

SPECIAL BOMBING REVIEW COMMISSION REPORT

December 25, 2020 Bombing of 2nd Avenue North,
Nashville, Tennessee

ABSTRACT

On December 25, 2020, a lone individual detonated a vehicle-borne improvised explosive device on 2nd Avenue North, Nashville, Tennessee causing catastrophic property damage to nearby structures and compromised critical city, state and regional infrastructure. For one year, the Special Bombing Review Commission investigated the federal, state and city-wide response to the incident. The recommendations proffered by this report are the result of individual expert testimony and study of documents related to the incident. The nine-person commission makes these recommendations and findings to aid the city of Nashville prepare for any future incidents of this magnitude in the hope that lives will be saved and impact to critical services minimized.

Special Bombing Review Commission
2020 Christmas Day Bombing

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EXECUTIVE SUMMARY

During the first quarter of 2021, Council Member Bob Mendes sponsored and the Metropolitan Council for Nashville and Davidson County, TN, approved Ordinance BL2021-612. This legislation was “(a)n ordinance establishing a Special Commission to review and investigate the circumstances and responses pertaining to the suicide bombing in Nashville on December 25, 2020, and to make any recommendations regarding public safety improvements.” The legislation provided:

‘WHEREAS, on December 25, 2020, a suicide bomber detonated a large explosion in downtown Nashville on 2nd Avenue North; and

“WHEREAS, the explosion caused extensive damage to buildings and infrastructure, significant business closures, job losses, and displaced people from their homes; and

“WHEREAS, many lives were saved as a result of the heroic actions of first responders and public safety personnel of Nashville and Davidson County, and,

“WHEREAS, the Metropolitan Government of Nashville and Davidson County is committed to learning from this tragic bombing;

“WHEREAS, the Metropolitan Government of Nashville and Davidson County is committed to transparently reporting what happened, why it happened, and any areas of potential improvement in policies, practices, procedures, and/or the law; and

“WHEREAS, the welfare of The Metropolitan Government of Nashville and Davidson County requires that these matters be pursued diligently.”

The legislation established a Special Bombing Review Commission (SBRC). The Commission is an agency and appointed body of the Metro Government. The SBRC consisted of nine members: seven appointed by the Mayor, the remaining two members included the Chair of the Council Public Safety Council and a designee of the Vice Mayor.

Mayor Cooper’s appointees were Jamie Hollin, lawyer, and former Metro Councilmember; Andres Martinez, director of policy and communications at Conexion Americas; Leshuan Oliver, captain, Vanderbilt University Police Department; Brenda Sanderson, downtown resident and co-owner of The Stage, Legends Corner, and Second Fiddle; Paul Summers, lawyer, former Tennessee senior judge, and former Tennessee attorney general; Darrell Talbert, president of Icon Entertainment Group, which owns and operates Johnny Cash Museum and several entities in downtown Nashville; and Margie Quin, law enforcement veteran and CEO of End Slavery Tennessee.

Vice Mayor Shulman appointed Councilmember Jennifer Gamble, Chair of the Metro Council Public Safety Committee, and Mario Avila, founding director of the Turner Family Center for Social Ventures at Vanderbilt University.

At the organizational meeting in March 2021, Paul Summers was elected Chairman of the SBRC. Jamie Hollin was elected Vice-Chairman. Margie Quin was elected Secretary. Cynthia Gross, Department of Law and Assistant Metro Attorney, was appointed by her department as legal counsel to the Commission. All meetings were publicly advertised and complied with the open meetings laws and mandates. The first official meeting of the SBRC was held on April 27, 2021.

The last Tuesday of each month at 10:00 a.m. CT was the time of each meeting. The venue was the Sonny West Conference Room of the Howard Office Building in Nashville.

With no exceptions, all members of the SBRC were diligent, took their assignments seriously, and were selfless about their dedication to duty. We appreciate the assistance and guidance of Chief William Swann and his staff, especially at the initial stages of the Commission's work. The



Nashville Fire Department and staff acted as a liaison between the SBRC and involved agencies (local, state, and federal); collected and compiled narratives from agencies to present to the SBRC; enhanced and added to after-action reviews and reports; and assisted in logistics requests. The members of the SBRC appreciated Chief Swann and his staff for their efforts and contribution to this review process.

As its purpose, "...the Commission (was) to review and investigate the circumstances surrounding the suicide bombing in Nashville on December 25, 2020, to make recommendations regarding possible improvements, procedures, and policy changes to reduce the likelihood of another bombing in Nashville, and to improve the city's response to similar responses in the future."

The Commission was granted the authority to conduct its own investigation, hold hearings, and engage outside professionals. The SBRC had subpoena power. The resolution further provided that within one year of the first meeting, "(t)he Commission shall prepare a Report and Recommendations to the Council about its findings...."

Early in the work of the SBRC, Chairman Summers formed three committees. They were the Criminal Investigation Committee (Commissioners Quin, Talbert, Martinez, and Gamble); Bombing and Responses Committee (Commissioners Sanderson, Oliver, Martinez, and Avila); and Lessons Learned Committee (Commissioners Hollin, Gamble, Sanderson, and Avila).

The Criminal Investigation Committee, chaired by Commissioner Martinez, was primarily involved in the circumstances of the criminal investigation of the bombing. The questions to be entertained:

1. What agencies investigated the crime or crimes?
2. Were after-action reports (AARs) submitted?
3. Which agency was the primary investigator?
4. What was the time frame from 2019 until the criminal investigation ended?
5. Was more than one person a suspect?
6. Explain the role of each agency.
7. Explain the communications among agencies.
8. Who committed the crime or crimes, and what crimes were committed?

9. Was there only one person involved?
10. Why did he or she detonate the bomb?
11. Is the sole suspect dead, and did he or she die in the bombing?
12. When did the investigation end?
13. Will there ever be any charges, federal or state?
14. What lessons were learned?

The Bombing and Response Committee, chaired by Captain Oliver, was primarily involved in noncriminal investigative agencies that responded to the bombing. The questions to be entertained:

What agencies, public or private, responded to the bombing?

Which noncriminal jurisdictional agencies were solely involved in the response, rescue, and safety?

Have those agencies submitted AARs?

Was there an office of primary responsibility (OPR)?

Explain communications among agencies.

Explain the extensive damage to buildings, infrastructures, businesses, jobs, and people.

When did the response begin, and when did it end?

What lessons were learned?

The Lessons Learned Committee, chaired by Vice-Chairman Hollin, primarily collated the information from the other two committees and finalized a report. The questions to be entertained:

1. Have all AARs from all entities been submitted?
2. What was the scope of the public's interest in the causes, reactions, and lessons learned?
3. What entities were affected other than governmental – private, telecom, communications, judicial, for example?
4. Have the AARs and reviews answered all the questions, or were there gaps?
5. If there were gaps, have they been filled?
6. What are the lessons learned?
7. Please make recommendations about possible improvements, procedures, and policy changes to reduce the likelihood of another bombing, and to improve the city's response to similar emergencies.

Please bear in mind that the Commission's Report is 100% hearsay. It reports and/or paraphrases witnesses' statements or testimony, reports or excerpts from reports and AARs. None of this information results from opinions or statements of commissioners. We are not experts, but rather,

are reporters. We have tried to quote from others or attribute to others. It is possible that we may have quoted or paraphrased incorrectly. If so, we apologize; but we have done the very best we could, considering dozens of witnesses; scores of AARs; and thousands of pages of documents. We have attempted to outline the different sections of the Report into the three basic missions of the Committees. The outline and page numbers direct the reader to those different sections of the Report.

Thank you for your interest in the Report of the Special Bombing Review Commission.

The Committee hearings may be viewed here: <https://www.youtube.com/c/MetroNashville>.

The Committee reports may be viewed here: [Special Bombing Review Commission - Submissions - All Documents \(sharepoint.com\)](#).

CRIMINAL INVESTIGATION COMMITTEE REPORT

The Criminal Investigation Committee, chaired by Commissioner Martinez, was primarily interested in the process and execution of the criminal investigation of the bombing.

1. Which law enforcement agencies were involved in the investigation of and response to the bombing?

- FBI
- U.S. Attorney's Office for the Middle District of Tennessee (USAO)
- Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF)
- U. S. Department of Justice
- Metro Nashville Police Department (MNPDP)
- Tennessee Highway Patrol
- Tennessee Bureau of investigation

2. Were after-action reports submitted by responding agencies?

The Special Bombing Review Commission (SBRC) received the Nashville 2020 Christmas Day Explosion Agency Response report from the Nashville Fire Department outlining the timeline for when the criminal investigation and bombing response agencies arrived at the scene of the bombing incident on Second Avenue in downtown Nashville. The report includes the after-action timeline for local, state, and federal government agencies and private organizations involved with the criminal investigation and response to the bombing. A copy of the report is included in the appendix of the SBRC report.

In addition, the Metro Nashville Police Department (MNPDP) conducted an after-action review to examine events leading up to the bombing in downtown Nashville and determine whether any gaps exist from which MNPDP can learn in the future. Specifically, the after-action review focuses on MNPDP's response to an incident that occurred on August 21, 2019, involving suicide bombing suspect Anthony Warner. The purpose of the after-action review was to look at what occurred, what mistakes, if any, were made in the handling of information, and whether changes to policy or procedures are needed to help improve response and keep Nashville safer. The MNPDP After Action Review regarding the 2019 incident was reviewed by the SBRC and information from the report is included in the criminal investigation committee report and its recommendations adopted in their entirety.

3. Which Agency was the primary investigator?

The criminal investigation committee report seeks to answer questions related to the conclusion of the downtown bombing criminal investigation. The Federal Bureau of Investigation was the primary investigative agency of the criminal investigation of the bombing. Included in this report is information gleaned from the criminal investigation conclusion submitted by the FBI. According to reports published by the FBI, the Anthony Warner acted alone and there were no others involved in the incident. Further, there are no additional charges expected in this case.

A full copy of the FBI press release with the criminal investigation summary is included in the SBRC report appendix.

In addition, the criminal investigation committee report includes information in reference to MNPD's After Action Review regarding an incident involving the bombing suspect that occurred in August 2019, leading up to the bombing on December 25, 2020.

4. Role of Law Enforcement Agencies Involved in the Criminal Investigation

FBI

The FBI Memphis Field Office immediately responded with personnel in Nashville arriving on scene within the hour of the explosion. In total, 277 Special Agents, Task Force Officers, Analysts, and Professional Staff responded. This included specialty units such as the Evidence Response Team, SWAT, Bomb Technicians, Crisis Negotiation, Behavioral Analysis, and Victim Assistance. One hundred and thirty (130) personnel responded from the FBI Memphis Field Office, augmented by 147 personnel from the following FBI field offices and headquarters components:

- FBI Field Offices:
- Albuquerque
- Atlanta
- Baltimore
- Birmingham
- Cincinnati
- Cleveland
- Dallas
- Denver
- Detroit
- Indianapolis
- Jackson
- Knoxville
- Little Rock
- Louisville
- Miami
- New Orleans
- Portland
- Salt Lake City
- San Francisco
- St. Louis
- FBI Headquarters:
- Counterterrorism Division
- Critical Incident Response Group
- Laboratory Division
- Office of the General Counsel
- Office of Public Affairs
- Operational Technology Division
- Victim Services Division
- Weapons of Mass Destruction Directorate

FBI CRIMINAL INVESTIGATIVE SUMMARY

The SBRC reviewed a press release submitted by the Federal Bureau of Investigation that includes a summary of the conclusion of the bombing criminal investigation. According to the press release, the FBI, U.S. Attorney's Office for the Middle District of Tennessee, Bureau of Alcohol, Tobacco, Firearms and Explosives, Metro Nashville Police Department, Tennessee Highway Patrol, and the Tennessee Bureau of Investigation has concluded a significant portion of the investigation into the explosion that occurred on December 25, 2020, at approximately 6:30 a.m. Central Time, in downtown Nashville, Tennessee. Following the explosion, the FBI worked closely with law Criminal Investigation Conclusion and Lessons Learned enforcement partners on a coordinated and comprehensive investigation. After recovering more than 3,000 pounds of evidence from the blast site, combing through more than 2,500 tips, and conducting more than 250 interviews, the investigative team reached the following conclusions.

The FBI investigation found that Anthony Quinn Warner of Antioch, Tennessee, acting alone, built and ultimately detonated the vehicle-borne improvised explosive device. His actions were determined to not be related to terrorism. The investigative team took diligent steps to determine the reason or reasons why Warner decided to construct and ultimately detonate his device in downtown Nashville on December 25, 2020. The FBI's Behavioral Analysis Unit, based in Quantico, Virginia, further assisted the local investigative team in answering this question. Based on analysis of the information and evidence gathered throughout the investigation, the FBI assesses Warner's detonation of the improvised explosive device was an intentional act in an effort to end his own life, driven in part by a totality of life stressors – including paranoia, long-held individualized beliefs adopted from several eccentric conspiracy theories, and the loss of stabilizing anchors and deteriorating interpersonal relationships.

The FBI assessed that Warner specifically chose the location and timing of the bombing so that it would be impactful, while still minimizing the likelihood of causing undue injury. The FBI's analysis did not reveal indications of a broader ideological motive to use violence to bring about social or political change, nor does it reveal indications of a specific personal grievance focused on individuals or entities in and around the location of the explosion.

The FBI report notes that only Warner knows the real reason why he detonated his explosive device. However, at this time, the FBI is confident, based on evidence collected, Warner's own writings, and interviews with those who knew him best, that the above assessment is accurate.

U.S. ATTORNEY'S OFFICE FOR THE MIDDLE DISTRICT OF TENNESSEE (USAO)

The U.S. Attorney's Office (USAO) deployed Assistant U.S. Attorneys, intelligence and research personnel, and legal support staff to the Command Center. USAO staff worked to provide legal guidance and issued legal processes such as subpoenas and search warrants necessary to allow investigators to recover evidence and conduct a comprehensive investigation. USAO Public

Affairs also worked with partner agencies to coordinate and manage the flow of information to the media.

BUREAU OF ALCOHOL, TOBACCO, FIREARMS, AND EXPLOSIVES (ATF)

The National Response Team (NRT) which was comprised of 40 members including Certified Fire Investigators and Certified Explosives Specialists focused on the processing of explosives at the scene. The NRT was supported by subject matter experts from the National Center for Explosives Training and Research (NCETR) and the U.S. Bomb Data Center both located in Huntsville, Alabama. Due to the extent of the scene, the ATF mobile command vehicle was on-site to provide additional support both from the communications as well as analytical perspectives. Additional ATF resources included explosives canines, representatives to (Emergency Support Function) ESF-13 and ESF-15 as well as the behavioral analysis unit. ATF public and governmental affairs consistently worked with the partnering agencies focusing on the media and congressional inquiries. Finally, the ATF Nashville Field Division had over 60 personnel both on-site, and offsite working this incident.

- National Response Team mobile truck
- Explosives Canine Teams: 2
- Mobile Command Vehicle with personnel
- Support and Subject Matter Experts (SME) from the National Center for Explosives Training and Research (NCETR)
- Analytical and intelligence support from the United States Bomb Data Center
- ATF representative to the Behavior Analysis Unit (BAU)
- Analytical and intelligence support from the Nashville Intelligence unit
- Public and governmental affairs resources both onsite and from ATF HQ level
- ATF representative from ESF-13 Law Enforcement
- ATF representative from ESF-15 Communications
- Nashville Field Division: Approximately 60 personnel both onsite and offsite

U.S. DEPARTMENT OF JUSTICE

Department of Justice Counterterrorism Section (CTS) deployed staff from Washington, D.C. alongside FBI personnel. CTS staffed the FBI command post in Nashville and worked with the U.S. Attorney's Office for the Middle District of Tennessee throughout the investigation.

METRO NASHVILLE POLICE DEPARTMENT (MNPD)

Six MNPD personnel from the Central Precinct, a sergeant, and five officers, were on the scene when the RV exploded at 6:30 a.m. on December 25, 2020. The response from the MNPD grew exponentially in the minutes and hours following the blast. Hazardous Devices Unit (HDU) officers, who were en route to 2nd Avenue prior to the explosion, started to lock down the inner perimeter surrounding the actual blast site. All 10 HDU officers responded to the scene and began coordinating initial sweeps of the downtown area looking for any secondary devices with assistance from explosive detection canine teams from the MNPD & Tennessee Highway Patrol. Additional police personnel were requested to expand the perimeter to the interstate with assistance from the Tennessee Highway Patrol. Tennessee Task Force 2 Urban Search & Rescue personnel from the Metropolitan Police & Fire Departments responded to assist any persons trapped by the explosion (thankfully, no one was found). Specialized Investigations Division personnel began work at intelligence gathering to determine if the bombing was part of a larger criminal act.



The response command structure was divided into 6 elements on Christmas morning, with resources assigned to each:

- Overall Command (based at Nissan Stadium)
- Unified Command (based at the Emergency Operations Center)
- Staging & Logistics Branch
- Traffic Branch
- Special Operations Division/Urban Search & Rescue Branch
- Security Branch

Thirty-two (32) traffic posts were established to secure the area. As days passed, the number of traffic posts declined as the perimeter shrank and businesses were allowed to reopen.

More than 500 MNPD personnel were part of the response to this incident between December 25 and December 29, 2020.

TENNESSEE HIGHWAY PATROL (THP)

Commissioner Jeff Long and Tennessee Highway Patrol Colonel Matt Perry immediately called the department into action once notified of the bombing and the Tennessee Department of Safety and Homeland Security sent a rotation of troopers and agents to assist with the investigation and security of Nashville after the bombing.

Tennessee Highway Patrol (THP) troopers staffed perimeters, and intersections, flew aviation details, and cleared downtown buildings with EOD K-9s.

The THP's Criminal Investigation Division worked with local, state, and federal agencies to help identify a 17-digit number from parts and pieces of the bombed vehicle. That 17-digit number was used to build and identify a vehicle identification number (VIN) with the National Insurance Crime Bureau (NICB).

The Tennessee Office of Homeland Security had agents that responded to the command post and coordinated with multiple local, state, and federal partners along with the Tennessee Fusion Center during the investigation.

Forty-Three Highway Patrol Troopers worked 658.5 hours on the Nashville Explosion.

TENNESSEE BUREAU OF INVESTIGATION (TBI)

In support of the FBI-led effort, the Tennessee Bureau of Investigation provided key technical support and expertise in the aftermath of the Nashville bombing. In total, TBI personnel provided 680 hours of work to this investigation, across several divisions:

Twelve TBI Special Agent/Forensic Scientists, assigned to a variety of disciplines, provided a combined 64 hours of work to support efforts to identify and document evidence in the case, including identification of the suspect's vehicle, specialized photography, fiber analysis, and the *DNA process and review that resulted in the confirmation of the suspect's identity.*

Thirteen TBI Special Agents, assigned to the TBI's Criminal Investigation Division, provided investigative support in the aftermath of the bombing, conducted interviews, vetted leads, and gathered and reviewed preliminary video footage of the incident.

Intelligence Analysts and Special Agents from TBI's Criminal Intelligence Unit and its Technical Services Unit, assigned to either the FBI Joint Terrorism Task Force or Joint Cybercrime Task Force, provided direct support to the investigation, vetted cyber leads, and secured and reviewed digital evidence, including relevant cell phone records.

In the immediate aftermath, Agents assigned to TBI's Aviation Unit deployed to use the Bureau's aircraft and drones to assist in documenting the bombing site, blast radius, and search for potential victims.

MNPD AFTER ACTION REVIEW REPORT SUMMARY

On June 2, 2021, the MNPD released its AAR to the public. Chief Drake announced the creation of an AAR in January 2021 to examine events leading up to the bombing and determine whether any gaps exist from which MNPD can learn in the future. Specifically, the AAR focused on the response to an incident that occurred on August 21, 2019, involving suicide bombing suspect Anthony Warner.

The review board consisted of five persons including Special Bombing Review Commissioner Council Member Jennifer Gamble, Deputy Chief Dwayne Green, MNPD professional standards division head Kathy Morante, Nashville attorney and former United States Attorney for the Middle District of Tennessee Ed Yarbrough, and Community Oversight Board Executive Director Jill Fitchard. The committee met from January through May of 2021 and examined multiple MNPD

reports, documents, and calls related to the incident on August 21, 2019, and conducted interviews with individuals and officers who were at the scene.

The report provides an analysis of what the committee discovered as well as recommendations for MNPB policies and procedures to improve public safety from future events. Since the after-action review was initiated by MNPB and not the Metro Council, meetings were not public, nor were they recorded, and individuals interviewed were not sworn under oath. The board had full autonomy over the process without interference from MNPB.

The AAR report is categorized into two specific areas: what went well and why, and what can be improved on and how. Additionally, there are subcategories within the framework to evaluate separately the patrol response, follow-up investigation, and departmental procedure as it relates to the after-action review.

It was determined by the after-action review board that the patrol response was handled appropriately and all response policies and procedures were followed successfully in response to the 9-1-1 call that directed patrol officers to the home of Pamela Perry who was the friend of suspect Anthony Warner. *While the response to the 9-1-1 call was deemed appropriate there were some deficiencies found in the follow-up investigation and related departmental procedures.*

The MNPB After-Action Review Board concluded that there is no way to know for sure if the suicide bombing on December 25, 2020, could have been prevented. Law enforcement followed protocols and procedures regarding the 8/22/19 incident, however, deficiencies were identified in how the follow-up investigation was conducted. The committee identified seven deficiencies in the follow-up investigation and departmental procedures. The report also provides recommendations for improvement regarding those deficiencies. *MNPB notes that the committee's recommendations have been fully implemented.*

MNPB POST BLAST AFTER ACTION TESTIMONY

On December 20, 2021, MNPB's Lt. Steve Lewis testified before the SBRC to discuss lessons learned as identified by MNPB in the wake of the Christmas Day bombing, and recommendations for improving the response and criminal investigation for similar incidents moving forward. Lt. Lewis noted the following recommendations:

- Monitor the environment: Step back from the situation and look at the bigger picture so you can supervise more effectively. Immediately check on your personnel and reassure them. Be mindful of the environment but start to address the injuries and life safety issues.
- Request the appropriate number of supervisors, and when appropriate, delegate with clear objectives and authority. Ensure there are assistants on staff.
- Be prepared to shelter persons in place. Request shelter appropriate for the persons and animals needing off-site shelter. Request mass transit support for those needing transportation to off-site shelters. Case management: document interactions with persons who are offered transportation, shelter, and other services in a searchable format.
- Request the appropriate agencies and resources as soon as practicable.

- Establish control of the blast site ASAP and document those entering the crime scene.
 - As soon as the emergency is over, establish a fixed scene check-in station and maintain it until the scene is turned over to Codes as a construction site.
 - Document entries with wrist bands or IDs, and accompany persons entering to avoid thefts and/or injuries.
 - Know who is inside of the perimeter at all times.
 - Establish a citywide credentialing program for all Metro employees.
 - Use lockout/tag-out procedures along with USAR/Fire accountability check-in and out processes to enter structures.
 - Assign a liaison to the investigative group and the MNPDP Community Coordinator to ensure a constant flow of information to the IC.
- Order fencing, barriers, and traffic control items ASAP.
- Monitor for environmental hazards, including chemical and radiological sources, and document any exposures.
- Request the fire department personnel to fill the site safety role so they can determine the proper PPE required, set up decontamination sites, and ensure adherence to proper safety protocols.
- Mitigate hazards at the blast scene as soon as practicable.
- Create a “blast injury card” describing proper injury care to educate personnel about blast injuries.
- Engage the public early and often with clear and concise messaging.
 - Post all information on a single government website.
- Be prepared for copycat incidents.
- Notify employees of the situation and establish expectations for their next actions (i.e. immediate response, extended shift, required gear, employee assistance).
- If possible, use mass transit to move workers into congested work areas and employees into the crime scene area.
- Have redundancy in specialty fleet and equipment, and ensure they receive priority service when repairs are needed.
- Have redundancy in communications
 - Issue satellite phones and, utilize multiple phone and data carriers.
 - Train and practice plan for total communications failures.
 - Know the jurisdiction’s critical infrastructure and what its failure will cause.
- Use incident support teams or logistics teams to assist with the food, water, rehabilitation, shelter, equipment, repair, fuel, and behavioral health support.
 - Ensure they have emergency spending authority.
- Invest in or keep a contract current for conditioned office space to avoid tying up a primary emergency command post for weeks on an extended incident.
- Carefully leverage victim services, community resource centers, volunteers, and donation groups.

- Assign a city project manager immediately to manage the constant competing interests from involved agencies.
- Conduct agency and city-wide incident command training, table-tops, and functional exercises to better prepare leadership and personnel for the responses to incidents and management of city resources.
 - Include private partners such as utilities and facilities when appropriate.
 - Maximize the opportunities to practice and exercise incident command principles during large special events.
- Change police patrol offices to 10-hour shifts to assist in adequate response numbers.
- Increase the amount of police take-home vehicles to police responders will have an assigned vehicle equipped with the proper gear to respond to major incidents at all times.
- Ensure specialized emergency responders are issued appropriate vehicles and are authorized to drive to their residence (in or out of county), to reduce response times to critical incidents while off duty.
- Implement an MNPD incident support team (IST) to assist the police incident commanders with logistics, planning, operational support, and bulk stock.
- Add and upgrade the city's camera safety system.
 - Add mobile camera systems
- Equip the four newly trained technicians with their individual equipment including
 - Portable x-ray systems
 - Tactical bomb tech gear
 - Ballistic helmet
 - Ballistic vest
 - Hand entry kit
 - Switch diagnosis
 - Rigging kits
 - Night vision
- Add two bomb suits for the four new bomb technicians.
- Add a Spartan Robot for simultaneous vehicle render safe explosive calls.
- Add video ray defender robot for underwater searches and render safe explosive calls.

BOMBING AND RESPONSE COMMITTEE REPORT

The Bombing and Response Committee as assigned by Special Bombing Review Commission Chairman Paul Summers, was charged with identifying all pertinent information and actions taken at the time of the bombing and in the subsequent time after the suicide bombing in Nashville on December 25, 2020. The committee reviewed the response actions and proffered recommendations for consideration. The committee's focus sought to answer the following questions.

1. What agencies, public and private, responded to the bombing?
2. Which agencies were involved solely with response, rescue, and safety – not the criminal investigation?
3. Have those agencies submitted After Action Reports (AARs)?
4. Was there an office of primary responsibility (OPR)?
5. Explain the communications among agencies?
6. Explain the extensive damage to buildings and infrastructures, significant business closures, job losses, and displaced people from their homes.
7. When did the response begin, and has it ended?
8. What lessons were learned?

1. What agencies, public and private, responded to the bombing?

A forty-two-page report documenting the timeline of the Nashville 2020 Christmas Day Explosion and Agency response consisted of twenty-three agencies in the original information submitted to the Special Bombing Review Commission. The Bombing and Response sub-committee created an Excel spreadsheet document to identify all agencies involved with the response and rescue efforts in the aftermath of the explosion. The spreadsheet tracked which agencies were involved, the nature of their involvement, whether response, rescue, and safety; or if they were public or private entities. The committee narrowed its focus to thirty-seven (37) agencies that contributed to either the response, rescue, or both in the aftermath of the explosion. The spreadsheet was prepared and shared on the Commission's website.

2. Which agencies were involved solely with response, rescue, and safety – not the criminal investigation?

The Bombing and Response sub-committee created an Excel spreadsheet document to identify all agencies involved with the response and rescue efforts in the aftermath of the explosion. The spreadsheet assisted with tracking which agencies were concerned, the nature of their involvement, whether response, rescue, and safety, or if they were public or private entities. Of the agencies tracked through the spreadsheet, only six were solely involved in the response, rescue, and safety, not the criminal investigation. Those agencies are as follows: Metro Nashville Public Schools (MNPS), Downtown Partnership, Community Resource Center (CRC), Hands on Nashville, Parks, and Nashville Electric Services (NES).

3. Have those agencies submitted After Action Reports (AARs)?

Within the forty-two-page report documenting the timeline of the Nashville 2020 Christmas Day Explosion and Agency response report submitted to the Special Bombing Review Commission, the Bombing and Response sub-committee noted fifteen agencies that submitted After Action Reports. Those agencies are:

- Nashville Office of Emergency Management
- Nashville DEC
- Federal Bureau of Investigation
- AT&T
- Metro Nashville Police Department
- Metro Nashville Fire Department
- PIO
- Fire Marshal Office
- Metro Code
- Parks
- Rehab 55
- Hands on Nashville
- CRC
- Red Cross
- Historic Zoning Commission

4. Was there an office of primary responsibility (OPR)?

The Office of Primary Responsibility originated with the Metro Nashville Police Department and Metro Nashville Fire Department during the initial incident. However, given the criminal nature of the bombing, the Federal Bureau of Investigation assumed the role as the criminal investigative lead agency for the Christmas Day Bombing 2020. Lieutenant Stephen Lewis with the Metro Nashville Police Department states, “All Investigations start local and end local because it is our



city.” Lieutenant Lewis implied that the conclusion of the Federal Investigation did not conclude subsequent investigations. Those initial respondents from the Metropolitan Government of Davidson County would be responsible for continuing the investigation into the Christmas Day Bombing 2020 as their primary responsibility for the overall safety of all citizens within its jurisdiction. Lieutenant Lewis stressed the importance of training and readiness for MNP. He advised the commission that training through the Emergency Management Institute was critical in

response to emergencies in Davidson County, but and that training should recommence. According to the EMA: “*FEMA’s Emergency Management Institute (EMI) has social media accounts to better share information on training opportunities and course offerings and in a timely manner. The accounts provide platforms for trusted networking opportunities that the emergency management community could use both on and off-campus. Students and emergency management*

professionals also will be able to engage in a dialogue to share information related to the training they receive through EMI.” Lieutenant Lewis gave his testimony to the Special Bombing Review Commission on Tuesday, September 28, 2021, at the Sonny West Conference Room in the Howard Office Building 700 2nd Avenue South, Nashville, Tennessee, his testimony may be found in its entirety on the Metropolitan Government YouTube channel.

5. Explain the communications among agencies.

Tennessee Bureau of Investigation Director David Rausch stated during his testimony to the SBRC on Tuesday, August 24, 2021, “Building relationships early on during the Christmas Day Bombing among many different agencies, considering there were so many new directors and chiefs, was critical.” MNPD Lieutenant Lewis stated, “Good relationship among these multiple agencies helped agencies trust and work together in the aftermath of the explosion on Christmas Day.” Communication from the initial call went out to all agencies that assisted the Metro Nashville Police Department and MNFD response and rescue from the time of the explosion. Incident Command was initiated in parking lot 9 outside of Nissan Stadium. The Tennessee Highway Patrol assisted with the shutdown of roadways into downtown Nashville, Tennessee. MNPD also asked

The Nashville Airport Police and Tennessee Highway Patrol Officers to help with K-9 for bomb and rescue efforts. The FBI and ATF were notified and set up within the staging area in lot 9 outside of Nissan Stadium to assist with the Incident Command. According to TBI Director Rausch, “There were hampered communications due to physical structures being down, so they learned the importance of having a diversification of resources.” It appeared at the time that the AT&T building was the primary target of the bombing. AT&T, NES, Metro Water, and Public Works were some of the agencies contacted to assist with the response, rescue, or safety following the incident. These agencies had to communicate and collaborate to restore needed services in the immediate aftermath of the bombing.

6. Explain the extensive damage to buildings and infrastructure, significant business closures, job losses and displaced residents.

As reported by the Nashville Downtown Partnership, sixty-five buildings received damage from the Christmas Day Bombing. As of the publishing of this report, more than thirty-three buildings have reopened. Nineteen buildings are undergoing minor reconstruction and ten buildings experienced structural damage. Damage included issues from steel beams and rafters to masonry and walls being compromised. Some of the buildings were initially deemed unsafe due to stability issues and designated as either collapsed or in danger of collapsing.

In a January 5, 2021, letter to Mr. Phillip Jones, assistant Director for Metro Nashville Public Works, from Logan Patri Engineering, Inc., damage assessment for the most severely damaged buildings included:

- Hooters building located at 184 2nd Avenue North building is unstable and will need structural framing, and substantial replacement. Walls will need to be tied to new framing and retrofitted.

- 101 Church Street Hostel located at 180 2nd Avenue North is unstable but can remain as having restricted use with only professional construction staff allowed. The structural framing and walls will need to be evaluated further and repaired.
- The Quarters located at 178 2nd Avenue North are unsafe and the framing of the building will require substantial replacement.
- 176 2nd Avenue North has already collapsed and is in danger of further collapse. Engineers note there is a "high potential" for further collapse and the building should be partially demolished and rebuilt.
- 174 2nd Avenue North has collapsed and is in danger of further collapse. The report states the building is uninhabitable and unsafe with the demolition of a significant portion of the building expected.
- 172 2nd Avenue North also has collapsed and faces further collapse with the demolition of a significant portion of the building needed.
- 170 2nd Avenue North: demolition of a significant portion of this building is expected as it has also collapsed and could face further collapse. The building is considered unsafe to all personnel.
- Rodizio Grill, Melting Pot, Laser Quest building located at 168 2nd Avenue North is uninhabitable and unsafe with the demolition of a significant part of the building expected.



- 164 2nd Avenue North building is in danger of imminent collapse and will need substantial replacement.
- Spaghetti Factory/160 Lofts located at 160 2nd Avenue North, the building is unstable and in danger of imminent collapse. Structural framing of the building will need replacement and new walls to be retrofitted.
- Buffalo Billiards, Dick's Last Resort, and 154 Luxury Hotel building located at 154 2nd Avenue North is unstable and unsafe and in danger of collapse due to damage.
- Commerce Street Garage suffered damage, but engineers believe it can be rehabilitated and appears to be stable.
- The bombing caused structural and infrastructure damage to nearby AT&T service facility, resulting in service outages across the United States, but primarily in Middle Tennessee. Backup generators were rendered nonfunctional

because of fire and water damage. Cellular, wireline telephone, internet, and U-verse television service were affected, as were multiple local 9-1-1 and non-emergency phone networks in the region.

Forty-four (44) businesses were impacted, with some permanently closed due to extensive building damage, 1,200 employees were impacted and over 400 residents were impacted.

7. When did the response begin, and has it ended?

According to Metro Nashville Police Department records from Officer Michael Sipos's body camera, the response to the Christmas Day Bombing began at 6:14 a.m. on December 25, 2020. Although other calls came into the MNPD dispatch center regarding gunshots being heard near 2nd Avenue, the recording of the explosion can be seen on Officer Sipos's body camera at 6:14 a.m. as presented by MNPD Lieutenant Lewis. The response and recovery work is ongoing as of the publication of this report.



8. What lessons were learned?

The swift and exemplary response in the immediate aftermath of the detonation of the bomb of our local agencies, especially the Metro Nashville Police Department and the Nashville Fire Department is to be commended. First responders risked their lives to aid those caught in the chaos of an unimaginable event and their heroism saved lives.

Initially, it was unknown if there were victims trapped or injured within the destruction site or if there were more undetonated devices. Some criticized first responders for the inconvenience of not accessing personal property immediately or in the days that followed. But, as the commission learned from investigators, accounting for all individual residents and guests took time, even days. Buildings were on the verge of collapse. Gas lines could have been leaking, which would have caused additional explosions. Electrical wiring was exposed to water. And there were fires from the blast with debris scattered for blocks. This was also a crime scene and protecting the integrity of the explosion site was critical.

PIEDMONT GAS LESSONS LEARNED

The Nashville 2020 Christmas Day Explosion Agency Response Timeline stated that a request for Piedmont Gas to discontinue service to the affected area did not come until approximately 10:15 a.m. on December 25th. Piedmont Gas personnel began shutting off the gas in the area at 2:01 p.m. Although this response appears slow, it is unclear whether the lack of communication because of the failures within the AT&T facility contributed or if personnel, because of the holiday, were unavailable. Some timeline responses can vary slightly, but gas shut-off must be a priority.

AT&T Lessons Learned

AT&T battery backup power failure had catastrophic effects and showed how diversity in communications was underestimated, and another lesson the commission made a note of for future response. AT&T engineers could not access their building due to the crime scene perimeters set by the FBI and other law enforcement agencies. Preserving the crime scene versus getting essential personnel to areas for immediate assistance was another lesson of effective communication between multiple agencies that must be examined and discussed going forward.

After the explosion, a multi-block area was quickly shut down due to debris being found as far away as Broadway to the south and 4th Avenue to the West. Had AT&T personnel been able to access the damage to their infrastructure quicker, it would have prevented communication breakdown. The building itself did its job, and the structure was sound and protected its contents.

The battery backup system immediately took over and functioned properly. *But, the blast immediately severed connections to commercial power directly beneath the vehicle and irreparably damaged three generators tasked with supporting most of the facility, including the floor hosting 9-1-1 infrastructure.* Within four hours, the battery backup system began to fail. Upgrading this system is essential. The catastrophic impacts on law enforcement agencies and 9-1-1 centers across the multi-state region were unexpected. Steps must be taken by AT&T as well as first responders to understand how the private company services impact public safety.

NONPROFIT AGENCIES RESPONSE

Tennessee is a volunteer state, and Nashville has the quintessential volunteerism spirit. Immediately, Hands on Nashville (HON), the Red Cross, and Voluntary Organizations Active in Disaster (VOAD) activated their volunteers and staff to aid those in need. Unlike a tornado or a flood, the influx of volunteers responding to the bombing scene was unnecessary. Volunteers came to the blast site and were turned away because of the lack of help with casualties or injuries. HON's Disaster Response Leader deployed immediately to gain situational awareness.

As the days went by, the need for the items typically distributed, like hygiene kits, diapers, etc., was not needed due to the few individuals affected.

The citizens of Nashville should be satisfied with the quick response of our local agencies, especially the Metro Nashville Police Department and the Nashville Fire Department, in the response and aftermath of the Christmas Day 2020 bombing. The perpetrator was identified within hours, and law enforcement determined he acted alone. There are lessons we can and must learn from the tragedy, or we risk repeating with more devastating results.

LESSONS LEARNED COMMITTEE REPORT

The Lessons Learned Committee as assigned by Special Bombing Review Commission Chairman Paul Summers, was charged with identifying lessons learned throughout the investigation of the suicide bombing in Nashville on December 25, 2020, and to make recommendations to reduce the likelihood of another bombing and improve the city's response to similar emergencies. The committee's focus sought to answer the following questions.

1. Have all After Action Reports from all entities been submitted?
2. What was the full scope of the public's interest in the causes, reactions, and any lessons learned?
3. What entities were affected other than governmental- private, telecom, communications, judicial, for example?
4. Have the AARs and reviews answered all the questions, or were there gaps?
 - a. If there were gaps, have they been filled?
5. What are the lessons learned and recommendations regarding possible improvements, procedures, and policy changes to reduce the likelihood of another bombing, and to improve the city's response to similar emergencies?

FINDINGS AND RECOMMENDATIONS

1. Have all After Action Reports from all entities been submitted?

The Special Bombing Review Commission (SBRC) received the Nashville 2020 Christmas Day Explosion Agency Response report outlining the timeline for when the criminal investigation and bombing response agencies arrived at the scene of the bombing incident on Second Avenue in downtown Nashville. The report includes the after-action timeline for local, state, and federal government agencies and private organizations. Additionally, the SBRC reviewed a press release highlighting the investigative report by the Federal Bureau of Investigation. In total, commissioners reviewed after-action reports and heard testimony from 20 agencies involved in the bombing and response and criminal investigation. The list of agencies and information from their respective timeline and after-action reports are outlined in the Criminal Investigation and Bombing and Response committee sections of the Special Bombing Review Commission report.

2. What was the full scope of the public's interest in the causes, reactions, and any lessons learned?

On February 16, 2021, the Metropolitan Council of Nashville and Davidson County passed ordinance BL2021-612 to establish a Special Commission to investigate the circumstances involving the suicide bombing in Nashville on December 25, 2020, and to make any recommendations regarding public safety improvements. While many lives were saved that day as a result of the heroic actions of first responders and public safety personnel of Nashville and Davidson County, the large explosion in downtown Nashville on 2nd Avenue North caused extensive damage to buildings and infrastructure, significant business closures, job losses, and displaced people from their homes.

The full scope of the Special Bombing Review Commission is to review and investigate the circumstances surrounding the suicide bombing, to make recommendations regarding possible improvements, procedures, and policy changes to reduce the likelihood of another bombing in Nashville, and to improve the city's response to similar emergencies in the future. The legislation established a Special Bombing Review Commission (SBRC). The Commission is an agency and appointed body of the Metro Government. The SBRC consisted of nine members: seven appointed by the Mayor, the remaining two members included the Chair of the Council Public Safety Council and a designee of the Vice Mayor.

It is in the public's interest that the SBRC prepare a report and recommendations to the Council about its findings and any recommendations for further action, within 12 months from the date of the establishment and first meeting of the Commission. The SBRC shall terminate upon its submission of the Report and Recommendations to the Council.

3. What entities were affected other than governmental-private, telecom, communications, judicial, for example?

Non-governmental entities affected by the suicide bombing include AT&T and the Nashville Downtown Partnership. AT&T's facility remained structurally sound and although network equipment was not directly damaged, the explosion took out the AT&T power grid located in the building and damaged power infrastructure linking to backup generators. As designed, following the loss of power, network equipment seamlessly transitioned to battery backup, however with the loss of power infrastructure linking to generators, there was no source for recharging the batteries—eventually leading to a service outage across the United States, but primarily in Middle Tennessee. Additionally, 44 businesses were affected, with some permanently closed due to extensive building damage impacting. Over 1,200 employees and over 400 residents were affected. An explanation of the extensive damage to buildings is detailed in the Bombing and Response Committee section of the Special Bombing Review Commission report.

4. Have the AARs and reviews answered all the questions, or were there gaps? If there were gaps, have they been filled?

The Special Bombing Review Commission requested and received after-action review reports and documents to transparently report what happened, why it happened, and any areas of potential improvement in policies, practices, procedures, and/or laws to reduce the likelihood of another bombing in Nashville and improve the city's response to similar emergencies in the future. The reports and documents reviewed by the SBRC are available included in the appendix of this report.

In addition, over the course of eleven months, the SBRC conducted monthly meetings and interviewed representatives to answer questions and fill in gaps related to the criminal investigation, bombing and response, and lessons learned. All meetings of the SBRC are streamed live and recorded on the Metro Nashville Network Channel. Following is the list of agencies interviewed by the SBRC.

- Nashville Fire Department

- Nashville Office of Emergency Management
- Nashville Department of Emergency Communications
- Metro Nashville Police Department
- AT&T
- Nashville Electric Service
- Piedmont Gas/ Duke Energy
- U.S. Department of Justice
- U.S. Attorney’s Office for the Middle District of Tennessee
- Bureau of Alcohol, Tobacco, Firearms and Explosives
- Department of Justice
- Tennessee Highway Patrol
- Tennessee Bureau of Investigation
- Tennessee Administrative Office of the Courts

5. What are the lessons learned and recommendations regarding possible improvement, procedure, and policy changes to reduce the likelihood of another bombing, and to improve the city’s response to similar emergencies?

The criminal investigation and bombing response committees have identified lessons learned as it relates to those areas as outlined in the respective committee sections of this report. The focus of the Lessons Learned Committee was to identify lessons learned related to the overall review and investigation of the suicide bombing in Nashville on December 25, 2020, and make recommendations to reduce the likelihood of another bombing, if feasible, and improve the city’s response to similar emergencies.

In identifying lessons learned the Lessons Learned Committee noted that the bombing was an unexpected tragic event that could have led to extensive loss of life if not for the heroic actions of first responders and public safety personnel of Nashville and Davidson County. Also, good relationships between local, state, and federal agencies prior to the bombing helped to garner immediate and efficient partnerships and investigative collaboration post bombing.

In addition, *a recurring lesson learned identified throughout the overall review and investigation of the bombing is the need for communications resilience and redundancy to diversify the communication network between investigative agencies.* Resilience is the ability of systems to withstand and continue to perform after damage or loss of infrastructure and redundancy is achieved through the duplication of services.

METROPOLITAN DEPARTMENT OF EMERGENCY COMMUNICATIONS LESSONS LEARNED

The Metropolitan Department of Emergency Communications’ (MNDEC) 2020 Christmas Day Bombing After Action Report provides an analysis of how the bombing impacted the communications infrastructure. In it, Director Stephen Martini reported that at approximately 11 a.m. on December 25, 2020, emergency dispatchers noticed intermittent 9-1-1 connectivity – with

some callers reporting they tried to get through but received a busy signal or message saying their call couldn't be completed.

Members of the technology section quickly identified the problem as “SIP bouncing” (unstable connections for our internet-based 9-1-1 phone lines) allowing some calls to come through while others failed. The tech team members acted quickly, shortly before noon, to route all 9-1-1 traffic to CAMA trunks. CAMA, Centralized Automatic Message Accounting is *a special analog trunk, originally developed for long-distance billing, but now mainly used for emergency call services (911 and E911 services)*. It is believed that this made the difference between Metro Nashville retaining 9-1-1 service throughout the event while neighboring Emergency Communication Centers did not. Batteries supporting CAMA trunks last for days – not hours – which was instrumental in retaining service for 72 hours after the bombing and before AT&T engineers were allowed access to the facility to provide alternate generators and restore power to 9-1-1 infrastructure. Shortly after noon, remote connectivity to the AT&T facility was completely lost as all power failed which restricted any neighboring counties from taking similar action. In all, 66 emergency communications centers (ECCs) were either partially or totally impacted by the loss of power caused by the blast.

Nashville was additionally impacted by the loss of commercial phone service. Shortly after noon, administrative lines including the alarm line queue and administrative non-emergency number were impacted in the same way as all other Metro Government lines and all AT&T customers throughout the Southeast Region. A flexible IP solution installed in 2019 to remotely manage and route these lines utilizing cloud-based redundancy utilized diverse equipment but was not geographically diverse – all backup equipment remained installed solely within the same impacted facility.

With the loss of administrative lines, dispatchers used older cell phones provided by a different carrier acquired and pre-positioned at each radio dispatch and call-taker console to make outbound calls to persons attempting to call 9-1-1 or make notifications for field response in the event of just such an emergency. This was another huge success. When not used, the phones generate no expense for the Department and, when used, the cost was nominal in light of critical communication needs. Director Martini reported that carrier diversity is an absolute must in events like these.

In the hours after the explosion, on a sub-freezing temperature day, fire roared throughout the downtown facility activating sprinklers and drowning critical equipment in water. Fire and water damage on all floors impacted individual circuits as well as the batteries serving entire sections of infrastructure. In the days following the initial blast, removing the water pumped into the building and repairing the damaged equipment was a slow process requiring five tractor-trailer generators running simultaneously (still only enough to power 85% of the facility), a team of 50-100 engineers working to slowly power up each battery (2 hours at a time) and then monitor that battery – covered in water – to prevent additional explosions. As the batteries were restarted, the water in and on the equipment evaporated to steam which, if not monitored, would increase the core temperature higher than manageable and result in small explosions. Engineers worked to power up and power down batteries in phases to evaporate the water safely and restore equipment permanently. *This powering up and down of equipment created operational confusion around the region, as service*

would restore for periods of time when power was on and then, abruptly, disappear again when the batteries were powered down. AT&T engineers were also allowed limited access to the facility by the Nashville Fire Department, the Federal Bureau of Investigations and the Bureau of Alcohol, Tobacco, Firearms and Explosives throughout the first 48 hours due to investigations, clearing an active crime scene, the instability of the surrounding structures, and continued small explosions or suspected fires within the facility. This aided in hindering progress to restore communications service.

MNDEC Director Martini also reported that discussions during the incident with colleagues in neighboring Williamson and Robertson Counties, as well as engagement with Metro Nashville Information Technology Systems professionals emphasized the need for interagency coordination and carrier redundancy, both of which are being explored. They are engaging opportunities to utilize SIP connections to access shared PRI lines via fiber connections utilizing both primary and backup sites. These, coupled with a cloud-based PBX solution from an alternate carrier could allow the opportunity to route existing numbers to other 10-digit PRI lines hosted by our neighbors that could be passed back into our facilities via alternate paths. These connections could also allow them to quickly publish alternate numbers to the community to call and reach our dispatchers, so we could triage concerns and send help. This will require additional infrastructure – IP phones placed at each dispatch and call-taker consoles redundantly connected to existing phone systems and an alternate, geo-diverse network – as well as establishing connections to our surrounding counties and working with an alternate carrier to establish an alternate call network.

AT&T RECOMENDATIONS

At the November 30, 2021, SBRC meeting, Tennessee AT&T President Joelle Phillips testified that Nashville's Central Office building withstood the bombing, but the commercial power interface was damaged, which caused a communications system failure. Commercial power to the AT&T building was de-energized because of the blast. The communications equipment can operate for several hours until commercial power is restored as long as the internal battery is switched to generator power. Battery power lasts approximately five hours and then needs to be switched to the generator to maintain power. However, the FBI restricted access to the building after the blast and did not allow A&T personnel to move equipment from battery to generator. It was more than 12 hours before AT&T personnel could access the equipment room to switch the power source. Eventually, a hole was constructed in the back of the building to move generators outside in order to switch the power source.

President Phillips testified that the bombing caused more than \$60 million in damages at AT&T. Moving forward, AT&T is looking to change disaster protocols so that they are able to switch from battery power to generator power seamlessly in the event of an emergency. They intend to work with policymakers to explore more robust redundancy and resilience communication measures.

Several government agencies involved in the criminal investigation and bombing response reported how telecommunication breakdowns that occurred as a result of the bombing interrupted cellular and radio capabilities across the city. Continuity of communication is enabled through diverse alternative methods when primary communications capabilities suffer damage. It is imperative that investigative agencies know where the single points of communication failure are ahead of tragic events to protect those vulnerable points and establish diversified communication options. Also, the review of

lessons learned identified the need for radio channels to be encrypted for private and protected communication on the ground between first responders and hospitals.

RECOMMENDATIONS FOR GOVERNMENT DEPARTMENTAL IMPROVEMENTS, PROCEDURE AND POLICY CHANGES

On December 20, 2021, MNP Lt. Steve Lewis addressed the SBRC and spoke to the lessons learned and needs identified by the Metropolitan Nashville Police Department in the wake of the Christmas Day bombing. Included in this report are recommendations to improve the city's response to similar emergencies as outlined by Lt. Lewis, as well as those identified by the Nashville Fire Department, Office of Emergency Management, and in the AASR from the State of Tennessee Department of Safety and Homeland Security, Department of Homeland Security (DHS) Cybersecurity, Infrastructure Security Agency (CISA), Interoperable Communications Technical Assistance Program (ICTAP). A full report of each agency's recommendations are included in the appendix of the SBRC report.

STATE OF TENNESSEE DEPARTMENT OF SAFETY AND HOMELAND SECURITY, DEPARTMENT OF HOMELAND SECURITY (DHS), CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY (CISA), INTEROPERABLE COMMUNICATIONS TECHNICAL ASSISTANCE PROGRAM (ICTAP) AFTER ACTION SUPPLEMENTAL REPORT

The State of Tennessee Department of Safety and Homeland Security requested assistance from the Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA) Interoperable Communications Technical Assistance Program (ICTAP) to develop an After Action Supplemental Report (AASR) to summarize the impact of the Nashville, Tennessee Christmas Day 2020 Bombing on a nearby critical AT&T telecommunications facility, with a focus on communications that were specifically impacted by the several-day outages of that facility, and the strengths and challenges faced by public safety during and after the incident. The AASR attempted to identify the communication issues experienced and develop recommendations to minimize their impact in the future. Significant assistance in its development was provided by the Tennessee State and local Telecommunicator supervisors. Information was solicited from at least 10 agencies/organizations, and several groups/units within some of those agencies/organizations. The following are recommendations from the AASR report.

Throughout the process of stakeholder discussions, research of information available on the internet, and review of the information provided, a number of areas were identified where improvements should be considered. The various recommendations noted below were either extracted directly from the information provided or developed because of our discussions. The recommendations are included in an Improvement Plan, provided as a separate attachment. A copy is also included in the appendix of this report.

Recommendations for improvement of public safety interoperable and broadband/FirstNet communications include the following:

6. **Private Partner Agreements, Notifications, and Policies:**

Description: The primary concern of the public safety personnel and agencies involved in this incident was the lack of coordination, communications, and notifications in a timely fashion, from AT&T. Although notifications were eventually made, those notifications came well after failure had occurred on the 9-1-1 system. In fact, at least one Public Safety Access Point (PSAP) made the discovery of the 9-1-1 failure on their own after not receiving any 9-1-1 calls for over an hour. From the time the incident happened in the early morning, to the time the backup power failed, was nearly 6 hours. During that time, agencies were unaware of the risk of catastrophic failure and as a result, were unable to put in place any means of potential redundancy and backup that may need to be initiated while the power was still on. The six-hour window provided ample opportunity for the vendor to provide a situation report to their customers in order to protect a critical public service like 9-1-1 from going down. A warning could have prevented major issues for many of the centers involved. As was noted in the incident summary, although this outage impacted at least seven states in the region, no known notifications were sent about this potential outage. AT&T was unable to provide an explanation for their lack of notifications. AT&T does not now have a plan to warn critical public safety infrastructure, but personnel said they would look into changing that policy for future incidents.

RECOMMENDATIONS GENERALLY

- Develop agreements with private partners who supply critical services to public safety that include notifications, trigger points, and other critical information that public safety needs in a timely fashion.
- Ensure that agreements created include responder-defined notification timelines and circumstances to ensure required information is disseminated in an efficient and timely way.
- Collaborate with vendors and infrastructure owners to develop a two-way communication plan any time that critical infrastructure is under threat or at risk, including known vulnerabilities that may impact public safety operations.
 - Include in private partner/agency communication plans specific information as to:
 - What personnel (individuals or positions) are responsible for making notifications and to whom?
 - What situations should prompt notification?
 - What timeline is reasonable for notifications to be completed?
 - What procedures may be followed to ensure receipt of notifications by appropriate parties?
 - What communications pathways are available for making notifications?
- Plan and conduct exercises with private partners and infrastructure owners to test and refine communication plans.

IDENTIFICATION OF REDUNDANCIES FOR 9-1-1 PATHWAYS RECOMMENDATIONS

Description: There were many examples during this incident where perceived redundancies failed or were shown to not be truly redundant. In some cases, agencies believed that having a primary and secondary vendor created independent redundant lines of communications. However, in this incident, those independent lines traversed through a single choke point in the AT&T hub. This chokepoint of signal transfer, with no true built-in redundant paths, caused a false sense of security for agencies who believed that they have a backup plan, but do not. It is essential for public safety communications centers to have a realistic understanding of their redundancies and how truly redundant they are.

- Working with private service providers, identify network pathways for all communications that may travel through their infrastructure.
- Identify true redundant services and network pathways for critical services such as 9-1-1.

STATE NETWORKS RELIANCE ON PRIVATE CIRCUITS RECOMMENDATIONS

Description: Similar to the above 9-1-1 related issues, there were also issues with devices and systems that were connected to the state network infrastructure, which is mainly supported and provided by AT&T. Due to this reliance and lack of redundancy as noted above, the State radio system, Computer-Aided Dispatch (CAD) system, and access to many features on the primary network no longer worked or were inaccessible. Some state systems were able to rely on the states' backup network; however, some critical services, such as CAD, were not supported on the backup network.

- Ensure all important applications and systems on the state network have true redundancy access on the backup network including CAD.
- Working with private vendors, ensure access to backup networks exist and are truly redundant to the primary lines.
- Continue with plans to use cloud-based applications for state network systems. Ensure that redundancies to cloud-based applications exist so that when an area is impacted, they have multiple means of access.
- Identify pathways of communication that, although seemingly unrelated to one another may run through a narrow pipeline (e.g., cell phone, wifi, CAD systems) and research truly redundant workarounds as part of a primary, alternate, contingent, and emergency (PACE) plan.

SECURITY AND REDUNDANCY OF PHYSICAL INFRASTRUCTURE RECOMMENDATIONS

Description: The physical infrastructure that underlies, serves, and supports the critical functions of emergency response (e.g., 9-1-1, NG9-1-1, land mobile radio (LMR)) must be made to be as secure as possible from intentional sabotage, man-made disasters, and natural disasters. It is understood that most agencies rely on vendors to ensure this security and may have little or no control over those security plans and procedures. As a result, it is important for agencies to be

aware of the security threats to critical infrastructure and develop true redundancies so that critical response functions are not reliant on a single point of failure.

- Collaborate with vendors and infrastructure owners to determine the level and sources of risk facing physical infrastructure, not in direct control of your agency.
- Exercise “worst-case scenarios” should critical infrastructure fail for any reason.
- Include vendors and infrastructure owners in any exercises designed to plan for the failure of physical infrastructure not under the direct control of your agency.

NASHVILLE FIRE DEPARTMENT RECOMMENDATIONS

NFD Special Operations:

- NFD Special Operations needs additional staffing to be able to work on more plans, procedures, and policies, along with additional training and exercise to ensure maximum preparedness across multiple levels of emergency response.
- Survey 123 should be used at full capacity to give real-time data back to command during an emergency.
- Improve equipment on NFD Command Vehicle.
- Improve training and processes including training budget for NFD Special Operations.
- Improve and update equipment on Urban Search and Rescue (USAR) Trailer and cache, which has not been updated in nearly 20 years.

NFD Personnel:

- NFD staffing levels need additional staffing to be able to work on more plans, procedures, and policies, along with additional training and exercise to ensure maximum preparedness across multiple levels of emergency response.

Equipment:

- NFD Special Operations need larger and additional vehicles to be able to transport additional personnel and equipment/resources to the scene.
- Survey 123 app and technology needs to be in place.
- Improve technology/equipment on NFD Command Vehicle.
- Improve technology in field response operations, including response vehicles.
- Recommend reconnaissance drones for public safety surveys.
- Improve training and processes, including training budget for NFD Special Operations.
- Improve and update equipment on USAR Trailer and cache, which hasn't been updated in nearly 20 years.



Planning/Processes:

- Have an engineer on contract through USAR.
- Better program to manage and track available resources (IT or APP software).
- Improve training and processes; have a training budget for NFD Special Operations.
- Coordinated focus group headed by the mayor's office and department heads.
- Have consultants, engineers and contractors, and all stakeholders involved to initiate a checkpoint immediately following an emergency event.

OFFICE OF EMERGENCY MANAGEMENT RECOMMENDATIONS

Emergency Operations Center:

- EOC upgrade to get up-to-date technology and to accommodate the necessary size of multi-agency personnel.

OEM Personnel:

- OEM staffing levels need to be increased - OEM needs additional staffing to be able to work on more plans, procedures, and policies, along with additional training and exercise to ensure maximum preparedness across multiple levels of emergency management.
- OEM dispatch needs additional personnel to ensure enough coverage of at least 2 per shift.
- OEM needs additional personnel to cover scribe activities in the field and the EOC.
- OEM needs additional personnel for field response, resource allocation needs, and Emergency Support Unit management.

Equipment:

- OEM needs larger and additional vehicles to be able to transport additional personnel and equipment/resources to the scene.
- Additional redundancy needs to be put in place for communication capabilities (e.g. cell phone lines went down, along with landlines and networks).
- Improve technology/equipment on OEM Command Vehicle.
- Improve technology in field response operations, including response vehicles.
- Improve equipment cache for USAR team, i.e. structural integrity tools for engineers.

Planning/Processes:

- Create a program for real-time UAV footage for scene awareness.
- Improve processes and training for timely financial tracking across all departments (i.e. staffing hours, equipment usage, fuel logs, etc.) from the beginning of each event, for quick turnaround when needed for potential declarations.
- When a large-scale emergency occurs, and an EOC Activation is called, a Finance person should immediately respond to the EOC to ensure financial tracking, etc. is taking place.
- Increase the EOC critical infrastructure awareness and responsibilities as a unified command to improve Metro's response to emergencies.
- Create a new OEM Dispatch SOP for "Major Incidents".
- Re-establish proper protocol of OEM being the lead coordinating agency for resource needs and allocation, for Metro cross-agencies and State assets, and solidify the process

(and educate) of single-point resource requesting with OEM and into Unified Command, to avoid duplication of requests and confusion.

- During times of response, set specific times for briefings.
- Improve communication from field command, federal assets, etc., into the Metro EOC
- Improve usage of Law Enforcement Enterprise Portal (LEEP) from all agencies.
- Improve process for victim/survivor case management to be up and running quicker
- Institute program to manage and track available resources.
- Conduct off site executive briefings to share future strategic planning goals.

CONCLUSION

On December 25, 2020, a vehicle-borne improvised explosive device was detonated on 2nd Avenue North, Nashville, Tennessee. The explosion caused catastrophic property damage to many structures. The property damage alone is in the hundreds of millions of dollars. Thousands of citizens, employers, and employees were affected, many permanently out of work. The bombing compromised or damaged critical city, state, and regional infrastructures. Every branch or department of state, federal or metropolitan jurisdiction was affected. There was no branch of government - legislative, executive, or judicial - that escaped some impact. Telecommunication capabilities and communications infrastructure were shut down for some time. The explosion shattered lives, businesses, and citizens.

Metro Nashville, our State, and our federal authorities responded instantaneously. Although the criminal jurisdictional issues were federal in nature, all teams worked together. They communicated, delegated, reacted, and responded. For one year, the Special Bombing Review Commission (SBRC) has studied the federal, state, and city-wide response to the catastrophe. The nine-person SBRC has made recommendations proffered by this Report based on testimony, statements, after-action reports (AARs), and studies by hundreds of responders and responsive agencies. The SBRC is a reporting agency and not an investigative agency. We have tried our best to give credit where credit is due. All of our work results from quoting other people or reports or paraphrasing what they have said. If we got it wrong or incorrectly, we apologize. We just did the best we could do.

This Report consists of hundreds of pages and appendices that cover thousands of other pages.

What we know for certain is that the Department of Justice has found, beyond a reasonable doubt, that a lone, suicidal individual detonated the improvised explosive device on Christmas Day 2020. It is absolutely a miracle that others were not killed. Lives were saved because Nashville was strong, responsive, brave, and resilient.

COMMISSION RECOMMENDATIONS

Having listened to, investigated, researched, and discussed the events surrounding the Christmas Day Bombing for one year, the Special Bombing Review Commission voted on the following recommendations for consideration by the Office of Mayor John Cooper and Nashville Metropolitan Council of Nashville, and Davidson County.

1. Make provisions to train MNPd command staff and supervisors through an Integrated Emergency Management course at the Emergency Management Institute.
 - a. MNPd should pursue "train the trainer" courses to defray future costs.
 - b. We highly recommend this type of training for all government and any civilian responders.
2. Develop multi-disciplinary teams which include private partners and engage in scenario-based table-top exercises on at least a semi-annual basis.

3. The Commission supports and adopts the recommendations of the MNPB AAR Review Board.
4. Recommend MNPB make available to the Metro Council the number of critical incident calls per year to include bomb threats and threats of mass violence.
5. The Commission recommends that MNPB, the Mayor's Office and the Metro Council work together to close gaps in technology which aids public safety.

All SBRC members concur.

March 29, 2022

APPENDIX

Supporting documents and video testimony can be found through the listed links.

- <https://vimeo.com/manage/videos/567516947/250c953c67> (Video Presented to the Commission September 28, 2021)
- <https://metronashville.sharepoint.com/sites/SpecialBombingReviewCommission/Shared%20Documents/Forms/AllItems.aspx?ga=1&id=%2Fsites%2FSpecialBombingReviewCommission%2FShared%20Documents%2FTimeline%2FSubmissions%2FFBI%20Timeline%2Edocx&parent=%2Fsites%2FSpecialBombingReviewCommission%2FShared%20Documents%2FTimeline%2FSubmissions> (FBI Timeline Document)
- <https://metronashville.sharepoint.com/:w:/r/sites/SpecialBombingReviewCommission/layouts/15/Doc.aspx?sourcedoc=%7BD509CEB3-2242-4A40-9F06-0F18F1AED9BD%7D&file=NFD%20Timeline.docx&action=default&mobileredirect=true> (NFD Timeline Document)