

**H.R. 7900—FY23 NATIONAL DEFENSE
AUTHORIZATION BILL**

**SUBCOMMITTEE ON TACTICAL AIR
AND LAND FORCES**

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DIVISION A—DEPARTMENT OF DEFENSE AUTHORIZATIONS

TITLE I—PROCUREMENT

LEGISLATIVE PROVISIONS

SUBTITLE C—NAVY PROGRAMS

Section 1xx—Quarterly Briefings on the CH-53K King Stallion Helicopter Program

This section would require the Secretary of the Navy to provide a briefing on the cost, schedule, and testing of the CH-53K helicopter program on a quarterly basis through fiscal year 2024.

Section 1XX—Authority to Procure Airframes and Engines for CH-53K King Stallion Heavy-Lift Helicopters

This section would authorize the Department of the Navy to enter into one contract for procurement of up to 30 CH-53K helicopters and one contract for procurement of up to 90 engines for the CH-53K over fiscal years 2023 and 2024.

SUBTITLE D—AIR FORCE PROGRAMS

Section 1xx—Requirements Study and Acquisition Strategy for the Combat Search and Rescue Mission of the Air Force

This section would require the Secretary of the Air Force to conduct a study on the requirements for the Air Force combat search and rescue mission to meet the objectives of the most recent National Defense Strategy and to provide the result of this study to the Committees on Armed Services of the Senate and the House of Representatives not later than March 30, 2023. This section would further require the Secretary to develop an acquisition strategy to meet the requirements identified under the directed study and to submit this strategy to the Committees on Armed Services of the Senate and the House of Representatives not later than June 1, 2023.

Section 1xx—Repeal of Air Force E-8C Force Presentation Requirement

This section would amend section 147 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232) by striking subsection (f).

SUBTITLE E—DEFENSE-WIDE, JOINT, AND MULTISERVICE MATTERS

Section 1XX—Assessment and Report on Military Rotary Wing Aircraft Industrial
Base

This section would require the Under Secretary of Defense for Acquisition and Sustainment, in coordination with the Secretaries of the military services, to conduct an assessment of the military rotary wing industrial base and provide a report to the congressional defense committees.

TITLE X—GENERAL PROVISIONS

LEGISLATIVE PROVISIONS

SUBTITLE F—STUDIES AND REPORTS

Section 10xx—Annual Reports on Safety Upgrades to the High Mobility
Multipurpose Wheeled Vehicle Fleets

This section would require the Secretaries of the Army, Navy, and Air Force to each submit reports annually on the plans and progress made with respect to the installation of safety upgrades to their respective High Mobility Multipurpose Wheeled Vehicle fleets.

BILL LANGUAGE

1 **SEC. 1** [Log 74842]. **QUARTERLY BRIEFINGS ON THE CH-**
2 **53K KING STALLION HELICOPTER PROGRAM.**

3 (a) **IN GENERAL.**—Not later than 30 days after the
4 date of the enactment of this Act, and on a quarterly basis
5 thereafter through the end of fiscal year 2024, the Sec-
6 retary of the Navy shall provide to the Committee on
7 Armed Services of the House of Representatives a briefing
8 on the progress of the CH–53K King Stallion helicopter
9 program.

10 (b) **ELEMENTS.**—Each briefing under subsection (a)
11 shall include, with respect to the CH–53K King Stallion
12 helicopter program, the following:

13 (1) An overview of the program schedule.

14 (2) A statement of the total cost of the program
15 as of the date of the briefing, including the cost of
16 development, testing, and production.

17 (3) A comparison of the total cost of the pro-
18 gram relative to the original acquisition program
19 baseline and the most recently approved acquisition
20 program baseline as of the date of the briefing.

21 (4) An assessment of the flight testing that re-
22 mains to be conducted under the program, including
23 any testing required for validation of correction of
24 technical deficiencies.

1 (5) An update on the status of the correction
2 of technical deficiencies under the program and any
3 effects on the program schedule resulting from the
4 discovery and correction of such deficiencies.

5 (c) CONFORMING REPEAL.—Section 132 of the Na-
6 tional Defense Authorization Act for Fiscal Year 2020
7 (Public Law 116–92; 133 Stat. 1238) is repealed.

1 **SEC. 1** [Log 75085]. **AUTHORITY TO PROCURE AIR-**
2 **FRAMES AND ENGINES FOR CH-53K KING**
3 **STALLION HEAVY-LIFT HELICOPTERS.**

4 (a) **CONTRACT AUTHORITY.**—During fiscal years
5 2023 and 2024, the Secretary of the Navy may enter
6 into—

7 (1) a single contract for the procurement of up
8 to 30 airframes in support of the CH-53K heavy-lift
9 helicopter program; and

10 (2) a single contract for the procurement of up
11 to 90 engines in support of such program.

12 (b) **LIABILITY.**—Any contract entered into under
13 subsection (a) shall provide that—

14 (1) any obligation of the United States to make
15 a payment under the contract is subject to the avail-
16 ability of appropriations for that purpose; and

17 (2) that total liability of the Federal Govern-
18 ment for termination of any contract entered into
19 shall be limited to the total amount of funding obli-
20 gated to the contract at time of termination.

1 **SEC. 1** [Log 74841]. **REQUIREMENTS STUDY AND ACQUI-**
2 **SITION STRATEGY FOR THE COMBAT SEARCH**
3 **AND RESCUE MISSION OF THE AIR FORCE.**

4 (a) **REQUIREMENTS STUDY.**—

5 (1) **IN GENERAL.**—The Secretary of the Air
6 Force shall conduct a study to determine the re-
7 quirements for the combat search and rescue mis-
8 sion of the Air Force in support of the objectives of
9 the National Defense Strategy.

10 (2) **ELEMENTS.**—The study under paragraph
11 (1) shall include the following:

12 (A) Identification of anticipated combat
13 search and rescue mission requirements nec-
14 essary to meet the objectives of the most recent
15 National Defense Strategy, including—

16 (i) requirements for short-term, mid-
17 term, and long-term contingency and
18 steady-state operations against adversaries;

19 (ii) requirements under the Agile
20 Combat Employment operational scheme of
21 the Air Force;

22 (iii) requirements relating to regions
23 and specific geographic areas that are ex-
24 pected to have a need for combat search

1 and rescue forces based on the combat-rel-
2 evant range and penetration capability of
3 United States air assets and associated
4 weapon systems; and

5 (iv) the level of operational risk asso-
6 ciated with each likely requirement and
7 scenario.

8 (B) An assessment of the rotary, tilt, and
9 fixed wing aircraft and key combat search and
10 rescue enabling capabilities that—

11 (i) are needed to meet the require-
12 ments identified under subparagraph
13 (A)(ii); and

14 (ii) have been accounted for in the
15 budget of the Air Force as of the date of
16 the study.

17 (C) Identification of any combat search
18 and rescue capability gaps, including an assess-
19 ment of—

20 (i) whether and to what extent such
21 gaps may affect the ability of the Air
22 Force to conduct combat search and rescue
23 operations;

24 (ii) any capability gaps that may be
25 created by procuring fewer HH-60W air-

1 craft than planned under the program of
2 record, including any expected changes to
3 the plan for fielding such aircraft for ac-
4 tive, reserve, and National Guard units;
5 and

6 (iii) any capability gaps attributable
7 to unfunded requirements.

8 (D) Identification and assessment of key
9 current, emerging, and future technologies with
10 potential application to the combat search and
11 rescue mission, including electric vertical take-
12 off and landing, unmanned aerial systems,
13 armed air launched effects or similar armed ca-
14 pabilities, or a combination of such tech-
15 nologies.

16 (E) An assessment of each technology
17 identified under subparagraph (D), including
18 (as applicable) an assessment of—

19 (i) technology maturity;

20 (ii) suitability to the combat search
21 and rescue mission;

22 (iii) range;

23 (iv) speed;

24 (v) payload capability and capacity;

- 1 (vi) radio frequency and infrared sig-
2 natures;
3 (vii) operational conditions required
4 for the use of such technology, such as
5 runway availability;
6 (viii) survivability;
7 (ix) lethality;
8 (x) potential to support combat mis-
9 sions other than combat search and rescue;
10 and
11 (xi) estimated cost.

12 (3) SUBMITTAL TO CONGRESS.—

13 (A) IN GENERAL.—Not later than March
14 30, 2023, the Secretary of the Air Force shall
15 submit to the Committees on Armed Services of
16 the Senate and the House of Representatives a
17 report on the results of the study under para-
18 graph (1).

19 (B) FORM.—The report required under
20 subparagraph (A) shall be submitted in unclas-
21 sified form, but may include a classified annex.

22 (b) ACQUISITION STRATEGY.—

23 (1) IN GENERAL.—Based on the results of the
24 study conducted under subsection (a), the Secretary
25 of the Air Force shall develop a strategy for the ac-

1 quisition of capabilities to meet the requirements
2 identified under such study.

3 (2) ELEMENTS.—The acquisition strategy
4 under paragraph (1) shall include—

5 (A) A prioritized list of the capabilities
6 needed to meet the requirements identified
7 under subsection (a).

8 (B) The estimated costs of such capabili-
9 ties, including—

10 (i) any amounts already budgeted for
11 such capabilities as of the date of the
12 strategy, including amounts already budg-
13 eted for emerging and future technologies;
14 and

15 (ii) any amounts not already budgeted
16 for such capabilities as of such date.

17 (C) An estimate of the date by which the
18 capability is expected to become operational.

19 (D) A description of any requirements
20 identified under subsection (a) that the Sec-
21 retary of the Air Force does not expect to meet
22 as part of the acquisition strategy and an expla-
23 nation of the reasons such requirements cannot
24 be met.

25 (3) SUBMITTAL TO CONGRESS.—

1 (A) IN GENERAL.—Not later than June 1,
2 2023, the Secretary of the Air Force shall sub-
3 mit to the Committees on Armed Services of
4 the Senate and the House of Representatives a
5 report on the acquisition strategy developed
6 under paragraph (1).

7 (B) FORM.—The report required under
8 subparagraph (A) shall be submitted in unclas-
9 sified form, but may include a classified annex.

1 **SEC. 1** [Log 74848]. **REPEAL OF AIR FORCE E-8C FORCE**

2 **PRESENTATION REQUIREMENT.**

3 Section 147 of the John S. McCain National Defense

4 Authorization Act for Fiscal Year 2019 (Public Law 115–

5 232; 132 Stat. 1669) is amended by striking subsection

6 (f).

1 **SEC. 1** [Log 75361]. **ASSESSMENT AND REPORT ON MILI-**
2 **TARY ROTARY WING AIRCRAFT INDUSTRIAL**
3 **BASE.**

4 (a) **ASSESSMENT REQUIRED.**—The Under Secretary
5 of Defense for Acquisition and Sustainment, in coordina-
6 tion with the Secretaries of the Army, Navy, and Air
7 Force, shall conduct an assessment of the military rotary
8 wing aircraft industrial base.

9 (b) **ELEMENTS.**—The assessment under subsection
10 (a) shall include the following:

11 (1)(A) Identification of each rotary wing air-
12 craft program of the Department of Defense that is
13 in the research and development or procurement
14 phase.

15 (B) A description of any platform-specific or ca-
16 pability-specific facility or workforce technical skill
17 requirements necessary for each program identified
18 under subparagraph (A).

19 (2) Identification of—

20 (A) the rotary wing aircraft capabilities of
21 each Armed Force anticipated for programming
22 beyond the period covered by the most recent
23 future-years defense program submitted to Con-
24 gress under section 221 of title 10, United

1 States Code (as of the date of the assessment);
2 and

3 (B) the technologies, facilities, and work-
4 force skills necessary for the development of
5 such capabilities.

6 (3) An assessment of the military industrial
7 base capacity and skills that are available (as of the
8 date of the assessment) to design and manufacture
9 the platforms and capabilities identified under para-
10 graphs (1) and (2) and a list of any gaps in such
11 capacity and skills.

12 (4)(A) Identification of each component, sub-
13 component, or equipment supplier in the military ro-
14 tary wing aircraft industrial base that is the sole
15 source within such industrial base from which that
16 component, subcomponent, or equipment may be ob-
17 tained.

18 (B) An assessment of any risk resulting from
19 the lack of other suppliers for such components, sub-
20 components, or equipment.

21 (5) Analysis of the likelihood of future consoli-
22 dation, contraction, or expansion, within the rotary
23 wing aircraft industrial base, including—

1 (A) identification of the most probable sce-
2 narios with respect to such consolidation, con-
3 traction, or expansion; and

4 (B) an assessment of how each such sce-
5 nario may affect the ability of the Armed
6 Forces to acquire military rotary wing aircraft
7 in the future, including any effects on the cost
8 and schedule of such acquisitions.

9 (6) Such other matters the Under Secretary of
10 Defense for Acquisition and Sustainment determines
11 appropriate.

12 (c) REPORT.—

13 (1) IN GENERAL.—Concurrently with the sub-
14 mission of the next annual report required to be sub-
15 mitted under section 4814 of title 10, United States
16 Code, after the date of the enactment of this Act,
17 the Under Secretary of Defense for Acquisition and
18 Sustainment shall submit to the congressional de-
19 fense committees a report that includes—

20 (A) the results of the assessment con-
21 ducted under subsection (a); and

22 (B) based on such results, recommenda-
23 tions for reducing any risks identified with re-
24 spect to the military rotary wing aircraft indus-
25 trial base.

1 (2) FORM.—The report required under para-
2 graph (1) may be submitted as an appendix to the
3 annual report required to be submitted under section
4 4814 of title 10, United States Code.

1 **SEC. 10** [Log 75048]. **ANNUAL REPORTS ON SAFETY UP-**
2 **GRADES TO THE HIGH MOBILITY MULTIPUR-**
3 **POSE WHEELED VEHICLE FLEETS.**

4 (a) ANNUAL REPORTS.—Not later than March 1,
5 2023, and annually thereafter until the date specified in
6 subsection (c), the Secretaries of the Army, Navy, and Air
7 Force shall each submit to the Committees on Armed
8 Services of the Senate and House of Representatives a re-
9 port on the installation of safety upgrades to the high mo-
10 bility multipurpose wheeled vehicle fleets under the juris-
11 diction of the Secretary concerned, including anti-lock
12 brakes, electronic stability control, and fuel tanks.

13 (b) MATTERS FOR INCLUSION.—Each report re-
14 quired under subsection (a) shall include, for the year cov-
15 ered by the report, each of the following:

16 (1) The total number of safety upgrades nec-
17 essary for the high mobility multipurpose wheeled
18 vehicle fleets under the jurisdiction of the Secretary
19 concerned.

20 (2) The total cumulative number of such up-
21 grades completed prior to the year covered by the re-
22 port.

23 (3) A description of any such upgrades that
24 were planned for the year covered by the report.

1 (4) A description of any such upgrades that
2 were made during the year covered by the report
3 and, if the number of such upgrades was less than
4 the number of upgrades planned for such year, an
5 explanation of the variance.

6 (5) If the total number of necessary upgrades
7 has not been made, a description of the upgrades
8 planned for each year subsequent to the year cov-
9 ered by the report.

10 (c) **TERMINATION.**—No report shall be required
11 under this section after March 1, 2026.

DIRECTIVE REPORT LANGUAGE

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DIVISION A—DEPARTMENT OF DEFENSE AUTHORIZATIONS

TITLE I—PROCUREMENT

AIRCRAFT PROCUREMENT, ARMY

Items of Special Interest

Army high-altitude intelligence, surveillance, and reconnaissance

The committee notes that intelligence, surveillance, and reconnaissance (ISR) systems fill critical roles in support of military operations across the globe. Demand for ISR continues to increase as the joint force reorients toward strategic competition. The committee recognizes that the Army has successfully augmented current service ISR capabilities with contractor-owned, contractor-operated (COCO) platforms to meet mission requirements and reduce operating costs for the military. The committee encourages the Secretary of the Army to continue utilizing the COCO model for ISR requirements in areas of operation of high value at the direction of the geographic combatant commanders, while developing an acquisition strategy to meet enduring ISR requirements.

Accordingly, the committee directs the Secretary of the Army to submit a report to the House Committee on Armed Services not later than February 1, 2023, regarding the plan to implement a program of record to fill the gap in ISR capabilities, including for high-altitude capabilities, to meet validated ISR mission requirements.

MISSILE PROCUREMENT, ARMY

Items of Special Interest

Tube-launched, optically tracked, wireless-guided missile system modernization

The committee supports the Army's continued investment in the tube-launched, optically tracked, wireless-guided (TOW) missile system to defeat known and future armored threats. The committee understands that the Army has two emerging requirements aimed at modernizing the TOW missile: the Close Combat Missile System-Heavy (CCMS-H) and the Multi-Purpose Guided Missile that is directly associated with the Optionally Manned Fighting Vehicle. However, the committee is concerned that the Army may be developing duplicative or redundant combat vehicle missile programs that may be unaffordable and could require a change in the TOW missile infrastructure fielded today.

Therefore, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to provide a briefing to the House Committee on Armed Services not later than December 23, 2022, on the Army's efforts to

modernize the TOW missile system. The report shall address issues including, but not limited to:

- (1) details of requirements of the CCMS-H and the Multi-Purpose Guided Missile;
- (2) schedules and cost estimates for developing and procuring the CCMS-H and the Multi-Purpose Guided Missile;
- (3) whether these new missile requirements maintain the TOW Form Fit Factor and if not, a breakout of schedules and cost estimates specific to the modification of existing TOW launchers fielded to the Army, Marine Corps, and allied nations;
- (4) any and all efforts to upgrade the current TOW2B missile configuration to prevent obsolescence and increase capability; and
- (5) opportunities to leverage the TOW Form Fit Factor to address adjacent mission requirements, including short-range air defense and counter-unmanned aerial systems.

PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES, ARMY

Items of Special Interest

M240 small arms industrial base

The committee remains concerned that the Army is underestimating risk in the small arms industrial base, particularly with respect to the family of M240 medium machine guns. The committee notes that the Army has programmed no funding for M240 procurement in fiscal year 2023. The committee understands that the Army has achieved the procurement objective for the M240 medium machine gun and that current M240 acquisition and sustainment strategies rely on replacement of individual parts instead of new production. The committee is concerned about the impact of this strategy on the industrial base and the potential risk of eliminating a production line that would be difficult and costly to reestablish at a later date. The committee understands that the M240 provides a vital capability for both the U.S. military as well as for foreign allies that also use the platform. The ongoing crisis in Ukraine has highlighted both the need for active production lines for critical equipment as well as the risks associated with not having them when unforeseen events arise. The committee is concerned that the resulting small arms industrial base will lack the capacity and capability necessary to support current and future Department of Defense and allied requirements.

Therefore, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than December 23, 2022, that includes, but is not limited to:

- (1) the state of the small arms industrial base both currently and as envisioned based on the fiscal year 2023 Future Years Defense Program;
- (2) envisioned future requirements for M240 weapons, including foreign military sales;

(3) the impacts to the small arms industrial base of shuttering legacy production lines such as the M240; and

(4) options to sustain the small arms industrial base through the upgrade of legacy systems, such as replacing the existing inventory of M240B medium machine guns with the lighter weight M240L model.

OTHER PROCUREMENT, ARMY

Items of Special Interest

Army and Marine Corps requirements for soft armor

The committee is concerned that the Army and the Marine Corps have not increased the objective requirements for soldier protection programs. The committee is aware that next-generation aramid (NGA) delivers an approximate 30 percent increase in tenacity over existing para-aramid fibers, enabling a previously unattainable level of weight reduction to woven ballistic protection. The inherent flame resistance of NGA provides fire protection at minimal additional weight or cost, thus enabling best-in-class fragment and ballistic protection in flexible soft body armor. It is inherently more flexible than ultra-high-molecular-weight polyethylene, making it ideal for conforming to female soldiers. NGA will deliver immediate benefits to active soft armor programs, enabling weight reduction to Army and Marine Corps programs like the Soldier Protection System, Modular Scalable Vest, Ballistic Combat Shirt, and Blast Pelvic Protector. Additionally, NGA potential applications include material hybridized rifle-resistant helmets, ballistic plates, vehicle spall liners, and hard armor.

Therefore, the committee directs the Secretary of the Army, in coordination with the Secretary of the Navy, to provide a briefing to the House Committee on Armed Services not later than December 23, 2022, on updating military requirements, incorporating the gains made by NGA.

CMOSS standards evaluation and enforcement

The committee remains concerned that the Army has not planned for appropriate resourcing to evaluate Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, Reconnaissance (C5ISR)/Electronic Warfare Modular Open Suite of Standards (CMOSS) compliance in future CMOSS embedded computing-related procurements, such as that of the forthcoming CMOSS Mounted Form Factor. The committee is also concerned about the Army's available resources to evaluate third-party software offerings for compliance to the multiple CMOSS software standards. Given CMOSS is intended as a regularly evolving suite of standards, failure to resource regularly assured compliance with these standards before, during, and after procurement risks the interoperability of entire Army systems.

Therefore, the committee directs the Secretary of the Army to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than December 23, 2022, on plans to ensure appropriate evaluation and certification of Army modular open systems architecture (MOSA) standards. This report shall include, but is not limited to, plans to establish, fund, and manage dedicated engineering technical responsibility, and the acquisition and competition plan for CMOSS Mounted Form Factor capability. This report shall also include what dedicated staffing and laboratory resources have been established, or are still required, to certify and validate the implementation of Army MOSA interfaces for industry and government.

Integrated tactical edge network technologies

The committee notes that the Department of Defense is developing and prototyping next-generation integrated sensor and communication technologies in support of programs such as Joint All-Domain Command and Control (JADC2). These next-generation technologies could provide critical data and voice communications capabilities as the Department begins to address the threat of near-peer adversaries and turns its focus to the great power competition as laid out in the 2022 National Defense Strategy. The committee is also aware that existing technologies could support an accelerated integration of next-generation technologies using cellular-based secure tactical edge networks that can operate in contested and congested environments.

The committee recommends the Department continue to prioritize the development, prototyping, testing, and potential procurement of such government and commercial next-generation integrated sensor and communication technologies. Accordingly, the committee directs the Under Secretary of Defense for Research and Engineering to provide a briefing to the House Committee on Armed Services not later than April 15, 2023, on the Department's plans for Government and commercially developed next-generation integrated sensor and communication technologies. The required briefing shall:

- (1) identify and evaluate costs and benefits of government and commercially available integrated tactical edge network technologies based on cellular networks; and
- (2) identify and evaluate risks related to the operational use of next-generation commercially available integrated sensor and communication technologies, including but not limited to the use of cellular-based communications in contested or denied conditions.

Textiles industrial base study

The committee is concerned about the Department of Defense's industrial base stability and future production capacity for individual soldier and Marine clothing equipment, specifically including textiles and body armor. Prior year budget requests planned for funding of this equipment out of overseas contingency

operations (OCO) funds. After the realignment of OCO funds back into the base budget, the committee believes there is no sustainable and stable plan from the Department of Defense for the industrial base to meet the current, future, and potential surge needs of individual soldier clothing, textiles, and body armor. Therefore, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services and the Senate Committee on Armed Services by December 23, 2022, on plans to secure, fund, and stabilize these industrial base capabilities. The report shall address the following:

- (1) the Department of Defense's historic spending on clothing and textiles and body armor;
- (2) the minimum sustainment rate for the clothing and textiles industrial base across the Future Years Defense Program;
- (3) the minimum sustainment rate for helmets, hard armor, soft armor, and flame-resistant uniforms;
- (4) the impact to the industrial base if the Department is not resourced to meet the minimum sustainment rates for the above;
- (5) the service-level cost share of the above;
- (6) the Department's expected annual operational demand and consumption rate for the above; and
- (7) the Department's plan for a sustainable organizational clothing and individual equipment strategy to include Arctic, sub-Arctic, jungle, and arid environments.

AIRCRAFT PROCUREMENT, NAVY

Items of Special Interest

F/A-18E/F advanced electronic warfare suite upgrade

The committee notes there is an operational need for an integrated electronic warfare suite to ensure the F/A-18 E/F Block III strike fighter aircraft fleet remains relevant and survivable in highly contested, anti-access/area denial environments. The committee recognizes that the Commander for Naval Air Forces (CNAF) noted on the CNAF's fiscal year 2023 annual priorities list a requirement for F/A-18E/F to be equipped with an advanced electronic warfare (ADVEW) suite. The committee notes the ADVEW suite is intended to serve as an upgrade for the existing AN/ALQ-214A(V) radio frequency countermeasure and AN/ALR-67(V) radar warning receiver (RWR) systems and is integrated with the APG-79 wide band receiver, active electronically scanned array (AESA) radar that is scheduled to be deployed on F/A-18E/F Block III configured aircraft as well as on the next generation of naval aviation platforms. The committee is aware of the need to expand the service life of the F/A-18E/F fleet and supports the Navy's efforts to improve the F/A-18E/F readiness and capabilities beyond 2030.

Therefore, the committee directs the Secretary of the Navy, in coordination with the Commander, U.S. European Command and the Commander, U.S. Indo-

Pacific Command, to provide a briefing to the House Committee on Armed Services not later than May 1, 2023, on the Navy's plan to ensure the tactical relevance and survivability of the F/A-18 E/F with the ADVEW suite. The briefing should include:

(1) the mission systems, if any, that are primary drivers in achieving tactically relevant primary mission capable or fully mission capable F/A-18E/F aircraft, given the context of operating in an increasingly contested environment against potential near-peer adversaries;

(2) how the Navy will leverage highly advanced compact, electronic antenna solutions that provide low-risk modifications on aircraft size, weight, and power, as well as assessing integration objectives for minimal hardware changes, ease of installation, and upgradeability to the existing F/A-18E/F fleet;

(3) how new ADVEW capabilities will fully integrate with current and expanded APG-79 AESA radars;

(4) any additional resources required to maintain the survivability of the F/A-18E/F fleet until the Navy's Next Generation Air Dominance (NGAD) is operational; and

(5) an integrated master schedule for F/A-18E/F ADVEW suite and Block III upgrades.

AIRCRAFT PROCUREMENT, AIR FORCE

Items of Special Interest

MQ-9 Reaper modernization

The committee is concerned that the Air Force is not properly prioritizing MQ-9 Reaper unmanned aircraft system modernization. The committee notes that the MQ-9 fleet is the youngest and lowest cost per flying hour, has the highest mission capable rate, and yet is under consideration for divestment before the airframe reaches its lifetime flying hours. The most recent briefing to the committee indicated that the Air Force intends to remove well over half of the existing aircraft from the MQ-9 fleet by fiscal year 2027.

The committee recognizes that a moderate, sustained investment in MQ-9 modernization would add mission-relevant capability to these aircraft, addressing unmet and urgent needs for intelligence, surveillance, and reconnaissance (ISR) identified by the commanders of the combatant commands. Current MQ-9 modernization efforts include the multi-domain operations (M2DO) program, designed to incorporate an open mission systems architecture (OMS) and increased power capacity, as well as advanced sensors, enhanced autonomy, and greater command and control resiliency. The committee understands that the budget request for \$36.7 million funds the OMS and power capacity portions of the program for approximately a third of the aircraft, but that the follow-on sensors and autonomy enhancements are underfunded through the Future Years Defense Program (FYDP).

As there is no formal follow-on acquisition program for the MQ-9, adequate modernization funding is critical to ensure MQ-9 operational capability and viability through the next decade. The committee expects the Air Force to fund modernization of the existing MQ-9 enterprise, upgrade these aircraft to the full M2DO configuration, and deploy them with advanced sensors to provide a low-cost alternative for wide area strategic ISR, while continuing to evaluate requirements for the next generation of unmanned ISR.

The committee directs the Secretary of the Air Force to submit a report to the congressional defense committees not later than December 1, 2022, on implementation of the MQ-9 M2DO program, to include the budget and schedule for each portion of the M2DO modernization effort through the FYDP.

Report on plans for reduction of Air Force fixed-wing advanced training aircraft

The committee notes the Air Force will be transitioning its existing fleet of T-38C pilot training aircraft over the next several years to the new T-7 fleet of aircraft which will be used for the advanced flight training phase within the Specialized Undergraduates Pilot Training formal training course of the Air Force. The committee requires more detail to understand the underpinning analysis that justifies replacing 422 T-38C aircraft with just 350 T-7 aircraft.

Therefore, the committee directs the Secretary of the Air Force to submit a report to the congressional defense committees by May 15, 2023, regarding the planned reduction of advanced training aircraft capacity of the Air Force. The report should include:

- (1) the justification and specific analysis for reducing the aircraft training capacity from 422 to 350 aircraft;
- (2) an explanation of whether, and to what extent, the reduction of training aircraft at a given military installation would negatively or positively impact pilot training efforts;
- (3) the impact that a reduction of training aircraft could have on pilot training locations involving partner nations training alongside members of U.S. Armed Forces and utilizing such training aircraft;
- (4) an analysis of the existing T-38C aircraft force structure recommended to support current-day pilot training activities and requirements;
- (5) the Secretary's justification and analysis for any increased operational or training risk that may be incurred by reducing the existing quantity of T-38C training aircraft to a smaller quantity of T-7 training aircraft for training in the future; and
- (6) any other information the Secretary considers appropriate to adequately explain the planned quantity reduction of advanced training aircraft at Air Force pilot training locations.

OTHER PROCUREMENT, AIR FORCE

Items of Special Interest

Air combat training system capability enhancements

The committee notes that the Utah Test and Training Range (UTTR) is one of a few premier Department of Defense air combat training ranges, supporting air-to-air and air-to-ground training and operational test and evaluation of weapons. The committee supports providing realistic training opportunities for fourth- and fifth-generation pilots to improve readiness levels and weapon systems capabilities, and hone the skills of combat air forces training required for deterrence and combat activities associated with great power competition.

The committee is concerned that the Air Force and joint forces lack a high-fidelity, X-band surface-to-air missile (SAM) threat simulator at the UTTR for aircrews to train against. The committee supports Air Force efforts to develop these capabilities with new programs but is concerned that this future capability may not be available in the near term and that the UTTR is not currently prioritized to receive these developmental systems. The committee is aware of the capability gap that currently exists for Air Force units training within the UTTR airspace in that the training range lacks relevant, advanced, high-fidelity surface-to-air missile threat emitters to train against.

Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services not later than March 1, 2023, on efforts to field a non-developmental, high-fidelity, full-effective radiated power, X-band threat emitter capability that would be suitable for aircrew training at the UTTR.

PROCUREMENT, DEFENSE-WIDE

Items of Special Interest

Degraded visual environment systems commonality and cost efficiencies

The committee recognizes that hazards such as wires, vehicles, uncharted terrain, and low-visibility conditions caused by smoke, dust, fog, and precipitation may all contribute to a degraded visual environment (DVE) for military air and ground vehicles. DVE occurs during training and operational missions and has led to aircraft damage, aircraft loss, and aircrew injuries and fatalities. The committee has encouraged and supported efforts by the military services to develop and field modernized DVE systems on rotary wing aircraft. The committee has previously noted the collaboration between the Army and U.S. Special Operations Command (USSOCOM) in developing and procuring a common DVE solution in order to quickly meet a directed requirement as well as field more broadly across the USSOCOM helicopter fleet.

The committee also recognizes ongoing efforts by the Army and the Air Force to ensure the emerging fleet of next-generation rotary wing and ground vehicles, including the Air Force's Combat Rescue Helicopter and the Army's Future Attack Reconnaissance Aircraft, Future Long Range Assault Aircraft, Optionally

Manned Fighting Vehicle, and Robotic Combat Vehicle, as well as the enduring fleet of existing rotary wing and ground vehicles, are equipped with DVE capability.

The committee understands that the key to DVE mitigation technology resides in software data fusion and the ability to rapidly integrate capabilities through open system architectures. Open system, software-based solutions can offer cost-savings across the Department of Defense while also allowing technology insertions at the speed of relevance in order to meet evolving and emerging threats.

Accordingly, the committee directs the Secretary of Defense to submit a report to the congressional defense committees not later than December 1, 2022, on the utility and potential cost-savings of coordinating and consolidating the development and procurement of DVE software data fusion across the services. The report shall include each of the military services' DVE sensor fusion integration and fielding timelines for both rotary wing and ground vehicle applications and anticipated costs across the Future Years Defense Program.

Increased lethality for unmanned aircraft systems

The committee recognizes that recent events in Europe have demonstrated the need for greater lethality, expeditionary capability, and precision targeting at the tactical unit level. The committee notes that providing smaller units and lower echelons greater organic capability to detect and target threats and support precision munitions could produce significant effects on the modern battlefield.

Accordingly, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than January 31, 2023, on current and future planned efforts to provide tactical units unmanned aircraft systems with designating and marking capability to enable the use of precision targeting and munitions.

TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY

Items of Special Interest

Acquisition strategy for autonomous ground vehicles

The committee notes the Army's efforts with development of autonomous and optionally manned ground systems and recognizes that they have the potential to increase efficiency, reduce workload, reduce risk, and support the lethality of ground forces. Given the level of effort the Army has made with various classes of autonomous or optionally manned vehicles, the committee would like a better understanding of the Army's plans, if any, to transition from developmental projects to acquisition programs.

Accordingly, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to provide a report to the House Committee on Armed Services not later than January 30, 2023, on the Army's development and acquisition strategy for autonomous ground vehicles, including the planned systems for acquisition, projected timeline, quality and safety metrics, and identification and assessment of any viable commercially available systems.

Autonomous robotic targets for small arms range training

The committee recognizes that live-fire training that is both safe and as realistic as possible is fundamental and critically important to soldier and unit readiness. The committee notes that the Army has an ongoing development program intended to deliver an autonomous robotic target system that meets training requirements and is affordable. The committee also notes that there are commercial alternatives being utilized by other military services. For example, the Marine Corps' "training-as-a-service" model of autonomous robotic targets is being used to improve marksmanship, tactical decision-making, and individual and squad engagement proficiency. The committee is interested to know the Army's current requirements and plans for autonomous robotic targets under the Future Army Systems Integrated Targets–Trackless Moving Targets program and how it accounts for advancements in individual and group robot autonomy attributable to artificial intelligence as well as the rapid technological improvements that occur each year in this field.

Therefore, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to provide a report to the Committees on Armed Services of the Senate and the House of Representatives not later than February 1, 2023, on the following:

- (1) requirements and plans for the development and acquisition of autonomous robotic targets for small arms training;
- (2) the availability and associated costs of Government-developed and commercially available live-fire autonomous robotic targets;
- (3) user feedback, if available, from soldiers that are provided an opportunity to assess such targets in live-fire training;
- (4) the Army's existing autonomous robotic target performance requirements;
- (5) an analysis of the cost of Government and commercial alternatives, including but not limited to procurement, sustainment, and necessary range facility support costs; and
- (6) potential range modernization cost-savings and cost avoidance, if any, that can be achieved by the adoption of autonomous robotic targets.

Carbon fiber and graphite foam applications for combat and tactical vehicles

In the committee report accompanying the National Defense Authorization Act for Fiscal Year 2022 (H. Rept. 117-118), the committee again noted that the

U.S. Army Ground Vehicle Systems Center (GVSC) and U.S. Special Operations Command (USSOCOM) were conducting developmental research on carbon fiber composite wheels and graphitic carbon foam in support of the Army's and the special operations forces' combat and tactical vehicle programs. The committee took the opportunity in H. Rept. 117-118 to note further that the GVSC and USSOCOM may be interested in a wider application of graphitic composite and graphitic carbon foam components in support of the Army's Next Generation Combat Vehicle and for other vehicle technology purposes. In accordance with the committee's direction last year, the Army submitted a report in February 2022, in which it noted that its ongoing outreach efforts have resulted in collaboration with 32 industry partners with shared interest or efforts related to graphitic foam applications and manufacturing.

Given the committee's attention to this technology over the years and its enduring interest in the testing and demonstration of the potential of graphite composite and graphitic carbon foam vehicle components, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology, in coordination with the Commander, U.S. Special Operations Command, to submit a report to the House Committee on Armed Services not later than December 23, 2022, on the results of government and commercial industry development and testing and the practical application or fielding of graphite composite and graphitic carbon foam components for existing or developmental combat or tactical vehicles.

Common Tactical Truck acquisition strategy

The committee notes the Army's Heavy Tactical Vehicle (HTV) fleet has reached its design maturity with significant obsolescence and repair parts challenges. The committee also understands that the Army has initiated the Common Tactical Truck (CTT) program utilizing a middle tier acquisition rapid prototype pathway with awards of other transaction agreements for prototypes planned for December 2022. The Army's intent appears to focus on modular truck prototypes that maximize use of current commercial heavy truck capabilities and commonality. The committee is interested in this effort as prototypes using commercial heavy truck capability could optimize available and emerging commercial-off-the-shelf technologies such as advanced driver assistance systems, digital design, improved fuel economy, predictive maintenance, diagnostics, and prognostics technologies. The committee is also interested to learn if this approach will set conditions for lower development cost and later procurement costs at commercial economies of scale.

The committee supports this accelerated effort given the apparent risk with current fleets, the criticality of logistics capability in large scale combat operations, as well as providing for increased competition and innovation in the tactical wheeled vehicle industrial base. The committee notes with concern, however, that the budget request included only \$16.3 million for CTT prototype builds and ongoing research and development. This amount suggests the Army is willing to

trade off the opportunity presented by commercial industry's interest to develop and field a 21st century heavy truck fleet to support Army and other defense logistics requirements now and into the future.

Accordingly, the committee directs the Secretary of the Army to provide a report to the House Committee on Armed Services not later than December 23, 2022, that details the Army's acquisition strategy to include:

- (1) required characteristics such as mission roles, commonality, leader-follower or autonomy ready, force protection and survivability, and demand reduction;
- (2) planned schedule to include use of soldier touch points;
- (3) contracting strategy;
- (4) modified test and evaluation plan that takes into account commercial-off-the-shelf technology;
- (5) funding profile across the Future Years Defense Program; and
- (6) issues for consideration and plans related to transitioning the program from prototype to production.

Stryker autonomy

The committee has noted elsewhere in this report the Army's efforts with the development of autonomous and optionally manned combat and tactical vehicles. The committee's interest in vehicle autonomy is not only limited to the development of future combat and tactical vehicles but also to currently fielded systems that are projected to remain in the force for the foreseeable future.

The Stryker Family of Armored Vehicles is one such system that is continuously undergoing upgrades and modifications to improve lethality and survivability. Given the Army's commitment to the Stryker vehicle and its apparent adaptability to a variety of tactical functions, the committee considers this system a likely candidate for research, development, testing, and operational experimentation with installed autonomous and advanced operator assistance systems.

Accordingly, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to provide a briefing to the House Committee on Armed Services not later than March 15, 2023, on the advisability, feasibility, and estimated cost of establishing a program to conduct research, development, prototyping, testing, and operational experimentation with autonomous, optionally manned, or advanced operator assistance systems on Stryker vehicles. In assessing the establishment of a program to develop the Stryker vehicle as an autonomous capability, the briefing shall include an outline of performance objectives and a plan for testing and experimentation in a variety of relevant operational scenarios and conditions. The briefing shall also include an estimated schedule and funding profile based on the performance objectives and test plans.

Tactical vehicle electrification field operations pilot program

The committee understands the Army approved the tactical and combat vehicle electrification (TaCV-E) initial capabilities document (ICD) in December 2021, that informs the transition to advancing electrification capabilities and operational requirements generation for the ground vehicle fleets. The committee is interested if electrification in the near term is achievable for tactical ground vehicles given the evident operational benefits associated with reduced vehicle thermal and noise signature, increased dash speed, and reduction in liquid fuel requirements. The committee understands rapid prototyping of and experimentation with TaCV-E could accelerate the military services' understanding of tactical vehicle electrification in field operations, inform analysis and planning, and manage potential issues associated with Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy.

Given the significant level of commercial investment in vehicle electrification by the automotive industry, the committee believes there is considerable and apparent value for the Army in entering into a cooperative research and development agreement (CRADA) with interested industry partners and initiating a tactical vehicle electrification pilot program at one of the combat training centers, such as the National Training Center at Fort Irwin, California. Such a CRADA could accelerate understanding of the potential and challenges of field operations and inform continued research and development of the TaCV-E. Such a pilot program, if implemented and supported, would allow tactical units to train on, experiment with, and demonstrate integrated electrification capabilities such as electric vehicles, and experiment with robust, resilient, mobile fleet charging systems and exportable power generation during operational training exercises.

Accordingly, the committee directs the Secretary of the Army to provide a report to the House Committee on Armed Services not later than January 15, 2023, on the advisability, feasibility, and estimated cost of conducting a tactical vehicle electrification pilot program through a CRADA-like structure with industry to experiment, demonstrate, and capture lessons learned from mature vehicle electrification technologies and associate integrated infrastructure.

Ultra-Compact Hyperspectral Imaging System

The committee is concerned with the Department of Defense's ability to detect, identify, and warn against chemical attacks and to track activities linked to the deployment of weapons of mass destruction by state and non-state actors. The committee notes that the Ultra-Compact Hyperspectral Imaging System (UCHIS) may have the potential to provide the necessary discrimination required to detect, identify, and defeat existing and future adversaries. UCHIS could potentially provide real-time data regarding chemical detection and identification adding significant capabilities in remote/standoff Measurement and Signature Intelligence, including chemical and biological intelligence, and spectroscopic intelligence.

Therefore, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than March 1, 2023, on the incorporation of UCHIS capabilities in Army modernization efforts and how the Secretary plans to develop these critical capabilities. The briefing should include: (1) total program cost, including program costs across the Future Years Defense Program; and (2) overall development timetable.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, NAVY

Items of Special Interest

Next Generation Jammer high band expansion

The committee continues to support expanding the capability of the Department of the Navy's Next Generation Jammer (NGJ) airborne electronic attack program to counter the high band electronic warfare threat. The committee is aware that the Navy's airborne electronic attack community views a high band capability as a top modernization priority and that the existing tactical jammer on the EA-18 Growler is not equipped to meet evolving threats. The committee concurs with this assessment and recognizes the need for an upgraded high band jamming capability for the Navy's EA-18 Growler.

In its response to the committee report accompanying the National Defense Authorization Act for Fiscal Year 2022 (H. Rept. 117-118), the Navy outlined three potential courses of action to address the high band threat and acknowledged that extending the frequency range of the current mid-band array represented the fastest path to an operational high band capability.

The committee notes that the NGJ Mid-Band program includes a cooperative agreement with a partner country, which has already contributed funding to the mid-band development effort. The committee is aware of interest on the part of the cooperative partner to begin investing in high band capability through a mid-band frequency extension effort. The mid-band frequency expansion course of action could provide a two-fold benefit: enhanced airborne electronic attack capability for the EA-18 Growler community and an opportunity for further technology collaboration.

The committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services not later than December 15, 2022, on the status of U.S. Navy-partner collaboration on NGJ, to include options for cooperative investment in an expanded frequency mid-band capability beginning in fiscal year 2024 and an assessment of any other resources or authorizations required to pursue this course of action.

Persistent, ultra-long endurance airborne intelligence, surveillance, and reconnaissance

The committee is concerned that combatant commanders have a critical requirement for persistent airborne intelligence, surveillance, and reconnaissance (ISR) in active conflict and low-intensity, highly dispersed regions that is not being met by existing systems. The committee is aware that the Office of Naval Research is developing an operational ultra-long endurance unmanned ISR aircraft with the aim of providing an affordable, persistent capability with significantly increased payload capacity compared to existing systems.

The committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services not later than March 1, 2023, on the Navy's efforts to develop persistent, ultra-long endurance, attritable Group III ISR systems. The briefing should include how such systems would address evolving and emerging threats and the associated budget and schedule with developing and fielding such capability.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, AIR FORCE

Items of Special Interest

Accelerating progress on Department of Defense autonomous collaborative platforms

The committee notes recent announcements by the Secretary of the Air Force acknowledging the requirement for affordable unmanned aircraft to team with and augment the current and future piloted aviation force. The committee understands that an option to achieve affordable capacity against peer adversaries for current aircraft fleets is to leverage cutting-edge manufacturing techniques, artificial intelligence, autonomy, and revolutionary-low cost mission systems enabling the capability, range, and survivability affordable enough to acquire platforms in sufficient ratios.

The committee is concerned with the current pace of efforts and the cost goals recently announced by the Secretary. Various low-cost autonomous programs have been undertaken across the entire Department of Defense enterprise for the last 8 years with some progress but no fieldable capability to date. Additionally, it is unclear there is a prioritized list of mission areas where autonomous platforms would operate and as such there exists a lack of focused effort to develop and acquire relevant systems. Finally, it remains unclear that the affordability goal of the Secretary of the Air Force would ever achieve the required ratios given current and future resource projections.

Therefore, the committee directs the Secretary of the Air Force, in coordination with the Secretary of the Navy and the Secretary of the Army, to provide a report to the congressional defense committees by February 15, 2023. The report should include required timelines to achieve a fieldable and relevant autonomous system. The report should also detail:

- (1) research and development objectives and resources required to achieve objections;
- (2) all-up round cost objectives;

(3) required capability, survivability, and mission areas where the platform would be employed; and

(4) operational concepts of operations and future growth potentials by the other military services outlining where synergies of effort could occur.

The report should be unclassified but may include a classified portion or annexes.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, DEFENSE-WIDE

Items of Special Interest

Department of Defense Live Virtual Constructive Training capabilities

The committee continues to support Department of Defense efforts to field a joint, interoperable, and secure blended Live, Virtual, and Constructive (LVC)-capable training system architecture and infrastructure. The committee acknowledges that without proper and sufficient training, future capabilities and efforts to ensure readiness will be less effective. While the committee believes LVC can be a cost-effective, realistic, and secure approach to eliminating training gaps for multi-domain combined operations, the committee is concerned about the developmental systems being currently fielded by the Department of Defense to meet LVC training requirements and is further concerned about the delays in fielding LVC capabilities and the adverse impacts these delays have on training to meet required readiness metrics.

The committee notes that current LVC systems lack the capability to display synthetic visual targets that are fundamental to aerial combat. The committee previously supported airborne augmented reality (AAR) technology currently under evaluation by the Air Force Research Laboratory, Air Combat Command, and Air Education and Training Command under the Small Business Innovative Research program. The committee encourages further development of AAR systems and expects all Air Force and Navy LVC training systems to include a capability to display realistic, all-aspect synthetic targets at distances within and beyond visual ranges.

Therefore, the committee directs the Under Secretary of Defense for Acquisition and Sustainment, in coordination with the Deputy Assistant Secretary of Defense for Force Education and Training, to provide a briefing to the House Committee on Armed Services not later than March 15, 2023, on the Department of Defense's overall plan to field joint, interoperable, blended LVC training environments. The briefing should include:

(1) a description of LVC training requirements of the Air Force and the Navy;

(2) an overview of all current LVC systems being developed, evaluated, tested, or fielded by the Air Force and the Navy and the results of any recent evaluations or testing activities of such systems;

- (3) the current schedule associated with each LVC system and how each system is performing to cost and schedule;
- (4) an assessment of the ability for each system to support existing, new production, and future aircraft;
- (5) budget estimates for each system;
- (6) current encryption capabilities for each system and the date each system is expected to meet required encryption capabilities;
- (7) current security accreditation status of each system;
- (8) an assessment of each system's open architecture design and current use of U.S. government-owned waveforms;
- (9) an assessment of each system's current and future capability to provide blended LVC training environments and support small-scale service training events, up to and including, large-scale coalition force employment exercises; and
- (10) how the Department of Defense plans to establish, maintain and ensure compliance with joint interoperable blended LVC standards and protocols, independent assessment criteria, and certification of service-blended LVC solutions to ensure joint and coalition interoperable training environments are responsive and authentic to the training requirements needed to succeed in a peer high-end fight.

Report on autonomy software for Next Generation Air Dominance Family of Systems

The committee understands the Air Force is pursuing autonomous collaborative platforms consisting of aircraft that would support the Air Force's nascent collaborative combat aircraft strategy envisioning autonomous, uncrewed platforms employing alongside piloted aircraft such as F-35, F-22, F-15EX, and Penetrating Counter Aircraft supporting the Next Generation Air Dominance Family of Systems (NGAD FoS) capabilities.

The committee understands that autonomy software could enable the continued operational capability of systems in position, navigation, and timing-denied environments and that inclusion of autonomy software has the potential to ensure aerospace platforms of the future are able to maintain their operational effectiveness in highly contested battlespaces and that the Department of Defense remains competitive in the development of emerging autonomy software technology.

Therefore, the committee directs the Secretary of the Air Force, in coordination with the Secretary of the Navy, to provide a report to the House Committee on Armed Services by May 1, 2023, on any plans to include autonomy software in their respective NGAD FoS initiatives. The report should include:

- (1) timelines for integrating autonomy software into any planned systems;
- (2) funding requirements related to the development, acquisition, and testing of autonomy software for such planned systems;
- (3) a description of the acquisition strategy that includes any autonomy software and how that strategy meets the requirements of section 2377 of title 10, United States Code; and

(4) plans for ensuring the safety and security of such systems equipped with autonomy software, including plans for testing, evaluation, validation, and verification of such systems.

The report should be submitted in unclassified form but may include a classified annex if required to fully inform all elements of the described report content.

OPERATIONAL TEST AND EVALUATION, DEFENSE

Items of Special Interest

Development and testing of body-worn equipment

The committee remains concerned that sizing, weight, and fit of body-worn equipment may continue to be inadequately accounted for, evaluated, and incorporated into the designs of new soldier and marine equipment. The committee expects next-generation body-worn equipment to be developed and tested on soldiers and marines within the 98th percentile for height and weight. Therefore, the committee directs the Director of Operational Test and Evaluation, in coordination with the Program Executive Officer Soldier, and the Commander of Marine Corps Systems Command, to provide a briefing to the House Committee on Armed Services not later than December 23, 2022, on most recent occurrences of and subsequent frequency of female soldier and marine equipment evaluation and what, if any, processes are in place to ensure future body-worn systems are evaluated for fit and appropriate wear through the 98th percentile of all possible sizes.

TITLE XVII—MUNITIONS REPLENISHMENT AND FUTURE PROCUREMENT

ITEMS OF SPECIAL INTEREST

Report on Anti-Air and Anti-Tank Ground Launched Munitions

The committee is concerned about the current industrial base capacity to produce short-range air defense (SHORAD) missiles after observing a surge in use of these weapons. Specifically, the committee is aware of the difficulties identified by the Army in fielding a next-generation SHORAD missile platform, also known as M-SHORAD Increment 3. Recent activities in Ukraine have increased demand for ground-launched, short-range air defense munitions, and ongoing risk of conflict with major state actors raises questions about capacity risk associated with our current stockpiles of anti-air and anti-tank capability.

Therefore, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to submit a report to the Committees on

Armed Services of the Senate and the House of Representatives not later than January 30, 2023, on plans to reduce risk to the tactical missile industrial base and supply chain, specific risks to the current stockpiles, and potential options for surging production capacity to address shortfalls in United States and allies' anti-air and anti-tank inventory.