I am committed to improving the combat preparedness, lethality, survivability and resiliency of our nation’s ground close-combat formations. These formations have historically accounted for almost 90% of our casualties and yet our personnel policies, advances in training methods and equipment have not kept pace with changes in available technology, human factors science and talent management best practices.

James N. Mattis, Secretary of Defense, 8 February 2018

### Introduction

The U.S. Army and DoD are long overdue in addressing a significant capability and survivability shortcoming in its most fundamental formation—the infantry squad. **Four percent of the total uniformed force—the infantry squad—has suffered almost 90% of U.S. military combat deaths since World War II.** Although it is not surprising that front-line infantry Soldiers, Marines and Special Forces suffer casualties in higher proportion than the rest of the military, the United States must do everything feasible to minimize the blood spilled by its front-line warriors fulfilling their indispensable role in defense of the nation.

Addressing this shortcoming is a political, strategic and moral issue. To prevail against near-peer threats in the increasingly lethal 21st-century security environment, the United States requires a military that is dominant in close-combat fighting. (Close combat is “ground combat executed by dismounted infantry squad-sized formations carried out within line of sight of the enemy and characterized by extreme violence.”) It also requires leadership and a population that is resilient enough to maintain the political will necessary to see conflicts through even with inevitable casualties. **This resilience only will be possible if the nation and its military keep faith with**

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those who volunteer to fight, and perhaps die, in the most lethal 600 meters on the battlefield.

Despite the progress made in high-end combat by revisionist powers such as China and Russia, the U.S. military remains the world’s best. However, rivals have closed the gap in numerous areas and achieved near parity in others. It is time for the United States to shoot for the next level: overmatch. (Close-combat overmatch is “the ability of a squad-sized unit to impose its will on a similar sized opponent under all conditions and operational environments.”) Changes in available technology, human factors science and talent management best practices make it imperative to modernize personnel policies, training methods and equipment at the speed of relevance to the challenges ahead.

A Strategic Conundrum

Myriad technological advances have expanded warfare across multiple domains and may be altering the character of war. However, the nature of war is not likely to change much, if at all. War will remain a violent human struggle, a “collision between two living forces,” that is governed—and has always been governed—by the interplay among passion, chance and reason. This struggle will have at its core, soldiers fighting, killing and dying in close proximity to their enemies; this is the domain of the infantry. Herein lies a strategic conundrum.

America does not want its military engaged in “fair fights” because these fights cost too many lives. How will U.S. armed forces prevail in this security environment if the cost of infantry fighting is too high? Since World War II, an overwhelming preponderance of combat fatalities occur among a group (principally dismounted infantry) that comprises less than 4% of the uniformed strength of DoD (or 0.02% of the U.S. population).

As seen in Vietnam (1965–1973), Desert One (1980), Lebanon (1983) and Somalia (1993), fallen U.S. troops present the greatest vulnerability to U.S. employment of military power. This vulnerability makes winning quickly both a moral necessity and a strategic imperative. This raises the issue of how America can make its infantry not only better but also dominant on tomorrow’s battlefields. What is required to ensure that the U.S. military’s close-combat units have tactical overmatch in all foreseeable engagements?

3 Ibid.
5 von Clausewitz, p. 77, and Thucydides, History of the Peloponnesian War, translated by Richard Crawley.
8 Ibid, p. 12.

What is required to ensure that the U.S. military’s close-combat units have tactical overmatch in all foreseeable engagements?
2017 Close Combat Strategic Portfolio Review

In recognition of the challenges posed by pacing threats, DoD has undertaken initiatives to improve readiness, increase lethality and modernize the force. Among them was the 2017 Close Combat Strategic Portfolio Review.

In 2017, the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) led the Close Combat Strategic Portfolio Review “to identify the most promising investment opportunities to improve our close-combat effectiveness and survivability.”

(Close-combat forces comprise front-line infantry Soldiers, Marines, and Special Forces.) Employing a framework of six topics—sensing, communication, maneuver, attack, survival, sustainability—the review sought to answer the question: “What are the close-combat capabilities needed for future conflicts out to 2029?”

As a result of this review, OSD allocated $815 million for 4,005 Army small units and $400 million for 685 Marine Corps small units for Fiscal Year (FY) 2019. Most of these funds are for equipping close-combat units with weapons (e.g., the next generation rifle, new machine guns), Soldier protection, sensors, unmanned vehicles, squad unmanned aerial vehicles, squad command and control, and precision weapons (e.g., Javelin, mortars). Total DoD investment in phases 2 and 3—as part of CCLTF—is yet to be determined but likely will be significantly more than the initial allocation.

Close Combat Lethality Task Force

On 8 February 2018, the Secretary of Defense established the Close Combat Lethality Task Force, led by the Under Secretary of Defense for Personnel and Readiness, to “further the implementation of select initiatives identified during the CAPE review and to identify, evaluate, and as appropriate, implement additional initiatives.”

The CCLTF comprises subject-matter experts from OSD; Joint Staff; Army; Marine Corps (USMC); Special Operations Command (SOCOM); and the National Guard Bureau. The CCLTF advisory board members include several key allies and senior retired noncommissioned officers from the Army, USMC, and SOCOM. (Army participants are Brigadier General Christopher T. Donahue, Chief of Infantry and Major General (retired) Robert H. Scales, Chairman of the CCLTF Board of Advisors. Major General Maria R. Gervais, Deputy Commander, U.S. Army Combined Arms Center, leads the Synthetic Training Environment (STE) CFT.)

The fundamental problem to overcome is an erosion in close-combat capability relative to the pacing threats identified in the National Defense

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11 Ibid.
Strategy. The CCLTF will analyze and provide focused recommendations on Military Service efforts to achieve overmatch to ensure infantry squads are never in a fair fight. Overcoming this problem will require changes to infantry squad manpower management, training and equipping—changes that enhance lethality and survivability, thereby achieving overmatch.

The mission of the CCLTF is to develop, evaluate, recommend and monitor the implementation of improvements to U.S. squad level infantry combat formations to ensure overmatch against pacing threats and strengthen the combat lethality, resiliency and readiness of infantry squads.12

The Way Ahead

The CCLTF is a DoD-wide and multiyear effort that is constructed like a campaign plan with its five lines of effort (LOEs)—manpower policy; training and human performance; warfighter equipment and weapons systems; guidance from Public Affairs; and Science and Technology (S&T) research and development—being pursued throughout five overlapping phases:

I. Establishment of the CCLTF. Securing work space, support team and initiation of planning.

II. Shaping. Fact-finding across the Joint Force and S&T research and development communities to develop an understanding of threat capabilities and the demands of the current and future operating environment for close-combat units.

III. Decisive Action. In coordination with the military departments, services, and combatant commanders, CCLTF will recommend implementation of policy changes, investment and divestment strategies and training methods and venues to achieve the CCLTF purpose.

IV. Exploitation. Iterative process to continually evaluate Service and Combatant Command efforts in order to identify and disseminate the practices best suited to increase infantry squad lethality and survivability.

V. Transition. Pursuit of policies and mechanisms that ensure outcomes are enduring across fiscal planning horizons.

CCLTF LINES OF EFFORT

- Manpower policy
- Training and human performance
- Warfighter equipment and weapons systems
- Guidance from Public Affairs
- Science and Technology research and development

END STATE: CLOSE COMBAT OVERMATCH

Enhanced infantry squad:
- lethality;
- survivability;
- resiliency; and
- readiness.

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Impact on the U.S. Army

The OSD-led CCLTF will contribute to several complementary U.S. Army initiatives. These include: Soldier Lethality cross-functional team (CFT); STE CFT; MFMS; S2MS-E plan; and the following four AWFCs:

1. Enhance Realistic Training;
2. Improve Soldier, Leader, and Team Performance;
3. Develop Agile and Adaptive Leaders; and

Soldier Lethality

The Army has task-organized the Soldier Lethality modernization priority into the Soldier Lethality and STE CFTs. These CFTs are integral to the Army’s CCLTF efforts.

Soldier Lethality spans the fundamentals of shooting, moving, communicating, protecting and sustaining. The Soldier Lethality CFT is developing solutions to make Soldiers more lethal and survivable with weapons, equipment, armor and other devices. It seeks to improve physical and mental performance, using behavioral and medical science to get more out of each Soldier. It also is exploring new training methods.13

The Soldier Lethality CFT is not attempting to improve the entire Army of more than 1,000,000 Soldiers at once. According to the CFT Director, it is focused on the “close combat 100,000”—the Regular Army, Army National Guard and Army Reserve Soldiers in the 7,200 squads that actually close with the enemy.14

Small units cannot achieve overmatch with field training alone. Synthetic immersions using cutting-edge science are key. Virtual simulations are likely to merit significant investment during the work of the CCLTF as Secretary Mattis has stated that he wants “our close-combat Soldiers to fight 25 ‘battles’ before the first battle begins.”15 Virtual simulations will be essential to meeting his intent.

Virtual simulations immerse soldiers in diverse, complex operational environments that replicate where they will fight, who they will fight and the terrain on which they will fight. The intent is to provide the warfighter the repetitions necessary to master the skills required to win in Multi-Domain Battle.16

The STE CFT has been supporting the OSD-led Close Combat Study since its inception. The STE CFT funded research, development, testing and evaluation (RDTE) in FY18 in advance of the FY19 and FY20 funding provided as a result of the CAPE review. This accelerated development of Soldier/Squad Virtual Trainers aligns with the Secretary of Defense’s requirement for a squad immersive environment. STE provides the infrastructure needed to support the squad immersive environment.

### Army Warfighting Challenges

The Army is focusing on several AWFCs to address critical capability gaps that reinforce the mission of the CCLTF. It is training resilient Soldiers, leaders and units to ensure they are prepared to accomplish the mission across the range of military operations while operating in complex environments against determined, adaptive enemy organizations. It is building formations to conduct continuous integrated reconnaissance and security operations to rapidly develop the situation while in contact with the enemy and civilian populations. The AWFC on developing agile, adaptive and innovative leaders who thrive in conditions of uncertainty and chaos also supports CCLTF initiatives to regain close-combat overmatch.17

### Maneuver Force Modernization Strategy

The MFMS establishes a modernization pathway to provide maneuver forces that can attain close-combat overmatch against current and potential adversaries.18 Part of the MFMS is the S2MS-E plan. Recognizing that Soldiers and squads are the foundation of the decisive force, the S2MS-E plan focuses on material and nonmaterial solutions that increase Soldier lethality, situational awareness, mobility and protection to provide overmatch at the small unit level and consider integration of capabilities at squad level while limiting weight and cognitive overload.19 It is clear that there will be significant complementary efforts between the MFMS and the CCLTF.

### Implications

- The Army and DoD should approach close combat as an expected function, not just a branch of service, but as a distinct band of warriors whose mission is to fight and win against an enemy they must kill face-to-face.

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19 Ibid. Related efforts include the Soldier Performance Optimization Directorate of the U.S. Army Natick Soldier Research, Development and Engineering Center, which increases Soldier and small unit lethality through cutting-edge science and technology, enhancing performance through cognitive, biological and physical sciences. Efforts focus on the underpinnings of lethality by enhancing the ability to shoot, move, communicate, protect and sustain.

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ARMY WARFIGHTING CHALLENGES INFORMED BY CCLTF

- Enhance realistic training
- Improve Soldier, leader and team performance
- Develop agile and adaptive leaders
- Conduct air-ground reconnaissance and security operations

I want our close-combat Soldiers to fight 25 "battles" before the first battle begins.

James N. Mattis, Secretary of Defense
• The Army should fully leverage related initiatives and programs such as the Soldier Lethality and STE CFTs, MFMS, the S2MS-E plan, and the AWFCs in conjunction with the CCLTF.

• The Army should implement this initiative as a campaign plan in which tactical advances contribute to a strategic effect.

• DoD and the services must institutionalize and implement approved outcomes of the CCLTF over the long term.

**Conclusion**

Overmatch at the squad level is a building-block capability. It enables tactical successes to accrue toward operational victories while denying adversaries the underlying logic of their strategies.

Prioritization of close-combat units as an excepted function will help in the identification and delivery of the capabilities, both material and nonmaterial, that will ensure close-combat formations have “overmatch at the tactical edge” against all potential adversaries. Changes in equipment, training methods and personnel policies are needed to enhance the combat preparedness, lethality, survivability and resiliency of the nation’s ground close-combat formations.

The CCLTF—in combination with the Soldier Lethality and STE CFTs, MFMS, the S2MS-E plan and the AWFCs—provides the Army its best opportunity in decades to build close-combat formations that are more lethal, resilient, discriminating and capable of distributed, complex, fluid operations that are fiscally sustainable and enduring. Most important, this initiative can help the nation keep faith with those who willingly volunteer to fight, and perhaps die, in the most lethal 600 meters on the battlefield.

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