public Affairs
Dawn Dudley, Durham County Public Affairs
Geoff Durham, Greater Durham Chamber of Commerce
Michael Hummel, Durham County EMS
Patsy "Pat" Gentry, Durham County Public Health
Glenn LeGrande, City of Durham Risk Management
Bo Ferguson, Deputy City Manager of Durham
Janelle Owens, Durham County Risk Management
Margaret Pentrack, Discover Durham
James "Chris" Salter, Durham Risk Management
Steve Schewel, Mayor of Durham
Arlene Sena, Durham County Public Health
Ken Shaw, Duke University Medical Center
Beverly Thompson, City of Durham Public Affairs
Nicole Thompson, Downtown Durham, Inc.