



**NAVAL
POSTGRADUATE
SCHOOL**

MONTEREY, CALIFORNIA

THESIS

**FORCE PROTECTION FOR FIRE FIGHTERS:
WARM ZONE OPERATIONS AT PARAMILITARY STYLE
ACTIVE SHOOTER INCIDENTS IN A MULTI-HAZARD
ENVIRONMENT AS A FIRE SERVICE CORE
COMPETENCY**

by

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March 2012

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REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.			
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE March 2012	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE Force Protection for Fire Fighters: Warm Zone Operations at Paramilitary Style Active Shooter Incidents in a Multi-Hazard Environment as a Fire Service Core Competency		5. FUNDING NUMBERS	
6. AUTHOR(S) Paul A. Atwater		8. PERFORMING ORGANIZATION REPORT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB Protocol number _____N/A_____.	
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited		12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) Paramilitary-style active shooter attacks in a multi-hazard environment are an emerging threat against the U.S. homeland. Lessons learned from previous paramilitary style attacks demonstrate the breaking points of the fire service policy of "standing by" until law enforcement declares that the scene is secure. When followed, the "standby" policy prevents fire fighters from taking calculated risks to accomplish the fire service mission of saving lives and protecting property. It is likely that the "standby" policy will be ignored when immediate action is required to save lives or mitigate hazards in areas of the incident in which the potential for violence, but no active threat exists. The optimal fire service response policy to save lives and mitigate hazards during paramilitary style attacks in a multi-hazard environment is a "force protection" model in which law enforcement officers accompany and protect fire fighters in the warm zone. This model is an adaptation of the successful "escort" model used by law enforcement and fire fighters during civil unrest incidents. As has occurred many times in the past, the fire service must incorporate a new core mission competency—warm zone operations at paramilitary style attacks.			
14. SUBJECT TERMS Active Shooter, Collaboration, Columbine High School Shootings, Fire As a Weapon, Fire Service, Force Protection, Lessons Learned, Multi-Hazard Environment, Mumbai-Style, Paramilitary Style Attack, Seattle Fire Department, "Standby" Policy, Terrorism Preparedness, Warm Zone.		15. NUMBER OF PAGES 113	
17. SECURITY CLASSIFICATION OF REPORT Unclassified		16. PRICE CODE	
18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified		20. LIMITATION OF ABSTRACT UU	
19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified			

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AT PARAMILITARY STYLE ACTIVE SHOOTER INCIDENTS IN A MULTI-
HAZARD ENVIRONMENT AS A FIRE SERVICE CORE COMPETENCY**

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Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

Paramilitary-style active shooter attacks in a multi-hazard environment are an emerging threat against the U.S. homeland. Lessons learned from previous paramilitary style attacks demonstrate the breaking points of the fire service policy of “standing by” until law enforcement declares that the scene is secure. When followed, the “standby” policy prevents fire fighters from taking calculated risks to accomplish the fire service mission of saving lives and protecting property. It is likely that the “standby” policy will be ignored when immediate action is required to save lives or mitigate hazards in areas of the incident in which the potential for violence, but no active threat exists.

The optimal fire service response policy to save lives and mitigate hazards during paramilitary style attacks in a multi-hazard environment is a “force protection” model in which law enforcement officers accompany and protect fire fighters in the warm zone. This model is an adaptation of the successful “escort” model used by law enforcement and fire fighters during civil unrest incidents. As has occurred many times in the past, the fire service must incorporate a new core mission competency—warm zone operations at paramilitary style attacks.

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LIST OF ACRONYMS AND ABBREVIATIONS

AQAP	Al-Qaeda in the Arabian Peninsula
ASI	Active Shooter Incidents
CBRNE	Chemical, Biological, Radiological, Nuclear, Explosive
CFD	Charlotte Fire Department
EMS	Emergency Medical Services
FDNY	Fire Department of New York
FEMA	Federal Emergency Management Association
IARD	Immediate Action Rapid Deployment
MEPS	Military Entrance Processing Station
NFPA	National Fire Protection Association
POG	Policy Operating Guidelines
SPD	Seattle Police Department
SWAT	Special Weapons and Tactics
TCCC	Tactical Combat Casualty Care
TEMS	Tactical Emergency Medical Services
USFA	United States Fire Administration
WTO	World Trade Organization

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ACKNOWLEDGMENTS

This thesis, as well as so many of the other wonderful things in my life, would not have happened without the love and support of my amazing wife, Deborah Schaaf. Thesis widow working mom with three kids—no longer. Thank you.

William, Kate, and Jack—I sincerely hope that over the last 18 months I have role modeled the importance of education, working hard, and making a difference. Of course, if your take away is that getting a degree makes a person distracted, unavailable to play, and gone for big chunks of time—that’s fair, too. My free time is now yours again.

Seattle Fire Chief Gregory Dean opened the door to this program for me. Considering some of the bumps in the early years of our relationship, I deeply appreciate his magnanimity. It is an underappreciated quality of his commendable leadership. I have also learned a great deal about this topic—and so much more—from the wisdom, mentoring, and example of Arlington County Fire Chief Jim Schwartz.

Several individuals helped guide this thesis to completion. John Rollins’ sense of humor and wry, combative comments helped me get through it all. I am also deeply indebted to Christopher Bellavita for his last minute heroics. Seattle Fire Department Captain Reba Gonzales, Captain Paul Foerster, Lt. Josh Pearson, and Fire Fighter Daniel Johanns all provided comments on early drafts. I am also indebted to Fred Stein for his insights—on my thesis and throughout this program.

Finally, I would like to acknowledge all of the faculty and staff at the Center for Homeland Security and Defense for creating an excellent learning environment. I have learned as much from my classmates as my instructors—and I know that this is by design.

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I. INTRODUCTION

A. PROBLEM STATEMENT

The next al-Qaeda-style attack on the American homeland featuring multiple simultaneous strikes against unarmed civilians is not likely to be hijacked planes flown into occupied buildings. Nor is it likely to be suicide bombers or backpack bombs directed against public transportation. The nature of the 9/11-quality terrorist threat has evolved since 9/11, Madrid, and London. The November 26–28, 2008 attack against Mumbai, India—also known as the 26/11 attacks—most likely represents the next stage in catastrophic terrorist attacks against the American homeland.

Although the 26/11 attacks may herald the arrival of a new era in catastrophic terrorist attacks, Mumbai also represents the return of a threat that has previously humbled the American fire service¹: paramilitary style active shooters who use fire as a weapon. The paramilitary style assault by two students at Columbine High School in 1999 revealed serious shortcomings in the fire service “standby” policy at active shooter incidents, a policy that requires fire fighters to wait outside areas of potential violence until law enforcement has declared the scene to be secure. The lessons of Columbine—and now 26/11 Mumbai—reveal that the “standby” policy prevents fire fighters from taking calculated risks to save lives or mitigate life threatening hazards during a paramilitary style attack. Unless the Fire Service finds a way to move beyond the “standby” policy—and into the “warm zone” of potential violence—then fire fighters will remain unprepared for the next paramilitary style attack against the U.S. homeland.

1. Definition of Paramilitary Style Active Shooter Incident in a Multi-Hazard Environment

The paramilitary-style active shooter terrorist attack is known by several names: complex, active shooter incident; swarming; and Mumbai-style assault. The focus of this

¹ Throughout this thesis, the author focuses on the fire service and use terms, such as ‘fire fighters’ instead of ‘fire/ EMS personnel.’ This usage is not to diminish the importance of single function emergency medical services personnel; rather, the jurisdiction in which the author works is fire/based EMS—all fire fighters are emergency medical technicians and all paramedics are fire fighters.

policy analysis is limited to ‘paramilitary-style active shooter incidents in a multi-hazard environment,’ a term that can be broken down into three specific components. (1) Single or multiple assailants armed with multiple weapons and weapon types, are using ballistic protection, and are tactically disciplined (paramilitary). (2) The assailants present an ongoing, immediate threat to life (active). When law enforcement engages the assailants, they do not surrender or commit suicide—although they may expect to die in their confrontation with law enforcement. The attackers return fire and attempt to evade or relocate to continue the killing. (3) To extend the duration and scope of the killing, the assailants create a multi-hazard environment for responders. A multi-hazard environment includes firearms plus one or more dangerous conditions that imperil life and the safety of victims and responders, such as fire as a weapon; secondary devices; building collapse; rope rescue; confined space; chemical, biological, radiological, nuclear, explosive (CBRNE); and/or other fire department core competencies.

Although this inquiry focuses on multi-hazard environments, the analysis may also be applicable to active shooter incidents involving ballistic threats exclusively. Furthermore, although discussion about paramilitary-style active shooter attacks occurs primarily in the domain of homeland security, such attacks are not the exclusive domain of radical Islamic terrorists. The motivation of the assailants at North Hollywood in 1997 (armed robbery), Columbine in 1999 (anger), and the Beltway snipers in 2002 (political), is evidence that not all marauding shooters are religiously inspired. Lone wolf shooters reflect a similar range of motivations, from the al-Qaeda inspired Major Hassan (2009) to Virginia Tech in 2007 (mental health) and Oslo, Norway in 2011 (political).

Regardless of the motivation, it is only a matter of time before another paramilitary style attack in a multi-hazard environment occurs on U.S. soil. When that time arrives, lives will hang in the balance. The fire service must be prepared.

B. RESEARCH QUESTION

What is the optimal fire department policy for safe and rapid access to victims in need of rescue or hazards in need of mitigation at paramilitary-style active shooter incidents in a multi-hazard environment?

C. LITERATURE REVIEW

The shootings at Columbine High School on April 20, 1999 were a novel event for the U.S. Fire Service. The United States Fire Administration (USFA) described the Columbine shootings as “an unprecedented terrorist-style assault using numerous semi-automatic weapons and nearly 100 improvised incendiary and explosive devices.”² Although violent incidents were not new to the fire service, Columbine represented first contact with paramilitary-style active shooters in a multi-hazard environment.

The USFA report made it clear that the “standby” policy may not be the optimal approach to this unprecedented threat: “terrorist-style emergencies place unique demands on public safety providers *and demand nontraditional responses and tactics*, especially in the presence of multiple casualties (emphasis in original).”³ The USFA report also recognized that even fire fighters operating a safe distance from the shooting could be in danger: “During terrorist-style assaults, emergency responders are likely targets, and thus should practice and use exposure and risk reduction strategies as they carry out their emergency assignments.”⁴

In developing the Observations and Lessons Learned section of its Columbine report, the USFA drew upon the “law enforcement escort” model described in its 1994 “Report of the Joint Fire/Police Task Force on Civil Unrest: Recommendations and Operations During Civil Disturbance.”⁵ The Civil Unrest report was in response to the worsening nature of violence on American streets in the early 1990s: “The protests of the 1960’s seem tame in comparison to recent civil unrest disturbances. Rather than peaceful demonstrations, police and fire departments today are faced with urban-guerilla warfare tactics.”⁶

² “Wanton Violence at Columbine High School,” United States Fire Administration (USFA) Technical Report Series, April 1999, 1.

³ *Ibid.*, 1–2.

⁴ *Ibid.*, 3.

⁵ “Report of the Joint Fire/Police Task Force on Civil Unrest: Recommendations for Organization and Operations during Civil Disturbance,” FEMA and USFA, FA-142, February 1994.

⁶ *Ibid.*, 45.

One of the key findings of the Joint Fire/Police Task Force was the need for law enforcement and fire department collaboration during incidents of ongoing violence.

We must recognize that during a riot or civil disturbance the responsibility to fight fires and deliver emergency medical service rests not only with the Fire Department, but also with the Los Angeles Police Department, which is charged with the critical responsibility of protecting fire fighters and paramedics from the threat of armed, hostile individuals. Fire Department personnel do not carry weapons; they depend on law enforcement to protect them and, without adequate protection, they simply cannot do their job.⁷

The Joint Fire/Police Task Force recommended that law enforcement escorts accompany fire fighters providing fire suppression or emergency medical services into potentially dangerous areas. These escorts would comprise police officers who were dedicated exclusively to protecting fire fighters; they could not be called away from escort duty to perform other police functions.⁸ The task force also recommended the use of body armor for fire fighters in areas of potential violence.

All personnel with the potential of entering the impact area should always be protected with body armor... Departments should ensure that there are enough bulletproof vests to outfit all personnel who may potentially operate in the impact area. Suppliers should be identified (e.g., the military) in case there is unforeseen need for more body armor and other protective gear.⁹

Although the Joint Fire/Police Task Force was written about civil disturbances, the USFA's Columbine report applied these lessons to active shooter incidents.

Among the many conclusions that can be drawn from this incident, the need to develop and apply exposure reduction methods beyond traditional tactics is a major finding. These preventive measures would likely include: Fire service/Emergency Medical Services (EMS) use of protective antiballistic garments; Law enforcement escorts during hostile, interior operations.¹⁰

⁷ "Report of the Joint Fire/Police Task Force on Civil Unrest," 11.

⁸ Ibid., 19.

⁹ Ibid., 46.

¹⁰ "Wanton Violence at Columbine High School," 30.

Despite the USFA recommendations, many fire departments responded to Columbine by training tactical medics—including the Littleton Fire Department, which trained 15 **special weapons and tactics** (SWAT) paramedics with federal funding.¹¹ Furthermore, at least two applied research papers submitted to the National Fire Academy as part of the Executive Fire Officer Program advocated the use of tactical medics.

In his 2000 applied research paper for the National Fire Academy, Frank McElroy recommended that the Saint Johns County, FL, Department of Emergency Services provide SWAT medic training for fire fighter paramedics. Based on the results of his research, McElroy also found that fire departments needed to prepare for violent incidents that exceeded the capabilities of tactical medics.

Fire fighters also have a history of performing extremely dangerous activities beyond the scope of their training and equipment when such actions were the only way to save a life... it is reasonable to assume that fire fighters will continue to place themselves in great danger to rescue those who would otherwise die, whether the dangers involved are from a fire or hostile gunmen.¹²

McElroy concluded that fire departments that do not have policies in place to guide decision making during violent incidents “outside the normal scope of operations” may be subject to, “intense local or even national criticism for failing to prepare and train for such incidents.”¹³

Kent Davis, in his 2009 applied research paper for the National Fire Academy, collected surveys from 116 fire departments.¹⁴ According to Davis, “This research has demonstrated that not only the CFD [Charlotte Fire Department] but the fire service in general is not prepared to respond to ASI’s [Active Shooter Incidents] and take action

¹¹ Susan Rosegrant, “The Shootings at Columbine High School: Responding to a New Kind of Terrorism Sequel,” Kennedy School of Government Case Program, C16-01-1612.1, 2001, 8.

¹² Frank McElroy, “Firefighters’ Role at School or Workplace Violence Incidents,” Applied Research Paper for the National Fire Academy Executive Fire Officer Program, February 2000, 26.

¹³ *Ibid.*, 27.

¹⁴ Kent Davis, “Charlotte Fire Department Responses to Active Shooter Incidents—A Critical Analysis,” Applied Research Paper for the National Fire Academy Executive Fire Officer Program, July 2009, 56.

beyond the standby mode.”¹⁵ Davis found that 68% of fire department survey respondents did not have written procedures in place for handling active shooter incidents that went beyond ‘standby mode.’ Davis recommended tactical medics as the policy option that would enable the Charlotte Fire Department to play an active role at ongoing active shooter incidents. He proposed maintaining on-duty tactical medics at three centrally located fire stations to maintain a response capability of four tactical medics to approximately 95% of the city within 10 minutes. Davis also recommended that appropriate ballistic protection be provided to operate in an active shooter environment.¹⁶

After the 26/11 attacks in Mumbai, the need for public safety agencies to provide effective rescue and hazard mitigation in potentially hostile areas became more urgent. Arlington County, VA developed the concept of Rescue Task Forces after the “standby” policy during a large-scale Mumbai-style active shooter drill led to an hour-long delay in patient care while law enforcement secured the scene. Arlington County identified this delay as the ‘basic problem’ with the “standby” policy: “While waiting for a secure scene, those injured inside the building aren’t receiving care and are dying from their injuries.”¹⁷

When Arlington County researched, “the weapons used by active shooters, the patterns of morbidity/mortality, and the medically austere conditions in which active shootings have taken place, it became clear to our department that civilian active shooter scenarios presented similar conditions and injuries as in combat.”¹⁸ According to the data on which Tactical Combat Casualty Care (TCCC) is based, one fifth of combat casualties are from three types of wounds readily treated in the field: extremity exsanguination,

¹⁵ Davis, “Charlotte Fire Department Responses to Active Shooter Incidents—A Critical Analysis,” 59.

¹⁶ *Ibid.*, 61–62.

¹⁷ Blake Iselin and E. Reed Smith, “Arlington County, VA, Task Force Rethinks Active Shooter Incident Response,” *Journal of Emergency Medical Services*, November 30, 2009, <http://www.jems.com/print/4622>.

¹⁸ Iselin and Smith, “Arlington County, VA, Task Force Rethinks Active Shooter Incident Response.”

tension pneumothorax, and airway obstruction. A patient has the best chance of surviving one of these types of ballistic injuries when the wound is stabilized within moments of the injury.¹⁹

The TCCC approach to active shooter injuries redefined Arlington County's response to these incidents: "It's no longer acceptable to stage and wait for the affected area to be cleared by the police; doing so defeats all principles of TCCC and can result in a number of preventable deaths."²⁰ Rescue Task Forces are a type of law enforcement escort that deliver Arlington County paramedics to the side of a patient with a gunshot wound quickly and safely. Each Rescue Task Force consists of two patrol officers and two Arlington County paramedics. The Rescue Task Force moves along corridors that have been cleared by law enforcement into areas in which assailants are not operating. All Arlington County medics are trained in Rescue Task Force operation and are provided with ballistic protection.²¹

A number of authors have also recommended consolidating police/fire capabilities in specialized teams that combine the weapons expertise of law enforcement with the fire fighting and emergency medical services expertise of fire fighters. Some fire departments have added weapons capability to fire fighters by arming tactical medics. In Clayton County, GA, tactical medics are trained to become Georgia Peace Officers. These tactical medics are then assigned law enforcement uniforms, body armor, and a firearm secured in a locked gun vault until they are deployed to an incident.²²

Theodore Moody, in his Naval Postgraduate School thesis, argued for the "cross-disciplinary tactical integration of police-fire-medical services."²³ He made clear that his

¹⁹ Iselin and Smith, "Arlington County, VA, Task Force Rethinks Active Shooter Incident Response."

²⁰ Ibid.

²¹ Ibid.

²² Mary Rose Roberts, "On the Front Line," *Fire Chief Magazine*, August 1, 2010, <http://firechief.com/ems/paramedic-cross-training-201008/>.

²³ Theodore Moody, "Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad" (master's thesis, Naval Postgraduate School, September 2010), 65.

thesis was not advocating “formalized consolidation of police-fire-medical services”²⁴ but only the “consolidation of *line*–or tactical level–operations with our fire and EMS partners.”²⁵

According to Moody, the fire service “standby” policy will fail catastrophically in a paramilitary style attack on the U.S. homeland. Moody argued that unless fire fighters are able to operate in the most dangerous areas of a violent incident, lives will be unnecessarily lost, “Organizational paradigms that exclude fire and medical personnel from hot zone operations are naïve and will not stand up to the test of a Mumbai or Beslan visited upon the United States.”²⁶ For Moody, the consequences of the “standby” policy are predictable–and preventable, “Sluggishness in tactical response, delays in medical evacuation and treatment, and degraded ability to address explosives mitigation and firefighting during ongoing tactical operations are vulnerabilities we are aware of and can begin to mitigate.”²⁷ To prevent the failure of the “standby” policy, Moody recommended that non-law enforcement first responders make the paradigm shift to “combat fire fighting and rescue.”²⁸

Although Moody did not fully describe how his cross-disciplinary tactical teams would operate on a daily basis, Sean Newman clearly articulated one version of a consolidated police/fire team in his Naval Postgraduate School thesis—SWARM Units: Syndicated Water-Enabled, Anti-Siege Response Matrix Teams comprised of cross-trained fire fighters and police officers. Similar to Moody, Newman did not propose formalized agency-wide consolidation, “The paper is not suggesting a department-wide merger but tests the idea of small, elite inter-agency units to maximize first responder effectiveness in one specific type of incident.”²⁹

²⁴ Moody, “Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad,” 61.

²⁵ *Ibid.*, 54.

²⁶ *Ibid.*, 57.

²⁷ *Ibid.*, 61.

²⁸ *Ibid.*, 66–67.

²⁹ Sean Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism” (master’s thesis, Naval Postgraduate School, March 2011), 2–3.

According to Newman, improved coordination between police and fire units is inadequate to address the unique challenges of paramilitary style terrorism; full police/fire integration is necessary.

Global trends in active shooter terrorism may force firefighters to operate in an active, hostile environment, and not just in the aftermath of attacks. Currently, compartmented standard operating procedure for first responders does not adequately address active shooter terrorist attacks when fire and explosives are combined with conventional firearms. To face this new threat, police and fire departments need more than coordination, but better integration.³⁰

The advantage of consolidated teams, such as Newman's SWARM units, is that they are capable of mitigating the use of fire as a weapon. However, consolidated teams are still at the conceptual stage of development and face a number of implementation obstacles. The lack of an established fire service capability to mitigate fire as a weapon in the warm zone during a paramilitary attack leaves a gap that must be filled. The fire service is in search of a policy alternative that combines the ability of Arlington County's Rescue Task Forces to operate in the warm zone to rescue patients and the ability of Newman's SWARM teams to operate in the warm zone to mitigate life-threatening hazards, such as fire as a weapon.

D. HYPOTHESIS

Law enforcement escorts for fire fighters in potentially hostile areas—also known as force protection—is the optimal fire department policy for safe and rapid access to victims in need of rescue or hazards in need of mitigation at paramilitary-style active shooter incidents in multi-hazard environments.

E. SIGNIFICANCE OF RESEARCH

Paramilitary-style active shooter incidents in a multi-hazard environment have the potential to inflict catastrophic loss of human life, cause a severe loss of confidence in public safety officials, and traumatize the affected community. These types of attacks are

³⁰ Newman, "Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism," 1.

designed to overcome counter-terror security measures, overwhelm emergency response, and extend the killing and carnage for as long as possible while capturing the attention of the world.

It is imperative that fire fighters and law enforcement be prepared for these rare yet catastrophic attacks. Previous attacks have demonstrated that the fire service “standby” policy is not adequate to the challenge of a paramilitary-style active shooter incident in a multi-hazard environment. Emerging alternatives to the “standby” policy offer partial solutions to the multi-faceted challenges of these attacks, but no single approach to date has offered a holistic solution to the problem.

This inquiry seeks to determine the optimal fire service response policy for paramilitary-style active shooter incidents in a multi-hazard environment. The optimal policy will enable fire fighters to save lives and mitigate life-threatening hazards in potentially violent areas.

F. METHOD

The methodology for this thesis is policy analysis.³¹

The study of fire service response policies to paramilitary-style active shooter incidents in a multi-hazard environment currently lacks an analytical framework. In this inquiry, the author begins to build such a framework.

Two events define the paradigm of paramilitary-style active shooter incidents in a multi-hazard environment: The shootings at Columbine and the 26/11 attacks in Mumbai. In addition to these two seminal events, this inquiry examines a number of key events at which the lessons learned are instructive to developing an effective fire service response to paramilitary style attacks in multi-hazard environments. Several patterns emerge from these lessons that can be used as criteria to differentiate between successful and unsuccessful response policies. In addition to establishing evaluative criteria, this inquiry categorizes the diverse range of response policies into a small number of clearly distinguishable policy alternatives.

³¹ Eugene Bardach, *A Practical Guide for Policy Analysis*, 3rd ed. (Washington, DC: CQ Press), 2009.

One criterion at a time, the likely outcome of each policy alternative is evaluated against a paramilitary-style active shooter incident in a multi-hazard environment. Based on the likely outcomes of these policy alternatives, the optimal policy for a paramilitary-style active shooter incident in a multi-hazard environment is determined.

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II. BACKGROUND

A. THE THREAT OF PARAMILITARY ATTACKS AGAINST THE U.S. HOMELAND CONTINUES TO EVOLVE

In the decade since 9/11, the nature of the terrorist threat against the U.S. homeland has evolved. In the years immediately following 9/11, homeland security agencies were primarily concerned with another catastrophic al-Qaeda-style attack against the U.S. homeland that featured multiple, simultaneous attacks.³² These fears were aggravated by the multiple bombings in Madrid on March 11, 2004, the multiple bombings in London on July 7, 2005, and the arrests in the United Kingdom on August 9, 2006 that prevented the attempted bombing of several transatlantic passenger airplanes.

In more recent years, however, the terrorist threat has trended away from coordinated catastrophic attacks toward simple attacks by lone wolf perpetrators. Terrorism experts Peter Bergen and Bruce Hoffman, writing in a 2010 report for the Bipartisan Policy Center entitled, “Assessing the Terrorist Threat,” argued that the ability of al-Qaeda or its affiliates to conduct a large-scale attack had been severely degraded by a number of operational and strategic factors—particularly the increase in overseas drone attacks starting in 2008.³³ To compensate, al-Qaeda has adopted a strategy of “diversification.”³⁴ The new strategy, “seeks to flood already stressed intelligence and law enforcement agencies with ‘noise’: low-level threats from ‘lone wolves’ and other jihadist ‘hangers-on.’ This ‘low-hanging fruit’ is designed to inflict as much damage as possible, but also to distract law enforcement and intelligence personnel from more serious terrorist operations, allowing such plots to go unnoticed beneath the radar and thereby succeed.”³⁵

³² Peter Bergen and Bruce Hoffman, “Assessing the Terrorist Threat,” *Bipartisan Policy Center*, September 10, 2010, <http://www.bipartisanpolicy.org/library/report/assessing-terrorist-threat>, 31.

³³ *Ibid.*, 20.

³⁴ *Ibid.*, 18.

³⁵ *Ibid.*, 18–19.

The shift toward simpler attacks may conceal how important 9/11-quality attacks remain for terrorist organizations. Coordinated catastrophic attacks inflict not only a significant economic and psychological cost on the nation attacked, but they serve as an effective fundraising and recruiting tool for the terrorists. The continued success of the United States in eliminating key al-Qaeda leaders—such as Osama Bin Laden (5/2/11), Anwar al-Awlaki, and Inspire magazine editor Samir Khan (9/30/11)—is also putting pressure on al-Qaeda and its affiliates to prove that they remain a relevant player on the global stage.³⁶

B. THE RISE OF PARAMILITARY STYLE ACTIVE SHOOTINGS

Another emerging trend in terrorist attacks is a shift from bombings to paramilitary style active shootings. The seminal event in the emergence of this trend is the 26/11 attacks in Mumbai, India in 2008. According to the Intelligence Division of the New York Police Department, the Mumbai attack indicated a ‘major shift’ away from multiple simultaneous attacks with suicide bombers toward multiple groups of active shooters capable of broadening the scope of the carnage and prolonging the terror.³⁷ Since the 26/11 attacks in Mumbai, numerous “Mumbai-style” paramilitary attacks and attempted attacks have occurred around the world against a diverse range of targets, including the Sri Lankan cricket team in Lahore, Pakistan in 2009,³⁸ the General Headquarters of the Pakistani military in Rawalpindi in 2009,³⁹ unknown targets in the United Kingdom, France, and Germany in 2010 (thwarted by U.S. drone attacks on

³⁶ Philip Mudd, “Evaluating the Al-Qa-ida Threat to the U.S. Homeland,” *CTC Sentinel* 3, no. 8 (August 2010): 3.

³⁷ New York City Police Department, “Active Shooter: Recommendations and Analysis for Risk Mitigation,” (n.d.), <http://www.nyc.gov/html/nypd/downloads/pdf/counterterrorism/ActiveShooter.pdf>, 4.

³⁸ Jane Perlez, “For Pakistan, Attack Exposes Security Flaws,” *New York Times*, March 4, 2009.

³⁹ Bergen and Hoffman, “Assessing the Terrorist Threat,” 28.

militants based in Pakistan),⁴⁰ and a military entrance processing station (MEPS) in Seattle, WA in 2011 (foiled by the Federal Bureau of Investigation and the Seattle Police).⁴¹

Evidence also exists in the pattern of attempted attacks within the United States that a shift away from bombings may be occurring. According to the Heritage Foundation website, 29 bomb plots have occurred against the U.S. homeland since 9/11, and all of them have been thwarted. In contrast, the only successful⁴² al-Qaeda inspired attacks within the United States since 9/11 have been shootings. Abdulhakim Muhammad (Carlos Bledsoe) killed one soldier and wounded another at a military recruiting station in Little Rock, Arkansas in 2009 and Major Nidal Hassan killed 13 and wounded 43 at Fort Hood, Texas, also in 2009.⁴³

Although lone wolves perpetrated both successful shootings, another pattern within the attacks against the United States points toward a future attack involving multiple shooters. It appears increasingly likely that a group of conspirators will plot a paramilitary style attack rather than a bombing. According to a Heritage Foundation report entitled, “40 Terror Plots Foiled Since 9/11: Combating Complacency in the Long War on Terror,” from September 11, 2011 until the Mumbai attacks in 2008, 13 terrorist plots within the United States were foiled that involved two or more individuals conspiring to attack a target.⁴⁴ Of these multi-conspirator plots, 10 (77%) involved

⁴⁰ Richard Norton-Taylor and Owen Bowcott, “‘Mumbai-Style’ Terror Attack on UK, France, and Germany Foiled,” *The Guardian*, September 2010, <http://www.guardian.co.uk/world/2010/sep/29/terror-attack-plot-europe-foiled>.

⁴¹ Mike Carter, “Two Indicted in Plot to Attack Military Center in Seattle,” *Seattle Times*, July 7, 2011.

⁴² On March 6, 2006, Mohammed Reza Taheri-Azar drove his sport utility vehicle into a crowd at the University of North Carolina, Chapel Hill, allegedly hoping to avenge the deaths of Muslims abroad that had been killed by U.S. armed forces. No one was seriously injured in the attack, so this attack is not considered successful. Jerome P. Bjelopera and Mark A. Randol, “American Jihadist Terrorism: Combating a Complex Threat,” Congressional Research Service, December 7, 2010, 29.

⁴³ Bergen and Hoffman, “Assessing the Terrorist Threat,” 33.

⁴⁴ James Jay Carafano and Jessica Zuckerman, “40 Terror Plots Foiled Since 9/11: Combating Complacency in the Long War on Terror,” *The Heritage Foundation*, September 7, 2011, <http://www.heritage.org/research/reports/2011/09/40-terror-plots-foiled-since-9-11-combating-complacency-in-the-long-war-on-terror>.

bombings and three (23%) involved paramilitary style attacks.⁴⁵ Since 26/11 in Mumbai, the report lists six plots involving more than one conspirator. Three (50%) of these plots were bombings and three (50%) were paramilitary style assaults.⁴⁶ Although the sample size is very small, a marked increase has occurred in the likelihood that a group of terrorist plotters will choose a paramilitary style attack (23% pre-Mumbai to 50% post-Mumbai). The increased ratio of paramilitary attacks to bombings may signal an emerging trend in the nature of the terrorist threat to the U.S. homeland.

C. LAW ENFORCEMENT HAS ADAPTED TO THE PARAMILITARY-STYLE ACTIVE SHOOTER THREAT

Modern thinking about law enforcement response to an active shooter incident can be traced to August 1, 1966, when Charles Whitman shot and killed 16 citizens from the Clock Tower at the University of Texas. Charles Whitman's precision shooting from his elevated position in the Clock Tower at the University of Texas resulted in the death of 16 citizens—some as far as two blocks away. A civilian and two unarmored and lightly armed officers who stormed the top of the Clock Tower finally stopped Whitman. In the aftermath of the shootings, Police departments identified the need for specially trained and equipped officers to confront extremely dangerous active shooters. This line of thinking gave rise to the creation of SWAT teams and the 'contain-and-wait-for-SWAT' policy for patrol officers. First-responding law enforcement officers to an active shooting would establish a perimeter and wait for the SWAT team to confront the shooter.⁴⁷

October 17, 1991, can be marked as another turning point in police active shooter tactics. Instead of establishing a perimeter and standing by for the SWAT team, seven police officers took immediate action and engaged George Hennard after he crashed his

⁴⁵ Carafano and Zuckerman, "40 Terror Plots Foiled Since 9/11." The three paramilitary style plots include Virginia Jihad in 2003, Jamiyyat ul-Islam Is-Saheeh (JIS) in 2005, and the Fort Dix Six in 2007.

⁴⁶ Ibid. The three post-Mumbai paramilitary style plots include Tarek Mehanna and Ahmad Abousamra in October 2009 (Boston), Ahmed Ferhani and Mohamed Mamdouh in May 2011 (New York), and Abu Khalid Abdul-Latif and Walli Mujahidh (Seattle) in June 2011.

⁴⁷ Rick Armellino, "Protecting Citizens from Killers Takes Bravery, Aggression and Speed," *PoliceOne.com*, December 3, 2007, http://www.policeone.com/pc_print.asp?vid=1630799.

car into Luby's Cafeteria in Killeen, Texas and began shooting patrons. Although Hennard managed to kill 23 people, the quick action of the police officers was considered the primary reason that Hennard was stopped before he killed the remaining citizens trapped inside Luby's.⁴⁸

The officers in Killeen, Texas demonstrated that rapid police intervention could bring a more expeditious end to the killing than standing by for the SWAT team. A shooter that law enforcement has challenged is no longer free to shoot victims. If the assailant does not relocate and/or return fire, then the assailant will be neutralized and further killing prevented.⁴⁹

The shootings at Columbine High School on April 20, 1999, were a landmark event for law enforcement response to active shooter events. Within five minutes of the first shots being fired, a Jefferson County Deputy had engaged the two assailants. In response to the Deputy's gunfire, the two heavily armed students retreated into the school. Instead of following the assailants and continuing to engage, law enforcement officers established a perimeter and stood by for SWAT.⁵⁰ During the 45 minutes it took for the SWAT teams to arrive and enter the first building, 10 of the 13 people killed on that day were shot.⁵¹

The lesson of Luby's Cafeteria—engage the shooter to stop the killing—only had to be relearned once by the law enforcement community. In the years after Columbine, law enforcement active shooter policy was transformed. Police now train for active shooter events under the assumption that an unchallenged gunman kills a victim every 15 seconds.⁵² The policy of establishing a perimeter and waiting for SWAT has been

⁴⁸Armellino, "Protecting Citizens from Killers Takes Bravery, Aggression and Speed."

⁴⁹ Ibid.

⁵⁰ Jefferson County Sheriff's Office, "The Columbine High School Shootings: Timeline of Events," May 16, 2001, <http://extras.denverpost.com/news/colreport/columbinerep/pages/NARRATIVE%20Time%20Line.htm>.

⁵¹ P. Solomon Banda, "Columbine Changed How Police React in Rampages," *Washington Post*, April 19, 1999, http://www.washingtonpost.com/wp-dyn/content/article/2009/04/18/AR2009041802277_pf.html.

⁵² Ibid.

replaced with contact teams that are formed-up by the first arriving patrol officers who use Immediate Action Rapid Deployment (IARD) tactics to engage the shooter(s) rapidly.⁵³

In addition to contact teams that neutralize the shooter(s), some law enforcement agencies also use rescue teams. A rescue team's objective is to aid the victims of the shooting. Rescue teams are comprised of five to six law enforcement personnel who become “grabbers” who retrieve the wounded and “flankers” who provide cover. The rescue team leader selects a safe location as a casualty collection point for the victims. Although the rescue team is there for patient extrication, the team becomes a contact team if it confronts a suspect.⁵⁴

Although law enforcement is prepared to engage active shooters rapidly to stop the killing, their ability to do so may be constrained in a multi-hazard environment. Sean Newman observed in his NPS thesis that, “what is conspicuously absent from law enforcement preparations for a Mumbai-type terrorist event is consideration of fire as part of the weapons mix.”⁵⁵ To neutralize active shooters in a multi-hazard environment, law enforcement will require fire fighter expertise.

D. THE FIRE SERVICE HAS STILL NOT ADAPTED TO THE THREAT OF A PARAMILITARY-STYLE ACTIVE SHOOTER IN A MULTI-HAZARD ENVIRONMENT

The U.S. Fire Service “standby” policy finds its origin in the National Fire Protection Association (NFPA) Standard 1500 (2007 Edition), Section 8.10 Scenes of Violence, Civil Unrest, or Terrorism. Section 8.10.1 states, “Fire department members shall not become involved in any activities at the scene of domestic disturbance, civil unrest, or similar situations where there is ongoing violence, without the confirmed presence of law enforcement personnel who have deemed the scene secure.” NFPA

⁵³ Armellino, “Protecting Citizens from Killers Takes Bravery, Aggression and Speed.”

⁵⁴ Dave Douglas, “Jumping into the Fire,” *Police: The Law Enforcement Magazine*, October 2002, <http://www.policemag.com/Channel/SWAT/Articles/Print/Story/2002/10/Jumping-into-the-Fire.aspx>.

⁵⁵ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 37.

standards are consensus based fire service industry recommendations. Unless incorporated into federal occupational safety and health standards or their state equivalent (Washington Industrial Safety and Health Administration standards in Washington State, for example), NFPA standards are not mandatory and do not have the force of law. They are, however, considered industry ‘best practices.’

Based on this standard, many fire departments have a “standby” or “staging” policy at active shooter incidents. These policies require fire fighters to wait outside of gunshot range until police have declared that the scene of a shooting is secure.⁵⁶ According to most “standby” policies, a scene is not secure until the active shooter(s) are captured or killed and law enforcement is confident that no further threats exist.

The “standby” policy has worked well for the fire service. During routine violent incidents at which the arrival of law enforcement stops the violence, the “standby” policy keeps fire fighters at a safe distance without unreasonably delaying access to patients. When violence ceases upon the arrival of police, it does not usually take long for officers to confirm that the scene is secure and to notify fire fighters that they can access the scene and begin to care for the wounded.

For fire fighters, rapid access to injured victims can make the difference between life and death. Fire fighters attempt to deliver trauma victims to definitive hospital care as quickly as possible, but certainly within an hour of the injury—known as the “golden hour.” There is no empirical evidence that the trauma survival rate declines noticeably after 60 minutes; the “golden hour” is a conceptual framework that guides decision making in civilian pre-hospital care trauma emergency environments. However, what has been empirically demonstrated is that the survival rate diminishes rapidly for trauma victims the longer they must wait to receive definitive hospital care.⁵⁷

⁵⁶ Seattle Fire Department, Policy and Operating Guidelines, Section 4004.

⁵⁷ Northwest Region EMS and Trauma Care Council, “Northwest Region Emergency Medical Services & Trauma System Strategic Plan July 2009–June 2012,” Submitted September 15, 2008, <http://www.doh.wa.gov/hsqa/emstrauma/download/nwrplan.pdf>, 79.

When assailants are willing to engage the police and die in the process, police intervention does not stop the violence. The assailants may reposition, establish barricades, take hostages, move to a new location, lure pursuers into a trap, and use diversionary tactics—to name just a few of the wide range of options to confuse responders and continue the killing. When law enforcement officers are delayed in their ability to secure a violent scene, it is difficult for fire fighters to access, triage, package, and transport patients to definitive hospital care as quickly as possible.

Even when the assailants do not wish to engage the police, it can take time to secure the scene. The shootings at Columbine and the 26/11 attacks in Mumbai, India, reveal that situational awareness at paramilitary style attacks is very poor in the early stages of the incident. When the number or location of shooters is unknown, the shooting is ongoing and dynamic, a large building or campus must be searched, or additional complications arise, such as smoke, fire, or hazardous materials, it can take hours for police to declare the scene secure.

According to the “standby” policy, the reason for the delay in securing the scene is not relevant; fire fighters must continue to wait at a safe distance until the scene is safe. Even if known viable victims can be accessed with reasonable safety or if other life threatening hazards exist that require mitigation—such as fire as a weapon—the scene must first be secured. It is at dynamic incidents where it takes an extended time to secure the scene that the “standby” policy becomes problematic.

The seminal event that revealed the shortcomings of the fire service “standby” policy was the shootings at Columbine High School. It took paramedics four hours to reach Dave Sanders—a known victim in a known location. Since law enforcement took as long as it did to secure the scene, law enforcement was the primary focus of public criticism for the delay.⁵⁸ A more balanced analysis, however, was being conducted within the fire service. The United States Fire Administration, in its after action report on the Columbine Shootings, recognized that fire service response protocols also required updating, “Hostile, multi-hazard situations—including acts of wanton violence—challenge

⁵⁸ David Kohn, “What Really Happened at Columbine?” *CBS News*, April 29, 2009, <http://www.cbsnews.com/stories/2001/04/17/60II/main286144.shtml>.

the fire/EMS service to respond with nontraditional tactics...”⁵⁹ The USFA recommended several preventive measures to reduce the risks to fire fighters at hostile, multi-hazard attacks, including the use of protective antiballistic garments; law enforcement escorts for fire fighters during “hostile, interior operations,” and “rapid rescue and medical intervention for tactical teams.”⁶⁰

The lessons of the USFA report failed to alter paramilitary-style active shooter response policy significantly in the U.S. Fire Service. As recently as 2009, in a survey e-mailed to the fire chief of each fire department represented in the metro section of the International Association of Fire Chiefs, National Fire Academy Executive Fire Officer candidate Kent Davis found that almost 88% of respondents still required responding units to stage during an active shooter incident until the scene was secure.⁶¹ Davis also reviewed a March 2004 Roundtable article in *Fire Engineering* in which fire departments were asked, “Your department responds to shots fired in a school... Police are inside the building but have not yet secured the building and are still looking for the shooter(s). Would you allow your crew members to enter the building and bring out the injured children?” According to Davis, 75% of the 32 responding fire departments stated that they would stage outside until police had cleared the building.⁶²

Many reasons exist for why the lessons of the USFA report did not transform paramilitary-style active shooter policy in the U.S. Fire Service. A key reason is that the USFA’s recommendations were based on only one paramilitary style attack in a multi-hazard environment. In fact, very few active shooter incidents occurred in the United States on which to base recommendations. According to the New York Police Department, a total of 202 active shooter incidents have occurred in the United States between 1966 and 2010 in which shooting fatalities went beyond the initial target of the

⁵⁹ “Wanton Violence at Columbine High School,” 2.

⁶⁰ *Ibid.*, 30.

⁶¹ Davis, “Charlotte Fire Department Responses to Active Shooter Incidents—A Critical Analysis,” 38.

⁶² *Ibid.*, 23.

attack. Although the report does not specify which incidents involved an ongoing paramilitary style attack in a multi-hazard environment, very few active shooter incidents in the U.S. are paramilitary style attacks.⁶³

Since paramilitary-style active shooter attacks have been extremely rare, the lessons learned from the shortcomings of existing fire service response policy have not occurred repeatedly. Nor does a robust mechanism exist to disseminate lessons learned throughout the U.S. Fire Service. Due to the decentralized nature of the Fire service, no nationally recognized fire service doctrine and no formal change process exists that would enable the fire service to learn lessons collectively.⁶⁴

Another reason that the fire service has not carefully reconsidered response policy to paramilitary-style active shooter incidents is that the fire service culture is slow to change—even when change can save lives.⁶⁵ Without public scrutiny or catastrophic and repeated policy failures, fire departments tend to rely on policies that have proven themselves over time. At routine violent incidents in which the arrival of police stops the violence, the “standby” policy has reliably worked by keeping fire fighters away from violent areas. In contrast, the USFA’s recommendations from Columbine—ballistic protection and police escorts for fire fighters during “hostile” operations—have had few opportunities to be proven effective under real-life conditions.

The risks of placing fire fighters in the “hostile” areas of an active shooter incident may also strike fire chiefs and incident commanders at a very personal level: No incident commander wants to order a fire fighter into a combat zone. Furthermore, the death of a fire fighter in a “hostile” area of a paramilitary-style active shooter incident in a multi-hazard environment would likely result in lawsuits, safety investigations, public outcry, and internal recriminations. Although it can be argued that police departments

⁶³ New York City Police Department, “Active Shooter: Recommendations and Analysis for Risk Mitigation.”

⁶⁴ Amy K. Donahue and Robert V. Tuohy, “Lessons We Don’t Learn: A Study of the Lessons of Disasters, Why We Repeat Them, and How We Can Learn Them,” *Homeland Security Affairs Journal* II, no. 2 (July 2006): 11.

⁶⁵ According to Fernando Daniels, Medical Director, Washington D.C. Quoted in Robert Davis, “Six Minutes to Live or Die: Many Lives Are Lost Across USA Because Emergency Services Fail.” *USA Today*, May 20, 2005, <http://www.usatoday.com/news/nation/ems-day1-cover.htm>.

have militarized since 9/11⁶⁶—especially since the 26/11 attacks in Mumbai—no corresponding shift has occurred in the fire service. The reluctance to adopt untested policies that commit fire fighters to the potentially “hostile” areas of a paramilitary-style active shooter incident in a multi-hazard environment may reflect the natural instinct to protect fire fighters from a danger not generally seen as a part of the fire service mission.

The impact of the USFA report was also diluted by the national reaction to the 9/11 attacks. In the years after 9/11, the focus was on multiple, simultaneous bombings. Madrid, London, and the thwarted transatlantic airlines plot kept the counter-terror focus on catastrophic bombings. The 26/11 attacks in Mumbai, however, were a stark reminder that paramilitary-style active shooter attacks in a multi-hazard environment remain an unanswered challenge for the fire service.

⁶⁶ Arthur Rizer and Joseph Hartman, “How the War on Terror Has Militarized the Police,” *The Atlantic*, November 7, 2011.

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III. KEY EVENTS IN THE EVOLUTION OF FIRE SERVICE RESPONSE TO VIOLENT INCIDENTS

The U.S. Fire Service has not formally developed a database of key events to inform policy development for paramilitary-style active shooter incidents in a multi-hazard environment. The following events were selected based on their ability to elucidate key challenges faced by responding fire fighters at active shooter incidents, especially those in a multi-hazard environment. This list also includes key events that illustrate recurring lessons from use of the fire service “standby” policy.

A. FREDDY’S FASHION MART, 1995

On December 8, 1995 in the Bronx, New York City, Roland Smith entered Freddy’s Fashion Mart with a gun, took the owner and six employees hostage, and then set fire to the store. Initially, Police officers attempted to prevent fire fighters from approaching the scene. First responding Fire Department of New York (FDNY) units pushed through police barricades and initiated fire suppression. Despite the inauspicious start to their on-scene relationship, police and fire commanders eventually resolved their differences and began to work cooperatively. Police officers used their bullet resistant shields to protect fire fighters engaged in fire suppression until heat and smoke conditions forced police to retreat. FDNY units eventually proceeded deeper into the building without police protection, until they were ordered out due to structural stability concerns.⁶⁷

The fire at Freddy’s Fashion Mart is a good example of the extraordinary lengths to which fire fighters will go to save lives. Police gave the first arriving FDNY units clear instruction not to enter and reinforced that directive with barricades. Despite these compelling reasons to delay operations, FDNY units believed that inaction would imperil

⁶⁷ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 23.

savable lives. FDNY actions at the fire in Freddy’s Fashion Mart demonstrate that the action-oriented culture of fire fighting is so strong that fire fighters might even overrun police barricades to take action.

The intentionally set fire at Freddy’s Fashion Mart was not a paramilitary-style active shooter incident—it was hostage taking at gunpoint. It is relevant to this inquiry because the attacker was armed and it was one of the first documented instances of fire being used as a weapon at an active shooter incident. Despite considerable risk to fire fighter safety from the uncontained armed assailant, FDNY units initiated an aggressive fire attack. Although none of the victims could be saved, when confronted with the possibility of saving lives in immediate danger in an unsecure scene, FDNY fire fighters were willing to risk their lives. The fire at Freddy’s Fashion Mart also demonstrated that first-in fire fighters and police officers will innovate to protect fire fighters operating in potentially violent areas of an incident.

B. COLUMBINE HIGH SCHOOL, CO, 1999

The shootings at Columbine High School on April 20, 1999, began with a diversion in an empty field almost three miles away. A timed explosive device had detonated, which caused a small brush fire. Police and fire units responded.⁶⁸ Moments later, two students initiated a paramilitary style attack on their school that resulted in the deaths of 12 students and one teacher.

The first students were shot at 1119 hours.⁶⁹ At 1158 hours, four of those students were still lying on the lawn in front of the school cafeteria. Even though the scene was not secure, paramedics planned to rescue the victims. As paramedics approached the lawn, nearby police officers gave them conflicting information about the location of the shooters—some police officers motioned the paramedics to remain out of sight while other police officers waved them in to assess the injured. The paramedics, “disregarding their

⁶⁸ “Wanton Violence at Columbine High School,” 9.

⁶⁹ Jefferson County Sherriff’s Office, “The Columbine High School Shootings: Timeline of Events,” 11:10 am to 11:59 am.

own safety,”⁷⁰ chose to take action. They positioned their vehicles on the lawn to protect themselves and then approached the injured students. When the paramedics came under fire from the assailants in the library, they grabbed the three surviving students, threw them into the paramedic unit, and drove away.⁷¹ One of the children rescued, Anne Marie Hochhalter, was estimated to be minutes away from death upon her arrival at the hospital.⁷²

Teacher Dave Sanders was in the second group of victims to be shot—at approximately 1126 hours. After Sanders escaped to a nearby classroom, a student called 911 operators and informed them of Sanders’ condition and location. Just before noon, another student hung a makeshift sign out the window that said, “one bleeding to death.” At 1208 hours, the assailants killed themselves. SWAT personnel entered the building in which Dave Sanders was located at 1310 hours. Although Dave Sanders had been bleeding for over three hours, he was still alive when SWAT arrived at his side an hour and a half later at 1442 hours. Forty-two minutes later, when paramedics finally reached him at 1544, Dave Sanders was dead.⁷³

The death of Dave Sanders was not due to a lack of courage or initiative from emergency responders. The fact that most of the victims were children—and many responders had unaccounted-for children who attended Columbine High School—added to the sense of urgency among responders. However, the police, fire, and EMS personnel who responded to the Columbine High School shooting performed their jobs as they had been trained: Fire and EMS personnel stood by until SWAT had declared the entire building safe.

Compliance with policy notwithstanding, criticism was severe when the circumstances surrounding the death of Dave Sanders became public. Numerous lawsuits

⁷⁰ “Wanton Violence at Columbine High School,” 14.

⁷¹ Susan Rosegrant, “The Shootings at Columbine High School: Responding to a New Kind of Terrorism,” Kennedy School of Government Case Program, C16-01-1612.1, 2001, 9.

⁷² *Ibid.*

⁷³ Kohn, “What Really Happened at Columbine?”

were filed against the responding jurisdictions. All of the lawsuits were dismissed⁷⁴—except one: the wrongful death lawsuit brought against the Jefferson County Sherriff’s office by Dave Sanders’ family, which was settled over three years after the shootings for \$1.5 million.⁷⁵ The words of the federal judge who presided over the settlement were unforgiving. He characterized the failed rescue of Dave Sanders as ‘shocking to the conscience’: “‘by 4 p.m., Dave Sanders’ heretofore survivable wounds had become fatal and he died,’ the judge said. ‘I do conclude that at some point during the afternoon, the (police) command defendants gained the time to reflect and deliberate on their decisions. At that point, (they) demonstrated a deliberate indifference towards Dave Sanders’ plight.’”⁷⁶ Such condemnation from the impartial federal judiciary erodes confidence in all public safety agencies.

One of the impediments to establishing a secure scene was the disorder of the event. Command and control over the Columbine response was very difficult to maintain. A Harvard case study of the shootings at Columbine, authored by Susan Rosegrant, succinctly described the challenges faced by the incident commanders:

The chaotic scene that law enforcement and emergency medical personnel faced, however, seemed designed to frustrate their best efforts. Witnesses were providing conflicting reports about the number of attackers, their location in the building, and their ages... By the time the first Special Weapons and Tactics (SWAT) team entered the school shortly after noon, the gunmen had grown quiet—removing the clear objective of an active target. As SWAT members moved cautiously through the school, the piercing sirens of fire alarms triggered by bombs made it almost impossible to communicate. Not only that, coordinating the growing crowd of responders outside had become increasingly difficult.⁷⁷

⁷⁴ “Judge Dismisses All but One Columbine Lawsuit,” *CNN.com*, November 27, 2001, http://articles.cnn.com/2001-11-27/justice/columbine.lawsuit_1_dave-sanders-peter-grenier-jefferson-county-school-district?_s=PM:LAW.

⁷⁵ Karen Abbott and Charley Able, “Daughter of Slain Teacher Agrees to \$1.5 Million; Questions Won’t Be Answered,” *Rocky Mountain News*, August 21, 2002, <http://m.rockymountainnews.com/news/2002/Aug/21/sanders-settles-columbine-suit/>

⁷⁶ “Judge Dismisses All But One Columbine Lawsuit.”

⁷⁷ Rosegrant, “The Shootings at Columbine High School: Responding to a New Kind of Terrorism,” 1.

In the words of Division Chief Chuck Burdick, Littleton Fire’s representative at the unified command post, the chaos at Columbine was ‘absolute overload,’ “There was so much information coming in, in such a short period of time, that it was absolutely physically impossible for any one person to get a handle on what was going on.”⁷⁸

Firefighters and law enforcement were not prepared for the multi-hazard environment they encountered at Columbine. The USFA succinctly summarized the scope of those hazards.

During the assault, the two assailants successfully detonated over 30 improvised incendiary and explosive devices, designed to cause numerous casualties. The incendiary devices included glass containers containing homemade “napalm” and various types and sizes of containers holding flammable liquids (gasoline, kerosene, and white gas). The juvenile offenders also deployed variously sized pressurized, flammable gas (propane) cylinders. The explosive devices consisted of pipe bombs of different sizes that were augmented with nails or pellets, or both, duct-taped to the outside so as to increase the shrapnel yield and the number of casualties. Investigators later located over 60 additional undetonated devices in and around the school.

The offenders also outfitted their own vehicles with incendiary and explosive materials that were deployed as car bombs. These vehicles were discovered in the parking lots adjacent to the school, and were intended as secondary devices to harm people fleeing from the building or to compromise first responders.⁷⁹

The widespread use of fire as a weapon in a multi-hazard environment contributed to the chaos. Fire units encountered a scene with an activated sprinkler system, an activated fire alarm, reports of an odor of natural gas, and an interior environment compromised by smoke, haze, noise, and flashing strobes from the fire alarm system.⁸⁰ An uncontrolled fire or a more successful detonation of the secondary devices would have further stressed the ability of responders to rescue students trapped by the fire and smoke.

⁷⁸ Rosegrant, “The Shootings at Columbine High School: Responding to a New Kind of Terrorism,” 21.

⁷⁹ “Wanton Violence at Columbine High School,” 1–2.

⁸⁰ *Ibid.*, 13.

The gravity of the incident contributed to the collaboration between law enforcement and fire fighters. The paramedic unit transporting Lance Kirklin, one of the severely injured students rescued from in front of the cafeteria, briefly stopped at the incident command post en route to the hospital. According to Littleton Fire Department Division Chief Chuck Burdick, “A lot of people saw Lance come through, and the magnitude of it was such that people realized this is too big to have petty issues between us. We’ve got to get through this, and the only way we’re going to get through this is with the support of each other.”⁸¹

C. **BESLAN MIDDLE SCHOOL #1, RUSSIA 2004**

On September 1, 2004, as many as 49 terrorists took as many as 1,220 hostages—most of them children—at Beslan Middle School #1 in Beslan, Russia. Over the next 62 hours, the terrorists subjected the hostages to inhumane conditions, including indiscriminate killings, deprivation of food and water, assaults, and psychological cruelty.⁸² Shortly after 1300 hours on the 3rd day of the hostage taking, two explosions ripped through the school’s gym. Although the reason for the twin explosions is subject to debate, the detonations initiated a frenetic rescue that would result in 330 dead, including 172 children, with 700 wounded.⁸³

It is possible that more than half of those killed, including many children, died by fire. According to witnesses, the two explosions caused a small fire in the gym. After approximately 45 minutes, however, a “hellish fire” began to engulf the gym and, along with a new series of explosions, may have caused the roof of the gym to collapse—possibly trapping any victims left alive. After the fire had been extinguished, 290-burned bodies were recovered from the gym; about 100 could be confirmed to have burned after death.⁸⁴

⁸¹ Rosegrant, “The Shootings at Columbine High School: Responding to a New Kind of Terrorism,” 10.

⁸² John Giduck, “Terror at Beslan,” *Archangel Group*, 2005, 115, 117, 120–125.

⁸³ *Ibid.*, 172.

⁸⁴ Kim Murphy, “Aching to Know,” *Los Angeles Times*, August 27, 2005.

The siege in Beslan was only a paramilitary-style active shooter event during the first moments as the terrorist used firearms to herd hostages into the school and to shoot anyone who tried to prevent their hostage taking. However, the outcome of the rescue effort demonstrates the destructive power of fire as a weapon—whether as a deliberate act or as a secondary effect of explosions. Moreover, the majority of Beslan’s victims were young children, which increases the sense of urgency for the responders, the parents, and the public.

D. JEWISH FEDERATION SHOOTING, WA, 2006

On July 28, 2006, a lone gunman shot six women at the Jewish Federation of Greater Seattle, killing one. The assailant, before he began shooting, had announced that he was “angry at Israel.”⁸⁵ Seattle police officers did not secure a perimeter and wait for the SWAT team; the first arriving officers rapidly entered the building and confronted the shooter. Shortly after police made contact with the assailant, he “peacefully surrendered.”⁸⁶

The first Seattle fire unit arrived on scene at 1606 hours and advised incoming units to wait until police had declared the scene secure. Four minutes later, at 1610 hours, police notified fire that the scene was secure and patient triage, treatment, and transport began.⁸⁷

At 1631 hours, a paramedic noticed that police officers were moving purposefully with their weapons drawn and asked command if the scene was still secure. Eight minutes later, at 1639 hours, a fire department division commander announced over the radio that SWAT might have an at-large suspect on the roof of the building. The Fire department incident commander advised all units to stay under cover until the situation

⁸⁵ “1 Dead, 5 Wounded in Jewish Federation Shooting,” *Seattle Times*, July 28, 2006.

⁸⁶ *Ibid.* Quoting Seattle Police Department Assistant Chief Nick Metz.

⁸⁷ Randy Hansen, “Jewish Federation MCI, Post-Incident Analysis,” (n.d.), Unpublished PowerPoint Presentation.

was resolved. It took 14 minutes (until 1653 hours) for SWAT to confirm that the roof of the building was clear, during which time at least one seriously injured patient (triaged red) was moved under cover to a medic unit for transport to hospital.⁸⁸

Events during this incident highlight the complex, dynamic nature of active shooter incidents. Twenty minutes into what was believed to be a stable incident, areas that had been declared secure were suddenly no longer secure. In fact, because it was believed that a possible second assailant was in an elevated position, the nearby streets on which most emergency response personnel were operating and all exit points from the building were now at risk.

E. VIRGINIA TECH, VA, 2007

On April 16, 2007, Virginia Tech student Seung-Hui Cho killed 32 people and wounded 25 before committing suicide. Cho killed his first two victims in the West Ambler Johnston dorm hall at approximately 0715 hours and then left the scene. In response to the shooting in West Ambler Johnston, both Virginia Tech police department emergency response teams (similar to SWAT teams) were assembled. Each team included a tactical medic.⁸⁹

According to the official timeline, Cho first entered the Norris Hall engineering building around 0915 hours. It is estimated that Cho began shooting victims at 0940 hours—shortly after chaining shut the three doors most commonly used to enter and exit the building. At 0951 hours, the last gunshot was heard—it was Cho committing suicide.⁹⁰

The Virginia Tech police department emergency response teams assembled in response to the twin shootings at West Ambler Johnston were immediately available to respond to the shootings at Norris Hall. At 0950 hours, two tactical medics accompanied the police emergency response teams into the building. At 0952 hours, the medics were

⁸⁸ Hansen, “Jewish Federation MCI, Post-Incident Analysis.”

⁸⁹ Virginia Tech Review Panel, “Mass Shooting at Virginia Tech, April 16, 2007. Addendum to the Report of the Review Panel,” November 2007, 26–27.

⁹⁰ *Ibid.*, 29–31.

allowed to proceed to the scene of the shootings on the second floor—even though the scene had not been declared secure. In addition to performing triage, the paramedics identified several victims who required immediate medical interventions to save their lives. Some of the victims with penetrating wounds to their lungs required chest seals to stabilize their breathing. Some of the victims with severe arterial bleeding required tourniquets, including a 22-year-old male victim with a profuse femoral bleed for whom the application of the tourniquet likely saved his life. To triage and treat over 50 patients, the two medics directed the assistance of some of the police officers.⁹¹

At 1009 hours, police dispatchers notified EMS command that the shooter was down and that the scene was secured. Fire fighters and EMS personnel began a thorough retriaging and rapid transportation to the hospital. The last injured patient was removed from Norris Hall by 1051.⁹² All of the patients alive after the shooting stopped would survive their injuries. The report concluded that, “the overall EMS response was excellent, and the lives of many were saved.”⁹³ The life saving interventions performed by tactical medics before the scene was secure were the difference between life and death for a number of the shooting victims.

The fact that Cho chained the doors reveals that he had learned from previous school shootings. Cho knew that by chaining the doors shut, he would increase the amount of time he could freely shoot victims before police could enter the building. Fortunately, for police, Cho’s delay tactic could be quickly overcome by equipment in the possession of police officers—a shotgun.

F. MUMBAI, INDIA, 2008

From November 26 through 28, 2008, 10 terrorists attacked several soft targets in Mumbai, India, killing at least 172, wounding at least 293, and capturing the attention of

⁹¹ Virginia Tech Review Panel, “Mass Shooting at Virginia Tech, April 16, 2007. Addendum to the Report of the Review Panel,” 104–106.

⁹² *Ibid.*, 28.

⁹³ *Ibid.*, 121.

the world.⁹⁴ The terrorists operated in four teams and attacked such varied targets as a rail station, a woman and children's hospital, a popular restaurant, hotels, a Jewish center, and targets of opportunity—including first responders. The terrorists used guns, grenades, improvised explosive devices, and fire as a weapon.⁹⁵

One of the most harrowing images of the attack came from the HBO film "Terror in Mumbai," in which two-year-old Baby Moshe could be seen crying next to his slain parents in the Jewish center on the morning of the second day. Concerned that the baby's cry would draw the terrorists to the child, Sandra Samuels left her own hiding place in the Jewish Center to take the boy to safety.⁹⁶ One of the chilling lessons of the 26/11 attacks in Mumbai is that even the smallest children may need rescue during a paramilitary-style active shooter incident in a multi-hazard environment.

In addition to the heroism of ordinary Mumbai citizens, Mumbai fire fighters and ambulance personnel also took tremendous risks to rescue civilians and injured police officers during the attack. Fire fighters on an aerial platform in mid-rescue were in direct line of sight of an armed terrorist, an ambulance driver had his windshield shattered by a grenade, and another ambulance worker recounted being caught in the middle of a firefight as he rescued an injured commando.⁹⁷ In his Naval Postgraduate School thesis, Sean Newman described the multi-hazard conditions in which Mumbai fire fighters operated,

Despite the gunfire and other dangers, the Mumbai Fire Brigade continued to rescue trapped hostages and fight fires in the hotels through interior attacks, and by using exterior ladders placed at windows to extract hostages... Also, with no equipment or training to operate in a combat

⁹⁴ NYPD Intelligence Division, "Mumbai Attack Analysis: Information As of December 4, 2008," <http://info.publicintelligence.net/nypdmumbaireport.pdf>.

⁹⁵ Angel Rabasa et al., "The Lessons of Mumbai," *RAND Corporation*, January 9, 2009.

⁹⁶ Aimee Ginsburg, "Inside Hero Nanny's Dash to Save Young Boy During Mumbai Massacre," *New York Daily News*, December 5, 2008.

⁹⁷ "Unnoticed Heroes on Mumbai Attack: Fire Fighters," *Indian Express*, November 29, 2008, <http://www.indianexpress.com/news/unnoticed-heroes-on-mumbai-attack-fire-fighters/392212/>.

situation, Mumbai fire fighters fought an interior attack on the intentionally set hotel fires with a commando escort—within earshot of gunfire.⁹⁸

Confronted with a novel threat, Mumbai police officers and fire fighters adapted and collaborated. Police officers protected fire fighters as they rescued civilians and police officers who had been shot—even in areas of active violence. Although 16 police officers and two commandos were killed attempting to stop the attackers, no fire fighter or ambulance attendant fatalities occurred.⁹⁹

The Mumbai attack was designed to be complex and dynamic; it was calculated to prevent first responders from having a clear understanding of what was occurring, where it was occurring, and what would happen next. Multiple terrorist teams attacked multiple sites and then moved on to additional sites. In one case, the assailants used a hijacked police vehicle to change locations. The assailants even placed diversionary bombs in taxis to create additional incident sites and confuse responders.¹⁰⁰ The plan to confound responders intentionally succeeded brilliantly, “We thought there must have been 60 instead of only 10.”¹⁰¹

The attacks on 26/11 in Mumbai also highlight the organizational learning abilities of terrorists. According to a RAND Corporation analysis of the attacks, the tactics used by the assailants revealed, “A strategic terrorist culture that thoughtfully identified strategic goals and ways to achieve them and that analyzed counterterrorist measures and developed ways to obviate them to produce a 9/11-quality attack.”¹⁰² In a September 23, 2011 Homeland Security Active Shooter Awareness Virtual Roundtable, James McGinty, the Vice President of Training and Safety for Covenant Security

⁹⁸ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 18.

⁹⁹ Roy Nohbojit, “Mumbai Terror Attacks—The International Experience with Terrorist Use of Explosives,” PowerPoint Presentation, November 7, 2011 at Tale of Our Cities Conference, Seattle, WA, 34.

¹⁰⁰ NYPD Intelligence Division, “Mumbai Attack Analysis: Information As of December 4, 2008,” 26–27, 41.

¹⁰¹ Moody, “Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad,” 10; quoting H. Roy in a personal communication on December 8, 2009).

¹⁰² Rabasa et al., “The Lessons of Mumbai,” 8.

Services, made a case that the 26/11 Mumbai terrorists developed their tactics, in part, based on the shootings at Columbine. McGinty cited several aspects of the Columbine attack mirrored in Mumbai, including multiple shooters, extensive planning, preplanted IED's for diversionary purposes, semi-automatic weapons, and weapons vests.¹⁰³

G. AURORA, CO, 2010

On June 25, 2010, in Aurora, CO, Adam Fisher was shot in the arm, face, and legs in his second floor apartment. The first police officers on-scene observed that the victim was losing a lot of blood and requested fire fighters, “as soon as we can get them up here.”¹⁰⁴ The officer of the first responding Aurora Fire Department unit, observing the letter of the department's “standby” policy, replied, “I'm not coming in until the scene is safe.”¹⁰⁵ Since the police officers could not confirm the location of the shooter, however, they could not declare the scene safe. Seizing the initiative, the police officers carried the victim down the stairs and out to the curb, at which point they radioed, “It's as safe as it's going to get.”¹⁰⁶ Fire fighters still refused to respond to the scene, so the police officers put the victim in a patrol car and drove to the waiting ambulance.¹⁰⁷

Fortunately for the Aurora Fire Department, the victim lived, “Aurora fire officials say they may have dodged a bullet in Fisher's case so that they can put a new policy in place for the next emergency.”¹⁰⁸ However, public reaction to the event was extremely critical and provoked a reversal of the ‘scene safe’ protocol:

In response to the public outcry, Aurora Fire has changed its standard operating procedures to permit on-scene fire fighters to decide for themselves if it is safe enough to enter an assault with weapons scene to provide rescue or EMS care... Today, Aurora firefighters can stand by and

¹⁰³ James McGinty, “Active Shooters: Historical Perspectives and Challenges,” Slideshow dated September 27, 2011. Slide 22, <https://connect.hsin.gov/asaware2011>.

¹⁰⁴ Jeffrey Wolf and Deborah Sherman, “‘Scene Safe’ Protocol Keeps Aurora Fire Paramedics from Helping Man Bleeding to Death,” *9news.com* (NBC), November 10, 2010.

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

wait for police to secure the scene and request them inside or they can decide for themselves to enter the scene to rescue and treat people. If there is any question, fire and police will speak face-to-face.¹⁰⁹

The article does not mention if fire department personnel have been giving training in violent incident risk/benefit analysis, tactics, mitigation of hazards, or collaboration with police. The absence of such policies and training would place a tremendous burden on the first-in fire officer, as it would be necessary to make life or death decisions without the benefit of training or protocols.

Aurora's strict adherence to the 'scene safe' protocol may have deeply felt historical roots. In 1993, Denver firefighter Doug Konecny was shot to death climbing into a suicidal man's second-floor window."¹¹⁰ Although it can be argued that Aurora may have become too risk avoidant with scene safety after the death of Konecny, their emphasis on fire fighter safety in unsafe scenes has kept fire fighters safe. If the fire captain and his crew had responded into the apartment on June 25 upon the request by police, the captain would have exposed his crew to considerable potential risk as the armed assailant was in the apartment across the hall from the victim.

Although the events in Aurora that prompted the reversal of the 'scene safe' protocols are not a paramilitary-style active shooter incident, these events highlight the challenges faced by fire fighters in potentially violent situations. If the Aurora fire captain and his crew had entered the scene, the armed shooter would have been across the hall from the unarmed fire fighters. Despite the fact that the captain protected his crew from this risk, the public outcry was strong enough to reverse the 'scene safe' protocol. The events in Aurora, CO, also reveal the severe negative public outcry in response to fire fighter inaction. Even though the fire captain was correct in his assessment that responding to the victim's apartment would put the safety of his crew at risk, public safety officials did not support his decision. Instead, the outcry and the loss of confidence in public safety officials prompted a reversal of the 'scene safe' protocols.

¹⁰⁹ Wolf and Sherman, "'Scene Safe' Protocol Keeps Aurora Fire Paramedics from Helping Man Bleeding to Death."

¹¹⁰ Ibid.

H. ALAMEDA COUNTY, CA, 2010

On May 31, 2011, Alameda police and fire fighters stood by while Raymond Zack waded into dangerous surf and eventually died. Fire fighters were on scene within minutes of Zack entering the water, but did not attempt rescue because they had not been trained in land/water rescue. In fact, due to budget cuts, the department's water rescue program had been eliminated two years earlier. After almost an hour, a passerby entered the water and dragged Zack's lifeless body to shore. Public condemnation of first responder inaction was tremendous, "It's like you are living in a different country that does not care about its citizens."¹¹¹

Although the drowning in Alameda County was not a shooting, the outcome of this incident illustrates key points about "standby" policies. Fire fighters did not have the training, equipment or protocols to enter the hypothermia-inducing, drowning-hazard surf to rescue a potentially violent and suicidal individual. Yet, failing to prevent an avoidable death diminished confidence in public safety officials; the public expected the fire fighters to go in harms way to rescue a man in danger. When a policy of inaction results in a preventable death, the importance of keeping fire fighters safe does not prevent the public outcry from changing those policies.

The failure of the "standby" policy in Alameda County also resulted in a significant financial cost. At considerable expense, fire fighters were trained and equipment was purchased to put a water rescue team put back in operation. In addition, a lawsuit for undisclosed damages has been filed alleging the wrongful death of Raymond Zack.¹¹²

I. OSLO, NORWAY, 2011

At approximately 1532 hours on July 22, 2011, a right wing militant in Norway detonated a vehicle borne improvised explosive device that killed eight in downtown

¹¹¹ Peter Hegarty, "Alameda: City Reviews Emergency Response After Drowning," *Insidebayarea.com*, May 31, 2011, http://www.insidebayarea.com/top-stories/ci_18177424.

¹¹² Peter Hegarty, "Family of Calif. Man Who Drowned File Lawsuit," *The Oakland Tribune*, October 14, 2011.

Oslo. He then commandeered a boat and proceeded to the nearby island of Utoya, where a summer camp for young members of Norway's governing Labor party was underway. Shortly after his arrival on the island at 1700 hours, the assailant began indiscriminately firing upon the youth. When police officers arrived on the island at 1825 hours, almost 90 minutes had elapsed since the start of the killing. Moments after police confronted him, the assailant surrendered peacefully. By then, 68 people on the island were dead and 60 had been injured in the two attacks.¹¹³

Although this attack was not an ongoing active shooter incident, it is relevant to this inquiry because of the careful planning and paramilitary tactics used by the assailant. This event demonstrated the great lengths to which paramilitary assailants may go to circumvent counter-terrorism security measures. A manifesto written by the assailant detailed how he set up front companies to purchase fertilizer, a potential bomb-making component, without attracting suspicion. The manifesto also described how the assailant began taking steps to obtain a Glock-17 semi-automatic pistol legally a full six years before the attack.¹¹⁴

On the day of the attack, the bombing in Oslo was merely a diversion. The assailant's true target was a youth camp on a remote island. The assailant knew that the diversion and the selection of a difficult to access target would delay police response and extend his time in the killing zone.¹¹⁵

¹¹³ "Norway's Black Friday: A Chronology of the Attacks," *Der Spiegel*, July 25, 2011, <http://www.spiegel.de/international/europe/0,1518,776437,00.html>

¹¹⁴ "Profile: Anders Behring Breivik," *BBC News Europe*. November 29, 2011, <http://www.bbc.co.uk/news/world-europe-14259989>.

¹¹⁵ McGinty, "Active Shooters: Historical Perspectives and Challenges," Slide 23.

The Utoya island attack also highlights the selection of children as targets of violence—including some as young as 16 years of age.¹¹⁶ The attack was designed to take advantage of the trust that children have for authority figures, such as police officers. When the assailant arrived on the island, he was dressed as a police officer. When the children first approached him, the assailant stated that a bombing had occurred in Oslo and he was there for their protection. He then opened fire.¹¹⁷

¹¹⁶ Elisa Mala and J. David Goodman, “At Least 80 Dead in Norway Shooting,” *New York Times*, July 22, 2011, www.nytimes.com/2011/07/23/world/europe/23oslo.html?_r=1&ref=Norway.

¹¹⁷ “Norway’s Black Friday.”

IV. ALTERNATIVES

A. FOUR RESPONSE MODELS

One of the challenges of analyzing fire service response policies to active shooter incidents in a multi-hazard environment is that no formally recognized categories exist for this type of response. Each fire department has an active shooter response policy that may vary on a number of dimensions from other fire departments. For the purposes of this inquiry, four categories of fire service response policy are analyzed. The policies are grouped into these four general categories to clarify the strengths and weaknesses of each policy approach.

To articulate some of the differences between the four fire service response policies to active shooter incidents, it is helpful to describe the concept of ‘control zones.’ Fire departments use the terms ‘hot zone,’ ‘warm zone,’ and ‘cold zone’ to distinguish the different levels of risk in the operating area of an incident. The control zones also limit which responders may operate in each zone.

At an active shooter incident, the ‘hot zone’ is the area of operations in which a direct and immediate threat to persons or responders occurs, which is the area of greatest risk and is usually limited to law enforcement personnel. The ‘warm zone’ is the area of operations in which a potential hostile threat to persons or responders occurs but the threat is not direct and immediate. This area of potential risk is one that law enforcement or SWAT has not fully cleared and is usually limited to law enforcement personnel. The ‘cold zone’ is the area of operations in which the tactical commanders do not reasonably anticipate a significant danger or threat to the responders or patients. The cold zone is the area secure enough to set up fixed operations, such as command, medical treatment areas, and transportation to hospital. The outer limit of the cold zone is considered the incident perimeter, which is the closest point to the incident that bystanders, media, and interested parties are permitted to approach.¹¹⁸

¹¹⁸ “Rescue Task Force,” The Arlington County Fire/EMS Medical Protocols for Emergency Medical Services Providers, Appendix #10, IV-10-1–IV-10-6, n.d.

Finally, the following response models are not mutually exclusive. A fire department may use a “standby” policy for some incidents and a force protection policy for other incidents. A fire department may operate with SWAT medics and also have a policy for the use of force protection.

1. Status Quo: “Standby” in the Cold Zone Until the Scene Is Secure

“Standby” policies require fire fighters to wait outside the scene of a violent incident until law enforcement declares the scene secure. Law enforcement officers and fire fighters perform their roles in a sequential fashion—first law enforcement neutralizes the suspect and secures the scene, then fire fighters perform rescue, first aid, or hazard mitigation.

The Seattle Fire Department Policy and Operating Guidelines (POG) Section 4004 “Response Guidelines” is a good example of a fire service “standby” response policy to violent incidents. Although POG Section 4004-2 does not specifically address active shooter incidents, the policy prohibits Seattle Fire and EMS units from entering an uncontrolled scene during an assault with weapons, “Assault with Weapons: Unit(s) dispatched to a situation involving assaults, including self-inflicted injuries, with weapons. This will indicate the need for arriving units to stand by at a safe location until police units have controlled the scene.”¹¹⁹

Since “standby” policies prohibit fire fighters from operating in the warm zone, they do not include protocols describing safe and effective warm zone operations. Furthermore, “standby” policies do not contemplate police and fire units working together in the warm zone of a paramilitary-style active shooter incident in a multi-hazard environment. Consequently, “standby” policies lack joint police/fire operating protocols to guide warm zone operations.

¹¹⁹ Seattle Fire Department, Policy and Operating Guidelines, Section 4004.

2. Tactical Medics—Medical Support for SWAT Teams in the Warm Zone

Tactical medics, also known as SWAT medics and TEMS (Tactical Emergency Medical Services), are paramedics with additional training in combat medicine equipped to operate in the warm zone of an active shooter incident. Their primary role is to provide emergency medical care for SWAT team members operating in the hot zone, but they can also play a rescue and/or treatment role for victims once the perpetrators of the violence have been neutralized. Although tactical medics are not usually armed, at least one fire department in Clayton County, GA, has armed tactical medics for defensive purposes only.¹²⁰

It can be argued that tactical medics are a type of law enforcement escort model—the SWAT team protects the tactical medics. For the purposes of this inquiry, tactical medics have been given their own category because they do not perform a fire service role while part of the SWAT team. Tactical medics provide close medical support for SWAT team members, who may require moving past injured victims. After tactical medics have been released from close medical support, then it would be accurate to describe them as operating with law enforcement escorts.

The deployment model for tactical medics varies considerably. In some jurisdictions, a dedicated team (or teams) of tactical medics is available with their own response vehicle at all times. In other jurisdictions, tactical medics perform routine fire fighting or emergency medical duties until they are paged to respond to an incident location at which SWAT is operating. Some of these tactical medics have their equipment with them while others respond to a designated location at which they can collect their equipment and/or a dedicated tactical EMS vehicle.

¹²⁰ Roberts, “On the Front Line,” 59–70.

3. Tactical-Level Consolidation—Individuals With Police/Fire/EMS Capability Working As a Team in the Hot Zone

In the fire service, “consolidation” refers to the integration of a police department and fire department into a single agency, often called a public safety department.¹²¹ Instead of police officers who perform a law enforcement role and fire fighters who perform a fire service role, consolidated departments have ‘public safety officers’ who are capable of performing both roles. During a paramilitary style attack, ‘public safety officers’ would be capable of simultaneously performing both a law enforcement role (neutralize the suspect and secure the scene) and a fire service role (rescue, medical treatment, and hazard mitigation) in the hot zone or the warm zone.

As of this writing, a specialized, tactical-level consolidated police/fire/emergency medical services unit has not been deployed in an American city. However, Sean Newman articulated one version of consolidated police/fire units in his NPS thesis, “Braving the SWARM: Lowering anticipated Group Bias in Integrated Fire/Police Units facing Paramilitary Terrorism.” SWARM Units can be thought of as a, “joint fire/police response unit of ‘pre-first responders’ who can enter a hostile environment ahead of traditional first responders.¹²² A SWARM team combines the agency-specific capabilities of fire fighters and police officers so that each team member can enter the hot zone and, “simultaneously engage terrorists and rescue victims in an operational environment that may include active shooting, explosives, smoke and fire.”¹²³

Police EMT/medics are another form of consolidation. These law enforcement officers are similar to ‘public safety officers’ except that they lack fire department training and expertise. Police EMT/medics response models vary considerably. In some cases, police EMT/medics are self-selected law enforcement officers who maintain their

¹²¹ Vinicio Mata, “The Contribution of Police and Fire Consolidation to the Homeland Security Mission” (master’s thesis, Naval Postgraduate School, March 2010), 6.

¹²² Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 2.

¹²³ *Ibid.*, 43.

training and certification on their own time and may be available to respond while on-duty. In other cases, police departments may support a dedicated on-duty police EMT/medic capability.

4. Force Protection—Police Escort Fire Fighters Into the Warm Zone

The term force protection is used to describe policies in which law enforcement officers escort fire fighters into the warm zone of unsecured scenes.¹²⁴ The role of the law enforcement escort is to support the fire service role by protecting fire fighters as they rescue, provide medical treatment, or mitigate hazards.

The term ‘force protection’ is a military concept that can be applied to fire department operations at an active shooter incident.¹²⁵ Similar to the law enforcement escort model, it is a general model of police and fire collaboration in which a group of law enforcement personnel provides protection to a group of fire fighters in the warm zone of a paramilitary style attack. Once a force protection team of fire fighters and law enforcement enter the warm zone, the police officers may not deviate from the task of protecting the fire fighters until the fire fighters have been returned to the cold zone.

Ideally, fire fighters entering the warm zone with law enforcement escorts should be provided with some form of ballistic protection. Properly fitted and maintained armored vests and helmets will provide some protection from projectiles, as will ballistic shields. However, most fire fighters do not perform routine job duties within easy access to ballistic protection. Some jurisdictions may have a limited amount of ballistic protection available in responding apparatus while other jurisdictions may expect to borrow ballistic protection from responding law enforcement.

¹²⁴ The term ‘force protection’ is used for purposes of this inquiry because this term is used to describe the concept in the author’s jurisdiction.

¹²⁵ Adapted from JP 1-02, DoD Dictionary of Military and Associated Terms, November 8, 2010, as amended through August 15, 2011. Force Protection: Preventive measures taken to mitigate hostile actions against [DoD] personnel.

B. VISUAL SUMMARY OF THE FOUR RESPONSE POLICIES

Table 1 visually summarizes the four response models. Table 1 depicts the relationship between the law enforcement role and the fire department role on the horizontal axis and the permitted zones of entry on the vertical axis.

	Police, then Fire	Fire Supports Police	Integrated Police & Fire	Police Supports Fire
Cold Zone	“Standby”			
Warm Zone		Tactical Medics		Force Protection
Warm & Hot Zone			Consolidated ”SWARM”	

Table 1. Description of response models based on ‘control zones’ and relationship between fire department role and police department role.

V. CRITERIA

A. CRITERIA FOR EVALUATION

Paramilitary-style active shooter incidents in a multi-hazard environment are relatively new and rare events for the fire service. As a result, a set of formal criteria with which to evaluate different policy approaches has not been established. Despite the novelty and small data set of these incidents, key patterns have emerged that can be used to evaluate the likely outcomes of the four policy alternatives at a paramilitary-style active shooter incident in a multi-hazard environment.

A review of several key active shooter and “standby” events described in Chapter III reveals six criteria that differentiate between successful and unsuccessful responses. Does the policy keep fire fighters safe? Is the policy consistent with fire service risk management principles? Does the policy maintain confidence in public safety officials? Is the policy effective in a multi-hazard environment, especially when fire is used as a weapon? Does the policy result in an expeditious response to immediate threats to life safety? Does the policy encourage collaboration between police and fire? In addition to consideration of success factors, two practical criteria shall be considered, cost and the political and cultural acceptability of the policy.

B. DESCRIPTION OF THE EIGHT CRITERIA FOR EVALUATION

1. Fire Fighter Safety

Although fire fighters work in hazardous environments, fire fighter death and injury is not considered a cost of doing business. All levels of the fire service are dedicated to identifying the causes of death and injury and identifying policies, practices, training, and equipment that protect fire fighters from the hazards of the job.

An example of the fire service’s commitment to fire fighter safety is the “Everyone Goes Home” initiative, a program partially funded by the Department of Homeland Security. Sponsored by the National Fallen Firefighters Foundation, the organization that oversees the National Fallen Firefighters Memorial in Colorado

Springs, CO, “Everyone Goes Home” consists of 16 life safety initiatives designed to provide the fire service with a blueprint for making changes to ensure that “everyone goes home.”¹²⁶ Life Safety Initiative #12 recommends, “National protocols for response to violent incidents should be developed and championed.”¹²⁷ Initiative #12 acknowledges the gaps that currently exist in fire service policy to violent incidents—such as paramilitary style active shooters in a multi-hazard environment.

The key incidents described in Chapter III highlight the challenge of protecting fire fighter safety during active shooter incidents in a multi-hazard environment. Paramedics at Columbine came under fire while rescuing students in front of the cafeteria and the fire fighters in Mumbai came under fire on numerous occasions. The report of a possible second shooter on the roof of the Jewish Federation building in Seattle transformed what responders thought was a cold zone into a warm zone. By their very nature, these incidents are unpredictable and extremely dangerous.

Finally, a paramilitary-style active shooter incident represents a unique threat to fire fighter safety—“a human, adaptive enemy who will manipulate the battlespace for their own advantage to the detriment of first responders.”¹²⁸ It will be an extraordinary challenge to keep fire fighters safe when one of the hazards is a thinking adversary intent on hurting first responders.

A fire service policy for paramilitary-style active shooter incidents in a multi-hazard environment must provide the highest reasonable level of safety for fire fighters.

2. Consistent With Risk Management Principles

Although fire fighter safety is the highest incident priority, to accomplish the mission of protecting life and property from fires, medical emergencies, and other disasters,¹²⁹ fire fighters often go in harm’s way. In addition to the challenges of fire,

¹²⁶ Everyone Goes Home, Firefight Life Safety Initiatives, <http://www.everyonegoeshome.com>.

¹²⁷ Everyone Goes Home, Firefight Life Safety Initiatives, 16 Firefighter Life Safety Initiatives, <http://www.everyonegoeshome.com/initiatives.html>.

¹²⁸ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 35.

¹²⁹ Seattle Fire Department Mission Statement.

building collapse, and hazardous materials, fire fighters must also confront incident complexity, confusion, and uncertainty. It is not always clear to initial responders how much risk they face or how likely their efforts to save a life will be. To help guide risk/benefit decision making under dynamic and chaotic emergency conditions, the National Fire Protection Association developed a risk management model known as the “rules of engagement,” Risk a lot, in a calculated manner, to save savable lives. Risk little, in a calculated manner, to save savable property. Risk nothing to save nothing.¹³⁰

Several of the key events in Chapter III highlight the risk management challenges confronted by first responders to paramilitary style attacks. At the Freddy’s Fashion Mart fire, the shootings at Columbine, and the 26/11 attacks in Mumbai, front line first responders chose to take action in potentially hostile environments when confronted with immediate rescues.

The acceptance of risk can be seen as a vital part of fire service culture. A revealing study by the Workplace Health Group at the College of Public Health in the University of Georgia reviewed 1,167 recommendations from 189 line-of-duty fire fighter deaths investigated by the National Institute of Occupational Safety and Health from 2004 through 2009.¹³¹ Based on this evidence, the authors concluded:

Operating with too few resources, compromising certain roles and functions, skipping or short-changing certain operational steps and safeguards, and relying on extreme individual efforts and heroics may reflect the cultural paradigm of fire fighting. This should not be construed as a culture of negligence or incompetence, but rather a culture of longstanding acceptance and tradition... The four higher order causal factors [of fire fighter fatalities] identified in this study may be symptoms of the prevailing culture of fire fighting: that the job must get done, get done as quickly as possible, and with whatever resources available.¹³²

The fire service culture of risk acceptance is not based on recklessness or carelessness. The fire service has developed rules of engagement to guide life and death

¹³⁰ National Fire Protection Association Standard 1500 (2007), Annex A, Section 8.3.2.

¹³¹ David M. DeJoy, Todd Smith, and Kumar Kunadharaju, “Line-of-Duty Deaths Among U.S. Firefighters: An Analysis of Fatality Investigations,” *Accident Analysis and Prevention* 43 (2011): 1171–1180.

¹³² *Ibid.*, 1179.

decision making in uncertain, confusing, and chaotic conditions. ‘Risk a lot, in a calculated way, to save savable lives’ is a guideline that balances fire fighter safety with the urgent need for action.

Risk acceptance is especially prevalent if victims are children. Directly or indirectly, children are frequently involved in active shooter incidents as demonstrated by the shootings at Columbine, the taking of hostages at Beslan Middle School #1, the shootings at Virginia Tech, Baby Moshe in the Jewish Center on the second day of the 26/11 Mumbai attacks, the shootings at the youth camp on Utoya island in Norway, and the daycare in the Military Entrance Processing Service in Seattle.

A policy for paramilitary-style active shooter incidents in a multi-hazard environment should provide fire fighters with effective guidelines for risk management.

3. Public Confidence in Fire and Police

In general, the public expects fire fighters to handle emergencies safely, quickly, and effectively—especially when lives are in the balance. First responders are not expected to be reckless or suicidal, but they are expected to anticipate likely hazards, train to perform safely despite those hazards, and to take calculated risks to save lives.

Several of the key events in Chapter III demonstrate that confidence in public safety officials is directly affected by the success or failure of the emergency response to active shooter incidents. At one extreme is the public reaction after the death of Dave Sanders at Columbine—intense public criticism, lawsuits, and a transformation of police response to active shooter incidents. On the other hand, the emergency medical service response to the active shooter at Virginia Tech is credited with saving a number of victims. One can imagine the criticism if the Virginia Tech shooting victims with life threatening injuries had waited without medical care for 17 minutes while law enforcement secured the scene—which may have occurred if the emergency response teams and their tactical medics had not already been mobilized in response to the two shooting fatalities earlier that morning in West Ambler Johnston.

Events in Aurora, CO and Alameda County, CA shed light on the consequences of “standby” policy failures. Even though Adam Fisher was not further harmed by the ‘scene safe’ protocol in Aurora, public criticism led to a reversal of the policy. The decision to wait at the water’s edge in Alameda County resulted in the death of Raymond Zach. The drowning led to intense public criticism, an unlawful death lawsuit, and reimplementation of the water rescue program at significant expense to the jurisdiction.

Fire fighter inaction perceived as unreasonable can also lead to public accusations of incompetence or indifference that may be directed at all levels of response—from the fire fighters to elected city officials. These accusations can lead to a loss of public support for the fire department, which may in turn lead to a loss of fire department funding. City decision makers establish budgets that reflect the community’s prioritization of the fire department’s ability to respond—until that response is viewed as inadequate. If the fire department does not maintain public support, then other pressing community needs may take precedence over fire department services. Reductions in fire service budgets adversely impact the ability of the fire department to achieve its mission.

One of the ways that fire department leaders and elected officials may attempt to restore public confidence is to change policies reactively. This change can lead to training and resource expenses driven by the need to ‘do something’ and not by actual operational needs, which occurred after both the Alameda County, CA and Aurora, CO incidents. In the long term, reactive spending and policy implementation may not hold up as well as pro-actively developed policies and programs.

Reactive attempts to restore credibility may not prevent community attempts to hold public safety officials responsible for the losses perceived to arise from fire department inaction. Citizens may file lawsuits alleging that the fire department failed to operate according to the appropriate standards of care. Such a lawsuit was successfully filed against the responding law enforcement agencies after Columbine and is pending in the Alameda County drowning.

To preserve confidence in public safety officials, a fire service policy for active shooter incidents in a multi-hazard environment should be consistent with public expectations for emergency response.

4. Adaptive to a Multi-Hazard Environment—Especially Fire As a Weapon

Several of the key events in Chapter III demonstrate that fire fighters must be prepared to mitigate multiple hazards in a paramilitary-style active shooter incident—especially the use of fire as a weapon. During the 26/11 attacks in Mumbai, the massive fire in the Taj Mahal hotel was intentionally set to confuse responders, trap victims, and create a powerful visual image that would captivate viewers around the world. During the shootings at Columbine, the two assailants detonated almost one third of the 90+ improvised explosive and incendiary devices. The resulting fires were successfully extinguished by the automatic sprinkler system, but created an environment with smoke, loud alarms, and flashing lights that created unusual shadow effects—all of which hindered SWAT efforts to clear the school.

Even when fire is not used explicitly as a weapon, it is frequently a secondary effect of terrorist attacks and bombings. Many victims of the World Trade Center attack on 9/11 jumped from the upper floors to avoid the heat and smoke of the fire from the ignited jet fuel. The majority of victims killed during the rescue of the hostages being held in Beslan Middle School #1 may have been from fire. In fact, as a weapon or as a secondary effect, fire is so effective that William Bird, a branch chief for the Department of Homeland Security Intelligence and Analysis, in a September 2010 presentation on Mumbai-style attacks, asserted that, “Fire and fire-related injuries killed nearly as many victims as gunfire.”¹³³

The key events from Chapter III also demonstrate that paramilitary style assailants have learned from previous active shooter incidents and adjusted their attacks to confuse or delay responders. Fire fighters should expect the next paramilitary style

¹³³ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 36.

attack to present a new and unpredicted constellation of challenges to be overcome. The response to an ongoing paramilitary style terrorist attack may require fire fighters to rescue victims trapped by a building collapse, to extricate victims tangled in ropes, machinery, or heavily damaged transportation vehicles, or to mitigate chemical, biological, radiological, and/or nuclear hazards. American counterterrorism officials recently warned that Al-Qaeda in the Arabian Peninsula (AQAP) is planning to use the lethal poison ricin in future attacks against the American homeland.¹³⁴ The range of potential rescue scenarios at terrorist attacks that require fire service expertise is limited only by the imagination.

A fire service policy for paramilitary-style active shooter incidents must guide fire department operations safely and effectively in a novel, multi-hazard environment.

5. Expeditious

Several of the key events in Chapter III demonstrate the life-saving difference that an expeditious response can make. Timely medical interventions most likely saved lives during the shootings at Columbine High School and Virginia Tech. Firefighters during the 26/11 attacks in Mumbai used an aerial platform to rescue dozens of victims from the rapidly spreading smoke and fire at the Taj Mahal hotel.

When life is threatened, time is of the essence. One of the most important ‘best practices’ for trauma victims is to be delivered to definitive medical care within the “golden hour.” The principles of tactical combat casualty care also reflect the importance of providing immediate medical care to trauma victims. A rapidly moving fire may trap victims with flames or with dense, toxic, asphyxiating smoke. Victims pinned in a structural collapse may suffer from crush injuries that cause compartment syndrome—when an extremity is pinned, metabolic toxins build, and are released when the extremity is freed that can cause potentially fatal heart rhythms. In high wind conditions, a hazardous materials plume can spread over vast areas and rapidly engulf unsuspecting victims. The successful resolution of an emergent condition requires an expeditious response.

¹³⁴ Bruce Riedel, “AQAP’s ‘Great Expectations’ for the Future,” *CTC Sentinel*, August 2011.

A fire service policy for a paramilitary-style active shooter incident in a multi-hazard environment should enable fire fighters to conduct fire service operations expeditiously.

6. Collaborative

Several of the key events listed in Chapter III demonstrate the value of collaboration between law enforcement and fire fighters at a paramilitary-style active shooter incident in a multi-hazard environment. Police officers used their bullet resistant shields to protect fire fighters as they attempted to extinguish the fire at Freddy's Fashion Mart. Fire fighters used a fire engine to shield police officers making entry to Columbine High School. Tactical medics followed SWAT team members into Norris Hall at Virginia Tech 17 minutes before the scene was declared secure. Fire fighters in the 26/11 attacks on Mumbai braved active gunfire to rescue injured police officers.

The value of law enforcement and fire department collaboration at paramilitary-style active shooter incidents has been documented since the attacks on Columbine High School. According to the USFA's Columbine after action report, "The lesson is becoming clear: Public safety managers need to reassess current response strategies in light of emergencies that, with increasing frequency, include wanton violence and demand a coordinated and joint public safety response."¹³⁵ In his NPS thesis about Mumbai-style attacks, Sean Newman succinctly reframed the need for police and fire collaboration in response to a paramilitary-style active shooter event, "This new form of terrorism is a direct challenge to ... single-agency mitigation strategies."¹³⁶

At paramilitary-style active shooter incidents, fire departments and law enforcement agencies have complementary capabilities that can overcome single-agency limitations. Fire fighters are not trained or equipped to operate in potentially violent conditions. This single-agency limitation can be overcome when police officers who are trained to operate safely in violent conditions escort fire fighters. Law enforcement

¹³⁵ "Wanton Violence at Columbine High School," 2.

¹³⁶ Newman, "Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism," 1.

officers are generally not trained to provide immediate medical care or mitigate fire used as a weapon or any other fire service hazards that may be encountered. This single-agency limitation can be overcome when law enforcement officers escort fire fighters who are trained to rescue and mitigate multi-hazard environments into potentially violent areas.

A fire service policy for a paramilitary-style active shooter incident in a multi-hazard environment should permit fire fighters to collaborate with law enforcement to overcome single-agency limitations.

7. Cost

The financial cost of a policy has a substantial impact on its feasibility. In the current economic environment, policy approaches to a paramilitary-style active shooter incident in a multi-hazard environment that require program expansion may be difficult to fund. Many fire departments have experienced budget cutbacks in recent years, including some fire departments that have laid off fire fighters. Investing in program expansion while other services are being cut is difficult to justify. The use of federal grants to fund program expansion is also becoming more difficult. Urban Area Security Initiative funds are facing a \$2 billion cut in 2012, which are a 60%+ reduction from 2011.¹³⁷ Prioritizing funds to prepare for the highly unlikely event of a paramilitary-style active shooter incident in a multi-hazard environment may be difficult to justify.

However, several key events demonstrate that liability must also be considered as a cost factor. Fire departments must carefully consider what level of care is due to imperiled victims at a paramilitary-style active shooter incident in a multi-hazard environment. The Jefferson County Sheriff's office was successfully sued after

¹³⁷ "Thompson Statement Opposing Omnibus Conference Report and Draconian Cuts to First Responders," UASI blog, Entry posted December 16, 2011, <http://urbanareas.org/blog/2011/12/16/thompson-statement-opposing-omnibus-conference-report-and-draconian-cuts-to-first-responders/>

Columbine for being, “too risk averse in the first minutes of the attack.”¹³⁸ The Police and fire departments in Alameda County, CA are currently being sued for allegedly violating their duty of care in the drowning death of Raymond Zach.

Liability costs must also be considered in the event of a line of duty fire fighter death. Fire departments must ensure that their policies are consistent with national standard ‘best practices’ and state safety standards.

A fire service policy for a paramilitary-style active shooter incident in a multi-hazard environment should be financially cost effective.

8. Acceptability

The acceptability of a paramilitary-style active shooter policy to fire fighters and fire department executives, police officers and law enforcement executives, and elected officials is an important evaluative criterion. Unless a policy is acceptable to key stakeholders, it may not be effective in practice.

Consolidation is one of the key issues affecting the political acceptability of a paramilitary-style active shooter policy. The consolidation of police departments and fire departments into a single agency of ‘public safety officers’ is very controversial in the fire service. The International Association of Fire Fighters and the International Association of Fire Chiefs, two of the most powerful voices in the U.S. Fire Service, are actively opposed to consolidation.¹³⁹ A fire service paramilitary response policy that becomes entangled in the consolidation debate may not be politically acceptable to key decision-makers.

To be acceptable to fire service leadership, a response policy to paramilitary-style active shooter incidents must provide fire chiefs and incident commanders with a compelling rationale for ordering fire fighters into a potential combat zone. Although line of duty deaths are an occupational hazard in the fire service, operating in the warm zone

¹³⁸ Rosegrant, “The Shootings at Columbine High School: Responding to a New Kind of Terrorism Sequel,” 4–5.

¹³⁹ International Association of Fire Chiefs and International Association of Fire Fighters, “Police and Fire Consolidation; An Ineffective Use of Resources,” Fairfax, VA, 2009, <http://www.iaff.org/09news/040209PSO.htm>.

of an active shooter incident is not widely recognized as a part of the fire service tradition or its core competencies. If a line of duty death in the warm zone of an active shooter incident is not consistent with the fire service tradition of risk acceptance, a response policy will not be acceptable to fire service leaders.

A fire department response policy to a paramilitary style attack must also be acceptable to fire fighters and law enforcement. Police officers and fire fighters take tremendous pride in the unique culture of their respective organizations and enjoy making good-natured fun of the other. However, disagreements have been quite serious when the cultures clash over emergency response.¹⁴⁰ At a practical level, questions as seemingly simple as, “When you need PD [Police Department] protection to operate a hose line, who is in charge?”¹⁴¹ may be very challenging to answer to the satisfaction of both cultures.

¹⁴⁰ See Paul Atwater, “Firefighters Do Whatever It Takes,” *Seattlepi.com*, September 18, 2003, <http://www.seattlepi.com/default/article/Firefighters-do-whatever-it-takes-1124685.php>; Ian Ith, “Water Rescue Divides Cops, Firefighters Again,” *Seattle Times*, September 8, 2003, <http://community.seattletimes.nwsourc.com/archive/?date=20030908&slug=policefire08m>.

¹⁴¹ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 47.

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VI. PROJECT THE OUTCOMES

Table 2 is a summary of the probable outcomes of each paramilitary-style active shooter policy as measured by each of the evaluative criteria. A “mixed” outcome recognizes that a policy may have good and/or bad outcomes depending on the situation.

	“Standby”	Tactical Medics	Consolidation	Force Protection
1. Safety	Mixed	Mixed	Mixed	Mixed
2. Risk Management	Poor	Good	Good	Good
3. Public confidence	Poor	Good	Good	Good
4. Multi-Hazard	Poor	Poor	Good	Good
5. Expeditious	Poor	Mixed	Mixed	Good
6. Collaborative	Poor	Good	Good	Good
7. Cost	Mixed	Poor	Poor	Mixed
8. Acceptability	Mixed	Good	Poor	Mixed

Table 2. Likely outcome of different policies at paramilitary-style active shooter incident in a multi-hazard environment as measured by selected criteria

The discussion of each outcome relies on the concept of breaking points, which are described by Sean Newman in his Naval Postgraduate School thesis. For the purposes of this inquiry, a breaking point is a set of circumstances that causes a policy to result in an adverse outcome.¹⁴²

A. STATUS QUO: “STANDBY” OR “STAGE” IN THE COLD ZONE UNTIL THE SCENE IS SECURE

1. Safety

The “standby” policy at paramilitary style attacks should result in the greatest safety for fire fighters. If law enforcement has confirmed that all threats are neutralized, then it should be safe for fire fighters to enter the scene.

However, the “standby” policy does not eliminate all risks to fire fighters at paramilitary-style active shooter incidents in a multi-hazard environment. During a

¹⁴² Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 44.

paramilitary style attack, the hot zone in which violence is occurring may rapidly evolve—or new hot zones may appear. Fire fighters waiting in a cold zone for the scene to be secured may suddenly find themselves in range of armed assailants. Even fire fighters responding to the scene of an active shooter incident may find themselves in danger. Kent Davis, in his 2007 National Fire Academy research paper, stressed that the National Fire Protection Association (NFPA) standard of a 4-minute response time results in the rapid arrival of fire units to the scene of an emergency. In the confusion, fire units may be first on scene before the shooting stops.¹⁴³ Fire fighters in the cold zone may also be intentional targets during an attack. For example, numerous secondary devices were left during the Columbine shooting, including two timer-activated vehicle-borne improvised explosive devices in the school’s parking lot.

Another key breaking point of the “standby” policy is the likelihood that firefighters will take action in the warm zone—regardless of policy. Fire fighters at the Freddy’s Fashion Mart fire went so far as to overrun police barricades to suppress the fire. Paramedics at Columbine exposed themselves to gunfire to rescue injured students lying on an exposed lawn. Fire fighters in Mumbai were close enough to make eye contact with terrorists while rescuing civilians and injured police officers. It is reasonable to conclude that when fire fighters are confronted with an imminent rescue in the warm zone, some will take action—even if this means increasing the risk to their safety.

When fire fighters operate in the warm zone, a secondary outcome is likely to occur. Many “standby” policies do not prepare fire fighters to operate with safety in the warm zone. Some policy makers have reasoned that if fire fighters are barred from the warm zone, then training them to operate in potentially hazardous warm zone areas may send a mixed message and imply that warm zone operations are acceptable. Consequently, many “standby” policies do not provide warm zone protocols, best practices, or training.

The “standby” policy can also reach a breaking point even when fire fighters are complying with the policy and waiting for the scene to be secure before making entry. If

¹⁴³ Davis, “Charlotte Fire Department Responses to Active Shooter Incidents—A Critical Analysis,” 19–20.

bystanders feel that fire fighters are not taking appropriate action, the individuals may take the initiative to rescue victims, such as the Good Samaritan who pulled Raymond Zack from the surf in Alameda County, CA. Unfortunately, well-intentioned citizens who enter a hazardous scene to attempt rescue will most likely be untrained, ill equipped, and lack a coordinated plan. If bystanders are injured while attempting rescue, they may increase the pressure on fire fighters to act while simultaneously creating additional incident complexity. These impacts directly increase the risks to fire fighters.

2. Consistent With Fire Service Risk Management Model

“Standby” is a zero-risk policy. Although it is clear from the previous discussion that “standby” actually presents significant risks to fire fighters, the intent of the policy is to prevent any risk taking until the scene is secure. A zero-risk policy is not consistent with the fire service risk management model of risking a lot, in a calculated manner, to save lives.

The “standby” policy reaches a breaking point at a paramilitary-style active shooter incident in a multi-hazard environment as soon as immediate rescues or fire fighting operations need to occur in the warm zone. The “standby” policy prohibits fire fighters from taking any risk—even if lives can be saved or life-threatening hazards can be mitigated. The likely outcome of a significant delay in fire department access to a multi-hazard scene—especially one measured in hours—is that trauma victims will not be delivered to definitive medical care within the “golden hour” and fires, hazardous materials, or other hazards will increase in size and severity.

3. Public Confidence in Fire and Police Response

At a paramilitary-style active shooter incident in a multi-hazard environment, the likely outcome of a “standby” policy on confidence in public safety officials is poor. To be fair, the public does not expect fire fighters to operate in the hot zone of an active shooter incident. Police officers are expected to take risks while confronting violent assailants, not fire fighters. In the hot zone areas of active shooting, the “standby” policy is reasonable in the eyes of the public.

However, attacks similar to Columbine and Mumbai will most likely have a warm zone with immediate rescues and hazards that require mitigation. In these cases, the public will expect action. If fire fighters follow the “standby” policy and delay entry to the incident, their inaction will likely lead to public outcry and a loss of confidence in fire department officials. Moreover, if untrained bystanders take action because they are so frustrated with fire fighter inaction, then confidence in public safety officials will be even further eroded.

A critical breaking point of the “standby” policy is that it is highly vulnerable to ‘clever exploitation’ by attackers. An effective way to inflict psychological harm on a society would be to attack its most vulnerable and its heroes simultaneously. If terrorists successfully plan an attack in which fire fighters wait at a safe distance while children are in need of immediate rescue, then the loss of confidence in fire fighters and public safety officials would most likely be catastrophic.

4. Adaptive to a Multi-Hazard Environment, Especially Fire As a Weapon

In a novel, multi-hazard environment, the outcome of the “standby” policy is poor. The “standby” policy reaches its breaking point as soon as fire fighters encounter a novel, multi-hazard environment. If the scene is not secure, then fire fighters cannot adapt to novel hazards or mitigate life-threatening conditions in the warm zone; they must wait for the situation to self stabilize.

5. Expeditious

The likely outcome of the “standby” policy at a paramilitary-style active shooter attack in a multi-hazard environment that requires an expeditious response is poor. The “standby” policy reaches its breaking point as soon as immediate rescue or hazard mitigation is needed in the warm zone. Unless law enforcement can rapidly secure the scene, fire fighters must delay their operations.

The likely outcome for victims needing rescue is improved if the law enforcement active shooter protocol includes law enforcement rescue teams. Although the use of rescue teams rapidly places a police officer at the side of a patient, this approach has

several adverse impacts on the response. Police officers on a rescue team are not focused exclusively on threat conditions in the warm zone. Rescue team officers focused on ‘grabbing and dragging’ patients may be less safe because they will be distracted from changing threat indicators. The use of rescue teams may also increase the severity of the injury to patients. Dragging unstabilized patients can worsen extremity exsanguination, tension pneumothorax, airway obstruction, and spinal injury—all of which are common trauma injuries in paramilitary style attacks.

6. Collaborative

The “standby” policy is a single-agency approach to mitigation. Very little opportunity exists for collaboration until the scene is declared safe. Until law enforcement has secured the scene, fire fighters cannot enter the warm zone and cannot work with law enforcement to solve problems in that space.

A critical breaking point of the “standby” policy occurs when a police officer has been injured or trapped in the multi-hazard environment. In fact, fire fighters who do not come to the aid of a fallen police officer may create an antagonistic environment between law enforcement and fire fighters.

7. Cost

In terms of operational costs, the “standby” policy imposes no financial burden in that it requires little training and no additional equipment. The “standby” policy also protects the fire department from liability and safety standard violations if fire fighters were allowed to work in the warm zone and became injured or were killed.

The “standby” policy reaches a breaking point, however, when fire fighters do not perform immediate rescues or mitigate life-threatening hazards. If the “standby” policy exacerbates the impact of an uncontrolled multi-hazard environment, then the financial toll of the incident may worsen. If the “standby” policy results in preventable loss of life, then lawsuits and public criticism will follow. Although it is hard to attach a dollar figure to the loss of public confidence, a community that loses faith in its fire fighters will not provide the same financial support to the fire department budget.

8. Acceptability—Political and Cultural

The “standby” policy is the default active shooter policy found in most U.S. fire departments. At most violent incidents, the “standby” policy keeps fire fighters out of harm’s way while the police secure the scene. However, the acceptability of the “standby” policy among fire fighters and police officers at paramilitary style attacks in a multi-hazard environment is in the early stages of analysis. Data from a small survey conducted in the Puyallup, WA fire and police departments suggest that the “standby” policy has poor acceptability. The survey asked fire fighters, “In your opinion, should Fire/EMS enter schools to rescue, treat immediate life threatening injuries, and extract shooting victims with a Law Enforcement Team?” Only 20% of respondent fire fighters (8 of 39) said, “No, not until the entire building is secured.” Police officers asked this question felt even more strongly. Only 4% (1 of 25) said that fire fighters should delay fire department operations until the entire building was secured.¹⁴⁴

Despite the acceptability of the “standby” policy, several of the key events described in Chapter III suggest that “standby” is only acceptable until it reaches a breaking point. Once the “standby” policy fails, the policy is no longer acceptable and is reversed. At an active shooter incident in a multi-hazard environment, it is likely that the “standby” policy will reach several breaking points—such as evolving hot zones, immediate rescues, multiple life-threatening hazards, and the need for an expeditious response. If any of these breaking points are reached, then the “standby” policy will be judged unacceptable.

B. TACTICAL MEDICS—MEDICAL SUPPORT FOR SWAT TEAMS IN THE WARM ZONE

1. Safety

When evaluating the criterion of safety, the likely outcome of utilizing tactical medics at a paramilitary-style active shooter incident in a multi-hazard environment is mixed. Tactical medics are trained and equipped to mitigate the risks of warm zone

¹⁴⁴ Patrick Donovan, “Puyallup Fire & Rescue’s Response to Active School Shooting Incident,” *National Fire Academy* (July 2008): 24, 26, 49.

operation and are safer as a result. However, any policy that permits fire fighters to operate in the warm zone before the threat has been neutralized puts fire fighters at risk of injury or death. Tactical medics in the warm zone are also closer to the hot zone, so if the hot zone evolves, they will have less time to find cover or concealment.

The use of tactical medics, however, improves on two of the key breaking points of the “standby” policy. Fire fighters waiting in the cold zone until the scene is secure are less likely to violate the policy and enter the warm zone if they know that tactical medics are available. Similarly, tactical medics making immediate rescues make it less likely that bystanders will feel the need to take action on their own.

2. Risk Management

The likely risk management outcome of utilizing tactical medics is good. Tactical medics provide close medical support for SWAT teams in the warm zone. They have been trained and equipped to take calculated risks to save lives.

A policy employing tactical medics in the warm zone reaches its breaking point if the deployment model delays the tactical medics from breaking away from the SWAT team to provide medical care for civilian casualties. If tactical medics are required to remain in close medical support of SWAT members until the incident is stabilized, then the likely outcome will be poor. Once the tactical medics are released—which may be much earlier than the scene is considered secure—then the likely outcome improves.

3. Public Confidence

At a paramilitary-style active shooter incident in a multi-hazard environment, the likely outcome of tactical medics on confidence in public safety officials is mixed. If tactical medics are required to remain in close support of the SWAT team, then they may have to leave immediate rescues behind, which could create the perception of indifference and diminish public confidence. However, tactical medics will be able to begin victim treatment before the scene is secure once the SWAT team no longer requires close medical support.

A second possible breaking point of tactical medics is a multi-hazard environment. Only tactical medics with a fire-based EMS background would be able to mitigate fire as a weapon or adapt to novel multi-hazard environments.

Finally, the vulnerability of tactical medics to ‘clever exploitation’ would be limited to two circumstances: 1) an ongoing firefight that required them to remain in close medical support of SWAT team, which would prevent them from falling back and performing life-saving interventions, and 2) a multi-hazard environment for which they did not have the fire fighting or technical ability. These vulnerabilities would be difficult to exploit intentionally in a manner that diminished public confidence.

4. Adaptive to a Multi-Hazard Environment, Including Fire As Weapon

The likely outcome of tactical medics in a novel, multi-hazard environment is mixed. Since some tactical medics are not fire fighters, they would be limited in the duties they could perform. Fire-based tactical medics, on the other hand, would be capable of mitigating most multi-hazard environments. However, fire-based tactical medics might not have responded with their fire fighting turnout gear or have ready access to specialized fire fighting equipment. Furthermore, fire-based tactical medics may not have the specialized training necessary to mitigate some of the hazards, such as hazardous materials, building collapse, confined space, and chemical, biological, radiological, nuclear, or explosives.

An additional breaking point of fire-based tactical medics is the requirement to provide close medical support of the SWAT team. Until the active shooting incident is stabilized to the point at which the SWAT team does not require close medical support, fire based tactical medics are limited in their ability to mitigate in a novel, multi-hazard environment.

5. Expeditious

The likelihood of an expeditious tactical medic response is mixed. Tactical medics can rapidly enter the warm zone, but they are only available to assist victims when they are no longer required for close medical support of the SWAT team.

Furthermore, the tactical medic deployment model may delay response time to the scene. While some tactical medic programs have personnel in geographically diverse locations available to respond immediately, other tactical medic programs are comprised of individuals who may or may not be on duty, who may be unavailable performing routine fire department or EMS duties, and who may have logistical challenges getting their ballistic protection and specialized equipment to the incident.

The tactical medic policy also reaches a breaking point when the incident requires more tactical medics than are available. While tactical medics are responding to the incident, or until sufficient tactical medics are available, the likely outcome will be delayed fire department access to the warm zone.

6. Collaborative

A tactical medic deployment is collaborative. SWAT team members protect the tactical medics; tactical medics provide immediate life saving interventions to injured SWAT team members. Tactical medics and SWAT team members also have good unit cohesion from regularly working and training together. In a novel, multi-hazard environment, this work history will provide a strong foundation for tactical medics and SWAT team members to work cooperatively to overcome novel challenges.

7. Cost

Tactical medic programs are expensive. Tactical medics require equipment, training, possibly a vehicle, and a considerable amount of administrative support. Jurisdictions with tactical medics who become injured or killed in the warm zone may also be subject to liability lawsuits and possible safety standard violations. These costs may be offset, however, in that the ability of tactical medics to enter the warm zone to perform immediate rescue and life saving medical interventions protects a jurisdiction against lawsuits alleging a breach of the ‘duty to care.’

8. Acceptability—Political and Cultural

Tactical medic programs have good acceptability. Tactical medics have a proven record of success and can be found in many fire departments. Due to the extensive

training, well-developed protocols, appropriate protective equipment, and law enforcement protection, fire service leaders are comfortable sending tactical medics into warm zones. Since tactical medics remain a part of their fire or EMS service when not deployed with a SWAT team, no political concerns exist about police/fire consolidation.

C. TACTICAL LEVEL CONSOLIDATION—INDIVIDUALS WITH POLICE/FIRE/EMS CAPABILITY WORKING AS A TEAM IN THE HOT ZONE

1. Safety

The likely outcome of a consolidated police/fire team at a paramilitary-style active shooter incident in a multi-hazard environment is mixed on the criterion of safety. Consolidated teams would have the highest level of training and equipment and would be able to defend themselves against assailants. However, consolidated teams would not be limited to the warm zone. Team members would be trained for tactical operations in the hot zone and would be at considerable risk of injury and death while operating therein.

Although operating in the hot zone is dangerous, the training level of consolidated teams would increase their safety in the hot zone: they would be trained and equipped to handle an evolving hot zone, they could perform immediate rescue and mitigation in the warm zone and, if necessary, hot zone, and, the level of professional response would obviate the need for bystander intervention.

2. Risk Management

The risk management outcome of a consolidated team is likely to be good. Members of a consolidated team would be able to take calculated risks to save lives in any type of active shooter environment.

3. Public Confidence

The likely outcome of consolidated teams is an increase in confidence in public safety officials. An elite unit designed to overcome any active shooter contingency is

unlikely to find itself in a situation in which it would be unable to take reasonable action. In addition, the specialized capabilities of consolidated teams make ‘clever exploitation’ very unlikely.

4. Adaptive to Multi-Hazard Environments, Especially Fire As a Weapon

The likely outcome of a consolidated team in a novel, multi-hazard environment is good. A consolidated team brings the technical capabilities of law enforcement and fire fighters together in a milieu designed to overcome any type of adversity. Consolidated teams would have the time, funding, and resources to train extensively on policies and equipment to anticipate and mitigate any active shooter contingency.

5. Expeditious

The likelihood of an expeditious response by a consolidated team is mixed. Once on scene, a consolidated team could rapidly respond to any hazard in the warm or hot zone. However, due to practical limits on the number of consolidated teams and the amount of time it takes to deploy, response delays may occur.

6. Collaborative

Consolidated teams are more than collaborative—they are integrated. In a novel, multi-hazard environment, these elite ‘public safety officers’ would bring all the skills they need into the warm zone and the hot zone. According to Sean Newman, consolidated teams may facilitate inter-agency collaboration in other operational areas as well: “If successful, joint fire-police units created specifically for complex, active shooter terrorist attacks would serve as a catalyst for better agency cooperation.”¹⁴⁵

7. Cost

Consolidated teams would be very expensive to maintain and operate. This kind of elite team would require advanced and continuous training, specialized equipment,

¹⁴⁵ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 2.

vehicles, and an extensive amount of administrative support. Jurisdictions with consolidated teams who have a member injured or killed in the hot zone or warm zone may also be subject to liability lawsuits and possible safety standard violations. These costs may be offset, however, in that the ability of consolidated teams to enter the hot zone to perform any required task would protect the jurisdiction from lawsuits alleging a breach of the ‘duty to care.’

8. Acceptability–Political and Cultural

Currently, the acceptability of consolidated teams in the fire service is poor. Although consolidated teams are still in the concept stage, to become reality, they must overcome several political and cultural obstacles.

Advocates of consolidated teams may find it difficult to justify the expense of to political leaders. One of the experts interviewed in Sean Newman’s thesis stated, “‘I like the integration idea, but I would hesitate to say that I would be behind a dedicated team, partly because they would be underused.’ He went on to say that it would be difficult to justify the costs and manpower commitment associated with integrated teams to department leaders.”¹⁴⁶

A second obstacle is the issue of police/fire consolidation. As Theodore Moody emphasizes in his NPS thesis, improved tactical-level integration may be seen as weakening the argument against public safety officers.¹⁴⁷ The active opposition by key fire service institutions makes significantly weakens the political acceptability of tactical level consolidated teams.

Finally, since consolidated teams are still in the concept stage, it is difficult to fully assess their acceptability to fire fighters, police officers, or fire service leaders. On the one hand, consolidated team members would operate under well-developed protocols, receive advanced training, be provided with appropriate protective equipment, and be

¹⁴⁶ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 48.

¹⁴⁷ Moody, “Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad,” 57.

capable neutralizing assailants. However, consolidated teams would operate in the hot zone. Fire service leaders may not be comfortable sending fire fighters—even with police officer training—into combat zones. It may also be difficult to persuade fire fighters to learn the combat skills and mindset necessary for hot zone operations.

D. FORCE PROTECTION—POLICE ESCORT FIRE FIGHTERS INTO THE WARM ZONE

1. Safety

The likely safety outcome of a force protection policy at a paramilitary-style active shooter incident in a multi-hazard environment is mixed. Fire fighters trained, equipped, and protected by a dedicated law enforcement team have taken steps to mitigate the risks of warm zone operation and are safer as a result. However, any policy that permits fire fighters to operate in areas of potential violence before the threat has been confirmed as neutralized puts fire fighters at risk of injury or death.

The force protection model enhances fire fighters safety if the hot zone evolves. If an active shooter incident evolves into a cold zone, the fire fighters and police officers in that area will have the training to improvise an adaptive force protection solution to minimize the risks to responders and patients.

The safety of force-protected fire fighters is significantly impacted by the availability of ballistic protection. A force protection policy may permit fire fighters to enter the warm zone without, or while waiting for ballistic protection, if immediate action is required. However, exposing fire fighters to potential violence in the warm zone of an active shooter incident without ballistic protection increases the risk of injury and death.

Another breaking point of the force protection policy is insufficient training. Policies and protocols are most effective when drilled regularly. Due to the cost, logistical challenge, and competing training priorities, interagency active shooter force protection drills may not occur with optimal frequency.

2. Risk Management

The likely risk management outcome of the force protection policy is good. Any responding fire fighters and police officers with appropriate training can take calculated risks to perform immediate rescues or mitigate life-threatening hazards in the warm zone.

3. Public Confidence

The likely effect on confidence in public safety officials of force-protected fire fighters is good. Any ad-hoc team of properly trained fire fighters and police officers can take immediate action in the warm zone. In addition, the tactical flexibility of force-protected fire fighters makes the ‘clever exploitation’ of fire fighter inaction unlikely.

4. Adaptive to a Multi-Hazard Environment, Especially Fire As a Weapon

The likely outcome of a force protection policy in a novel, multi-hazard environment is good. An ad-hoc team of fire fighters, including those with specialized expertise in hazardous materials, CBRNE, or structural collapse, can work in the warm zone with the protection of law enforcement officers to adapt to the novel challenges of a multi-hazard environment.

5. Expeditious

The likelihood of an expeditious response by a force-protected team of fire fighters is good. The force protection model is not limited by the availability of specialized teams. Any ad-hoc team of first-in fire fighters and law enforcement officers with the appropriate training will be able to work together based on a common set of policies and protocols. A force-protected team of fire fighters can begin operations in the warm zone as soon as personnel are available.

6. Collaborative

On the criterion of collaboration, the likely outcome of a force protection policy is good. A force-protection team combines the agency specific capabilities of law enforcement—neutralize the suspect and protected the unarmed—with the agency

specific capabilities of fire fighters—rescue and hazard mitigation. Whereas the collaborative capacity of specialized units is limited to the team members, the force protection model enables any group of properly trained fire fighters or police officers to collaborate.

7. Cost

The cost of the force protection policy is mixed. Although training fire fighters and police officers on policy and protocols could most likely be accomplished within existing training budgets, interagency training under realistic scenarios and the purchase of ballistic protection would have a significant financial impact.

Jurisdictions with fire fighters on a force-protection team injured or killed in the warm zone may also be subject to liability lawsuits and possible safety standard violations. These costs may be offset, however, in that the ability to enter the warm zone to perform any required task would protect the jurisdiction from lawsuits alleging a breach of the ‘duty to care.’

8. Acceptability—Political and Cultural

A force protection policy would have mixed political and cultural acceptability. The law enforcement escort model, which is similar to the force protection of fire fighters, is a fire service best practice at violent incidents of civil unrest. Public safety officials, fire service and law enforcement leaders, and the law enforcement and fire department cultures accept the escort model.

Some reluctance on the part of fire service leaders and incident commanders to apply the law enforcement escort model to the warm zone of a paramilitary-style active shooter incident may occur. Although force protected fire fighters would be trained and equipped to operate in the warm zone, fire service leaders may not be comfortable sending fire fighters—even with law enforcement protection—into areas of potential paramilitary violence.

The cultural acceptability of applying the force protection model to the warm zone of active shooter incidents in a multi-hazard environment has not been fully

explored. Data from a small survey conducted in the Puyallup, WA fire department and police department suggests that the force protection policy may have good acceptability. Participants in the survey were asked, “In your opinion, should Fire/EMS enter schools to rescue, treat immediate life threatening injuries, and extract shooting victims with a Law Enforcement Team?” Fifty-one percent of respondent fire fighters (20 of 39) said, “Yes, with proper training and life protecting equipment (ballistic vest).” Thirty percent of respondent fire fighters (11 of 39) stated that they were unsure at this point. In contrast, police officers were overwhelmingly supportive of the force protection policy. Ninety-two percent (23 of 25) of police respondents replied, “Yes, with proper training and life protecting equipment (ballistic vest).” Only 4% (1 of 25) of police respondents reported being unsure.¹⁴⁸

Finally, it may be difficult for public safety officials to justify training and equipment to prepare for the rare and unlikely event of a paramilitary-style active shooter incident in a multi-hazard environment. On the other hand, the force protection model avoids the consolidation controversy.

¹⁴⁸ Donovan, “Puyallup Fire & Rescue’s Response to Active School Shooting Incident,” 24, 26 49.

VII. FINDINGS

A. THE FIRE SERVICE HAS A CULTURE OF CALCULATED RISK ACCEPTANCE

During paramilitary-style active shooter incidents in a multi-hazard environment, fire fighters have taken risks to save lives. It should be expected that during the next paramilitary style attack, fire fighters will take risks to save lives—regardless of policy. Theodore Moody, who interviewed Mumbai fire fighters for his Naval Postgraduate School thesis, made a similar finding, “Fire service personnel in Mumbai, faced with the prospect of people trapped, injured, and dying inside the Taj Mahal Hotel and at other attack locations, chose to act immediately; we can be sure that fire fighters in the U.S. will do the same.”¹⁴⁹

B. AN EXPEDITIOUS RESPONSE WILL SAVE LIVES

At Columbine and the 26/11 attack in Mumbai, the expeditious emergency response saved lives. The delayed response to Dave Sanders at Columbine and to Raymond Zach in Alameda County resulted in the unnecessary loss of life. The principles of the “golden hour” and tactical combat casualty care are based on empirical evidence that rapid medical intervention saves lives. The National Fire Protection Association Standard 1710 (2007 Edition) of four minute fire service response times to fires or other hazards is based on the evidence that rapid incident mitigation saves lives. At a paramilitary-style active shooter incident in a multi-hazard environment, an expeditious response will be necessary to save lives.

Sean Newman reached a similar finding based on the observations made by the fire and police experts he interviewed for his NPS thesis. For Mumbai-type attacks, “an expeditious response, more than capability/capacity, was more of a concern for emergency responders, especially if multiple attacks occur simultaneously.”¹⁵⁰

¹⁴⁹ Moody, “Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad,” 60.

¹⁵⁰ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 13.

C. CHILDREN AS VICTIMS

Another key finding is the recurring presence of children as victims of paramilitary-style active shooter incidents. Columbine, Beslan, Virginia Tech, and Norway all involved young students. The bombing of the Oklahoma City Murrah federal building in 1995 and the thwarted paramilitary style plot against the military entrance processing station in Seattle (2011), involved day cares. Fire fighters will risk a lot to save children. A zero-risk policy when children’s lives are in the balance is not consistent with the fire service principles of risk management, public expectations, or the legal ‘duty to care.’

D. INACTION LEADS TO A LOSS OF CONFIDENCE IN PUBLIC SAFETY OFFICIALS

A key finding of this inquiry is the loss of confidence in public safety officials at “standby” incidents—even if no adverse consequences occur. The incident of fire fighter inaction in Aurora, CO did not result in preventable injury or death. Yet, the perceived failure led to a reversal of the ‘scene safe’ protocols. When adverse consequences occur, the public outcry is swift and severe. For example, inaction when the lives of children are at stake will have catastrophic consequences for a community and its public safety officials.

A common theme in most of the key events described in Chapter III is the availability of video footage—some of it in real time. Advances in video technology will compound the consequences of inaction on confidence in public safety officials. Since many cell phones now have cameras and/or video cameras, most fire fighter operations can be recorded and made publicly available for critique within moments of the event. Paramilitary-style active shooter attacks, which are designed to attract media coverage, may even be designed in a way that highlights fire fighter inaction. Real time footage of fire fighter inaction at an emergency can create a visceral reaction among viewers that could have lasting consequences for a fire department.

E. THE “STANDBY” POLICY IS NOT, IN PRACTICE, ZERO RISK

Of the four policy alternatives, one would expect that the “standby” policy should result in the best safety for fire fighters. If fire fighters observe the “standby” policy and remain in the cold zone until the scene is secure, then they should be safe.

A surprise finding, however, is the danger to fire fighters that occurs at the breaking points of the “standby” policy. Due to an evolving hot zone or the fire service culture of calculated risk acceptance, a likely outcome of the “standby” policy is that fire fighters will enter the warm zone if immediate action is required. At the fire in Freddy’s Fashion Mart, the shootings at Columbine, the Jewish Federation shooting in Seattle, and the 26/11 attacks in Mumbai, fire fighters took action in the warm zone. At the next paramilitary-style active shooter attack in a multi-hazard environment, it should be expected that firefighters would take action in the warm zone—regardless of policy.

F. “STANDBY” POLICIES DO NOT PREPARE FIRE FIGHTERS FOR THE WARM ZONE

If fire fighters are not permitted or trained to enter the warm zone of an active shooter incident, then they will not be familiar with best practice protocols or possess equipment to mitigate hazards. Consequently, fire fighters who take action in the warm zone may be unequipped, uninformed about the nature of the risks, and untrained in the safest and most effective ways to operate. In addition, fire fighters who enter the warm zone in violation of policy may not fully communicate their actions, location, or situational awareness with command—which would only further imperil their rescue efforts. Sean Newman reached a similar finding in his NPS thesis, “Firefighters and emergency personnel may operate in a chaotic, active shooter environment to address life-safety, regardless of a lack of operating procedures and protocols.”¹⁵¹

¹⁵¹ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 24.

G. ALL RESPONDERS MUST BE TRAINED TO ADAPT TO EVOLVING TERRORIST TACTICS

Fire fighters at the next paramilitary-style active shooter attack are likely to be confronted with novel terrorist tactics in a multi-hazard environment, which will test the first-in units in unprecedented ways. A thinking enemy who has learned from and adapted to the weaknesses in U.S. response protocols will be trying to kill for as long as possible. To overcome these challenges, adaptation by on-scene units will be critical. Safety, effectiveness, and “pre-incident innovation”¹⁵² are all improved with practice and familiarity.

Since it is impossible to predict in advance which individual fire fighters or law enforcement officers will be first in to a paramilitary style attack, all responders must be appropriately trained. This has the added benefit that if a skill is needed to mitigate an innovative constellation of hazards in the warm zone, and a fire fighter with that skill is among the responding fire fighters, then that fire fighter can be made available in the warm zone. Furthermore, since paramilitary style attacks require law enforcement officers and fire fighters to work together, a critical aspect of that training is inter-department collaboration. Sean Newman, in his NPS thesis, made similar findings about the importance of department-wide training in both agencies, “The key finding, which may or may not, contrast with the idea of a dedicated interagency response unit, calls for respective agency-wide awareness and training for a Mumbai style event, from the command to unit level.”¹⁵³

H. POLICE/FIRE COLLABORATION OVERCOMES SINGLE-AGENCY MITIGATION STRATEGY LIMITATIONS

At paramilitary-style active shooter incidents, fire departments and law enforcement agencies have complementary capabilities that can overcome single-agency limitations. Law enforcement officers are not generally trained to provide immediate medical care or mitigate fire used as a weapon. Fire fighters are not trained or equipped

¹⁵² Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 44.

¹⁵³ *Ibid.*, 15.

to operate in potentially violent conditions. Working together, however, fire fighters can save lives and mitigate hazards in the warm zone under the protection of police officers.

I. BARRIERS TO COLLABORATION REMAIN

It is possible that the collaboration at previous paramilitary-style active shooter incidents is a byproduct of the intensity of the event. Responders are more likely to put aside organizational differences when a crisis demands immediate action. During routine interaction, in contrast, collaboration may be made more difficult by politics, rivalries, cultural clashes, labor-relations disagreements, and competition for scarce resources. In the absence of a crisis, it is hard to sustain commitment to making difficult organizational changes necessary for collaboration to succeed.

Despite the awareness that law enforcement and fire department collaboration is critical at paramilitary active shooter incidents, few departments have formal collaborative policies or training in place. In fact, Sean Newman indicated in his NPS thesis that even though FDNY and NYPD are the two most experienced U.S. fire and police agencies with actual terrorist attacks, “Fifteen years after Freddy’s [1995], many of the inter-agency operational and communication deficiencies revealed during the incident have yet to be resolved...”¹⁵⁴

¹⁵⁴ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 24.

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VIII. CONCLUDING RECOMMENDATIONS

A. THE FIRE SERVICE MUST ADOPT A NEW CORE COMPETENCY: WARM ZONE OPERATIONS AT PARAMILITARY STYLE ATTACKS

The calculated acceptance of risk is an integral part of the fire service culture and tradition. The fire service rules of engagement—risk a lot, in a calculated way, to save savable lives—reflect a careful balancing of safety and action. Calculated risk taking is what the public expects of fire fighters, and it is what the fire service expects of its fire fighters.

The actions of the fire fighters who responded to the 9/11 terrorist attacks are instructive on this point. On 9/11, the fire fighters of the FDNY and the National Capital Region went in to fight the fires and assist the evacuation despite the risk and uncertainty. These fire fighters did not stand by outside of the collapse zone and wait for the incident to stabilize. Although the FDNY paid a heavy price, their calculated risk taking saved countless lives and epitomized the best qualities of the fire service.

It can be argued that the fire service rules of engagement only apply to hazards that are core competencies for the fire service—such as the fires and risks of structural collapse on 9/11. According to this argument, gunfire, explosions, and a thinking adversary at a paramilitary style attack are not risks that the fire service is trained or equipped to handle.

This argument overlooks the fire service’s storied history of incorporating new core competencies. Hazardous materials, technical rescues, infectious disease, and CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) weapons—all have successfully been incorporated into the fire service mission. For each new hazard, the fire service has trained its responders and provided policies and equipment to mitigate the risks in a way that balances the need to save lives with fire fighter safety.

The incorporation of new core competencies flows logically from the nature of the fire service mission. If fire fighters are to protect life and property from fire, medical emergency, and other disasters, then the fire service cannot ignore new and evolving

historical trends. Although it may be difficult to recognize emerging historical trends in the early stages, changes in technology and society inevitably affect the fire service mission.

The evolving nature of paramilitary style attacks is an emerging historical trend that directly impacts the fire service. As more paramilitary-style active shooter incidents occur in the future, the presence of—and the need for—fire fighters in the warm zone will become increasingly apparent. The importance of this finding cannot be overemphasized: A predictable outcome of paramilitary-style active shooter incidents in a multi-hazard environment is the need for fire fighters in the warm zone.

With the incorporation of each new core competency into the fire service, fire fighters have demonstrated that they can learn to take calculated risks to save lives. Fire fighters can be trusted to enter the warm zone of a paramilitary style attack safely when compelling reason occurs.

B. THE FIRE SERVICE MUST ACKNOWLEDGE THE BREAKING POINTS OF THE “STANDBY” POLICY

When the next paramilitary-style active shooter incident occurs in the United States, the standby policy may lead to unnecessary loss of life and set fire fighters up for failure. In a moment of great national trauma playing out on television screens around the world, when innocent men, women, and children need rescue—when fire fighters are needed most—fire fighters may be standing by two blocks away. Such inaction is not consistent with the fire service mission, the expectations of the nation, or with the tradition of courage in the face of catastrophic terrorism embodied by the fire fighters of the National Capital Region and the FDNY on 9/11.

The “standby” policy is also likely to fail on what appears to be its strongest quality—fire fighter safety. The findings of this inquiry unequivocally demonstrate that the fire service expects its fire fighters to act when lives hang in the balance—even if the “standby” policy dictates otherwise. After the perceived failure of the Aurora, CO, ‘scene safe’ protocols, a Denver Fire spokesman unintentionally articulated the hypocrisy of the

“standby” policy: “We want police to secure the scene first because we can't defend ourselves. But if someone has fatal injuries, we will ignore the policy and go in. We have plenty of guys who will break protocol in that case and just go in.”¹⁵⁵

The fire service engages in a dangerous charade when it relies on a “standby” policy it expects to be ignored. Once the fire service admits the inevitability—if not the expectation—of fire fighters operating in the warm zone to make immediate rescues during paramilitary attacks, then the true danger of the “standby” policy is revealed, the risks to fire fighter safety from the lack of training, equipment, and protocols.

The willful blindness of the “standby” policy to warm zone operations during paramilitary style attacks prevents the fire service from recognizing the need to provide fire fighters with the tools and training to operate safely at these incidents. The absence of such policies and training places a tremendous burden on the first-in fire officers, as they will be required to make life or death decisions without guidance or instruction. In the past, when the fire service has incorporated new hazards into core competencies, fire fighters have been provided with training, equipment, and protocols to mitigate the risks in a way that balances the need to save lives with fire fighter safety. The fire service has not fulfilled its obligation to provide fire fighters with training, protocols, and equipment to operate with reasonable safety at a paramilitary style attack.

C. THE FIRE SERVICE SHOULD ADOPT A FORCE PROTECTION MODEL OF RESPONSE FOR PARAMILITARY STYLE ATTACKS

Force protection is the optimal fire department policy for safe and rapid access to victims in need of rescue or hazards in need of mitigation at paramilitary-style active shooter incidents in a multi-hazard environment. A review of the likely outcomes of the force protection model at a paramilitary style attacks is consistently good—and superior to the alternatives. A force protection policy allows calculated risk taking, is consistent with public expectations, is adaptive in novel multi-hazard environments, is expeditious, and is collaborative with law enforcement.

¹⁵⁵ Wolf and Sherman, “‘Scene Safe’ Protocol Keeps Aurora Fire Paramedics from Helping Man Bleeding to Death.”

Force protection stands out for the expeditiousness of its response. Most major metropolitan fire departments can have at least four fire fighters at the scene of an incident within four minutes. If another incident occurs simultaneously elsewhere in the jurisdiction, at least four more fire fighters will be on-scene within four minutes. The number of on-duty fire units in a city and its surrounding jurisdictions is the only limit on the expeditiousness of fire department response. If law enforcement response is similarly swift, then a force-protected team of fire fighters can be ready to enter the warm zone within minutes of incident onset. As the seconds tick away from the “golden hour” or a fire rapidly grows in size, the most expeditious response is a team of fire fighters protected by police officers. Although specialized teams may have greater capability than first-in fire units, they cannot compete in terms of expeditiousness.

The expeditiousness of the force protection model can be contrasted with the inevitability of fatal response delays of specialized teams. Although the shootings at Virginia Tech are considered a success of the tactical medic model, the circumstances of the shootings produced the life saving result—not the policy. The tactical medics were available to respond rapidly to the Norris Hall shootings only because they had been mobilized for the earlier shootings at West Ambler Johnston. If the tactical medics had not been activated for the earlier shooting, their response to Norris Hall would have been delayed, and a number of students may have died in the 19 minutes it took for SWAT teams to make the scene secure enough for the first in fire fighters.

The response delay with specialized teams is a recurring theme in studies on paramilitary style attacks. According to Theodore Moody in his NPS thesis, “Delays are inherent with specialized teams, and delays cost lives and provide attackers time to create a tactical advantage.”¹⁵⁶ Sean Newman made a similar observation in his NPS thesis,

¹⁵⁶ Moody, “Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad,” 46.

“Even with the appropriate training, the police source anticipates that the integrated team could not be formed and ready to enter a hostile environment fast enough for most active shooter incidents.”¹⁵⁷

The force protection model also overcomes the other key weaknesses of specialized teams. Whereas tactical medics must remain in close medical support of their SWAT team and are limited in a multi-hazard environment, force protected fire fighters may act immediately in novel multi-threat environments. Whereas consolidated teams are controversial and still in the conceptual phase, the ‘escort’ model of force protection is familiar to fire fighters and police officers and has proven its value during civil unrest.

Force protection for fire fighters in the warm zone of a paramilitary-style active shooter incident has three primary weaknesses. The application of the ‘escort’ model of force protection to active shooter incidents is a relatively new context in the fire service. Although reasons exist to believe that the fire service would accept a force protection model—acceptance of the similar ‘escort’ model at incidents of civil unrest and preliminary survey results—development of this policy is still in its early stages.

The acceptance of the force protection model may become stronger over time as the fire service learns from paramilitary-style active shooter incidents. Furthermore, questions of acceptability and best practices for force protected fire fighters in the warm zone may prove to be valuable lines of future research.

The second weakness of the force protections model is the availability of ballistic protection. The cost of providing ballistic protection for every fire fighter, or even making sets of ballistic protection available on each fire apparatus, is prohibitive for many jurisdictions.

It may be possible to overcome this weakness with creative solutions that provide fire fighters in the warm zone with an appropriate level of protection. One option is caches of body armor that can be rapidly deployed in the event of a paramilitary-style active shooter incident. Other options may also be investigated, such as dual use police

¹⁵⁷ Newman, “Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism,” 43.

riot shields that can serve as bullet-resistant cover, which may be another area of future research that could significantly improve fire fighter safety at active shooter incidents.

The third weakness of the force protection model is the challenge of justifying the expense of training and equipment to prepare for the rare and unlikely event of a paramilitary-style active shooter incident in a multi-hazard environment. This may be the most difficult challenge to overcome.

The justification for the expense of preparing for paramilitary style attacks should become more evident as the fire service educates its communities about the threat. Paramilitary-style active shooter incidents in a multi-hazard environment, like earthquakes, are rare events. However, they are both well-identified hazards for which fire departments must be prepared. After the shootings at Columbine and the 26/11 attacks in Mumbai, public safety officials cannot claim ignorance of this threat. Failing to prepare in the hope that ‘It won’t happen here’ is not a reliable policy approach.

The World Trade Organization (WTO) riots in 2000, also known as the ‘Battle in Seattle,’ are instructive on this point. One reason that the City of Seattle was not prepared for the level of violence was the belief that Seattle was different—riots would not happen here. The Seattle Police Department (SPD), in its WTO after action report, observed, “In retrospect, SPD commanders put their faith in historical precedent... we relied on our knowledge of past demonstrations, concluding that the ‘worst case’ would not happen here.”¹⁵⁸ After the worst case did occur, the Seattle Police Department resolved not to make the same mistake again, “In retrospect, we relied too much on our collective memory of recent history (‘fighting the last war’) and placed too little credence on intelligence that ultimately proved to be accurate (‘the new war’). In the future, SPD must be the bearer of bad news and, quite simply, assert serious misgivings about missions where there is not a realistic expectation of success.”¹⁵⁹ Fire departments would be well

¹⁵⁸ Clark Kimmerer, “The Seattle Police Department After Action Report,” World Trade Organization Ministerial Conference, Seattle, Washington, November 29–December 3, 1999, Seattle Police Department, April 4, 2000, 4.

¹⁵⁹ *Ibid.*, 8–9.

served to heed the experience of the Seattle Police Department and assert serious misgivings about underfunding preparations for a paramilitary style attack because they ‘will not happen here.’

D. JOINT POLICE/FIRE TASK FORCE ON PARAMILITARY STYLE ATTACKS

Development of a robust fire service response policy to paramilitary-style active shooter incidents in a multi-hazard environment is in its early stages. Although key patterns are beginning to emerge, a considerable amount of work remains to be done. The decentralized nature of the fire service continues to work against the development of a well-developed policy. Isolated fire departments may be innovating partial solutions to some of the challenges, but no formal clearinghouse to share those lessons exists.

A key obstacle to fire service response policy development is the need for inter-agency cooperation with law enforcement. Few formal inter-agency linkages exist to disseminate the lessons that law enforcement is learning in the development of active shooter protocols. Furthermore, aside from the trial and error of inter-agency drills and exercises on paramilitary style attacks, few forums exist for police and fire to work collaboratively on this issue.

Two decades ago, the fire service and law enforcement confronted a similar challenge—consolidating and refining policies and procedures to deal with civil unrest. After the April 1992 Los Angeles riots that occurred in the wake of the Rodney King verdict, the Federal Emergency Management Association (FEMA) and the United States Fire Administration brought together fire chiefs, police chiefs, and experts from around the nation to answer that challenge. The task force was a model of successful collaboration, “For the first time in recent memory, police and fire executives were able to sit and work together, to voice their concerns and wishes, and to come to a basic agreement on how their personnel can best cooperate in the field.”¹⁶⁰

¹⁶⁰ “Report of the Joint Fire/Police Task Force on Civil Unrest,” Preface.

Today's challenge is consolidating and refining policies and procedures to deal with paramilitary style attacks. The threat to homeland security from a paramilitary style attack is clear and gaps in fire service response have been identified. A joint police/fire task force—before, rather than after, such an attack occurs in the United States—may be called for once again.

LIST OF REFERENCES

- “1 Dead, 5 Wounded in Jewish Federation Shooting.” *Seattle Times*, July 28, 2006.
- Abbott, Karen, and Charley Able. “Daughter of Slain Teacher Agrees to \$1.5 Million; Questions Won’t Be Answered.” *Rocky Mountain News*, August 21, 2002.
<http://m.rockymountainnews.com/news/2002/Aug/21/sanders-settles-columbine-suit/>
- Armellino, Rick. “Protecting Citizens from Killers Takes Bravery, Aggression and Speed.” *PoliceOne.com*, December 3, 2007.
http://www.policeone.com/pc_print.asp?vid=1630799.
- Atwater, Paul. “Firefighters Do Whatever It Takes.” *Seattlepi.com*, September 18, 2003.
<http://www.seattlepi.com/default/article/Firefighters-do-whatever-it-takes-1124685.php>.
- Banda, P. Solomon. “Columbine Changed How Police React in Rampages.” *Washington Post*, April 19, 1999. http://www.washingtonpost.com/wp-dyn/content/article/2009/04/18/AR2009041802277_pf.html.
- Bardach, Eugene. *A Practical Guide for Policy Analysis*, 3rd ed. Washington, DC: CQ Press, 2009.
- Bergen, Peter, and Bruce Hoffman. “Assessing the Terrorist Threat.” *Bipartisan Policy Center*, September 10, 2010,
<http://www.bipartisanpolicy.org/library/report/assessing-terrorist-threat>.
- Bjelopera, Jerome P., and Mark A. Randol. “American Jihadist Terrorism: Combating a Complex Threat.” Congressional Research Service, December 7, 2010.
- Carafano, James Jay, and Jessica Zuckerman. “40 Terror Plots Foiled Since 9/11: Combating Complacency in the Long War on Terror.” *The Heritage Foundation*, September 7, 2011. <http://www.heritage.org/research/reports/2011/09/40-terror-plots-foiled-since-9-11-combating-complacency-in-the-long-war-on-terror>.
- Carter, Mike. “Two Indicted in Plot to Attack Military Center in Seattle.” *Seattle Times*, July 7, 2011.
- Davis, Kent. “Charlotte Fire Department Responses to Active Shooter Incidents—A Critical Analysis.” Applied Research Paper for the National Fire Academy Executive Fire Officer Program, July 2009.
- Davis, Robert. “Six Minutes to Live or Die: Many Lives Are Lost Across USA Because Emergency Services Fail.” *USA Today*, May 20, 2005.
<http://www.usatoday.com/news/nation/ems-day1-cover.htm>.

- DeJoy, David M., Todd Smith, and Kumar Kunadharaju. "Line-of-Duty Deaths Among U.S. Firefighters: An Analysis of Fatality Investigations." *Accident Analysis and Prevention* 43 (2011): 1171–1180.
- Donahue, Amy K., and Robert V. Tuohy. "Lessons We Don't Learn: A Study of the Lessons of Disasters, Why We Repeat Them, and How We Can Learn Them." *Homeland Security Affairs Journal* II, no. 2 (July 2006): 11.
- Donovan, Patrick. "Puyallup Fire & Rescue's Response to Active School Shooting Incident." *National Fire Academy* (July 2008): 24, 26, 49.
- Douglas, Dave. "Jumping into the Fire." *Police: The Law Enforcement Magazine*, October 2002.
<http://www.policemag.com/Channel/SWAT/Articles/Print/Story/2002/10/Jumping-into-the-Fire.aspx>.
- Everyone Goes Home. Firefight Life Safety Initiatives. 16 Firefighter Life Safety Initiatives. <http://www.everyonegoeshome.com/initiatives.html>.
- . <http://www.everyonegoeshome.com>.
- Giduck, John. "Terror at Beslan." *Archangel Group*, 2005.
- Ginsburg, Aimee. "Inside Hero Nanny's Dash to Save Young Boy During Mumbai Massacre." *New York Daily News*, December 5, 2008.
- Hansen, Randy. "Jewish Federation MCI, Post-Incident Analysis." (n.d.). Unpublished PowerPoint Presentation.
- Hegarty, Peter. "Alameda: City Reviews Emergency Response After Drowning." *Insidebayarea.com*, May 31, 2011. http://www.insidebayarea.com/top-stories/ci_18177424.
- . "Family of Calif. Man Who Drowned File Lawsuit." *The Oakland Tribune*, October 14, 2011.
- International Association of Fire Chiefs and International Association of Fire Fighters. "Police and Fire Consolidation; An Ineffective Use of Resources." Fairfax, VA, 2009. <http://www.iaff.org/09news/040209PSO.htm>.
- Iselin, Blake, and E. Reed Smith. "Arlington County, VA, Task Force Rethinks Active Shooter Incident Response." *Journal of Emergency Medical Services*, November 30, 2009. <http://www.jems.com/print/4622>.

- Ith, Ian. "Water Rescue Divides Cops, Firefighters Again." *Seattle Times*, September 8, 2003.
<http://community.seattletimes.nwsourc.com/archive/?date=20030908&slug=policefire08m>.
- Jefferson County Sherriff's Office. "The Columbine High School Shootings: Timeline of Events." May 16, 2001.
<http://extras.denverpost.com/news/colreport/columbinerep/pages/NARRATIVE%20Time%20Line.htm>.
- JP 1-02. DoD Dictionary of Military and Associated Terms, November 8, 2010.
- "Judge Dismisses All but One Columbine Lawsuit." *CNN.com*, November 27, 2001.
http://articles.cnn.com/2001-11-27/justice/columbine.lawsuit_1_dave-sanders-peter-grenier-jefferson-county-school-district?_s=PM:LAW.
- Kimmerer, Clark. "The Seattle Police Department After Action Report." World Trade Organization Ministerial Conference, Seattle, Washington, November 29–December 3, 1999, Seattle Police Department, April 4, 2000.
- Kohn, David. "What Really Happened at Columbine?" *CBS News*, April 29, 2009.
<http://www.cbsnews.com/stories/2001/04/17/60II/main286144.shtml>.
- Mala, Elisa, and J. David Goodman. "At Least 80 Dead in Norway Shooting." *New York Times*, July 22, 2011.
www.nytimes.com/2011/07/23/world/europe/23oslo.html?_r=1&ref=Norway.
- Mata, Vinicio. "The Contribution of Police and Fire Consolidation to the Homeland Security Mission." Master's thesis, Naval Postgraduate School, March 2010.
- McElroy, Frank. "Firefighters' Role at School or Workplace Violence Incidents." Applied Research Paper for the National Fire Academy Executive Fire Officer Program, February 2000.
- McGinty, James. "Active Shooters: Historical Perspectives and Challenges." Slideshow dated September 27, 2011. Slide 22. <https://connect.hsin.gov/asaware2011>.
- Moody, Theodore. "Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of Urban Jihad." Master's thesis, Naval Postgraduate School, September 2010.
- Mudd, Philip. "Evaluating the Al-Qa-ida Threat to the U.S. Homeland." *CTC Sentinel* 3, no. 8 (August 2010): 3.
- Murphy, Kim. "Aching to Know." *Los Angeles Times*, August 27, 2005.
- National Fire Protection Association Standard 1500 (2007). Annex A, Section 8.3.2.

- New York City Police Department. "Active Shooter: Recommendations and Analysis for Risk Mitigation." (n.d.).
<http://www.nyc.gov/html/nypd/downloads/pdf/counterterrorism/ActiveShooter.pdf>.
- Newman, Sean. "Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism." Master's thesis, Naval Postgraduate School, March 2011.
- Nohbojit, Roy. "Mumbai Terror Attacks—The International Experience with Terrorist Use of Explosives." PowerPoint Presentation. November 7, 2011 at Tale of Our Cities Conference, Seattle, WA.
- Northwest Region EMS and Trauma Care Council. "Northwest Region Emergency Medical Services & Trauma System Strategic Plan July 2009–June 2012." Submitted September 15, 2008,
<http://www.doh.wa.gov/hsqa/emstrauma/download/nwrplan.pdf>.
- Norton-Taylor, Richard, and Owen Bowcott. "'Mumbai-Style' Terror Attack on UK, France, and Germany Foiled." *The Guardian*, September 2010.
<http://www.guardian.co.uk/world/2010/sep/29/terror-attack-plot-europe-foiled>.
- "Norway's Black Friday: A Chronology of the Attacks." *Der Spiegel*, July 25, 2011.
<http://www.spiegel.de/international/europe/0,1518,776437,00.html>
- NYPD Intelligence Division. "Mumbai Attack Analysis: Information As of December 4, 2008." <http://info.publicintelligence.net/nypdmumbaireport.pdf>.
- Perlez, Jane. "For Pakistan, Attack Exposes Security Flaws." *New York Times*, March 4, 2009.
- "Profile: Anders Behring Breivik." *BBC News Europe*. November 29, 2011.
<http://www.bbc.co.uk/news/world-europe-14259989>.
- Rabasa, Angel, Robert D. Blackwill, Peter Chalk, Kim Cragin, C. Christine Fair, Brian A. Jackson, Brian Michael Jenkins, Seth G. Jones, Nathaniel Shestak, and Ashley J. Tellis. "The Lessons of Mumbai." *RAND Corporation*, January 9, 2009.
- "Report of the Joint Fire/Police Task Force on Civil Unrest: Recommendations for Organization and Operations during Civil Disturbance." FEMA and USFA, FA-142, February 1994.
- "Rescue Task Force." The Arlington County Fire/EMS Medical Protocols for Emergency Medical Services Providers, Appendix #10, n.d.
- Riedel, Bruce. "AQAP's 'Great Expectations' for the Future." *CTC Sentinel*, August 2011.

Rizer, Arthur, and Joseph Hartman. "How the War on Terror Has Militarized the Police." *The Atlantic*, November 7, 2011.

Roberts, Mary Rose. "On the Front Line." *Fire Chief Magazine*, August 1, 2010.
<http://firechief.com/ems/paramedic-cross-training-201008/>.

Rosegrant, Susan. "The Shootings at Columbine High School: Responding to a New Kind of Terrorism." Kennedy School of Government Case Program, C16-01-1612.1, 2001.

———. "The Shootings at Columbine High School: Responding to a New Kind of Terrorism Sequel." Kennedy School of Government Case Program, C16-01-1612.1, 2001.

Seattle Fire Department Mission Statement.

Seattle Fire Department. Policy and Operating Guidelines. Section 4004.

UASI Blog. <http://urbanareas.org/blog/2011/12/16/thompson-statement-opposing-omnibus-conference-report-and-draconian-cuts-to-first-responders/>

"Unnoticed Heroes on Mumbai Attack: Fire Fighters." *Indian Express*, November 29, 2008. <http://www.indianexpress.com/news/unnoticed-heroes-on-mumbai-attack-fire-fighters/392212/>.

Virginia Tech Review Panel. "Mass Shooting at Virginia Tech, April 16, 2007. Addendum to the Report of the Review Panel." November 2007.

"Wanton Violence at Columbine High School." United States Fire Administration (USFA) Technical Report Series, April 1999.

Wolf, Jeffrey, and Deborah Sherman. "'Scene Safe' Protocol Keeps Aurora Fire Paramedics from Helping Man Bleeding to Death." *9news.com* (NBC), November 10, 2010.

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