CRITICAL INFORMATION FLOWS IN THE ALFRED P. MURRAH BUILDING BOMBING: A CASE STUDY

Catherine Manzi
Michael J. Powers
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Terrorism Studies Series

Special Report 3

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About CBACI

Established in 1994, the Chemical and Biological Arms Control Institute (CBACI) is a non-profit policy research organization focusing on national and international security in the 21st century with a special but not exclusive focus on the elimination of chemical and biological weapons. It fosters this goal through an innovative program of research, analysis, publication, technical support, and education. Institute publications focus on products that are readily usable for busy policymakers, including a biweekly newsletter, the *Dispatch*, the Occasional Paper and Special Report series, *The ARENA* issue paper series, and numerous monographs and books. CBACI promotes a variety of outreach activities to government, industry, and academe, including an ongoing seminar series "Responding to the Biological Weapons Challenge."

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Contents

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Foreword

The tragedies of the September 11, 2001 terrorist attacks, along with the deaths and illness resulting from the release of weaponized anthrax spores through the U.S. postal system, have provided a clear demonstration of the complexities and challenges facing government officials in responding to domestic terrorism incidents. Firefighters, police officers, public health officers, urban search and rescue teams, engineers and public works officials, military personnel, hospitals and other medical care providers, and others are traditionally included among the community of "first responders" to such incidents. Integrating and coordinating the activities of such a large body of individuals from a wide variety of responding organizations representing all three levels of government, local, state, and federal, depends on getting the right information to the right people at the right time. Moreover, a successful response – one that maximizes the number of lives saved and minimizes the fear and disruption that frequently follow such incidents – is also dependent on meeting the information requirements of the general public before, during, and after terrorism incidents. This requires government officials to involve journalists, editors, news directors, and other media representatives as partners in terrorism response planning and preparation – and execution.

With the generous support of the National Memorial Institute for the Prevention of Terrorism in Oklahoma City (MIPT), the Chemical and Biological Arms Control Institute has undertaken an eighteen-month project to develop a counterterrorism communications

strategy to meet the information requirements of the "first responders" and those of the general public. This publication is the final product of a case study, completed during the first phase of the project, that identified the information and communication flows affecting the response to the April 1995 bombing of the Murrah building. Not a critique of response efforts during this incident, this case study provides an illustrative example of how information and communication affected the response to a major incident of domestic terrorism. This publication is the first of a series of project-related publications the Institute will release in coming months.

On behalf of CBACI, I would like to express our appreciation to the Memorial Institute for the Prevention of Terrorism for their support of this effort. Without their support, this report, along with the rest of the project, would not exist. I would also like to personally express my appreciation to the members of the Institute staff responsible for the research, analysis, and drafting that produced this report. The co-authors of this report, Catherine L. Manzi and Kristina Zetterlund, must be singled out for tireless efforts in completing this report in a relatively short period of time. In addition, I would like to thank Jane Thomas, Collections Manager at the Archives of the Oklahoma City National Memorial , for providing us with access to the archives and her recollections of the bombing and its aftermath. Finally, and most importantly, special thanks are due to those individuals who agreed to be interviewed for this report. Without their donation of time, we would have been unable to access a wealth of information and insight.

Michael J. Powers
Project Director

April 2002

I. Introduction

On April 19, 1995, the worst act of terrorism on U.S. soil, at least before September 11, 2001, was committed. A truck bomb containing more than 4,000 pounds of a highly explosive mixture of ammonium nitrate and fuel oil was parked in front of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma and detonated at 9:02 a.m. that morning.

At the time of the explosion, hundreds of people were working inside the Murrah Building. Hundreds more worked in neighboring buildings or were walking near the Murrah Building at the time of the explosion. According to an investigation of bombing injuries and fatalities completed by the Oklahoma State Department of Health, more than 800 people were injured in the bombing. Injuries ranged from cuts and scrapes, to severe sprains and broken bones, to severe crush injuries. Many victims remained trapped within the debris of the Murrah Building until freed by fire and rescue workers. In the end, 168 people lost their lives as a direct result of the bombing – 167 died in the bombing with one volunteer rescue worker killed during rescue efforts. The bombing has had a profound emotional impact on the family and friends of those killed and injured in this act of terrorism extending to the broader community of Oklahomans.   It has also deeply affected the psyche of an entire nation.

Many injuries were caused by the shower of falling glass and debris resulting from the blast's sheering effects on the north face of the building. The blast penetrated deep into the building, catastrophically damaging the main horizontal load-bearing cross member located between the second and third floors on the north side of the building. This cross member supported several vertical pillars stretching from the third floor to the top of the building. In addition, the blast severed several vertical columns located deeper within the building. As the structural support provided by the horizontal member and the vertical columns was eliminated by the blast, the northern third of these floors collapsed.

In addition, several nearby buildings, including the Athenaeum, the Water Resources Board building, and the *Journal Record* building, were either destroyed or severely damaged by the explosion. The force of the blast was so powerful that the resulting shockwave was felt by people miles away.

Numerous local, state, and federal agencies and departments responded to the bombing of the Murrah Building. Fire and rescue personnel from the Oklahoma City Fire Department, surrounding fire departments, and several urban search and rescue teams deployed from across the country by the Federal Emergency Management Agency (FEMA) worked within the remnants of the Murrah Building to locate and rescue victims trapped in the rubble. The Oklahoma City Police Department, supported by units from surrounding jurisdictions, the County Sheriff's office, and the National Guard, provided security around the perimeter and assisted in rescue efforts and providing medical care. The Emergency Medical Services Agency (EMSA) provided initial medical care to victims at the bombing site and transported many of the most severely injured victims to area hospitals. In turn, those hospitals received and treated hundreds of victims. These included several severely injured

patients who were transported to area hospitals by EMSA, and numerous victims injured less seriously who came by themselves or were transported by family members and friends.

The federal government also played a key role in several areas of the response to the bombing. The Federal Bureau of Investigation (FBI) headed the criminal investigation, while FEMA, supported by the State Department of Civil Emergency Management, coordinated federal support to rescue and recovery efforts. FEMA's responsibilities included organizing the deployment of urban search and rescue teams. It also included the coordination of several assistance programs that provided financial and material assistance to affected families and businesses. In addition to governmental activities, several volunteer organizations, private businesses, and individuals from all over the United States donated money, goods, and, in many cases, their time to assist the victims of the bombing.

Executing and coordinating the response to the bombing of the Murrah Building was an enterprise of considerable complexity. A substantial number of organizations and individuals participated in response activities, either directly or indirectly. Moreover, several different *types* of organizations – including public safety organizations, law enforcement, private corporations, volunteer organizations, and the media – simultaneously participated in a number of different activities, all of which were essential in fashioning an effective response.

Successfully managing and exploiting the flow of information is the key to managing any enterprise of the size and complexity of the Oklahoma City bombing response, and the information demands are heavy for both organizations and individuals. Implementers need to know their respective roles and responsibilities. Managers need to know what tasks are being undertaken and who is undertaking them. They also need to know which tasks have yet

to be completed, and what assets are available to get critical jobs done. They must also have the ability to direct available assets to undertake assignments necessary to complete a specific task.

In addition, responding to an act of terrorism is highly time-urgent. Unlike most other enterprises, success and failure are measured according to the number of lives saved and lost. When people's lives are at risk, speed and accuracy are of the utmost importance. Not only are the information requirements demanding in this type of operation, the requirements need to be met almost instantaneously.

Added to this are the information requirements of the general public. In addition to the various government organizations and private organizations directly involved, the general public plays two critical roles in response efforts. First, most acts of terrorism are intentionally designed to affect the general "viewing public" psychologically. As the term "terrorism" implies, terrorists use violence and the threat of further violence to instill fear and panic within the general population – through an increased sense of personal risk or the risk to others. The bombing of the Murrah Building was no exception. Information provided to the public during the response phase can reduce the level of fear and panic by assuring the public that the government and other organizations are taking measures to assist those who have already been affected by recent act(s) of terrorism, while also working to prevent additional incidents.

The general public can also play a key facilitating role in rescue and recovery efforts. The people of Oklahoma, as well as people from across the country and around

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            Pre-Incident          Incident         Post-Incident



        Deterrence                                  Deterrence
                           Response
                           – Internal            Recovery
        Preparedness       – External
                                                       Preparedness
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Figure 1 – Critical Information Flows
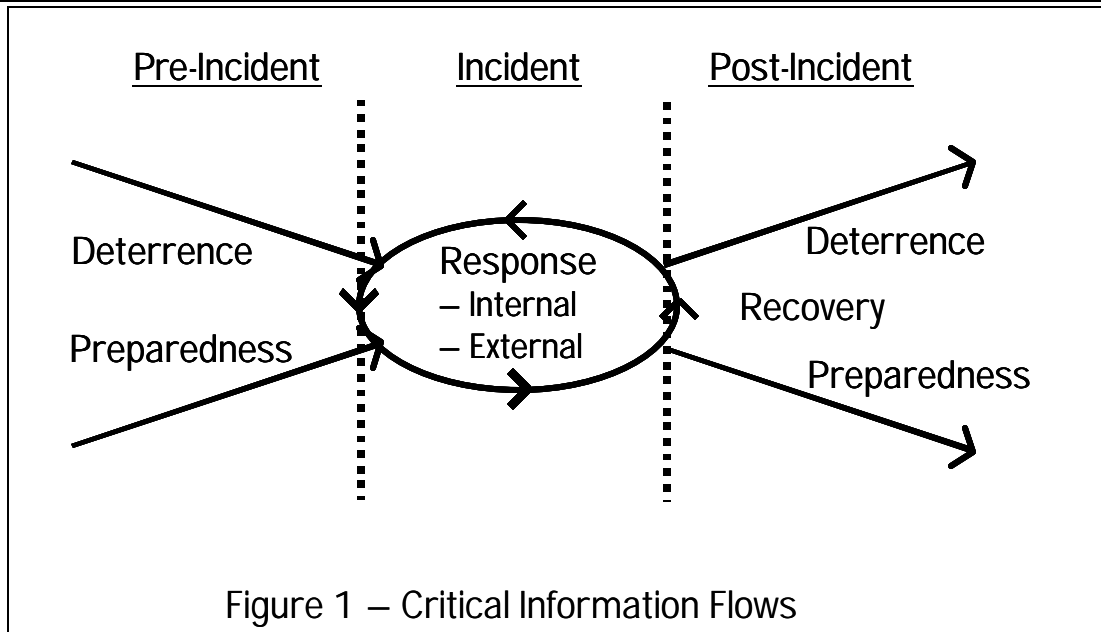
the world, opened their hearts, homes, businesses, and in many cases their checkbooks to

help the victims of this bombing. Information provided to the public, particularly through print

and electronic media outlets, helped direct these contributions by specifying what items

were needed by the victims and the rescue workers and how donations could be made.

Information was also provided on how the donations were actually making a difference in the

response effort.

        Media of all types – print, electronic, local, national, and global – served as the public's

main source of information about those responsible for the bombing, how people were

affected physically and psychologically, and what the government and other organizations did

to respond. Because of their role as interlocutor with the public, the media influenced the

emotional reaction to the bombing, while also helping to guide actions taken by the public.

The media is a key partner in the response to any act of terrorism on U.S. soil. Despite their

important role in feeding information to the public, the media has not been a full participant in

ongoing counterterrorism planning and preparedness activities.

The examples provided by the bombing of the Murrah Federal Building clearly demonstrate the importance of information and communication within U.S. counterterrorism strategies, policies, and programs. The graphic above illustrates the critical information flows constituting a counterterrorism information strategy. Successfully exploiting information and meeting communication requirements not only facilitate the response to an act of terrorism, but also serve critical roles in deterring future acts of terrorism and facilitating planning and preparedness efforts should deterrence fail. With this in mind, the Oklahoma City National Memorial Institute for the Prevention of Terrorism (MIPT) is supporting the efforts of the Chemical and Biological Arms Control Institute (CBACI) to develop the information and communication component of a successful counterterrorism strategy. This project will explain and integrate these "critical information flows" that support three central counterterrorism objectives — deterrence, preparedness, and response. It will also include a comprehensive review of current programs, policies, and procedures related to communications and information dissemination.

This report is not a comprehensive review of the response to the bombing of the Murrah Building. Rather, it is a review of the role of information and communications in deterring, preparing for, and ultimately responding to the bombing. This report draws from a combination of interviews with individuals who played key roles in the response and a comprehensive review of available literature — including several after-action reports.

The report is organized according to three phases of response-related activities — pre-incident, incident, and post-incident. The information flows supporting deterrence and

preparedness are discussed in the pre-incident and post-incident sections. Those

information flows supporting post-incident recovery are discussed within the post-incident

section. Within the incident section, the discussion of incident information flows has been

divided into internal information flows – that is, the information and communication among

the response participants – and external information flows, or information and

communication with the public.

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II. Pre-Incident Critical Information Flows

Pre-incident information flows are those information flows that exist before an act of terrorism occurs. They are aimed at affecting future acts of terrorism. Generally, pre-incident information flows can produce two different, but closely connected, types of effects. The first effect is the deterrence of future acts of terrorism through information provided to the public and to potential terrorists. Deterrence, at its essence, is about convincing a potential terrorist that the cost of acting is too high, the benefit the terrorist will gain is minimal, or both. When such a perception of greater costs than benefit is created, the *potential* terrorist chooses not to undertake the act of terrorism he or she may have contemplated. Terrorists whose decision to act is based on a unique logic that fails to consider benefit, costs, and risk may be "undeterrable." Deterring those terrorists who do consider these factors in their decision-making processes requires informing them of the high costs and risks and the minimal benefits associated with terrorism. This is one of the objectives of pre-incident information flows.

A key aspect of convincing potential terrorists of the high costs and low benefits derived from terrorist acts is developing an effective response capability - be it to terrorism using high explosives, chemical weapons, or biological weapons. This requires

the implementation of robust preparedness programs within local and state government, and public safety, public health, and medical care communities. Pre-incident communications and information are important in developing the capabilities necessary to respond to these types of incidents; they are essential to the training, planning, and coordination efforts that are central components in developing a national response capacity - the key objective of ongoing domestic preparedness programs.

Both training and planning involve the exchange of a substantial amount of information. Officials developing counterterrorism training programs need to answer several important questions: What type of response capabilities should the program be designed to promote? Who should participate in the training program? What information should the program provide? Which training method should be used? In addition, the development of local, state, and federal terrorism response plans rests on coordinated input and review by numerous governmental agencies and departments, working with several private organizations such as hospitals, and integrating the support capabilities of volunteer and non-profit organizations.

Several examples of "pre-incident information flows" existed before the April 1995 bombing of the Murrah Building. Although information disseminated before the incident failed to deter the bombing, other critical information flows supported the development of the robust response capability that was clearly demonstrated. As a later section of this report describes, post-incident information flows, especially information disseminated for the purpose of making potential terrorists aware of existing response capabilities as well as the existence of a capability to apprehend and prosecute terrorists, can also serve to deter future acts of terrorism.

In the case of the Murrah bombing, the act of terrorism was not deterred. In fact, it does not appear that government officials had defined deterrence as a prime objective of U.S. counterterrorism policies and programs. At most, prosecution and punishment were held out as probable outcomes for those individuals engaging in acts of terrorism. While deterrence was not a policy instrument used by officials in the period before the bombing, this case study provides some indication of how information dissemination could be used to deter potential terrorists.

A central component to any strategy of deterrence is demonstrating the ability to impose costs, reduce benefits, and raise the risk for an actor in direct response to the undertaking of an unwanted action. The other key component of any strategy of deterrence is *informing* the actor being deterred of the high costs, minimal benefit, and substantial risks associated with taking an unwanted action. In other words, the existence of an ability to impose costs, reduce benefits, and raise risks is not sufficient to deter an actor. The actor needs to be *aware* of the existence of those capabilities when deciding whether to undertake the action being deterred. Determining the extent to which information disseminated before the bombing of the Murrah Building contributed to the breakdown of deterrence is difficult, given the lack of reliable accounts of the target selection and planning process undertaken by those responsible. In any case, it is unclear whether alternative forms of communication or the dissemination of different information would have deterred the perpetrators from undertaking this act of terrorism.

The three central instruments for imposing costs, reducing benefits, and raising risks

for terrorists – denying terrorists the instruments of violence, developing robust means of detection and response to minimize the effects of terrorism, and punishing individuals who engage in acts of terrorism – failed to deter these particular terrorists. First, given the relative ease with which the bomb-making ingredients can be obtained, it was very difficult to convey the message that engaging in this form of terrorism is too challenging. Second, it is unclear whether the relative vulnerability of this particular facility was a major factor in selecting it as a target. Timothy McVeigh's primary source of information regarding the Murrah Building's physical characteristics and occupancy appears to have been visual observation. Such observation indicated the building was physically vulnerable to this type of bombing, and it contained a large number of federal government employees – his intended victims. Even if physical countermeasures had been in place at the Murrah Building to make this bombing too difficult, other federal buildings located in the same section of the country were equally vulnerable. This might have deterred the bombing of the Murrah Building but would have only shifted the target selection to a different federal building.

Second, the existence of a relatively robust disaster response capability also failed to deter for two reasons. The selection of the Murrah Building as the target does not appear to have been based upon an assessment of response capabilities within the City of Oklahoma City or the State of Oklahoma and how such capabilities could have mitigated the effects of the bombing. Furthermore, a deliberate policy on providing the public, and thus the perpetrators, with information on the city's and state's level of readiness to respond to acts of terrorism was not established before commencement of the planning process by those responsible for the bombing. This meant this type of information was not available to the perpetrators as they selected this specific target.

While facilities in Arkansas, Missouri, Arizona, Texas, and the FBI headquarters were considered as potential targets, the Murrah Federal Building in Oklahoma City was selected, at least in part, because of two factors. The first factor was the relatively large number of federal employees housed in the Murrah Building. In particular, the building housed representatives of several federal law enforcement agencies, including the FBI and the Bureau of Alcohol, Tobacco, and Firearms — agencies that were the main targets of this attack. Second, the building was relatively close to the location of the conspirators during their initial planning. This provided opportunities to visit the building before the bombing. While Kansas City was closer than Oklahoma City, the Murrah Building contained a larger number of federal law enforcement officers, who were the main targets of this bombing.

The bombing perpetrators were not deterred by the high probability of their apprehension and punishment in response to the bombing. While Timothy McVeigh was the central figure in the planning and execution of the bombing, both Terry Nichols and Michael Fortier were involved in developing the idea to bomb a federal building. Fortier was involved in the initial planning and failed to inform the police, while Nichols was involved in both the planning and the construction of the bomb, although neither of them actually set or detonated the bomb. All three must have known that the bombing was a direct assault on federal government property and would kill several federal employees, and that the manhunt for the perpetrators of this act of terrorism was almost certainly going to be one of the most intense in U.S. history. All three must have recognized the high probability of their being apprehended and prosecuted after the bombing. It is difficult to say with certainty whether the possibility of capture and prosecution was a key factor in causing both Nichols and Fortier to hesitate to follow through on the conspiracy, given the lack of reliable accounts on why they failed to carry out the attack. Nevertheless, both McVeigh and Nichols continued to

organize, and eventually McVeigh carried out the attack.

REGIONAL PREPAREDNESS EFFORTS

While deterrence failed to prevent the April 1995 bombing of the Murrah Federal Building, several examples of pre-incident information flows facilitated the development of local, state, and federal response capabilities. In particular, several training programs, mainly internal to the local fire and police departments, directly improved disaster response capabilities. They also facilitated the development of all-hazards emergency response plans at the city and state levels of government. Pre-incident information flows also promoted development of strong working relationships between the local media and government officials, including elected officials like the Mayor and the City Council but also key officials within the city administration and public safety agencies.

The most important sets of pre-incident information flows related to preparedness were those supporting pre-incident planning and coordination. Included among these were the provision of disaster management, emergency management, and domestic preparedness training courses to government officials and members of the responder community (public safety, public health, and medical providers). They also included a range of planning and coordination activities undertaken in preparation for future incidents – including both natural and man-made disasters. A particularly important example is the drafting and compiling of local and state disaster response plans. The process of drafting departmental or organization-specific disaster response plans and then integrating these plans into local, regional, and state plans involves the sharing of different disaster response ideas and concepts among different agencies and departments. It also provides numerous

opportunities for personal interaction among representatives of participating agencies, departments, and organizations.

One organizational structure that enabled improved coordination among the various organizations involved in disaster planning was the Oklahoma Disaster Preparedness Council. The council was founded in 1994 to improve emergency notification and communication systems in the event of a natural or man-made disaster. The council included top-level management and operations personnel from departments of municipal governments in the metropolitan area, county, state, and federal agencies, hospitals, and the media.

Both Oklahoma City and the State of Oklahoma had drafted disaster response plans well in advance of the bombing of the Murrah Building. While it is an exaggeration to say that natural disasters are a way of life in Oklahoma, it is fair to say that natural disasters, in particular severe weather and tornados, are not uncommon. Added to this impetus for disaster planning was the possibility of urban disasters – fires, structural collapses in downtown buildings, airport emergencies, and so forth. State and local officials recognized the danger of mass casualty disasters and had worked to develop response plans providing an all-hazards response capability. City and state planners had attempted to develop plans that allowed for considerable uncertainty regarding both the type and scale of future disasters. The plans attempted to be preemptive and predictive in terms of scenarios against which the response plans were based and scaleable according to the severity of the damage.

City and state drafting of disaster response plans occurred in two distinct steps. First, individual agencies, departments, or organizations developed internal disaster or emergency response plans independent of other organizations. Government agencies and

private organizations that drafted such disaster or emergency response plans included the Oklahoma City fire and police departments, the Emergency Medical Services Agency (EMSA) (with a specific focus on mass casualty situations), several area hospitals such as St. Anthony's and Presbyterian, the Oklahoma State Department of Civil Emergency Management, and the Oklahoma Red Cross. Drafting internal response plans provided opportunities for conducting internal assessments of existing response capabilities and "cataloguing" existing response concepts.

The next step was integrating these individual response plans into local, regional, and state-wide response plans. This process of integration required frequent meetings between government departments and agencies, and with key external organizations like area hospitals, EMSA, and the Red Cross. By itself, the coordination process produced several cross-organizational dynamics that enabled a more effective response to the Murrah Building bombing. First, this process increased the amount of transparency regarding individual emergency or disaster response plans. Participants in the coordination process were required to share their existing plans with partners in other agencies and departments. Second, by sharing existing plans and concepts for response operations, participants could delineate their respective organization's role and responsibilities, provide opportunities to develop common understandings and approaches, and modify plans to ensure their integration. Third, coordination meetings and informal consultations provided opportunities for face-to-face interaction between senior and mid-level managers who would be involved in coordinating the response to the bombing. Formal meetings occurred approximately on a monthly schedule. Informal consultations occurred on a regular basis.

While the coordination process facilitated response efforts, several interviewees

reported that gaps existed in the process. Agencies and departments focused on coordinating government plans. Although some effort was made to integrate non-government organizations, their participation was sporadic. This was especially true of integrating hospital response plans and the response plans of the Red Cross.

In addition, the response plans were not adequately evaluated or assessed. This was due to a lack of adequate and cost-effective means for evaluation – especially for evaluating plans for responding to large-scale events. Periodic exercises were held and plans were implemented during actual disasters, but they were based on scenarios of limited duration and scope. No metric existed, therefore, for evaluating plans for an urban rescue and recovery of the size and scope of the Murrah Building bombing. The plans also failed to incorporate issues related to internal communication systems and procedures. This included planning for the necessary bandwidth of the technical system capacity and the necessary policies and procedures for using the system.

Important to the establishment of strong interpersonal relationships between senior city department heads was a FEMA-sponsored training course attended by city department heads and other senior management representatives. About a year before the bombing, senior officials from Oklahoma City attended a week-long integrated disaster management course at FEMA's Emergency Management Institute in Emmitsburg, Maryland. The central feature of the course is a tabletop simulation in which participants work through how their city would respond to a hypothetical disaster scenario. FEMA invites cities from across the nation to participate on a rotational basis. Coincidentally, FEMA invited the mayor of Oklahoma City to have the city participate in the course, and he accepted the offer about one year before the Murrah Building bombing.

Almost all of the senior department heads from the Oklahoma City government participated in the course, including the chief of police, the chief of the fire department, the director of public works, several senior representatives from the city manager's office, several senior managers from EMSA, and senior managers from local utility companies. Most participants felt that the most valuable aspect of participation rested not in the information presented, but in the numerous opportunities to interact with counterparts from other departments and build strong interpersonal relationships. According to several participants in the course and in the bombing response, such relationships proved to be critical in that they facilitated the organization of the initial response effort. Incident commanders knew where to turn if they needed support. They knew the various city department managers on a first-name basis; they knew the departments represented; and they knew the capabilities each department could bring to bear during the response efforts.

Another key pre-incident information flow relating to coordination and preparedness was the strong working relationship that existed between members of the local press and senior government officials, particularly the chief and assistant chiefs in the fire and police departments. At the time of the bombing, several local journalists from both electronic and print media had established themselves as trusted fixtures with city officials and the local community more generally. Local journalists had worked closely with representatives from the fire department, police department, and the city manager's office in covering similar types of stories – local emergencies, fires, natural disasters, local crime investigations, and so forth. In working with the media during the bombing response, both the incident commanders and the public information officers could distinguish local media from national media representatives. They had a good understanding of how the local media would cover the bombing and response efforts. They also knew local media would cover this tragedy with

sympathy and compassion because they were members of the community. Because of this

understanding, the incident commanders entrusted the local media with their

communication with the broader Oklahoma community.

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III. Incident Critical Information Flows

Managing a complex operation like the one undertaken in response to the bombing of the Murrah Federal Building relies upon the successful management of information. Information flows existed among the numerous organizations directly involved in response operations – fire, police, investigators, emergency medical services, hospitals, and others. The flow of information between participating organizations provided cohesion across organizations and ensured that individual activities were coordinated and integrated toward the primary goals of rescuing trapped victims and treating the injured.

As in any incident of terrorism, the public, both the broader Oklahoma community and the rest of the country, played an important role throughout the response and recovery. The psychological impact of the bombing was sharply affected by the flow of information from the bombing site to the media organizations covering the bombing and then out to the public. At least in part, the public responded by working to support response operations by donating goods, time, and money. Many requests for donations were transmitted through the local and national media. Both of these dynamics required officials not only to manage the exchange of information between the responders, but to work with the media to manage the flow of information to the public.

Interagency Organization and Communication

On-Scene Command Structure

As the extent of the damage became apparent, resources from the city, county, state, and nation were directed to the Murrah Building and to the victims. Fire, emergency, medical, and law enforcement personnel, as well as many voluntary organization workers and civilians, entered the bombed structure and began a massive search and rescue effort. In addition to the Oklahoma City Fire Department (OKCFD), the Oklahoma City Police Department (OKCPD), and the Federal Bureau of Investigation (FBI), the Emergency Medical Services Authority, the Oklahoma State Bureau of Investigation, the Department of Civil Emergency Management, the Oklahoma State Highway Patrol, the Oklahoma National Guard, and Tinker Air Force Base assisted in various aspects of the response effort on-scene, from the removal of victims to the criminal investigation. Victims were brought to a number of hospitals in the greater Oklahoma City area, including St. Anthony's, Presbyterian, University, Children's, and the Veteran's Administration Medical Center. Many of these hospitals also supplied medical equipment to rescue workers at the Murrah site. A Declaration of Disaster from President Bill Clinton brought federal resources to the site, including those of the Federal Emergency Management Agency (FEMA) and 11 Urban Search and Rescue teams from across the country.

Several nonprofit organizations, such as the American Red Cross, the Salvation Army, and Feed the Children, assumed responsibility for providing many forms of support to the

victims and their families and for assisting with food and supplies for the rescue workers and others at the site. Southwestern Bell Telephone Company President David Lopez offered the One Bell Central headquarters building and parking area, only a few blocks from the Murrah Building, as a central site for all the command operations. The One Bell Central site greatly facilitated coordination among the various response entities.

Oklahoma City's disaster protocols directed the Fire Department to take charge of rescue operations under the Incident Command System, a form of organization that allows for the distribution of responsibilities and the coordination of interagency activities in a complex situation. However, in the hours and days following the bombing, the efforts of the three lead agencies (OKCFD, OKCPD, FBI) were coordinated through a looser unified command. OKCFD took responsibility for search and rescue and recovery operations. OKCPD established a perimeter and security for the scene in coordination with the Oklahoma county sheriff, and the FBI conducted the criminal investigation. Given the centrality of search and rescue activities in the response efforts, Fire Chief Gary Marrs was widely accepted as incident commander. It was agreed early on that Sam Gonzales, police chief, Gary Marrs, fire chief, and Bob Ricks, FBI regional coordinator, would be the official spokespersons for their areas, while Mayor Ron Norick would represent the City. The "system" effectively handled the massive influx of resources, including federal, state, local, and voluntary agency response personnel and equipment.

With the large number of organizations and agencies taking part, communication was clearly an important, if problematic, aspect of response operations. From the very beginning, responding police and fire personnel could not talk to federal agencies or one

another. In fact, it was not until late in the afternoon of April 19 that an integrated communications network could be established. In the early stages of the response, requests from one service to another were relayed through the city's Emergency Operations Center, which, despite a high volume of traffic through the radio system, could receive and transmit on all city radio channels. Most supervisors had cellular phones, but the cellular systems were overloaded in the first hour and many calls did not go through. Landline phones worked, with occasional blockages, but were not available to responders at the disaster site. Face-to-face communication and runners were used extensively to coordinate early response efforts. FEMA's Mobile Emergency Response Service (MERS) was alerted to provide communications services for the FBI. Corporate communication providers AT&T and Southwestern Bell provided substantial communications support. Landline, cellular, and long-distance services were provided to every department, agency, and nonprofit group involved in the rescue work or in serving the victims and their families.

In the chaos of the first few hours of the bombing response, lapses in communication were inevitable, especially among agency representatives at the Murrah Building and their off-site counterparts who could not benefit from the face-to-face communications that sustained the early response efforts at the site. For example, a breach in communication occurred between both the hospitals and EMSA and the hospitals and the Incident Command Team. As will be discussed later in this report, a radio failure was mainly responsible for the coordination problems between EMSA and the hospitals. However, the Incident Command team simply did not notify the hospitals of the command structure and the lead response agencies. As one interviewee noted, "St. Anthony's hospital is only five blocks away, but we had no idea who was in charge." It was not until the second day that hospital disaster departments had a phone number for the on-site command center. Moreover, because the

Incident Command Team did not incorporate the hospitals into the command structure, the Team did not have accurate contact information for appropriate hospital departments or personnel. Consequently, the hospitals received duplicate phone calls from police, state troopers, and EMSA asking for medical supplies. One interviewee noted, "we would get phone calls five minutes apart asking for the same things – but we sent them over anyway, even though we assumed there was a duplication of effort."

Off-Site Command Structure

In response to some of the lapses in communication and in order to better manage interagency support activities and communications, especially between on- and off-site response organizations, officials designed a structure for coordinating the multi-agency response that became known as the Multi-Agency Coordination Center (MACC). After its establishment, the MACC became the principal organizational structure facilitating communication among response entities.

On Thursday, April 20, and Friday, April 21, the Oklahoma City Fire Department and the Federal Emergency Management Agency developed plans to open the MACC at the Myriad Convention Center (see map in Appendixes). The MACC was designed to separate incident command functions, which remained at the One Bell Central site, from other support functions, and to facilitate support to local efforts by federal and state agencies. These support functions included the management of resource requests from the Fire Incident Command (FIC) and Incident Support Team (IST) at the Murrah Building, the organization and implementation of operational requests that involved two or more agencies, and the coordination of all responding agencies involved in the rescue effort. An initial MACC opened

on the evening of Friday, April 21, while plans were made to complete installation of communications and computer systems the following day. The MACC was fully staffed and operationally tested for 12 hours on Saturday before entering into its highest period of activity. Personnel at the MACC included representatives of several Oklahoma City government departments, the Emergency Medical Services Authority (EMSA), the Oklahoma County Department of Emergency Management, the Oklahoma State Department of Civil Emergency Management, FEMA representatives, the Oklahoma National Guard, the National Weather Service, the American Red Cross, and technical advisors from the U.S. Forestry Service.

The physical layout of the MACC was organized by providing desks, tables, telephones, and computers to all supporting city, state, and federal groups, as well as to volunteer agencies. Each agency working in the rescue/recovery operation provided a liaison. Large identifying signs were hung over each work area to distinguish each agency. Support functions were coordinated and problems resolved through face-to-face contact among agency representatives. Resources needs from the incident site were routed to the MACC, where specialists located the items from available inventories or procured the needed items from vendors. As part of its mission, the MACC received, reviewed, and routed the Incident Support Team's daily action plans to all agencies, provided briefings, and served as a clearinghouse for public service announcements. The Public Information Officer for the City of Oklahoma was charged with coordinating public information releases through a Joint Information Center located at the MACC. Twice-daily teleconference briefings were also provided to the Emergency Training Center in Emmitsburg, Maryland, using FEMA's MERS communication system.

Extensive communication equipment was provided to support the MACC. Southwestern Bell Telephone installed 100 phone lines at the Myriad, as well as a separate telephone switch for the MERS system. AT&T Wireless Services installed a micro-cell to provide cellular communications within the Myriad without increasing demand on the rest of the cellular system. AT&T Wireless Services also provided a phone distribution and battery-charging site at the Myriad.

The MACC operated through Friday, April 28, after which it was relocated to the Police Communications Emergency Operations Center. The MACC officially ceased operations on Tuesday, May 2. According to the Oklahoma State Department of Civil Emergency Management After Action Report, response coordination and exchange of information improved significantly with the activation of the MACC. However, in several interviews, officials involved in the response expressed their belief that the MACC should have been included in response plans and opened earlier. According to one official, "the MACC is something that, in retrospect, we should have set up immediately." Many interviewees also noted that each agency should have been familiar with the design and operation of such a center and should have appointed a regularly assigned, pre-designated member as part of their existing disaster plans. One official pointed out that the MACC did not include command-level responders, something that should be a component in future MACCs. According to the Police Department After Action Report, "the MACC center should be staffed by agency commanders who would direct their agencies' responses and work to ensure that adequate resources were available to accomplish each agency's mission."

Technical Communications

The rescue and recovery effort utilized every available communications system in Oklahoma City. Two-way radio, landline, and cellular communications were all vital in responding effectively to the bombing, although from the beginning each system met distinct challenges that affected its level of performance. The radio system, while clogged and sluggish from the high volume of traffic in the first few hours, did not fail and proved essential in dispatching equipment and personnel. Landline communications, which experienced difficulties ranging from overwhelmed capacity to a lack of phones at the response site, provided the main support for fax machines, computer modems, and secure communications. Cellular telephones, which crashed during the early hours of the response because of high volume and low capacity, provided a critical form of interagency communication once they had been restored.

The public and corporate communication systems that supported the effort included the City of Oklahoma City's two-way radio system, E-911 Communications, Computer Aided Dispatch, Southwestern Bell Telephone, AT&T Wireless Services, and Southwestern Bell Mobile Systems. The Urban Search and Rescue Teams brought in their own systems, while FEMA brought in the MERS system that linked federal agencies sent to Oklahoma City with Washington, DC.

Dispatch system and landline communications

In the minutes and hours after the bombing, emergency communications centers were flooded with calls. In fact, within the first hour, 1,800 people tried to call E-911. The

Police Department's 911 Center answers all calls to the 911 emergency number. Calls for the fire department and for EMSA are transferred to their respective branches. According to the Final Report on the Alfred P. Murrah Federal Building Bombing, "every phone at Fire Dispatch, Fire Administration, Police Administration, and EMSA was ringing -- off duty personnel reported to the centers so that all lines could be manned." Fire Communications reported the volume of 911 phone calls averaged 20 percent above normal for three days, and the Fire Dispatch Center was flooded with automatic dial alarms from businesses all over the downtown area.

The volume of 911 calls caused problems in several areas. First, as the Police Department After Action Report points out, the volume of incoming calls about the incident, combined with calls activating officers, caused the dispatch system to overload. Consequently, many callers reached busy signals, slowing the response for some officers. Second, because the 911 center did not have a direct ring to EMSA, and EMSA's phone systems were overloaded, dispatchers experienced difficulties in transferring calls to the EMSA Dispatch Center. According to the Police Department Final Report, this situation highlighted the need for a computer or radio link between the two entities. Third, evacuation of city offices and the forwarding of their telephones to the Emergency Operations Center created an overload in switchboard communications. In order to rectify problems such as these in the future, the Police Department suggested that an alternate site be created for the forwarding of City Office telephones and that portable data terminals and operators be provided to all responding agencies' command centers on which authorized actions could be broadcast for dissemination to personnel.

Finally, it is important to note that out-of-town media were calling the Emergency

Operations Center and E-911 instead of the City's Public Information Office. Many reporters asked to tape statements and demanded to stay on the line until they received information. In order to improve system capacity, dispatch staff adopted a policy of telling the media to call the Public Information Office and then hanging up.

Response agencies and the media quickly discovered that landline phone connections were needed to support fax machines, computer modems, and secure communications. In fact, in the early hours of the response, the Incident Support Team needed nearly 50 landline connections to support the Rescue Operations Center at the Murrah Building. Southwestern Bell worked throughout the day of April 19 and into April 20 to install the required lines, as well as 300 additional lines needed at the Medallion Hotel for Government Services Agency (GSA) staff. Southwestern Bell also installed roughly 1,500 phones in the perimeter and media areas in the first week.

By late afternoon on April 19, Southwestern Bell had established a special center that handled service orders for phones needed at the incident area. Southwestern Bell connected every organization involved in the response to an open conference line, which was monitored 24 hours a day. When a phone line was requested for a site, each organization responded to the conference line with the required information. The Southwestern Bell system expedited installation and prevented duplicate service orders. Through the system, Southwestern Bell provided over 100 phones lines to the Myriad to support the MACC and the USAR teams, and provided phone lines for FEMA that included a switch for FEMA's MERS communication system.

One of the major problems encountered with landline communications involved the

overwhelming of their capacity by calls from the public. As the Oklahoma City Police Department pointed out in its report, the Police Command Post was equipped with a telephone system that provided landline telephone communications during mobile operations. However, this system was severely disrupted when the Command Post phone number was inadvertently broadcast as a number to call for information about missing relatives. Hundreds of people tried to call the Command Post number, jamming police communications. In order to rectify the problem, the City's telecommunications manager had to have new lines installed at the Command Post along with new telephone numbers — all six of which had to be re-published for other responding agencies. Similarly, when the EMSA switchboard received such a high volume of calls that all outgoing calls were blocked, communication with other agencies, and specifically with city hospitals, became virtually impossible.

As communications were disrupted among responding agencies by a flood of calls to official numbers, city communications on the whole were also affected. According to Southwestern Bell, within two hours of the blast, more than 12 million calls were attempted in Oklahoma City — three times the normal volume. Because so many people were attempting to use their telephones, some callers did not get a dial tone on the first attempt. Once Southwestern Bell implemented emergency network controls, disruptions in service were minimal. However, this was not completed until mid-afternoon on April 19.

Three long-distance carriers — AT&T, Sprint, and MCI — provided support for the rescue and criminal investigation work and to the victims and the community. AT&T provided free long-distance service to the MACC and to the Urban Search and Rescue task forces at the Myriad. Often the service was used to make calls to locate supplies and equipment

needed in the rescue work. MCI stationed a satellite truck on Harvey Avenue adjacent to the One Bell Central command post areas and ran lines from the truck to each Command Post to provide free long-distance service for response agencies, as well as for the two Urban Search and Rescue teams based there. On April 22, MCI offered free long-distance services to all its Oklahoma City customers, and city residents who were not customers were offered free calling cards. Finally, Sprint provided the toll-free number for the FBI's suspect information hotlines, as well as calling cards for victims' families through the Feed the Children Ministry and the Family Assistance Center. Later, Sprint paid the long-distance bills for customers who had family members wounded or killed in the bombing.

Radio communications

The Oklahoma City Fire Department maintains the City's two-way radio system, which serves all departments that have mobile personnel and equipment. The two-way system acts as the basic system for communications between headquarters units and field personnel, and allows users to hear all communications over their assigned channel. The two-way system represents 35 different but interconnected systems, with the older systems operating in the 150 MHZ range and the newer ones in the 450 MHZ bands. It uses repeaters, towers, and transmitters located across the city that are linked by telephone lines. If telephone lines or any of the major system components fail, direct communication from radio to radio is possible, although hand-held radio transmissions would be limited to one-half mile, and car radio transmissions to about 15 miles. Each department or division operates on a designated channel pre-programmed by the Fire Department, which allows different departments to control access to their communications but does, however, preclude direct radio communication between various departments.

The Emergency Operations Center (EOC) played an integrative function within the communication system. The EOC monitors traffic, allowing a department to radio the EOC to have a message relayed to another department. At the time of the bombing, the system served the Fire Department, Police Department, Emergency Operations Center, Public Works, the Department of Airports, the Department of Parks and Recreation, the Building Management Division of the General Services Department, Water and Wastewater Utilities, and several other agencies.

Each department's two-way radio system was crowded with traffic but functioned throughout the first critical hours. The system was used to dispatch equipment and personnel, as well as to maintain communications in support of the rescue effort. However, as previously noted, Police, Fire, EMSA, and other City departments could not communicate directly with each other by radio because each used different frequencies. As a result, some officials described radio communications as fragmented, with messages being relayed from one agency radio system to another, and losing some of the meaning in the process. Face-to-face messaging and cellular telephones (once restored) thus became critical in supporting interagency communication.

The two-way radio provided dependable, but unsecured, voice communication throughout the rescue effort. It proved especially critical in the early stages of the response at the bombing site when landline and cellular communications were overwhelmed. As the Fire Department pointed out in its after-action report, having multiple radio channels proved invaluable, allowing companies on the scene to operate on one channel while all other radio traffic worked on the second and third backup channels. In the first few hours after the bomb was detonated, the Chief Communications Officer worked to ensure that an adequate

supply of handheld radios and batteries was available, contacting major suppliers to arrange

for the delivery of radios, batteries, and battery chargers. Vendors supplied close to 900

radios and over 3,000 batteries, which were then programmed to the designated rescue

channels. The new radios and batteries were delivered to the Fire Logistics Center and

dispensed accordingly.

One problem encountered with radio communications involved nonstandard

communication equipment and frequencies among the Urban Search & Rescue (USAR)

teams. According FEMA guidelines, all USAR teams were supposed to operate on low UHF

403-420 MHZ bandwidth, but many of them did not. As a result, many USAR daily

communication plans involved the use of VHF, high UHF, or 800 MHZ caches. One team had

a frequency normally used for a UHF TV station, while only a few teams had equipment that

would operate in the approved frequency range. Networking among different teams was

therefore difficult. Fortunately, the frequencies teams chose to use were vacant and in low-

power applications, which did not cause any interference with adjacent users such as the

Oklahoma City Fire Department. USAR teams also reported problems in the early stages of

the response with other rescue workers trying to use radios at the same time.

One of the most critical problems occurred on EMSA's radio frequencies. As EMSA

pointed out in its after-action report, immediately after the blast, seven-digit phone lines,

cellular phone lines, and radio communications were jammed, leaving Hospital Emergency

Administrative Radio (HEAR) and the 911 lines as the only means of communication. The

911 lines were quickly overwhelmed as hundreds of medical calls and reports came in

during the first hours. However, when EMSA attempted to use the HEAR system, it found it

could not raise many of the hospitals. As one hospital representative noted, "radios simply

didn't exist for some hospitals." In addition, very few tests of the system had occurred prior to the bombing. When EMSA discovered it could not communicate effectively with the city hospitals through HEAR, it switched to an emergency frequency in the hopes of acquiring greater reach and bandwidth. Yet, as interviewees from both EMSA and the hospitals admitted, because HEAR was not working correctly, no means existed to relay the frequency switch to hospitals. As a result, city hospitals, most of which were relying on EMSA for first-hand coverage of the bombing, ended up relying on the media for information. Also, because EMSA could not communicate with area hospitals, it was forced to dispatch police units to individual hospitals to obtain available patient bed capacity counts.

Finally, most agencies reported in their after-action reports that having a common frequency available to all response agencies would have enhanced the ability of command personnel to understand how different agencies were setting up their command structure and would have enhanced communication between the agencies as information became important to disseminate. As a result of the lack of a common frequency, it was imperative for each response agency to keep a representative in the Incident Command Area to communicate important information. Runners to each agency's command post were also used to ensure the dissemination of critical information. The Police and Fire Departments suggested the acquisition of an 800 MHz trunk system that would provide access to a greater number of frequencies, permit channels to be dedicated to specific functions required for the incident, and provide interdepartmental communication, as well as communication with other entities such as utility companies. However, such a system is expensive and would complicate communications with state agencies because it is by nature a proprietary system.

Cellular communications

Radio communications were insufficient because of the number of personnel who needed to communicate with each other across agency lines during the response. Consequently, cellular phones became the primary means of communication among the units and agencies at the building site, allowing virtually all personnel, from local to federal, to keep in constant communication at the scene as well as with personnel across the country. The use of cell phones helped to simplify communication during the recovery and rescue efforts, and limited radio traffic to emergencies, vital information, and rescue operations. As personnel checked in for duty at the Command Post, individuals in charge of specified areas were issued phones donated by the two major cellular communications providers in Oklahoma City – AT&T Wireless and Southwestern Bell. All requests for supplies or changes in staffing were relayed by phone. According to Fire Department officials interviewed for this project, a directory with the name of the person to whom the phone was given and the phone number was compiled at the Command Post, ensuring that response personnel could reach each other when needed and keeping radio transmissions at a minimum. Fire Command did not restrict the number of people who received the cellular phones, but made it clear that, in order to prevent confusion, personnel would not be allowed to share their phones.

However, in the early hours of the response, so many phones were in use that many calls would not transmit. Requests for citizens not to use their cellular phones were aired throughout the day, but additional capacity was still needed to support the rescue work and maintain regular communications. AT&T Wireless Services (operating under the name "Cellular One") and Southwestern Bell Mobile Systems were the two corporate cellular communications providers in Oklahoma City at the time of the bombing. Both companies

played critical roles in augmenting equipment and cellular capacity to handle disaster-related traffic.

AT&T Wireless Services had been an active participant in the Oklahoma Disaster Preparedness Council. Through the council, a directory of cellular telephone numbers of key personnel and facilities was created, which proved useful in the response to the Murrah bombing. AT&T had also participated in disaster planning with emergency service agencies and area hospitals. Before the Murrah bombing, AT&T had provided backup cellular systems in all area hospitals, the E-911 Center, and the Fire Department chiefs' vehicles. To combat the congestion experienced by the cellular system in the first hour of the response, AT&T recognized that it needed to balance the system, provide additional capacity, and provide priority phone service to the incident area.

AT&T Wireless Service staff called for the immediate provision of phone service to the Oklahoma City Fire Department and other departments and agencies working at the Murrah site. Engineers made adjustments to the system so that it would handle traffic more efficiently and focused on balancing the cellular traffic in its four cell sites serving the downtown area. As part of AT&T's pre-plan, a cell-on-wheels (COW) was designated for emergencies. By 9:29 a.m. on April 19, personnel had confirmed that the COW was available and ordered it to be mobilized and brought down from Tulsa. By 6:00 p.m. on April 19, the COW was in place at Walker and Main streets, connected to the existing switch, and working, adding 30 voice channels to the cellular phone system. AT&T also mobilized a second COW at NW 9th and Robinson (see map in Appendixes) by 6:00 p.m. on April 20 that added 38 voice channels. Because channels connecting wireless services to landline phones were experiencing blockage, 48 trunk lines for interconnection to the phone line were

installed, relieving most cellular congestion. A third COW was installed in response to communication needs regarding the presidential entourage and Secret Service for the Memorial Service on April 22.

AT&T Wireless also made arrangements to expand cellular access. By 1:00 p.m. on April 19, AT&T had selected a site at One Bell Central to serve as a phone supply depot. Nine employees staffed the site, and runners were used to take phones and batteries to command posts, logistics sites, and nonprofit agencies in the disaster area. Phones were also provided to the staff of the Family Assistance Program at the First Christian Church. AT&T recognized the need to supply one type of phone to facilitate communication, and thus requested all suppliers to provide the Motorola Ultra Classic II with a rapid charger. When the MACC was officially opened on April 22, AT&T moved its distribution site to the Myriad and set up a post for phone distribution at the entrance. Once at the MACC, AT&T used a microcell to provide additional phone service at the Myriad. The microcell, which was operational by 4:00 p.m. on April 22, handled the traffic requirements inside the Myriad without increasing demands on the rest of the system – an aspect that was critically important, given that cellular phones played a major role in communication between agencies at the Myriad and agencies at the Murrah site. In total, AT&T estimates that it provided 1,052 phones to the rescue and recovery work, and its contribution of time and equipment was in excess of $4 million. AT&T also provided free phones, pagers, chargers, and voice mail to the Oklahoma City Document Management Team that was formed to write the official report of the disaster.

Finally, AT&T established dedicated cellular channels for those responders working the incident. Within 60 to 90 minutes of the bombing, AT&T set aside a number of "priority"

channels. Use of these restricted priority channels prevented congestion and blockage problems at the disaster site. For the public at large, non-priority phones continued to have some level of blockage until AT&T Wireless added additional capacity to the system.

Southwestern Bell Mobile Systems (SWBMS) responded on two fronts – first, by providing phones and batteries for rescue workers, and second, by enhancing the cellular communications system. At the time of the bombing, SWBMS monitored three cell sites with 37 channels serving downtown. In the initial hours of the response, about 10 to 15 percent blockage was experienced, with traffic running five to six times the normal load. In response, SWBMS made plans to add channel capacity. Because its central downtown site was in close proximity to the rescue site, channel capacity was added to the cell sites on the east and west of downtown. SWBMS also installed a direct retry program between the downtown cells that allowed traffic to overflow to another cell face when busy. At noon on April 19, the Dallas SWBMS office offered to supply a COW, which the Oklahoma staff accepted and placed at NW 7th and Harvey. By 12:00 a.m. on April 20, a total of 49 channels served the rescue site. However, because cellular traffic was still high on Friday, April 22, SWBMS added 10 channels to the downtown COW.

Within 20 minutes of the bombing, SWBMS began its delivery of phones to emergency personnel. Staff provided a system for the 24-hour manning of a battery charging station and for a rotation of batteries on and off the chargers. Hourly routes were made to deliver fresh batteries at two dozen sites in and around the perimeter, and approximately 500 phones and 850 batteries were provided to city, state, and federal agencies. In addition to phones provided to emergency workers, key officials were provided 10 digital cellular phones that offered better security features, including scrambling. These

digital phones were given to Governor Keating, the Attorney General, EMSA, the Oklahoma County Sheriff, the Oklahoma County Emergency Management Agency, and two State Senators.

Internal Communications Content

Throughout the response effort, several different types of information were exchanged between responding organizations using face-to-face communication as well as the various technical communications systems previously outlined. This included information exchanged between on-scene commanders and the deployed units over which they held management responsibility during the response. It also included information passed across functional areas or between the on-scene command post and the MACC. One example is the information exchanged between the rescue command and the medical command sections. Another is the logistics information exchanged and compiled at the MACC. The types of information exchanged internally among the responders are described below. In this report, the content of the internal information flows is broken into three main categories: (1) information on the blast effects and the use of this information to develop daily operations plans; (2) information providing situational awareness and operational control to on-scene commanders; and (3) logistics information.

Blast Effects Information and the Daily Operations Plan

In terms of organizing and managing the rescue effort, one of the most valuable pieces of internal information was data estimating blast effects and the impact on the Murrah and other affected buildings. This provided on-scene commanders with a better

understanding of the structural damage and where victims might be found within the remnants of the building. In turn, this information provided the basis for the daily rescue operations plans. As mentioned previously, the local branch office for Southwestern Bell was located within a block of the Murrah Building and strongly supported response efforts by providing bolstering communication capabilities at the scene. They also owned advanced computer-aided design (CAD) systems used for infrastructure-related architectural and engineering designs. Shortly after the start of the response effort, Southwestern Bell offered use of this system to develop a computerized rendering of the Murrah Building blueprints, estimate the impact of the blast on the building, and then use the outcome of the blast effects estimate to develop a plan for rescue operations.

First, original design information drawn from blueprints provided by the General Services Administration was used to develop a computerized rendering of the building. Next, estimates of the type and size of the bomb and its physical impact on the building and information about the bombing (drawn mainly from visual information regarding the extent of the damage and early forensics data) were combined with the computerized blueprint to produce a rough computer model approximating the blast's effect on the building, and the sequence of the building collapse. GSA building managers also provided information on the location of offices within the building and a list of personnel who normally worked in those offices. Incorporating this information into the building collapse model provided an approximation of where victims might be located within the remnants of the building.

This approximation of the victims' locations provided an excellent starting point for the development of rescue and recovery efforts. Especially after the visually identifiable victims had been removed from the building, information on who might have been in the building at

the time of the bombing and where they might be found was important in guiding rescue teams to focus on certain parts of the collapsed building or within the rubble pile. This ensured a maximization of rescue efforts as well as the swiftest recovery possible.

Situational Awareness and Command and Control

Information on the nature of the blast, the type of damage produced, and the progress of ongoing activities was critical to successfully mounting and managing a response operation of this magnitude and complexity. Implementing the daily response plan required a continuous stream of information between the on-scene commanders and the units they were managing. Deployed units could report on current activities and on the amount of progress made, and submit requests for assistance. Depending on situational developments, incident commanders could alter task orders or submit new task orders to these deployed units. They could also direct additional units to the scene or forward assistance requests to the MACC when appropriate. This provided on-scene commanders with the flexibility to adapt to changing circumstances by ensuring constant situational awareness and maintaining control over deployed units.

In the area of rescue and recovery, rescue teams from the Oklahoma City Fire Department, other local fire departments, and the urban search and rescue teams logged in at the rescue command post before beginning their assigned work shift. While doing this, the team leader was provided with a task assignment for that team for that shift. This task assignment included information on the area of the building where they would be working and a shift objective.

During their time in the building, and as they logged in and out at the beginning and end of their shifts, rescue teams continuously updated their progress and reported any problems or difficulties encountered. Using both face-to-face communication and technical systems, on-duty rescue teams could submit requests for additional material, special equipment – including cranes and heavy-lifting equipment – and additional manpower to be deployed to the site. In providing this information to rescue command, on-scene commanders had the ability to provide additional support at a moment's notice, and thus could adapt to the situation as it changed with the progress made and increased awareness of the situation. It also allowed for regular updates to the daily action plan, and the relay of any task order changes to the teams in the building.

As these teams communicated with each other and with the command post throughout the rescue effort, problems of different terminology and jargon arose frequently. The different search and rescue teams deployed to the site were highly skilled, extremely well-trained urban search and rescue experts. But, the teams were trained using slightly different training programs; and without previous opportunities to work as part of a large search and rescue operation integrating USAR teams from across the country, each team arrived at the site with a different set of technical jargon, command terminology, and different slang terms. Command terms and signaling techniques varied among the different search and rescue teams deployed to the site. On a handful of occasions, hand signals used by rescue teams deployed in the building to communicate with other teams were either not recognized by the intended recipient or misinterpreted. While this breakdown of internal communications caused considerable confusion and hindered rescue efforts slightly, no damage or injuries resulted from this confusion.

Oklahoma City Police, along with the several other agencies supporting site and perimeter security activities, also used a combination of technical and face-to-face communications to maintain situational awareness at the perimeter and the surrounding area, and to maintain the ability to deploy units to areas at the perimeter where they were needed. Like the search and rescue units deployed to the building, security units logged in and logged out at the security command post, where they received shift assignments - including their deployment location and patrol area. Individual unit assignments depended on the daily operations plan, the nature of activities projected for the period of the shift, and any project development during the shift, including the removal of victims. Using the police radio system, the security commander could monitor the location and activity of deployed units and change the location and assignment of a unit if necessary.

The Emergency Medical Services Agency (EMSA) established a medical command post and the primary triage and treatment site at St. Joseph's Church — facing the north side of the Murrah Building. As during normal operations, EMSA's main dispatch and communications center, located several miles away from the location of the building, was charged with dispatching and tracking of ambulances sent to the building site. Ambulances deployed from cities and counties near Oklahoma City covered regular ambulance calls. Medical command, headed by a senior manager at EMSA, maintained direct communication with deployed ambulance units and area hospitals using cellular phones and the previously installed radio systems.

Information flows back to medical command were disrupted at several points during the response. This hindered medical command's ability to understand the situation as it unfolded, and thus the ability to manage available medical treatment assets. As previously

mentioned, information was not exchanged between medical command and the rescue and security commands during the initial stage of the rescue. Part of this is explained by the breakdown of the technical communication system, but it also resulted from a failure to use the available systems to provide information to medical command – using either the radio system once it was established or using runners to provide face-to-face communications. As a result, medical command remained unaware of the large number of ambulatory injured who were exiting the south side of the Murrah Building. Given its location on the north side of the building, medical command could not visually identify those victims. Police units on that side of the building established a second triage and treatment site in ad-hoc fashion, and began diverting ambulances to that site. Neither the police nor the ambulances passed information on the existence of the second triage and treatment site back to medical command.

In addition, several ambulances, both EMSA-owned units and ambulances arriving from surrounding cities with mutual agreements, arrived on scene and began treating and transporting the injured without checking in with medical command or with EMSA's dispatch and communications center. In several instances, medical command was not aware of certain units having been on-scene and transporting victims until several days later. Part of this is explained by the pace of events and the desire to assist on-scene as rapidly as possible. Several units were unwilling to use their radios because of the earlier radio system problems caused by overloading.

In addition to internal communication problems with the emergency medical units, communication between EMSA and area hospitals also broke down at several points. As mentioned previously, the technical communication system designed to integrate EMSA with

area hospitals failed. Even after technical problems were resolved, problems relating to the information being exchanged continued to surface. The main problem related to the ability of the medical commander to receive information on hospitals' level of readiness to receive patients. As medical command contacted area hospitals to determine both the numbers of bombing-related patients hospitals were currently treating and their ability to receive additional patients, several hospitals reported using terminology and short-hand status codes with which medical command was unfamiliar. Other hospitals were so overwhelmed by the volume of patients that completing a capability assessment was impossible. Nevertheless, they asked medical command to keep the patients coming.

Deployed units – including rescue, security, and emergency medical – provided on-scene commanders with a tremendous amount of information regarding the situation both at the building and in the surrounding area. In the immediate response to the bombing, the fire, police, and EMSA units who were first to arrive on-scene were critically important to providing the initial situation assessment to on-scene commanders. Police and EMSA were also important in providing initial medical treatment to ambulatory victims located outside the building, and reporting the location of these victims back to the central command post. Partly due to the separation of the rescue command post from the medical command post in the initial phase of the response, and partly due to the breakdown the technical communications in this phase, this information was not relayed to medical command in a timely manner.

Logistics and Accounting

People from across the state of Oklahoma, the country, and the world donated

money, time, food, clothing, equipment, and other items in support of the response effort and the bombing victims. Given the tremendous amount of donated goods and material as well as the substantial resources provided by local, state, and federal governments, the transportation, tracking, storage, and maintenance of supplies was a complex undertaking by itself. Logistical issues were some of the most challenging aspects of organizing and managing response operations. Both human and automated systems supported the tracking, cataloging, and transmission of logistical information, thus contributing to the overall success of the response effort.

The sheer volume and variety of the items donated made rapid and accurate tracking of incoming goods and materials almost impossible – especially given the lack of a truly mobile, high-speed, mass storage computing system. Hand-held scanning and inventory input devices were not widely available in 1995. In addition, some shipments were consumed before they could be tracked. Other shipments arrived in Oklahoma City without any previous notification or even a request for the item being donated.

The destination of incoming shipments of donated goods depended largely on the size of the donation and whether the item being donated was urgently needed at the bombing site or at an associated facility. Many of the donated items resulted from requests broadcast through the media. These shipments were frequently sent directly to the site or to a nearby staging area, where they could be situated for use. Adequate tracking of these materials failed to occur frequently because of the speed at which they were consumed.

Additionally, officials in the MACC center established storage facilities at local warehouses, including several facilities managed by the Red Cross. When their arrival was

known in advance, larger shipments of donated goods were sent to these storage facilities where they were documented and catalogued using both computers and old-fashioned paper logbooks. This included information describing the type of item donated, the quantity provided, the storage location of the item, and if available, the identity of the person making the donation (this was to ensure an appropriate acknowledgment was sent). This information was sent to the MACC, where it was compiled and stored. Requests coming in from on-scene commanders or other locations could be filled with newly arrived donations or from materials previously purchased by the city or state.

In addition to tracking the arrival and consumption of donated goods and services, the City of Oklahoma City and the State of Oklahoma were able to track incurred expenses related to the bombing response. Using a combination of pre-existing accounting systems and tracking procedures and ad-hoc systems instigated during the response, the city tracked the number of man-hours expended during the response, and the cost of consumed items like food and vehicle fuel and accounted for the cost of items purchased explicitly for the response by the city and state.

EXTERNAL COMMUNICATION

Public Relations

Organizing and Implementing a Public Information Strategy

When the explosion rocked downtown Oklahoma City, media representatives rushed to the scene to report to the public what had happened. In the initial phase, information on

what had happened was therefore not as much provided *to* the media by government officials as it was provided *by* the media to government officials and the public at large. Most people did not know what had happened and relied on media reports for the latest information. Media agencies were among the first ones on scene, and as early as 9:14 a.m. helicopters of local television stations were circling the remains of the Alfred P. Murrah Federal Building, transmitting live aerial shots of the destruction.

In the initial shock and confusion, and with the large number of emergency response agencies involved, there was no clear structure in the early stages of the response for who was in charge of providing what information to the media. Most information and interviews were given independently and on an informal basis. At this point, government officials were themselves trying to obtain more information on what had actually happened.

Arrangements for talking with media were two-way; media would contact government authorities with their questions, and authorities would approach media to give statements. Initially, media organizations relied on accounts by eyewitnesses and rescue workers in the area for much of their information. Trying to find out what had happened and how search and rescue efforts were progressing, reporters directed their questions to passersby.

A system for channeling information to media organizations crystallized as operations progressed. Within a few hours of the explosion, the Oklahoma City Police Department began establishing a media command area. Assistant Chief Jon Hansen, serving as the Fire Department's public information officer, took over the media command about one and a half hours later. Public information officers (PIOs) Karen Farney of the Oklahoma City Manager's Office, Captain Bill Citty of the Police Department, Assistant Chief Hansen of the Fire

Department, and Lieutenant Don Stockton of the Highway Patrol reported to the command area in the early stages of events. The PIOs started to gather and verify information and set out to establish procedures and boundaries for the release of information to the media. The highest priorities for information handling in the first hours were to control rumors and establish working relationships with the media. The PIOs would coordinate their agencies' relations with media throughout the incident and arrange periodic updates and interviews.

At 1:00 p.m. on April 19, Mayor Norick, Fire Chief Gary Marrs, Police Chief Sam Gonzales, and other members of the incident command group met for a status update. A decision was made to hold an afternoon press conference at the Civic Center Music Hall. The venue was chosen because it provided adequate space and was close to the perimeter. The City Manager's Office PIO, Karen Farney, was responsible for coordinating arrangements for the conference, and Civic Center staff started to prepare the venue's large Hall of Mirrors. A local company contributed a special sound system, and Southwestern Bell installed cables and phone lines for the media.

The press conference was planned to take place at 3:30 p.m., following a televised press conference by the White House at 3:00 p.m. The local press conference was put on hold, however, due to a delay in the president's broadcast. The president and Attorney General Janet Reno addressed the nation at 4:30 p.m., after which the local press conference commenced. Police Chief Gonzales, Mayor Norick, Governor Frank Keating, FBI Special Agent-in-Charge Bob Ricks, Fire Chief Marrs, and FEMA Region VI Director R.L. "Buddy" Young participated. No representative from the medical community spoke. The officials told the people of Oklahoma City and the nation what information they had and what each agency was doing.

At the request of the FBI, the City Public Information Office formally established a daily press conference, which was held every morning at 10:00 a.m. The press conference would start with a report on rescue developments by the fire chief. The mayor, the police chief, the public works director, and other officials were also present to answer any additional questions. The FBI agent-in-charge and other federal officials were also invited to participate, and City Council members were present at most briefings. These briefings also served as an opportunity for the various agencies to update each other on events and operations and to compare data.

The Medical Examiner's Director of Operations, Ray Blakeney, would hold press briefings at the Family Assistance Center regarding the status of body recovery and identification. These press briefings would take place after separate briefings for the families of missing persons, which were held every morning and afternoon from April 20 to the end of rescue operations.

A secure area for media vans and broadcast equipment was established near the perimeter. Briefings and interviews took place in this area. Fire Department PIO Hansen set up two daily briefings in the media area. Hansen decided to call the media together to reach a joint decision as to when the formal briefings would be held. One consideration was that national and international media faced different deadlines due to time differences between Oklahoma City and the city or country where the media organizations were based. A representative from the Fire Department would be available at the established times. In addition, situational briefings took place on an ad hoc basis when new developments such as the recovery of a body occurred. Rescue Command staff Chief Marrs and Chief Hansen tried to do a majority of the interviews requested with the Fire Department, lending credibility to

the information given. Instead of hearing the news from a representative of the Fire

Department, who would have had to verify the information a number of times, the public

would get the information straight from the source. Throughout the incident, the Police

Department's PIO coordinated appearances and interviews with police officers involved in the

initial rescue of victims. The Police Chief was available for all press conferences and helped

to provide information, as needed, throughout the incident.

Compared to the incident command agencies, hospitals did not play a prominent role in

providing information to media, apart from providing lists of treated victims who had agreed

to release their information to media. Hospital staff gave interviews and provided information

to media organizations on an ad hoc basis. At the time of the bombing, there was no one in

charge of media relations present at St. Anthony's Hospital. This hampered the coordination

of information distribution to the media.

The mayor and the City Council members visited the site on numerous occasions to

support media relations as well as to support rescue and recovery efforts. Governor Keating

would also make regular appearances to ensure that the media was provided with

information.

Southwestern Bell and two cellular phone companies provided communication

support for the media, as well as the search and rescue operation. Media and agencies

required landline phone connections to support fax machines, computer modems, and

secure communications. Southwestern Bell installed more than 1,000 phones in the

perimeter and media areas during the first week.

A Joint Information Center (JIC) was established on the morning of April 23, four days after the bombing. The JIC was created in the Multi-Agency Coordination Center (MACC) at the request of Oklahoma City. The City's PIO was placed in charge of the JIC while the public information office staff wrote press releases. JIC staff comprised representatives from Oklahoma City and Oklahoma County as well as the state and federal public information offices. The staff accompanied local, state, and federal officials at events during the response and recovery effort. The Center also monitored print as well as broadcast media, released information to the media, referred the media to the appropriate source for answers to their questions, and helped officials in setting up interviews with the media. Early in the disaster, a shortage of equipment and personnel reportedly hindered PIOs from monitoring media in a comprehensive manner.

FEMA supported the distribution of news releases through a computer-based system at their headquarters. Some of the fax phone numbers had to be updated, but in all, this proved to be an efficient method of distributing the releases during the first days of operation. The ability to target local media with those releases of specific concern to the local community contributed to the success.

Providing Information to the Media

The general approach taken by incident commanders was to be as open as possible with media and provide all information available. Only confirmed information was released, and these facts were provided to the media in a complete and truthful manner. Within the first hour after the bombing, Mayor Norick spoke with media representatives in phone interviews in order to avert panic among the public. Mayor Norick assured the public that

the City was already taking action to get the disaster under control, but noted that he did not yet have any details of the explosion. Governor Keating also gave interviews early in the disaster, assuring the audience that all necessary measures were being taken to rescue trapped victims and treat the injured.

All levels of government talked to media about their areas of responsibility. At the first press conference on April 19, government officials explained what each agency was doing and only answered questions relating to their particular work. The Fire Department only discussed search and rescue efforts, the FBI only discussed the criminal investigation, the police covered security and the perimeters and major public safety issues, the governor addressed state support, the mayor talked about concerns and needs of the city, and FEMA covered federal operations. This arrangement worked to reduce the risk of misinformation and duplication and ensured that only confirmed information was released.

The FBI was in charge of the criminal investigation and responsible for speaking to media about matters concerning their work. Statements relating to the criminal investigation were relatively more restricted, and any information that could obstruct the investigation was withheld. Before the FBI released information, it had to be cleared by officials at FBI headquarters. According to one interviewee, one of the daily press conferences proceeded without FBI participation because FBI officials in Oklahoma City had not received approval from headquarters on the content of information they were to release.

Information provided to media by the various agencies ranged from numbers of victims and lists of names of treated persons to developments in search and rescue operations and calls for assistance or information on where people could turn for help.

News programs all over the world dedicated most or all of their air time to the bombing, fueling an enormous demand for new information and making heavy demands on PIOs. The task of the various federal, state, local, and volunteer agencies' PIOs to coordinate and verify information was hampered by the variety of agency-specific command locations established for coordinating response efforts. Conflicting information was provided to the media at times due to imperfections in communications flows between various authorities, one example being conflicting data early in the disaster regarding the number of victims.

Media organizations had an unobstructed view of the remains of the Murrah Building from the secure media area by the perimeter. Eventually, media pools were taken into the building. In part, this was done to placate the media, which could not see much of the recovery effort as it was moving deeper into the interior of the building. The different media organizations jointly decided who would be included in the pools. A group of representatives from each type of media – TV camera crews, still photographers, radio reporters, TV reporters, and print journalists – was chosen. The group was brought in and would afterwards share its footage and other material produced with the rest of the media. The understanding was that they would not film or photograph bodies. Allowing media into the area gave them a deeper understanding of the circumstances under which rescue workers had to work and the extent of the devastation. Footage made for internal use by FEMA's Phoenix Emergency Search and Rescue Team was also made available to media. The media pool system proved to be a success, although there appears to have been an initial lack of communication and coordination between various response agencies setting up the pools and releasing footage.

The City's Public Information Office had a Spanish-speaking staff member who

conducted interviews with Spanish language networks. The bombing in Oklahoma City attracted attention from all over the world and international media organizations flooded the scene. In such circumstances, suddenly standing in the spotlights of world attention, agencies and individuals face the temptation to use the opportunity to gain international fame and recognition. A deliberate effort was made, however, not to give national and international media any preferential treatment, but to treat local media at least as well as the larger networks. Local media organizations would be given at least the same amount of information and interviews and at least as quickly as the larger media organizations. A conscious decision was made to maintain good relations with the local media as national and international media's interest would eventually fade and turn elsewhere. Furthermore, officials recognized the key role played by the local media in communicating information and messages to the people of Oklahoma City, including requests for assistance and cooperation. Relations between the local media and the few local officials who gave priority to national media organizations are still somewhat strained, according to interviews.

Prior to the bombing, local authorities had built solid relationships with local media organizations. This notably facilitated mutual understanding and cooperation. Local media already knew whom to contact when the explosion occurred, and they understood the restrictions these agencies faced in releasing information. By the same token, PIOs understood the urgent needs of media, including interviews and footage. Furthermore, due to the working relationships established prior to the incident, most local PIOs and local news representatives recognized each other and knew each other on a first-name basis, something that facilitated smooth cooperation and coordination at the scene. Federal agencies, on the other hand, had founded strong working relations with national media over the years.

Controlling the Media Presence

While government officials tried to be as open as possible with the media in answering questions and providing information, several measures were taken to control the media's physical presence in and around the bombing site. Containing the media prevented the release of information that could put both the investigation and response at risk. Media access was also controlled to safeguard the privacy of the relatives of victims - the amount of disturbing footage of victims was thus kept to a minimum. Furthermore, access to the scene was restricted both for the safety of media personnel and for prevention of any interference with the search and rescue operation. Controlling information flows to media was facilitated by the fact that the disaster was limited to a relatively small number of contained areas.

Some of the initial police units responding to the bombing promptly established an inner perimeter of the 200 block of NW 5th Street (see map in Appendixes). Within minutes, the perimeter expanded to include the 200 block of NW 6th Street and then continued to grow in tandem with the growing number of injuries and as triage stations were set up. At 10:28 a.m., the threat of a second explosive device forced evacuation of the area as hundreds of people fled in panic. Media representatives together with police, fire, utility, and other groups were pushed back to NW 10th Street and Harvey – some seven blocks from the Alfred P. Murrah Building. The evacuation offered the Police Emergency Response Team an opportunity to establish an outer perimeter bound by NW 7th Street on the north, Robert S. Kerr Avenue on the south, Walker Avenue on the west, and Broadway on the east. Control of the outer perimeter was gained by 11:20 a.m. The buffer zone between the inner and outer perimeters facilitated the rescue effort but also protected rescue workers from contact with the media until they had been debriefed. Triage areas directly outside the

building and the temporary morgue area were not within reach of media's view.

While media organizations were denied access to the building, officials understood that the media would need to work at a location within visual range of the building. The Police Department identified an area on NW 7th Street and Harvey as appropriate for media operations. Filling up with satellite trucks of news organizations from all over the world, the area was soon nicknamed "Satellite City." More than 300 news agencies sent crews to Oklahoma City. Media interviews with government officials occurred on a regular basis along the perimeter.. A conscious effort was made to provide the media with interviews with rescue workers and other people who could provide them with the information they needed.

Special press passes were required for media representatives to enter both Satellite City and the press conferences at the Civic Center. The FBI was responsible for accreditation and started issuing special badges to media. Media representatives were checked for legitimate press IDs. Those who did not have special press IDs had to prove their legitimacy by other means. IDs would be checked and the media organization contacted to verify whether the person in question was indeed an employee. The process was facilitated by the fact that most local media representatives were already known to local authorities.

On April 23, the Oklahoma City Police Department and the FBI opened a joint Scene Permit and Identification Office in the vacant Oklahoma Publishing Company building located outside the perimeter. Before this, both agencies had been issuing scene passes. The joint office eliminated the confusion about which passes were valid and provided continuity.

Security measures were also taken to safeguard the restricted areas and control media access. Police officers were assigned to Satellite City and to all entrances of the daily press conferences, ensuring that only media and those agencies involved in the incident response could gain access. At the press conference, media representatives signed a log, enabling authorities to monitor the media presence. Security guards and the Oklahoma National Guard controlled the area of the Medical Examiner's Office in the Oklahoma University Health Sciences Center. Camouflage netting was put up around the office to hinder telephoto lens camera shots into the area. National Guard and Tinker Air Force Base units secured the area around the Family Assistance Center at the First Christian Church from April 20 in order to shelter families there from media contact. Media representatives only had access to a separate building where press briefings were held. There were some incidents of non-local media representatives slipping through security lines and being arrested for trespassing. Such incidents, however, appear to have been rare and did not have any serious consequences for the search and rescue effort or the investigation.

Airspace was also secured to limit aerial shots of the scene. The Federal Aviation Administration (FAA) imposed a five-mile restriction with a 6,500 foot ceiling on high helicopters. One interviewee recalled an incident when a photographer attached a camera to a helium balloon in order to get closer shots of the Murrah Building. Prevalent strong winds, however, hampered the photographer from acquiring good footage. It was not clear whether the photographer was aware of airspace limitations. When detected and told it was not allowed, the photographer immediately cooperated.

Some authorities also worked to communicate directly with the general public — without channeling information through media organizations. Although Internet use has increased considerably since 1995, the World Wide Web was employed as a means of sending out messages in the immediate aftermath of the bombing. Agencies posted official statements and the latest information on their home pages. These sites were not only useful to the general public but also to media and researchers around the world who needed background information for their reports. Governor Keating used the State Finance Office's Internet resources as a platform for public statements. The University of Oklahoma Health Sciences Center assembled and put up reports from local news media on the Internet. FEMA experienced a surge in the number of users accessing its website where news on the bombing in Oklahoma City was posted. Some 51,797 users accessed FEMA's site between April 16 and April 23, more than doubling the weekly average. On the two days following the bombing, the number of users peaked at 27,695. Local access providers posted lists of telephone numbers for social service agencies and numbers that people who had been in the Murrah Building at the time of the explosion were asked to call.

The Internet also provided a means by which individuals and communities could communicate with each other directly. Soon after the explosion, the Internet shuttled a large volume of messages regarding the bombing in Oklahoma City and provided a forum where users offered each other comfort and support, practical advice, and the latest news. It also provided an arena for personal views, rumors, and speculations. Direct communication over the Internet much resembles live television coverage in the sense that there is no room for editing. Furthermore, comments and messages can be written on an anonymous basis. In

the first days after the bombing, anti-Muslim comments appeared in these discussion forums. After the arrest of a suspect, the dialogue involved opinions of, and comments on, right-wing militia groups.

Information was provided directly to the immediate families of missing persons, beyond the reach of media. Some two hours after the explosion, the State Medical Examiner's Director of Operations, Ray Blakeney, requested the State Funeral Directors' Association to implement the Mortuary Disaster Coordination Plan. The Plan provided a process for collecting information about missing persons from their families. The First Christian Church offered its facilities for the registration center. The center opened at 5:00 p.m., and by 7:00 p.m. more than 500 people had arrived at the church, desperately trying to obtain information on their loved ones. The center quickly evolved into a counseling and support system and became, at 9:00 a.m. on April 20, the Family Assistance Center.

The Family Assistance Center was the only official notification point where information on the positive identification of a body was released. Notification was made by a fax transmission to the Center from the Medical Examiner's Office. The Red Cross organized waiting areas so that when there was a need, each family could be located. Lists of phone numbers were assembled for those families who decided to wait at home. In addition to forwarding information on recovered bodies, the Center offered mental health counseling and comfort to those in need.

Initially, the Family Assistance Center was not closed to the media and only a few security personnel were required. On April 20, National Guard and Tinker Air Force Base units were placed around the First Christian Church where the Center was located. This

measure was taken in order to safeguard the privacy of the families at the Center. Media

representatives were only allowed access to a separate building where press briefings were

held.

Every morning and afternoon at the Family Assistance Center, Director of Operations

Blakeney would brief families on body recovery and identification work. At the first briefing,

held at 9:00 a.m. on April 20, Blakeney emphasized to the families that his office was the

sole source of information on recovered bodies and stressed they should not listen to

rumors or conflicting information from any other source. At these daily briefings, the

Oklahoma Department of Public Safety Public Information Officers would be present to

update families on the status of the rescue and recovery work. After the families had been

briefed, Blakeney went to the media area and held a press briefing.

When leaving the Center, families had the choice of talking to media or leaving without

media contact. A military chaplain would escort the families to a controlled exit where vans

would wait to transport the families to their cars in order to shelter them from any media

contact.

Media Operations

Media Information Requirements

To a large extent, the media's coverage and resulting information requirements

varied between individual reporters and media organizations as well as different types of

media. The media organizations present during the response cannot be viewed as a uniform

body. They included broadcast media, daily and monthly print media, wire services, and media with very specific niches such as financial news.

The focus of media coverage changed over time, mirroring developments in rescue and recovery efforts as well as the investigation. Initially, media looked to obtain information on what had happened. They were especially interested in acquiring visual shots of the building and the surrounding area. At this stage, it remained unclear whether the destruction was caused by an accident, such as a gas leak, or whether it had been a deliberate attack.

Subsequent questions asked by media related to the extent of destruction, the number of victims, and who had been in the building at the time of the bomb. The search and rescue effort was monitored, and calls for assistance were broadcast. Regular weather forecasts were provided by television stations.

On April 23, a Memorial Service attended by President Clinton dominated coverage. Media reports on the people of Oklahoma and their losses helped the community in its healing process. Fire Chief Marrs on May 4 declared the Murrah Rescue and Recovery Operation completed.

Media Coverage

Media, like the nation at large, was caught unprepared when terrorism hit Oklahoma City. Local media organizations had experience in covering emergencies, but none expected to cover a terrorist attack in their community. Devastation on this scale had not been seen

before by local media. Hence, local media did not have formal guidelines in place for covering terrorist events. However, most media organizations did operate with their own formal or informal guidelines relating to ethical issues like rumors and broadcasting pictures of deceased victims.

One of the implications of live television is that images are transmitted in an unedited state. The camera lens becomes the eyes of the audience. The only censorship in place is that implemented by the photographer in the field as he or she decides to film or not film. Following the bombing, camera crews were sent to a number of locations across Oklahoma City. Local television stations beamed out live images from the area near the Alfred P. Murrah Federal Building, from hospitals and triage centers, the Oklahoma Blood Center where people lined up to donate blood, and the Family Assistance Center. Stretchers with injured victims ran across television screens. The audience saw children as well as adults who were in a state of shock, some desperately anxious about family and friends who had been in the building at the time of the explosion. The power of the explosion blew out the windows of buildings located many blocks from the Murrah Federal Building. Many of the injuries filmed were therefore exceptionally bloody due to lacerations caused by broken glass. This fact was noted by some reporters commenting on the footage as it was broadcast.

As time passed, the urgency and need for live coverage diminished, and programs could be edited and camera shots restricted. KWTV's News 9 was one of the local news media organizations that chose not to cover the funerals of bombing victims. The television station today broadcasts images of the injured, filmed at the time of the disaster, in black and white to limit the disturbing and distressing impact of the footage.

Several days following the explosion, local television stations dedicated all their airtime to continuous live coverage of events linked to the bombing – without breaking for other news or commercials. This also created an enormous pressure to produce stories. The creativity of reporters and producers was put to the test as they tried to find new angles to cover.

Shortly after the incident, the media's interest turned to the criminal investigation and possible suspects. Questions included what potential motivation lay behind the attack, how the attack had been executed, and what leads the law enforcement agencies had. In the wake of the bombing, the media immediately began to consult experts in terrorism and the politics of certain geographical regions. This sometimes produced speculation rather than facts. In this case, speculation led to fear that the bombing was part of a broader bombing campaign. Given the similarities in the type of truck bomb used in the attack and that used in the bombing of the World Trade Center, some, but few, of the experts were quick to jump to the conclusion that the bombing was probably linked to Middle East extremist groups. Preliminary suspect descriptions released by the FBI that mentioned suspects of Middle Eastern origin seemed to give further credence to this. If the World Trade Center was the first and the Murrah Building was the second in a series of planned attacks, the public feared number three.

Conjecture over the possible links between the bombing of the World Trade Center and the bombing of the Murrah Building quickly subsided with Timothy McVeigh's arrest on April 20. This story dominated headlines on April 21. His transportation to Tinker Air Force Base and then to El Reno Federal Penitentiary was broadcast live from television helicopters. Given the background of the suspect, stories on militia groups were quickly produced.

Because the media relied on eyewitness accounts and rescue workers for much of their information, requests for assistance and other information broadcast by the media were at times unconfirmed and even erroneous - especially in the initial stages of the coverage. Given the initial confusion among agencies on media relations, government officials also provided erroneous information to the media on occasion. One example was the inappropriate broadcast of telephone numbers. Some two hours after the explosion, the media obtained the Command Post police cellular telephone numbers that were aired to the public as numbers to call for information about missing relatives. Hundreds of people tried to call the Command Post, disrupting its communications. The Command Post had to have new lines with new telephone numbers. However, the number of erroneous reports and speculations were limited because of the policy of authorities to provide the media with complete and truthful information.

Coverage by international, national, and local media naturally differed, given the different audiences they addressed. In all, both national and local media covered events in a way sensitive to the Oklahoma City community. Many local media reported on events despite their own worries about friends and families who had worked in the Murrah Building or who had been close to the explosion. Out-of-town media personnel who arrived in Oklahoma City were deeply moved by what they saw, which in turn was reflected in their coverage. On the first day, a reporter of one of the national networks gave the impression that she was questioning the ability of local authorities to handle the disaster. This was, however, a singular event that stood out in what was otherwise sensitive coverage by both local and national media.

Traditional media also used the Internet as a means of providing information to the

general public, mainly by posting the latest news and footage on their homepages. The *Oklahoman*, in cooperation with local Internet access provider Internet Oklahoma, put up some of its coverage of events on the World Wide Web. Also the University of Oklahoma's student newspaper; *The Oklahoma Daily*, produced daily online coverage of the disaster. KWTV created a special website which summarized the latest news relating to the bombing. This site was operating in the early morning hours of April 20.

The media, in particular local media, played a critical role in transmitting messages to the community of Oklahoma City and in mobilizing support. The coverage assisted the search and rescue operation by informing the public and government officials on what had happened and by providing instructions on how to best help. Through its extensive coverage of events, media also helped the greater Oklahoma community with the healing process.

Almost immediately after the explosion, television anchors told people to stay off their phones so that phone lines would open for the search and rescue operation. The audience was also advised to steer clear of the roads in order to enable ambulances and other vehicles to transport equipment and personnel. People in buildings close to the bombing site were told to evacuate. Telephone numbers for information on loved ones were aired. These were later revoked as viewers and listeners were told to wait for relatives to contact them to prevent phone lines from overloading. Newspapers provided information on how affected families and businesses could find assistance. Helplines were set up and psychiatrists and counselors brought into news studios. Suspect descriptions provided by the FBI were broadcast. Descriptions of missing family members were broadcast. Lists of names of people who had been treated or treated and released from hospitals scrolled down television screens.

The community responded with tremendous generosity to calls for assistance and cooperation with the rescue effort. People who watched as events unfolded on television wanted to do everything they could to help. Volunteers would line up for hours to donate blood to the Oklahoma Blood Institute after local media aired requests for donations. Within the first hour, media broadcasts called for volunteers with medical experience. More than 2,200 volunteers registered with the Red Cross on the first day, and many additional people offered their assistance to Feed the Children and the Salvation Army. Substantial donations poured in at a steady stream, and requests for tools and clothing such as rain gear were met with an immediate response.

During the first 48 hours a number of calls for supplies transmitted by media were erroneous, but the community tended to respond to all requests. Inventory control of donations became difficult to handle, and new drop-off locations had to be rapidly arranged. Television stations began functioning as drop-off sites. The tide of volunteers responding to media requests also created problems in terms of accountability and identification of people inside the perimeter boundaries. Furthermore, security was an issue when donations such as food were accepted and distributed at a quick pace with little time for checking everything that came in. Every day the Red Cross received truckloads of mail addressed, for example, "to the people of Oklahoma City" or "to the little boy with red hair who was on TV last night."

Donations continued long after the bombing. The Red Cross had as of January 5, 1996, received contributions of $12.1 million earmarked for bombing relief. After April 20, the resources of the MACC were utilized to help locate or order needed equipment.   The comprehensive coverage of events by all local media, including radio and television stations, newspapers, and journals, contributed to further the community's understanding of what had

happened and thus lent a helping hand to the healing process. The *Daily* and *Sunday*

Oklahoman dedicated a continuing special section of the paper to the rescue effort and the

community's response. The coverage of the Memorial Services, the first held on April 23 in

1995 and the most recent on April 19 in 2001, and the implosion of the Murrah Building on

May 6 helped the community to move toward closure and work through the healing process.

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IV. Post-Incident Critical Information Flows

While they failed to deter the bombing of the Murrah Building, pre-incident information flows improved response capabilities by providing training, allowing for the coordination and integration of response plans, and building strong working relationships between members of the city and state's senior management. Post-incident information flows are the other side of the same coin.

The value of the post-incident information flows lies in how the response to the Murrah bombing has been used to prevent and prepare for future terrorism incidents on U.S. soil. Similar to pre-incident information flows, information flows in the post-incident phase of the bombing can contribute to deterring future acts of terrorism and, if deterrence fails, will improve national response capabilities by preparing to respond and mitigate the effects of terrorism swiftly and effectively.

RECOVERING FROM THE BOMBING

Several information flows, in particular those involving local and national media outlets, have played an important facilitative role in recovering from the bombing of the Murrah Building. While the recovery process is far from complete, and in reality may never be complete, the local and national media outlets worked with the local community to help those di-

rectly affected recover physically and financially. As was mentioned previously, several media organizations supported response and recovery efforts in the weeks following the bombing by providing critical information related to the provision of financial assistance, establishing temporary housing as necessary, and publicizing offers from individuals, businesses, and charitable organizations from across the country to provide assistance to the victims. The media continues to play an important role in facilitating emotional healing and long-term recovery. Specifically, the media has acted to help provide a sense of community across distances by helping to unify the broader community of Oklahomans affected by the bombing and fostering a sense of community with the entire nation.

In the weeks and months following the bombing, the press, government publications, and other information sources provided victims with a key source of extremely valuable information on where to find assistance. This included information on which types of assistance were available, who was providing assistance, and the procedures for applying for and receiving assistance. Because the bombing damaged several housing complexes in the area, a critical need was temporary housing. FEMA, Red Cross, and other assistance organizations worked with both print and electronic news outlets to provide information on where temporary food and shelter were being provided. As state and federal governments established financial assistance programs, these organizations worked with several local media outlets, including the *Daily Oklahoman* and the *Journal Record* to provide information about the status of these programs and how people could apply for assistance.

In addition to helping individuals, an additional recovery function was efforts to reduce the economic and emotional impact of the bombing by providing economic assistance to the several businesses who were either destroyed or closed due to the bombing. Both local print

and electronic outlets played critical roles in providing information on eligibility for direct financial assistance. An excellent example of the role of the media in providing this type of information is operation of the *Journal Record*, a local newspaper focused on local business and economic issues. For several weeks after the bombing, the *Record* focused its coverage on the bombing's impact on local business, the availability of emergency economic assistance (loans, grants, etc.) being provided by the federal government through FEMA to local businesses, and the procedures for applying for this assistance. This coverage ensured local and national leaders recognized and understood the economic dimension of the bombing's impact while facilitating efforts to mitigate those effects.

In addition to working with the media to disseminate this type of information, the government has increasingly turned to the Internet as a vehicle for directly providing information to the victims on finding and obtaining assistance. In particular, FEMA continues to maintain a robust Internet presence to provide information to the public on the bombing and the various forms of assistance it continues to make available to those affected by the bombing. This growth in importance of the Internet as a tool for information dissemination stems from three important factors.   First, the provision of assistance to the victims has been an ongoing process and continues to this day. In particular, several important programs, including Project Heartland – the principal mental health care provider for survivors of the bombing – continue to provide counseling and other services to those affected by the bombing. The Internet, along with local news outlets, continues to provide information about these services. Second, due to the pace with which the news cycle changes and emergence of other stories and issues, the media's coverage of recovery activities decreased with time. Third, since April 1995, the Internet has become an increasingly important source for all types of information. As the technology matured and its utilization increased, most government agencies,

news organizations, and private businesses established a presence on the Internet. While the constantly changing newscycle precludes media outlets from serving as long-term sources for recovery-related information, the Internet provides a cost-effective, permanent means of providing information to a specific audience - including the victims of the Murrah Building bombing.

The media's role in facilitating emotional recovery has been very important and continues to this day. While the bombing's immediate impact was on the Murrah Building, those who were injured by the blast, and the family and friends of the victims, this tragedy affected the psyche of the entire community of Oklahomans and the nation. The media serves an important integrative function by helping create a sense of community at the local, state, and even national level. Because of the size of the audience served by several of the larger outlets like CNN or MSNBC and the speed at which many of those outlets can provide real-time coverage, a terrorist incident like the bombing of the Murrah Federal Building is an experience that is shared by the entire nation, and indeed the world.

Because the incident was a shared experience, the recovery from the emotional pain and psychological trauma of it is facilitated by being shared. The media, both print and electronic, has helped to share the emotional recovery across the local community and across the nation. Several of the local print and electronic journalists who covered the bombing and the response have worked with several of the survivor support groups, although this fact was not broadcast over television or published in newspapers. Through their involvement, these journalists have shared their experiences of the bombing with the survivors and have continued to cover stories relating to the victims and the stories of the healing process. In addition, national print and electronic outlets have covered several of the stories of victims or their

families.   Most recently, mainly in the context of the McVeigh execution, national media out-lets provided extensive coverage of some victims and their stories of post-bombing recovery. National media outlets continue to provide extensive coverage of anniversary-related events and ceremonies each year. This includes national coverage of the completion of the National Memorial at the site of the Murrah Building and the opening of the National Memorial Cen-ter. In combination, local and national coverage of the victims and the paths of emotional re-covery they have taken since the bombing have helped the emotional healing process on a national basis.   The sharing of these stories has provided comfort and hope to others who were affected physically and emotionally by the bombing. The nation continues to grieve with the victims and their families and friends, the media has been an important mechanism for sharing the grief, but also hope across the nation.

DETERRING FUTURE ACTS OF TERRORISM

In general, post-incident information flows can contribute to deterring future acts of terrorism. The response to the bombing of the Murrah Building can provide a clear demon-stration of capabilities in the areas of incident response and the apprehension and punish-ment of terrorists. It can also establish precedents that will affect operational concepts re-lated to incident response and mitigation and that can contribute to deterring future terror-ists. On balance, specific post-incident information flows related to the bombing of the Mur-rah Building have contributed to deterrence through the demonstration of effective response capabilities and the resulting improvement in national response capacity, while other specific post-incident information flows may have actually eroded deterrence.

In relatively short order, law enforcement agents identified and apprehended the

three individuals responsible for the bombing of the Murrah Federal Building – Timothy McVeigh, Terry Nichols, and Michael Fortier. Once apprehended, they were tried for their respective roles in this act of terrorism, and each was found guilty of varying levels of duplicity in the planning and execution of the bombing – McVeigh as the mastermind, Nichols as co-conspirator, and Fortier as failing to inform law enforcement about their plans. Investigators rapidly determined who was responsible, law enforcement representatives apprehended them quickly, and they were tried in a court of law. In light of the media's extensive coverage of this historical case, the bombing of the Murrah Building has clearly demonstrated to the public the ability of U.S. law enforcement agencies and the court system to impose penalties against individuals who engage in acts of terrorism committed on U.S. soil or against U.S. citizens and interests abroad.

For individuals who may be contemplating or actually planning similar acts of terrorism, the example provided by the prosecution and conviction of those responsible for the Murrah bombing may serve as a deterrent. Clearly, the extensive media coverage has ensured that the public, and most potential terrorists residing among the public, is aware of what happened to those responsible for the bombing and the punishments imposed. The unknown variable is whether a specific terrorist values his or her personal freedom enough to make this awareness deter potential actions. Potential terrorists who do value their personal freedom and well-being are likely to be deterred by this example.

Another post-incident information flow that will help to deter future acts of terrorism is dissemination of the response story – in particular the story of the responders and how their actions saved lives. This story demonstrates how successful responders were in diminishing the impact of the bombing. Conveying the response story to the public increases the

potential terrorist's awareness of a robust response capacity to terrorism. Combining this story with information on the substantial expenditure of time and money over the past several years to further improve national terrorism response capabilities conveys two important messages. First, the public will be better informed regarding national terrorism response capabilities, which can reduce the immediate psychological impact of future incidents. Second, because the potential terrorist resides within the general public, telling this story will convey the message that terrorism is too costly for too little return to individuals contemplating similar acts. Response capabilities demonstrated during the response to the bombing testify to the existence of a system for responding to and mitigating the effects of similar acts of terrorism. Because the physical and psychological impact of violence is reduced by effective response capabilities, potential terrorists may increasingly view violence as an ineffective means of obtaining their goals.

To date, efforts to disseminate the response story have been less visible than the story of those responsible for the bombing or the stories of the victims of the bombing. Much of the national media's attention has been focused on those responsible for what happened, and the ultimate fate of the victims and their families. This has included both electronic and print media and also book authors, screenwriters, and freelance authors working for popular magazines, and so forth. Certainly, these stories need to be told, but this has resulted in substantially greater awareness of the impact of the bombing rather than the heroics, determination, and strength demonstrated during the response. What *have* been disseminated effectively to members of the responder community across the country are the lessons learned. The recently opened Museum Center at the Oklahoma City National Memorial does an excellent job in telling the responders' story to the public, and helping to deter similar acts of terrorism. This should be the first step; additional steps to tell this story must

also be considered.

Another critical issue on post-incident information flow that policymakers must consider carefully is the degree to which suspected or convicted terrorists have access to media outlets. Established policies will shape the degree to which a post-incident information flow between the terrorist and the public exists, as well as the type of information the terrorist can communicate to the public. Traditionally, terrorists have used calibrated amounts of violence to draw the attention of national and global media outlets. Frequently, terrorists use this attention to convey a message or somehow call attention to a perceived injustice. Since Timothy McVeigh's conviction as the central figure in the Murrah Building bombing and until a policy review undertaken by Attorney General John Ashcroft, senior officials in the Department of Justice provided the media with extensive access to McVeigh in order to correspond and conduct interviews with him. The results of these contacts have been published by the press in newspapers, magazines, and books, or have been shown on television. This policy provided McVeigh with numerous opportunities to disseminate his anti-government message.

In terms of the effect of this policy on deterring future acts of terrorism, setting policies restricting a detained terrorist's access to the media is a double-edged sword. On one hand, providing a convicted terrorist like McVeigh with open access to the media grants/rewards him with his desired platform for communication with the general public. This may encourage rather than deter future terrorists because it provides a clear precedent in which violence is used successfully to capture tremendous media attention. On the other hand, setting policies that severely restrict the amount of media access to a terrorist may reinforce the perception held by the far-right militia and "patriot" movements that the government is

strongly inclined toward limiting individual rights and freedoms. Such restrictions could lead to more protests and additional acts of violence.

IMPACT ON PREPAREDNESS

Post-incident information flows existing after the conclusion of response efforts to the Oklahoma City bombing have also made a substantial contribution to ongoing efforts to improve national capabilities for responding to and mitigating the effects of future acts of terrorism – as well as improving those capabilities in Oklahoma City and the State of Oklahoma. By making a contributing push for improvements in the area of preparedness, those post-incident information flows supporting preparedness indirectly also contribute to deterring future acts of terrorism.

One of the most beneficial post-incident information flows supporting preparedness was the drafting and dissemination of lessons-learned and after-action assessments during the period immediately following the incident. Most of the city departments involved in response activities, either directly or in a supporting capacity, drafted an internal after-action report. The purpose of these reports was not only to document the organization's role in response activities, but also to engage in a process of identifying the strengths and weaknesses demonstrated by the respective organizations during the response, and to document and build upon them. This type of self-evaluation immediately after an incident of this scale is critically important in that it provides the basis for improvement – for the department itself and also for the broader community of responders who draw lessons from the incident.

Under the direction of the city manager's office, a document management team was

established to draw from the department-specific after-action reports and from a large cache of primary documents and interviews to compile a single compendium after-action report. Included as an integral part of the process was a series of formal conferences and workshops, along with numerous informal conversations and meetings. Similar to the pre-incident coordination process, these sessions facilitated the exchange of information and perspectives on what took place during the response and at least began a more informal assessment process. Some individuals interviewed during the preparation of this report expressed the opinion that the after-action process focused on highlighting what went right and failed to identify areas of weakness. Some interviewees also believed the process focused on governmental organizations and failed to adequately integrate private institutions and volunteer organizations.

Drafting after-action reports and distilling lessons-learned are only the first step in preparing for the next incident that may occur. To maximize the impact on preparedness programs across the country, the information generated by the after-action process must be disseminated to counterparts across the country. City and state officials involved in the response have gone to great lengths to ensure this has happened. Several approaches have been used for dissemination. First, the city's compendium after-action report was published as a book and widely disseminated. Second, key leaders of the city departments involved in the response, including the fire chief, the police chief, the assistant city manager, EMSA's emergency response coordinator, and several others, have regularly participated as speakers and presenters in conferences and workshops across the country. For several years after the bombing, many of these individuals were spending as much time on the road giving presentations as they were in their home offices. In addition, many individuals who participated in the response have published articles in magazines and professional journals. These

articles include both personal accounts of what occurred and perspectives on what worked and what did not – while providing suggested fixes and recommendations. Many of these articles are listed in the bibliography to this report.

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V. Critical Issues and Questions

This case study raises several critical issues and questions regarding the role of communication and information in U.S. counterterrorism strategies. More specifically, these issues relate directly to the roles of communication and information dissemination in deterring future acts of domestic terrorism, preparing for the possibility of future acts of terrorism, and responding to and mitigating the effects of a terrorist attack in the event deterrence fails. Among others, these issues and questions will be used to inform the research approach and shape the analysis to be completed during latter stages of the project. These issues and questions are listed below.

> ⮡ *Mass media operates on a twenty-four-hour cycle, and public information strategies need to account for this dynamic.* To paraphrase several media commentators, "the media is an animal that is always awake and is always hungry." As demonstrated by the Murrah Building bombing, coverage of any domestic terrorism incident will begin immediately. This requires a media strategy that can match the pace of the current news cycle and can be implemented as soon as coverage begins. In fact, the state of government-media relations before an incident will have a greater impact on the level of cooperation during the initial hours of an incident than the media component of a terrorism response plan. This places considerable importance on building good

working relationships with the media in the pre-incident phase.

- ò *A key question for consideration in the context of general terrorism prepared-ness, but also in responding to a specific terrorism incident, is whether complete openness with the media is appropriate for all terrorism scenarios.* An important corollary is how should policymakers draw the line between information shared with the public and that which is held back. In this case, a conscious decision was made to be completely open and cooperative with the media's inquiries, unless it compromised either the criminal investigation or the privacy of the victims and their families. Will this approach work in all situations? If the objective is to communicate with the public to reduce panic and facilitate response efforts, should some consideration be given to controlling the flow of information to the media and the public? If the answer is yes, what information should be provided, and what are the methods for controlling public information flows?

- ò *Organization and definition of responsibilities among public information person-nel is as important as the development of a message or content in formulating and implementing a media strategy.* Clearly and purposefully disseminating a message to the public during a crisis depends on effectively organizing public information officers and delineating responsibility for content development and speaking with the press.

- ò *Controlling the media presence is an important element of the media strategy that may change with the geographic nature of the scene.* In the case of the

Murrah Building bombing, the incident scene was a single, defined location. This facilitated physical control of the media's presence around the site perimeter and access to the site itself. Given the media's interest in using the building as the focus of video and still cameras, and to provide a backdrop for correspondents at the site, controlling the media presence was an important element of the media strategy. Both the physical site and the item or items of interest will be very different in a chemical or biological scenario, where the geographic scale of the "scene" could be either quite large or possibly non-existent. This may require different strategies or approaches for working with the media.

ò *As the size of the scene of a terrorism incident expands, the burden placed on technical communications systems will increase. The limited size of the bombing scene in Oklahoma City facilitated communication among the responders.* The relatively limited size of the scene allowed for the use of both technical communications systems and the use of runners and couriers. The use of runners to relay messages becomes increasingly cumbersome, inefficient, and most important, slow as the size of a terrorist incident increases.

ò *A lack of capacity in combination with a lack of integration among available communication and information systems can reduce the effectiveness and success of any disaster response, including incidents of domestic terrorism.* At several points during the response, the flow of information broke down, either because the volume overwhelmed the communication systems or because different systems being utilized were not well integrated. Both of these

problems were solved by overlaying additional communication systems over the existing network. This increased the amount of information the system could relay, while facilitating communication between agencies and organizations using different systems. Several projects are currently underway to develop technical solutions to the problem of communications system integration. Solving the problem of limited capacity is much more challenging due to the substantial investments of time and money that are required.

ò *Pre-incident planning and coordination must include consideration of internal communication requirements.* Policies and procedures for the use of available systems should be included in response plans. Non-governmental organizations, including local telecommunications companies, charitable organizations, and medical care providers, need to be integrated into local communication systems. Periodic assessments of existing systems should be incorporated into preparedness activities. Areas requiring improvement, including increasing bandwidth and improving systems integration, should be addressed.

ò *Pre- and post- incident information flows are critical components of national preparedness efforts.* In fact, it is accurate to describe them as two sides of the same coin. Disseminating lessons-learned from the response to the bombing of the Murrah Building has contributed to improving national capacities for responding to domestic terrorism incidents. Both the Archives at the Oklahoma City National Memorial Center and the establishment of a lessons-learned library at the National Memorial Institute for the Prevention of Terrorism ensure that these lessons will be available to the responder community.

ò *Deterring terrorism will be a particularly difficult challenge but must be part of the U.S. counterterrorism strategy.* While deterrence failed to prevent the bombing of the Murrah Building, thoughtfully incorporating deterrence into counterterrorism strategies can reduce the number of future domestic terrorism incidents. The challenge facing counterterrorism officials is designing and implementing a pre-incident public information campaign that serves deterrence by informing potential terrorists of the substantial costs and risks associated with engaging in acts of terrorism on U.S. soil, as well as the existence of a robust response system, while not simultaneously alarming the public.

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APPENDIX A. – LIST OF INTERVIEWEES

Ashwood, Albert

    Director, Oklahoma State Department of Civil Emergency Management

Bullard, JoeVan

    Assistant City Manager, Oklahoma City

Citty, Bill

    Public Information Officer, Oklahoma City Police Department

Dagg, Anne

    St. Anthony's Hospital

Dagg, David

    St. Anthony's Hospital

Gonzalez, Sam

    NDPO/FBI

    Former Police Chief, Oklahoma City

Goodman, Morrie

    The Boeing Company

    Formerly Director of Strategic Communications and Emergency Information,

        Federal Emergency Management Agency

Hale, Sue

    Managing Editor, *Daily Oklahoman*

Hampton, Debbie

    Deputy Executive Officer, American Red Cross of Central Oklahoma City

Hansen, Jon

    Public Information Officer, Oklahoma City Fire Department (Ret.)

Hill, Bill

    Public Information Officer, Oklahoma City Police Department

Keating, Cathy

    First Lady, State of Oklahoma

Mahoney, Dan

    Governor's Communications Director

Marrs, Gary

    Oklahoma City Fire Chief

McLain, Sheryl

    Vice President, Communications, Oklahoma Hospital Association

Moreno-Hix, Lisa

Oklahoma City National Memorial Fund for the Prevention of Terrorism

Murphy, Michael

Emergency Medical Services Agency

Page, David

Managing Editor, *Journal Record*

Pratt, Tamara

Anchor/Reporter

KWTV Channel

Shannon, Michael

Oklahoma City Fire Department (Ret.)

Response International Group

Thomas, Jane

Curator of Collections, Oklahoma City National Memorial Foundation

Watkins, Terri

KOCO-TV Channel 5

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MURRAH BUILDING BOMBING
APRIL 19, 1995

LEGEND

- Broken Glass/Doors
- Collapsed Structure
- Structural Damage

The City of OKLAHOMA CITY

Public Works Department

N. WALKER

N. ROBINSON
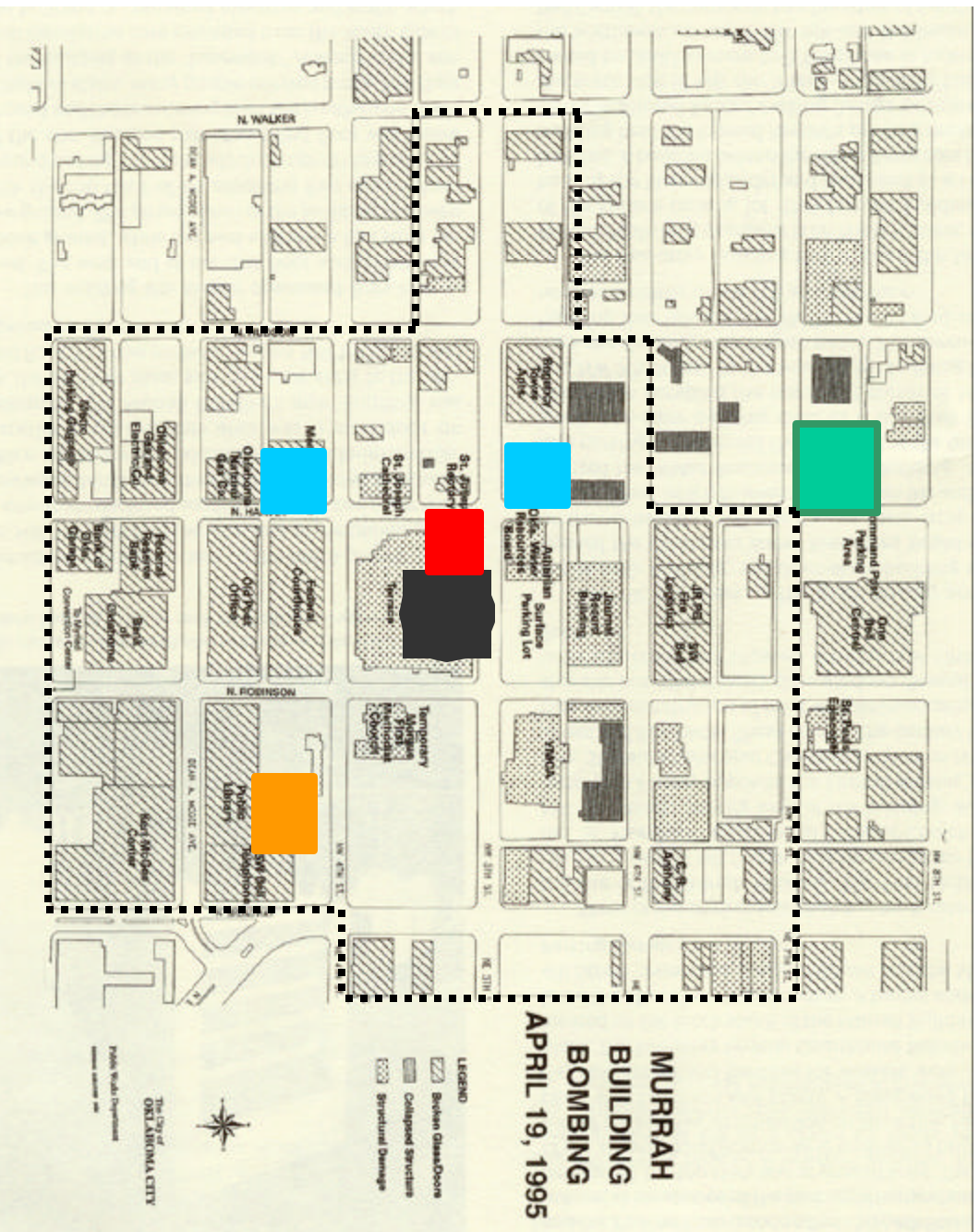
Legend

- Initial Perimeter
- Murrah Buildin
- Unified Comman Post
- Fire/Rescue Command
- EMS/Medica Command
- "Satellite City"