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BY THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND
FORCES

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BEFORE THE

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

MARINE CORPS GROUND MODERNIZATION

JUNE 7, 2021

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Around the globe, Marines and Sailors stand shoulder to shoulder to reassure allies and partners, respond to crisis, deter competitors, and if necessary, defeat adversaries in conflict. Integrated American Naval Power has led to global prosperity and the advancement of democratic ideals. Seeking to challenge established international norms and pursuing nefarious motives, peer competitors and rogue actors have invested in precision strike weapons over the last two decades to usurp the Navy and Marine Corps' military advantages. To ensure our Marines and Sailors deployed in harm's way are properly prepared in this decade and the next, the Marine Corps, in concert with the Joint Force, is re-thinking our operating concepts and strategies.

The Marine Corps seeks to achieve success in both maritime gray zone competition and more traditional conflict. In the future, deterrence will not only be achieved by denial of spaces or overwhelming fires, but also through deterrence by detection. Detection, which refers to gaining an information advantage over our adversaries, means the Marine Corps must win the reconnaissance and counter-reconnaissance competition on a daily basis. The required intelligence and communication capabilities, enabled through a system of sensors and networks, and combined with proven and established lethality will be required to deter future conflict among peer competitors.

Understanding the constraints of the fiscal environment, the Marine Corps has initiated a modernization campaign predicated on the reprioritization and realignment of our existing funding. These reallocations allow the Marine Corps to invest in our highest priority programs and modernize our warfighting capabilities. While confident in the progress we are making, we continue to conduct robust wargaming and experimentation to further refine our path forward.

The Marine Corps must support the Naval and Joint Force through long-range precision fires, resilient sensors and communication networks, and organic mobility.

Long-Range Precision Fires

As the Nation's Stand-In force, the Marine Corps is uniquely suited to provide precision fires from land-to-sea to enable Fleet maneuver. While this is a significant change from the past two decades of land-based operations, we are implementing this change to maximize the Marine Corps' deterrent and combat capabilities in support of future naval campaigns. Simultaneously, we retain our national crisis response force capability.

Ground-Based Anti-Ship Missile (GBASM)

GBASM is the Marine Corps' top modernization priority and is the key lethality component for the Marine Corps to facilitate sea denial in support of naval and joint operations. The current materiel solution for GBASM is the Navy-Marine Expeditionary Ship Interdiction System (NMESIS) which consists of two Naval Strike Missiles mounted on a remotely operated JLTV-based chassis. The capability creates cost impositions for an adversary by introducing a new and highly credible threat into their decision-making, while providing us with a relatively low cost and highly effective capability.

By combining existing technologies in the missile and the platform, the Marine Corps has reduced programmatic risks through the use of proven capabilities, which enables us to move faster. The Marine Corps successfully tested this system in November 2020, and in our FY 2022 budget request, we are seeking funding for 10 test systems for further developmental and operational testing. With the ability to strike enemy ships at ranges of 100 nautical miles and

beyond, we believe it will be a "game changer" for the Marine Corps, the Naval Fleet Commander, and combatant commanders.

Organic Precision Fires (OPF)

OPF is a family of loitering munition systems that will provide multiple echelons of the Fleet Marine Force with beyond-line-of-sight, precise fires capabilities. As a "hunter – killer" capability, OPF will provide continuous surveillance before, during, and after conducting lethal strikes against targets, while reducing potential for collateral damage. Furthermore, these systems will be capable of engaging targets at extended range with sufficient lethality to defeat armored, water-borne, and personnel threats.

Long-Range Unmanned Surface Vessel (LRUSV)

The Marine Corps envisions LRUSV as an uncrewed vessel, approximately 45 feet in length, capable of conducting semi-autonomous maneuver in the open ocean for extended periods of time. The vessel will serve as a platform for the launching of Organic Precision Fires, thus providing reconnaissance and surface-launched strike capabilities. Through extensive wargaming, the LRUSV has demonstrated the potential to generate significant operational impact, benefitting the Navy and Marine Corps' anti-surface warfare campaigns. The Marine Corps is taking a deliberate approach to capability development using prototyping and experimentation to reduce technical and integration risk, validate designs, and better inform achievable and affordable requirements, with the ultimate goal of delivering capabilities to the Marine Corps and Joint Force in the mid- to late-2020s. The Marine Corps has already contracted for three prototypes, and with our FY22 budget request, we will seek to procure two additional prototype vessels to begin experimentation.

Resilient Sensors and Communication Networks

To enable naval and joint force commanders across the competition continuum, the Marine Corps must not only become lighter and more lethal, but also must enhance its ability to enable joint command and control, as well as reconnaissance and counter reconnaissance operations. Thus, the Marine Corps is working on more resilient and interoperable networks and data systems that will support Marines' sensing and communication capabilities, enabling the Navy Tactical Grid and Joint All-Domain Command and Control. This creates advantages for Marines across key maritime locations and provides the required information for uniformed and civilian leaders to make sound judgments.

Ground/Air Task Oriented Radar (G/ATOR)

G/ATOR is a state-of-the-art, ground-based, short-to-medium range, expeditionary radar system designed as a single materiel solution to satisfy air surveillance, air defense, ground counter-fire and counter-battery, with the ability to perform air traffic control mission sets. The radar is transportable by organic Marine Corps means. G/ATOR enables Marines to control designated airspace by way of detecting, tracking, classifying, and accurately determining the origin of enemy projectiles and air threats. Notably, G/ATOR will support forward-postured Marines by providing surveillance and detection of enemy air threats, not easily identified by other radar assets in congested littoral environments. The G/ATOR radar is already in service in the Pacific region, and the Marine Corps will continue to procure and field this highly capable radar system. In addition to G/ATOR, the Marine Corps is developing the Multi-Domain Radar for a Contested Environment (MuDRaCE). This advanced system is complementary to the G/ATOR and will enhance the Marine Corps and Joint Forces' situational awareness.

Marine Electronic warfare Ground Family of Systems (MEGFoS)

MEGFoS is an electronic warfare system that serves to counter improvised explosive devices and unmanned aerial surveillance threats while also providing limited counter-communications capabilities. This family of systems, which includes mounted and dismounted variants, is in development. Through the use of the electro-magnetic spectrum, MEGFoS will have the ability to locate and identify adversary forces while simultaneously providing friendly forces feedback on their signature management operations. MEGFoS will enable the Marine Corps to maneuver, fight, and sustain itself through the exploitation of the electro-magnetic spectrum.

Networking On The Move (NOTM)

NOTM is comprised of a robust communication system mounted on a ground combat vehicle or aviation platform. NOTM provides terrestrial line-of-sight and beyond line-of-sight satellite communications for Marines at-the-halt and while on-the-move. NOTM is purpose built to support our naval and joint concepts that require our forces to fight in a distributed manner by allowing dispersed commanders the ability to effectively command and control forces in a contested all-domain environment. The Marine Corps is currently fielding these systems that will allow for seamless command and control for maneuvering units in the future.

Next Generation Satellite Communications

Marine Corps Wideband Satellite Communications Family of Systems (MC-WSATCOM FoS) is a comprehensive, integrated, and sustainable solution designed to address current and future warfighting capability needs using military and commercial SATCOM systems in both contested and permissive electro-magnetic spectrum environments. The MC-WSATCOM FoS

will replace legacy very-small-aperture terminal communications systems, enable command and control of forward postured Marines, and be fully interoperable with naval and joint wideband SATCOM systems.

Integrated Broadcast Receiver (IBR)

IBR is the Marine Corps' family of terminals that provides direct, over-the-air access to the Joint-sponsored Integrated Broadcast Service. The IBR receives and processes near-real time multi-intelligence data from strategic, theater, and tactical sensors to include Theater Missile Defense indications and warnings. To ensure the survivability of the network, the IBR is low bandwidth, mission tailorable, and capable of operating in a degraded, intermittent, and emission controlled environment.

Military Global positioning system User Equipment (MGUE)

MGUE efforts are focused on enhancing the Resilient Expeditionary Positioning, Navigation, and Timing (REPNT) capabilities across the enterprise, enabling Marines to know and trust their position, effectively navigate, and receive precise and accurate timing information for themselves and their platforms. Under the MGUE program, the Marine Corps will transition to the modernized military GPS signal, which upgrades protections against enemy jamming and spoofing threats. The program is also a critical enabler of the Marine Corps' participation in Joint All-Domain Command and Control efforts within the Joint Force.

Next Generation Enterprise Network (NGEN)

NGEN is a Department of the Navy enterprise program enabled by cloud technology, modern networking tools and applications, and core enterprise services shared by both the Marine Corps and the Navy to support free flow of warfighting data from garrison to tactical

environments. NGEN forms the foundation for the Department of the Navy's future Naval Networking Environment and is interoperable with and leverages other Department of Defense provided Net-Centric Enterprise Services, supporting the Joint Information Environment.

Complementary Air and Surface Efforts

To achieve overall successful execution in the future, all of the Marine Corps' ground modernization efforts are complemented by air and surface capabilities and programs that are either mature or in development. For example, the F-35 is a mature program that will be critical to the Marine Corps' overall warfighting concept in the future due to its advanced sensing and strike capabilities.

Another example of a complementary aviation effort is the Marine Corps' pursuit of the MQ-9A Extended Range Unmanned Aircraft System (UAS), which the Marine Corps has identified as the materiel solution for the Marine Air-Ground Task Force Unmanned Experimental – Medium Altitude Long Endurance (MUX MALE) capability. The Marine Corps seeks to procure six MQ-9A Extended Range systems in FY 2022, and a total of 18 systems over the next several years, to form three UAS squadrons. The Marine Corps will leverage an existing Air Force system and two current Marine Corps assets in USCENTCOM to reduce risk, while providing advanced capabilities to the Marine Corps and overall joint warfighting enterprise. These squadrons will provide persistent airborne data relay in support of overall maritime domain awareness and command and control capabilities. The MQ-9A Extended Range is a critical enabler to the Naval force in building an alternate Precision, Navigation, and Timing network.

In addition to aircraft, the Marine Corps' the success of ground modernization is also predicated on Navy shipbuilding programs, such as the Navy's Light Amphibious Warship (LAW). The LAW, which is a new class of warship that will complement existing traditional amphibious warships, will provide added surface mobility and survivability for Marine Corps forces. These functions will be critical to Marine ground forces' ability to operate and sustain themselves in austere intra-theater locations across remote beaches.

Conclusion

The programs highlighted here are critical to the Marine Corps' modernization. Some of the programs are nascent, while others are more mature in the acquisitions process. Regardless, maintaining the pace of each of these programs is essential to achieving initial operating capability of critical warfighting concepts and sustaining momentum to achieve a combat credible force in a chaotic, uncertain, and competitive future operating environment. Our proactive modernization, balanced with the readiness to "fight tonight," will ensure your Marine Corps remains a naval expeditionary force-in-readiness that is prepared to sense, communicate, and act today and in the future. Our Marines and Sailors around the globe thank you, as well as many of your constituents in industry who are developing and building these systems, for your continued support over the last challenging year and in the future.