

NATIONAL SECURITY FELLOWS PROGRAM

# Urban Blind Spots

## Gaps in Joint Force Combat Readiness

Kenneth K. Goedecke

William H. Putnam



HARVARD Kennedy School

**BELFER CENTER**

for Science and International Affairs

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Cover Photo: Spc. Alec Nitollama, a combat engineer with 65th Brigade Engineer Battalion, 2nd Infantry Brigade Combat Team, 25th Infantry Division, directs his squad through a breach point in the wire during a Bangalore wire breach range August 30, 2019 at Schofield Barracks, Hawaii.  
(US Army Photo)

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**Spc. Alec Nitollama, a combat engineer with 65th Brigade Engineer Battalion, 2nd Infantry Brigade Combat Team, 25th Infantry Division, directs his squad through a breach point in the wire during a Bangalore wire breach range August 30, 2019 at Schofield Barracks, Hawaii.**

US Army Photo

# Introduction: Wars are Fought Where People Live

*Cities have always been centers of gravity, but they are now more magnetic than ever before. Once the gatherers of wealth, the processors of wealth, cities and their satellite communities have become the ultimate creators of wealth. They concentrate people and power, communications and control, knowledge and capability, rendering all else peripheral. They are also the post-modern equivalent of jungles and mountains—citadels of the dispossessed and irreconcilable. A military unprepared for urban operations across a broad spectrum is unprepared for tomorrow.<sup>1</sup>*

—Ralph Peters

The world today is urbanizing at the fastest rate in history, especially in the developing world. Sixty percent of the world's population will live in urban environments by 2030.<sup>2</sup> Today's urban areas continue to grow in size, but more importantly, they are expanding into all warfighting domains to include air, sea, land, space, and cyber. These urban locales can have skyscrapers that dominate skylines, subterranean networks such as sewers or underground train systems that stretch for miles, and mobile phones and internet connections that allow for instant communication with the entirety of the outside world. These cities, especially in the developing world, are progressively becoming the dominant centers of social, diplomatic, political, and economic activity in their countries. Indeed, between 2014 and 2016, the 300 largest urban areas in the world accounted for 36 percent of global employment growth and 67 percent of global gross domestic product increases.<sup>3</sup>

These trends will continue as the 21<sup>st</sup> Century progresses. Urban areas will increasingly intersect with United States (US) national security interests whether it be part of the chess board of renewed great power competition or because the US is trying to support a friendly government in a contested

region. These areas will be important because “urban areas are often absolutely critical strategic objectives...that have a political value that is of much greater strategic importance than the material military advantage they provide.”<sup>4</sup> Whether or not the US decides to utilize its military to achieve its strategic objectives, the Joint Force (Army, Air Force, Navy, and Marines) must be prepared to conduct a variety of urban operations in support of US interests. These efforts could consist of anything from humanitarian efforts, battling a pandemic, supporting a friendly government against insurgents or terrorists, or conducting full spectrum combat operations.

The Joint Force, however, currently lacks a cohesive joint operating concept to conduct military operations in an urban environment because unlike the Army or Marine Corps which has an office assigned as an advocate for urban operations, the Joint Staff has not had such an executive agent since Joint Forces Command was dissolved in 2011.<sup>5</sup> At the conventional level, most of the service branches train at the tactical echelon on room clearing and how to capture a single building. There are few Army or Marine courses designed to build expertise for urban operations at the warfighter (company and below) and planner (battalion and above) levels. The majority of unit staffs at the battalion level and up do not train on how to maneuver their subordinate units in an urban environment. At the service level, the Navy and the Air Force currently lack an urban operations doctrine. The Army and Marine Corps are making efforts to improve upon the quality and quantity of urban training, but aside from service-level initiatives, the Joint Force is currently not at the level of readiness it should be for urban operations.

Of the significant, service-level initiatives, there is a focus on investigation and recognition of a problem or gap in preparedness as opposed to a resolution. General Ray Odierno, the former Army Chief of Staff, directed his Strategic Studies Group (SSG) to research megacities and the potential threat they posed to US forces in 2014.<sup>6</sup> The SSG published “Megacities and the United States Army: Preparing for a Complex and Uncertain Future.”<sup>7</sup> In one of its concluding paragraphs, this 28-page study declared: “The Army is currently unprepared. Although the Army has a long history of urban fighting, it has never dealt with an environment so complex and

beyond the scope of its resources.”<sup>8</sup> In 2014, a US Army study directed by the Army Chief of Staff determined the Army was not ready for urban operations. Although the study concentrated on megacities, its conclusions are relevant for all urban centers. The SSG effort was a notable one that created conversation, but unfortunately did not result in concrete and lasting changes to improve the Army’s readiness to conduct urban operations.

General Mark Milley, General Odierno’s replacement and the current Chairman of the Joint Chiefs of Staff, also believes the Army will fight in urban areas and has said so repeatedly. In 2017, General Milley said, “In the future, I can say with very high degrees of confidence, the American Army is probably going to be fighting in urban areas.”<sup>9</sup> General Milley also added that he believes the Army, “needs to man, organize, train, and equip the force for operations in urban areas, highly dense urban areas.”<sup>10</sup> The last two heads of the Army have understood the importance of urban combat and the fact that the Army is not properly prepared. Despite such high-profile attention and support, however, there has been little change. As a result, the Army continues to train for urban warfare much in the same manner as it did prior to 2014: at the company and below level.

The Army’s challenges with improving how it trains for urban operations are reflected throughout the Joint Force, as all services are operating from a service-specific perspective and not from a unified approach. The Marine Corps is pursuing a variety of urban initiatives, but they are largely uncoordinated with the other services, and both the Navy and the Air Force currently lack an urban operations doctrine as mentioned earlier. Future urban efforts will require more than a service-specific response. Activities in urban locales will require ground forces, such as the Marines and the Army, but also the ability to get those forces into theater. The Navy and Air Force will be needed for force projection, logistics, close air support, medical evacuation, and many other tasks. More than one service will be needed to successfully conduct urban operations in the future, whether it is a humanitarian mission or a conventional fight. The future of urban operations will be a joint effort because it will require two or more military departments to succeed. The current lack of any joint urban exercises or

training is preventing the Joint Force from being properly prepared for the next major urban operation.

The disconnect between recognition of gaps in readiness faced with the inevitability of the urban nature of future operations presents not only a say-do gap between senior leadership perspectives and actual training, but it also presents a significant blind spot in readiness if not resolved through a paradigm shift in how the Joint Forces prioritizes and integrates urban training throughout all services and echelons. Failure to rectify this urban blind spot greatly increases the risk of collateral damage, civilian casualties, friendly losses, and the possibility of mission failure.

Military planners face significant challenges when preparing for urban operations in the 21<sup>st</sup> century. On one hand, the Joint Force must maintain the ability to counter threats from a near peer enemy on a traditional conventional battlefield in a more rural setting. On the other hand, the Joint Force is likely to face either a near peer competitor or some other type of threat or mission in an urban environment for one simple reason: it is very difficult to avoid cities when the majority of the world's population is urban.

The Joint Force needs to develop capabilities, doctrine, and training that will give it an advantage in this extremely complex environment at the tactical and operational levels. Historically, the military has adapted conventional capabilities to develop advantages in an urban environment, but the size, ubiquity, and complexity of today's urban terrain require dedicated analysis and preparation. This paper offers military planners and policy makers a starting point for understanding the need for developing a cohesive strategy to ensure the Joint Force is able to successfully reduce its urban blind spot and effectively conduct urban operations in support of US national security interests. Given the rapid urbanization of the 21<sup>st</sup> century and how cities are increasingly the dominant social, political, diplomatic, and economic centers, the Joint Force must take measures to address shortfalls across all services and echelons to be ready to meet future urban challenges in all warfighting domains. To continue the status quo is simply unacceptable.

# Chapter 1: The World is Becoming More Urban and Coastal

*At the turn of the century in 2000, there were 371 cities with 1 million inhabitants or more worldwide. By 2018, the number of cities with at least 1 million inhabitants had grown to 548 and in 2030, a projected 706 cities will have at least 1 million residents.*<sup>11</sup>

—United Nations, Department of Economic and Social Affairs

The world's population is becoming more urbanized, with the highest rates of growth being in coastal, or littoral, areas. Urban areas are also more complex than they were just a few decades ago. They have an unprecedented level of interconnectedness and complexity brought about by technological advancements. Military operations are increasingly occurring in and around these complicated urban areas, driving the need for renewed emphasis of understanding urban locales and how to operate in and around them.

## **An Urbanization Primer: Past, Present, and Future**

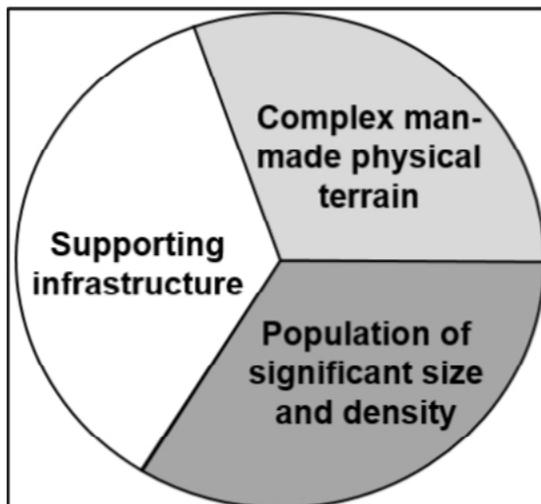
For the purpose of this study, it is important to define an urban area. Joint Publication (JP) 3-06 *Joint Urban Operations* states, “Urban areas are frequently defined according to size, from villages of fewer than 3,000 inhabitants to large cities with populations of over 100,000. Large cities vary enormously in size, ranging in population from 100,000 to over 20,000,000 and in area from several to hundreds of square miles.”<sup>12</sup> This study uses the broad definition above, spanning from villages to extremely large cities.

It is also important to draw a distinction between *urban areas* and *cities*. This is essential for two reasons, both of which require a change in perspective in order to frame the subject correctly. First, on the lower end of the spectrum,

a small town or village today is more complex than one just a few decades ago due primarily to unprecedented levels of connectedness brought about by technology. Although it may not have a population large enough to be called a *city*, it meets every definition of an urban area, as detailed further below, and is therefore included for the purposes of this study. Second and most importantly, is how *cities* are viewed from a military perspective. From 500 B.C., when Sun Tzu advised against attacking cities to post-World War II doctrine<sup>13</sup> that advised avoiding, isolating, or bypassing cities, 2,700 years of bias steers military leaders away from conducting operations in cities. This section explores how cities have changed and why the Joint Force must shake loose the bias that steers military leaders away from conducting operations in cities, recognizing the inevitable intersection of cities, or more broadly, urban areas, and military operations.

JP 3-06 frames the urban environment as “an *urban triad* consisting of complex man-made physical terrain, a population of significant size and density and varying sociocultural groupings, and an infrastructure.”<sup>14</sup> Historically, each element of the triad is an enduring characteristic of the urban environment. However, there are notable changes in each element of the urban triad that have made military operations in urban areas shift from avoidable to inevitable.

**Figure 1-1:** The Urban Triad<sup>15</sup>



One of the most enduring, fundamental characteristics of any urban area, regardless of size or point in history is *complex man-made physical terrain*. Urban areas are and have always been, by the simplest definition, groups of man-made structures. The concept of *dense urban terrain* is, in fact, nothing new. However, throughout history, urban areas have grown increasingly more complex. Multi-story or high-rise buildings are the primary structural feature adding to the complexity of cities, creating dense, defensible space in, above, and in some cases below the structure. As JP 3-06 notes, “A 10-story building may take up the same linear space on a two-dimensional map as a small field, but the building has 11 times the actual defensible space—10 floors plus the roof and any associated subterranean structures.”<sup>16</sup>

Cities existed for thousands of years without rising more than a few floors. The *insulae*, or apartments, of ancient Rome and Ostia only rose about four stories. Nevertheless, the *insulae* were “a phenomenon of urban building that would not manifest itself again until the Industrial Revolution.”<sup>17</sup> The first skyscraper, the 10-story, 138-foot Chicago Home Insurance building, was built in 1885, when the discovery of iron and steel framing facilitated lighter, taller, stronger, and more fire-resistant structures than those supported by wood or masonry.<sup>18</sup> This discovery revolutionized the shape of cities to the extent that today, multi-story buildings can be found in almost any urban area worldwide.

Another enduring, fundamental characteristic of urban areas is *population density*. The fact that cities or urban areas are more densely populated than surrounding areas is nothing new. What is new, however, is an exponential increase in the number of cities worldwide, their proximity to the coast, the potential for natural disasters, and their location within developing and potentially unstable areas. The intersection of the above areas makes future military operations in urban areas highly probable.

In 1950, there were 78 cities in the world with one million inhabitants, and New York was the only city in the world that the United Nations would classify as a *megacity*, having a population of over 10 million people.<sup>19</sup> Since 1950, urban growth has been exponential, with 371 cities reaching

over one million people in 2000, 548 in 2018, and a projection of over 700 by 2030.<sup>20</sup> By 2030, an estimated 60 percent of the world will live in *urban agglomerations* defined as contiguous, built-up areas.<sup>21</sup>

Not only is the world becoming more urbanized, the population is becoming more *littoral*, or closer to the coast. According to ATP 3-06, “In 2013, more than 80 percent of the world’s population lived within 60 miles of a coast, while 75 percent of large cities were on a coastline.”<sup>22</sup> Littoralization of urban populations is perhaps the biggest driver for a Joint Force approach to urban operations. Of the likely or possible missions in urban areas, there are few, if any, missions that would or could be performed purely by one service.

Senior leaders at United States Pacific Command (PACOM) described the capabilities required for today’s potential missions as “a force ready to fight tonight and systematically apply and integrate asymmetric advantages and emerging capabilities.”<sup>23</sup> Projecting power to littoral, urban areas requires unique capabilities resident across all Services, making this a Joint issue.

These capabilities include forward positioning theater infrastructure capabilities and the use of prepositioned equipment and supplies. An integrated joint force also requires a force posture that prepositions expeditionary capability, supported by dynamic basing and a level of partnering with other agencies and coalition forces not yet achieved. U.S. capabilities such as special operations forces; anti-submarine warfare; air and space superiority; land forces equipped with weapon systems to hold an adversary’s air, sea, and land forces at risk; cyber teams; and unique intelligence, surveillance, and reconnaissance capabilities are critical to this posture.<sup>24</sup>

Proximity of urban populations to coastal areas brings other risks. Almost 60 percent of cities of a half million or more are at high risk of natural disaster.<sup>25</sup> According to a United Nations (UN) study, “of the 1,146 cities with at least 500,000 inhabitants in 2018, 679 (59 percent) were at high risk of exposure to at least one of six types of natural disaster, namely cyclones, floods, droughts, earthquakes, landslides and volcanic eruptions.”<sup>26</sup>

Urbanization is not merely a Western phenomenon; it is increasing in all regions of the world. The largest areas of urban growth are in littoral areas, especially in Asia and Africa. Per the UN, “Between 2018 and 2030, the number of cities with 500,000 inhabitants or more is expected to grow by 57 per cent in Africa and by 23 per cent in Asia.”<sup>27</sup> This growth intersects with the “arc of instability,”<sup>28</sup> a region from Asia through the Middle East to Africa to South America that is prone to terrorism, natural disaster, and political unrest. Increasing urbanization, especially in the developing world, is creating and will continue to create urban areas that are crowded, complex, coastal, and in some cases under or ill-governed.<sup>29</sup>

The third element of the urban triad, *supporting infrastructure*, is also an enduring, fundamental characteristic of urban areas. Sewage, water, and trash services have been common in cities for many generations, as have transit corridors for goods and services such as roads and ports. Subways, airfields, and electrical grids are somewhat newer, but have been common for close to 100 years. What is new, however, and demands attention, is an unprecedented connectedness and complexity due to technology, specifically the cell phone, the smart phone, the internet, and the personal computer. As will be discussed later, this increased connectedness and complexity led to a doctrinal shift in military thinking in the late 1990s from avoiding cities to embracing the inevitability of the intersection of military operations with urban areas. The continued, rapid increase in connectivity and technology since 2000, however, warrants special attention, as innovations are quickly outpacing military doctrine.

In summary, the elements of the urban triad— complex, man-made physical terrain; population density; and supporting infrastructure are nothing new. Each element is an enduring, fundamental characteristic of urban areas going back hundreds, if not thousands, of years. There are new aspects of each of these elements, though, that should be driving the Joint Force to develop a new approach to understanding urban areas. Cities have always had man-made structures, but only in the last century or so of history have cities grown *up* and down as well as out, adding significant complexity. Also, cities have always been dense population centers, but in the last half-century, exponential growth in urbanization has been largely in coastal areas prone to natural disaster and in the developing world prone

to under-governance. Finally, cities have had supporting infrastructure for thousands of years, but the explosion of technology in the last half-century and the unprecedented connectivity, complexity, and interconnectedness of cities, especially since the turn of this century continues to outpace doctrinal approaches.

Put into perspective, when the theorist Sun Tzu wrote *The Art of War* 2,700 years ago, cities over one million people did not exist. When Carl von Clausewitz penned *On War* almost 200 years ago, the world was still a century away from the first megacity. The concept of an ungoverned *feral city*<sup>30</sup> such as Mogadishu, Somalia did not exist in military theory until less than 20 years ago.<sup>31</sup> Despite the doctrinal shift in military thinking in the late 1990s from avoiding and bypassing cities, the US continues to examine urban conflict through an outdated, conventional, tactical lens and does not always appreciate that a variety of operations can occur in an urban area. One could argue that the Joint Force will not go into an urban area because it is too dangerous or that cities can be isolated and bypassed. America's adversaries have studied its operations and recognize that an urban environment can reduce or even negate its superior technology. This can be seen in an increasing use of "lawfare" by weaker opponents, a practice of purposefully positioning forces in cities to inflict civilian casualties, bringing condemnation.<sup>32</sup> Moreover, today's increasing urbanization will ensure that cities can no longer be isolated and bypassed. The Joint Force's adversaries will seek to negate its strengths and technological advantages by taking the fight to an urban environment.

# Chapter 2:

## The Intersection of National Security and Urbanization

*It would be incredibly naïve for anyone to think US forces would not operate in an urban environment at some point in the future.*<sup>33</sup>

—Professor Stephen Walt, Harvard University

An increasingly urbanized world will ensure that many operations the Joint Force engages in in the future will occur in an urban setting. In his impressive book *Out of the Mountains*, David Kilcullen wrote that “wars happen where people live.”<sup>34</sup> This roughly translates into the idea that people cause conflicts for a variety of reasons and that since most of the world’s populations are located in urban areas, future conflict will involve urban settings. Kilcullen’s quote is supported by the US Army’s recent release of its Multi-Domain Operations doctrine where it claims that “dramatically increasing rates of urbanization and the strategic importance of cities also ensure that operations will take place within dense urban terrain.”<sup>35</sup> This trend will likely continue in the long term as the world’s populace grows and its cities, especially in the developing world, become denser and the areas where the majority of political, economic, and developmental decisions are made in a country. These cities increasingly are centers of gravity in their countries and regions because they contain elements of governance, population, finance, and industry, and the Joint Force must develop a better understanding of how to effectively maneuver and operate in them.

However, not all urban operations will involve conflict. Some missions, such as humanitarian efforts or support to a pandemic outbreak, will require the Joint Force to engage in a more permissive environment. It is therefore essential that Joint Force planners utilize an urban lens when examining military operations in support of objectives related to national security interests. We have identified six scenarios that could cause the Joint Force to deploy to an urban area in support of US national security interests. They are Humanitarian Assistance/Disaster Relief (HA/DR),

a pandemic response, Foreign Internal Defense and Counter-Terrorism (FID/CT), Non-Combatant Evacuation Operation (NEO), a conventional fight against armed opposition, and Weapons of Mass Destruction (WMD) counter-proliferation.

## **Humanitarian Assistance/ Disaster Relief (HA/DR)**

The Joint Force has been involved in numerous HA/DR efforts this century in order to stabilize areas so they do not fall into insecurity and this trend is only likely to increase in the foreseeable future, given increasing climate change that could affect an area's crop production or because of devastating storms. HA/DR efforts not only demonstrate American values and a desire to help those in need, they also can garner goodwill and help stabilize a crisis area, which is in US national security interests. In 2010, President Obama sent the largest US military HA/DR response in history to Haiti to assist in the recovery from the 2010 Haitian earthquake, which killed an estimated 220,000 to 300,000 people and left over 1.5 million people displaced.<sup>36</sup> The earthquake devastated the presidential palace and destroyed 14 of the 16 government ministries, and also killed many government officials and employees. Port-au-Prince, the capital of Haiti with a metropolitan population of 1.3 million before the earthquake, was devastated.<sup>37</sup> Joint Task Force Haiti at its peak comprised of more than 22,200 US personnel, 33 Navy and Coast Guard vessels, and more than 300 aircraft, including a Brigade Combat Team from the 82<sup>nd</sup> Airborne Division.<sup>38</sup>

A second example of HA/DR efforts occurred in 2013 when the Joint Force supported a Philippine request for assistance after Typhoon Haiyan, purportedly the strongest storm on record at that time, caused significant damage to the archipelago.<sup>39</sup> The largest city affected was the provincial capital of Tacloban and the majority of its structures were destroyed. The US military's presence comprised over 13,000 troops, 66 aircraft, and 12 naval vessels and its efforts resulted in helping stabilize the region and helping the local population and authorities better deal with the crisis.<sup>40</sup>

Natural disasters, such as earthquakes, hurricanes, volcanic eruptions, and typhoons will continue to occur. Future HA/DR operations will probably result in the Joint Force going into additional urban areas because it is the most equipped force in the US government that has the ability to project force in a quick and efficient manner. It will be important for US forces to understand how to maneuver and conduct themselves in an urban setting, much as they had to do in Haiti and the Philippines, because urban areas suffering from some type of natural disaster present unique challenges not normally found in a more rural setting (larger population numbers, greater likelihood of disease outbreak, difficulties feeding the population, and civilian rescue operations). The Joint Force may be required to provide security, as well as key enabling functions such as engineer, medical, and logistics support to the affected population. It could find itself in a scenario like it did in Somalia in 1993 (when the mission started out peacefully but ended up becoming combative), Haiti in 2010 or the Philippines in 2013. The Joint Force may also find itself responding to a crisis like that of the 2011 Fukushima nuclear power plant debacle that occurred after a major earthquake in Tokyo or to a massive flood in Dhaka, Bangladesh. US HA/DR efforts can help build positive impressions of the US while also enhancing US soft power. The Joint Force needs to be prepared to project force rapidly, while also understanding how to operate in a permissive, semi-permissive, and non-permissive urban environment to support HA/DR efforts.

## **Response to Pandemic**

Increasing urbanization, especially in the developing world, has resulted in many cities having more people than they were designed to support.<sup>41</sup> One consequence of this has been the increased risk of diseases spreading rapidly that could lead to a pandemic, which is defined as “an outbreak of global proportions when a disease spreads across a wide geographical area and affects many people.”<sup>42</sup> A pandemic usually spreads past borders and becomes a regional, and potentially, worldwide challenge. The worst pandemic of all time was the 1918-1919 Spanish Flu outbreak which killed an estimated 50-100 million people.<sup>43</sup>

Infectious diseases and the potential outbreak of a pandemic have garnered attention as key national security concerns in at least the last four National Security Strategies. President Obama's 2010 National Security Strategy says, "The threat of contagious disease transcends political boundaries, and the ability to prevent, quickly detect and contain outbreaks with pandemic potential has never been so important."<sup>44</sup> The 2015 NSS claimed, "The spread of infectious diseases constitute a growing risk."<sup>45</sup> President Trump's 2017 NSS says, "Naturally emerging outbreaks of viruses such as Ebola and SARS, as well as the deliberate 2001 anthrax attacks in the United States, demonstrated the impact of biological threats on national security by taking lives, generating economic losses, and contributing to a loss of confidence in government institutions."<sup>46</sup> Pandemics are a national security issue and a worst-case scenario would be for one to break out in an urban setting in a developing region where the host government lacks the infrastructure to effectively deal with the outbreak.

In August 2006, the Department of Defense (DoD) released the *Department of Defense Implementation Plan for Pandemic Influenza*, its plan for responding to a pandemic for influenza.<sup>47</sup> This document delineated responsibilities and assumptions that DoD would take on in the event of an influenza pandemic; however, it can be applied to any pandemic. Some of these responsibilities include conducting Non-Combatant Evacuation Operations of non-infected US citizens from areas experiencing outbreaks and providing security in support of vaccine production and distribution.<sup>48</sup> The Joint Force would be responsible for executing such missions, and these tasks could occur in a pandemic in the US or abroad. An example of the latter occurred when the Joint Force supported operations in western Africa against the Ebola outbreak from 2013-2015.

Beginning in late 2013, the outbreak of Ebola in western Africa affected Guinea, Liberia, Sierra Leone, and Senegal. More than 28,652 people were infected and over 11,325 died.<sup>49</sup> Washington responded by sending US troops to assist a multinational effort and at its peak, the Joint Force had as many as 2,800 troops under the command of the 101<sup>st</sup> Airborne Division.<sup>50</sup> These Soldiers built emergency treatment centers, opened testing centers and mobile labs, trained health care workers, and conducted a variety of operations in the support of the effort against Ebola in both urban and

rural environments.<sup>51</sup> The majority of the troops returned in early 2015 and their efforts helped end the crisis and reduce the problem to one that local authorities could manage.

The likelihood of a pandemic in the developing world remains a constant and potential threat. A recent example is the Ebola outbreak in the eastern part of the Democratic Republic of the Congo.<sup>52</sup> Efforts to combat the outbreak have been frustrated because the outbreak has occurred in a conflict area with urban domains. In the future, the Joint Force could find itself tasked to assist a coalition effort in combatting a pandemic in a conflict area that has one or multiple urban locales. Such a scenario would likely see the Joint Force have to maneuver in an urban environment, especially in an effort to best support disease suppression.

## **Foreign Internal Defense (FID) Counter-Terrorism (CT) Operations**

Another category concerns Foreign Internal Defense (FID) efforts as well as counter-terrorism operations. Both categories can be found in the 2017 National Security Strategy and the 2018 National Defense Strategy. The most recent NSS has “Defeating Jihadist Terrorists” in Pillar 1, “Protect the American People, the Homeland, and the American Way of Life,” and states that “Jihadist terrorist organizations present the most dangerous terrorist threat to the Nation. America, alongside our allies and partners, is fighting a long war against these fanatics.”<sup>53</sup> A prominent combined FID/CT example would be US support to the Iraqi government beginning in 2014 in the fight against ISIS. US forces trained Iraqi troops as well as assisted them in operations, most notably in the fight to retake Mosul in 2016-2017.<sup>54</sup> The Mosul operation was the largest conventional land battle since the 2003 US invasion of Iraq and the largest sustained urban fight US forces had been involved in since the 2004 fighting in Fallujah and the 1968 Battle of Hue in South Vietnam.<sup>55</sup> US troops played an important and extensive role in the campaign, and Iraqi forces would probably have needed far more time in securing Mosul without US elements participation. Operations in Mosul, Iraq and Raqqa, Syria demonstrate how US forces can become involved in an urban fight when assisting friendly forces. US forces are able to

bring key enablers, such as air support, coordination of forward fires, and Intelligence, Surveillance, and Reconnaissance (ISR) assets that local forces usually lack the capacity to deliver.

It is important that the lessons learned from such efforts be integrated into training and doctrine to help the Joint Force be better prepared for future efforts. Operating in an urban environment does not necessarily mean controlling a city block or moving a company or battalion sized element in the city. It can also mean leveraging key enablers to assist local forces in achieving their objectives, whether it is retaking a city from ISIS or capturing a terrorist target who poses a threat to US citizens and the local population. In the future it is quite probable that the Joint Force will assist a friendly government much as it did in Iraq in the fight against ISIS. Such activity will likely occur in the developing world and could be similar to the efforts to help Baghdad defeat ISIS. Another scenario that could require a joint force response in an urban area is a friendly government that loses control of one or more of its urban neighborhoods to organized crime. Such activity has occurred in parts of Mexico, Jamaica, and Brazil with the Mexican and Jamaican Armies, respectively, having to go into areas to reclaim them for the government.<sup>56</sup> Indeed, 43 of the 50 cities with the highest murder rate in the world are in the Western Hemisphere.<sup>57</sup> It is important to recognize that increasing urbanization in the world will likely mean that terrorists hide not only in remote areas in places in Pakistan or Afghanistan, but also in cities like Abbottabad, Pakistan where Osama Bin Laden was discovered.

## **Non-Combatant Evacuation Operations**

US troops have deployed to urban areas in foreign countries to perform Non-combatant Evacuation Operations (NEO). US Joint Publication 3-68 defines a NEO as, “an operation whereby noncombatant evacuees are evacuated from a threatened area abroad, which includes areas facing actual or potential danger from natural or manmade disaster, civil unrest, imminent or actual terrorist activities, hostilities, and similar circumstances, that is carried out with the assistance of the Department of Defense.”<sup>58</sup> JP 3-68 goes on to add that “NEOs can occur in hostile, uncertain, or permissive

operational environments. Evacuation operations are typically characterized by uncertainty and may be directed without warning because of sudden changes in a country's government, resulting in a shift in diplomatic or military relationships with the US. A sudden hostile threat to US citizens from a force within or external to a host nation, or a devastating natural or man-made disaster may lead to a NEO."<sup>59</sup>

US forces have participated in a variety of NEOs this century, with the largest one occurring during the 2006 conflict between Israel and Hezbollah in Lebanon, when US forces evacuated over 15,000 US citizens.<sup>60</sup> Marine Expeditionary Units are the normal force that conducts NEOs, and these forces have not had to respond with force of any kind during a NEO, although they have gone to some troubled urban areas and had to prepare for potential hostile action. Nevertheless, any Joint Force element conducting a NEO must be prepared to deal with any hostilities and also needs to understand how to conduct operations in an urban environment whether it is permissive or not.

## **Conventional Operations Against Armed Opposition**

The scenario that would involve the largest number of troops and the most risk would be a traditional fight against a near peer competitor or an irregular warfare fight in an urban area much like the Fallujah operation in 2004 or Marawi in the Philippines in 2017. Although this scenario is unlikely unless US forces conduct an invasion similar to the 2003 Iraq conflict, it is still plausible. The reason it is a worst-case scenario is that urban areas in a contested zone are likely to be more competitive as the US military gets closer to achieving its objectives because the enemy could use cities in an effort to neutralize US technological superiority and exact high levels of casualties, while attempting to influence world opinion against the US by claiming it is destroying cities and killing civilians. Cities, especially country capitals or economic hubs, can be centers of gravity, much as Baghdad was in 2003. US forces have conducted conventional assaults against Baghdad in 2003, Fallujah in 2004, Sadr City in 2008, as well as other

municipalities in Iraq. Outside of Iraq, US forces fought in Mogadishu in 1993 and operated in Panama City during Operation Just Cause in 1989.

The 2017 National Security Strategy (NSS)<sup>61</sup> and 2018 National Defense Strategy (NDS)<sup>62</sup> highlight the return of great power competition and both documents identify Russia and China as revisionist powers. The Joint Force has begun to focus more on operations against a near-peer competitor and any potential fight would more than likely involve some type of operation in an urban setting. The 2018 NDS states, “the central challenge to U.S. prosperity and security is the reemergence of long-term, strategic competition by what the National Security Strategy classifies as revisionist powers. It is increasingly clear that China and Russia want to shape a world consistent with their authoritarian model.”<sup>63</sup> Such a fight will probably require the Joint Force to operate in a contested urban area. Professor Barry Posen coined the term “contested zones” in his 2003 article “Command of the Commons.”<sup>64</sup> He defines contested zones as “the arenas of conventional combat where weak adversaries have a good chance of doing real damage to US forces.”<sup>65</sup> Professor Posen discusses how most US adversaries since 1990 (the Serbs, Iraqis, Somalis, and Iranians) studied US military strength and worked on ways to neutralize them through asymmetric means.<sup>66</sup> Although Baghdad in 2003 did not become “Stalingrad on the Tigris,” Iraqi insurgents did subsequently use asymmetric efforts in urban areas to complicate the US mission in Iraq, especially in Baghdad, Fallujah, and Ramadi.

The 2014 Quadrennial Defense Review (QDR) talks about conventional ground forces and says, “The ability to defeat an enemy’s ground force and occupy territory is central to our ability to deter aggression, gain access, project power and win decisively. We will refine our doctrine, modernize our capabilities, and regain our proficiency to conduct forcible entry and large-scale combined arms maneuver operations against larger and more capable adversaries than we have confronted over the past decade.”<sup>67</sup>

Urban operations are implied in the QDR’s claim. The Joint Force cannot conduct conventional operations against a near peer competitor and not expect to have to engage its opponent in an urban environment. Barry Posen wrote that the US military needed to “think carefully and candidly about its strengths and weaknesses and how to leverage the former and

buffer the latter” when fighting in a contested zone.<sup>68</sup> As he wrote, “it is not a prediction of US defeat. The US will be able to win wars in the contested zone...it is a prediction of adversity.”<sup>69</sup> This adversity could be North Korea going into Seoul or Russia forcibly entering Eastern Europe. The Joint force may eventually succeed, but it could pay a heavy price to overcome the adversity that Professor Posen foresaw.

## **Counter Weapons of Mass Destruction (CWMD)**

The last category concerns the spread of Weapons of Mass Destruction (WMD) and this scenario usually involves a CT effort. The 2017 NSS says that, “Terrorist groups continue to pursue WMD-related materials. We would face grave danger if terrorists obtained inadequately secured nuclear, radiological, or biological material...we will direct counterterrorism operations against terrorist WMD specialists, financiers, administrators, and facilitators. We will work with allies and partners to detect and disrupt plots.”<sup>70</sup> The 2018 NDS also states, “Terrorists likewise continue to pursue WMD, while the spread of nuclear weapon technology and advanced manufacturing technology remains a persistent problem. Recent advances in bioengineering raise another concern, increasing the potential, variety, and ease of access to biological weapons.”<sup>71</sup> Moreover, one of the core DoD objectives from the NDS is, “dissuading, preventing, or deterring state adversaries and non-state actors from acquiring, proliferating, or using weapons of mass destruction.”<sup>72</sup>

As of 2018, US Special Operations Command took ownership from US Strategic Command for the WMD counter-proliferation mission.<sup>73</sup> One of the top missions is to stop ISIS from getting access to WMD. DoD published its last strategy on countering WMD in June 2014.<sup>74</sup> This document created three lines of effort to countering WMD: prevent acquisition, contain and reduce threats, and respond to crises.<sup>75</sup> It is quite possible that in an effort to counter terrorists or other groups from receiving WMD, US forces will have to conduct operations in an urban area.

In closing, this chapter identified six potential complex and varied scenarios that could cause the Joint Force to conduct urban operations to secure US national security interests in the future. Although none of these scenarios are ideal, they are all real possibilities, especially in an increasingly urbanized and complex world that is currently witnessing the return of great power competition. In 2010, Parag Khanna, an international relations scholar, wrote in *Foreign Policy* magazine that the 21<sup>st</sup> century “will not be dominated by America or China, Brazil or India, but by the city.”<sup>76</sup> Khanna’s words may seem alarmist or a critique of the role of the state in the future, but his words should sound as a warning for those that believe the Joint Force can avoid urban operations. Cities will come to play an increasingly more strategic and powerful role in the 21<sup>st</sup> century. Noted author David Kilcullen recently wrote, “However much we might wish to avoid fighting in cities, and whatever clever maneuvers or political negotiations our leaders engage in to avoid those urban fights, when push comes to shove, we as operators have an absolute obligation to be ready to enter, fight and prevail in an urban environment.”<sup>77</sup> Kilcullen is correct; leaders and planners have an obligation to ensure that the Joint Force is ready to not only operate in an urban environment, but ultimately succeed and achieve US objectives.

# Chapter 3:

## Is the Joint Force Prepared?

“They’ve watched CNN, the enemy has. They’ve seen the might of our technology. They’re not going to fight us straight up. We’re not going to see the son of Desert Storm anymore. You’re going to see the stepchild of Chechnya”.<sup>78</sup>

—General (Ret.) Charles Krulak

As US national interests continue to draw the Joint Force into urban areas, it is imperative that the proper doctrine, training, and organization are in place to ensure mission success. The Joint Force would go to great lengths to achieve any mission, but lack of training time, facilities, and expertise regarding urban operations could greatly increase the risk of civilian deaths, collateral damage, and US casualties. Such concerns underscore that the Joint Force has an urban blind spot, which could result in more blood and treasure being expended than is needed to achieve the objective, and ultimately undermining US public support for any potential operations. This chapter examines the current status of *doctrine*, *training*, *organization*, and *facilities* within the DoD as they pertain to Joint Force preparedness to conduct operations in urban areas.

In May 2018, the House Committee for Armed Services (HASC) directed the Secretary of the Army to develop a plan for urban warfare training to address the Army’s preparedness for the trend towards the urban nature of future conflict. The Fiscal Year (FY)19 National Defense Authorization Act (NDAA) directed the following to the Secretary, to be briefed no later than 1 February 2019:

The committee has continuing interest in the Department of Defense’s ability to prepare for and operate in complex, densely populated urban terrain. Recent trends reflect that the future of global violence is urban, and that the next war will likely be fought in densely populated cities. The committee is supportive of the Department’s ongoing efforts but remains concerned with the lack of Army prioritization and resourcing to address

these challenges. The committee is particularly concerned with the Army's lack of realistic training sites that reflect the scale and density of real-world urban operating environments. The committee believes the Army should more aggressively prepare for urban warfare and explore the construction of an urban warfare training center that focuses on basic and advanced skills to fight, survive, and win in urban operating environments. This training should address the challenges associated with vertical, subterranean, and dense urban terrain, and the inclusion and integration of joint and interagency enablers.<sup>79</sup>

Specifically, the HASC directed the Secretary of the Army to provide the Army's plans for the following items:

1. a description of urban warfare training requirements;
2. an overview of a plan and timeline to integrate urban warfare training within the Army;
3. an identification of costs associated with an urban warfare training program;
4. a feasibility study on the construction of an urban warfare training center;
5. feasibility of utilizing existing private facilities and contracting training iterations until a final DOD facility can be constructed;
6. any critical technology, maneuver, or mobility shortfalls associated with operating in a dense urban environment; and
7. force design impacts or considerations within the Army.<sup>80</sup>

While this is a step forward in the right direction, fully addressing DoD urban blind spots requires more than service-specific direction.

# Doctrine

As discussed in the first chapter, relatively recent changes to elements of the *urban triad*, e.g. rapid urbanization of the world littorals and increasing complexities due to global technology proliferation, have changed the way DoD must view urban operations. The evolution of U.S. military doctrine since WWII can be broken down into distinct periods, shaped by changes in the nature of the *urban triad*:

- Post-WWII focus on bypassing and isolating cities (1944-1992)
- A shift in understanding of urban operations (1993-2003)
- A post-9/11 pause in momentum (2003-present)

*Post-WWII focus on bypassing and isolating cities.* The Army's post-WWII doctrine, published in 1944 as *Combat in Fortified Areas*, was a tactical manual based primarily on the US Army's experiences in the European theater, namely in small German villages. Later revised in 1952 and 1964 to become FM 31-50 *Combat in Fortified and Built-up Areas*,<sup>81</sup> it continued to stress the importance of bypassing built up areas and cities except if absolutely necessary. As late as 1979, this was still reflected in FM 90-10, *Military Operations on Urban Terrain*, which began with the following:

Tactical doctrine stresses that urban combat operations are conducted only when required and that built-up areas are isolated and bypassed rather than risking a costly, time-consuming operation in this difficult environment.<sup>82</sup>

FM 90-10 and Marine Corps doctrine on Military Operations on Urban Terrain (MOUT) in the 1980s were based at the tactical level and included procedures for clearing rooms, buildings, and only if necessary, blocks and small cities at the brigade and lower level as a defensive action, meant to slow the enemy. Doctrine did not discuss the complexities of cities, especially factors relating to civilians, nor did it address operations within cities beyond offensive operations (again, to be avoided) or defensive operations. MOUT doctrine did not address other types of missions, nor did it adequately address what would be repeated in the 1980s and 1990s: that

potential adversaries would use urban terrain to negate the technological advantages of US forces.

*A shift in understanding.* The experiences of the 1980s and 1990s provided numerous examples of why doctrine needed revision and a new approach. In the late 1990s, the Joint Staff J-8 formed the Joint Urban Working Group (UWG) to draft the *JTF Commander's Handbook for Urban Operations* to provide an operational level approach to urban operations. The cases cited as the impetus for this doctrine are the following:

Algiers (1957)	Manila (1945)
Baghdad (1991)	Belfast (1980s - present)
Beirut (Israel, 1982; US, 1983)	* <b>Grozny</b> (1995)
Budapest (1945)	Berlin (1947-48)
Freetown (1997)	Kuwait City (1991)
Hue (1968)	* <b>Mogadishu</b> (1991, 92-93)
Jerusalem (1967)	* <b>Panama City</b> (1989)
Khafji (1991)	* <b>Port au Prince</b> (1994)
Tirana (1997)	* <b>Sarajevo</b> (1992-1995)
Monrovia (1996)	Stalingrad (1942)

\* Denotes “The Big Five” that the UWG felt were the best post-Cold War examples where urban operations were critical to achieving operational objectives.<sup>83</sup>

Also, in late 1999, the Joint Staff J-8 recommended development of JP 3-06, *Joint Urban Operations*, assigning the Marine Corps as lead agent and the Army technical review. JP 3-06, guided by the J-8, incorporated existing Army, Marine Corps, and Air Force urban doctrine and addressed the complexities experienced in many of the operations above, namely the complexities involved with planning for non-combatants on the battlefield, infrastructure, media presence, and inter-agency coordination. The complex nature of modern urban operations, popularly known as the “three-block war,” was captured by Marine General Charles Krulak, who envisioned a small, tactical unit simultaneously conducting combat operations, humanitarian relief, and peacekeeping on successive blocks within in a city.<sup>84</sup>

*A post 9-11 pause in momentum.* The awakening to the likelihood and complexities of urban operations was stymied by the terrorist attacks of 9-11 and subsequent involvement in protracted campaigns in Afghanistan and Iraq. Counter-terrorism and counter-insurgency warfare became the focus of Army and Marine Corps training and doctrine for the next several years. US forces adapted to urban warfare at times in Iraq, but quickly regressed from lessons learned. Despite the focus on operations in Iraq and Afghanistan, the Joint Staff maintained some forward pressure on examining joint urban operations.

In 2007, the Joint Staff published Joint Urban Operations Joint Integration Concept (JIC), informed by a series of joint urban exercises and experiments. The JIC outlined initial capabilities, tasks, measures of effectiveness, and effects, and it announced a J-9 led capabilities-based assessment (CBA) to identify policy and DOTMLPF (doctrine, organization, training, materiel, leadership and education, personnel, and facilities) changes required to conduct joint urban operations in the 2015-2027 timeframe.<sup>85</sup> All efforts to follow through on the CBA or identified DOTMLPF changes ceased with disestablishment of Joint Forces Command in 2011.

JP 3-09, originally published in 2002, was revised in 2009 and again to the current version in 2013 with the Army as lead agent and Director for Force Structure, Resources, and Assessment (J-8) as the Joint Staff doctrinal sponsor. However, with the disestablishment of Joint Forces Command in 2011, DoD lost a joint executive agent for urban operations, reassigning what were joint duties to the service component. The most current doctrine is the dual-designated Army-Marine Corps manual, Army Techniques Publication (ATP) 3-06/Marine Corps Techniques Publication (MCTP) 12-10B, Urban Operations, published in December 2017, which outlines tactical, service-specific approaches, largely ignoring the complexities that will require the Joint Force in most urban operations scenarios.<sup>86</sup>

In short, DoD spent a decade in the 1990s studying urban operations, with senior leaders accepting that future military operations *will* occur in urban areas and forming a joint urban strategy. DoD lost intellectual momentum for examining urban operations during conventional and counterinsurgency operations in Iraq and Afghanistan and removed the joint

proponent, risking regression to the service-specific, disjointed approaches of the 1990s. Collectively, the Joint Force largely forgot about the lessons learned regarding joint urban operations in the late 1990s and early 2000s.

The big problem is that the changes in the nature of the urban triad, specifically the development and proliferation of new, often disruptive technologies, did not pause after 9-11, when DoD shifted focus away from urban operations. In fact, this exact time period, from 9-11 to present, has seen an exponential increase in not only urbanization, but in emerging technologies that will drive DoD into urban areas that are more complex than ever. As leaders in DoD wake back up to the reality of conducting many if not most operations in urban areas, they must not only reach back to the lessons learned (specifically joint approaches) from urban operations but bridge the gaps in understanding the effects of new conditions on future operations.

<b>Changing Times, Changing Views of Cities</b>
<b>Sun Tzu</b> (ca. 500 B.C.) Avoid besieging walled cities. Too complex and time consuming.
<b>Combat in Fortified Areas</b> (1944) Do not attack. Incorporate in defensive obstacle plan.
<b>FM 90-10 MOUT</b> (1979) Bypass and isolate.
<b>JP 3-09</b> (2002) Urban operations are often difficult and costly in terms of personnel and equipment and require a full suite of military capabilities. A new approach to complexity.
<b>MDO</b> (2018) The changing character of warfare identify urbanization trends that portend future competition or conflict with the evolving threat will take place in urban environments. <sup>87</sup>

## Organization

Joint Forces Command provided a body of individuals dedicated to study, research, and write about urban operations. Since the disestablishment of Joint Forces Command in 2011, organizations to study and prepare for urban operations now reside within the individual services, largely uncoordinated across the Joint Force. Despite an increasing likelihood

that the US will conduct operations in a dense urban environment, DoD lacks the proper joint organization to coordinate doctrine, organization, training, and the complex facilities across the services to prepare for such operations.

*Army organizations.* The Combined Arms Center at Fort Leavenworth is the Army proponent for Urban Operations. The Army's Research, Development, and Engineering Command (RDECOM) in Picatinny Arsenal, New Jersey has a Subterranean & Dense Urban Environment material development program. Other Army entities that examine urban warfare are the Urban Warfare Project within the Modern War Institute at the United States Military Academy, Army Training and Doctrine Command (TRADOC), and the Asymmetric Warfare Group (AWG).

*Marine Corps organizations.* Marine Corps Tactical Operations Group (MCTOG) is the primary author or contributing author to all Service, multi-Service, and Joint urban doctrine. In addition, MCTOG is a stakeholder with Marine Corps Warfighting Lab (MCWL) in NATO's four-year urban conceptual study and wargame project.

Although there is cross-talk and interaction within and between service entities, the result is that organizationally DoD is stove-piped. This creates language and doctrinal divergence. What was done in late 1990s to bring joint understanding to urban operations has been lost. It is important to bring urban operations into the joint area because urban operations in dense urban environments (DUE) will be inherently complex and joint.

## **Training**

For decades, the US military looked to superior night vision technology as the biggest advantage on the battlefield. The vast majority of training occurred as it does now, in large, open training areas commonly referred to as "the field," with the primary and most complex task being to "own the night." Today, owning the night is not good enough. First, there is "a narrowing gap between US night vision and the rest of the world."<sup>88</sup> In other words, potential enemies have largely negated the night vision advantage.

The other major shortcoming is that even though more operations are occurring in and around urban areas, the US military is still training the same way, training to own the night in wide open training areas. The Joint Force is not conducting urban training in quantity or complexity to be able to achieve dominance in today's complex, urban areas. To be successful, the US military must now learn to own the city as well as the night, not simply surviving, but dominating the urban landscape.

In order to highlight trends and shortcomings in urban training and facilities at the tactical level, interviews were conducted with a variety of US Army and US Marine Divisions, and representatives at Army and Marine Corps training centers, National Training Center (NTC) in Fort Irwin, California; Joint Readiness Training Center (JRTC) in Fort Polk, Louisiana; and Marine Corps Air Ground Training Center (MCAGTC) in Twentynine Palms, California. Below are the major trends.

The interviews indicated that despite the prevalence and increasing likelihood of conducting operations in a dense urban environment, training in DUE is under-prioritized and under-resourced. Additionally, professional examination of urban operations for over two decades has highlighted the fact that *any* operations in urban terrain are enormously complex, yet the vast preponderance of urban training continues to be very basic. *This is the largest shortfall in preparation for future missions and a notable urban blind spot.* While some of this shortfall can be attributed to available, adequate venues and facilities, there are many other factors that make current training inadequate.

With little or no exception across Marine Corps and Army infantry battalions, urban training accounts for a very small percentage of overall training time. Rarely are any complexities introduced, such as aggressors or other enablers. Training is typically:

- Small in scope (Company level and below)
- Infrequent (10% or less of training time)
- Tactically basic (room clearing and breaching)
- Inadequately populated with civilians or aggressors

- Not integrated with enablers
- Not certified
- Void of staff training

Units are not being certified on their ability to plan and conduct urban operations. Readiness levels to conduct operations in DUE, if reported in Defense Readiness Reporting System (DRRS)/Unit Status Report (USR), are listed as a commander's comment. Urban operations are sometimes mentioned but not prioritized by commanders or in infantry battalion annual training plans (ATPs). Staff training at the tactical level is limited, usually amounting to a case study or table top exercise, if at all, and rarely integrated with adjacent units, supporting arms, critical enablers, or outside agencies.

Ranger battalions and Marine Corps infantry battalions attached to a Marine Expeditionary Unit (MEU) as a Battalion Landing Team are notable exceptions and provide good examples of small units that conduct complex, integrated training. However, training exercises in these units are focused at a low level, typically Company and below, in a small urban facility. Rangers and MEUs conduct raid, strike, NEO, direct action, and tactical rescue of aircraft personnel missions as part of pre-deployment training plan, often in urban areas. They also conduct major exercises such as the Amphibious Readiness Group/MEU Exercise, Composite Training Unit Exercise, and Realistic Unit Training in urban areas like Los Angeles with a focus on urban reconnaissance and surveillance and the Maritime Raid Force. These exercises require significant interagency and local government coordination, and they are observed and certified by Special Operations Training Group.

DoD's best urban training facilities are at major service level training centers, but urban operations play a small part of the training. Few service level exercises, Theater Security Cooperation exercises, and Commander Joint Chiefs of Staff exercises focus on urban exercises.

For 20 years since US doctrine has shifted from avoiding urban areas to accepting the likelihood that they will occur, and fully understanding the

complexity of urban operations as opposed to those in any other environment, commanders at all echelons are failing to prioritize *training* for our most likely, complex, dangerous missions.

**Figure 4-1:** Comparison of Operations in Urban and Other Environments<sup>89</sup>

Aspect	Urban	Desert	Jungle	Mountain
Number of civilians	High	Low	Low	Low
Amount of valuable infrastructure	High	Low	Low	Low
Multidimensional operational environment	Yes	No	Some	Yes
Restrictive rules of engagement	Yes	Some	Some	Some
Detection, observation, engagement ranges	Short	Long	Short	Medium
Avenues of approach	Many	Many	Few	Few
Freedom of vehicular movement and maneuver	Low	High	Low	Medium
Communications functionality	Degraded	Fully Capable	Degraded	Degraded
Logistics requirements	High	High	High	Medium

## Facilities

For nearly 20 years, service and joint doctrine has recognized the enormous complexity of conducting operations in urban areas. Since 2002, US joint doctrine has described the urban environment through an urban triad frame of understanding, with the three parts being complex man-made terrain, population of significant size and density, and infrastructure on which the area depends.<sup>90</sup> Few, if any, DoD training venues adequately replicate even one of the elements of the urban triad.

[The Urban] battlespace is defined as “the environment, factors, and conditions that must be understood to successfully apply combat power, protect the force, or complete the mission. This includes the air, land, sea, space, and the included enemy and friendly forces; facilities; weather; terrain; the electromagnetic spectrum; and the information environment within the operational areas and areas of interest.” Urban battlespace includes the above factors but focuses

on the urban triad of complex manmade physical terrain, population, and infrastructure.<sup>91</sup>

Replicating even a small city for training purposes is extremely expensive and presents significant limitations in regard to the size of the force and ability to realistically replicate the complex nature of cities. Even the largest current and proposed venues are no bigger than the size of a small town. They are so small that they lend themselves to artificialities of maneuvering out of and into the urban training area. Most existing sites lack anything even closely resembling a skyscraper or subterranean networks, and few if any include canals, rivers, or water features. Additionally, they are “dumb” sites that do not have electronic grids, cell networks, internet connections, or sewer systems, and role-players, if used, are used in such insufficient numbers that the sites resemble a virtual ghost town. The largest sites are only capable of supporting training at the Army brigade or Marine Corps regiment level, with little integration of key enablers. DoD venues are usually too costly, not big enough, and do not present authentic operational level challenges.

Urban training facilities on posts and bases are typically platoon/squad level MOU facilities made of connex boxes. Urban training facilities at the large training centers (NTC, JRTC, MCAGTC) are much more robust. For example, JRTC has 18 villages and two major towns, the largest with 51 buildings and the second largest with 26.<sup>92</sup> MCAGTC hosts the largest urban training complex in Marine Corps, used annually to train four active duty and one reserve reinforced Marine Infantry Regiments; tenant and visiting units, and 1-2 MEUs for RUT exercises.

As robust as the MCAGTC facility is, it still falls short in many areas and possesses only one of the elements of the urban triad, complex, man-made terrain. Even with costly role players, it does not have a dense population, and it lacks any sort of infrastructure.

### **Marine Corps Air Ground Training Center Urban Complex**

- One platoon small arms live fire urban attack range (range 205) made of SAACON construction, i.e. a shoot house.
- Two company small arms live fire urban attack ranges (range 210 and 230) made of SAACON construction, i.e. a shoot house.
- MOUT town non-live fire Battalion-level objective (range 215)
- MOUT town non-live fire Regiment (rein) level objective (range 220) approximately the size of Old Town San Diego but resembling what Task Force 2/7 encountered in Fallujah in 2005.
  - Surface, subterranean, and multi-story (up to five floors) features
  - Supports two battalions consecutively during ITX for urban lane training (counter-mobility, IED, breaching; patrolling; platoon urban assault)
  - Concurrently supports tanks and AAV's to conduct urban clearing operations
- Regiment fires cell conducts cross-boundary coordination and fires de-confliction
- 60-70 OPFOR used as adversary force for clear phase
- Approximately 200 role players used for phase four: clear/conduct defense of semi-permissive urban environment
- Integration of Radio Battalion SIGINT assets
- SUAS integrated into ISR plan

**Figure 4-2: MCAGTC Urban Complex Capabilities**

Far and away the most realistic and complex urban training center in DoD is the Muscatatuck Urban Training Center (MUTC) in Indiana. MUTC is a former state mental institution campus, with 120 buildings across a 1,000-acre campus, including former staff housing areas and large hospital buildings connected by subterranean tunnels. The campus has working sewer, water, and power, and it hosts a cyberwarfare training center. Despite the realistic environment, it still requires costly role players, doesn't represent even a small town, and doesn't offer sufficient training areas for an entire Brigade Combat Team or Marine Corps Regiment.

### MUTC RealWorld Cyber-Physical Infrastructure<sup>93</sup>

- 1.5 Miles of Tunnel Systems
- 4 Downed Aircraft (ex: B-727)
- 5 Rubble Buildings (14 searchable lanes):
  - Collapsed Apartment Building
  - Collapsed Parking Garage
  - Floodable, Collapsed Rail Trestle
- 5-Story Hospital
- 7-Story High-Angle Rescue Trainer
- 9 Miles of Roads with 3 Traffic Circles and Overpass
- B-757 Cabin Simulator
- Bank
- Bus Station
- Business Offices
- Camp Holland Isolated Housing Area
- Cave Complex
- Church/Mosque/Temple
- Circular Drop Zone
- Coal-Fired Steam Plant
- Concrete Batch Plant
- Convenience Store/Pizza Shop
- Cyber Range
- Dam
- Destroyed Substation
- Destroyed Trailer Park
- Farm
- Farms, Third-World
- Fire Rescue Trainer
- Fire Station
- Fitness Center and Gym
- Flooded Community
- Freshwater Treatment Facility (functional)
- Gas Station
- Hotel
- Landing Zones/Pickup Zones
- Laundry
- Marketplace
- Multicultural Center
- Multi-Purpose Building
- Municipal Buildings
- Nursing Home
- Observation/Clock Tower
- Oil Refinery
- Power Transfer Station
- Prison Compound
- Public Transit
- Radio Station
- Residential Neighborhoods/Single Family Homes
- Salvage Yard/Motor Pool
- Sawmill
- Shantytown
- Site Exploitation Houses
- Sniper Locations
- Soccer Stadium
- Static-Line Surveyed Drop Zone (FOB Panther)
- Subway Station
- Tactical Operations Centers (isolation facilities)
- Town Houses
- Train Station
- Training School
- University/School/Dormitories
- Urban Canyon
- Blank/Simulation Shoot House
- Villages:
  - Fishing
  - Rural/Wooded
  - Third-World
- Walled and Gated Embassy
- Wastewater Treatment Facility (functional)

**Figure 4-3:** MUTC Infrastructure<sup>94</sup>

# Chapter 4:

## Recommendations and Potential Solutions

*Operation EAGLE STRIKE demonstrated that the U.S Army must continue to train at echelon in dense urban conditions to understand the complexities of decisive action in unified land operations. In Mosul, the coalition had to contend with simultaneous execution of offensive, defensive, shaping, and stability tasks.<sup>95</sup>*

—Mosul Study Group, 2017

Our findings demonstrate that the preponderance of effort by the Joint Force to prepare for urban conflict is at the tactical level and that a Joint Operating Concept for the overall force is lacking. The Joint Force's current efforts are largely uncoordinated across the services and missing the necessary emphasis and linkages from the strategic level down to the tactical echelon.

In order to ensure US forces are properly prepared to conduct activities in complex urban terrain, the Joint Force must recognize that urban operations can occur in a diverse spectrum from a near-peer conflict to conducting a humanitarian operation. The Joint Force currently has an urban blind spot because it is not utilizing an urban lens when examining the types of future operations it will be tasked to accomplish in support of US national security objectives. Current urban training efforts are inadequate, sporadic, and in need of a comprehensive strategic plan. The following recommendations are based on a tier basis (Tier 1 is mission critical, Tier 2 is mission essential, and Tier 3 is mission enhancing) and if implemented, will help ensure the risk facing the Joint Force's urban blind spot is significantly diminished:

- Tier 1: Create a DoD **executive agent** with associated duties and responsibilities for Joint Urban Operations. There has not been such an advocate since Joint Forces Command went away in 2011, and there currently is no repository of urban warfare expertise in

the US military. This body would serve as the coordinating authority and overseer of efforts to improve urban operations training throughout the Joint Force. The executive agent could either be an organization within the Joint Staff or one of the services could be designated as the DoD Executive Agent by the Joint Chiefs.

- Tier 1: Ensure that already existing urban-related Mission Essential Tasks (METs) are added to the Mission Essential Task List (METL) for all combat units or add urban activities to the Training, Evaluation, and Outline Reports for an existing MET already on the METL.
- Tier 2: Ensure battalion and above units, especially division and corps, leverage staff exercises to stress units in how to manage urban operations in a variety of scenarios.
- Tier 2: Develop an urban master trainer course for company and below and an urban planner course for battalion and up.
- Tier 2: Ensure units are training their enablers and low-density personnel on how to support urban operations.
- Tier 3: Increase quantity, quality, and complexity of urban training exercises and venues. Leverage DoD Executive Agent for Urban Operations (see recommendation one above) to begin efforts to have a joint urban operations exercise.

## **Create an Executive Agent on the Joint Staff**

The Joint Force has lacked an urban operations proponent since Joint Force Command was disestablished in 2011 and the Joint Urban Operations Office ceased to exist.<sup>96</sup> As a result, there is no executive agent on the Joint Staff that can advocate for urban operations and can coordinate the effort

to improve the Joint Force's capabilities, training, and doctrine among the services, much less develop a repository of urban expertise. Currently, each service's urban proponent works across service boundaries when needed, but there is no Joint Staff forcing mechanism to make this happen. Moreover, urban operations are not always the priority or even a mission enhancing thought at the service level at times. An executive agent is needed to ensure that proper coordination is occurring and to help ensure that the Joint Force is properly prepared and ready to conduct urban operations to support US national security interests. The lack of an effective executive agent will guarantee the status quo continues and that the risk of collateral damage, civilian losses, or friendly casualties increases during future urban operations. The executive agent can either be a body on the Joint Staff or one of the individual services.

## **Create an Urban Mission Essential Task**

According to FM 25-100, the "Mission Essential Task List (METL) is derived from the organization's wartime missions and related tasks in external directives."<sup>97</sup> However, a search for an infantry or other combat arms unit METL in the Army Training Network reveals that none of the METs on the METL of these units directly concerns urban operations, which would be a significant wartime task.<sup>98</sup> For example, an Army infantry battalion's Airborne METL includes the following seven tasks: conduct an area defense, conduct a movement to contact, conduct an attack, conduct an airborne assault, conduct an air assault, conduct area security, and conduct expeditionary deployment operations at the battalion level.<sup>99</sup> None of the Training Evaluation and Outline Reports for these tasks or the subsequent sub-tasks mentions anything to do with urban operations.

During interviews with Army and Marine Corps personnel at the division level, we were informed that urban operations are implied in conduct an area defense or conduct an attack.<sup>100</sup> Although this is true, urban training is minimal and inconsistent because there is no specified mention of urban operations in the Training Evaluation and Outline Reports or an urban-related MET. All of the interviewees recognized the importance of urban operations and that their units should be conducting more training

for it, but because there is no urban MET or sub task that deals with urban operations on the METL, urban operations are not part of the “report card” that gets reported to higher commands. Efforts to train for urban operations are relegated to mission enhancing rather than mission critical. The addition of an urban MET that would be placed on units METL would help ensure that units train on urban operations, as they will have to report it on the monthly Marine Corps Defense Readiness Reporting System report and the Army’s Unit Status Report. However, units are already burdened by multiple METs and significant training requirements. A secondary solution could be to add urban operations to a sub-task or to make sure that urban activities are part of the Training Evaluation and Outline Reports for the current METs. To further assist the units’ limited training time, it could be possible to have the unit achieve a “Practiced” rating instead of a “Trained” rating. To create a cultural shift, it is important that urban operations are part of a MET on a unit METL in some capacity.

## **Staff Training**

One area of significant importance our research highlighted was the lack of staff training concerning urban operations at all levels, but especially at the division and corps echelons. Most of the urban training at the division and below level concerns tactical efforts at the company and below echelon at a MOUT site where units practice room clearing efforts or going through a shoot house. Staff training for how a battalion element and higher would manage an urban operation, integrate key enablers, and maneuver subordinate units is rarely happening, if at all. Troops may be learning how to clear a room or to seize a two-story building, but trouble can occur if higher units do not understand how to maneuver these units, integrate enablers into the effort, and work with the higher echelon to better understand the operational or strategic picture, while advocating for more resources. The majority of current divisional warfighters are not challenging division staffs with urban problem sets at all and battalion and brigade staffs are not simulating the urban fight as much as they should be.<sup>101</sup> The lack of staff training for urban missions will likely result in confusion, potential logistics issues, and a host of other problems until the staff has had a few days to garner a better understanding of the urban situation.

This can be avoided by having staffs at the battalion level and up actually train on conducting urban operations.

## **Develop Master Urban Trainer and Urban Planner Courses**

Most units do not have expertise in urban operations at the troop level or when it comes to proper planning. Some troops may have experience from Iraq, but the vast majority do not. Moreover, although the Army has courses for Airborne, Air Assault, armor gunnery, mountain warfare, jungle warfare, and northern warfare, it lacks an institutional course for urban operations. A recent article by Army Master Sergeant Eric Linn calls for the Army to create an urban master trainer course that would begin building institutional expertise at the battalion and below levels.<sup>102</sup>

Such a course would accomplish two key tasks. The first would be the creation of “principal advisors versed in urban combat training and techniques that are transferable, standardizing urban combat training across the Army,” and the second would be giving units the expertise they need to create and implement realistic urban training.<sup>103</sup> The Canadians have already developed something similar called the Urban Operations Instructor course.<sup>104</sup> It is a 30-day effort that combines urban offensive, defensive, and planning efforts. However, the infantry school leadership felt it was too much for the limited time and decided to split the course into two separate efforts.<sup>105</sup> The first is essentially a warfighter course called “Urban Operator,” and it “focuses on increasing survivability and adaptability of the individual to the five person stack via the sharpening of weapons drills, target engagements, non-explosive breaching, and movement in close quarters and complex environment.”<sup>106</sup> The second course is the Urban Advisor module which “produces specialists capable of advising commanders...with regard to planning considerations, organization, coordination and combat power in order to be successful in offensive and defensive operations in an urban environment.”<sup>107</sup> Such efforts will ensure a unit is building its institutional knowledge on urban operations, while also allowing the new “urban operators” to become their unit’s trainers on

urban operations. This will allow a unit to build depth and increase institutional capacity. We believe the Joint Force could benefit from adopting the Canadian model of having two such courses, with the latter one focusing more on urban planning.

## **Train Enablers and Support Personnel**

As stated above, most units train on urban operations at the company and below level by going to a MOUT site and training on room clearing or seizing a building. Additionally, most unit staffs at the battalion level and up are not training on how to manage urban operations. Another area that could see improvement is having enablers and support personnel train on what their specific section or Mission Operating Specialty (MOS) would do during an urban effort. An example of this would be the battalion S2 shop practicing on conducting Intelligence Preparation of the Battlefield (IPB) for an urban area, while the battalion S4 shop drafted its support plan for the unit in an urban operation. Other cases would be how the maintenance section of a unit would set up operations, how the S6 would conduct its mission in an urban environment, or where the cooks would set up their kitchen. Although such training occurs in a field environment, support personnel are rarely tasked to train on how they would support their unit in an urban setting. Such efforts would go a long way in ensuring the support personnel for a unit are ready to for an urban operation.

## **Increase Quantity, Quality, and Complexity of Urban Training Exercises and Venues**

It is important to continue to invest in making local MOUT sites more complex, and commanders at all levels should push their units into the MOUT sites with increasing regularity. Building new and more complex MOUT sites is a costly endeavor, though, so other methods should be

explored. Muscatatuck Urban Training Center's complexity as a premier urban training center is because it was an actual state mental facility campus before being turned over to DoD for use as a training area. DoD should look for similar opportunities, such as Base Realignment and Closure (BRAC) military sites<sup>108</sup>, abandoned or ghost towns such as Centralia, Pennsylvania<sup>109</sup>, or a town such as Newtok, Alaska, which is seeking federal funding to relocate due to climate change.<sup>110</sup> Falling in on existing sites provides ready, complex training sites, many of which come at a mutual financial benefit to DoD and federal, state, and local governments.

Exercises such as the Marine Corps' Realistic Urban Training (RUT) serve as a good example of conducting complex urban training in existing US cities. Military bases and stations also serve as good training venues. Whether conducting exercises in a civilian city or on a military base, such training exercises require detailed coordination with state, local, and federal agencies as well as a robust public affairs campaign. While this level of coordination is difficult, the same type of coordination would invariably accompany any real-world military operation in urban areas, but with foreign governments and populations. Much of the training is in this actual coordination, so the Joint Force should not avoid this type of training on the grounds of being difficult. In fact, that is precisely why the training should occur.

# Conclusion: Illuminating Urban Blind Spots

*We are our choices.*<sup>111</sup>

—Jean Paul Sarte

The 2017 National Security Strategy and 2018 National Defense Strategy highlight the return of great power competition and the need for the Joint Force to be prepared to counter near peer competitors. The Joint Force has concentrated on training on combined arms maneuver in non-urban terrain whether it is a desert or other rural environment. However, increasing urbanization around the world and the difficulties this trend presents, as well as adversaries employing methods to negate the Joint Force's traditional military strengths and advantages, portends that the Joint Force will probably find itself engaged in some of type of urban action in the future. It is important to remember that the Joint Force's potential opponents get a vote as Roger Spiller wrote in 1999. "No fighting force is ever permitted to indulge its operational preferences with impunity. War and lesser forms of conflict do not organize themselves for anyone's benefit."<sup>112</sup> The Joint Force's potential adversaries may force an urban fight much like the North Vietnamese and Viet Cong did in Hue in South Vietnam in 1968 or Iraqi insurgents did in Fallujah in 2004. Future adversaries may attempt to leverage urban centers against the Joint Force and it must be ready to fight and win in one of the most dangerous conditions in modern warfare.

Urban operations can be complex, difficult, resource intensive, and bloody in combat efforts. However, although a strategy that centers on bypassing or isolating cities may seem ideal, such efforts create the risk that the Joint Force will be unprepared for operations in urban terrain. It is difficult to force a change in political conditions without going into a city. An example of this would be Baghdad in April 2003 or Kabul in 2001. Given the size and sprawl of cities, merely surrounding them and waiting for capitulation

is not a formula for success. Failure to train for urban operations or to hope that isolating a city will work increases the risk to the Joint Force of collateral damage, civilian casualties, and friendly losses because it will be unprepared for urban combat. The Joint Force needs to improve its training for a variety of urban operations and can take steps now to mitigating risk by implementing the recommendations mentioned in Chapter 4.

Such endeavors are only the beginning of reducing the Urban Blind Spot and not the final remedy. The likelihood the Joint Force will have to conduct an urban operation of some type only increases with each passing year as the world becomes more urbanized, the challenges resulting from urbanization multiply, and the Joint Force's potential opponents continue to seek ways to neutralize its technological advantages. If the Joint Force wants to ensure that it can successfully support US national security objectives for the foreseeable future, it must be prepared to allocate the resources, time, and funding in order to prepare its troops to successfully compete and win in an urban environment. Failure to do so will only result in the increased likelihood of civilian casualties, collateral damage, and friendly losses. The Joint Force can diminish and even potentially eliminate its urban blind spot, but it must choose to do so. The status quo is simply not sustainable if the Joint Force expects to successfully conduct any non-combat operation in an urban area or emerge victorious in any conflict in the 21<sup>st</sup> century.

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