

117TH CONGRESS }
1st Session

HOUSE OF REPRESENTATIVES

{ REPORT
117-118

NATIONAL DEFENSE AUTHORIZATION ACT
FOR FISCAL YEAR 2022

R E P O R T

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ON

H.R. 4350

together with

ADDITIONAL AND DISSENTING VIEWS

[Including cost estimate of the Congressional Budget Office]



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NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL
YEAR 2022

SEPTEMBER 10, 2021.—Committed to the Committee of the Whole House on the
State of the Union and ordered to be printed

Mr. SMITH of Washington, from the Committee on Armed Services,
submitted the following

R E P O R T

together with

ADDITIONAL AND DISSENTING VIEWS

[To accompany H.R. 4350]

[Including cost estimate of the Congressional Budget Office]

The Committee on Armed Services, to whom was referred the bill (H.R. 4350) to authorize appropriations for fiscal year 2022 for military activities of the Department of Defense and for military construction, to prescribe military personnel strengths for such fiscal year, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill as amended do pass.

The amendments are as follows:

The amendment strikes all after the enacting clause of the bill and inserts a new text which appears in italic type in the reported bill.

The title of the bill is amended to reflect the amendment to the text of the bill.

PURPOSE OF THE LEGISLATION

The bill would: (1) authorize appropriations for fiscal year 2022 for procurement and for research, development, test, and evaluation; (2) authorize appropriations for fiscal year 2022 for operation and maintenance and for working capital funds; (3) authorize for fiscal year 2022 the personnel strength for each Active Duty Component of the military departments, and the personnel strength for

the Selected Reserve for each Reserve Component of the Armed Forces; (4) modify various elements of compensation for military personnel and impose certain requirements and limitations on personnel actions in the defense establishment; (5) authorize appropriations for fiscal year 2022 for military construction and family housing; (6) authorize appropriations for fiscal year 2022 for the Department of Energy national security programs; and (7) authorize appropriations for fiscal year 2022 for the Maritime Administration.

RATIONALE FOR THE COMMITTEE BILL

H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022, is the primary vehicle through which Congress fulfills its responsibility as mandated in Article I, Section 8, of the Constitution of the United States, which grants Congress the power to provide for the common defense, to raise and support an Army, to provide and maintain a Navy, and to make rules for the government and regulation of the land and naval forces. Rule X of the House of Representatives provides the House Committee on Armed Services with jurisdiction over the Department of Defense generally and over the military application of nuclear energy. The committee bill includes findings and recommendations resulting from its oversight activities, conducted through hearings and briefings with Department of Defense and Department of Energy civilian and military officials, intelligence analysts, outside experts, and industry representatives, and it is informed by institutional experience. H.R. 4350 provides the Department of Defense and the Department of Energy with important policy authorities to speed decision making and improve agility, while improving readiness and increasing capabilities and capacities.

H.R. 4350 authorizes a defense enterprise that draws on all sources of our national power, one that draws on our diversity, vibrant economy, dynamic civil society, innovative technological base, enduring democratic values, and our broad and deep network of partnerships and alliances around the world.

Central to H.R. 4350 is the focus on improving the lives of our men and women in uniform. The committee believes our service members confront unique, complex challenges and deserve our support.

H.R. 4350 meets the committee's goal of facilitating a strong national defense apparatus that is resourced properly, accountable for its actions, and cognizant of the essential and direct oversight role of Congress. H.R. 4350 emphasizes transformational change and leans forward to fortify the Department's technological advantage to respond to ensure our servicemembers have the tools required to address growing threats in this area. H.R. 4350 allows our military to improve readiness, expand capabilities, and invest in the new technologies required to secure our country and protect us against our adversaries.

HEARINGS

In compliance with clause 3(c) of rule XIII, (1) the following hearing was used to develop or consider H.R. 4350:

On June 23, 2021, the committee held a hearing, “The Fiscal Year 2022 National Defense Authorization Budget Request from the Department of Defense”. (2) The following related hearings were held:

On February 17, 2021, the committee held a hearing, “Update on the Department of Defense’s Evolving Roles and Mission in Response to the COVID–19 Pandemic”.

On March 10, 2021, the committee held a hearing, “National Security Challenges and U.S. Military Activities in the Indo-Pacific”.

On March 24, 2021, the committee held a hearing, “Extremism in the Armed Forces”.

On April 14, 2021, the committee held a hearing, “National Security Challenges and U.S. Military Activity in North and South America”.

On April 15, 2021, the committee held a hearing, “National Security Challenges and U.S. Military Activities in Europe”.

On April 20, 2021, the committee held a hearing, “National Security Challenges and U.S. Military Activities in the Greater Middle East and Africa”.

On April 28, 2021, the committee held a hearing, “The Department of Defense’s Financial Improvement and Audit Readiness Plan: Fiscal Year 2020 Audit Results and the Path Forward”.

On May 5, 2021, the committee held a hearing, “Member Day”.

On May 12, 2021, the committee held a hearing, “An Update on Afghanistan”.

On May 19, 2021, the committee held a hearing, “Recommendations of the National Commission on Military, National, and Public Service”.

On June 15, 2021, the committee held a hearing, “Department of the Navy Fiscal Year 2022 Budget Request”.

On June 16, 2021, the committee held a hearing, “Department of the Air Force Fiscal Year 2022 Budget Request”.

On June 23, 2021, the committee held a hearing, “The Fiscal Year 2022 National Defense Authorization Budget Request from the Department of Defense”.

On June 29, 2021, the committee held a hearing, “The Fiscal Year 2022 National Defense Authorization Budget Request for the Department of the Army”.

On July 20, 2021, the committee held a hearing, “Non-Governmental Views on the Fiscal Year 2022 Department of Defense Budget”.

In addition, the seven subcommittees of the committee conducted 19 hearings and 7 markups to develop and consider H.R. 4350.

COMMITTEE POSITION

On September 1, 2021, the Committee on Armed Services held a markup session to consider H.R. 4350. The committee ordered the bill H.R. 4350, as amended, favorably reported to the House of Representatives by a recorded vote of 47–2, a quorum being present.

EXPLANATION OF THE COMMITTEE AMENDMENTS

The committee adopted an amendment in the nature of a substitute during the consideration of H.R. 4350. The title of the bill

is amended to reflect the amendment to the text of the bill. The remainder of the report discusses the bill, as amended.

RELATIONSHIP OF AUTHORIZATION TO APPROPRIATIONS

The bill does not provide budget authority. This bill authorizes appropriations; subsequent appropriations acts will provide budget authority. However, the committee strives to adhere to the recommendations as issued by the Committee on the Budget as it relates to the jurisdiction of this committee.

The bill addresses the following categories in the Department of Defense budget: procurement; research, development, test, and evaluation; operation and maintenance; military personnel; working capital funds; and military construction and family housing. The bill also addresses the Armed Forces Retirement Home, Department of Energy National Security Programs, the Naval Petroleum Reserve, and the Maritime Administration.

Active Duty and Reserve personnel strengths authorized in this bill and legislation affecting compensation for military personnel determine the remaining appropriation requirements of the Department of Defense. However, this bill does not provide authorization of specific dollar amounts for military personnel.

SUMMARY OF DISCRETIONARY AUTHORIZATIONS IN THE BILL

The President requested discretionary budget authority of \$743.1 billion for national defense programs within the jurisdiction of the committee for fiscal year 2022. Of this amount, \$714.8 billion was requested for Department of Defense programs, \$27.9 billion was requested for Department of Energy national security programs and the Defense Nuclear Facilities Safety Board, and \$0.4 billion was requested for defense-related activities associated with the Maritime Administration.

The committee recommends an overall discretionary authorization for national defense of \$768.1 billion in fiscal year 2022. The committee authorization represents a \$36.5 billion increase above the national defense levels provided for in the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283).

The table preceding the detailed program adjustments in division D of this report summarizes the committee’s recommended discretionary authorizations by appropriation account for fiscal year 2022 and compares these amounts to the President’s request.

BUDGET AUTHORITY IMPLICATION

The President’s total request for the national defense budget function (050) in fiscal year 2022 is \$765.5 billion, as estimated by the Congressional Budget Office. In addition to funding for programs addressed in this bill, the total 050 request includes discretionary funding for national defense programs not in the committee’s jurisdiction, discretionary funding for programs that do not require additional authorization in fiscal year 2022, and mandatory programs.

The table preceding the detailed program adjustments in division D of this report details changes to the budget request for all aspects of the national defense budget function.

DIVISION A—DEPARTMENT OF DEFENSE AUTHORIZATIONS

TITLE I—PROCUREMENT

AIRCRAFT PROCUREMENT, ARMY

Items of Special Interest

Assured Communications on Tactical Unmanned Aerial Systems in Highly Contested Environments

The committee anticipates that future combat operations will involve increasingly hostile radio frequency environments requiring improved low probability of detection, low probability of intercept, low probability of exploitation, and anti-jam tactical communications capability. The committee commends the Army and Air Force officials for working with industry partners to develop a multicarrier spread spectrum protected waveform designed to resolve gaps in wideband tactical data link terminals that are critical to Unmanned Aerial Systems (UAS) operations in highly contested environments. This capability will help ensure secure, persistent, reliable communications required for UAS tactical operations.

The committee remains interested in continued efforts to mature assured communications technologies. Accordingly, the committee directs the Secretary of the Army, in coordination with Commander, Army Futures Command, to provide a briefing to the House Armed Services Committee not later than March 1, 2022, on plans to accelerate fielding of a next-generation protected waveform. The briefing shall include the Army's plans to:

- (1) expand research and development efforts to scale terminals for multiple applications and to address adjacent functions, such as electronic warfare techniques;
- (2) port to small form-factor radios and demonstrate airborne testing on relevant tactical UAS platforms;
- (3) augment additional capabilities like multiple-access networking or burst-mode transmission;
- (4) optimize processor architecture to improve size, weight, power, and cost; and
- (5) achieve any other critical next generation features.

The briefing should also explain what steps the Department is taking to integrate next-generation secure waveforms with a multi-channel antenna for assured communications.

Litter Load Stability Technology

The committee is aware that load stability technology has the potential to offer performance and safety improvements for military utility and medical evacuation helicopters. The committee understands that Army Futures Command and Army Program Directorate Medical Evacuation have conducted test and evaluation of litter-attached load stability systems on helicopter hoists. The committee supports completing any further testing and certification of

this type of safety stabilization technology and allowing units to make use of this capability for life-saving and other missions. 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 no later than March 31, 2022, on the remaining testing required on load stabilization technology and the status of plans to procure and field this capability to Army aviation units, to include estimated cost and schedule.

MISSILE PROCUREMENT, ARMY

Items of Special Interest

Extended Range Air Defense

The committee notes the Army's efforts to restore its short-range air defense (SHORAD) systems capability and capacity. Of the capabilities tested, the Army is pursuing the Initial Maneuver SHORAD (IM-SHORAD) system consisting of a Stryker vehicle equipped with multiple air defense weapons including its existing air defense missile. The Army plans to begin fielding IM-SHORAD vehicles in fiscal year 2021.

However, the committee is concerned there may be a requirement to engage hostile aircraft at greater ranges to successfully protect U.S. and allied ground forces. 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 by December 30, 2021, on the Army's plans for sustaining and improving SHORAD system capability and capacity to meet current and potential air threats. This briefing should address issues including, but not limited to, the technology options under consideration for SHORAD capability improvements, force structure options under consideration for SHORAD capacity improvements, the schedule and funding profiles through the Future Years Defense Program associated with each option, the relative priority for modernizing SHORAD systems in the Army's modernization strategy, and options for mitigation of short-term air defense risk while SHORAD improvements are developed, procured, and fielded.

PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES, ARMY

Items of Special Interest

Armored plate technical performance specifications

The committee is aware that several Army armored vehicles currently in production specify the use of proprietary branded armor plate products and that sources for some of these products are uncertain or potentially unreliable. The committee is concerned that the practice of specifying proprietary or brand-name products, rather than a technical performance specification, may reduce the ability of domestic manufacturers of equivalent products to fairly compete for subcontracts and may pose unacceptable risk to the supply chain for such products. 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, 2022, concerning the full extent to which proprietary branded armor plate products are used in armored vehicle production by the Army; the extent to which such products are supplied by foreign sources or foreign-owned entities; and the efforts the service is taking to establish military technical performance specifications for armor plate material for use in armored vehicles.

M240 medium machine gun

The committee is concerned about the Army's management of risk in the M240 medium machine gun industrial base. The committee understands the Army has achieved the procurement objective for the M240 medium machine gun, and that the current M240 acquisition and sustainment strategy is to end production of new machine guns and rely on replacement of individual parts. The committee's concern is focused on the implications of closing a production line that would be expensive and difficult to reestablish at a later date, risking an industrial base that lacks the capacity and capability necessary to support current and future military requirements.

Accordingly, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than January 28, 2022, that includes details on the state of the small arms industrial base both currently and as planned based on the fiscal year 2022 Future Years Defense Plan; the expected impacts to the small arms industrial base of closing production lines such as the M240; and options to manage risk in the small arms industrial base through the sustainment, upgrade, or replacement of existing weapons.

PROCUREMENT OF AMMUNITION, ARMY

Items of Special Interest

Conventional ammunition demilitarization

The committee is concerned about the growing stockpile of obsolete or expired munitions and the yearlong contract award delay for the ongoing conventional ammunition demilitarization mission. The committee notes that the original award date was planned for September 2020. The committee understands that the dangerous and challenging process of munition demilitarization requires the combination of a proven workforce and highly specialized equipment to safely handle and dispose of explosives and hazardous munitions. The committee is further concerned that continued uncertainty and contract award delays have resulted in poor program execution of previously enacted funds.

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 30, 2021, that addresses the Army's obligations and expenditures of the conventional demilitarization budget. The report should include the strategy for the utilization of each government-owned/government-operated, government-owned/contractor-operated, and contractor-owned/contractor-operated activity and include an analysis

of the recent cost-benefit and cost trends data, recycling costs, efficiency, and environmental compliance.

Medium caliber ammunition

The committee supports and encourages the Army's careful management of production capacity, capability, and risk in its medium caliber ammunition industrial base. The committee is also aware that the Army is evaluating the adequacy of and risk associated with medium caliber industrial base production capability and capacity for 20mm to 30mm ammunition. The committee is further aware that adequate production capability and capacity exists today, within a competitive procurement environment, with two North American vendors. Given this ongoing evaluation, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than December 30, 2021, on the current medium caliber direct-fire ammunition acquisition strategy and future changes, if any, under consideration. The briefing shall include cost-benefit considerations and potential industrial base impacts to any future medium caliber ammunition acquisitions.

OTHER PROCUREMENT, ARMY

Items of Special Interest

Army modular open systems architecture

The committee notes the Army's progress with the development of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Modular Open Suite of Standards (CMOSS). However, the committee is concerned about an apparent lack of sufficient policy and programmatic governance with the research, development, testing, and decision-making associated with these standards, as well as the enforcement of these standards throughout the research, development, acquisition, and sustainment cycles across programs for the upgrade, modernization, or replacement of equipment and weapon systems. Therefore, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services by December 30, 2021, on plans for the establishment of a governance system for CMOSS that includes the formal assignment of responsibility, authority, and accountability for the development of CMOSS standards and their enforcement. The briefing should include how such a governance system incentivizes programs of record to ensure their compliance with current and future CMOSS requirements.

Enhanced Night Vision Goggle-Binocular

The committee continues to support the Army's Enhanced Night Vision Goggle—Binocular (ENVG—B) program. ENVG—B provides the U.S. Army's close combat forces with the critical visual situational awareness necessary for engaging in close combat and combat support operations in all weather conditions, through obscurants, during limited visibility, and under all lighting conditions. ENVG—B technology utilizes thermal sensors and white phosphor dual Image Intensification (I2) tubes, both of which are key to low-light functionality and interoperability with other Army

target acquisition devices and weapons. The committee supports the continued fielding of ENVG–B. Furthermore, 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 30, 2021, on the acquisition strategy for procurement and fielding of all night vision devices to include testing and fielding schedules for each program, funding profiles, and acquisition objectives. The briefing should also include how the Army plans to ensure competition among current and future technologies and management of risk in the industrial base, and to ensure technology innovations in ENVG–B functionality are able to be rapidly manufactured and integrated into qualified fielded systems.

Firefighting equipment modernization

The committee recognizes the importance of fire safety and firefighting capabilities at all military installations at home and around the world. Managing risk at acceptable levels against the loss of property or lives, as well as meeting the legal and regulatory requirements of fire safety, protection, and response, requires that military and civilian firefighters have modern, capable, and reliable equipment. Critical firefighting equipment such as structural fire engines, ladder trucks, water tankers, and supporting items such as communications define how such requirements are identified and risks managed. Modern capabilities for fire safety and response reduce the risk of loss for infrastructure and military equipment, and most importantly, protect the safety and lives of service members, families, and the Department of Defense’s civilian workforce.

The committee acknowledges the opportunity that modern firefighting equipment provides to efficiently and effectively respond to events and, therefore, manage risk. At the same time, the committee clearly sees the danger of allowing firefighting capabilities to atrophy, wear out, and become unreliable or obsolete. Accordingly, the committee strongly encourages the Department to invest in the procurement of modern firefighting and fire safety equipment and prioritize its fielding to installations lacking proper equipment to meet the legal and regulatory requirements for fire safety and fire emergency response.

High frequency radio infrastructure

The committee supports modernization of high frequency radio infrastructure, including fielding of near-term technology upgrades to infrastructure that provide continued beyond-line-of-sight communications capability in the event of the disruption of primary systems. The committee encourages the Department of Defense to coordinate with other Federal agencies to identify a central coordinating authority for high frequency operational interoperability and modernization planning. Furthermore, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing to the House Committee on Armed Services not later than December 30, 2021, on high frequency communications infrastructure, including modernization plans, coordination between Federal agencies, and infrastructure resiliency.

High Mobility Multipurpose Wheeled Vehicle rollover mitigation

The committee remains concerned about tactical vehicle accidents resulting in serious injuries and fatalities. A significant number of accidents with the most serious injuries or loss of life appear to be those involving vehicle rollovers based on excessive speed, mishandling, or breaking. Although environmental conditions, operator training, supervision, and discipline are almost always contributing factors in these accidents, there is evidence that for some tactical vehicles, their technical capabilities can be improved to reduce such risks. This is particularly the case with older models of the widely used High Mobility Multipurpose Wheeled Vehicle (HMMWV).

To deal with this challenge for the HMMWV fleet, the Army designed, developed, and validated an antilock brake system and electronic stability control (ABS/ESC) rollover mitigation solution for installation over time onto the existing HMMWV fleet. In 2018, the Army mandated that all new production HMMWVs must have the ABS/ESC installed. Since July 2018, the Army has received approximately 5,000 new production or recapitalized HMMWV vehicles with ABS/ESC installed. In 2019, the Army created an ABS/ESC retrofit kit to upgrade the fielded fleet for installation at either the depot or home station. This dual approach, production and retrofit, will ensure that all HMMWVs in the enduring fleet eventually include installed ABS/ESC rollover mitigation technology.

The committee is concerned, however, that the Army investment in new production and retrofit installations, either at home station or the depot, is not as aggressive as necessary to manage risk in the HMMWV fleet. Given there are over 54,000 HMMWVs in the fielded fleet that are older models without installed rollover kits, the committee is concerned that the fleet upgrade may take longer than prudent risk allows. 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 by December 30, 2021, on the Army's plans, including schedule and funding profiles, for the completion of the installation of rollover mitigation kits onto all HMMWVs the Army plans to retain.

Joint Light Tactical Vehicle Acquisition Strategy

The Committee recognizes that the Joint Light Tactical Vehicle (JLTV) offers the protection and off-road mobility needed to support operations along the full spectrum of conflict and will serve as part of the Army and Marine Corps tactical wheeled vehicle (TWV) fleet for decades. The Committee also understands that the Army plans to initiate a full and open competitive process for a new JLTV production contract in fiscal year 2022. The committee is concerned, however, that Army leadership's decisions over the last three years have failed to provide stable funding to support documented production plans and introduced avoidable risk within the JLTV supplier base. Accordingly, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology, not later than March 1, 2022, to provide a report to the House Armed Services Committee that reassesses the health of the JLTV industrial base and the business case for a competition for future JLTV production.

Magazine acquisition for the Next Generation Squad Weapon

The committee understands that rifle magazine malfunctions threaten a soldier's survival in combat and reduce operator lethality. The committee expects that the Army's Next Generation Squad Weapon will perform as reliably as legacy platforms. The committee encourages the Army to field the best-performing magazine with respect to reliability for the Next Generation Squad Weapon. Furthermore, the committee encourages the Army to consider the following qualifications for magazines throughout the acquisition process, such as overall weapon and magazine related Mean Rounds Between Stoppages (MRBS) requirements; how joint utilization of the Next Generation Squad Weapon across the military services and by allied nations would impact said qualifications; how the Army will be evaluating the potential suppliers for average MRBS; performance in extreme temperature conditions; and resiliency against chemicals, corrosive substances, and UV radiation.

Rifle Integrated Controller

The committee understands the U.S. Army is currently conducting research, development, test, and evaluation in the development of soldier systems that improve lethality, optics, image intensification, fire control, and many more functions. In consideration of this effort, the committee encourages the Army to evaluate technology that integrates these capabilities into a simplified control platform.

The committee recognizes the challenges that exist for an individual soldier to operate separate situational awareness, communications, target designators, thermal sights, and other battle management devices and notes a Rifle Integrated Controller (RIC) system could consolidate these disparate capabilities into one unified capability. The committee encourages the Chief of Staff of the Army to consider a rapid acquisition strategy to accelerate the operational testing, procurement, and fielding of a RIC utilizing existing acquisition reform authorities.

Soldier Enhancement Program

The budget request contained \$1.3 million for the Soldier Enhancement Program (SEP). The committee is concerned that the Army's budget request for fiscal year 2022 appears to inadequately fund the SEP. Since its creation by Congress in 1990, SEP has served a unique and critical function to accelerate the evaluation and procurement of off-the-shelf items with the potential to substantially improve weapons and support equipment in the areas of fires, mission command, movement and maneuver, sustainability, and protection. SEP is a low-risk, low-cost, high-payoff investment that has also demonstrated consistent success, in close collaboration with industry, in addressing mission-critical and training-critical soldier needs in a timely and highly cost-effective manner.

The committee notes that enduring operational and threat environments demonstrate the continued need for this successful and critical research, development, and acquisition activity. Therefore, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than December 30, 2021, on its plans to fulfill the critical soldier equip-

ment evaluation and acquisition role played by SEP, as well as the distribution of responsibility and authority for budgeting and the management of the execution of the program. Furthermore, the committee recommends \$6.3 million, an increase of \$5.0 million, for the SEP.

Synthetic Training Environment

The committee recognizes the future role that the Army expects the Synthetic Training Environment (STE) will play in preparing a wide range of next-generation training capabilities for soldiers and units. The STE Live Training System (LTS) segment of this program in particular seeks to provide combat units with simulators and simulations for training in dynamic real-world scenarios that will accelerate and sustain soldier skills and improve overall unit readiness. The STE-LTS has the potential to provide the Army with a high-fidelity representation of real combat scenarios, including simulated direct and indirect fire engagements, that integrates synthetic and live training and enhances warfighter readiness. The committee will continue to follow the Army's plans to accelerate live training efforts and encourages the Army to continue STE-LTS development.

AIRCRAFT PROCUREMENT, NAVY

Items of Special Interest

CMV-22

The V-22 is an assault support tilt-rotorcraft that provides unparalleled flexibility by combining the vertical takeoff/landing strengths of a helicopter with the speed (250+ knots) and range (425 nautical miles combat radius) advantages of a turbo-prop airplane. It is the only tiltrotor in the Department of Defense inventory and is in high demand throughout the world. Fiscal year 2022 is the final year of a multiyear procurement (MYP) contract authorized by Congress in fiscal year 2018. Congress has added V-22s the last 4 years to pull remaining aircraft into the MYP contract, resulting in a reduced price for the aircraft and faster delivery to the fleet. There are only five remaining V-22s outside of the last year of the MYP contract. The committee encourages the Navy to support the full program of record for the CMV-22.

Nacelle Improvement

The Committee notes that the United States Air Force has requested funding to modernize and upgrade its fleet of CV-22 aircraft, specifically for Nacelle Improvements. The Air Force Nacelle Improvement program is specifically engineered to attack the highest reliability and readiness degraders within the nacelle, which constitute nearly 60% of maintenance actions on the aircraft. Nacelle improvements are a top priority for improving V-22 readiness across all variants. Therefore, the committee recommends an additional \$5,000,000 for the Air Force upgrades.

Additionally, the committee recommends that the US Marine Corps leverage the Air Force's investment in nacelle improvement and initiates a plan to begin the upgrades and install the nacelle improvement kits on their fleet of MV-22 aircraft. The committee

recognizes that the most efficient means of implementing the Nacelle Improvement program across the fleet may be to do this work at the original equipment manufacturer final assembly facility. The committee believes that there is the potential to save money, reduce down-time of the aircraft, and impact the entire program in an extremely positive manner. Therefore, the committee directs the Secretary of the Navy to prepare a brief to the House Committee on Armed Services by March 1, 2022 as to options to accelerate MV-22 nacelle improvements.

Naval adversary aircraft recapitalization

The committee is aware of evolving requirements for the Navy to maintain near-peer simulated air-to-air combat training scenarios using organically provided aggressor aircraft that can emulate capabilities similar to those of advanced threat airborne adversaries. The committee supports continuing efforts to increase capabilities of aircraft assigned squadrons responsible for providing adversary aggressor training, but has concerns about Navy plans to use foreign F-5 and pre-block F-16 aircraft, which are older and less capable than the aircraft of advanced adversaries, to perform this mission long term. Due to the criticality of simulating relevant adversary air tactics and capabilities, the committee believes that the Navy should instead reprioritize planned funding to transition organic aggressor squadrons away from less capable aircraft to a more advanced and capable platform, such as the F/A-18E/F Super Hornet, that would more effectively support the adversary air training mission requirements. The committee is also discouraged by Navy plans to reduce tactical fighter aircraft capacity by designating certain adversary air aggressor squadrons as no longer deployable to meet warfighting contingency requirements in order to resolve the significant strike-fighter inventory shortfall that currently exists within the Navy.

Therefore, the committee directs the Secretary of the Navy to submit a report to the congressional defense committees not later than March 21, 2022, that provides an alternative plan to transition all Navy Reserve Component aggressor squadrons to a more capable and relevant aircraft within a 10-year timeframe. The report should include a holistic overview and description of the validated mission requirements of the Navy's current adversary aircraft aggressor enterprise and assess how less capable aircraft, such as F-5 and pre-block F-16 aircraft, will meet future training requirements and capabilities necessary to represent near-peer threat-based scenarios. Finally, the report should also identify the risk and fleet sustainment costs incurred by the continued employment of older, less capable aircraft attempting to provide realistic and relevant adversary air mission training for the Navy's operational fleet of aircraft and aircrews.

Navy tactical fighter aircraft force structure

The budget request contained \$87.8 million for F/A-18E/F aircraft production line activities but did not include any funding for the procurement of additional aircraft.

The committee recalls that the prior budget request for fiscal year 2020 programmed the purchase of 36 new F/A-18E/F aircraft over fiscal years 2022, 2023, and 2024, but the Navy revised that

plan in the fiscal year 2021 budget request by eliminating the 36 new aircraft in those same fiscal years. Additionally, the committee believes that the Navy's decision to eliminate the 36 new aircraft incurred greater risk for combatant commanders and increased the Navy's strike-fighter deficit in fiscal year 2021 from -49 to -58 aircraft, and forecasted the shortfall resolving to zero in fiscal year 2030. Further, the Navy still plans its strike-fighter inventory without including traditional margin for attrition reserve aircraft that would backfill forces in cases of training or contingency operational losses of aircraft. The Navy should plan for 54 aircraft per aircraft carrier air-wing (CVW), but instead only budgets for 44 aircraft per CVW. Consequently, the Navy had an actual deficit of -148 strike-fighter aircraft in fiscal year 2021 when including attrition reserve planning factors.

In fiscal year 2022 analysis the Navy claims that the strike-fighter shortfall is resolved to zero in 2025, 5 years earlier than planned, but the committee is highly circumspect of the Navy's new analysis. Since last year's budget, the Navy has delayed the fielding of its planned F/A-XX aircraft, removed 104 F/A-18E/F Block II aircraft from the planned Service-Life Modification (SLM) program, and F-35C procurement quantity has still not reached 24 aircraft per year. The committee believes that these significant factors actually exacerbate the shortfall and would not contribute to the expedited timing of resolving the shortfall prior to 2030 as stated last year.

Therefore, the committee recommends \$1.17 billion, an increase of \$1.08 billion, for the procurement of 12 F/A-18E/F aircraft and production line activities to reduce operational and warfighting capacity risk. The committee also directs the Director, Cost Assessment and Program Evaluation, to submit a report to the House Committee on Armed Services not later than February 1, 2022, that compares and contrasts the ground rules, assumptions, and planning factors contained in the Navy's fiscal year 2021 strike-fighter analysis as compared to the fiscal year 2022 strike-fighter shortfall analysis.

P-8 aircraft

The committee notes that the budget request contained no funds for P-8A Poseidon aircraft procurement. The budget request for fiscal year 2022 does not take into account the increased warfighter requirement for 138 aircraft which is 10 additional P-8As. This increase is driven by the proliferation of adversarial submarine fleets and their increasingly active operational tempo. The committee is encouraged by the Navy's recognition of the Navy Reserve force and the contribution they can provide to the increased requirement for the P-8A but is discouraged by the Navy's decision to not procure the aircraft needed to reach the warfighting requirement. The committee highly encourages the Secretary of the Navy to program the remaining aircraft into the fiscal year 2023 budget which may be the last opportunity before the production line is shut down.

Survivability systems for Navy, Marine Corps, and Air Force rotary-wing aircraft

The committee recognizes the Department of the Navy's progress on developing and fielding the Distributed Aperture Infrared Coun-

termeasure System (DAIRCM) for aviation survivability. In the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116–442), the committee expressed support for this effort and requested information on the status of DAIRCM fielding under Joint Urgent Operational Need Statement (JUONS) SO–0010 to Navy MH–60, Marine Corps UH–1Y and AH–1Z, and Air Force HH–60G helicopters. According to the briefing provided in response, the services have fielded over half of the systems slated for integration under the JUONS.

The committee understands that the Navy, Marine Corps, and Air Force all view DAIRCM as part of their long-term strategy for sustainable, cyber-secure aviation survivability against future battlefield threats. Both the Marine Corps and the Air Force expect to make production decisions on procuring additional DAIRCM capability mid-decade. The committee recommends continued focus on enhanced rotary aircraft survivability and expects to see future budget requests that support timely fielding of DAIRCM to Navy, Marine Corps, and Air Force helicopters.

T–45 Program Report

The committee directs the Secretary of the Navy to provide a report to the House Committee on Armed Services no later than June 1, 2022 on the continued T–45 engine obsolescence issues, the T–45 replacement program, and potential alternatives that could support an accelerated replacement timeline.

V–22 Nacelle Improvement Program

In prior budget submissions, the Air Force has stated that the Nacelle Improvement (NI) program is “. . . Air Force Special Operations Command #1 priority for the CV–22 weapon system” and will increase the readiness, reliability and ability to deploy of one of Defense Departments highest in-demand aircraft. The committee is pleased the NI program is on track to deliver the first modified CV–22 this year and encourages the Air Force Special Operations Command to continue to work with industry to accelerate the program as quickly as possible. Further, the committee is aware that should Air Force Special Operations Command accelerate the NI program, a gap could open between the end of the Air Force program and the initiation of the Marine Corps’ NI effort. To avoid an unnecessary and costly break in the program, the committee directs the Secretary of the Navy to coordinate with the Secretary of the Air Force and industry to ensure that the NI program transitions from modifying CV–22 aircraft to MV–22 aircraft without interruption. The committee further directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by January 1, 2022 on Marine Corps’ NI effort and their coordination with the Air Force.

SHIPBUILDING AND CONVERSION, NAVY

Items of Special Interest

Aegis radar

The committee recognizes that the rapid deployment of next-generation maritime radar systems is required to address existing and emerging gaps in integrated air and missile defenses, particularly in the Indo-Pacific region. However, the committee is concerned by the apparent lack of alignment and congruent planning between three concurrent Aegis Baseline radars funded at various stages of development or production across the Navy and Missile Defense Agency. Specifically, the Navy budget includes funding for the backfit of AN/SPY-6(V), which began low-rate production in 2016 and will enter full-rate production upon the award of a hardware production and sustainment contract anticipated by the end of fiscal year 2021. The Navy budget also includes funding for the development of a digital low noise amplifier modification to the existing AN/SPY-1 radar. At the same time, the Missile Defense Agency budget includes funding for the development of a variant of the Long Range Discrimination Radar for use in Aegis Ashore applications.

The committee believes there are opportunities to better leverage common, mature radar technology in modernizing all Aegis-based platforms, including through U.S. Navy weapon systems applications aboard existing surface ships, Homeland Defense Guam, and/or defense of the continental United States from cruise missiles or air and missile defense threats. Leveraging such commonality across platforms would serve as a means to achieve critical distributed maritime operations objectives by expanding the number of deployed netted sensors while also proliferating the number of sensors capable of simultaneously defending against advanced air and missile defense threats. Moreover, the committee believes that better aligning Aegis Baseline radar investments would also serve to reduce risk and lower acquisition, lifecycle, and sustainment costs.

Therefore, the committee directs the Director of Cost Assessment and Program Evaluation to conduct a review of the three Aegis Baseline radars included in the budget request for fiscal year 2022 and to submit a report to the congressional defense committees not later than December 1, 2021, outlining the results of this review and making recommendations for achieving greater affordability, commonality, and sustainability through improved alignment of radar modernization investments.

Analysis of the Costs and Benefits of the Littoral Combat Ship Program

The committee notes that the Government Accountability Office (GAO) has reported extensively on issues with the Littoral Combat Ship (LCS) program. Since 2005, GAO has issued no fewer than 19 reports that highlight failures in the acquisition of LCS, including ships delivered late, with increased costs and less capability than planned—such as lower lethality and survivability—higher than expected costs for contractor maintenance, and numerous mechanical failures. Most recently in 2021, GAO found that the Navy continues to face substantial challenges in demonstrating the oper-

ational and warfighting capabilities that the LCS fleet needs to perform its missions.

The committee notes that the Navy continues to make significant investments in the LCS program even as it has stopped accepting Freedom-class LCS variants while the contractor fixes a class-wide engineering defect, is decommissioning two LCS ships in 2021 after completing just one mission each, and has proposed retiring four more ships in fiscal year 2022. The Navy has yet to complete reviews to identify ways to improve LCS employment, lethality, maintenance, reliability, and sustainability.

Therefore, the committee directs the Secretary of the Navy to submit a report to the congressional defense committees by March 15, 2022, assessing the costs and benefits of continued investment in the LCS program. As the ships are being employed differently and are experiencing different levels of reliability and different employment schedules, the report should address the Independence and Freedom variants separately. The report shall include:

(1) An assessment of whether the LCS is meeting current and future performance requirements and fleet needs and whether the LCS fleet could be expected to contribute to forward naval presence and operate effectively against near-peer threats and on blue water missions.

(2) An assessment of all LCS deployments in 2020–2021 to include reliability, missions performed, and feedback from Fleet Commanders, and an assessment of operational impact of changes to manning and maintenance CONOPS for deployed LCSs.

(3) An updated estimate of total life cycle costs for the program as currently structured, including research and development, acquisition of the seaframes and mission modules, test and evaluation, in-service modernization, training, operating and support, and disposal. The associated costs and benefits of modifying the current LCS program, including alternatives such as revising the LCS capabilities and concept of operations, such as different mixes of mission modules, weapons, crews, and missions to find a combination that is efficient to operate and effectively performs a useful mission; increasing the endurance of the vessels, including reliability, maintainability, and availability; addressing deficiencies identified during deployments and operational testing; retiring some or all of the LCS fleet earlier than planned; and implementing other major modifications to the LCS program currently under consideration or already being executed, such as recommendations resulting from Task Force LCS and ongoing studies.

(4) An analysis of fleet wide costs to support LCS compared with other ship classes and an assessment of whether end-strength and funds devoted to keeping LCS ready and mission capable would be better used to mitigate shortfalls on other ship classes.

(5) A recommendation from the Secretary of the Navy as to whether the benefits and performance of LCS justify continued investment in the program.

Astern refueling on Expeditionary Sea Based platforms

The committee recognizes that current versions of the Expeditionary Sea Based (ESB) platforms do not possess an astern refueling capability. Current astern fueling configuration height does not allow for safe refueling of the Littoral Combat Ship or the Expedi-

tionary Fast Transport ship. Addition of an astern refueling capability, coupled with the large fuel capacity of the ESB, will allow for coordinated operation of these platforms in a variety of expeditionary missions, such as mine warfare. The committee encourages the Secretary of the Navy to consider designing and incorporating an astern refueling capability for ESB platforms.

Comptroller General review of enabling technologies for unmanned systems

The committee recognizes that, as part of the Navy's plan to counter increasing competition among nations in the maritime environment, the Navy intends to field a future fleet composed of a mix of manned and unmanned platforms. In doing so, the Navy identified core technologies and enabling capabilities it believes are necessary for its future unmanned undersea and surface vehicles. The core technologies and enabling capabilities are a broad range of efforts including autonomous management of ship systems and navigation, communications, manned-unmanned teaming, and payload development and integration among others. Congress has previously expressed concern with the Navy's proposed concurrent approach for the large unmanned surface vessel design, technology development, and integration. While the Navy takes action to address our concerns, the committee would like a better understanding of the Navy's technology development efforts for unmanned maritime systems as a whole.

The committee directs the Comptroller General of the United States to conduct a review of the Navy's core technologies and enabling capabilities for unmanned undersea and surface vehicles and to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, on its findings. As part of this review, the Comptroller General should examine:

- (1) the status of the Navy's efforts to develop the core technologies and enabling capabilities for unmanned maritime systems;
- (2) the extent to which the Navy has successfully identified all critical technologies necessary for unmanned maritime systems;
- (3) the methods and documentation the Navy uses to track technology development for unmanned maritime systems;
- (4) the extent to which the technologies developed for unmanned maritime systems will meet Navy requirements and mission needs;
- (5) the Navy's process for tracking and prioritizing investments made into its technologies; and
- (6) any other areas the Comptroller General deems important.

DDG-51 multiyear procurement

The committee remains concerned that the Navy is not adequately planning for the DDG(X) procurement. The current DDG-51 multiyear procurement contract ends in fiscal year 2022, and the Navy has yet to produce program milestones or an acquisition strategy for the next large surface combatant, known as DDG(X). The lack of an adequate plan is even more troubling given the Navy's most recent shipbuilding proposal that reduces a destroyer in fiscal year 2022 and violated the current multiyear procurement contract. This will incur a penalty of over \$33.0 million. The reduction will delay the force level goal for large surface combatants during a period of increasing demand, particularly in countering

threats from China and Russia. Therefore, in order to mitigate this risk and ensure a smooth shipbuilding manufacturing and design industrial base transition from DDG-51 to DDG(X), elsewhere in this Act, the committee authorizes a multi-year procurement for up to 15 Flight III DDGs beginning in fiscal year 2023.

Improving Safe and Secure Cyber-Enabled Navy Vessels

The committee continues to have concerns regarding the emerging threat of cyberattacks and present danger to US Navy vessels, both surface and underwater. Entire Navy systems, including vessels, weapons, and facilities, continue to be cyberattack targets from both state and non-state sponsored actors. Significant investment in cyber-defense training and technology development is essential to ensure continued naval superiority throughout the world for the foreseeable future. The digital thread from manned ships and autonomous platforms provides enormous opportunities for efficiencies in coordination, operation, maintenance, and cyber-resilience. However, this thread of critical data, including location, heading, and platform health, presents one of the biggest opportunities for cyber threats and cyber-attacks to Navy vessels. End-to-end cybersecurity and anti-tamper technology need to be addressed for a wide range of systems, from small man-portable autonomous vehicles to systems as large as carrier groups.

Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by March 31, 2022, that includes current plans and potential opportunities to improve the cybersecurity of the digital thread communication network for Navy vessels, specifically communication between unmanned and autonomous vessels.

The briefing should also include:

(1) A description and evaluation of current Naval vessel cybersecurity real-world test-bed facilities and their capabilities.

(2) A description and evaluation of requirements for autonomous Naval vessel cybersecurity communications testing and qualifications.

(3) A description and evaluation of current Naval vessel cybersecurity workforce and expected future workforce needs.

(4) An analysis of opportunities to expand Naval vessel digital thread cybersecurity development and testing, specifically for unmanned and autonomous vessels.

National Security Hospital Vessel

The committee recognizes the Navy's plan to increase Role 2 afloat medical capacity through the procurement of a modified Expeditionary Fast Transport (EPF) ship called an EPF Flight II. The committee is supportive of this effort and recognizes that an embarkable Role 2 enhanced (R2E) medical capability will allow the Navy to fill gaps identified by the Naval Expeditionary Health Services Support (NEHSS) for Distributed Maritime Operations. The committee further understands that the afloat theater hospitalization Role 3 requirement will continue to be met by the Navy's aging hospital ships (T-AH). The committee believes that as an alternative to maintaining converted supertankers that were procured in the mid 1970s, the Navy could take advantage of a redesigned EPF or the National Security Multi-Mission Vessel

(NSMV) that the Maritime Administration is currently procuring for the 6 State Maritime Academies “to meet this Role 3 requirement.” By utilizing the NSMV or the EPF hull form and an ongoing production line, the Navy could minimize design costs and schedule of the T-AH(X) that is planned to replace the current T-AHs. This strategy would also allow the Navy to defer future costly maintenance availabilities on the existing T-AHs and deliver a replacement capability sooner than the current plan. Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, on the feasibility of utilizing the EPF or the NSMV hull forms to fill the requirements of the T-AH(X).

Report on large surface combatant production transition

The committee recognizes the Navy’s successful transition from the Los Angeles-class submarine to the Seawolf and Virginia submarine classes and the importance of shipbuilding schedule overlap within that transition. The committee believes that new programs such as the DDG(X) should also implement some type of overlap shipbuilding schedule, which would mitigate shipbuilding issues related to stops in lead ship build design and construction. The committee notes that absence of a proper overlap plan may adversely impact both the Navy’s overall shipbuilding numbers and the associated shipyard’s ability to adjust their production line accordingly.

Therefore, the committee directs the Secretary of the Navy to submit a report to the congressional defense committees not later than December 30, 2021, that details what the proper transition between the two platforms should include. The report should be informed by early collaboration with the two current shipbuilders to maximize design and cost efficiencies and emphasize the needs of the industrial base regarding both design and construction capacity. This report shall include at a minimum:

(1) a review of the Los Angeles submarine class transition to the Seawolf and Virginia submarine classes, including shipyard schedules and operational impacts; shipyard cost impacts; effects on associated shipyard manpower and skill; impact on planned versus actual fiscal year shipbuilding numbers; and lessons learned;

(2) a review of the DDG-51 class transition to the Zumwalt DDG-1000 program, including shipyard schedules and operational impacts; shipyard cost impacts; effects on associated shipyard manpower and skill; impact on planned versus actual fiscal year shipbuilding numbers; and lessons learned;

(3) a review of the *Nimitz*-class carrier transition to the *Ford*-class carrier program, including shipyard schedules and operational impacts; shipyard cost impacts; effects on associated shipyard manpower and skill; impact on planned versus actual fiscal year shipbuilding numbers; and lessons learned;

(4) recommendations on the amount of time for a successful overlap transition period before a shipyard shifts to full-rate production of the next-generation ship; and

(5) recommendations on requirements for an ideal large surface combatant shipyard transition and next-generation shipbuilding production.

Sentinel-class Fast Response Cutter

The committee looks forward to reviewing the Navy's updated force structure assessment and shipbuilding plan. The committee understands the Navy intends to change the fleet architecture reflected in the 355-ship force-level goal to reflect a more distributed fleet mix with a smaller proportion of larger ships and a larger proportion of smaller manned ships as well as unmanned vessels. The committee supports incorporating a mix of smaller manned ships into the fleet and encourages the Navy to consider the capabilities the U.S. Coast Guard's *Sentinel*-class Fast Response Cutter could provide to the fleet and the concept of operations and associated requirements that would support acquisition of these vessels.

Further, the committee is aware the U.S. Coast Guard has contract options for 12 additional *Sentinel*-class Fast Response Cutters with firm fixed pricing in place until May of 2023. Exercising these contract options in advance of their expiration would lock in favorable pricing on *Sentinel*-class Fast Response Cutters should the Navy determine that they add value to the fleet.

Given the successes of the U.S. Coast Guard's *Sentinel*-class Fast Response Cutter in support of the Navy's Fifth Fleet as a part of Patrol Forces Southwest Asia, the committee believes there are similar roles for *Sentinel*-class Fast Response Cutters in other areas of responsibility. Therefore, the committee directs the Secretary of the Navy to submit a report to the congressional defense committees not later than February 1, 2022, that details the current mission sets and operating requirements for the *Sentinel*-class Fast Response Cutter and expands on how successes in the U.S. Central Command area of responsibility would translate to other regions, including the U.S. Indo-Pacific Command. Further, the committee directs the Secretary of the Navy to assess the requisite upgrades to the *Sentinel*-class Fast Response Cutter required to meet Navy standards and evaluate the concept of operations for employing these vessels in Southeast Asia. This report should be unclassified but may include a classified annex.

SPY-1D capability improvements

The committee recognizes the urgent need to deliver increased warfighting capability through combat systems modernization to the destroyers comprising flight I, II, and certain IIA ships, and further understands that advances in digital technology, solid-state upgrades, and other innovations can be leveraged in existing mature systems to keep Aegis destroyers threat-relevant to the end of their service lives. The committee encourages the Secretary of the Navy to consider specific initiatives that could rapidly incorporate digital technology into the receive chain of the SPY-1D radar in order to improve readiness, lethality, survivability, and operational availability.

Virginia Class Submarine Spare Parts

The committee notes a March 2021 report by the Congressional Budget Office, prepared as part of its ongoing work to evaluate submarine maintenance issues first requested by the House Seapower and Projection Forces and Readiness Subcommittees in 2015, found that "Administrative data from NAVSEA suggest that cannibalization associated with submarine maintenance has in-

creased over the past two years.” The increase was particularly acute for the *Virginia* class program, with data showing an increase in the number of cannibalized parts from 146 in 2017 to 485 in 2019. CBO also found that certain VCS overhauls “took longer and that most required more labor than the class plan estimated for each ship . . . in part because some parts had to be replaced earlier than expected,” and that the *Virginia* class was designed to require less maintenance than the Los Angeles class, in part because the *Virginia* class featured more parts that were designed to last the life of the ship . . . at this early stage in the class’s life cycle, the reverse has been the case, though that could change as the shipyards gain more experience with the class.”

The committee recognizes that as the Navy begins to take delivery of more *Virginia* class submarines (VCS), spare parts will be at an increased demand. Due to the shortage of existing spares and earlier than expected failures of parts, the Navy has resorted to the cannibalization of spares from other submarines. This has led to increased maintenance timelines and a higher possibility of damaging the parts as they are changed out between submarines. This problem is only exacerbated when the Navy chooses to redirect spares funding to higher priority needs. Rather than chasing the problems as they arise, the Navy should take an experienced based process that tracks the types of spares that are in highest demand and closely monitor which components are failing ahead of their expected design life.

Therefore, the committee directs the Secretary of the Navy to brief the House Committee on Armed Services no later than February 1, 2022 on what efforts the Navy is taking to reduce the backlog of spares and cannibalization on *Virginia* class submarines.

OTHER PROCUREMENT, NAVY

Items of Special Interest

Joint force tiltrotor training

The committee recognizes that tiltrotor aircraft will be a significant part of the Department of Defense for the foreseeable future. The tiltrotor community is the only Department of Defense undergraduate pilot training program without a dedicated, technologically comparable aircraft to conduct undergraduate-level pilot training. Utilizing an initial pilot training platform that can more efficiently and effectively train new tiltrotor pilots could lower training costs. The committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by May 2, 2022, that discusses current initial pilot tiltrotor training program requirements including aircraft, sorties/hours, planned student throughput, and training locations; training effectiveness of using fixed-wing and rotary-wing training to train new tiltrotor pilots; hours/sorties required to transition new pilots from initial fixed-wing/rotary-wing aircraft to instrument qualification in the V-22; impacts of initial training sorties/hours on overall V-22 readiness and sustainment; and feasibility of using current and future vertical lift technology platforms to support and streamline initial joint force pilot tiltrotor qualification training.

Maritime Augmented Guidance with Integrated Controls for Carrier Approach and Recovery Precision Enabling Techniques

The committee is aware that the Department of the Navy has performed flight testing events with advanced flight control software for the F-35, F/A-18 E/F Super Hornet, and E/A-18G Growler tactical aircraft platforms. The committee supports the Navy's efforts to reduce the workload and improve safety for naval aviators and landing signals officers (LSOs) performing the tasks associated with aircraft carrier approaches and landings. The Maritime Augmented Guidance with Integrated Controls for Carrier Approach and Recovery Precision Enabling Techniques (MAGIC CARPET) software assists aviators in maintaining consistent and safe glide-slope descent tracking during final approach to landing in all environmental conditions. MAGIC CARPET increases the automation of terminal approach operations and could potentially enable the Navy to reduce training costs for operations related to aircraft carrier operational certifications prior to steaming in support of deployments.

Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services not later than February 1, 2022, on MAGIC CARPET software development, flight testing, and fielding schedule. The briefing should also include the impact on naval aviator and LSO workloads, the potential reduction in training missions and associated cost avoidance, and a notional schedule for implementation and integration of the software to support locations hosting E/A-18G aircraft operations.

Mine-hunting capabilities from Expeditionary Sea Base platforms

The committee notes that while the Mine Countermeasures (MCM) Mission Package (MP) was designed to be employed on the Littoral Combat Ship (LCS), operational tests of this system on LCS have faced technical challenges and delays in fielding. Legacy MCM platforms have remained in service well past their intended service life, but it is imperative that the Navy fill an equal or greater capability before the legacy platforms can be retired. Various components of the MCM MP have successfully deployed from Expeditionary Sea Base (ESB) 4 and have potential when operated from this platform, either in conjunction with or independently from LCS, to provide a robust mine countermeasures package, which is urgently needed. The committee recognizes that the ESB has command, control, communications, computers, and intelligence (C4I) spaces that could provide mission planning and execution of MCM operations. Therefore, the committee directs the Secretary of the Navy to provide a briefing to the Committee on Armed Services of the House of Representatives by March 1, 2022, on the feasibility and cost of incorporating MCM capabilities on all ESB platforms.

Tactical aircraft training telemetry system recapitalization

The committee is aware of the need for the Air Force and Navy to upgrade training range data and information-sharing capabilities to improve readiness levels, weapon systems capabilities, and joint, combined force employment of organic and coalition air forces to deter aggression against current and future rising competitors, both peer and non-peer. The committee continues to support the ef-

forts of the Air Force and the Navy to jointly pursue a common tactical aircraft training telemetry system to replace legacy systems, allowing current and next-generation aircraft pilots to train together. Current telemetry systems lack required security features to support training needs, and have end-of-life obsolescence issues and diminishing manufacturing sources that are limiting training effectiveness and that incur a high cost of ownership.

The committee encourages the Air Force in partnership with the Navy to expedite fielding of next-generation combat training systems to ensure robust interoperability with joint service partners and provide a generational upgrade in realistic training for current and next-generation tactical aircraft platforms to enable proficiency and survivability against existing and evolving threat systems. The Air Force and Navy agreement should also pursue a common range training telemetry system enabling a live, virtual, and constructive training environment for aircrews. The committee supports accelerated fielding, where feasible, by the Air Force and Navy to achieve cost savings and more efficient use of limited flight training hours, while simultaneously enabling more secure, realistic, and supportable training for Air Force and Navy aircrews.

Underwater ranges

The committee supports the acceleration of the upgrading of our underwater ranges. These ranges are critical as they facilitate training, tactics development, and test and evaluations. Most of the Navy's underwater ranges are multi-environmental and are capable of supporting surface, subsurface, air, and space operations simultaneously. These ranges are in need of continuous modernization and upkeep. Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by March 1, 2022, on the status and timeline of upgrades and planned maintenance of all naval underwater ranges.

PROCUREMENT, MARINE CORPS

Items of Special Interest

High Mobility Engineer Excavator

The Marine Corps budget request does not include any funding for procurement of the High Mobility Engineer Excavator (HMEE). The committee is concerned that stopping procurement of HMEE will leave the Marine Corps with an aging, less capable and sustainable, trailer-transported backhoe loader system that does not meet current or future deployed requirements. Accordingly, the committee directs the Commander, Marine Corps Combat Development Command, to provide a briefing to the House Committee on Armed Services by January 30, 2022, that identifies the current and future requirements for highly mobile engineer excavation capability and how the Marine Corps plans to meet those requirements.

AIRCRAFT PROCUREMENT, AIR FORCE

Items of Special Interest

A-10 Wing Replacement Program

The committee believes that prudent modernization of the A-10 fleet provides the Air Force a cost and mission effective close air support capacity and capability that will meet joint force requirements. The committee continues to support the A-10 ATTACK wing replacement program, which will enable full fleet operations to 2030 and beyond. The committee believes that wing replacement for the planned fleet is a critical element of the fleet's sustainment and should be a high priority for the Air Force.

Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services no later than January 31, 2022, regarding the planned timeline for completion of the re-winged of all planned aircraft in the A-10 fleet.

A-10C Threat Warning System Modernization

The committee understands the A-10C aircraft supports the Air Force's close air support and forward air control missions, with fighter squadrons in both the active and reserve components. The committee also recognizes the increased risk associated with the combat search and rescue mission, which may require operations in dense or advanced threat environments. As identified in the 2012, A-10 Operational Viability and Sustainment Gap Analysis Report and subsequent requirements studies contained in the Air National Guard and Air Force Reserve Modernization Priorities Book, the existing threat warning system is inadequate and requires modernization. The committee also notes that Air Force Air Combat Command has formally defined a modernization requirement for installing a digital radar warning receiver system within the A-10 aircraft. To reduce costs and expedite fielding, the committee recommends fielding a digital radar warning system currently in production and already in operation on a number of existing Air Force aircraft. Existing digital radar warning receivers have the ability to integrate threat identification of the most sophisticated modern threats and are designed to be a form, fit, function replacement. Modernized electronic warfare suite subsystems, architecture, and countermeasures will enable the A-10 to conduct complex combat operations in the vast majority of today's contested environments.

Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by March 31, 2022, on the Secretary's strategy to expeditiously integrate a digital radar warning receiver onto the A-10C fleet of aircraft.

Airlift tactical data link

The committee understands airlift aircraft will be required to operate in a contested environment and is concerned with the lack of situational awareness upgrades for these aircraft. The committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by December 30, 2021, that

provides a modification plan to provide situational awareness for airlift aircraft.

Bridge Tanker

The committee believes that the Secretary of the Air Force should consider the benefit of seamless tanker recapitalization deliveries by accelerating the Bridge Tanker competition with a request for proposal not later than fiscal year 2023, an award in fiscal year 2024, and the delivery of the first bridge tanker not later than in fiscal year 2029. The committee further believes that this bridge tanker should be limited developmental, operationally ready and best value based on platform capability. Therefore, the committee directs the Secretary of the Air Force to prepare a brief to the House Committee on Armed Services by March 1, 2022 that provides the Secretary's assessment of the bridge tanker acquisition timelines to include requirements development, procurement milestones and proposed contract type.

C-130H propellers/engines

The committee notes that the C-130H aircraft that are flown primarily by the Air National Guard and Air Force Reserve continue to provide critical tactical airlift capabilities and will continue to support this mission for years to come. The committee is once again disappointed with the amount of time it has taken for the Air Force to address a safety of flight issue with the legacy propeller system of the C-130H.

Procurement of new composite propeller blades is the obvious solution to this serious safety of flight and readiness issue. The Air Force has moved slowly in addressing the issue and still refers to the propeller upgrade as an enhancement and not a safety requirement. A new composite blade would also decrease maintenance time and improve logistics support, which will result in increased readiness. Delays are unacceptable considering the inherent safety of flight and readiness risks surrounding this issue.

Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by January 31, 2022, updating the acquisition strategy for procuring new blades. This plan should include updated estimated costs, timelines, and a unit upgrade schedule. The briefing should also include the Air Force plan to incorporate C-130H T-56 Series 3.5 Engine Enhancement Packages. Congress has repeatedly added additional funds for these upgrades and the Air Force has yet to budget for them despite the demonstrated performance benefits and fuel efficiencies.

Degraded visual environment system for Air Force combat search and rescue helicopter fleet

The committee has encouraged and supported efforts by the military services to develop and field modernized degraded visual environment (DVE) systems on rotary wing aircraft. Uncharted wires and low visibility brown-out conditions present military helicopters with additional hazards during training and operational missions, sometimes leading to aircraft damage, aircraft loss, or aircrew fatalities.

The committee supported plans by the Air Force to leverage investments made by the Army and U.S. Special Operations Command and field a DVE capability to its HH-60G Pave Hawk fleet. However, the fiscal year 2022 budget request eliminated nearly all HH-60G DVE funding, leaving only \$5.6 million for contract close-out. Information provided to the committee from the Air Force cited delays caused by integration challenges as the reason for cancelling the DVE program. In a June 30, 2021, committee hearing on the fiscal year 2022 budget request for rotary wing aircraft, the Acting Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics testified that the planned divestment of the HH-60G fleet within this decade influenced the decision to cancel the DVE project.

The committee is concerned about the abrupt DVE cancellation and the deemphasis on increasing flight and aircrew safety. Though the Air Force claims that near-term HH-60G retirement justifies not fielding a DVE system, the replacement combat rescue aircraft, the HH-60W Jolly Green II, has no DVE system in its current program baseline. The committee notes that in 2018, an entire crew of seven service members died when their HH-60G Pave Hawk flew into an undetected wire on the border between Iraq and Syria.

Accordingly, the committee directs the Secretary of the Air Force to submit a report to the House Committee on Armed Services by December 15, 2021, on a plan to restore the DVE integration and fielding effort to the HH-60G program. The report shall include a schedule for integration and fielding and the associated remaining costs.

EC-37B Compass Call Replacement

The committee notes the Air Force commitment to improving electromagnetic spectrum (EMS) capabilities through its recently published EMS Superiority Strategy. However, the committee remains concerned that the Air Force's only dedicated electromagnetic warfare (EW) aircraft, the EC-130H Compass Call, is rapidly nearing the end of its service life, while the EC-37B Compass Call replacement program faces production and delivery delays. The committee is also aware that the Air Force underestimated the cost of implementing system-wide open reconfigurable dynamic architecture (SWORD-A) capabilities, forcing the Compass Call program to realign funding from procurement to research and development. All of these issues raise concerns that the Air Force will be unable to meet joint airborne EW requirements as legacy aircraft retirements outpace the availability of replacement capability.

Given these concerns and the critical importance of airborne EW in support of joint military operations, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by March 1, 2022, on its plan to procure the full complement of ten EC-37B aircraft as defined in the program of record. The briefing shall include details on the planned utilization of the ten aircraft EC-37B fleet to meet test, training, operational deployment, and depot maintenance requirements, and the Air Force's plan to provide modernized EW capabilities to com-

batant commands in accordance with the Department's EMS Superiority Strategy implementation plan.

HH-60W Combat Search and Rescue helicopter

The committee recognizes the Air Force's focus on testing, procuring, and fielding the HH-60W Jolly Green II to replace the HH-60W Pave Hawk combat rescue helicopter. The committee notes that the HH-60W is designed to provide increased range, lethality, situational awareness, safety, and reliability for the crucial Air Force combat search and rescue (CSAR) mission.

Accordingly, the committee directs the Secretary of the Air Force to provide a briefing to the congressional defense committees by March 1, 2022, on the status of the HH-60W program. This briefing should include, at a minimum, the following: the plan and schedule for aircraft beddown; planned force structure, to include current and future basing and the timing of associated divestment of the HH-60G Pave Hawk; manning, training, and infrastructure requirements; required support equipment; the associated funding requirements for all these elements; and recommendations on further improving the overall combat effectiveness and readiness of the HH-60W aircraft and the CSAR mission.

Joint Surveillance Target Attack Radar System

The budget request included \$16.3 million for E-8 Joint Surveillance Target Attack Radar System.

The committee continues to be concerned about insufficient investment in the Joint Surveillance Target Attack Radar System (JSTARS). The committee notes that the geographical combatant commanders rely on JSTARS for battle management command and control and ground moving target indicator radar support. Current public law, most recently amended in the National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283), requires the Air Force to keep at least six JSTARS available annually for allocation to the geographic combatant commanders through the Global Force Management process.

The committee further notes that Congress has expressed concern about inadequate funding for JSTARS in previous legislation and denied prior year attempts to reprogram modernization funds for necessary JSTARS communication upgrades. The committee understands that the JSTARS program has begun this data link upgrade with funding appropriated in fiscal year 2021 but requires additional funds to continue this work. The bandwidth efficient common data link will replace a critical information-sharing link between JSTARS and Army and Marine Corps forces that no longer operates due to outdated technology and cybersecurity risk.

The committee recommends \$43.3 million, an increase of \$27.0 million, for communication modernization upgrades to E-8 JSTARS.

KC-135 modernization

The committee understands the KC-135 is projected to fly for potentially another 30 years and needs to modernize to operate in a contested environment. Accordingly, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by December 30, 2021, that provides the

pros and cons of designating a single point of contact to prioritize and deconflict all modernization efforts for the KC-135.

KC-135R Cooling Capability

The committee understands the KC-135R provides Aerial Refueling, Aeromedical Evacuation and Mobility Transport for both the Active and Reserve Components. The committee also understands that these critical yet aged airframes do not have adequate cooling capability for ground and low-altitude operations, significantly impacting operations and crew stamina in a large number of our nations key operating environments. The committee also recognizes that Ground cooling carts are the primary method for temperature reduction, but are removed prior to engine start and are not usable if mission delays occur. A roll-on/roll-off vapor cycle air conditioning units placed onboard can provide required cooling at a fraction of the cost of replacing the aircraft handling system. The committee understands that aircrew cooling has been a long-standing Air National Guard Critical requirement, but has yet to receive funding. The committee recommends additional funding for the National Guard and Reserve Component Equipment Account (NGREA) to meet this requirement. The committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by March 31, 2022 on the Air Force's strategy to fill this identified, critical requirement for the KC-135R fleet.

MH-139 conversion

The committee recognizes that the 908th Reserve Airlift Wing at Maxwell Air Force Base (AFB) was recently selected by the Air Force and Air Force Reserve for conversion from its current mission as a Combat Coded C-130 airlift wing to an Air Force Reserve Flying Training Unit (FTU) to train air crew members for the new MH-139 helicopter. The successful transition and on-time schedule depend on the completion of the environmental assessment and the completion of the requisite facility modifications. The aircraft are currently scheduled to be delivered as early as fiscal year 2023.

In testimony before the committee, the commander of U.S. Strategic Command emphasized the pressing need to replace the current fleet of UH-1N Huey helicopters with the new MH-139 aircraft and recognized the important role this new aircraft will play in maintaining the operational readiness of the nation's Intercontinental ballistic missile force. The committee emphasizes that for the transition to the new weapons system to remain on schedule, it is critical that the new FTU be equipped, manned, and ready to produce aircrew members as soon as the aircraft is operationally ready. The committee believes that failure to immediately fund related projects to retrofit existing facilities to accommodate simulators and training of the initial cadre of flight training instructors prior to the delivery of the aircraft would have significant adverse impacts on the readiness of the FTU to begin its mission. Additionally, the committee believes that any C-130 divestiture of mission at Maxwell AFB should be "heel to toe" with the delivery of replacement MH-139 aircraft. Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by March 1, 2022, as to: the delivery

timeline for MH-139 helicopter aircraft; the anticipated transition of C-130 aircraft; and the facility recapitalization to support the aircraft simulators, building updates, training aircraft, and instructor training to ensure this bed-down remains on schedule at Maxwell AFB.

MH-139A Grey Wolf Aircrew Exposure Protection

The committee supports Air Force modernization plan to replace the UH-1N helicopter with the MH-139A Grey Wolf to continue the critical mission of ensuring the security of the ground-based leg of the nuclear triad. The committee understands that Air Force helicopter aircrews providing operational support to strategic missile sites in remote locations of the United States often face severe weather conditions and sub-arctic temperatures that present a wide range of operational hazards, especially for Airmen operating side-mounted M240 medium machine guns while exposed to the elements. Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by March 1, 2022, on potential MH-139 aircrew exposure hazards related to operation of side-mounted machine guns. The briefing should include a description of developmental test and evaluation activities focused on operations in extreme cold weather, potential options, to include aircraft modifications, to address or mitigate the risk of aircrew exposure due to extreme weather conditions, and the estimated costs of these mitigation measures.

Propeller blades

The committee received recent information regarding the United States inability to support C-130 aircraft propeller blades previously sold under Foreign Military Sales to United States allies. These C-130s are operational assets of foreign militaries around the globe and assets that could be called upon by the United States in times of need. Currently, the production of C-130 propeller blades is nearly entirely consumed by the U.S. Air Force, leaving other countries with propeller blade shortages and grounded C-130 aircraft. The Air Force is aware of this situation and has indicated that the only way for this blade shortage to end is for overseas manufacturer to produce more blades or move the manufacturing of these C-130 blades to the United States. The committee encourages the Air Force to coordinate with the manufacturer to increase production to address global C-130 blade shortages by shifting or augmenting production of these blades to a capable United States manufacturer. This shift will have the benefit of uninterrupted support of our allies, ensuring mission-critical asset readiness, increasing United States jobs, and better control over United States military asset production and maintenance.

Survivable Airborne Operations Center

The committee supports the Air Force's recapitalization effort for the Survivable Airborne Operations Center (SAOC), formerly known as the E-4B National Airborne Operations Center (NAOC). The aging E-4B fleet faces capability gaps, diminishing manufacturing sources, increased maintenance costs, and parts obsolescence as it approaches the end of its serviceable life. The recapitalization effort will be informed by Air Force and Department of De-

fense analyses used to determine a holistic approach to replacing the aging E-4B fleet and capabilities of other nuclear and national command and control mission sets. The committee understands that the SAOC weapon system will be comprised of a Commercial Derivative Aircraft (CDA), mission system, and ground support systems. The committee is encouraged by the program's effort to maintain a full and open competitive acquisition and maximize competition across the entire weapon system lifecycle. The committee supports the funding for SAOC in fiscal year 2022 and expects the Air Force and the DoD to prioritize funding in the future years. Given the critical and uniquely complex nature of this recapitalization effort, the committee strongly encourages the Air Force and the Department of Defense to consider non-traditional acquisition strategies to enable flexibility, accelerate systems development, and sufficiently address the risks of modernization and integration of the mission systems. Therefore, the committee directs the Secretary of the Air Force to deliver a briefing to the House committee on Armed Services no later than March 1, 2022, on the Air Force's comprehensive SAOC modernization strategy.

V-22 nacelle improvement program

The budget request contained \$71.5 million for the V-22 nacelle improvement program. In prior budget submissions, the Air Force stated that the nacelle improvement program is an Air Force priority for the V-22 weapon system and will increase the readiness, reliability, and ability to deploy one of the Defense Department's highest in-demand aircraft. The committee is pleased the nacelle improvement program has now delivered the first modified CV-22 to the fleet and encourages continued work to accelerate the program as quickly as possible. The committee recommends \$76.5 million, an increase of \$5.0 million, for the V-22 nacelle improvement program.

OTHER PROCUREMENT, AIR FORCE

Items of Special Interest

Bomber fleet hypersonic weapons integration

The committee notes that the Air Force is retiring 17 B-1s, one quarter of the B-1 fleet. The committee is concerned that the remaining B-1, B-2 and B-52 aircraft may not have the necessary improvements to make up for the substantial reduction in numbers and be capable of meeting the Nation's long-range precision strike requirements. The committee notes that the bomber fleet are a critical component to the United States' force projection capability and will continue to be used both as conventional and strategic deterrence assets in this great powers competition with China and Russia. The committee notes that part of the future power projection capability will involve the integration of hypersonic missiles into the bomber aircraft. The committee also notes that the retirement of the 17 B-1s will result in substantial cost savings over the FYDP and expects the Air Force to dedicate part of these cost savings back into the B-1 fleet by increasing its capabilities, possibly including expanded carriage, hardpoint pylon development and hypersonic weapons.

Therefore, the committee directs the Secretary of the Air Force to provide a briefing, no later than March 1, 2022, to the House Committee on Armed Services on the plans for hypersonic integration for the bomber fleet. This briefing shall include an updated Air Force bomber roadmap and the Air Force's plans for the integration of hypersonics into the bomber fleet, including a plan to achieve full operational capability of the B-1 fleet to deliver hypersonic weapons by 2025 and any other upgrades that will be required for the bomber fleet.

Commercial best practices

The committee supports procuring commercial derivative aircraft for the Air Force and Navy. Commercial industries have maintained aircraft for decades and the committee encourages the Air Force and Navy to learn from any best practices saving time and money.

Standardization for Full Motion Video Dissemination

The committee notes that after more than a decade of proven operational performance, the Defense Information Systems Agency's Unified Video Dissemination System (UVDS) and the National Geospatial-Intelligence Agency's Motion Imagery Online (MIO) have become the de facto standards for disseminating full motion video (FMV) on classified computer systems within the Department of Defense and select interagency partners. Both UVDS and MIO leverage an open architecture, well-documented standards-based interfaces, and a common software baseline to keep pace with rapidly evolving commercial developments in FMV technology. For example, the committee is aware that the Joint Artificial Intelligence Center is leveraging UVDS and MIO as the primary sources for its FMV ingest capabilities. Given the ubiquitous use of UVDS and MIO, both via traditional data centers and cloud deployments, the committee is concerned that the Air Force is potentially overlooking the utility of standardizing the existing, proven FMV dissemination capabilities of UVDS and MIO, especially as they relate to emerging cloud requirements for the Air Force Distributed Common Ground System.

Therefore, the committee directs the Chief of Staff of the Air Force to provide a briefing to the House Armed Services Committee, by February 15, 2022, on plans for full motion video dissemination standardization. The briefing shall include, at a minimum: a description of the Air Force's analysis of utilizing UVDS and MIO as the platforms for FMV dissemination; an assessment of the costs of leveraging these existing systems as compared to developing similar systems; and a technical and security comparison between these systems and other systems under consideration or under development.

Transfer of U.S. Coast Guard HC-130H Aircraft to the State of California

The National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232) directed the Air Force to modify and transfer seven Coast Guard HC-130H aircraft to the State of California, Natural Resources Agency, for use by the Department of Forestry and Fire Protection (CAL FIRE). The Committee notes that the

current estimated delivery date for the first Retardant Delivery System (RDS)-modified aircraft is November 2022, with the seventh in June 2023. The committee understands that these aircraft are necessary to California's efforts to fight ongoing and future wildfires. Therefore, the Committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by December 1, 2021, on the progress made to deliver these aircraft. The briefing shall include: 1) an assessment of capacity and capability to deliver these aircraft on an accelerated schedule; 2) a cost assessment associated with a potential early delivery schedule; and 3) impact to other programs in the event that the Air Force elects to accelerate delivery of these aircraft.

PROCUREMENT, DEFENSE-WIDE

Items of Special Interest

Comptroller General review of tactical fighter aircraft capacity shortfalls and capability gaps

Despite billions of dollars of investment in developing and acquiring tactical fighter aircraft over many years, the Air Force, Navy, and Marine Corps will likely continue to face capability and capacity shortfalls over the upcoming decades. The committee understands that each of the services has begun reevaluating its tactical aircraft force structure requirements and capability needs, with the Air Force and Navy simultaneously planning to heavily invest funding in the upcoming years to develop and field advanced Next Generation Air Dominance (NGAD) capabilities.

The committee notes that the tactical fighter aircraft shortfalls facing the military services did not suddenly appear. As far back as 2010, the Government Accountability Office (GAO) noted in its report (GAO-10-789) that the Air Force, Navy, and Marine Corps were projecting tactical fighter aircraft shortfalls beginning in the 2020 timeframe. GAO concluded that the services needed to gain a clearer and more comprehensive portfolio-level understanding of their tactical fighter aircraft requirements and forecasted shortfalls in order to ensure that they made well-informed tactical fighter aircraft acquisition investment decisions.

Therefore, given that the services are still facing tactical fighter aircraft inventory and capability shortfalls more than a decade after the last GAO report on the issue, the committee directs the Comptroller General of the United States to submit a report to the congressional defense committees not later than April 1, 2022, that assesses and identifies current Air Force, Navy, and Marine Corps tactical aircraft capability and capacity requirements and forecasted shortfalls. In addition, the report should assess the extent to which the services' tactical aircraft acquisition and modernization investment plans, including NGAD efforts, are likely to meet those requirements and address the shortfalls. Finally, the Comptroller General should, as appropriate, provide the congressional defense committees with periodic briefings on preliminary findings and pertinent information during the compilation and drafting of the final report.

F-35

The budget request contained \$9.97 billion for the procurement of 85 F-35 aircraft and associated spares, modifications, depot activations, and advanced procurement for fiscal year 2023 aircraft for the Air Force, Navy, and Marine Corps. The budget request contained \$2.05 billion for research and development related to deployability and suitability initiatives, Block 4 and Continuous Capability Development and Delivery (C2D2), and Air Force dual-capable aircraft efforts. The committee notes that the unfunded priority lists for the Navy contained five F-35C aircraft.

The committee supports the F-35 program and acknowledges it is a capability that can be used against advanced integrated air defense systems operating against the United States or its foreign partners and allies during high-end, very contested contingencies when the aircraft is finally installed with Technical Refresh-3 hardware and Block 4 software capabilities. But given the extraordinary costs to date of the program, the committee calls into question the actual affordability of the program for the taxpayer after 20 years since its inception. The committee agrees with the F-35 Program Executive Officer in that the current and forecasted high cost of sustainment remains a real and existential threat to the program, and the committee remains continually frustrated by the program's overly aggressive development and production schedules that contain significant amounts of execution risk and concurrency, which have traditionally resulted during the 20-year lifetime of the program in longer schedules and much higher costs than planned to realize less than full warfighting capabilities required by the Department of Defense. Additionally, given that the program's capability requirements were established over 20 years ago and predicted near-peer threats have realized capabilities more rapidly than assessed, the committee is uncertain as to whether or not the F-35 aircraft can sufficiently evolve to meet the future expected threat in certain geographical areas of operations in which combat operations could occur.

The committee is concerned about the Department's lack of sufficient access to accurate and complete F-35 enterprise-wide technical data, intellectual property, software code, expedient engineering disposition turnaround times, and the Department's significant reliance upon original equipment manufacturers supporting development, fielding, and sustainment activities for the airframe, propulsion, and mission systems. Especially for an aircraft that is a military unique end item for which the Department of Defense has invested billions of fiscal resources over the years for a capability that still has yet to reach its full and required combat capability to be an effective combat platform. The committee is also discouraged by the Department's slow response introducing competition across the F-35 development and sustainment enterprises for both the airframe and propulsion systems, and believes that the lack of competition in these areas is a significant contributor to runaway costs and the Department's inability to hold original equipment manufacturers properly accountable for subpar performance of products and services provided.

Therefore the committee recommends \$11.73 billion, a decrease of \$292.7 million and reduction of 5 F-35A aircraft, that would support procurement of 80 aircraft and associated spares, modifica-

tions, depot activations, advanced procurement for fiscal year 2023 aircraft, research and development related to deployability and suitability initiatives, Block 4 and C2D2, and Air Force dual-capable aircraft efforts for the Air Force, Navy, and Marine Corps. The committee believes that reductions in aircraft procurement quantities should also be considered in future years that would reallocate funding towards resolving the multitude of cost and performance issues within the F-35 sustainment enterprise.

The committee also recommends provisions elsewhere in this Act that would: (1) limit total quantities of F-35 aircraft that could be procured by the Department based on current cost-per-tail-per-year affordability constraints that have been established by the Department; (2) integrate a more fuel-efficient and higher performance propulsion system that would help reduce sustainment costs and provide better capabilities regarding combat radius and thermal management, in addition to reducing reliance upon aerial refueling aircraft; (3) direct the Comptroller General of the United States to conduct an annual review of F-35 sustainment efforts; and (4) require a report and certification regarding F-35 program sustainment costs, and prohibit the Secretary of Defense from entering into a Performance-Based Logistics (PBL) sustainment contract until he certified that the program met sustainment cost reduction metrics and that any PBL contract would further reduce sustainment costs.

National Guard and Reserve Equipment Account

The budget request contained no funding for a National Guard and Reserve Component equipment account. The committee has long been concerned about the availability of modern equipment needed to ensure the relevance and readiness of the National Guard and Reserve Components as an operational reserve and for their domestic support missions. The committee notes that the annual National Guard and Reserve Equipment Reports over the last several years identify continuing shortages in modernized equipment and challenges associated with efficiently fulfilling combat readiness training requirements.

The committee believes additional funds would help manage strategic risk and eliminate identified critical dual-use equipment shortfalls. The committee expects these funds to be used for the purposes of, but not limited to, the procurement and modernization of High Mobility Multipurpose Wheeled Vehicles including modifications for rollover mitigation; Family of Medium Tactical Vehicles trucks; F-16 Active Electronically Scanned Array radar; KC-135 modernization; C-130 propeller upgrades; C-130 firefighting system upgrades; UH-60 conversions and UH-60M Black Hawk helicopters; UH-72 Lakota helicopters and sustainment; and other critical dual-use, unfunded procurement items for the National Guard and Reserve Components.

The committee recommends \$950.0 million for National Guard and Reserve equipment.

Persistent Airborne Intelligence Surveillance & Reconnaissance

The committee is concerned that the combatant commands have a critical requirement for persistent airborne ISR in active conflict

and low-intensity, highly dispersed regions that is not being met by existing unmanned aerial systems (UAS).

Therefore, the committee directs the Secretary of the Defense to provide a brief to the House Committee on Armed Services by March 1, 2022, on how ISR capabilities on persistent, ultra-long endurance (multi-day), attritable Group III unmanned aerial systems address these threats and how the Secretary plans to develop these critical capabilities. This brief should include (1) total program cost; program costs included in the fiscal year defense plan and (2) overall development timetable.

Radio Integration System program upgrade

The budget request contained \$284.5 million for Warrior Systems. Of this amount, \$13.8 million was requested for the Radio Integration Systems (RIS) program. The committee recognizes the importance of ensuring timely procurement for the RIS and the need to fully integrate disparate communications across air, ground, and maritime domains, providing full battlespace awareness and communication capabilities critical across the full spectrum of special operations forces missions.

Therefore, the committee recommends \$33.8 million, an increase of \$20.0 million, in Warrior Systems for the U.S. Special Operations Command Radio Integration System program to procure and test the Digital Aided Close Air Support Gateways components necessary to maintain programmatic schedule.

Further, the committee directs the Commander, U.S. Special Operations Command, to provide a briefing to the House Committee on Armed Services not later than January 28, 2022, on the Radio Integration System program, to include historical and current funding levels, an updated program schedule, and necessary milestones to achieve full operational capability, and any other information the Commander would like to provide.

Review of Armed Overwatch aircraft systems

The committee directs the Comptroller General of the United States to assess U.S. Special Operations Command's (USSOCOM's) Armed Overwatch concept. The assessment shall review:

(1) the roles and responsibilities of the Department of Defense organizations involved in the transfer of the Air Force's Light Attack Experimentation program to USSOCOM as the Armed Overwatch concept, and the analysis conducted to execute such a transfer;

(2) the extent to which the Department of Defense, to include those organizations identified in review element (1), has assessed the intended roles and missions of the Armed Overwatch platforms, to include consideration of how such platforms would support the joint force with close air support, precision fires, and armed intelligence, surveillance, and reconnaissance (ISR), if it is intended to do so;

(3) the extent to which Armed Overwatch, as an armed ISR capability, will satisfy USSOCOM's airborne ISR requirements;

(4) the extent to which USSOCOM has prioritized missions and plans, to include evaluating risks, to employ Armed Overwatch independently or with other ISR and operational platforms;

(5) the extent to which alternatives were considered to meet this concept, to include capabilities provided by the joint force; and

(6) any other matters the Comptroller General deems appropriate.

The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services not later than March 25, 2022, on the Comptroller General's preliminary findings, and to submit a final report to the Committees on Armed Services of the Senate and the House of Representatives on a date agreed to at the time of the briefing.

LEGISLATIVE PROVISIONS

SUBTITLE A—AUTHORIZATION OF APPROPRIATIONS

Section 101—Authorization of Appropriations

This section would authorize appropriations for procurement at the levels identified in section 4101 of division D of this Act.

SUBTITLE B—ARMY PROGRAMS

Section 111—Multiyear Procurement Authority for AH-64E Apache Helicopters

This section would authorize the Secretary of the Army to enter into one or more multiyear contracts for AH-64E Apache helicopters beginning in fiscal year 2022, in accordance with section 2306b of title 10, United States Code.

Section 112—Multiyear Procurement Authority for UH-60M and HH-60M Black Hawk Helicopters

This section would authorize the Secretary of the Army to enter into one or more multiyear contracts for UH and HH-60M Black Hawk helicopters beginning in fiscal year 2022, in accordance with section 2306b of title 10, United States Code.

Section 113—Continuation of Soldier Enhancement Program

This section would continue the Soldier Enhancement Program under the responsibility and authority of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology.

Section 114—Strategy for the Procurement of Accessories for the Next Generation Squad Weapon

This section would require the Secretary of the Army to develop and implement an acquisition strategy for the Next Generation Squad Weapon accessories and other components.

SUBTITLE C—NAVY PROGRAMS

Section 121—Extension of Procurement Authority for Certain Amphibious Shipbuilding Programs

This section would extend the authority granted by section 124(a)(1) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283) to fiscal year 2022.

Section 122—Inclusion of Basic and Functional Design in Assessments Required Prior to Start of Construction on First Ship of a Shipbuilding Program

This section would amend section 124 of the National Defense Authorization Act for Fiscal Year 2008 (Public Law 110–181) and would require the Secretary of the Navy to ensure that certain levels of design maturity are met before funds can be authorized or appropriated for a first of a class naval vessel.

Section 123—Multiyear Procurement Authority for Arleigh Burke Class Destroyers

This section would authorize the Secretary of the Navy to enter into one or more multiyear contracts for Arleigh Burke class destroyers and associated systems beginning in fiscal year 2023, in accordance with section 2306b of title 10, United States Code.

Section 124—Incorporation of Advanced Degaussing Systems into DDG–51 Class Destroyers

This section would require the Secretary of the Navy to ensure that an advanced degaussing system is incorporated into the contract for the next multiyear procurement contract for the DDG–51 Flight III.

SUBTITLE D—AIR FORCE PROGRAMS

Section 131—Contract for Logistics Support for VC–25B Aircraft

This section would require the Secretary of the Air Force to re-compete the depot sustainment contract for the VC–25B after the first 5 years.

Section 132—Limitation on Availability of Funds for the B–52 Commercial Engine Replacement Program

This section would set a cost baseline for the B–52 Commercial Engine Replacement Program.

Section 133—Inventory Requirements and Limitations Relating to Certain Air Refueling Tanker Aircraft

This section would address KC–135 and KC–10 retirements and limit the Air Force from moving KC–135 from Primary Mission Aircraft Inventory to Backup Aircraft Inventory in the Air Force Guard and Reserve.

Section 134—Minimum Inventory of Tactical Airlift Aircraft and Limitation on Modification of Air National Guard Tactical Airlift Flying Missions

This section would require the Secretary of the Air Force to retain a minimum of 279 C–130 aircraft.

Section 135—Procurement Authority for Certain Parts of the
Ground-Based Strategic Deterrent Cryptographic Device

This section would allow the Secretary of the Air Force to enter into a life-of-type procurement for the KS-75 cryptographic device as part of the Ground-Based Strategic Deterrent program.

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

Section 141—Implementation of Affordability, Operational, and
Sustainment Cost Constraints for the F-35 Aircraft Program

This section would limit the total quantity of F-35 aircraft that could be procured and maintained in the aircraft inventory by the Secretary of the Air Force and the Secretary of the Navy based on existing affordability cost constraints that have been determined by each Secretary.

Section 142—Limitation on Availability of Funds for Aircraft
Systems for the Armed Overwatch Program

This section would prohibit the expenditure of certain funds to the Department of Defense for the procurement of armed overwatch aircraft systems until such time after the provision of the airborne intelligence, surveillance, and reconnaissance acquisition roadmap for the U.S. Special Operations Command as directed by section 165 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283) to the congressional defense committees.

Section 143—Major Weapon Systems Capability Assessment
Process and Procedure Review and Report

This section would require a report on the Department of Defense's processes for the management of strategic risk with respect to major weapon systems capabilities and capacities including ensuring major weapon systems' suitability for current and emerging military threats to U.S. forces and accomplishment of their missions, and identifying for modernization by either upgrade or replacement any weapon systems that are not capable of effectively accomplishing their military purpose or are excess to operational requirements. The section would also require the Comptroller General of the United States to review the report and provide a briefing on the preliminary assessment.

Section 144—Reports on Exercise of Waiver Authority with Respect
to Certain Aircraft Ejection Seats

This section would require the Secretary of the Air Force and Secretary of the Navy to provide a report to the congressional defense committees on a semi-annual basis that would describe the total quantity of ejection seats currently in operational use that are operating with an approved waiver due to deferred maintenance actions or because required parts or components are not available to replace expired parts or components. The committee is aware of two recent aircraft accidents in which ejection seats in operational service malfunctioned during the pilot's ejection sequence due to

lack of parts or deferred maintenance actions; one ejection resulted in a fatality.

TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY

Items of Special Interest

40mm Training Ammunition Analysis of Alternatives

The committee has supported the Army's development of two new 40mm day, night and thermal (DNT) training ammunition: the M918E1 40mm high velocity (HV) cartridge and M781E1 40mm low velocity (LV) cartridge. The committee is aware of the Army's cancellation of the M918E1 40mm HV DNT and pause in transition of the M718E1 LV DNT training cartridges into production. With this delay, the Army may need to revert to legacy ammunition and use a "mixed belt" configuration consisting of both the legacy M918 and M385A1 cartridges for HV day and night training and legacy M781 cartridge to conduct LV day-only training.

The committee is concerned that legacy HV ammunition may present avoidable risk including unexploded ordnance (UXO) danger, an incendiary hazard that creates a fire hazard on training areas and reduces training efficacy. The committee is also concerned about the use of legacy LV ammunition due to its limitation of day-only training use.

The committee is further aware that other services currently use alternative 40mm HV and LV day and night training cartridges that do not present the hazards and impediments found in the Army's legacy ammunition. Therefore, the committee directs the Secretary of the Army to provide a report to the congressional defense committees by March 1, 2022 that evaluates existing and available 40mm HV and LV day and night training ammunition currently in use in other services. The report shall include, but is not limited to, an assessment of the ability of other cartridges to meet the Army's requirements, a cost analysis of procuring this ammunition for Army use, an analysis of the contractual and legal barriers, if any, to procurement and a potential fielding schedule.

Advanced ammunition material and manufacturing technologies

The budget request included \$43.0 million in PE 0605805A for Munitions Standardization, Effectiveness and Safety, Life Cycle Pilot Process. The committee supports the Army's investments in ammunition enterprise modernization. The committee also supports the Army's focus on early research and development of safe and clean ammunition manufacturing technology, including novel materials, foamable celluloid and propellant energetics. These efforts have the potential to support the Army's key modernization efforts while continuing to deliver high-quality, reliable and effective ammunition products to Warfighters. The committee recommends \$48.0 million, an increase of \$5.0 million, in PE 0605805A for Munitions Standardization, Effectiveness and Safety, Life Cycle Pilot Process.

Advanced combat engine

The committee is aware of an effort to develop an advanced combat engine with the potential to provide a modular and scalable powertrain solution fitting the needs of the current and next generation of combat vehicles programs, including the Optionally Manned Fighting Vehicle (OMFV). The committee understands that this technology is based upon an innovative opposed piston technology with the potential to provide significant increases in power density and efficiency in a smaller size compared with current engines in armored or combat vehicle applications.

Accordingly, the committee directs the Commander, U.S. Army Futures Command to submit a report to the House Committee on Armed Services not later than December 30, 2021, that provides an assessment of the technical and affordability potential of an advanced combat engine based on opposed piston technology. Such engine's technical assessment should include its potential for application in any current or future combat or tactical vehicle, including OMFV.

Autonomous robotic targets for small arms live fire training ranges

The committee is aware of Department of Defense interest in autonomous robotic targets (ART) to improve soldier lethality, team performance, and marksmanship. The committee understands that this technology could provide the Army with an unpredictable and dynamic live fire training adversary, improve warfighter readiness, and enhance soldier and squad performance evaluation tools while expanding the useful life of existing small arms ranges.

The committee is aware of the Army's efforts to improve targets as part of the Future Army System of Integrated Targets Program, and understands the Army is currently working to test trackless moving target efforts, but that these differ from ARTs. The committee understands that ARTs may require some range modifications or accommodations to facilitate complex individual and squad training exercises, but that based in part on the favorable technology review by the Asymmetric Warfare Group in 2013 and the Army Research Institute in 2017, select units in the U.S. Army, Marine Corps, and Special Operations Forces have fielded ARTs in limited capacity, providing outstanding results. Going forward, the committee understands that the Department's Close Combat Lethality Task Force (CCLTF) considers ARTs to be one of the most important training enhancement tools to significantly increase close combat lethality today.

The committee believes ARTs as a range enhancement and training tool significantly contribute to the ongoing CCLTF objectives and therefore supports broader rapid adoption of this commercial-off-the-shelf capability. The committee directs the Secretary of the Army to submit a report to the congressional defense committees not later than April 30, 2022, on how the Army can field this capability in fiscal year 2023, and what assistance the Army may need to accelerate its fielding.

Auxiliary power units for Army combat and tactical vehicles

The committee understands that the Army is currently exploring auxiliary power units (APUs) for use on Army combat and tactical vehicles. APUs provide electrical power to the vehicle's on-board

systems, such as weapons, sensors, computers, and radios, without draining the batteries or running the engine. The committee understands that the APUs under development could offer significant improvements in size, weight, and fuel efficiency compared to other APU and power generation solutions currently available. The committee encourages the Army to continue to pursue modern, light, efficient APUs to supplement existing on-board vehicle power and maximize mission effectiveness while minimizing fuel consumption in the future.

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 by December 30, 2021, on efforts to develop modern, light, efficient APUs for use on combat and tactical vehicles. This report shall include, but not be limited to, plans to field new APUs on Army combat and tactical vehicles, an overview of current and planned research and development efforts relating to auxiliary power units, and an assessment of which combat and tactical vehicles stand to benefit the most from APUs currently in development.

Battery charging for electric vehicles in tactical environments

The committee is aware of interest and efforts on the part of the military departments and defense agencies toward the development and potential use of electric vehicles and systems throughout an area of operations. Using electric vehicle to replace or supplement the current or future tactical vehicle fleet will require sustained and focused investment in a variety of technical areas not only in fleet electric vehicles but in the capabilities and infrastructure necessary to support them. The committee notes that the Army has started to identify the capabilities required to support and sustain tactical vehicles in an operational environment with particular focus on the capabilities and infrastructure need to recharge those tactical systems that are not hybrid or otherwise capable of recharging themselves with an onboard generator. The concept of tactical charging or recharging is central to feasibility of the electrification of combat or tactical vehicles. The committee is concerned that research and development of electric vehicle charging or recharging technology should keep pace with research and development of the vehicles themselves.

Accordingly, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services by December 30, 2021, on research and development plans related to electric vehicle charging and recharging in the tactical environment. This briefing should include, but not be limited to, an overview of the Army's current thinking on electric vehicle operations in a tactical environment and related sustainment requirements including battery charging or recharging; an assessment of existing commercially available battery charging capabilities and their potential for use in a tactical environment; how plans and schedules for battery charging research and development are synchronized with electric vehicle development; and funding profiles for battery charging research and development support electric vehicle development.

Carbon fiber and graphite foam applications for combat and tactical vehicles

In the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116-442), the committee 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 that report to encourage the Army and USSOCOM to ensure that the combat and tactical vehicle industrial base were aware of their potential interest in graphite and carbon fiber technologies as well as to continue to assess their possible application to future combat and tactical vehicles.

The committee now understands 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. For example, graphitic composites used in batteries and fuel cells may reduce their weight with increased strength. Graphitic carbon foam may have utility in reducing component heat signatures and protecting against blast, directed energy, or electromagnetic pulse weapons.

Given the committee's encouragement in last year's report, 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 Commander, Army Futures Command, 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 30, 2021, on efforts to make the combat and tactical vehicle industrial base aware of its interest in graphite composite and graphitic carbon foam vehicle components.

Electrification of combat and tactical vehicles

The committee understands the Army is in the process of developing a tactical and combat vehicle electrification (TaCV-E) initial capabilities document (ICD) to lay out the operational characteristics or requirements for electrification of the Army's ground vehicle fleet. The committee understands the TaCV-E ICD will identify electrification opportunities for both new start and modification of existing vehicle programs. The committee also notes the electric light reconnaissance vehicle (eLRV) program is the Army's rapid prototyping effort to develop an all-electric tactical vehicle with which soldiers can then experiment and demonstrate electrification's potential as well as inform the broader TaCV-E initiative.

The committee is aware that the automotive industry is aggressively moving forward with electrification based on mature commercial technologies, including advanced battery technology, and expects the Army to engage with traditional and non-traditional industry entities to accelerate eLRV prototype development and, looking farther into the future, also inform the broader TaCV-E initiative. Inherent in vehicle electrification is the potential for operational exportable power generation, making modification of

existing tactical vehicles, where appropriate and cost effective, part of the TaCV-E initiative. The Army's new Infantry Squad Vehicle and U.S. Special Operations Command's (USSOCOM) light tactical vehicles may be candidates for such consideration.

Accordingly, the committee directs the Secretary of the Army, in coordination with the Commander, U.S. Special Operations Command, to provide a briefing to the House Committee on Armed Services by December 30, 2021, on the status and plans for the TaCV-E and the eLRV rapid prototyping program. The briefing should include, but not be limited to, initial assessment of characteristics or requirements for electrification of combat and tactical vehicles. The briefing should include technology development plans including schedule, technology objectives, test and evaluation strategies, and funding profiles separately for TaCV-E and eLRV. The briefing should identify options for the realistic and achievable acceleration of eLRV to include funding requirements and engagement strategies, if any, with the commercial electric vehicle industrial base. Finally, the briefing should address how the Army and USSOCOM are coordinating on combat and tactical vehicle electrification technology development.

Extended range cannon artillery rate of fire

The committee notes the Army's commitment to its highest priority modernization effort that would develop and field new long range precision fires using both missile and cannon artillery systems. Last year, the Extended Range Cannon Artillery (ERCA) program demonstrated the prototype of a modified M109A7 Paladin self-propelled howitzer that fired a cannon launched projectile nearly 70 kilometers. Although ranges of 70 kilometers or more appear achievable, the Army recognizes that improving ERCA's rate of fire is critically important to its fundamental operational utility.

In this regard, the committee is aware that last year, a test of the Army designed and fabricated automatic loader, intended for later insertion into the ERCA system, failed to demonstrate suitability as a component of the modified M109A7 Paladin chassis and turret. Nonetheless, the Army is committed to exploring other potential technical solutions that will improve ERCA's rate of fire without undermining its operational reliability and supportability. The committee supports this approach.

Accordingly, the committee directs the Commander, Army Futures Command to provide a report to the House Committee on Armed Services by December 30, 2021, on alternative technologies, including an automatic loader, for increasing the ERCA system's rate of fire. This report should include, but not be limited to a survey and assessment of the artillery systems of NATO allies or other partner nations that evaluates and considers the potential of the technologies they are developing or have developed and fielded to improve cannon rate of fire. This report should also detail the actions taken and planned for identifying technologies relevant to ERCA rate of fire and how the Army will ensure the widest possible participation of relevant and available technologies in a free, fair, and open competition for the collection, evaluation, and selection of these candidates for possible further development. Plans included in this report should include detailed schedules and funding profiles.

Future Long Range Assault Aircraft

The budget request contained \$1.13 billion in PE 0603801A for advanced aviation development, including \$448.4 million for the Future Long Range Assault Aircraft (FLRAA).

As part of the Future Vertical Lift (FVL) program, the FLRAA will eventually replace the UH-60 Black Hawk as the Army's medium-lift utility helicopter. In previous legislation, the committee has supported the Army's decision to accelerate FLRAA development by 4 years and has authorized additional funding beyond that requested in the budget submission. FLRAA is conducting an extended competitive critical design risk reduction (CDRR) phase through the second quarter of fiscal year 2022, after which the program will be awarded to one vendor and transition to a major defense acquisition program at Milestone B. The committee notes that the extended CDRR is intended to de-risk system and sub-system design integration to facilitate the accelerated development schedule.

While the committee understands that the Future Years Defense Program is under review by the Department of Defense, the lack of outyears funding for FLRAA and the rest of the FVL portfolio in the fiscal year 2022 budget request complicates the committee's ability to assess the adequacy of the program's funding profile. The committee expects the Army to budget sufficient funding to maintain FLRAA technical development and schedule and to share a revised future years funding profile as soon as practicable.

Accordingly, the committee recommends \$1.13 billion, an increase of \$33.0 million, in PE 0603801A for advanced aviation development, specifically to continue risk reduction work on the Future Long Range Assault Aircraft.

Future Vertical Lift

The committee supports the Army's pursuit of a Future Vertical Lift (FVL) program to replace some of the Army's existing portfolio of rotary wing assets. Army operations depend on the capabilities of rotary wing aviation for troop transport, reconnaissance, close air support, and logistics. The committee recognizes that while the Army's current aviation platforms, such as UH-60 Blackhawk, AH-64 Apache, and CH-47 Chinook, have been modified and extensively refurbished, their basic designs have been in service for decades and may be reaching the limits of modernization.

The committee notes that since designating Future Vertical Lift as a top modernization priority in 2017, the Army has shifted its acquisition strategy and now intends to develop and procure two new platforms, the Future Attack Reconnaissance Aircraft and the Future Long Range Assault Aircraft, in parallel. Both programs are scheduled for First Unit Equipped in fiscal year 2030.

The committee believes the magnitude of this program necessitates an independent baseline assessment against which to measure future progress, and that such an examination would assist the committee in conducting appropriate oversight.

Therefore, the committee directs the Comptroller General of the United States to submit a report to the congressional defense committees by April 1, 2022, on the Army's Future Vertical Lift program. The committee further directs the Comptroller General to provide a briefing to the Committee on Armed Services of the

House of Representatives by February 1, 2022, on the Comptroller General's preliminary findings. The required report shall include, but not be limited to, the following elements:

(1) the capabilities the Army intends to acquire through the Future Vertical Lift effort and the plan for replacing existing aircraft;

(2) the acquisition approaches and contracting strategies under consideration for the FVL portfolio;

(3) the estimated cost and schedule for development and acquisition of FVL capabilities; and

(4) an assessment of the risk reduction approaches the Army intends to employ to develop technologies, demonstrate designs, and produce aircraft and related FVL capabilities.

Helicopter Vertical Tail Boom Modification

The committee is aware of new and emerging commercial technologies that could benefit the Army's UH-60 aircraft performance, to include providing more directional control with increased lift capability. The committee supports the Army's efforts to incorporate proven enhanced capabilities into its current aircraft inventory.

The committee directs the Secretary of the Army to provide a briefing to the House Armed Services Committee by March 15, 2022, on any testing conducted on vertical tail boom modifications to improve the directional control and lift capabilities of rotary wing aircraft, any plans for continued testing of such capabilities, and an assessment of the aircraft performance benefits that could be provided by these technologies.

Improving Ground Vehicle System Center Modeling and Simulation

In the committee report accompanying the National Defense Authorization Act for Fiscal Year 2020 (H. Rept. 116-120), the committee noted that modeling and simulation (M&S) has demonstrated its utility as a tool for vehicle technology development. Subsequently, in the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116-442), the committee further recognized the importance and value of modeling and simulation (M&S) in supporting digital design, experimentation, and developmental and operational test and evaluation for military ground vehicle systems. The committee also appreciates the briefing provided by the Army in December 2020 that outlines the Ground Vehicle Systems Center (GVSC) plans and efforts to improve and expand its M&S capabilities through public-private partnerships and finding additional M&S tools through their innovative outreach program.

The committee remains interested in the Army's development and appropriate use of M&S capabilities supporting digital design, technology development, experimentation, and testing of combat and tactical vehicles. Accordingly, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology, not later than March 1, 2022, to provide a briefing to the House Armed Services Committee that outlines the Army's accomplishments, if any, that demonstrate its improvement and expansion of GVSC's internal and external M&S capabilities and how such improvements and expansion directly supports, materially advances, and reduces costs for the Army's high priority programs for combat and tactical vehicle modernization.

Modernization of mobile X-ray systems

The committee recognizes that forward-deployed military medical facilities require ruggedized diagnostic equipment that provide life-saving and timely diagnostics in adverse conditions to save lives during the “golden hour,” and that recent breakthroughs in X-ray technology have resulted in mobile units with significant reductions in Size, Weight & Power Cost. The committee believes that these new technologies have the potential to improve currently deployed mobile X-ray imaging systems, and urges the Secretary of the Army to consider plans to modernize mobile X-ray units to ensure that the best possible care is available to deployed soldiers.

Modular approach to combat vehicle lethality

The committee notes that the Army and Marine Corps have related modernization efforts to improve the lethality of their existing and future ground combat vehicles. These efforts are directed at all the combat functions but are particularly noteworthy in the modernization of the direct fire weapons systems for tanks, mechanized and motorized infantry, light and armored reconnaissance, and air defense.

Ground combat vehicle lethality today and well into the future depends upon technologically superior sensors, fire control, and weapons. Current combat vehicles initially developed and fielded decades ago, and upgraded several times since, have a variety of capabilities for each. In the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116–442), the committee expressed its interest in the potential of commonality in weapon station configuration for the Stryker infantry carrier. The committee remains interested in the potential opportunity, given the number of combat vehicle development programs underway in the Army and Marine Corps, to focus development efforts for new vehicles on modular, multi-purpose approaches that allow fielding future weapons capabilities in different mixes, across like-vehicle chassis families, and in configurations that allow rapid weapons changes even in a field environment.

Accordingly, the committee encourages the Army and Marine Corps to consider modernization of ground combat vehicle lethality by pursuing modular, multi-purpose sensor, fire control, and weapon configurations capable of hosting a variety of weapons across a vehicle family. Such modular, multi-purpose capability should include capacity for technological growth allowing for the incorporation of advances in sensors, fire control, and weapons as they are fielded.

The committee also directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to provide a briefing to the House Committee on Armed Services by December 30, 2021, on an assessment of the potential of combat vehicle lethality that uses modular, multi-purpose approach to sensor, fire control, and weapons configuration. This assessment should include existing or future capabilities, if any, that could provide this capability.

Report on the Universal Robotics Controller (URC) Program

The committee is aware that the U.S. Army’s Universal Robotics Controller (URC) program is developing a common, open architec-

ture operating system to run applications for all battalion and below Robotic and Autonomous Systems (RAS). URC is intended to be both backwards compatible with existing Army RAS and forward compatible with emerging Army and Joint RAS such as the Next Generation Combat Vehicle (NGCV), Optionally Manned Fighting Vehicle (OMFV), and Robotic Combat Vehicle (RCV) programs. The committee is also aware that there may be commercial operating systems that meet the requirements of the URC program and provide equivalent functionality at lower cost. Accordingly, the committee directs the Assistant Secretary of the Army for Acquisition, Logistics, and Technology, not later than January 30, 2022, to provide a briefing to the House Armed Services Committee on the Army's development strategy for URC including identification and an assessment of any viable commercially available alternatives for the URC program.

Request for Briefing on Vehicle Cyber Security Research Center

The budget request contained \$164.9 million in PE 0603462A for Next Generation Combat Vehicle advanced technology development. The committee recommends \$169.9 million, an increase of \$5.0 million, in PE 0603462A for vehicle cyber security research.

The committee understands the risks that cyber-threats pose to the effective and efficient operation of our military and commercial vehicles and recognizes that a wide range of expertise, resources, and technical capability are necessary to address cyber-security challenges. The committee also acknowledges that there is both a national security and an economic value in collaboration to address these challenges through the integration of Department of Defense, federal agencies, commercial entities, and academic partners. Private-public collaboration and formal partnerships are important tools for conducting research and innovation, specifically in technology and cyber-security programs.

Accordingly, the committee directs the Commander, Army Futures Command, not later than February 1, 2022, to provide a briefing to the House Committee on Armed Services on the feasibility and advisability of establishing a research center for vehicle cyber security development and testing either under the authority of the U.S. Army Ground Vehicle Systems Center or as a Cooperative Research and Development Agreement. This briefing should include an assessment of the purposes, objectives, governance, facilities and staffing requirements, cost estimates, and identification of suitable locations for establishment of such a center to support vehicle cyber security research, development, and testing.

Thermal imaging and intrusion detection technology

The committee is aware of technology developing within the commercial sector for thermal imaging, analytics, and intrusion detection. These technologies are currently used within the mining industry and could have potential application to Department of Defense systems by increasing capabilities and reliability, reducing component size, and come at substantial cost savings over legacy systems. The committee encourages the military departments to investigate adoption of this technology to current and future military applications for thermal imaging and intrusion detection requirements.

Vehicle protection systems against unmanned aerial systems

The committee has consistently supported the Army's efforts to identify, develop, integrate, and test various active and passive vehicle protection systems (VPS) that would increase armored vehicle survivability and protect crew and passengers. The Army has examined many technologies with the potential to provide such protection from direct fire systems such as missiles, rocket-propelled grenades, as well as medium and small arms projectiles. The committee is unclear, however, as to VPS research or development efforts related to potential threats from unmanned aerial systems (UAS).

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 January 28, 2022, that addresses the Army's plans and activities related to VPS against UAS threats. This briefing shall include:

- (1) an assessment of current and future UAS threats to armored vehicles;
- (2) the Army's research, development, test, and evaluation strategy to identify and examine existing or readily available counter-UAS VPS technologies; and
- (3) funding profiles for research and procurement through the Future Years Defense Program.

Wearable Gesture Control Technology

The committee understands the 2019 Army Modernization Strategy calls for the development and procurement of tools and platforms that increase situational awareness, reduce cognitive load, simplify use of unmanned systems, and improve human-machine connectivity. The committee also understands the Army is pursuing gesture control technology, a potential capability shared between these priorities that harnesses neural and physical gesture impulses to control digital interfaces, unmanned systems, and communications. Therefore, the committee directs the Secretary of the Army to brief the congressional defense committees no later than March 1, 2022, on its efforts to integrate gesture control technology into platforms with potential compatibility, including but not limited to Integrated Visual Augmentation System (IVAS), Android Tactical Assault Kit (ATAK), Nett Warrior, Enhanced Night Vision Goggle-Binocular (ENVG-B), Soldier Borne Sensors, and aerial and ground robotics. The briefing shall include, but is not limited to, existing capabilities, research and development efforts, and potential budget and schedule timelines.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, NAVY

Items of Special Interest

Accelerating supercavitating ammunition

The committee has been supportive of efforts to test and validate supercavitating ammunition technologies. Recent reports provided by the Department of Defense to the committee demonstrate that this technology fulfills current unmet requirements. Specifically, the capability provides increased performance over conventional rounds with higher impact energy through multiple media while

delivering improved precision projectiles. The rounds are also meeting capability expectations in air to water, water to air, and underwater shooting. The committee is concerned that advancements by near-peer competitors in this area have led to gaps in U.S. Armed Forces readiness and lethality capabilities.

Current reports indicate an intention to begin procurement of the capability in fiscal year 2021, and the committee encourages the Secretaries of the Army and the Navy to move quickly to procure this capability. As the Joint Program Executive Office Armaments & Ammunition (JPEO-A&A) is tasked with providing superior ammunition to the soldier, the committee believes this technology is needed to help them fulfill their mission of delivering dominating capabilities to the warfighter and urges the JPEO-A&A to formalize this capability within a program of record as a component of the upcoming Program Objective Memorandum and Budget Estimate Submission for fiscal year 2023.

Advanced Low Cost Munition Ordnance

The committee continues to support accelerating deployment of and continued roadmap development of the Advanced Low Cost Munition Ordnance 57mm guided projectile, with fire-and-forget capability that requires no Littoral Combat Ship fire control system changes, to counter the growing threats posed by small boat swarms, unmanned aerial systems, and other emerging threats.

Assessment of the Naval Air Warfare Center Division

The committee recognizes the significance of the Naval Air Warfare Center Weapons Division (NAWCWD) and the vital research, development, acquisition, test, and evaluation of U.S. military weapons systems conducted throughout the division. NAWCWD leverages its experienced and diverse military-civilian personnel workforce to deliver critical capabilities to the warfighter that provide tactical advantages and carry out complex development, integration, and testing of weapon systems. The committee understands that as threats grow with the advancement of technology, NAWCWD faces challenges in fulfilling its mission. These challenges include funding for key sustainment, restoration, and modernization of specialized and relevant research and testing capabilities and equipment, and increasing workforce recruitment, retention, and expertise. The committee believes that given the need for advanced and next-generation weapon systems development, a current assessment is necessary to provide relevant information on the challenges confronting NAWCWD.

Therefore, the committee directs the Secretary of the Navy provide a report to the congressional defense committees not later than December 30, 2021, that assesses the key enabling issues and items supporting NAWDC's mission to determine what capacity, resources, and infrastructure is required to support advanced and next-generation weapon systems development and testing activities into the future.

*Implementation of the National Security Innovation Partnerships
and Integration of the Future of Defense Center and Naval Tech
Bridges*

The committee notes that the United States has entered an era of great power competition. As the 2021 Interim Strategic Guidance suggests: We face a world of rising nationalism, receding democracy, growing rivalry with China, Russia, and other authoritarian states, and a technological revolution that is reshaping every aspect of our lives . . . China, in particular, has rapidly become more assertive. It is the only competitor potentially capable of combining its economic, diplomatic, military, and technological power to mount a sustained challenge to a stable and open international system.

To meet the demands of great power competition, the United States must not only compete on the battlefield, but also in the technological sphere. To effectively compete and out-innovate strategic competitors such as China, the committee believes the Department of Defense should harness, organize, and integrate the talent within the Department, universities, and the private sector around critical national security problems.

The committee believes that Hacking for Defense continues to be an innovative educational model that could underpin other Department innovation efforts. The committee notes that the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91) authorized the Secretary of Defense to support national security innovation and entrepreneurial education including the Hacking for Defense program. The committee further notes that the Department has adopted and scaled the program and applauds the Department's expansion of this and other efforts to scale innovation at the speed of relevance.

The committee further notes that section 219 of the National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) National Security Innovation Partnerships directed the Secretary of Defense to facilitate engagement with academic institutions, private sector firms in defense and commercial sectors, commercial accelerators and incubators, commercial innovation hubs, public sector organizations, and nonprofit entities with missions relating to national security innovation for the purpose of developing solutions to national security and defense problems articulated by entities within the Department, including through programs such as the Hacking for Defense program. The Office of Naval Research (ONR) has been engaged in innovation efforts that are consistent with the Hacking for Defense model, and the committee encourages ONR to continue supporting the Secretary in executing the direction in this section.

Further, the committee supports the ONR's efforts to train and deploy innovation leaders and leverage the Department of the Navy's tech bridges to bring new and innovative capabilities to the warfighter. Through such efforts, the committee believes the Navy will inculcate the foundational principles of problem definition and build operational concepts through methods such as Lean Startup to allow for faster delivery of capability to the warfighter.

In addition, the committee supports the ONR's establishment of the Future for Defense Center. The committee believes such a center will help the Department of the Navy study, improve, and insti-

tutionalize processes that will build and harness the national security innovation base.

Therefore, the committee directs the Secretary of Defense to submit a report to the congressional defense committees by April 1, 2022 on how the Department of Defense is integrating the Future of Defense Center, the training and deployment of innovation leaders, and the Department of the Navy's NavalX Tech Bridges and the Centers for Adaptive Warfighting to achieve new and innovative technologies at scale. The report should include, but not be limited to, the following:

(1) The authorities the Department of the Navy requires for such efforts;

(2) The required budget to sustain such efforts in the ONR in future fiscal years;

(3) The partnerships that the ONR is undertaking to further such efforts;

(4) Similar efforts within the other United States Armed Forces and across the Department of Defense ecosystem;

(5) A status on the implementation of Section 219 of the National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283) National Security Innovation Partnerships; and,

(6) Any other information the Secretary deems relevant.

MH-60 Service Life Extension Program and modernization

The budget request contained \$46.4 million in PE 0604216N for multi-mission helicopter upgrade development.

The committee is aware that the Navy's MH-60 Seahawk fleet is nearing the end of its service life and is slated for a service life extension program (SLEP) to avoid creating a gap in the helicopter inventory. The committee understands that the Navy intends to begin the MH-60S SLEP in 2024, followed by the MH-60R approximately 3 years later. The committee notes that while a SLEP will extend the service life of these aircraft, weight growth, operations in a GPS-denied environment, and increased cyber and electronic warfare threats require similar attention to keep the aircraft and mission system performance relevant through the next decade.

The committee views scheduling capability upgrades in conjunction with the MH-60 SLEP as the most efficient route to addressing evolving threats, enhancing performance, and resolving obsolescence issues in the MH-60 fleet. The committee further notes that the Consolidated Appropriations Act for Fiscal Year 2021 (Public Law 116-260) included an additional \$10.0 million for MH-60 upgrades. The committee is aware that the Navy intends to utilize this funding to begin integration of a digital magnetic anomaly detector, upgrade software and mission systems, and address obsolescence issues. The committee supports this effort and considers these technology improvements as key to reducing future operational risk for the upgraded MH-60 fleet.

Accordingly, the committee recommends \$56.4 million, an increase of \$10.0 million, in PE 0604216N for multi-mission helicopter upgrade development, specifically to continue development of performance enhancement and threat mitigation solutions for integration on the MH-60 helicopter.

Next Generation Jammer high band

The budget request included \$243.9 million in PE 0604274N for Next Generation Jammer Increment 1 and \$248.0 million in PE 0604282N for Next Generation Jammer Increment II, but no funding for a capability to counter the high band electronic warfare threat.

The committee supports the ongoing development of the Department of the Navy's Next Generation Jammer mid and low band capabilities but notes that the Navy has yet to begin to address the high band 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.

Therefore, the committee recommends \$245.4 million, an increase of \$1.5 million, in PE 0604274N, to include an increase of \$10.0 million to begin risk reduction on a high band electronic attack capability for EA-18G aircraft, and a reduction of \$8.5 million due to test and evaluation delays.

The committee further directs the Secretary of the Navy to submit a report to the congressional defense committees by February 1, 2022, on the technical requirements, estimated cost and schedule, and acquisition strategy for producing a high band capability for the EA-18 Growler. The report should also assess the practicality of leveraging the investments already made on Next Generation Jammer to develop and field a high band capability.

Shipboard High Energy Laser

The committee is encouraged by the Navy's continued progress in testing and deploying High Energy Laser Systems (HELs). The integration of the 150kW class Solid State Laser Technology Maturation on the USS *Portland* (Landing Platform/Dock-27) in 2019 is a significant improvement in lethality over the Laser Weapons System and will provide a valuable capability to counter unmanned aerial systems and fast inshore attack craft, as well as intelligence, surveillance, and reconnaissance capabilities on its upcoming deployment. The committee is also encouraged by the planned integration of the 60kW HELIOS and 30 kW Optical Dazzler Interdictor Navy on identified Arleigh Burke-class destroyer ships beginning in 2021. The committee is eager to facilitate the widespread adoption of this necessary capability, but is concerned about inadequate Space, Weight, Power and Cooling, Service Life Allowances in currently deployed ships and a robust industrial base. Lastly, the committee would like to avoid backfitting costs by ensuring future ship design plans include HELs.

The committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by December 1, 2021, on a plan describing a path forward for integration of HEL Systems with more than 150kW of power on the DDG(X) ship class, and address installation plans on other surface combatants Arleigh Burke-class destroyers.

Silicon carbide power modules

The committee supports the recommendations in the recently updated Naval Power and Energy Systems Technology Development Roadmap for development of advanced power electronics, including silicon carbide power modules, which can reduce the size and weight of power conversion modules and other electronic systems needed to power advanced sensors and weapon systems. Space is limited on current and legacy Navy ships and the committee encourages the Secretary of the Navy to provide additional funding to support cost reduction and qualification of silicon carbide power modules in order to enable a deployment of high-power, mission-critical systems on Navy platforms as early as fiscal year 2024.

Transformational Reliable Acoustic Path System

The committee recognizes the Transformational Reliable Acoustic Path System (TRAPS) is a deployable deep-water passive undersea sensor, designed to auto-detect and report subsurface contacts. The TRAPS system uses a fixed sonar node placed on the ocean floor, exploiting the advantages of operating from the seafloor, to achieve large-area surveillance. Each node communicates back to a floating “stationary surface node” through a wireless acoustic modem when the ocean floor node detects a sound. The committee further recognizes that this system gives Navy operators the ability to provide safe havens in contested areas for surface fleet vessels and provides added capability for Anti-Submarine Warfare (ASW) surveillance. The key features of the TRAPS system, in particular, is its small footprint and operational flexibility. TRAPS provides reliable long-range detection of quiet submarines in open-ocean and key transit areas. The committee encourages the Secretary of the Navy to continue development of this critical capability.

Virtualization Technology

The committee is aware of the important role that weapons system virtualization technology can play in reducing size and weight, streamlining hardware requirements, increasing efficiency, and improving capability. Using virtualization technology, the Navy was able to run AEGIS Weapon System code in a successful live fire engagement in a fraction of the original hardware space, allowing that space to be used for other purposes. As the information technology needs of deployed forces and weapons systems increases, it is important that virtualization technology be utilized where appropriate to reduce unnecessary hardware requirements while providing safe, secure, and interoperable capabilities to the battlefield edge. Therefore, the committee directs the Secretary of Defense, in consultation with the Under Secretary of Defense for Research and Engineering, the Under Secretary of Defense for Acquisition and Sustainment, and the Director of Operational Test and Evaluation, to submit a briefing to the congressional defense committees not later than March 1, 2022, on a plan to use commercial virtualization technology, such as was used in the AEGIS system, in weapon systems and for deployed forces. This briefing can accompany or be included in the Digital twin assessment required elsewhere in this bill.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, AIR FORCE

Items of Special Interest

Adaptive Engine Transition Program propulsion system

The budget request contained \$13.5 million in PE 0604004F for the Adaptive Engine Transition Program (AETP).

The committee supports the adaptive cycle engine research and development initiative and encourages the Department of Defense to transition this technology into the engineering and manufacturing development phase quickly. Tactical fighter aircraft propulsion is one of the few areas in which the United States maintains a distinct advantage over near-peer competitors. The F-35 Lightning II is currently planned to comprise a significant portion of tactical fighter aircraft inventories for the United States and its global partners and allies, but it's presenting affordability challenges for all involved with the program related to current and forecasted sustainment and maintenance costs. According to Air Force officials, the AETP technology is predicted to reduce F-35 fuel consumption by 25 percent, increase F-35 combat radius 27 percent, provide a 167 percent increase in F-35 air system thermal management capability, and provide a positive impact towards environmental considerations. The Department's failure to transition the AETP into production at the earliest opportunity on the F-35, after reaching appropriate technological and production representative maturity, would constitute a missed opportunity to capitalize on the more than \$4.0 billion invested to date in research and development for AETP. AETP also presents an opportunity to reduce the current unaffordability of the F-35 given currently planned future inventory levels and would strengthen F-35 performance capabilities. The committee also recognizes the importance of maintaining a strong, competitive military engine industrial base and the role AETP technology could play in supporting our national security strategy for defense and the environment.

Therefore, the committee recommends \$270.5 million, an increase of \$257.0 million, in PE 0604004F for acceleration and integration of AETP into the F-35. The committee also includes a provision elsewhere in this title that would require an executable and risk informed acquisition strategy for integrating and fielding the AETP propulsion system into the F-35A aircraft be submitted to Congress as part of the fiscal year 2023 budget request. The committee also expects the Department to evaluate the use and implementation of middle-tier acquisition authorities enabling rapid prototyping and fielding of AETP into F-35A aircraft.

Advanced Battle Management System

The committee supports the Air Force's November 2020 decision to restructure the Advanced Battle Management System (ABMS) development effort and direct the Air Force Rapid Capabilities Office (AFRCO) to assume responsibility for producing specific capabilities for fielding to the force. The committee agrees with the decision to prioritize tangible solutions but emphasizes that questions remain about the direction of ABMS. Though the Air Force reduced the amount requested under the ABMS budget line, the service also requested \$82.4 million in PE 0604006F, Department of the

Air Force Technical Architecture Design, Integration, and Evaluation, a new program element to fund technical architecture activities. ABMS is now split between two lines of effort, architecture and interface development under the Chief Architect's purview, and product development managed by AFRCO.

The committee is concerned with ensuring that ABMS supports Air Force all-domain command and control and avoids wasting resources on duplicative or low priority solutions. While connecting every sensor to every shooter appears a worthy goal, the ABMS emphasis on architecture interface development may have the undesired effect of locking the Air Force into the current centralized command and control process to which the Joint Force has become reliant. Concepts, such as the Defense Advanced Research Projects Agency (DARPA)'s mosaic warfare whereby forces could be recombined to provide more options against an adversary, will require decision support tools to aid command and control rather than a narrower focus on a pre-defined communications architecture. The committee encourages the Air Force to concentrate on a command, control, and communications strategy that maximizes flexibility to avoid inadvertently constraining future commanders' options.

The Air Force should ensure the capabilities ABMS delivers support the overarching Joint All Domain Command and Control concept. Therefore, the committee directs the Comptroller General of the United States to conduct a review of ABMS and provide the congressional defense committees with a report by November 1, 2022. The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services by March 15, 2022, on the Comptroller General's preliminary findings. The required report shall include, but not be limited to, the following elements:

(1) an evaluation of the Air Force's business case for ABMS, such as the acquisition strategy, technology readiness assessments, product roadmaps, and cost estimates;

(2) an assessment of the Air Force's approach to prioritizing and developing capabilities to address Combined Joint All Domain Command and Control requirements, including efforts focused on command and control, and those focused on communications;

(3) an assessment of how AFRCO is evaluating the value of its development efforts and obtaining feedback from warfighters using these capabilities; and

(4) an assessment of how AFRCO is ensuring its development efforts are not duplicative of the other ongoing programs in military departments.

Accordingly, the committee recommends \$178.8 million, a reduction of \$25.0 million, in PE 0604003F for the Advanced Battle Management System and \$48.4 million, a reduction of \$34.0 million, in PE 0604006F, Department of the Air Force Technical Architecture Design, Integration, and Evaluation.

Air Force Sensor Open Systems Architecture Standard initiative

The committee commends the Department of Defense's support for Modular Open Systems Architecture (MOSA) in recent years. The Air Force's Sensor Open Systems Architecture (SOSA) and the Army's Command, Control, Communications, Computers, Intel-

ligence, Surveillance, and Reconnaissance (C4ISR) Modular Open Suite of Standards (CMOSS) are examples of mature military electronics standards initiatives that are proving that programs of record can be unified around common modular building blocks. Increased use of these standards has the potential to increase speed of technology refresh, foster industry competition, and reduce the U.S. Government's costs of modernization and sustainment.

The committee notes that the SOSA and CMOSS standards are aligned in both hardware and software specifications, creating cross-service cooperation and cost savings for the Department of Defense (DoD). Nonetheless, the committee understands that despite this progress, Department of the Air Force software standards are still largely stovepiped along mission or capability areas and often not accessible to smaller or non-traditional defense contractors.

The committee encourages the Air Force to consider leveraging SOSA software and hardware standards across high priority sensor and C4ISR programs in support of building a true open, common, multi-purpose backbone architecture able to incorporate new capability more quickly and at lower cost.

Therefore, the committee directs the Secretary of the Air Force to submit a report to the congressional defense committees by March 1, 2022, on plans to accelerate and expand implementation of SOSA software and hardware standards. This report shall explain:

(1) How the Air Force intends to leverage SOSA to combine mission areas into a common system hardware and software ecosystem for multi-mission/multi-intelligence tactical communication, C4ISR, electronic warfare, signals intelligence, geospatial intelligence, and battlefield embedded computing;

(2) How the Air Force can maximize the accessibility and participation from industry and NATO partners, especially small and medium sized traditional and non-traditional defense businesses, to build against the SOSA standard;

(3) How the Air Force will ensure life cycle support of future SOSA sensor and C4ISR programs; and,

(4) How the Air Force will resource future SOSA standard research and development efforts such as prototyping, industry technical interchanges, a method of SOSA system accreditation/industry technical interchanges, and efforts to domestically source advanced chip technologies and manufacturing of critical components for the DoD.

Airborne augmented reality for Air Force pilot training

The budget request contained \$7.1 million in PE 0207701F for full combat mission training activities, but did not include sufficient funding for airborne augmented reality training capability development.

The committee has been monitoring significant Air Force pilot shortfalls for the past two decades but remains concerned that minimal progress has been made addressing the issue, especially increasing the quantity of tactical fighter aircraft pilots. Although initiatives by Air Education and Training Command (AETC) and Air Combat Command (ACC), such as Pilot Training Next, Undergraduate Pilot training 2.5/3.0, and project "Rebuilding the Forge",

are designed to leverage innovative technologies and methodologies to train and field fighter pilots faster and to a higher training standard, neither AETC nor the ACC has sufficiently supported the development optimization of other innovative technologies advancing inflight training operations to meet pilot production and training requirements. The committee notes that airborne augmented reality (AAR) technology currently under evaluation by the Air Force Research Laboratory, ACC, and AETC are demonstrating great promise at addressing this aspect of training.

Therefore, the committee recommends \$16.6 million, an increase of \$9.5 million, in PE 0207701F for full combat mission training activities, to accelerate AAR technologies for military pilot training. The committee also expects the Secretary of the Air Force to move more rapidly to develop and field AAR technologies that will enable significantly improved training outcomes, reduced net training costs, and increased environmental sustainability.

Common Armament Tester Fighters (CAT-F)

The committee is aware the Air Force is conducting an analysis of alternatives (AoA) to develop a new material solution as part of the Air Force Common Armament Tester Fighters (CAT-F) program. This program is critical to providing a common test capability for fighter aircraft armament systems in support of F-15, F-16, A-10, MQ-9, and F-22 aircraft. The committee has a strong interest lowering acquisition cost and program risk by evaluating and leveraging existing operational systems in use across the military services that have the potential to meet new mission requirements. The committee expects the Air Force to fully consider all available options, including Navy test systems now in use, that may have the potential to meet Air Force operational requirements while delivering enhanced capability faster and at a lower cost.

Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by March 1, 2022, on its strategy to consider existing systems and technologies across the military services with the potential to meet CAT-F mission requirements, what systems have this potential, and how this information will be assessed and incorporated by the Air Force prior to release of the CAT-F request for proposal.

Digital engineering design and manufacturing expansion

The committee supports the Air Force's continued development of its advanced manufacturing techniques and processes that are predicted to reduce cost and time needed to develop, test, and field new weapon systems and capabilities. The committee acknowledges the positive impacts that "e-Design" digital engineering initiatives had on the new T-7A trainer by nearly eliminating manufacturing rework and touch-labor hours to assemble the first aircraft. The committee believes e-Design and advanced manufacturing processes and techniques will allow the Air Force to exchange real-world activities with the digital environment, increasing speed and agility.

Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services not later than February 15, 2022, on the Air Force's ability to expand digital engineering capabilities to a wider range of programs,

high-cost structural parts, mission systems, and component sub-systems. The committee expects the briefing to include verifiable information that describes how e-Design methodologies and processes will reduce a program's maintenance, sustainment, and operations costs during the life-cycle of the program.

Enhanced connectivity with RC-135 aircraft

The committee continues to be concerned about networked data sharing between intelligence, surveillance, and reconnaissance (ISR) aircraft and current and advanced next generation tactical platforms. The committee is aware of disparate efforts aimed at equipping existing tactical and ISR aircraft with resilient, low probability of intercept, low probability of detection (LPI/LPD) data links for information sharing but is unaware of any comprehensive, near-term plan for incorporation on existing systems.

As a high-demand, low-density airborne signals intelligence collection platform, the RC-135V/W Rivet Joint is a critical node in the Air Force sensing grid, providing sensor processing at the tactical edge, electromagnetic support, and tactical and beyond line of sight communications capabilities. The committee notes that despite the RC-135's expanded tactical role delivering time-sensitive situational awareness information directly to the warfighter, the Air Force has yet to consider utilizing available LPI/LPD data links on the aircraft for connectivity with 5th generation systems. Given that the Air Force's ISR 2030 plan includes maintaining RC-135 in the inventory into the next decade, the committee believes the Air Force should prioritize modernized data links for the aircraft to ensure maximum interoperability with key weapons systems.

Accordingly, the committee directs the Secretary of the Air Force to provide a briefing to the House Armed Services Committee not later than December 15, 2021, on efforts to enhance collaboration between the RC-135 system and current 4th and 5th generation platforms and future next generation platforms. At a minimum, the briefing shall include:

(1) an assessment of the existing LPI/LPD networking data links in use or technologically suitable for any ISR aircraft in the Air Force inventory;

(2) current communication and information sharing capability between RC-135 and 4th and 5th generation aircraft, to include types and amount of data able to be shared and an assessment of the security and resiliency of each capability;

(3) any planned future connectivity and data sharing capabilities between RC-135 and 5th generation or advanced next generation platforms, to include a description of the technical requirements, cost, and timeline for integration onto the RC-135; and

(4) an analysis of the feasibility, technical requirements, and estimated cost of integrating the multifunction advanced data link onto the RC-135.

Report on the Agility Prime program of the U.S. Air Force

The committee recognizes that the U.S. Air Force's Agility Prime program is working towards its goal of ensuring a robust domestic market for electric vertical takeoff and landing (eVTOL) aircraft, as well as introducing the Department of Defense to zero emissions aviation. eVTOL aircraft can provide the Department with many

unique use cases since they are electric, have significantly lower noise levels compared to today's aircraft, lower maintenance and operating costs, and reduced heat signatures. The committee commends the Air Force for prioritizing the Agility Prime program and believes that continued investment in this technology will help to maintain the country's global leadership in the eVTOL market.

Therefore, the committee directs the Secretary of the Air Force to submit a report to the congressional defense committees not later than March 30, 2022, on the research, development, testing, and acquisition strategy for the Agility Prime program. The required report shall address the following matters:

(1) a description and justification for the focus areas of the program.

(2) projected dates for key milestones within the strategy.

(3) cost estimates and a projected budget for a 5-year investment plan.

(4) a description of how the strategy will improve collaboration with the private sector and military exploration of these key areas of innovation.

(5) a description of how the strategy will encourage competition and reward innovation for addressing system performance requirements.

(6) policies that could be pursued by the Department to ensure global leadership in the sector.

(7) a projected timeline for acquisition of electric aircraft.

T-7 review and program risk assessment

The budget request contained \$188.9 million in PE 0605223F for the research and development efforts associated with the Air Force T-7 advanced pilot training aircraft that is scheduled to replace the T-38C aircraft at various Air Force pilot training basing locations in the continental United States beginning in the fiscal year 2023 timeframe.

The committee notes that the T-7 program commenced in September 2018 with expectations of low-risk and high-reward program execution due to the prime contractor for the program using leading-edge, digital engineering design and full-sized determinate manufacturing technologies to produce two prototype aircraft in near-record time. While the committee appreciates the advances in more rapid acquisition practices and aircraft manufacturing processes, the committee remains concerned regarding the flight science development and supply chain establishment for this program. The committee notes that the low-rate initial production milestone decision has been postponed at least 1 year from the originally planned date due to flight science software glitches and challenges associated with sourcing and establishing critical parts from the global supply chain. Acknowledging that the T-7 aircraft is not planned to integrate complex mission systems nor have the ability to employ weapons, the committee remains cautiously optimistic that the T-7 program will not experience the program issues, challenges, and cost overruns that the Air Force has seen with other programs.

Therefore, the committee recommends \$170.0 million, a decrease of \$18.9 million, in PE 0605223F for the research and development efforts associated with the Air Force T-7 advanced pilot training

aircraft. The committee also directs the Comptroller General of the United States to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, that provides an assessment of current estimates for cost, schedule, contractor performance, technology maturation, software development, systems integration, and program risks for the development and manufacturing of the T-7 aircraft.

Teamable Attributable Air Vehicles

The committee is aware of progress made regarding the development of teamable attributable air vehicles and believes they will play an important role in effectively countering anti-access area denial threats. While the Committee encourages the continued rapid development of these vehicles under the Skyborg Vanguard program, it is concerned by the absence of available propulsion systems with cost-optimized limited-life design, high-speed maneuverability, and high electrical power generation capacity. Modified commercial jet engines currently used on Skyborg experimentation demonstrator vehicles do not provide the electrical power generation and high-G maneuverability necessary for fighter aircraft teaming missions, without significant modification. These commercial engines are also designed for thousands of flight hours, which are excessive compared to the Department's requirements for attributable vehicles, resulting in unnecessarily high acquisition and operating costs.

The committee is encouraged by the Air Force Research Laboratory's effort to develop long-term propulsion solutions for attributable air vehicles under the Attributable Cost-Optimized Limited-Life Engine Technologies program and believes these activities must be appropriately funded in Fiscal Year 2022 (FY22) and beyond to ensure parity with ongoing airframe systems development. Therefore, the committee directs the Under Secretary of Defense for Research and Engineering to provide a briefing to the congressional defense committees by June 30, 2022 on a roadmap for the development of teamable attributable aircraft and high-speed attributable propulsion starting in FY22.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, SPACE FORCE

Items of Special Interest

Space Force higher education strategy

The committee appreciates the Space Force's establishment of a Chief Scientist, a Chief Technology and Innovation Officer, and a University Partnership Program as part of its efforts to improve its science and technology strategic vision and execution as well as its access to the talent, research expertise, and technological capabilities resident in universities. The committee directs the Chief of Space Operations to provide a briefing to the House Committee on Armed Services not later than January 31, 2022, that assess the effectiveness of the Space Force's higher education strategy in creating long-term, strategic relationships; in developing talent; and in providing access to expertise and engineering, research, and development capability. The briefing should outline the Space Force's strategy to engage higher education, to include minority institutions, in foundational research in disciplines that the Chief deter-

mines to be critical to the mission of the Space Force, and what role the University Partnership Program plays in that strategy.

University Consortium for Space Technology Development

The Committee recognizes the need to accelerate the transition of fundamental research and early-stage technology development into integrated systems capable of aiding the national security space enterprise. Specifically, the Committee recognizes and values the critical role universities play in spurring transformational research and technology development within the space domain. Given the diverse and highly technical needs of the Space Force, the Committee supports the development of a university-led consortium that addresses and facilitates the advancement of capabilities related to space domain awareness; position, navigation, and timing; autonomy; data analytics; communications; space-based power generation; and space applications for cybersecurity. The Committee directs the Chief of Space Operations, in coordination with the Chief Scientist of the Space Force, to establish a university consortium for space technology development that will support the Space Force's research, development and demonstration needs in these areas and others as needed. This university consortium should also promote the education and training for students in order to support the nation's future national security space workforce.

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

Items of Special Interest

5G Open Radio Access Network

The Committee notes that the Department of Defense and the military Services manage a number of 5G programs. The Committee further notes that 5G offers the potential for significant strategic and tactical improvements and advantages for the Department of Defense as well as the American people. The Committee is concerned that to date, the Department of Defense does not appear to have developed a well-coordinated 5G effort.

The Committee is aware that the Executive Order on Promoting Competition in the American Economy reads in part that the Administration supports the "continued development and adoption of 5G Open Radio Access Network (O-RAN) protocols and software, continuing to attend meetings of voluntary and consensus-based standards development organizations, so as to promote or encourage a fair and representative standard-setting process, and undertaking any other measures that might promote increased openness, innovation, and competition in the markets for 5G equipment;"

The Committee believes continued support and increased attention on the development and adoption of O-RAN in 5G could result in a downstream effect, whereby the United States becomes less dependent on foreign sourced technology. The Committee believes O-RAN, if more broadly supported, adopted, and deployed, will contribute to an environment of increased competition by new and innovative, competitive suppliers, leading to a more robust domestic supply chain that is able to develop more organically.

The Committee supports 5G Open Radio Access Network (O-RAN) because it promotes competition. To this end, the Committee

is extremely supportive of efforts and collaborations helping support the development of a healthy, domestic, multivendor supply base of O-RAN equipment and software providers.

Therefore, the Committee directs the Under Secretary of Defense for Acquisition and Sustainment, by March 31, 2022, to provide a briefing to the Senate Committee on Armed Services and the House Committee on Armed Services on the steps the Department is taking to support 5G and O-RAN. The report shall address how the Department is supporting the development of a domestic industrial base for 5G.

Additionally, the Committee directs the Under Secretary of Defense for Acquisition and Sustainment, in coordination with the Senior Official for 5G, to provide a report to the Senate Committee on Armed Services and the House Committee on Armed Services by March 31, 2022 regarding the Department of Defense's ability to carry out 5G research, prototyping and production projects utilizing existing consortia, as well as the advisability of creating one or more additional consortia in order to address the specific needs of the 5G Wireless Networking Cross Functional Team and others.

Advanced Development of Chemical and Biological Detection Media

The budget request contained \$56.4 million in PE 0602144A for RDT&E, Army, Ground Technology. The committee recognizes that there are emerging technology opportunities in the field of bioaerosol and chemical detection, collection, and analysis. The committee believes the Department of Defense should sufficiently resource these emerging chemical and biological threats. Therefore, the committee recommends an increase of \$5.0 million, in PE 0602144A to support development of a small lightweight wearable sensor for real-time detection of chemical and biological threat agents.

Advanced electronic warfare capabilities

The committee is aware that the Department of Defense views advanced electronic warfare techniques, such as adaptive and cognitive capabilities, as key attributes of future electronic warfare (EW) systems. Adaptive EW applies artificial intelligence and machine learning to EW systems to identify unknown signals and generate a counter response to those characterized as threats. Cognitive systems aim to condense the detection-to-response timeline significantly through near-real time learning and response. A true cognitive EW capability will be able to identify previously unknown signals and generate near-real time countermeasures as these new signals are characterized. It is the committee's understanding that it may take months to incorporate emerging threat detection capability into current airborne EW systems.

The Department of the Air Force Electromagnetic Spectrum Superiority Strategy, released publicly in April 2021, states that anticipatory cognitive systems and platform-agnostic applications comprise the core of the service's modernization plan. While the Navy has yet to update its own electromagnetic spectrum strategy, the committee is aware of ongoing research and development of adaptive EW capabilities within the Navy. The committee is concerned, however, with the pace of development of true cognitive electronic warfare capabilities. While the committee understands and supports the effort to field near-term improved EW systems to

Navy and Air Force airborne fleets, the committee believes greater emphasis should be placed on cognitive and other advanced techniques.

Therefore, the committee directs the Secretary of the Air Force, in coordination with the Secretary of the Navy, to submit a report to the congressional defense committees by April 1, 2022, on current research, development, and procurement programs in progress with the goal of fielding advanced or cognitive EW capabilities to their respective airborne fleets. The report should include, at a minimum: descriptions of the cognitive and advanced EW technologies and techniques in research, development, and acquisition; the intended or potential application of these technologies and techniques; the estimated Technology Readiness Level of each project; costs already invested and the planned budget through the Future Years Defense Program for each project; and any identified technology or resource challenges associated with integration and implementation in the airborne fleet.

Advancing Gaming, Exercising, Modeling, and Simulation capabilities

The committee is aware of the Defense Science Board's final report on Gaming, Exercising, Modeling, and Simulation (GEMS), which concluded that the Department of Defense must significantly advance its capabilities to keep pace with competitors and effectively counter threats, both today and in the future. Therefore, the committee directs the Under Secretary of Defense for Research and Engineering to provide a briefing to the House Committee on Armed Services by January 15, 2022, on current and contemplated efforts to invest in and improve Gaming, Exercising, Modeling, and Simulation innovation across the analytical community within the Department of Defense. The briefing should include planned or ongoing efforts, assessments and evaluation, and investments in:

(1) digital engineering to support an enterprise-level GEMS strategy that would promote effective adoption of improved tools.

(2) training and experimentation augmented and facilitated by tools to help inform better implementation of modeling and simulation to discover new tactics and concepts and improve warfighter performance and readiness in the face of emerging threats from peer competitors.

(3) better strategic data collection and use and improved modeling and simulation to enable the evaluation and testing of high-level geopolitical strategies with long time horizons.

(4) integrating the use of technology-based enablers such as game engines and synthetic environments for a wide variety of Department of Defense missions.

(5) promoting effective GEMS governance to enable the proper coordination of activities and uses across the Department and the wider national security enterprise.

Aircraft ejection seat spinal injuries assessment

The committee understands Department of Defense Military Handbook-516C (MIL-HNBK-516C) defines modern ejection related injury criteria and that change-notice five to that publication, issued in 2016, established abbreviated index scale (AIS) level-two as the standard which provides aircrew the ability to successfully

escape and evade post-ejection. Injuries which preclude post-ejection aircrew the ability to escape and evade are classified as AIS level-three.

The committee notes that spinal injuries sustained during the ejection and escape sequence and subsequent landing can result in hospitalization, chronic pain and mobility limitations, and permanent disability that adversely affects long-term quality of life. In combat scenarios, certain types of ejection related spinal injuries could pose a serious challenge for aircrew trying to escape and evade enemy capture. The committee expects that any ejection system technology in development or production should strive to eliminate lower-back spinal fractures and lumbar compression injuries to escaping aircrews. However, the committee notes that fulsome ejection-related injury data is difficult to ascertain by ejection seat manufacturers because of data-sharing policy differences and mechanisms in place by each military service and how the services categorize and assess ejection seat injuries, thereby complicating a comprehensive evaluation of ejection system performance across the Department.

Therefore, the committee directs the Secretary of Defense, in coordination with the Secretary of the Air Force and Secretary of the Navy, to submit a report to the congressional defense committees not later than March 1, 2022, that analyzes and summarizes spinal-fracture and lumbar compression injuries that have occurred during ejections from Department of Defense aircraft between 1985 and present day. The report should also contain a comparison of performance between different ejection and escape systems, including an analysis of AIS level-2 and level-3 injuries, and information regarding future acquisition and ejection seat upgrades for ejection and escape systems that will minimize injury and increase survivability. The committee also expects the Department to implement standardized policies that facilitate inter-service exchange of ejection event safety and injury-related data and information.

Artificial intelligence for Small Unit Maneuver

The budget request contained \$145.8 million in PE 1160408BB for Operational Enhancements.

The committee recognizes the need to increase investments in artificial intelligence/machine learning (AI/ML) enabled autonomous systems. The committee supports the shift from inadequate legacy platforms and weapons systems to increased investment in cutting-edge technologies and capabilities needed to support strategic competition with near-peer adversaries.

The committee supports the efforts of U.S. Special Operations Command (USSOCOM) to accelerate the development and employment of AI/ML applications and AISUM, which can augment the warfighter by enhancing operational maneuver and lethality.

Therefore, the committee recommends \$195.8 million, an increase of \$50.0 million, in PE 1160408BB for AISUM.

Further, the committee directs the Commander, USSOCOM to provide a briefing to the House Committee on Armed Services by December 31, 2021, on the planned resourcing, development, and transition roadmap for AISUM. The briefing shall include anticipated operational applications of enhanced development of AISUM technologies, and an assessment of these technologies and their ap-

plication to support the Joint Force in near-peer competition, GPS-denied, and anti-access/area denial (A2/AD) environments.

Comptroller General Report on STEM and AI Workforce Development

The National Security Commission on Artificial Intelligence’s (AI) final report highlighted that the Department of Defense and the Intelligence Community both face an alarming talent deficit in their digital and AI workforce and that America is not prepared to defend or compete in the AI era—a reality that demands comprehensive, whole-of-nation action. China’s ambition to surpass the United States as the world’s AI leader within a decade should be taken seriously. To address this daunting challenge, the Commission emphasized that the government must expand science, technology, engineering, and mathematics (STEM), to include AI, talent pipelines from universities to government service, to include streamlining the hiring process and building new training infrastructure such as a digital service academy. In 2018 the Comptroller General evaluated federal investment in STEM education fields and found that government efforts to assess the performance of STEM programs are limited and hinder efforts to identify effective programs. The United States government, and particularly the Department, cannot afford to fall behind in the development of a robust STEM workforce when AI and other emerging technology tools will be vital in future conflicts.

Therefore, the committee directs the Comptroller General to provide a briefing to the House Committee on Armed Services not later than March 31, 2022, with a report to follow on the Department’s—including the defense intelligence components’—progress in developing a robust STEM, to include AI, workforce. The review shall assess the Department’s:

(1) current organization and workforce planning process for their STEM, to include AI, workforce needs, including the identification of STEM skills and the resources currently dedicated to the hiring, training, and retention of their STEM workforces;

(2) plans and efforts to expand hiring in their STEM workforce, including collaboration with industry and academia, the broadening of recruiting pipelines, and mechanisms to attract the best AI talent;

(3) efforts to grow the training infrastructure for their STEM workforce, such as special schools or online training programs, and continuing professional education; and

(4) efforts to improve the retention and visibility of their STEM workforce, including the availability of non-financial benefits, the implementation of flexible career paths, and the development of management structures to enhance the workforce.

Counter Unmanned Aerial Systems (C-UAS) Development, Testing and Fielding

The committee supports the Department of Defense (DOD) and Joint Counter Unmanned Aerial Systems (C-UAS) Office (JCO) efforts to identify gaps and prioritize CUAS solutions. However, the committee is concerned that the rapidly evolving threat of advanced autonomous aerial systems could, at its current rate, continue to outpace DOD capabilities. Therefore, the committee directs

the Secretary of Defense, not later than March 1, 2022, provide the House Armed Services Committee a briefing on its plan to rapidly develop, test, and field C-UAS systems. The briefing shall include a DOD UAS global threat assessment, a summary of DOD C-UAS capability requirements; and an identification and assessment of:

(1) C-UAS systems under development by both DOD and the private sector, if any, including schedules for their current and planned testing;

(2) existing and developmental systems' capability to counter advanced threat UAS including their ability to integrate with existing DOD air defense networks;

(3) existing and developmental C-UAS systems ability to detect, track and kill individual drones or swarms;

(4) their ability to protect rapidly deploying and mobile forces and operator safety;

(5) potential policies impacting C-UAS fielding; and

(6) an overall assessment of funding to include projected shortfalls and alternative near-term funding opportunities in order to rapidly develop, test and field C-UAS capabilities from now and over the next five years.

Critical Shortage of STEM Professionals

The committee remains concerned that the Department of Defense continues to face a critical shortage of science, technology, engineering, and mathematics (STEM) professionals, both among the uniformed military and the Department civilian workforce. As the Department continues its modernization efforts, these shortages will only increase in severity. High demand among private technology companies has dramatically increased the average salaries for STEM professionals, making recruiting and retention for the government even more challenging.

The committee notes that, until now, the Department has compensated for many of these critical shortages by relying on contractors to provide needed support in critical STEM fields. However, contractors are now having difficulty attracting and retaining STEM talent because statutory caps on allowable contractor compensation have not kept pace with salary inflation in certain in demand STEM fields. Congress contemplated this problem might occur when establishing the caps, and therefore included section 2324(e)(1)(P) of Title 10, United States Code, which enables the Secretary of Defense to establish an exception to the compensation limit for "positions in the science, technology, engineering, mathematics, medical, and cybersecurity fields and other fields requiring unique areas of expertise upon a determination that such exceptions are needed to ensure that the Department of Defense has continued access to needed skills and capabilities." Yet the committee is unclear as to whether this exception has been effectively used.

Section 245 of the National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283) directed the Department to develop programs and incentives to ensure the Department's contractors are engaging with schools and universities to encourage students to pursue STEM education. However, once students are educated in STEM fields, they tend to gravitate toward jobs at private technology firms that do not have restrictions on how much they can be paid. Therefore, the committee directs the Secretary of De-

fense to provide a report to the Committee on Armed Services of the House of Representatives by March 1, 2022, on the following matters:

(1) For Calendar Years 2019 and 2020, the number of times the exception under section 2324(e)(1)(P) of title 10, United States Code, has been used by an executive agency and the specific circumstances under which it was used.

(2) How the Federal Acquisition Regulation, which requires an agency head using the exception to analyze each individual contractor employee to determine whether that individual's position should be exempted, rather than allowing the general exemption of certain types or classes of positions, affects the Department's use of this exception.

(3) How is the Department engaging with contractors to address rapidly rising wages in the competitive STEM labor market?

(4) Any other matters the Secretary determines relevant to the issue of compensation for STEM professionals.

Data storage capabilities for special operations forces

The budget request included \$93.4 million in PE 1160402BB for special operations forces advanced technology development.

The committee is encouraged by U.S. Special Operations Command's efforts to develop scalable, platform-agnostic data storage system solutions and the use of the Small Business Innovation Research program to identify relevant and commercially viable small business-developed technologies. The committee recognizes the long-term value in maximizing the utility of existing and future data streams with machine-to-machine communications in a platform agnostic tool environment. Furthermore, the committee notes that advances in common data standards can rapidly identify and extract information of value across available data sources while leveraging advances in artificial intelligence, machine learning, and computer vision. Finally, the committee recognizes the strategic value across a broad range of military applications where special operations forces require access to large scale common data standards and must avoid the risks associated with vendor lock.

Therefore, the committee recommends \$98.4, an increase of \$5.0 million, in PE 1160402BB, for the further development and fielding of a platform-agnostic data storage system.

Defense Innovation Unit assessment

The committee is concerned that the Defense Innovation Unit (DIU) does not have an adequate size and composition of personnel to accomplish its mission. Therefore, the committee directs the Under Secretary of Defense for Research and Engineering to submit a report to the congressional defense committees not later than March 31, 2022, on the DIU that includes:

(1) a determination of the appropriate size and composition of personnel to accomplish the organization's mission;

(2) an assessment of whether existing structures, offices, and personnel are appropriately resourced to accomplish the organization's mission;

(3) an assessment of any additional authorities that would assist the organization and its affiliated entities in better accomplishing its mission; and

(4) an assessment of the structure, personnel, resources, and field offices that would be sufficient in fulfilling the organization's responsibilities and requirements.

The report shall be submitted in unclassified form that can be made available to the public.

Development of High Mach and Hypersonic Aircraft

The committee is encouraged by recent efforts to mature technologies necessary to develop reusable high-mach and hypersonic aircraft. The reports required by the Fiscal Year 2021 National Defense Authorization Act and Intelligence Authorization Act mandated hypersonic flight roadmaps, which demonstrates that these reusable aircraft have the potential to expand operational capability in intelligence, surveillance, and reconnaissance and low-cost responsive space access, mitigating the threat posed by traditional anti-access/area-denial systems and providing critical intelligence collection resiliency. The committee supports ongoing investments by the Department of Defense to deliver reusable high-mach flight capability in 2030, including near-term development and testing of high-mach propulsion, high-temperature materials, and hypersonic test facilities. The committee further believes that effective development of reusable high-mach flight capabilities will likely comprise integration of unique intelligence related mission requirements early in the development cycle.

Therefore, the committee directs the Under Secretary of Defense for Acquisition and Sustainment, in coordination with the Under Secretary of Defense for Intelligence and Security, to provide a report no later than April 15, 2022, to the congressional defense committees on the Department's ability to meet intelligence capability requirements as described in the Department's hypersonic flight roadmap, as well as explain any significant divergence in strategy or schedule. The report should also describe consultation and joint development activities with the intelligence community on research, development, test, and evaluation of reusable hypersonic flight platforms.

Digital Engineering Infrastructure and Workforce Development

The Committee is concerned about the pace of weapon systems development at the Department of Defense and the ability of the Department's acquisition system to overcome the increasing threats posed by our adversaries. Current model-based system engineering, as a part of digital engineering practices, offers the Department transparency, flexibility, rigor in communication, analysis, quality control, and an increase in the efficiency in engineering and acquisition practices.

The committee urges Department components to embrace and resource their digital engineering infrastructure and workforce skill development needed to practically implement digital practices using state-of-the-practice methods and techniques. The Committee encourages the services to consider establishing partnerships with academic institutions to create consortia which can act as centers of excellence and promulgate best practices across the Department's research and development programs.

Therefore, the Committee directs the Under Secretary of Defense for Research and Engineering to provide a briefing to the House

Committee on Armed Services by March 1, 2022, on the status of the Department's adoption and implementation of digital engineering, including, but not limited to:

- (1) The workforce skill development required;
- (2) Implementation best practices from across the Department's research and development ecosystem, grouped by domain, enterprise, or functional area;
- (3) Efforts to increase adoption and improve the use of digital engineering across the Department and the defense industrial base; and
- (4) The amount of funding provided across the Department for this effort.

Digital twin assessment and agile verification processes

Implementation of the Software Acquisition Pathway directed in section 800 of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92) and the digital engineering capability to automate testing and evaluation effort directed in section 231 of Public Law 116–92 have made it clear that digital twins are a critical enabler to extending the efficacy and efficiency of continuous integration/continuous delivery (CI/CD) approaches beyond simple information technology systems. This extension includes systems that have joint and systems-of-systems warfighting requirements, as well as those in which battlefield complexities become a more prominent factor in survivability and effectiveness. The committee is concerned that many acquisition programs do not develop digital twins at all, or they develop twins that are not adequate for test and evaluation purposes.

The determination of a digital twin's adequacy is a lengthy process often appended to the development of a model later, and at a time when most resources have already been exhausted. When the digital twin evolves from an engineering baseline as the program develops, the adequacy of that twin can evolve in a more iterative and incremental way that builds a body of evidence over time.

The committee believes the use of digital twins must be a more prevalent practice in the Department of Defense. To that end, the committee directs the Secretary of Defense, in consultation with the Under Secretary of Defense for Research and Engineering and Director of Operational Test and Evaluation (DOT&E), to submit a report to the congressional defense committees not later than March 1, 2022, that assesses:

- (1) the state of digital twin practices in the Department. This assessment should include how many programs on the Software Acquisition Pathway or under DOT&E oversight are applying CI/CD methodologies and have built or are planning to build digital twins. It should also include information on the extent to which these twins are adequate to support test and evaluation as part of a CI/CD process, and where gaps continue to exist.
- (2) the existing verification, validation, and accreditation body of work, and provide recommendations on how adequacy can be developed and determined in a more agile process as the digital twin evolves, instead of through a waterfall process enacted at the end of the digital twin development.

Emerging Tech Adoption Training

The committee notes the importance of Department of Defense efforts to train its active duty and civilian workforce on innovation and technology adoption. The committee recognizes that the Department is offering training programs on these topics through both program offices and private sector organizations. As emerging technologies hold the ability to have a disruptive impact on U.S. national security, the committee understands the importance of ensuring the DoD is trained and prepared to identify, acquire, and integrate innovative technologies. The committee directs the Under Secretary of Defense for Acquisition and Sustainment, in coordination with the Under Secretary of Defense for Research and Engineering, to submit a report to the House Armed Services Committee by March 31, 2022 on the current status of the Department's emerging technology adoption training programs. The report shall include:

- (1) a detailed description of the types of training programs already underway on these subjects and the professional series of the participants;
- (2) the metrics collected on workforce performance following each program (to include the rate of adoption of emerging technologies and innovative contracting methods);
- (3) a list of the Department and private sector organizations providing the training programs;
- (4) a description of any plans to expand the training programs; and
- (5) a discussion of any authorities or funding needed to support expanded trainings.

Establishing a National Network for Microelectronics Research and Development

The committee recognizes that semiconductors are essential components in the electronic devices that Americans use every day. The committee also recognizes that the COVID-19 pandemic has highlighted weaknesses in our nation's reliance on supply chains abroad, particularly with regard to semiconductor manufacturing. The Committee believes that the United States must commit to translating innovations that occur inside the laboratory to the marketplace—commonly referred to as “lab to fab” capability—to support American manufacturing jobs and prevent the United States from falling further behind other countries in semiconductor manufacturing. Specifically, the committee believes it is important to establish a national network for microelectronics research and development, composed of United States research universities, to increase American “lab to fab” capability; conduct microelectronics research and development; aid in workforce development; and increase supply chain resiliency for United States semiconductor production.

Therefore, the committee directs the Secretary of Defense to provide a report to the House Committee on Armed Services by March 31, 2022, on efforts to establish a national network for microelectronics research and development composed of United States research universities. The report shall include:

(1) opportunities to explore new cost-effective materials, devices, and architectures, and prototyping in facilities at United States research universities to safeguard domestic intellectual property;

(2) opportunities to accelerate the transition of new technologies to domestic microelectronics manufacturers;

(3) an assessment of United States research universities that can join the network through a competitive process; and

(4) how the Department can ensure that research and development participants in the network represent the geographic diversity of the United States.

F-35 breathing system disruptions

The committee is aware that U.S. F-35 pilots interviewed by the National Aeronautics and Space Administration Engineering and Safety Center, during the recent study that assessed the F-35 pilot breathing system, stated that perturbations in F-35 breathing systems present a hazard to operations. The committee notes that the study found that pilots who have suffered physiological episodes in the F-35 fault the breathing system for acute and chronic health conditions that have caused impairment for days, weeks, months, or longer. Pilots reported that interactions with the F-35 breathing system have resulted in symptoms ranging from confusion, distraction, extreme discomfort and persistent fatigue, as well as lung inflammation resulting in permanent dysfunction. The committee also notes that F-35 pilots have regularly labeled certain F-35 aircraft as having consistently more difficult breathing systems than other aircraft. The study also noted significant differences between the two F-35 aircraft that were assessed in the study, as well as, between both F-35 aircraft and prior generation aircraft breathing systems in terms of breathing dynamics and functionality. Furthermore, the study noted that F-35 pilot and F-35 jet disharmony could create stress on the pilot and result in discomfort, fatigue, and may ultimately lead to short-term or long-term physiological damage to the pilot.

Therefore, the committee includes a provision elsewhere in this title that would require the Secretary of Defense, in consultation with the Administrator of the National Aeronautics and Space Administration, to design and conduct thorough testing of the F-35 pilot breathing system and then implement immediate actions to resolve deficiencies that may be discovered. Lastly, the committee finds it unacceptable and disappointing that the Department of Defense must be continually prodded by Congress to conduct testing, assessments, and resolution of physiological episodes and poor performing pilot breathing systems in military aircraft, similar to what was required in recent years to address significant issues with pilot breathing systems in the F-22, T-6, T-45, and F/A-18 aircraft.

Fielding of Counter-Small Unmanned Aircraft Systems Across the Joint Force

The committee understands that the Under Secretary of Defense for Acquisition and Sustainment designated an Executive Agent for Counter-Small Unmanned Aircraft Systems (C-sUAS). The committee included language in the fiscal year 2021 NDAA Conference Report requiring the Executive Agent to “prioritize the objective of

developing and executing a plan to develop, test, and begin production of a counter unmanned aircraft system that can be fielded as early as fiscal year 2021 to meet immediate operational needs in countering Group 1, 2, and 3 unmanned aircraft systems and, to the extent practical, has the potential to counter other, larger unmanned aircraft systems.” The committee is concerned about the increasing threats to US forces by UAS, including swarms, and believes certain commercial solutions, if tested and proven suitable and effective, can be acquired, tested, and fielded at a faster rate than what is occurring today. The committee also believes that dynamic live-fire testing, demonstrations, and competitive shoot-offs can be effective ways to comparatively evaluate systems and accelerate their acquisition. Therefore the committee directs the Executive Agent for C-sUAS, not later than March 1, 2022, to brief the House Armed Services Committee on plans, if any, to expedite the identification, live-fire testing, acquisition, and fielding of commercial C-sUAS solutions suitable and effective for use at forward deployed locations.

High Energy Laser System Power and Thermal Management

The Committee notes with concern the recent decision by a major defense contractor to exit the Directed Energy Mobile Short-Range Air Defense program following repeated failure of its power and thermal management system. The Committee recognizes the need for expanded investment in power and thermal management systems as the Office of the Secretary of Defense (OSD) and the military services seek to increase the power of high energy laser systems. The Committee supports OSD and service efforts to increase high energy laser power levels, but remains concerned about the strength and breadth of the industrial base in key enabling technology areas, including power and thermal management.

Therefore, the Committee directs the Secretary of Defense to brief the House Armed Services Committee not later than June 1, 2022 on plans to budget for and invest in the development of power and thermal management subsystems, as well as the integration of those subsystems with OSD and service-led high energy laser activities in the timeframes described in the Directed Energy Roadmap.

Mobile Compact High Energy Laser

The budget request contained \$145.8 million in PE 1160408BB for Operational Enhancements.

The committee recognizes the value in ruggedized, mobile, compact high energy laser technologies that can be moved, assembled, and operated by special operations forces in austere environments. These technologies are ideal for clandestine engagement from safe distances, without detectable signatures, to disable or destroy enemy critical equipment and infrastructure. The committee recognizes that recent advances in relevant technologies are rapidly maturing laser systems that can be adapted to a variety of tactical configurations to support multiple mission areas.

Therefore, the committee recommends \$163.8 million, an increase of \$18.0 million, in PE 1160408BB for mobile high-energy laser technologies.

Naval aviation dedicated operational test capacity reductions

The committee understands that the Secretary of the Navy plans to significantly reduce, by nearly half, the dedicated capacity and aviation force structure during fiscal year 2022 that supports critical testing and evaluation activities for various Department of the Navy acquisition programs and modernization projects. Additionally, the committee understands that the Secretary of the Navy plans to mitigate planned testing capacity reductions by randomly tasking non-testing certified naval fleet operational aviation units and non-testing qualified operational unit personnel with resourcing, planning, and executing complex and rigorous testing activities that would normally be conducted by highly trained and qualified Navy operational testing personnel with specialized aircraft and instrumentation to collect and subsequently analyze critical data gained during testing events. The committee believes that a reduction of this magnitude without sufficiently analyzing risk to programs could adversely affect the quality of testing and evaluation for weapons systems and mission systems before being declared operationally suitable and effective prior to being operationally fielded to Sailors and Marines.

Therefore, the committee includes a provision elsewhere in this title that would prohibit the Secretary of the Navy from reducing any dedicated aviation operational testing capacity or aircraft force structure during fiscal year 2022. Additionally, the provision would require the Director of Operational Test and Evaluation to submit a report to the congressional defense committees that assesses the risk associated with such a significant reduction in dedicated naval aviation operational testing capacity.

Prioritizing retrofit of the C-130 with autonomous flight capabilities

The committee notes the utility of the C-130 aircraft as a critical multi-mission capability for the Department of Defense. As suggested by the House Committee on Armed Services Future of Defense Task Force, the Department should consider ways in which artificial intelligence/machine learning (AI/ML) and autonomous capabilities can be integrated into existing platforms.

The committee is aware of U.S. Special Operations Command's use of AI/ML for predictive maintenance on special operations forces (SOF)-peculiar air platforms, and appreciates the impact such capability can have on the avionics of Air Force Special Operations Command (AFSOC) capabilities to provide autonomous flight in existing capabilities. Integrating AI/ML-enabled autonomous technology into SOF-peculiar platforms, such as the C-130, could greatly enhance operational service time and enable the Department to more effectively utilize current platforms and resources instead of pursuing acquisition of new capabilities. Further, the committee encourages the Department to consider commercially available AI/ML-enabled autonomous technologies, such as those being tested by AFSOC, to lower cost and risk across the Joint Force. The committee also recommends other military services consider how emergent commercial technologies, such as automation, can be included in fixed-wing fleet modernization efforts.

Therefore, the committee directs the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict to provide a briefing to the House Committee on Armed Services not later

than December 31, 2021, on the efforts underway by AFSOC to incorporate autonomous capabilities into the SOF-peculiar C-130 platform. The briefing shall include a timeline, milestones, expected final operating capability for development and operational deployment of these capabilities, and whether there are any challenges to integrating commercially available technologies into this platform.

Report on flexible funding for transitioning science and technology

The committee is concerned that the Department of Defense struggles to transition and scale critical innovative technologies from development projects to acquisition programs in a time period that meets the needs of the warfighter and ensures technology providers are able to survive. Despite Congress providing significant new acquisition authorities and flexibilities, too often successful prototypes and pilot efforts are unable to transition to successful programs due to a lack of agile funding. Therefore, the committee directs the Deputy Secretary of Defense to submit a report to the congressional defense committees by July 1, 2022, with an evaluation of the barriers preventing the Department from quickly and successfully scaling innovative technologies to support the warfighter and the Department's critical operational needs. This report shall include:

(1) a description of the systemic challenges associated with scaling innovation, including requirements, acquisition, programming, and culture; and

(2) a discussion of whether flexible funding could help bridge critical innovative technologies into programs of record.

The committee further directs the Deputy Secretary of Defense to include a framework for how the Department would execute any flexible funding for transitioning science and technology, including:

(1) a list of critical operational needs to be addressed;

(2) a recommendation of the level of funding required and appropriate award size;

(3) the government entity best suited to execute and oversee the funding until the program is included in the Fiscal Year Defense Plan (FYDP);

(4) the metrics by which a project will be selected for funding and the success or failure of the transition assessed;

(5) how to prioritize innovative performers with clearly demonstrated and successful past performance;

(6) a plan of action and milestones for selected projects from time of identification to time of funding;

(7) how to ensure such projects are successfully integrated into the FYDP and transitioned to service program executive offices; and

(8) the frequency and substance of congressional reporting recommended to ensure transparency throughout the selection and transition process.

The Deputy Secretary may consider in this report any additional recommendations that would support successful transition of technology pilot and prototype programs to scale to address defined mission requirements, critical operational needs, or emerging threats.

Solid rocket motors

The committee notes the diminishing domestic supplier base for solid rocket motors, and that the two existing U.S. providers both rely on manufacturing technology that was developed in the 1950s. Meanwhile, U.S. near-peer competitors are rapidly developing small, low-cost, mobile, highly responsive space launch systems that are based on storable, responsive solid rocket motors. In late 2019, one near-peer competitor conducted simultaneous launches of small satellites from two mobile, ground-based solid-rocket-motor-based launch systems within 6 hours of one another.

The committee is aware of advanced additive manufacturing technologies that could be applied to rapidly manufacture solid propellant-based rocket motors addressing a critical need for the Department of Defense to enable a new class of highly mobile, responsive, low-cost solid rocket motors that would incentivize competition and benefit programs across the military services. Therefore, the committee directs the Under Secretary of Defense for Research and Engineering, in coordination with the directors of the Service Research Labs and Space Rapid Capabilities Office, to provide a briefing to the House Committee on Armed Services not later than January 31, 2022, on how the Department of Defense could leverage investment in additive manufacturing technology to improve the domestic solid rocket motor industrial base with the intent of incentivizing competition, and delivering more responsive capabilities to the Warfighter. The committee further encourages the Department to invest in technologies with small businesses and non-traditional suppliers to increase the solid rocket motor industrial base.

Strengthening the Diversity of the Science, Technology, Research, and Engineering Workforce

The committee notes that diversity remains an issue within the Department of Defense, particularly in the Department's science, technology, research, and engineering workforce. Increasing diversity brings new ideas and perspectives into the innovation and technology development processes. Section 229 of House Report 116–333 for the National Defense Authorization Act of Fiscal Year 2020 required the Secretary of Defense, acting through the Under Secretary of Defense for Research and Engineering and in consultation with the Under Secretary for Personnel and Readiness, to conduct an assessment of critical skill sets required across, and the diversity of, the research and engineering workforce of the Department, including the science and technology reinvention laboratories, to support emerging and future warfighter technologies.

Based on this assessment, the Secretary of Defense, acting through the Under Secretary of Defense for Research and Engineering and in consultation with the Under Secretary for Personnel and Readiness, was tasked with developing and implementing a plan to diversify and strengthen the science, technology, research, and engineering workforce of the Department of Defense. To that end, the committee has been pleased to see the release of the Department of Defense's STEM Strategic Plan for Fiscal Year 2021 through Fiscal Year 2025.

The committee now directs the Secretary of Defense to submit a briefing to the congressional defense committees no later than Sep-

tember 1, 2022, regarding the progress the Secretary has made towards implementing the Department's plan to strengthen the diversity of the science, technology, research, and engineering workforce. In this briefing, the Secretary should highlight all recruitment efforts carried out in cooperation with minority-serving institutions of higher education to create talent pipelines and all retention efforts to ensure that underrepresented communities are fully supported within the Department.

Support for Department of Defense-wide SBIR and STTR Transition Education Program

The budget request contained \$3.6 million in PE 0605790D8Z for the administration of the Department of Defense Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer (STTR) program.

The committee is encouraged by the Department of Defense's innovative execution of the SBIR/STTR 3 percent administrative fund, as authorized by section 638(mm) of title 15, United States Code, and the Department of the Navy's efforts to reach out to non-traditional performers. The committee encourages the Secretary of Defense to seek additional opportunities to support participation of non-traditional performers from Defense Established Program to Stimulate Competitive Research (DEPSCoR) states and other underserved communities, and encourages the Secretary to leverage the Navy's SBIR/STTR Transition Program (STP) as a way of achieving efficient and effective support to those non-traditional performers.

The Navy has demonstrated success in mentoring Phase II companies for increased transition of SBIR and STTR technologies by focusing administrative funding toward education within the STP. Recently, the STP has leveraged online resources and virtual platforms for successful delivery of this mentorship and education. By modeling the Navy's STP delivery methodology success, the Department of Defense can achieve a broadly accessible and cost-effective virtual program aimed at increasing participation within DEPSCoR states and underserved communities.

Therefore, the committee recommends \$8.6 million, an increase of \$5.0 million, in PE 0605790D8Z to enable the Secretary of Defense to expand the Navy's SBIR/STTR transition program across the Department to better educate small businesses, researchers, and universities in DEPSCoR states and underserved communities on how to participate in the Department's SBIR and STTR programs.

The committee directs the Secretary of Defense to submit a report to the congressional defense committees not later than June 30, 2022, on the Secretary's progress in expanding the Navy's SBIR/STTR transition program in support of small businesses, researchers, and universities in DEPSCoR states and underserved communities.

Sustained human performance and resilience

The budget request for fiscal year 2022 contained \$44.8 million in PE 1160401BB for special operations forces technology development.

The committee recognizes that U.S. Special Operations Forces (SOF) have endured disproportionate impacts following two decades of continuous combat operations. The compounding effects of high operational tempo deployments, corresponding training, and increasing operational load requirements coupled with the lasting psychological and physical trauma of these cycles continues to impact the readiness of SOF. The committee recognizes that such trauma is not specific to operators, but can and does affect support and enabling personnel as well. The committee is concerned about the consequences of undiagnosed, untreated traumatic brain injury (TBI) and post-traumatic stress syndrome (often referred to as “operator syndrome”) across the SOF formation, which has resulted in alcoholism, drug use, suicide, and other violent behavior both in active and veteran SOF personnel, as well as those augmenting SOF from the Reserve and Guard Components.

The committee believes that the recording and monitoring of blast exposures and head strikes should occur throughout the SOF training and operational cycle. Recent studies highlight that consistent monitoring of SOF personnel can inform on brain health trends and individual blast or impact exposure with the goal of diagnosing and reducing the incidence of TBI within the force. Such monitoring could also increase health risk surveillance, identifying high risk behaviors and tracking emerging signs and symptoms of acute or chronic blast exposure. The committee recognizes the imperative to identify, rehabilitate, and assist in the recovery of those SOF members who are suffering psychological or physical trauma resulting from such operational demands and understands that several efforts are underway at U.S. Special Operations Command (USSOCOM) to develop and align the appropriate care and technologies to those SOF members in need. The committee expects USSOCOM to prioritize rehabilitative care of cognitive, psychological, emotional trauma, and physical performance of SOF members within its human performance efforts, to thus reestablish resilience and readiness of the formation.

Therefore, the committee recommends \$49.8 million, an increase of \$5.0 million, in PE 1160401BB for sustained human performance and resilience.

LEGISLATIVE PROVISIONS

SUBTITLE A—AUTHORIZATION OF APPROPRIATIONS

Section 201—Authorization of Appropriations

This section would authorize appropriations for research, development, test, and evaluation at the levels identified in section 4201 of division D of this Act.

SUBTITLE B—PROGRAM REQUIREMENTS, RESTRICTIONS, AND LIMITATIONS

Section 211—Duties and Regional Activities of the Defense Innovation Unit

This section would modify section 2358b(c)(2)(B) of title 10, United States Code, to update the Department of Defense’s technology strategy documents for which the Joint Reserve Detachment

of the Defense Innovation Unit (DIU) is responsible for increasing awareness. Additionally, subject to the availability of appropriations, this section would also authorize the Secretary of Defense to, as appropriate, expand the efforts of the Defense Innovation Unit to engage and collaborate with private-sector industry and communities in various regions of the United States that do not otherwise have a DIU presence, including in economically disadvantaged communities.

Section 212—Modification of Mechanisms for Expedited Access to Technical Talent and Expertise at Academic Institutions to Support Department of Defense Missions

This section would modify section 217 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91) on mechanisms for expedited access to technical talent and expertise at academic institutions to encourage the sharing of information on research and consulting in Department-wide shared information systems, and would add additional mission areas of nuclear science, security, and non-proliferation and chemical, biological, radiological, and nuclear defense. This section would also extend the authority through September 30, 2028.

Section 213—Modification of Mechanisms for Expedited Access to Technical Talent and Expertise at Academic Institutions

This section would modify section 2358 of title 10, United States Code, on mechanisms for expedited access to technical talent and expertise at academic institutions and would add a 33rd mission area called “spectrum activities.”

Section 214—Minority Institute for Defense Research

This section would require the Secretary of Defense to submit a plan to the congressional defense committees not later than 1 year after the date of the enactment of this Act for the establishment of a Minority Institute for Defense Research and authorize the Secretary to establish a program to award grants, on a competitive basis, to minority institutions. This section would also amend section 2304 of title 10, United States Code, to direct the head of an agency to require that a contract awarded to a Department of Defense Federally Funded Research and Development Center or University Affiliated Research Center includes a requirement to establish a partnership to develop the capacity of minority institutions to address the research and development needs of the Department through a subcontract with one or more minority institutions for at least 5 percent of the contract award.

Section 215—Test Program for Engineering Plant of DDG(X) Destroyer Vessels

This section would require the Navy to initiate a land-based test site prior to the start of construction of the DDG(X) destroyer program.

Section 216—Consortium to Study Irregular Warfare

This section would direct the Under Secretary of Defense for Research and Engineering to establish an academic research consortium to study irregular warfare and responses to irregular threats.

Section 217—Development and Implementation of Digital Technologies for Survivability and Lethality Testing

This section would direct the Secretary of Defense to expand survivability testing of covered systems to include testing against non-kinetic threats, and to develop digital technologies to test those systems against threats throughout the system's lifecycle. This section would also direct the Secretary to carry out activities to demonstrate digital technologies for live fire testing, and would require the Director of Operational Test and Evaluation to submit a report to the congressional defense committees not later than March 15, 2023, with an assessment of the Secretary's progress on expanding survivability testing, supporting development of digital technologies for live fire testing, and the demonstration activities.

The committee notes that digital technologies and non-kinetic threats have advanced beyond the efficacy of the language in section 2366 of title 10, United States Code, Major systems and munitions programs: survivability testing and lethality testing required before full-scale production, and modernization is necessary. Survivability and lethality are no longer constrained by simple ballistics and are instead today susceptible to contemporary non-kinetic threats including cyber; electromagnetic spectrum operations; chemical, biological, radiological, nuclear, high yield explosives; and directed energy weapons. These threats can interact in inventive ways to degrade, disable, deceive, and destroy a force or mission, and they can evolve continually. It is imperative that the Secretary of Defense take a whole of systems and whole of lifecycle approach in the identification of these threats and their effects to assess the full spectrum of survivability and lethality of any system.

Digital technologies, including digital twins and modeling and simulation, have advanced and enable the Department to build high-fidelity models of systems to test and evaluate this full spectrum of threats, perform many more digital tests, and perform continuous vulnerability discovery and mitigation of the most prominent threats throughout the system's lifecycle. Data from physical and digital testing must be collected and fed back into the models to improve their fidelity and value over the system's lifecycle. Additionally, the Department has a legacy fleet with non-kinetic vulnerabilities and should consider model creation when appropriate and necessary. The committee believes the Department will benefit from broadening its view of survivability and lethality testing and evaluation to include non-kinetic threats. The Department should also broaden its view of live fire testing to include digital-live fires through models and simulations, which may augment, or in some cases replace, live-testing, and allow for continuous survivability assessments over time. Taken together, these two modernization improvements should provide the foundation for a full spectrum survivability assessment approach throughout the system's lifecycle.

Section 218—Pilot Program on the Use of Intermediaries to Connect the Department of Defense with Technology Producers

This section would direct the Secretary of Defense to carry out a 5-year pilot program to help foster transition of the Department of Defense's science and technology programs, projects, and activities into full scale implementation. This section would direct the Secretary to seek to enter into agreements with qualified intermediaries to provide technical assistance to technology producers to better participate in the procurement programs and acquisition processes of the Department. This section would require a briefing to the House Committee on Armed Services not later than December 31, 2022, on the Secretary's progress in implementing the program and any related policy issues. This section would also direct the Comptroller General of the United States to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than 5 years after the date of the enactment of this Act on the pilot program's effectiveness.

The committee is aware that there are a growing number of access points for innovative technology companies to engage with the Department of Defense, but there is no support team connecting those businesses between each of the innovation entities and to the appropriate customers in the Department, including program executive offices, program management offices, and science and technology reinvention laboratories. The pilot program would provide support to those technology producers looking to do business with the Department, and guidance on how to navigate unfamiliar processes including those surrounding requirements, budgeting, contracting, and other statutory, regulatory, and cultural hurdles. The committee believes that an entity that specializes in engaging and supporting technology producers is necessary to help the Department become a better buyer and a more attractive customer to innovative commercial companies.

Section 219—Assessment and Correction of Deficiencies in the F-35 Aircraft Pilot Breathing System

This section would require the Secretary of Defense, in consultation with the Administrator, National Aeronautics and Space Administration, to investigate, assess, and implement, if necessary, effective corrective actions for the F-35 breathing system to address the initial findings and recommendations noted by the National Aeronautics and Space Administration's Engineering and Safety Center Technical Assessment Report on the F-35 pilot breathing system published on November 19, 2020.

Section 220—Identification of the Hypersonics Facilities and Capabilities of the Major Range and Test Facility Base

This section would require the Secretary of Defense to identify each facility and capability of the Major Range and Test Facility Base that is primarily concerned with the ground-based simulation of hypersonic atmospheric flight conditions and the test and evaluation of hypersonic technology in open air flight.

Section 221—Requirement to Maintain Access to Category 3
Subterranean Training Facility

This section would require the Secretary of Defense to maintain access to a covered category 3 subterranean training facility on a continuing basis and authorize the Secretary to enter into a short-term lease with a provider of a covered category 3 subterranean training facility.

Section 222—Prohibition on Reduction of Naval Aviation Testing
and Evaluation Capacity

This section would prohibit the Secretary of the Navy from taking any actions to reduce the aviation testing capacity with regards to aircraft divestment or personnel billet changes of the Navy below fiscal year 2021 levels and requires the Director of Operational Test and Evaluation to assess the Navy's planned reductions and mitigation strategy.

Section 223—Limitation on Availability of Funds for Certain C-130
Aircraft

This section would limit funds for the E-6B recapitalization until the Secretary of the Navy submits a report to the congressional defense committees with more information.

Section 224—Limitation on Availability of Funds for VC-25B
Aircraft Program Pending Submission of Documentation

This section would limit funds for the VC-25B Presidential aircraft until the Secretary of the Air Force submits an updated schedule.

SUBTITLE C—PLANS, REPORTS, AND OTHER MATTERS

Section 231—Modification to Annual Report of the Director of
Operational Test and Evaluation

This section would amend section 139(h)(2) of title 10, United States Code, by removing the sunset date for the Director of Operational Test and Evaluation's annual report to Congress.

Section 232—Adaptive Engine Transition Program Acquisition
Strategy for the F-35A Aircraft

This section would require the Under Secretary of Defense for Acquisition and Sustainment to submit to the congressional defense committees an acquisition strategy for continued development, integration, and operational fielding of the Adaptive Engine Technology Program propulsion system into the U.S. Air Force fleet of F-35A aircraft beginning in fiscal year 2027.

Section 233—Advanced Propulsion System Acquisition Strategy for
the F-35B and F-35C Aircraft

This section would require the Secretary of the Navy, in consultation with the Under Secretary of Defense for Acquisition and Sustainment, to submit to the congressional defense committees a report on the integration of the Adaptive Engine Transition Pro-

gram propulsion system or other advanced propulsion system into F-35B and F-35C aircraft not later than 14 days after the date on which the budget of the President for fiscal year 2023 is submitted to Congress pursuant to section 1105 of title 31, United States Code.

Section 234—Assessment and Report on Airborne Electronic Attack Capabilities and Capacity

This section would require the Secretary of the Air Force to conduct an assessment of the airborne electronic attack capabilities and capacity of the Air Force and analyze the feasibility of integrating the Department of the Navy's ALQ-249 Next Generation Jammer on Air Force tactical aircraft. This section would require a report on the assessment to be submitted to the Committees on Armed Services of the Senate and the House of Representatives not later than February 15, 2022.

Section 235—Strategy for Autonomy Integration in Major Weapon Systems

This section would require the Secretary of Defense to create a strategy for maneuver autonomy capability in major weapon systems by fiscal year 2025. The Secretary of Defense would also be required to submit a report not later than 1 year after the date the strategy is submitted, and by October 1 of each of the following 5 years, on the Department's implementation progress.

TITLE III—OPERATION AND MAINTENANCE

ITEMS OF SPECIAL INTEREST

BUDGET REQUEST ADJUSTMENTS

Nucleated Foam Engine Wash

The budget request for fiscal year 2022 contained \$1.08 billion in Defense-Wide Operations and Maintenance for maintenance.

The committee is aware that an advanced FAA-accepted nucleated foam engine restoration technology is demonstrating the ability to improve the long-term readiness, efficiency, and sustainability of critical military aircraft engines, while reducing fuel consumption and emissions. The committee also understands that in addition to achieving substantial efficiency and safety improvements, recent foam engine wash testing performed on CV-22 turbine engines under an AFWERX SBIR contract has significantly reduced the engine wash cycle from multiple hours to only thirty minutes, while reducing the need for up to five maintainers, further increasing critical aircraft readiness while reducing overall maintenance cost and manning requirements.

The committee appreciates the Air Force Office of Operational Energy and the Air Force Special Operations Command's roles in advancing this technology demonstration and is interested in opportunities to leverage this solution across varying military aircraft platforms in other military services, such as the Marine Corps Special Operations Command, so that it may enhance combat capa-

bility and improve aeronautical performance and readiness of military aircraft against potential future threats.

Therefore, the committee recommends \$1.08 billion, an increase of \$2.0 million, in Maintenance for nucleated foam engine wash testing.

Further, the committee directs the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict to provide a briefing to the House Committee on Armed Services by December 31, 2021, on the resources required for the MARSOC to implement this program.

ENERGY ISSUES

Enhancing Base Resiliency through Ocean Thermal Energy

The committee remains interested in renewable sources of energy for remote and island facilities. The committee also understands that ocean thermal energy conversion represents an abundant source of redundant power and water that could be used at remote and island facilities. Therefore, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to brief the House Committee on Armed Services by April 1, 2022 on the potential employment of commercial-scale ocean thermal energy conversion power plants.

Fuel Visibility and Management

The committee acknowledges the recent efforts of the Department to seek fuel asset visibility solutions to improve current accountability infrastructure. The committee believes that leveraging existing commercial solutions for fuel accountability and remote transaction monitoring can reduce internal development requirements, lower sustainment costs, and increase the speed and accuracy of fuel transaction reporting. The committee notes with interest the Defense Logistics Agency's intent to replace the legacy fuels manager defense accountability system as an opportunity to research, identify, and leverage the best practices of the energy industry to improve the remote monitoring and quality assurance procedures for defense fuel business practices.

The committee encourages the Department and military services to identify existing electronic fuel management systems being employed by the energy and maritime industries for the monitoring of fuel storage, fuel transfer transactions, operational fuel consumption, and CO2 emissions reporting at remote locations on land and at sea. The committee believes that fuel management systems that provide near-real time, secure, accurate and automated monitoring capabilities via a common analytics dashboard, and which reduce the need for manual reporting and opportunity for human error in data entry should be considered for transition to defense application.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by March 1, 2022 on progress the military services have made in identifying and evaluating existing technology and industry best practices for remote fuel monitoring and accountability.

Installation Energy Resilience

The Committee is aware of Department of Defense initiatives on energy resilience as outlined in Department of Defense Instruction 4170.11, Installation Energy Management and commends the Department for efforts to mitigate the impact of energy disruptions on military installations that would threaten mission accomplishment. The committee continues to encourage the Secretary of Defense to procure, operate, maintain, test and upgrade energy resilient systems for critical energy requirements on its military installations. The use of alternative or renewable energy offers great promise in achieving energy resilience and meeting the goal of 25 percent renewable energy goal for the Department of Defense will require the Department and the Services to streamline project requirements and address barriers to development of renewable energy to support military installation energy needs.

The committee directs the Secretary of Defense, in coordination with the Services, to standardize, where possible, the policies and processes that guide renewable energy developments. Further, the committee directs the Secretary of Defense in coordination with the military service secretaries to provide a report to the House Committee on Armed Services by February 1, 2022, on the following:

- (1) currently operational renewable energy projects on military installations;
- (2) The average time elapsed from project initiation to completion, organized by type (wind, solar, geothermal, energy storage, hydro, CHP/Cogeneration, microgrids) and by Service;
- (3) areas that the Department of Defense and the Services can standardize items such as consent agreements, Power Purchase Agreements, site licenses, ground and roof-top leases and subleases and memos of aforementioned documents;
- (4) an analysis of whether more flexible contract terms could increase incentives for project developers; and
- (5) measures that would increase incentives for battery storage on military installations.

Micro-reactor Support of Installation Energy Resiliency

The committee commends the Department of Defense (DoD) for pursuing policies and goals to increase energy resilience as a means to enhance the range, endurance, agility, and mission assurance of DoD installations. The committee recognizes that the Department has a variety of policies, programs, statutory authorities, and tools to implement energy resilience and maintain critical missions and readiness. The committee appreciates the efforts of the Department of Defense to further the research and development of micro-reactors as a possible means to increase energy resilience at defense installations without contributing to the carbon footprint of the Department.

Sections 2911 and 2924 of Title 10 of the United States Code establish the Energy Policy of the DoD, which emphasizes the importance of energy security, resilience, and sets a goal for the use of renewable energy to meet energy needs. However, the committee notes that many of these goals are set to be achieved in 2025, and questions whether it is time for the Department to establish new goals to continue progress towards energy resiliency beyond 2025.

Accordingly, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing to the House Committee on Armed Services by February 1, 2022, regarding the Department's evaluation of future energy resilience. The briefing shall address

(1) the Department's evaluation of its current and projected performance out to 2025, in meeting the existing resilience and energy performance goals. Such evaluation should include an assessment of the challenges to achieving relevant policies;

(2) the Department's evaluation of the adequacy of current resilience requirements for installation energy to determine whether changes are needed to address the following: (a) the need to provide uninterrupted power to installations during power grid failures for at least three days; (b) protection against cyber threats and electromagnetic pulses; (c) resilience to extreme natural events, including earthquakes, volcanology, tornados, hurricanes, floods, tsunamis, seiches, high snowfall, and very low or high temperatures;

(3) the Department's plans for deploying a micro-reactor or small modular reactor at a domestic installation by 2025, and the efforts by each military branch to include micro-reactors in the planning for meeting future installation energy needs.

(4) What if any barriers to the deployment of micro-reactors currently exist in statute or regulation.

Mobile, High-Density Hybrid Power Delivery

The committee recognizes that resourcing sufficient, expeditionary clean power to off-the-grid and remote locations remains an operational challenge to our military and limits its ability to compete against near-peer adversaries. The development of advanced technologies for mobile energy generation will improve our energy resilience and independence, and ensure our Joint Forces can meet high-density, near-term power requirements in remote areas that have limited access to fuel and resupply convoys.

The committee also notes that mobile, high-density hybrid power delivery systems may be configured to drive novel electric powertrains in applications from high-torque vehicles to unmanned maritime systems to long-range high-power autonomous flight vehicles.

The committee directs the Deputy Assistant Secretary of Defense for Environment and Energy Resilience to provide a report to the House Committee on Armed Services by December 1, 2022, on efforts to incorporate mobile, high-density power delivery technologies in electric powertrain platforms. The report should consider commercial, off-the-shelf solutions.

Operational Energy

The committee remains concerned about the logistics challenges our armed services will encounter in a contested environment. In particular, the committee is cognizant of the obstacles related to energy that could lead to disruptions in operations due to potential intermittent energy availability.

While the committee is aware of the Department of Defense's nascent efforts to address these issues, the lack of coordination and the focus on addressing both supply- and demand-side element of

the problem is concerning. The committee observes that some of the Department's policies, such as a preference for a single drop-in fuel type, may not be the only option for meeting certain requirements of the National Defense Strategy.

The committee notes that industry, as well as our allies and partners, have been investing in hydrogen fuels, electric propulsion systems, and other systems that increase the range and on-station time of fossil fuel vehicles and that these systems could be selectively applied to reduce the risk in a contested environment. Therefore, the committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment, in coordination with the Director of Logistics for the Joint Staff, the Assistant Service Secretaries of the military departments for Energy, Installations, and Environment, the Commander of U.S. Indo-Pacific Command, and the Director of the Defense Logistics Agency, to submit a report to the House Committee on Armed Services by March 15, 2022, that identifies and evaluates viable operational energy architectures including but not limited to the above for their value in reducing the demand on the contested logistics enterprise. The report shall include at a minimum the following:

(1) an assessment of alternate-fuel-based commercial platforms and products, and the level of suitability, effort, and risk associated with adapting them for Department of Defense use;

(2) a general discussion about potential performance benefits and corresponding operational benefits of platforms powered by alternate fuels, with a specific focus on the feasibility, benefits, and risks of using hydrogen fuels and cached hydrogen fuel feedstock for operational energy in expeditionary advanced base operations;

(3) a discussion of current and future production capacity by U.S. allies and partners for fuel alternatives that could address demand in a contested environment, with a specific focus on the commercial availability of hydrogen and hydrogen fuel feedstocks within the U.S. Indo-Pacific Command area of responsibility;

(4) a review of transportation safety and storage capacity for fuel alternatives, with a focus on the feasibility, benefits, and risks of transporting hydrogen gas in bulk as well as storing hydrogen fuel feedstocks; and

(5) a list of recommendations for Department of Defense research and development investments to address the demand side of the contested logistics environment.

LOGISTICS AND SUSTAINMENT ISSUES

Addressing Out-of-Pocket Cost Disparities for Military Uniform

The committee directs the Secretary of Defense, in consultation with the Service Secretaries, to submit a report to the House Committee on Armed Services not later than March 1, 2022 on the plan to address the recommendations in the U.S. Government Accountability Office's report entitled *Military Service Uniforms: DOD Could Better Identify and Address Out-of-Pocket Cost Inequities* (GAO-21-120).

In responding to the recommendations, the report shall include a summary of actions that have been or will be taken to implement the recommendation, and a schedule, with specific milestones, for completing implementation of the recommendation.

The report shall also include the following:

(1) define standardized thresholds at which cost differences in allowances or from planned uniform changes (across the Services or by gender within a Service) are considered significant and warrant adjustments, including analysis completed to define those (per the official DoD response to GAO–21–120);

(2) demonstrate how a service's directed uniform changes are calculated into the enlisted uniform allowance; and

(3) Identify causes for like-uniform cost disparities between males and females, and actions the Department can take to eliminate that disparity.

Air Force Mobility Sustainment and Modernization

The committee recognizes the importance of a strong Air Force Reserve Component that can provide needed surge capability to the Active Component during times of peak demand. The Reserve Component is an especially critical force provider of inter- and intra-theater mobility assets to United States Transportation Command, via the Air Force Air Mobility Command. To that end, the committee is concerned that the Air Force continues to divest legacy aircraft from the Reserve Component while it modernizes the Active Component.

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, 2022, on the Air Force's sustainment and modernization plans for the global fleet of C-17 and C-130 aircraft, broken out by Active and Reserve Components, including an assessment of the need for standardized fielding allocations and permanent aircraft tail number assignments for Reserve Component airlift squadrons.

Air Logistics Complex Capital Equipment Requirements

The committee recognizes the importance of the work performed at the Air Force's three public depots (Air Logistics Complexes) and has concerns about the aging capital equipment at each location.

The committee therefore directs the Secretary of the Air Force to submit a report to the Committees on Armed Services of the Senate and House of Representatives by March 1, 2022, on the capital equipment replacement and/or refurbishment requirements at each of the Air Force Air Logistics Centers. The report should include the name, age, and expected replacement age of equipment; replacement or refurbishment cost; year of obsolescence; replacement plan for obsolescent equipment; and the plan to invest in advanced technology capital equipment.

Army Futures Command Depot-Level Maintenance

While the committee is encouraged by the ongoing work of Army Futures Command to modernize Army platforms, it is concerned about how these future systems will be maintained. The committee believes that there must be planning and infrastructure in place for the sustained maintenance of these systems, and that depot-level maintenance will be particularly important. It is also critical that the introduction of new equipment maintenance obligations be effectively integrated with existing capabilities to ensure that Army

Futures Command can meet delivery schedule requirements. Therefore, the committee directs the Secretary of the Army to submit a report to the House Committee on Armed Services not later than January 31, 2022, that includes the following:

(1) an analysis of the ability of the Army to perform depot-level sustained maintenance of any future systems developed by Army Futures Command; and

(2) recommendations for additional maintenance capabilities that will need to be established to sustain such systems.

C-130 Depot Maintenance Capacity

The committee is aware that Air Force, Navy, and Marine Corps C-130 depot maintenance is performed at multiple locations and Air Force Air Logistics Centers, and it has concerns about potential capacity and capability shortfalls to execute overflow or surge C-130 depot maintenance. Accordingly, 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, 2022, on the Air Force's efforts to ensure that adequate capacity and capability exists to complete all current and forecast C-130 depot maintenance. The briefing should include an explanation of C-130 depot work performed, by location; a description of the workforce composition at each location, broken down between government and contractor employees; and a description of each location's existing additional capability and capacity to meet surge or overflow C-130 depot maintenance. If capability or capacity shortfalls are identified, the briefing should include the Air Force's plans to mitigate these shortfalls.

Data Analytics Driving On-Time Ship Maintenance Deliveries

The committee recognizes the benefits of leveraging the vast amounts of data collected to drive better and more rapid decision across the Department of Defense. The Navy is implementing data analytics tools and techniques to enhance warfighting, training, acquisition and all corporate decisions. Using quantitative techniques, data driven analysis, and various other research techniques, Navy leadership is embracing data analytics and the benefits it brings to all organizations at all echelons. Initiatives such as Perform to Plan (P2P) have shown how data driven decisions not only enhance readiness but reduce cost. The committee is particularly impressed with how the Mid-Atlantic Regional Maintenance Center (MARMC) has leveraged previous Department of Defense Small Business Innovation Research (SBIR) investments in Data Analytics to drive improved performance in the ship maintenance process. By extending the Expeditionary Logistics (EXLOG)/Logistics Common Operating Picture (LOGCOP) tool created under the SBIR program, the command has increased the speed and quality of decisions which is resulting in improved performance during maintenance periods. The committee believes the Navy should leverage this SBIR technology to improve the tool and expand this best practice to other Regional Maintenance Centers. Therefore, the committee directs the Secretary of the Navy by February 1, 2022, to prepare a brief to the House Committee on Armed Services

as to Secretary's intent to expand these data analytic tools and techniques throughout the ship maintenance enterprise.

Defense-Wide Working Capital Fund Cash Management Actions

The committee is aware that the Defense-Wide Working Capital Fund has faced cash management challenges due to the COVID-19 pandemic and subsequent reduced operational tempos of the individual services, and that the Defense Logistics Agency has executed multiple near-term actions to maintain adequate cash balances, including purchase order reductions, reprogramming actions, and rate increases. However, the committee is concerned with the potential longer-term impacts to readiness and supply chain resilience as a result of these cash management actions. Therefore, the committee directs the Director, Defense Logistics Agency to submit a report to the House Committee on Armed Services not later than March 1, 2022, on the overall solvency of the Defense-Wide Working Capital Fund. At a minimum, the report shall address the following elements:

(1) a review of monthly fiscal years 2020 and 2021 cash balances compared to upper and lower limits, and cash management actions taken to ensure adequate balances;

(2) an assessment of the impact to the supply base from cash management actions taken in fiscal years 2020 and 2021;

(3) a review of strategies implemented to lessen the impact on the supply base, especially smaller vendors, due to fiscal year 2020-2021 cash management actions;

(4) an assessment of what impact reduced purchase order actions in fiscal years 2020 and 2021 will have on future readiness over 6-month, 12-month, 18-month, and 24-month time horizons;

(5) A review of actions taken in the President's budget request for fiscal year 2022 that will allow for the normalization of purchase orders in execution year 2022;

(6) an identification of the percentage of fluctuation related to long-range forecasting and demand requirements for troop support end items, and an assessment of specific processes used to track and reduce such fluctuations; and

(7) a recommendation as to whether shifting from a long-range forecasting model to a consumption pull model would create a more consistent purchase order environment and facilitate cost reductions as a result of greater certainty for contractors in the supply chain, and whether reducing the range of minimum and maximum contract obligations to a range of plus or minus 20 percent of annual estimated quantities would relieve ordering fluctuation and improve supply chain resilience.

Depot Capital Investment

The Committee authorizes \$900 million of additional depot modernization funds for each of the Services. These funds shall only be used to sustain, modernize, or improve the efficiency of government-owned depot facilities, infrastructure, equipment, processes, and work environment. None of the funding provided may be used for depot operations. The Committee directs the Secretary of Defense and the Service Secretaries to submit a detailed spend plan by project, location, and dollar amount not less than 30 days prior

to the obligation of these funds. The Committee also directs the Secretary of Defense to submit a report to the House Committee on Armed Services by December 1, 2022, that describes the impact of these funds on depot modernization and operations.

Efficiency in in the Field of Logistics Management

The committee supports the Marine Corps' continued development of real-time global asset inventory systems at the Marine Corps Platform Integration Center (MCPIC). MCPIC was created to enable visibility into inventory location and condition. Originally, MCPIC was designed for the Marine Corps Prepositioning Program's global mission of supporting the warfighter using commercially available technologies in accordance with the Department's cybersecurity standards. The committee acknowledges the system's positive impacts on inventory management of supplies and its capacity to provide insight into the physical location of items during the in-storage, in-process, and in-maintenance phases. Broader implementation of this capability could enable a common logistics picture across the enterprise and reduces redundancies between the services and supporting agencies such as the Defense Logistics Agency.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services, no later than February 15, 2022, on the potential efficiencies and other benefits of expanding MCPIC technology to a wider range of asset management programs within the Department-wide supply enterprise.

F-35 Organic Maintenance Capability

The committee recognizes the importance of the F-35 Lightning II program to our national defense and its foreign partners. The committee is concerned that the program faces affordability challenges for the services, and that organic repair capability could play a large role in reducing sustainment costs.

Given the significance of the F-35 program to the future of tactical air for the military, the Department of Defense's need to operate and deploy the F-35 on a widespread basis in the coming years, the involvement of international partners and foreign military sales customers, and the importance of maintaining affordability, the committee directs the Comptroller General of the United States to review organic maintenance capability of the F-35. At minimum, the review shall address the following elements:

(1) depot standup, including prospects for moving some aspects from contract-led to organic repair capability; F-35 Joint Program Office efforts to speed up the establishment of depot maintenance capability; technical data rights and unique tooling requirements associated with an expanded organic depot repair capability; prime and sub-prime contractor efforts to provide required technical data and unique tooling in accordance with organic repair requirements; and an assessment of the actual versus forecast complexity for scheduled and unscheduled depot-level repair actions, as well as planned efforts to account for expanded complex repair requirements;

(2) options, progress, and impact for organic supply chain management; options and efforts to make supply chain management an organic task, as well as assessment of potential cost savings in doing so;

(3) field-level maintenance challenges including Autonomic Logistics Information System (ALIS), ALIS to Operational Data Integrated Network transition, lack of technical data and unique tooling, and reliability and maintainability problems; assessment of key drivers of Not Mission Capable for Maintenance (NMC–M) rates; assessment of Department efforts to address key drivers to NMC–M rates; and

(4) other items the Comptroller General determines appropriate.

The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, on the Comptroller General’s preliminary findings and to present final results in a format and timeframe agreed to at the time of the briefing.

Ground Combat Vehicle Maintenance Modernization Report

The committee is aware that while Army rotary-wing aviation has digitized their systems to increase efficiency, those in ground combat vehicle maintenance are still using paper records for multiple processes including ordering parts and standard checks. The committee is concerned that such techniques slow the maintenance process down and increase the risk of human error. The committee notes that recent reports have highlighted Army Materiel Command’s efforts to modernize and invest in technologies that will speed up and improve the maintenance process. The committee applauds these efforts and believes there is room to investigate further modernization efforts involving ground combat units force-wide.

Therefore, 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 by February 15, 2022, assessing at a minimum the following:

(1) a description of current field-level maintenance procedures for ground combat vehicles;

(2) a review of current efforts that the Department of the Army has taken to digitize items including, but not limited to, procedures and manuals;

(3) a discussion of the options available for further digitization and the expected efficiencies that can be gained from these possible changes;

(4) a cost estimate for procuring said capabilities; and

(5) an estimated implementation plan and timeline for doing so.

Ground Tactical Vehicles for Special Operations Forces

The committee recognizes that commonplace technologies and equipment such as Non-Standard Commercial Vehicles (NSCV) can support special operations forces (SOF) efforts to compete with near-peer adversaries and counter violent extremist organizations. NSCV can also enable SOF to operate safely while blending into the local population as the fleet is based upon globally available, regionally specific commercial vehicle platforms that are enhanced

with SOF-specific modifications. The committee recognizes the importance of such a capability, which can enable SOF operations and activities in plain sight. However, the committee is also aware that the current NSCV fleet is coming to the end of its service life.

Therefore, the committee directs the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict to submit a report to the House Committee on Armed Services not later than February 25, 2022, on the current and future plans for the NSCV fleet. The report must include a strategy for the use of ground tactical vehicles across the spectrum of SOF-specific missions, focusing on great power competition. Further, the report must include an analysis of alternatives to the NSCV fleet, if applicable. The report may contain a classified annex if necessary.

Implementation of Improvements to F-35 Sustainment

The committee recognizes the importance of the F-35 Lightning II Program to the nation's defense. The F-35 and its advanced capabilities represent a growing portion of the tactical aviation fleet for the Department of Defense, eventually to replace a variety of legacy fighter aircraft in the Air Force, Navy, and Marine Corps. The F-35 is also the Department's most ambitious and costly weapon system, with overall costs for the program estimated by the Department at more than \$1.7 trillion over its 66-year life cycle. The majority of these costs, approximately \$1.3 trillion, are associated with the sustainment of the aircraft. The Government Accountability Office (GAO) has been assessing the Department's efforts to sustain the F-35 since 2013. The GAO's work has resulted in over 30 recommendations to the Department on how it could more effectively manage sustainment of the F-35 program. Although the Department has taken positive steps to implement and eventually close out several of these recommendations, the majority of GAO's recommendations remain open. Some of these recommendations, which focus on critical aspects of sustainment such as developing an intellectual property strategy for the program and establishing a performance-measurement process for the Autonomic Logistics Information System (ALIS), have been open for 7 years. Others, such as the June 2021 recommendations to help the Department ensure it can afford to sustain the number of F-35s it plans to purchase, are more recent and particularly time-sensitive.

The GAO's work assessing sustainment of the F-35 has produced critically important recommendations that, if implemented, could help the Department improve overall sustainment and affordability of the program. Given the significance of the F-35 program to the future of tactical air in the Department, and the Department's need to continue to procure, operate, and deploy the F-35 in the coming years, the committee directs the Secretary of Defense to submit a report to the congressional defense committees by March 1, 2022, on the Department's progress implementing GAO's F-35 sustainment-related recommendations, including:

- (1) the status of the Department's efforts to address open GAO recommendations for enhancing F-35 sustainment;
- (2) the steps the Department plans to take to fully implement GAO's recommendations; and
- (3) key factors hindering the implementation of these recommendations.

Landing Gear System Management

The committee is aware of seven landing gear related Air Force flight mishaps between June 2020 and May 2021, involving seven different aircraft (A-10, C-17, F-15, F-16, F-22, F-35, and MQ-9), and has concerns about landing gear systems management across the total Air Force inventory. 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, 2022, on the Air Force's efforts to reduce landing gear related mishaps and discrepancies across its entire inventory of aircraft. The briefing should include a 10-year historical review of landing gear related mishaps; identification of any trend data across platforms; and an assessment of the need to consolidate management of total inventory landing gear systems to one organization within the Air Force as a means to identify trend data across platforms, develop common solutions, and reduce Air Force landing gear systems malfunctions and mishaps.

Predictive Maintenance

The committee notes that the Department of Defense has in recent years undertaken various initiatives to determine the most effective and efficient way to plan and perform maintenance on its weapon systems, including through preventive maintenance performed on a regular schedule and conditions-based maintenance performed at predetermined trigger events. The military services have begun developing predictive maintenance programs that rely on sensor technology, data analytics, and algorithms, rather than calendars and current conditions, to better plan what maintenance is needed when. If performed effectively, predictive maintenance can reduce weapon system downtime, ensure adequate supply of needed parts, and decrease costs.

The committee directs the Comptroller General of the United States to review the incorporation of predictive maintenance into the military services' weapon system sustainment. The review should address the following elements:

(1) the extent to which the Department and the military services have incorporated predictive maintenance into the sustainment of ground combat systems, ships and submarines, and aircraft;

(2) the extent to which the Department and the military services have set goals, resourced, tested, and executed their predictive maintenance efforts; and

(3) the extent to which the Department and the military services have established policies and implemented processes to track and manage predictive maintenance efforts.

The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, on the Comptroller General's preliminary findings and present final results in a format and timeframe agreed to at the time of the briefing.

Report on Navy Dry Dock Strategy for Ship Maintenance and Repair

The committee understands that the Navy has made investments to increase dry dock capacity on the west coast of the United States

to meet ship repair surge capacity requirements and support the National Defense Strategy. The committee is concerned that a lack of clarity on how these dry docks will be used and administered could have unintended negative consequences on the private sector maintenance and repair industrial base.

Therefore, the committee directs the Secretary of the Navy to provide a report to the House Committee on Armed Services, no later than March 1, 2022, that outlines the Navy's long-term plans for its utilization of existing and potential new dry docks on the west coast. The report should address:

(1) how the Navy will execute a consistent and balanced docking strategy that ensures the health of the private sector maintenance and repair industrial base;

(2) the conditions under which the Navy plans to utilize surplus dock space on the west coast;

(3) any additional Navy-owned dry dock assets the Navy plans to locate on the west coast and the planned cost to build and maintain such planned additional dry docks;

(4) the projected utilization of all dry dock assets (both private and public) through 2026; and

(5) how the Navy assesses the impact of government investment in additional dry dock capacity on private sector repair and maintenance facilities and these facilities' planning for future upgrades.

Space Resources (Propellant) National Reserve

The committee recognizes the great importance of utilizing the resources found in space (space resources) to support the mission of the Space Force and national security space enterprise as well as the viability of civil and commercial space activities. Of particular importance is satellite or rocket propellant. The committee notes that creating a logistics chain for supplying satellite and rocket propellant in space is key to the long-term sustainability of the Space Force and central to one of its core competencies, Space Mobility and Logistics. The committee further notes that creating a strategic propellant reserve in space will act as a catalyst for America's commercial space and resources industries to invest the capital to create the elements of the supply chain. These include developing sources of propellant on the Moon and asteroids, developing the transportation elements to move propellant within cislunar space, and developing the distribution nodes or depots to store the propellant. The committee believes that ready access to propellant for satellites allows maneuver without regret, the ability to reposition orbital assets as needed for greatest strategic and tactical benefit. Finally, the committee notes that refueling rockets outbound from Earth results in a dramatic lowering of the cost of space transportation to any destination beyond Low Earth Orbit, providing tremendous benefits to military, civil and commercial space activities. Therefore, the committee directs the Secretary of the Air Force, in consultation with academia and private sector subject matter experts, to provide a report to the House Committee on Armed Services by March 31, 2022 that evaluates the national security benefits of creating a Space Resources (Propellant) National Reserve.

Sustainment Competition in the F-35 Program

The committee is concerned about rising sustainment costs in the F-35 program, as these costs create affordability challenges for the services. As such, the committee is interested in determining the Department of Defense's plans to increase competition within the F-35 enterprise, including what intermediate steps could be taken in the near term to leverage the whole of industry outside the original equipment manufacturers. Increased competition for F-35 sustainment could reduce lifecycle costs, increase efficiency, and drive innovation while strengthening the overall viability of the program. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, on the Department's efforts to reduce sustainment costs by driving competition into the F-35 program. The briefing should include information on known barriers that must be overcome to facilitate a competitive sustainment environment, as well as recommended solutions.

READINESS ISSUES

Air Force briefing on delivery of emergency services by firefighters

The committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by February 1, 2022, outlining efficiencies that will be gained from the transfer of Emergency Medical Service (EMS) delivery to firefighters. The briefing will include the following elements:

- (1) an analysis of cost savings to the Air Force from moving EMS delivery to Fire and Emergency Services (FES).
- (2) an analysis of manpower savings potential in the transition to FES.
- (3) an assessment of cost required to train firefighters to appropriate certification levels.
- (4) an assessment of physical space required to move ambulances to fire stations.
- (5) an assessment of required equipment to support the transition.

Army Enterprise Resource Planning

The Committee directs the Secretary of the Army to provide a report to the congressional defense committees no later than March 1, 2022 regarding the implementation, operation, and maintenance of its enterprise resource planning systems. The report should address:

- (1) challenges the Army faces in its efforts to implement, operate and maintain its enterprise resource planning (ERP) systems;
- (2) the extent to which the Army is executing business process reengineering to match commercial best practices;
- (3) how the Army has conducted market research and the results of that market research; and
- (4) how the Army is incorporating lessons learned and best practices in its ERP modernization program.

Assessment of Low-Level Military Training Routes

The committee is aware of Department of Defense concerns regarding encroachment from development of various types on low-level military training routes (MTRs) and special use airspace (SUA). The committee also recognizes that the Department's airspace needs change over time. The committee remains committed to preserving access to national airspace for military test and training activities to ensure military readiness. However, the committee is also interested, where feasible, in facilitating deployment of renewable energy projects, such as wind turbines, that enhance our national and economic security in ways that are compatible with military airspace needs. Therefore, the committee directs the Secretary of Defense, in coordination with the Secretaries of the Army, Navy and Air Force, provide a report to the congressional defense committees by October 1, 2022 that assesses low-level military training routes and special use airspace to identify areas that are no longer needed or could be adjusted while still meeting military training requirements. This report shall document and define military airspace requirements based on service operational and training needs, identify routes and special use airspace that could potentially be eliminated or modified in various ways to accommodate future deployment of additional wind turbines renewable energy projects, and provide recommendations for such changes.

Body-Worn Cameras for Military Law Enforcement

The committee recognizes the expansive use of body cameras by law enforcement personnel around the nation, along with the positive benefits that result from their use. However, the committee also notes that there are differences between some of the tasks that military law enforcement and civilian law enforcement are called to perform. Therefore, the committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment to submit a report to the House Committee on Armed Services by February 15, 2022, assessing the use of body cameras by military law enforcement. The committee believes that local community stakeholders should also be engaged during the production of this report, to make sure their thoughts and suggestions are taken into consideration and incorporated into any final report recommendations. The report shall include at a minimum the following:

- (1) an assessment of the viability of using body cameras by military law enforcement personnel;
- (2) a description of the duties where their use would be the most appropriate and impactful;
- (3) a discussion of what policies would need to be in place to govern the storage, release, and distribution of camera recordings to address accountability, transparency, and national security concerns;
- (4) a cost estimate of deployment and storage of camera equipment; and
- (5) to the extent that body cameras are deemed appropriate and necessary for use by military law enforcement personnel, an implementation plan for their deployment and use.

Continuation of Waterjet Technology Systems for Removal of Underwater Explosive Munitions

The Committee understands underwater munitions continue to pose environmental and safety threats for the military. The committee is aware that high pressure waterjet technology systems have demonstrated capability to safely demilitarize munitions on land and can demilitarize munitions underwater. Despite the department's efforts, underwater munitions pose a continued threat. To ensure the issue has been sufficiently addressed, the Committee directs the Secretary of the Army to provide a briefing to the Committee on Armed Services by February 1, 2022, about current and planned efforts to mitigate against underwater munitions threats, including efforts to employ waterjet technology systems for the removal of explosive constituents in underwater munitions.

Eglin Gulf Test and Training Range

The committee notes that the 96th Test Wing's mission, headquartered and largely executed at Eglin Air Force Base and the Eastern Gulf Test and Training Range (EGTTR), is to plan, conduct, test, and evaluate U.S. and allied non-nuclear munitions, target acquisition, weapon delivery, command and control systems, navigation systems, integrated base defense security systems, and supporting systems.

The committee is aware that EGTTR will require highly specialized capabilities enabling successful fifth-/sixth-generation weapons testing. The committee is concerned that the open-air range test-data gathering instrumentation infrastructure on EGTTR is not keeping pace with the advanced capabilities of modern weapons systems and munitions. The committee is further concerned that, with a growing volume of test and training requirements, more instrumentation throughout the EGTTR is required for efficient use of air, surface, and subsurface test areas to address the competition for range space between competing operational readiness and testing priorities.

Accordingly, the committee encourages the Secretary of Defense to modernize and expand open-air range test capabilities operation and maintenance in the EGTTR through the upgrades of the Electronic Combat Range. The committee further encourages the Secretary of Defense to continue to work with the other departments to ensure that the test and training missions conducted in EGTTR are protected from activities incompatible with successful mission completion.

Foreign Military Flight Training Program Assessment

The committee understands the United States has trained foreign nationals for decades with over 5,100 foreign students from over 153 countries in the United States for security cooperation related training with the Department of Defense. It fully supports this training and its goal of advancing U.S. security interests by building defense partnerships. It also understands that international military students undergo security and medical screening by U.S. officials in the foreign country before getting a visa and the Secretary of Defense directed a review of vetting procedures for all foreign nationals who come to the United States to train.

The committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by March 1, 2022, on its foreign military flight training in the United States. The briefing will include, at a minimum, the number of current locations being used for flight training of foreign nationals, the number of foreign nationals being trained at each location and the type of training and equipment being used, the types of additional flight training in the United States that would be beneficial to both the United States and the partner countries, and locations where additional flight training can be continued or expanded.

Impacts of Tijuana River Sewage on the Ability of Training Ranges to Meet Joint Force Training Requirements

The committee acknowledges recent efforts by United States and Mexican authorities to address the impact of transboundary sewage runoff from the Tijuana River. The committee is aware that this pollution has eroded Navy Outlying Landing Field Imperial Beach and contributed to over 250 in-water canceled training events in Fiscal Year 2020. These findings suggest Tijuana River sewage runoff will continue to impact the utility of range complexes, installations, and related facilities in the San Diego region and the Navy's ability to train to required standards until proper mitigation measures have been enacted. Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services, not later than February 1, 2022, related to the impacts of Tijuana River sewage on the ability of training ranges in the region to meet joint force training requirements. This briefing shall address the ability of relevant commands to accomplish mission essential tasks across the Navy's mission areas; the ramifications of cancelled, delayed, or altered training on joint force operations; and what actions might be taken to resolve or mitigate these impacts on relevant ranges.

Implementation of the Navy Common Readiness Model

The committee notes that it is critical for the United States Navy to leverage technology to identify lifecycle needs and address readiness challenges. The Navy Common Readiness Model, which utilizes modeling, simulation and analytic capabilities to understand and optimize readiness, could allow the Navy to save development, maintenance and sustainment funding and enhance the readiness of our naval platforms and weapon systems.

The committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by March 1, 2022, on the implementation of the Navy Common Readiness Model (NCRM). This briefing should address:

- (1) the cost, scope and schedule for NCRM implementation;
- (2) the Navy platforms and weapons system that will be modeled in the NCRM in Fiscal Year 2022; and
- (3) the projected cost savings and readiness impact for each of the platforms and weapons systems.

Minimizing Large Transport Fleet Fuel Burn

The committee strongly supports the mission of the Air Force's large transport fleet, responsible for airlifting troops and critical

equipment to and from military theaters across the world. The committee is aware that engines onboard these aircraft are routinely exposed to harsh environments that prematurely damage their engine fan blades. The committee understands that such damage can lead to increased fuel usage that escalates costs and carbon emissions. As such, the committee encourages the Air Force to utilize innovative coating technology to engine fan blades that will reduce fuel usage and thereby improve the efficiency of existing aircraft. The committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services by March 1, 2022 on the Air Force's strategy to reduce large transport aircraft fuel burn. The briefing shall address: (1) The large transport fleet's annual fuel consumption and associated operational costs; and (2) An analysis of engine fan blade coatings that could deliver greater fuel efficiency.

Mission Training Complex

The committee recognizes the importance of modernizing United States Army mission training complexes to meet the evolving challenges in a multi-domain environment. The committee notes that upgrading existing information technology (IT) infrastructure is essential to ensuring these facilities have access to the most advanced classified networks for critical training and mission preparation for members of the U.S. Armed Forces. The committee further notes that IT modernization is crucial to mission planning, rehearsals and execution, and support to culminating training exercises for future evolving threats in an immersive training environment.

Finally, the committee recognizes that these upgrades to existing infrastructure improve the U.S. Army's ability to sustain readiness, better integrate with joint forces, and prepare for the complex array of global challenges they must counter across the multi-domain environment. The committee strongly encourages the U.S. Army to continue modernization of mission training complexes and prioritize such efforts on installations whose units experience high operational tempo.

National All-Domain Warfighting Center

The committee recognizes the critical need for the National Guard, as an essential component of the Joint Force, to conduct all domain training and exercises in support of the National Defense Strategy (NDS). The committee notes the Joint Staff's development of an all-domain warfighting concept to support the NDS.

The committee notes that in order to support the national defense strategy there is an identified need for training capabilities that can best be achieved within an all-domain training environment that is able to support training and exercises for aircraft, maritime, littoral, amphibious, joint fire support, maneuver coordinated with fires and effects, multi-echelon sustainment, combined arms live fire, decisive major combat operations scenarios, air mobility, cyber operations, space operations, electronic warfare spectrum availability, mission command, remotely piloted aircraft launch and recovery, and four seasons capabilities.

The committee notes that the National All Domain Warfighting Center in Michigan is able to support this all-domain approach and the requirements that come with it, therefore enhancing opportunities for all military services to train within its facilities. Joint All Domain training, exercise integration, and test and experimentation capability currently residing within NADWC supports military units from all service branches, our allies and partners.

The committee further notes that NADWC delivers a joint all-domain, four-season, training environment that is able to support its users in their efforts to achieve or sustain proficiency in conducting joint command and control, air, maritime, and ground maneuver integration, and the synchronization of lethal and non-lethal (cyber) fires in a joint, multinational major combat operations environment that is scalable across unit resources levels. These capabilities are critical to the preparedness of our armed forces for future warfighting demands. NADWC provides a training environment that addresses training gaps and builds readiness at multiple echelons with the scope and scale required to address emerging challenges of near-peer competitors.

The committee directs the Secretary of the Army, in coordination with the Secretary of the Air Force, to submit a report to the House Armed Services Committee by March 31, 2022, on existing joint all-domain warfighting centers that are able to support training and exercises for aircraft, maritime, littoral, amphibious, joint fire support, maneuver coordinated with fires and effects, multi-echelon sustainment, combined arms live fire, decisive major combat operations scenarios, air mobility, cyber operations, space operations, electronic warfare spectrum availability, mission command, remotely piloted aircraft launch and recovery, and four seasons capabilities., including:

- (1) current funding levels for the National Guard training centers that meet all these requirements and conduct joint all-domain warfighting training;
- (2) whether these training centers that meet all these requirements are appropriately resourced to conduct joint all-domain warfighting training;
- (3) training capabilities and opportunities available at each joint all-domain warfighting center that meet all these requirements; and
- (4) training gaps and limitations present at each joint-all domain warfighting center that meet all these requirements.

Navy Optimized Fleet Response Plan

The committee notes that in order to address its persistently low readiness levels, the Navy implemented a revised operational schedule, the Optimized Fleet Response Plan (OFRP), in November 2014. OFRP was intended to address several problems that had developed as the Navy coped with heavy operational demands. These included increased ship deployment lengths, reduced or deferred maintenance, decreased predictability for sailors and the ship repair industrial base, declining ship conditions across the fleet, and longer maintenance periods. The Navy's implementation of the OFRP—and readiness recovery more broadly—is premised on adherence to more sustainable deployment, training, and maintenance schedules.

However, the Navy has faced persistent challenges in implementing OFRP since its inception and Navy readiness declined between 2017 and 2019. In addition, the Navy has experienced continued difficulties with ship maintenance timeliness, implementing training for the high-end fight, limiting deployment lengths, maintaining ship readiness after deployment to provide for surge capacity, meeting “fit and fill” crewing goals across the fleet, and maintaining carrier air wing readiness. In October 2020, the Navy updated its OFRP instruction to implement additional changes and address lessons learned. The committee remains concerned about the Navy’s implementation of OFRP and its effect on the Navy’s readiness recovery.

Therefore, the committee directs the Comptroller General of the United States to assess the following:

(1) the extent to which the Navy has been successful in achieving OFRP goals for maintenance completion, timeliness, training certifications, personnel fit/fill rates, operational availability, and others;

(2) the extent to which OFRP implementation impacted carrier air wing maintenance, training, and readiness;

(3) the extent to which the Navy has taken action to improve OFRP and the challenges it faces in maximizing the fleet’s operational availability; and

(4) any other related matters the Comptroller General considers appropriate.

The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services not later than November 1, 2021, on the Comptroller General’s preliminary findings and to present final results in a format and timeframe agreed to at the time of the briefing.

Next Generation 911

The committee recognizes the importance of quick response times in responding to emergencies on military installations. Incidents at Naval Air Station Corpus Christi, Joint Base Pearl Harbor-Hickam, and Washington Navy Yard show the importance and need for rapid alert systems and responses. The committee is aware of Department of Defense’s ongoing efforts to upgrade their public safety communications ecosystem, taking advantage of innovative technological solutions in the emergency services space to increase efficiency and save lives. The committee is encouraged by these steps by the Department and looks forward to further progress in this realm as their planning continues.

The committee directs the Director of the Defense Information Systems Agency to provide a briefing to the House Committee on Armed Services by February 15, 2022, including at a minimum the following:

(1) an update of ongoing efforts and plans to modernize emergency alert systems on domestic installations;

(2) a discussion on the specific challenges to modernizing emergency alert systems on domestic installations;

(3) an assessment of the possible use of an outside project manager or consulting service to assist in Department efforts to modernize emergency alert systems on domestic installations; and

(4) a description of next steps for the implementation of this program.

Parachute Management System

The committee continues its interest in updating the way in which the Army manages parachute systems. In the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116–442), the committee required a report on Personnel Parachute and Cargo Management Inventory which the Army provided to the committee on January 8, 2021. The report concluded that the existing paper-based system used by parachute riggers is inadequate. As a result, the Army is developing an interim parachute management system that is slated to be replaced by a program of record in the 2027 timeframe.

The committee is concerned that the Army has decided to forgo suitable commercially available parachute management systems, and instead develop a government solution to bridge the gap between today and the program of record replacement. The committee notes that the report does not conclude that the commercially available systems do not meet the Army's requirements. The committee therefore directs the Secretary of the Army to submit a report to the House Committee on Armed Services by February 1, 2022, containing at a minimum an analysis of the ability of commercial parachute management solutions to meet Army requirements and the cost of developing a government solution versus deploying an interim solution for parachute management with a commercial-off-the-shelf system.

Pilot Training Next—Advanced (PTN–A)

The committee acknowledges the challenges the Air Force faces in training and retaining qualified pilots and is concerned about the risk this poses to the Air Force core mission. Therefore, the committee directs the Secretary of the Air Force to provide a report to the House Committee on Armed Services by March 1, 2022 on the Air Force's strategy to train 1450 pilots per year and the required combat system operators (CSOs), from initial mission qualification through combat mission qualification. The report should specifically address:

(1) Considerations related to retirement of the T–1 Jayhawk including a cost benefit analysis comparing upgrading and maintaining the current fleet or part thereof; transitioning to a new commercially available aircraft; or transitioning to a simulator only course;

(2) Status of development for the T–7 Red Hawk syllabus and course requirements to account for the expected increased capability of the T–7 aircraft compared to the legacy T–38 aircraft;

(3) A strategy to incorporate new technologies developed under Pilot Training Next/Pilot Training Next—Advanced (PTN/PTN–A) experimental training courses to improve training effectiveness and efficiency, including considerations for incorporating immersive technologies with the intent of leveraging low-cost training devices where appropriate;

(4) Considerations related to the incorporation of biometric monitoring devices and psychometric testing to assess readiness of instructor and student aircrew;

(5) Other material and non-material requirements to achieve improvements in rated aircrew training effectiveness, efficiency, and operator retention.

Preserving Military Training Routes

The committee commends the Military Aviation and Installation Assurance Siting Clearinghouse (the Clearinghouse) for its efforts in ensuring that compatible energy development for energy security does not present an undue national security risk or undermine readiness. The committee notes that the Clearinghouse has conducted considerable analysis related to potential wind energy projects on military training routes and ensuring that adequate mitigations are in place to avoid any adverse impact on military operations and readiness. Further, the committee encourages the Department of Defense to engage with all stakeholders as part of its process to assess and make a determination of whether an individual project is compatible. As such, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services by March 1, 2022, to include, at a minimum the following:

(1) an update on the process by which the Clearinghouse reviews and seeks stakeholder input on proposed wind energy projects with the potential to impact military training routes;

(2) a review of available mitigations to include technological mitigations being used to avoid any negative impact to readiness;

(3) any ongoing research and development programs to mitigate readiness impacts of wind turbines and how emerging technologies are factored into the Clearinghouse's compatibility analysis;

(4) a discussion of how the Clearinghouse assesses the cumulative impacts of wind projects on the viability of a military training route; and

(5) a list of military training routes that are no longer in use due to wind energy projects, and what training mitigations were put in place to counter the readiness impacts of those routes not being available for use.

Readiness Modeling

The committee is encouraged by the Under Secretary of Defense for Acquisition and Sustainment's efforts to improve readiness and control lifecycle costs. The committee encourages the Department of Defense to expand these efforts across the enterprise and look at the potential for using modeling for all complex defense systems, performing simulation and analytically optimizing readiness and lifecycle cost outcomes. The committee notes that this methodology could reliably redefine readiness not as a single measure, but as a cost-optimized curve that could provide Congress and the Department with multiple support options across an array of budgetary scenarios thereby increasing understanding of the steps required to reduce lifecycle costs and improve system performance. Therefore, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to submit a report to the House Committee

on Armed Services by December 1, 2021, on efforts to standardize readiness modeling for major weapon systems across the Department of Defense enterprise.

Review of Mitigation Options for Potential Wind Turbine Interference on Radars

The committee is aware of Department of Defense concerns, including coming from the North American Aerospace Defense Command (NORAD), regarding compatibility between wind turbines and radars if energy projects are not properly sited. The committee also understands there are some mitigations available today, both on the wind farm side and the radar side, to address wind turbine and radar issues, and others under consideration but not yet fully developed or validated.

For example, the committee is aware and has previously supported development of gap-filler, or infill, radars that are delivering promising results mitigating the impact of wind turbine interference on the Department's radar infrastructure. The impact of wind turbine interference is most significant at the moment within the United States Northern Command/North American Aerospace Defense Command (USNORTHCOM/NORAD) air surveillance command and control system (C2). Therefore, the committee encourages the Department of Defense to move more rapidly to test the integration of infill radars into the existing C2 architecture.

The committee is also aware of potential opportunities to upgrade ASR-11/DASR sites utilized by NORAD, including through adapting the CARSR 270 software modification for use in ASR-11/DASRs, concurrent beam processing, and MIT Lincoln Lab's turbine adaptive nulling concept. The committee encourages the Department to move rapidly to develop, validate and deploy these mitigations as necessary.

The committee directs the Under Secretary of Defense for Acquisition and Sustainment, in coordination with the Commander of North American Aerospace Defense Command, to provide a briefing to the Committees on Armed Services of the Senate and the House of Representatives by February 1, 2022 on a strategy for integrating in-fill radars into the Battle Command System-Fixed (BCS-F) command and control architecture and other potential alternative mitigations. The briefing should also include the strategy for upgrading ASR-11/DASR sites. At a minimum, the briefing should include the following elements:

(1) Impact of wind turbine radar interference on the homeland air sovereignty mission and how it is assessed;

(2) Limitations and challenges associated with infill radar integration into the BCS-F architecture;

(3) Strategy, milestone events, and timeline for integration of infill radars into BCS-F;

(4) Status of development, testing and/or deployment of upgrades to the ASR-11/DASR sites;

(5) Any additional migration options the Department is actively investigating to address potential wind turbine/radar conflicts and the remaining steps and timeline to validate and deploy such mitigations if they are successfully tested;

(6) Mitigation options the Department is not considering but could with additional resources;

(7) Mitigation options the Department has considered but rejected, if any, along with an explanation of why the option(s) is not considered viable; and

(8) An assessment of the resources necessary to develop, test, validate and deploy the mitigation options described above, including opportunities for industry financing under section 183a of title 10, United States Code.

Study and Report on Feasibility of Permanent Basing Air Force Flying Unit/s on Guam

The committee recognizes the importance the island of Guam plays in the National Military Strategy for the Department of Defense and its critical role in safeguarding our national security interests in the Indo-Pacific. Therefore, the committee directs the Secretary of the Air Force, in consultation with the Chief of the National Guard Bureau and the Director of the Air National Guard, to report to the House Committee on Armed Services by February 15, 2022, on the feasibility and advisability of establishing Total Force flying mission/s on Guam that include the Guam Air National Guard. The report shall include at a minimum the following:

(1) a detailed analysis on how permanent basing flying mission/s on Guam would affect the region's strategic planning and overall national defense and security;

(2) the optimum airframe type/s and mission designation;

(3) the overall cost estimate for such establishment;

(4) a cost-benefit analysis of rotational presence vs. permanent basing;

(5) an estimate of how many assigned personnel are required to support the mission;

(6) the length of time and critical milestones required for such establishment;

(7) the recommended structure of the organization (Active or Classic Associate); and

(8) such other matters as may be determined relevant by the Secretary.

T-7A Red Hawk Predictive Analytics

The Committee supports the use of predictive analytics by the Department of the Air Force's Air Education and Training Command (AETC) to achieve improvements in aircrew training production, aircraft readiness, and cost. The use of such data has provided important advantages to help address AETC production challenges and pilot shortages.

Therefore, the committee directs the Secretary of the Air Force, in coordination with the Commander, Air Education and Training Command, to provide a briefing to the House Committee on Armed Services by March 1, 2022 on the strategy to expand predictive analytics in the effort to mitigate mission and cost impacts during the transition process from the T-38 Talon to the T-7A Red Hawk.

Use of Fitness Wearables to Measure and Promote Readiness

The Committee recognizes warfighter readiness remains an ongoing challenge. In recent years, the Department of Defense conducted several pilot programs to use wearable health and fitness

trackers to measure individual and troop readiness. Accordingly, the committee directs the Secretary of Defense to provide a report to the House Committee on Armed Services by no later than March 1, 2022 on the potential for wearable technology to improve readiness. The report shall at a minimum include the following:

1. An assessment of the potential for a DOD-wide program to use wearable health and fitness trackers to provide the warfighter with key readiness metrics and scores, including activity levels, stress, sleep, heart rate variability, and oxygen saturation;
2. How aggregated data could be used to improve physical readiness programs;
3. What steps would be required to safeguard data and maintain privacy protections; and,
4. What steps would be required to safeguard classified data in locations where wearables are being used.

Wind Turbine Mitigation Technology

The committee notes that energy security is a key component of national security. However, the committee is aware of the challenges posed to military readiness created by wind turbine radar interference. The committee is concerned that without mitigation, these challenges can lead to lost opportunities for compatible development of a clean, renewable energy source without any accompanying detriment to military readiness.

Fortunately, the committee is also aware of substantial progress in the development of technological solutions including infill radar systems that are delivering promising results mitigating the impact of wind turbine radar interference on the Department of Defense's air traffic control radar infrastructure. Consequently, the committee encourages the Department of Defense to prioritize the development, analysis, and certification of radar infill data solutions to improve mission readiness and enable wind energy development to promote energy security.

OTHER MATTERS

Briefing on Progress of Cleanup Actions Related to Department of Defense-Caused Per- and Polyfluoroalkyl Substances Contamination

The committee remains concerned about the progress of environmental remediation at sites contaminated with perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) caused by the Department of Defense. The committee recognizes the concerns of communities impacted by this contamination and their frustration with poor communication by the Department. Accordingly, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing not later than February 1, 2022, on the progress of all ongoing environmental remediation actions to clean up PFOS- and PFOA-contaminated sites. The briefing shall at a minimum include the following:

- (1) a list of contaminated sites by service;
- (2) the status of environmental remediation at each site;

(3) for sites that have completed the preliminary assessment or site inspection phase, the number that have been assessed to require no further action and the justification for this finding;

(4) for sites that have proceeded to the remedial investigation or feasibility study phase, the timeline for completion of this phase;

(5) for sites that have completed the remedial investigation or feasibility study phase, a discussion of next steps to include, where appropriate, the justification for a finding that no further action is required;

(6) a discussion of any site where duly promulgated State standards or regulations have been assessed as applicable or relevant and appropriate requirements; and

(7) the means by which the Department is communicating with community stakeholders about the progress of environmental remediation actions.

Briefing on Southern Resident Killer Whale Interagency Working Group

The Committee notes the Southern Resident Killer Whales (SRKW) are an important cultural symbol and environmental linchpin in the Pacific Northwest.

The Committee is encouraged the Navy met with the US Coast Guard (USCG) regarding future interagency cooperation in developing measures to protect SRKWs. The Committee is also encouraged the Navy and USCG are both eager to work together to address SRKW monitoring and have set up an interagency working group to understand and leverage each agency's capabilities to enhance the protection of the SRKW.

The Committee directs the Deputy Assistant Secretary of the Navy for Environment and Mission Readiness, in coordination with the Director of Marine Transportation Systems and the Senior Arctic Policy Advisor at the USCG, to brief members of the House Armed Services Committee, not later than February 28, 2022, on the findings, goals and needed capabilities for the Interagency Working Group to enhance the protection of the SRKW.

Chemicals Used for Aircraft Rescue and Firefighting Operations at Civilian and Joint Use Airport Operations

The committee recognizes the continuing work of the Department of Defense on important environmental issues relating to the use of Aqueous Film-Forming Foam (AFFF) containing Per- and polyfluoroalkyl (PFAS) chemicals in Aircraft Rescue and Fire Fighting (ARFF) operations at military installations. This work includes environmental remediation and research to develop an effective fire-fighting foam that does not contain PFAS.

Therefore, the committee directs the Secretary of Defense to submit a report to the congressional defense committees by March 1, 2022. The report should address: the coordination between the Department and the FAA with the Joint and Shared Use civilian airports that depend on military-controlled emergency response; the progress towards establishing a formal consultation system to coordinate the review process and final actions on PFAS-containing foam with the Joint and Shared Use Airport operators; and the

timeline for the Department of Defense to issue directives on PFAS-containing foam.

Continuing Foreign Language Education

The committee recognizes the importance of providing ongoing foreign language instruction to maintain linguists' highly perishable skills after they transition from education or training settings to operational environments. In addition, given the importance of frequently updating language and cultural awareness training content, it is also critical that the Department of Defense monitor the quality and suitability of its post-schoolhouse language training programs and establish metrics to ensure training effectiveness. Therefore, the committee directs the Under Secretary of Defense for Personnel and Readiness to submit a report to the House Committee on Armed Services, not later than March 1, 2022, that includes the following:

- (1) a summary of the Department's in-person and virtual offerings for language professionals to sustain their proficiency, including information on these platforms' online and mobile accessibility;
- (2) a description of the Department's utilization of both organic and commercially available advanced foreign language tools;
- (3) a description of the extent to which the Department's current tools and programs include multimedia content, including video, audio, print, and interactive features; and
- (4) information on the oversight and management of these programs, including an assessment of the necessity and feasibility of establishing an executive agent for continued foreign language education.

Feasibility and Relative Toxicity of Bio-Based Corrosion Control

The committee commends the Department of Defense on its research and analysis of the feasibility of incorporating domestically manufactured, bio-based chemicals for corrosion control. The committee is aware that corrosion is a significant problem for the Department of Defense and that some estimate the cost of addressing corrosion to be approximately \$20 billion a year department-wide. The committee is concerned about the toxicity of many of the widely used corrosion control and mitigation measures. The committee is also concerned that many of the currently used phosphate-based chemicals are not produced domestically creating further risk both to the maintenance of weapon systems and equipment and to the environment due to a lack of regulatory controls in the nations in which they are produced. The committee is aware that the field of synthetic biology continues to advance, and that domestic producers are developing innovative corrosion control formulations that may provide safer, domestically produced alternatives. The committee encourages the Department to continue testing these formulations for efficacy and to determine relative ecotoxicity, with the goal of identifying safer corrosion control options that meet the Department's requirements.

Fire Detection and Monitoring

The committee is aware of Department of Defense efforts to assist states in the initial detection and monitoring of wildfires

through a pilot program known as FireGuard. In recent years, wildfires have burned millions of acres, causing economic damage and the displacement of thousands of people. The committee is also aware that this pilot program requires Department of Defense to extend it incrementally rather than providing long term authorization, and of the Department of Defense's efforts to transition the program to the National Interagency Fire Center (NIFC). If the Department executes its transition, the committee is concerned about maintaining the continuity of operations of this critical resource and whether Department-provided resources and support will be made available to the NIFC to ensure a seamless transition. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by February 15, 2022, that will include at a minimum the following:

(1) a history of the FireGuard program, examples of the types of data it provides, and how that data is ultimately used by states and interagency partners;

(2) a full review of what resources may or may not be transferred from the FireGuard program to the National Interagency Fire Center to ensure continuity of operations and why; and

(3) an assessment of what other resources could be made available to the States to assist in the detection and monitoring of wildfires.

Planning Tool for Assessing Drought, Water Scarcity, and Fire Risk

The committee shares the Department of Defense's view that climate change represents a significant concern for military readiness. The committee notes that since 2010, the Secretary of Defense has acknowledged that a changing climate has a dramatic effect on military missions, plans, and installations. The committee is concerned about increasing incidents of flooding, drought, wildfires, and extreme weather events and their effects on military installations. In addition, the committee notes that combatant commanders, allies, and coalition partners have been forced to conduct operations that result from instability in societies strained by desertification and the demands for humanitarian assistance worldwide. The committee is also concerned about the potential for instability around the globe in societies impacted by the intersection of drought, health, water scarcity, food insecurity, and national security. The committee is aware that drought conditions have the potential to create vulnerabilities or "hot spots" that could require an armed response.

The committee commends the Air Force Weather Agency for initiating a program to develop a global early warning drought indicator in fiscal year 2021 that could be used to inform climate change considerations in policy activities and risk assessments to mitigate these drivers of insecurity. The committee understands that the program leverages existing infrastructure and platforms developed by other Federal partners to address emerging national security concerns through machine learning and big data analytics. This program fuses climate, hydrologic, biophysical, and vegetation conditions with social and economic risk and vulnerability factors to create a global drought early warning system for use by combatant commanders, military services, and the intelligence community to predict global "hot spots" and potentially reduce the need for

armed conflict. The committee encourages the Air Force to continue its support and development of this tool.

Reducing the Risk of Flash Fire

The committee is aware of the ongoing risks of flash fire to members of the Armed Forces and National Guard and encourages the implementation of enhanced protections against this significant category of injury. The committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services by February 1, 2022, on the risk of flash fire to members of the Armed Forces and National Guard of the United States which shall include at a minimum:

- (1) an assessment of the risk to members of the Armed Forces and National Guard presented by flash fire in combat and non-combat operations;
- (2) a review of existing criteria for determining in what circumstances combat uniforms of the Armed Forces and National Guard are required to be flame-resistant;
- (3) the potential benefits of flame-resistant combat uniforms on operational safety and force protection; and
- (4) plans for enhancing protections for members of the Armed Forces and National Guard against flash fire.

Report on Existing Use of Virtual Reality Technology in Hard Skills and Soft Skills Training

The Committee recognizes the rapid advance in the capability of virtual reality (VR) and augmented reality (AR) systems, and notes their commercial adoption in training programs for activities such as aircraft maintenance, aircraft operations, and advanced pilot education. The committee believes that adoption of VR and AR technologies in the activities of the Department of Defense promises to produce favorable impacts in readiness, cost effectiveness, productivity, and availability. Therefore, the committee directs the Secretary of Defense to provide a report to the House Armed Services Committee not later than March 30, 2022, that includes, at minimum, the following:

- (1) An overview of the current level of adoption of commercially-based VR and AR training platforms throughout the Department of Defense;
- (2) The impacts to readiness observed to be associated with VR and AR adoption, including cost effectiveness, productivity, availability, access, adaptability, and end user satisfaction;
- (3) Currently planned additional deployments of commercially-based VR and AR training capabilities, including those associated with major acquisition programs;
- (4) The possible utility of commercially available VR and AR platforms to support additional Department of Defense training activities, including but not limited to aircraft maintenance, aircraft operations, advanced pilot education, sexual assault prevention, and suicide prevention; and
- (5) Such other information as the Secretary deems appropriate.

Report on Incorporation of Disinfecting Technologies Like Antimicrobial, Antiviral, Antifungal in Department of Defense Issued Clothing and Individual Equipment

The committee remains concerned about the threat of transmission of infectious diseases among Department of Defense (DoD) personnel in training and deployed due to the ongoing worldwide pandemic. The committee understands DoD has developed and executed processes and procedures to mitigate the pandemic's impact on the readiness of our military and its ability to execute its peacetime and wartime missions. However, the committee is not aware of any efforts currently being developed to incorporate antimicrobial and antiviral technology in the manufacturing of DoD issued clothing and individual equipment.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by March 1, 2022, on current efforts, effectiveness, and feasibility of including antimicrobial and antiviral technology in the manufacturing of DoD issued clothing and individual equipment. The report will include at a minimum:

(1) assessment of infectious diseases that could be mitigated by incorporating disinfection technologies into DoD issued clothing and equipment;

(2) a detailed description of the current use of disinfection technologies in the manufacturing of DoD issued clothing and individual equipment;

(3) identification of existing textile based disinfection technologies including environmentally friendly solutions that could be utilized in DoD issued clothing and individual equipment;

(4) assessment of the effectiveness of incorporating disinfection technologies into DoD issued clothing and individual equipment;

(5) proposed strategy and the timeline for incorporating such disinfection technology into the production of DoD issued clothing and individual equipment in order to better protect the health of our Service Members; and

(6) a cost assessment of incorporating disinfecting technologies into DoD issued clothing and individual equipment.

Report on the Status of PFAS Remediation

The committee recognizes the Department's efforts to test for and plan for the remediation of perfluoroalkyl substances and polyfluoroalkyl substances (PFAS) at and around military installations. However, the committee is concerned that many service members, military families, and nearby communities remain at risk of PFAS exposure. The committee notes that rapid remediation of PFAS is critical to safeguarding the health of military and nearby communities. Therefore, the Committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and the House of Representatives by March 1, 2022, detailing a proposed schedule for the completion of remediation of PFAS at military installations, formerly used defense sites, and State-owned National Guard facilities in the United States and the associated cost estimates to perform such remediation. The committee further directs the Secretary of Defense to identify the status of efforts to remediate PFAS at the following sites in the report:

- (1) England Air Force Base, Louisiana.
- (2) Naval Air Weapons Station China Lake, California.
- (3) Patrick Air Force Base, Florida.
- (4) Myrtle Beach Air Force Base, South Carolina.
- (5) Langley Air Force Base, Virginia.
- (6) Naval Air Station Jacksonville, Florida.
- (7) Niagara Falls Air Reserve Station, New York.
- (8) Grand Prairie Armed Forces Reserve Complex, Texas.
- (9) Altus Air Force Base, Oklahoma.
- (10) Charleston Air Force Base, South Carolina.
- (11) Barksdale Air Force Base, Louisiana.
- (12) Plattsburgh Air Force Base, New York.
- (13) Tyndall Air Force Base, Florida.
- (14) Sheppard Air Force Base, Texas.
- (15) Columbus Air Force Base, Mississippi.
- (16) Chanute Air Force Base, Illinois.
- (17) Marine Corps Air Station Tustin, California.
- (18) Travis Air Force Base, California.
- (19) Ellsworth Air Force Base, South Dakota.
- (20) Minot Air Force Base, North Dakota.
- (21) Westover Air Reserve Base, Massachusetts.
- (22) Eaker Air Force Base, Arkansas.
- (23) Naval Air Station Alameda, California.
- (24) Eielson Air Force Base, Alaska.
- (25) Horsham Air Guard Station, Pennsylvania.
- (26) Vance Air Force Base, Oklahoma.
- (27) Dover Air Force Base, Delaware.
- (28) Edwards Air Force Base, California.
- (29) Robins Air Force Base, Georgia.
- (30) Joint Base McGuire-Dix-Lakehurst, New Jersey.
- (31) Galena Air Force Base, Alaska.
- (32) Naval Research Laboratory Chesapeake Bay Detachment,
Maryland.
- (33) Buckley Air Force Base, Colorado.
- (34) Arnold Air Force Base, Tennessee.
- (35) Tinker Air Force Base, Oklahoma.
- (36) Fairchild Air Force Base, Washington.
- (37) Vandenberg Air Force Base, California.
- (38) Hancock Field Air National Guard Base, New York.
- (39) F.E. Warren Air Force Base, Wyoming.
- (40) Nevada Air National Guard Base—Reno, Nevada.
- (41) K.I. Sawyer Air Force Base, Michigan.
- (42) Pease Air Force Base, New Hampshire.
- (43) Whiteman Air Force Base, Missouri.
- (44) Wurtsmith Air Force Base, Michigan.
- (45) Shepherd Field Air National Guard Base, West Virginia.
- (46) Naval Air Station Whidbey Island—Ault Field, Washington.
- (47) Rosecrans Air National Guard Base, Missouri.
- (48) Joint Base Andrews, Maryland.
- (49) Iowa Air National Guard Base—Des Moines, Iowa.
- (50) Stewart Air National Guard Base, New York.

Research and Development of New and Emerging Technologies for the Remediation and Disposal of PFAS

The committee commends the Defense Strategic Environmental Research and Development Program and Environmental Security Technology Certification Program for their work on the research and development of new technologies to aid in the environmental remediation of soils and water contaminated with per- and polyfluoroalkyl substances (PFAS), and the safe disposal of aqueous film-forming foam and other PFAS-contaminated items. However, the committee is aware that there is still significant work to be done in the development and field-testing of these technologies. Accordingly, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing to the House Committee on Armed Services by February 1, 2022, on its continuing efforts to develop and field remediation and disposal technologies to address PFAS contamination. The briefing shall at a minimum address the following:

(1) a description of completed and ongoing work in PFAS sampling and analysis technologies;

(2) a description of completed and ongoing work in in situ and ex situ treatment for PFAS to include work or planned work in the following areas: super-critical water oxidation technology, granulated active carbon filter alternatives, and thermal destruction; and

(3) a description of completed and ongoing work on incineration alternatives for disposal to include non-thermal plasma technologies, various thermal and hydrothermal technologies, chemical and photo/electric reduction technologies, and electron beam technologies.

Study and Report to Congress on DoD Logistics and Potential Benefits of Carsharing

The Committee is interested in enabling and incentivizing servicemembers (especially when deployed) to share their car(s) or use a shared car through a peer-to-peer carsharing platform, creating an economic opportunity for car owning servicemembers and providing a key mobility option for those servicemembers and dependents in need of a car. The primary advantage to the warfighter is that the expense of a depreciating asset can be monetized while deployed. Costs of storage should also be reduced for DoD.

Peer-to-peer (P2P) carsharing is the authorized use of a vehicle by an individual other than the vehicle's owner through a peer-to-peer carsharing platform, which is a business that connects vehicle owners with drivers to enable the sharing of vehicles for financial consideration. P2P carsharing is distinct from rental car or rental activity.

P2P carsharing is an alternative to personal car ownership. Instead of owning a vehicle, by using a smartphone application (app) and an online marketplace, users have access to cars shared by private owners that they can use to run errands, commute to work, or enjoy a road trip. Many shared cars are available by the hour or day 24/7, and can be more conveniently located than other forms of transportation. P2P carsharing is increasing in popularity among Americans.

Some P2P carsharing platforms require that an individual manually provide the car keys to the user so that the user may unlock and drive the car. Other platforms use in-car technology to enable the user to unlock the car using a smartphone to access keys inside, without meeting anyone in person. It is anticipated that forthcoming technological developments will enable a user to unlock and drive the shared car using a smartphone and a carsharing app, without a traditional car key.

Studies have also shown that P2P carsharing benefits the environment by reducing car ownership and increases use of mass transit, buses, bikes, and other alternative transportation options because car sharers are less likely to use their own personal vehicle for all trips. Further studies have shown that P2P carsharing can economically assist individuals by contributing additional income to their household.

The Committee directs the Secretary of Defense to study the logistics and potential benefits of P2P carsharing, including:

(1) Personal car ownership, including selling one's car or not purchasing a car in the first place, potentially reducing opportunities for predatory lending occurrences.

(2) Benefits to the deployed warfighter

(3) Reduction of greenhouse gas (GHG) emissions

(4) Benefits to spouses and dependents (i.e., economic revenue and expense reduction, such as not having to purchase a second car)

(5) Mode shift away from using one's own automobile to other transportation options

The study should also consider the equity and economic impacts on users of having access to a shared car, as well how participation would impact car depreciation. The Department shall report back to the Committee not later than April 1, 2022.

Sufficiency of Current Special Operations Force Language Capabilities to Meet Great Power Competition Challenges

The shift in focus by the Department of Defense on strategic competition with near-peer adversaries necessitates a force that is not simply proficient in foreign languages such as Chinese and Russian, but also regional dialects and the languages of relevant foreign partners. Proficiency and sufficiency of foreign language skills are a necessity for the joint force to conduct irregular warfare (IW), and the Department must maintain an expandable baseline level of institutional readiness, to include that of foreign language proficiency, to meet the full range of enduring IW requirements. While the conduct of IW is a whole-of-government effort in which the Department plays an important role, U.S. Special Operations Forces (USSOF) are an integral part of those military activities carried out below the level of armed conflict and therefore must maintain a high degree of proficiency in those languages critical to enable strategic competition.

The committee is concerned that the last two decades of combating violent extremism has impacted USSOF's ability to access and participate in foreign language training and thus led to an atrophy of such skills across the formation. Further, the committee is aware that foreign language readiness of the formation is an element that is not well documented nor assessed.

Therefore, the committee directs the Comptroller General of the United States to conduct a review of the foreign language skills of special operations forces. The review shall assess:

- (1) the required number of SOF personnel trained and proficient in foreign languages;
- (2) the current number of SOF personnel trained and proficient in foreign languages;
- (3) the distribution of SOF personnel with language skills by military occupational specialty;
- (4) the ways in which proficiency of foreign languages is determined;
- (5) the accessibility of such foreign language programs by SOF personnel;
- (6) how the Department determines the sufficiency of existing foreign language training, education, and testing programs to address current and emergent threats;
- (7) any gaps in foreign language readiness to include specific shortfalls in critical languages and mitigations to address those gaps; and
- (8) any other areas the Comptroller General deems appropriate.

The committee directs the Comptroller General to provide a briefing to the House Committee on Armed Services by March 4, 2022, on the initial findings and to submit a final report on a date agreed to at the time of the briefing.

Waikoloa Maneuver Area

The committee is aware that Waikoloa Maneuver Area is a formerly used defense site on the island of Hawaii that extends to over 100,000 acres on the northwest side of the island. The committee notes that two surface cleanup actions were taken shortly after the end of the Second World War to clean up unexploded ordnance and that additional contracts have been completed to clear areas planned for development. The United States Army Corps of Engineers has assessed certain areas of the site as moderate to high risk areas. To date, 28,000 acres have been cleared. The committee is concerned that munitions continue to be found on the site, and that there has not been sufficient progress in clearing areas planned for development. Accordingly, the committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment to provide a report to the House Committee on Armed Services by February 1, 2022, that shall include at a minimum the following:

- (1) an updated estimate for the cost to complete the investigation, cleanup, and long-term monitoring of the site;
- (2) a prioritized timeline and plan for cleaning up the areas of the site planned for industrial or agricultural, and other development;
- (3) a description of ongoing communication efforts with community stakeholders on the progress and future plans for cleanup; and
- (4) the status of current and planned contract awards for remaining investigation and cleanup work.

Water Banking to Support Installation Resiliency

The committee is concerned about the threat of drought and water insecurity, particularly for military installations in the western United States that are wholly or in part west of the Continental Divide. The committee contends that resiliency planning, particularly installation resiliency master planning, must be a key priority for the military departments to ensure that wise investments are made to ensure efficient management and storage of this resource and to model future requirements. Accordingly, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services not later than April 1, 2022, that shall at a minimum contain the following:

(1) the results of a survey of water resources in the western United States providing water to military installations;

(2) the amount of water purchased on behalf of military installations in the western United States by the Department annually;

(3) a description of how such water (total) is stored and by what means (surface, subsurface, or by other means) by military installations;

(4) the amount of such purchased water that is stored as emergency reserve for the installation;

(5) risk factors that could contribute to the loss of such purchased water resources;

(6) a discussion of alternative storage methods that could provide additional resiliency; and

(7) the potential for regional transfers of purchased water to mitigate water insecurity or achieve resiliency.

LEGISLATIVE PROVISIONS

SUBTITLE A—AUTHORIZATION OF APPROPRIATIONS

Section 301—Authorization of Appropriations

This section would authorize appropriations for operation and maintenance activities at the levels identified in section 4301 of division D of this Act.

SUBTITLE B—ENERGY AND ENVIRONMENT

Section 311—Inclusion of Impacts on Military Installation Resilience in the National Defense Strategy and Associated Documents

This section would require the Secretary of Defense and the Secretaries of the military departments to incorporate consideration of the risks related to installation resilience in certain strategies of the Department of Defense.

Section 312—Modification of Authorities Governing Cultural and Conservation Activities of the Department of Defense

This section would amend section 2694 of title 10, United States Code, to include Sentinel Landscapes and encourage the establishment of an interagency Sentinel Landscape Partnership.

Section 313—Modification of Authority for Environmental Restoration Projects of National Guard

This section would amend section 2707 of title 10, United States Code, to allow the National Guard to access Defense Environmental Restoration Programs funds.

Section 314—Prohibition on Use of Open-Air Burn Pits in Contingency Operations outside the United States

This section would prohibit the use of open-air burn pits during overseas contingency operations unless an exemption is issued by the President of the United States for a particular location. Thirty days after an exemption is granted, the President would be required to submit a report to Congress detailing the location, size, duration, and need of the burn pit; the number of personnel assigned to the location; and the personal protective equipment or other methods that will be used by those personnel to mitigate the health effects of said pit.

Section 315—Maintenance of Current Analytical Tools for Evaluation of Energy Resilience Measures

This section would require the Department of Defense to implement a process to ensure that it is using accurate and effective tools for analyzing cost and performance of energy resiliency measures.

Section 316—Energy Efficiency Targets for Department of Defense Data Centers

This section would require the Department of Defense to assess its current inventory of data centers and set energy and water targets for certain centers.

Section 317—Modification of Restriction on Department of Defense Procurement of Certain Items Containing Perfluorooctane Sulfonate or Perfluorooctanoic Acid

This section would amend section 333 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) and restrict the Department of Defense from procuring certain items containing perfluoroalkyl or polyfluoroalkyl substances.

Section 318—Temporary Moratorium on Incineration by Department of Defense of Perfluoroalkyl Substances, Polyfluoroalkyl Substances, and Aqueous Film Forming Foam

This section would require the Department of Defense to institute a moratorium on incineration of materials containing or contaminated by perfluoroalkyl substances, polyfluoroalkyl substances, or aqueous film forming foam until the Secretary of Defense certifies that the Department has implemented the Environmental Protection Agency's guidance for disposal.

Section 319—Public Disclosure of Results of Department of Defense Testing of Water for Perfluoroalkyl or Polyfluoroalkyl Substances

This section would require the Department of Defense to publicly disclose the results of testing for perfluoroalkyl or polyfluoroalkyl substances on military installations or formerly used defense sites.

Section 320—PFAS Testing Requirements

This section would require the Secretary of Defense to complete preliminary assessment and site inspection for PFAS at all military installations, formerly used defense sites, and State-owned facilities of the National Guard within the United States.

Section 321—Standards for Response Actions with Respect to PFAS Contamination

This section would require the Secretary of Defense to meet or exceed the most stringent standards between an enforceable State standard under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), an enforceable Federal standard under CERCLA, or a health advisory under the Safe Drinking Water Act when performing removal or remediation actions of PFOS or PFOA contamination from Department of Defense or National Guard activities found in drinking water or in groundwater that is not currently used for drinking water.

Section 322—Review and Guidance Relating to Prevention and Mitigation of Spills of Aqueous Film-Forming Foam

This section would require the Secretary of Defense to promulgate guidance on the prevention and mitigation of spills of aqueous film-forming foam within 180 days of the date of the enactment of this Act.

Section 323—Budget Information for Alternatives to Burn Pits

This section would require the Secretary of Defense to include a budget line item for alternatives to burn pits.

Section 324—Establishment of Emissions Control Standard Operating Procedures

This section would require the Secretary of Defense to conduct a review of electromagnetic spectrum emissions control (EMCON) standard operating procedures. It would further mandate that each military department establish standard operating procedures for EMCON. In addition, it would require a report within 1 year on the Department of Defense's implementation of these provisions.

Section 325—Long-Duration Demonstration Initiative and Joint Program

This section would require the Department of Defense to establish a demonstration program with the Department of Energy with the aim of developing long-duration energy storage technologies.

Section 326—Pilot Program on Use of Sustainable Aviation Fuel

This section would require the Department of Defense to conduct a pilot program on the use of 10 percent blend sustainable aviation fuel at two geographically diverse locations by 2028.

Section 327—Joint Department of Defense and Department of Agriculture Study on Bioremediation of PFAS Using Mycological Organic Matter

This section would require the Secretary of Defense and the Secretary of Agriculture to jointly carry out a study on bioremediation of PFAS using mycological organic matter.

SUBTITLE C—LOGISTICS AND SUSTAINMENT

Section 341—Mitigation of Contested Logistics Challenges of the Department of Defense through Reduction of Operational Energy Demand

This section would require the Department of Defense to establish a contested logistics working group for the purpose of mitigating energy-related contested logistics challenges.

Section 342—Global Bulk Fuel Management and Delivery

This section would amend subchapter 3 of chapter 173 of title 10, United States Code, by adding a new section that would direct the Secretary of Defense to designate a combatant command to be responsible for global bulk fuel management and delivery. This section also would direct a strategy on global bulk fuel management and delivery.

Section 343—Comptroller General Annual Reviews of F-35 Sustainment Efforts

This section would direct the Comptroller General of the United States to conduct an annual review of F-35 sustainment efforts, provide annual briefings to the House Committee on Armed Services not later than March 1 of each year of 2022, 2023, 2024, and 2025, and annual reports at a time agreed upon by the Comptroller General and the House Committee on Armed Services.

Section 344—Pilot Program on Biobased Corrosion Control and Mitigation

This section would require the Secretary of Defense to create a 1-year pilot program to test the use of covered biobased solutions as alternatives to current solutions for the control and mitigation of corrosion. Upon completion of the pilot program, the Secretary shall develop recommendations for deployment throughout the Department.

Section 345—Pilot Program on Digital Optimization of Organic Industrial Base Maintenance and Repair Operations

This section would require that the Secretary of Defense initiate a pilot program under which the Secretary shall provide for the

digitization of the facilities and operations of at least one government-owned and operated military depot.

Section 346—Pilot Program on Implementation of Mitigating Actions to Address Vulnerabilities to Critical Defense Facilities and Associated Defense Critical Electric Infrastructure

This section would authorize the Secretary of Defense in coordination with the Secretary of Energy to conduct a pilot program to mitigate vulnerabilities in defense critical electric infrastructure.

Section 347—Report and Certification Requirements regarding Sustainment Costs for F-35 Aircraft Program

This section would require a report and certification regarding F-35 program sustainment costs, and would prohibit the Secretary of Defense from entering into a Performance-Based Logistics sustainment contract before certifying that the program met sustainment cost reduction metrics and that the contract would further reduce sustainment costs.

SUBTITLE D—RISK MITIGATION AND SAFETY IMPROVEMENT

Section 351—Treatment of Notice of Presumed Risk Issued by Military Aviation and Installation Assurance Clearinghouse for Review of Mission Obstructions

This section would amend section 183a of title 10, United States Code, to clarify the treatment of notices of presumed risk.

Section 352—Establishment of Joint Safety Council

This section would amend chapter 7 of title 10, United States Code, to establish a Joint Safety Council within the Office of the Deputy Secretary of Defense.

Section 353—Mishap Investigation Review Board

This section would direct the Deputy Secretary of Defense to develop a proposal for the establishment of a Mishap Investigation Review Board to provide oversight and independent review of safety and legal mishap investigations.

Section 354—Implementation of Comptroller General Recommendations on Preventing Tactical Vehicle Training Accidents

This section would require the Secretaries of the Army and Marine Corps to develop a plan to address the recommendations contained in the Comptroller General report entitled “Army and Marine Corps Should Take Additional Actions to Mitigate and Prevent Training Accidents.”

Section 355—Pilot Program for Tactical Vehicle Safety Data Collection

This section would require the Secretary of the Army and the Secretary of the Navy to carry out a pilot program to evaluate the feasibility of using data recorders to monitor, assess, and improve the readiness and safety of military tactical vehicles.

SUBTITLE E—REPORTS

Section 361—Inclusion of Information regarding Borrowed Military Manpower in Readiness Reports

This section would amend section 482 of title 10, United States Code, to require that semiannual readiness reports to Congress include information on the extent to which service members are diverted to perform functions previously performed by civilian employees or contractors.

Section 362—Annual Report on Missing, Lost, and Stolen Weapons, Large Amounts of Ammunition, Destructive Devices, and Explosive Material

This section would add the Bureau of Alcohol, Tobacco, Firearms and Explosives to an existing reporting requirement and adds an annual report to Congress on missing, lost, or stolen weapons, large amounts of ammunition, destructive devices, and explosive material for the previous year.

Section 363—Annual Report on Material Readiness of Navy Ships

This section would amend section 8674 of title 10, United States Code, to make permanent the requirement for an annual report to the congressional defense committees on the material readiness of Navy ships.

Section 364—Strategy and Annual Report on Critical Language Proficiency of Special Operations Forces

This section would require the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict (ASD SO/LIC), in coordination with the Commander, U.S. Special Operations Command, to prepare a 5-year strategy on current and planned efforts to recruit, select, and train special operations forces (SOF) in critical languages relevant to strategic competition. Further, this section would also direct ASD SOLIC to submit an annual report on the assessed proficiency of SOF in those critical languages, due not later than 1 year after the submission of the strategy.

Section 365—Report and Briefing on Approach for Certain Properties Affected by Noise from Military Flight Operations

This section would require the Secretary of Defense to provide a briefing and report on the use and applicability of the Air Installations Compatible Use Zones program to support noise mitigation and insulation efforts.

Section 366—Study on Use of Military Resources to Transport Certain Individuals and Effect on Military Readiness

This section would direct the Secretary of Defense to conduct a study to determine the effect on readiness of using Department of Defense resources to transport individuals who have crossed the southern border of the United States without authorization and submit a report to Congress on such study.

SUBTITLE F—OTHER MATTERS

Section 371—Budget Justification for Operation and Maintenance

This section would direct the Secretary of Defense, in consultation with the Secretary of each military department, to provide budget justification details for Operation and Maintenance accounts, including information displayed by sub-activity group, as detailed in the Future Years Defense Program, as well as material readiness objectives and any associated risks to the supply chain.

Section 372—Improvements and Clarifications Related to Military Working Dogs

This section would amend section 2583 of title 10, United States Code, and direct that retired military working dogs shall be transferred without charge to the adoption recipients. This section would also amend section 708 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328) and direct the Joint Trauma Education and Training Directorate to consider military working dogs and veterinary services in its research and planning efforts.

Section 373—Management of Fatigue among Crew of Naval Surface Ships and Related Improvements

This section would require the Secretary of the Navy to implement the recommendations contained in the Comptroller General of the United States report entitled “Navy Readiness: Additional Efforts Are Needed to Manage Fatigue, Reduce Crewing Shortfalls, and Implement Training.”

Section 374—Authority to Establish Center of Excellence for Radar Systems and Complementary Workforce and Education Programs

This section would permit the Secretary of Defense to establish a Center of Excellence to further the expertise of the Department of Defense in the repair, sustainment, and support of radar systems.

Section 375—Pilot Program on Military Working Dog and Explosives Detection Canine Health and Excellence

This section would require the Secretary of Defense to carry out a pilot program to ensure the health and excellence of explosives detection military working dogs.

TITLE IV—MILITARY PERSONNEL
AUTHORIZATIONS

LEGISLATIVE PROVISIONS

SUBTITLE A—ACTIVE FORCES

Section 401—End Strengths for Active Forces

This section would authorize the following end strengths for Active Duty personnel of the Armed Forces as of September 30, 2022:

Sec. 401.

Service	FY 2021 Authorized	FY 2022		Change from	
		Request	Committee Recom- mendation	FY 2022 Request	FY 2021 Authorized
Army	485,900	485,000	485,000	0	- 900
Navy	347,800	346,200	346,200	0	- 1,600
USMC	181,200	178,500	178,500	0	- 2,700
Air Force	333,475	328,300	328,300	0	- 5,175
Space Force	6,434	8,400	8,400	0	1,966
DOD Total	1,354,809	1,346,400	1,346,400	0	- 8,409

Section 402—Revisions in Permanent Active Duty End Strength Minimum Levels

This section would establish new minimum Active Duty end strengths for the Army, Navy, Marine Corps, Air Force, and Space Force as of September 30, 2022. The committee recommends 485,000 as the minimum Active Duty end strength for the Army, 346,200 as the minimum Active Duty end strength for the Navy, 178,500 as the minimum Active Duty end strength for the Marine Corps, 328,300 as the minimum Active Duty end strength for the Air Force, and 8,400 as the minimum Active Duty end strength for the Space Force.

SUBTITLE B—RESERVE FORCES

Section 411—End Strengths for Selected Reserve

This section would authorize the following end strengths for Selected Reserve personnel, including the end strength for Reserves on Active Duty in support of the Reserves, as of September 30, 2022:

Sec. 411.

Service	FY 2021 Authorized	FY 2022		Change from	
		Request	Committee Recom- mendation	FY 2022 Request	FY 2021 Authorized
Army National Guard	336,500	336,000	336,000	0	-500
Army Reserve	189,800	189,500	189,500	0	-300
Navy Reserve	58,800	58,600	58,600	0	-200
Marine Corps Reserve	38,500	36,800	36,800	0	-1,700
Air National Guard	108,100	108,300	108,300	0	200
Air Force Reserve	70,300	70,300	70,300	0	0
DOD Total	802,000	799,500	799,500	0	-2,500
Coast Guard Reserve	7,000	7,000	7,000	0	0

Section 412—End Strengths for Reserves on Active Duty in Support of the Reserves

This section would authorize the following end strengths for Reserves on Active Duty in support of the Reserves as of September 30, 2022:

Sec. 412.

Service	FY 2021 Authorized	FY 2022		Change from	
		Request	Committee Recom- mendation	FY 2022 Request	FY 2021 Authorized
Army National Guard	30,595	30,845	30,845	0	250
Army Reserve	16,511	16,511	16,511	0	0
Navy Reserve	10,215	10,293	10,293	0	78
Marine Corps Reserve	2,386	2,386	2,386	0	0
Air National Guard	25,333	26,661	26,661	0	1,328
Air Force Reserve	5,256	6,003	6,003	0	747
DOD Total	90,296	92,699	92,699	0	2,403

Section 413—End Strengths for Military Technicians (Dual Status)

This section would authorize the following end strengths for military technicians (dual status) as of September 30, 2022:

Sec. 413.

Service	FY 2021 Authorized	FY 2022		Change from	
		Request	Committee Recom- mendation	FY 2022 Request	FY 2021 Authorized
Army National Guard	22,294	22,294	22,294	0	0
Army Reserve	6,492	6,492	6,492	0	0
Air National Guard	10,994	9,885	9,885	0	- 1,109
Air Force Reserve	7,947	7,111	7,111	0	- 836
DOD Total	47,727	45,782	45,782	0	- 1,945

Section 414—Maximum Number of Reserve Personnel Authorized To Be on Active Duty for Operational Support

This section would authorize, as required by section 115(b) of title 10, United States Code, the maximum number of Reserve Component personnel who may be on Active Duty or full-time National Guard duty during fiscal year 2022 to provide operational support. The personnel authorized here do not count against the end strengths authorized by section 401 or section 412 of this Act unless the duration on Active Duty exceeds the limitations in section 115(b)(2) of title 10, United States Code.

Sec. 414.

Service	FY 2021 Authorized	FY 2022		Change from	
		Request	Committee Recom- mendation	FY 2022 Request	FY 2021 Authorized
Army National Guard	17,000	17,000	17,000	0	0
Army Reserve	13,000	13,000	13,000	0	0
Navy Reserve	6,200	6,200	6,200	0	0
Marine Corps Reserve	3,000	3,000	3,000	0	0
Air National Guard	16,000	16,000	16,000	0	0
Air Force Reserve	14,000	14,000	14,000	0	0
DOD Total	69,200	69,200	69,200	0	0

Section 415—Accounting of Reserve Component Members Performing Active Duty or Full-Time National Guard Duty Towards Authorized End Strengths

This section would amend the accounting of Reserve Component members performing Active Duty or full-time National Guard duty towards authorized end strengths from 1,095 days out of 1,460 days to 1,825 days out of 2,190 days.

SUBTITLE C—AUTHORIZATION OF APPROPRIATIONS

Section 421—Military Personnel

This section would authorize appropriations for military personnel at the levels identified in the funding table in section 4401 of division D of this Act.

TITLE V—MILITARY PERSONNEL POLICY

ITEMS OF SPECIAL INTEREST

Arlington National Cemetery Burial Policy

The committee is aware of upcoming changes in eligibility for interment at Arlington National Cemetery. The committee is concerned that veterans who previously qualified for in-ground burials at Arlington National Cemetery will be forced to choose between being cremated and being buried somewhere else. The committee directs the Secretary of Defense, in coordination with the Secretary of Veterans Affairs to submit a report to congressional defense committees no later than March 1, 2022, on potential locations of the next national cemetery.

Army Aviation Retention Study

The committee recognizes the importance of the United States Army's aviation mission and corresponding need for strong end strength. United States Army aviators have unique skill sets and provide expertise critical to the service's combat readiness. However, the committee is concerned about the recruitment and retention of qualified pilots and aviation crewmembers and the effect on the Army's ability to conduct worldwide operations. The U.S. Army must work towards retaining these personnel to avoid a shortage of experienced pilots with the technical and tactical knowledge to maintain aviation readiness.

Therefore, the committee directs the Secretary of the Army to conduct a study and to provide a report to the House Committee on Armed Services by December 31, 2021, on necessary efforts to recruit and retain qualified pilots. The study and report shall include information and recommendations based on, but not limited to:

- (1) barriers to successful recruitment of qualified pilots;
- (2) the high operational tempo for Army pilots and its effects on training and readiness, as well as effects on military families;
- (3) pay and bonus structures for Army pilots and aviation Military Occupational Specialties;
- (4) the length and structure of aviation contract obligations; and

(5) existing retention tools outside of monetary bonuses such as improved quality of life initiatives.

Artificial Intelligence and Personnel Talent Management

The committee recognizes the significant resources that all of the services spend in recruiting and retaining talent across their respective enterprises. The committee is aware of capability gaps within the military services in properly identifying the skills and necessary attributes of personnel to optimize their talent pools. Further, the committee acknowledges that artificial intelligence (AI) and other data science innovations can help better align individuals' skills to service requirements with predictable successful outcomes, measured through job performance and retention. The committee recognizes that AI can also improve talent management by creating a rich repository of data that can be used to build a more holistic view of skills obtained throughout a career in military service. The committee believes that the technology can improve force readiness by enhancing recruitment efficiency and increasing retention. Ensuring that military service members are identified for the right missions based on a critical combination of skills and experience will optimize performance and increase mission success. The committee urges the Army and other services to support increased AI investment for talent management and acquisition.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the Committee on Armed Services of the House of Representatives not later than February 1, 2022, on how each of the military services are leveraging commercially available AI platforms that are designed to accurately predict human outcomes and radically improve talent management.

Award of the Prisoner of War Medal

The committee notes the unequal treatment of applicants across the services for award of the Prisoner of War Medal under section 1128(b) of title 10, United States Code, as amended by the National Defense Authorization Act for Fiscal Year 2013 (Public Law 112-239). The Department of the Army specifically has interpreted the statutory requirements in such a narrow way as to block seemingly obvious cases of eligibility, whereas the other service secretaries have implemented the requirements for the award in a much more discretionary fashion as was intended. The committee also understands that not all services have established clear processes for how service members or their next of kin might apply for the Prisoner of War Medal under the provisions of section 1128(b) of title 10, United States Code. The committee encourages the Department of Defense to mandate the sharing of best practices of award criteria across the services. Therefore, the committee directs the Secretaries of the military departments to provide a briefing to the Committee on Armed Services of the House of Representatives not later than March 1, 2022, on the details of the process and criteria by which they consider the award of the Prisoner of War Medal under section 1128(b) of title 10, United States Code.

Briefing on Efforts of Extremist Organizations to Recruit Members of the Armed Forces

The committee directs the Secretary of Defense to provide a briefing not later than March 1, 2022 to the Congressional Defense Committees on all studies, including status reports and initial findings from any ongoing studies, regarding the efforts of extremist organizations to recruit members of the Armed forces (including the reserve components).

Within 180 days of providing this briefing, and provided that the Department of Defense concludes that extremist organizations are attempting to recruit members of the armed forces, the Secretary of Defense shall provide a follow-on briefing to the Congressional Defense Committees regarding how the Department is addressing this threat.

Briefing on Implementation of U.S. Special Operations Command Diversity and Inclusion Strategic Plan

The committee notes the 1999 RAND study on barriers to minority participation in special operations forces. The committee also understands that the U.S. Special Operations Command struggles to build and maintain a diverse and inclusive force. Therefore, the committee directs the Secretary of Defense, in coordination with the Commander, U.S. Special Operations Command, to provide a briefing to the Committee on Armed Services of the House of Representatives, not later than April 1, 2022, to address the following: (1) the specific tools and metrics devised to evaluate the diversity and inclusivity of recruiting within the special operations community; (2) the potential cultural barriers that may prevent those with diverse backgrounds from serving in the special operations community and possible solutions; and (3) whether the special operations community is measuring the right data points to ensure combat effectiveness, and if not, what data points should be measured. The briefing shall include implementation efforts and the milestones to fully realize the Diversity and Inclusion Strategic Plan 2021.

Career Intermission Program Evaluation

The committee is concerned about the perceived or real barriers to service members using the Career Intermission Program to its full potential to benefit service member career choices. Therefore, the committee directs the Secretary of Defense to provide a briefing to the Committee on Armed Services of the House of Representatives not later than February 1, 2022, on the utilization rate of the Career Intermission Program, disaggregated by gender, and the barriers perceived by service members, such as promotion opportunity, that would make them hesitate to use the program.

Comptroller General Review of Navy Ship Manning

The committee notes the Navy's efforts to accurately calculate manpower requirements for surface ships and improve shipboard manning since the fatal ship collisions in 2017. However, as the Government Accountability Office (GAO) reported in May 2021, the Navy's surface fleet manning shortfalls have grown from 6 percent in September 2016 to 15 percent in September 2020 (GAO-21-

366). The committee is concerned that these growing shortfalls are likely contributing to the lack of sleep and extensive fatigue also reported by the GAO, creating unsafe and ineffective operating conditions in the surface fleet. The committee is also concerned that the Navy has not historically authorized billets to required levels. Therefore, the committee directs the Comptroller General of the United States to assess Navy ship manning. The assessment shall include:

(1) the Navy's process for determining the number of authorized billets to meet ship manpower requirements;

(2) the extent to which qualified personnel have been assigned to required billets (referred to as "fit");

(3) the extent to which the Navy is manning ships to required levels; and

(4) any other related matters the Comptroller General considers appropriate.

The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services by April 1, 2022, on preliminary findings and present final results in a format and timeframe agreed to at the briefing.

Defense Prisoner of War and Missing in Action Accounting Agency Forensic Laboratory

The committee acknowledges the important work of the Defense Prisoner of War and Missing in Action Accounting Agency (DPAA) in its mission to provide the fullest possible accounting of personnel missing from past conflicts to their families and the nation. The committee congratulates the Agency for its recent success in the return of remains of sailors and Marines aboard the USS *Oklahoma* who perished during the attack on Pearl Harbor. In particular, the committee commends the exceptional work of the Agency's laboratory personnel at Offutt Air Force Base who, in collaboration with the University of Nebraska-Omaha, performed analyses of more than 13,000 bones and identified 351 individuals from the USS *Oklahoma*.

The committee observes that the Agency's forensic laboratory is currently located in Building 301D on Offutt Air Force Base, an aging facility that also hosts several other missions. The committee notes the historic role of Building 301D as the Martin Bomber Plant during the Second World War and is aware of its more recent utilization as a temporary swing space following the 2019 floods that displaced numerous units and missions on the installation. However, given the age and condition of Building 301D, the committee has concerns regarding the structural integrity, environmental impact, safety, and long-term viability of this facility.

Based on the continuing deterioration of Building 301D, the committee urges the Department of Defense to accelerate planning for the construction and relocation of the Agency's laboratory to a more permanent and purpose-built facility. Therefore, the committee directs the Secretary of Defense to brief the House Committee on Armed Services by March 1, 2022, on the status of planning for a new facility adjacent to Offutt Air Force Base to house the Defense POW/MIA Accounting Agency's forensic laboratory.

Demographics of Drug Testing and Evaluation Programs

The committee is aware of data collected by the Department regarding demographics of the drug testing and evaluation programs of the Armed Forces, including as set forth in the report of the Inspector General of the Air Force titled “Report of Inquiry (S8918P), Independent Racial Disparity Review,” and dated December 2020. The committee is concerned with the racial disparities found in the report regarding random drug test selection, including significant over representation in the random drug test selection of non-commissioned officers and field grade officers and a consistent and statistically relevant over representation of Black service members overall from fiscal year 2015 to fiscal year 2019. The committee further notes a higher positive test rate amongst service members of color and a standard course of action upon a positive test to administratively separate such personnel.

Therefore, the committee directs the Secretary of Defense, in coordination with the Secretaries of the military departments, to provide a report to the House Committee on Armed Services by March 1, 2022, on the feasibility of implementing standard demographic reporting of the drug testing and evaluation programs of each armed force, to include collecting demographics on random test selection, availability for random testing, results of random testing, referrals to investigation, and any other relevant stages of the testing and evaluation program; changes to the program necessary to implement such data collection; impediments to implementing such changes; potential options for mitigating such impediments; and a schedule, including specific milestones, in which the establishment of such standard demographic reporting could be executed.

Enhancing Readiness to Department of Defense Workforce through Technology

The committee notes with grave concern the myriad of issues facing the Department’s workforce. From recent reports of fraud associated with privatized military housing contracts and maintenance to sexual assault and other issues in the ranks. The committee believes the Secretary of Defense must systematically address these workforce issues at the enterprise-level.

As the 2021 Interim Strategic Guidance notes, “for our national security strategy to be effective, it is essential to invest in our national security workforce . . .” The committee believes the Department can better leverage new and emerging technology to understand the challenges in the Department’s workforce. The committee notes technology, such as survey tools powered by artificial intelligence, have been in use within the Department of Defense, including the U.S. Air Force, the U.S. Army Training and Doctrine Command, the Defense Counterintelligence and Security Agency, the Defense Intelligence Agency, the National Aeronautics and Space Administration, and the Joint Artificial Intelligence Center to better understand organizational and workforce challenges. The committee believes such a capability would capture individual inputs and perspectives at scale—thereby providing insight and early warning of systematic issues facing the Department’s workforce and enabling actionable information on what to work on, with whom, and why.

Therefore, the committee directs the Secretary of Defense to submit a report to the congressional defense committees, no later than March 1, 2022, on how the Department of Defense is leveraging new and emerging technologies to understand the needs and readiness of its workforce. The report should include, but not limited to, the following:

- (1) An outline of the various technologies used to understand the challenges of the military and civilian workforces;
- (2) An assessment of how artificial intelligence-powered technology and survey tools could aid in understanding the issues within the Department's workforce, including as an alternative to command climate surveys;
- (3) An outline of the projected programs that will use new and emerging technology to understand the challenges within the Department's workforce; and
- (4) Any other information the Secretary deems relevant.

Enhancing Recruitment and Opportunities for Military Service

The House Committee on Armed Services recognizes that tattoos and body modification for potential enlistees has become a deterrent to meeting recruitment goals in previous years. The committee also recognizes the value of an all-volunteer force and encourages the services to consider updating their recruitment incentives to reflect changing cultural norms and emerging demographics.

As a result, the committee directs the Under Secretary of Defense for Personnel and Readiness to submit a report to the House Committee on Armed Services by March 1, 2022, identifying the exact number of potential enlistees per year that are denied access to the military due to tattoos and body modifications.

The report should include a breakdown by service, by census division, and include a minimum of five (5) years of data. It should assess the manning impact on emergent branches like U.S. Army Cyber and Space Force, qualify the impact on specific career-enhancing jobs like recruiting duty, and compare service policies with those of private sector companies.

Due to the prohibitive cost of tattoo removal, the report should also include an analysis of the benefits of offering tattoo removal as an incentive to meet recruitment goals.

Lastly, the report should explore commercial solutions to remove prohibitive tattoos and body modifications in ineligible candidates otherwise qualified for military service and current service members seeking promotion opportunities.

Identifying the Remains of the Casualties of the USS *Arizona*

The committee recognizes the importance of identifying the 85 sets of remains of the sailors and Marines who perished aboard the USS *Arizona* during the Pearl Harbor attack on December 7, 1941. The committee notes that it is entirely within the capability and capacity of the Defense POW/MIA Accounting Agency (DPAA) to identify the remains of the still unidentified 85 personnel. The committee further notes that our nation owes it to the surviving families of the deceased to identify these remains and finally allow these sailors and Marines to be laid to rest. Therefore, the committee directs the Secretary of the Navy to submit a report to the

Committees of Armed Services of the Senate and House of Representatives by January 31, 2022, on the feasibility and cost associated with identifying these remains. The Secretary shall consult with the private sector in the creation of this report to leverage the most state-of-the-art advancements in applicable technologies to expeditiously bring this effort to completion.

Media Literacy Training

The committee is concerned about the level of media literacy of service members. Therefore, the committee directs the Secretary of Defense to provide a briefing to the Committee on Armed Services of the House of Representatives not later than March 1, 2022, on a strategy to include media literacy, digital literacy, and information literacy as part of regular service member education beginning in basic training and continuing throughout their careers. Additionally, the Secretary will consider the feasibility of making this training available to dependents.

Military Criminal Investigative Training

The committee still needs to understand whether there are any increased costs, gained or lost efficiencies, or capacity limitations that may exist derived from any realignments of current military criminal investigative training. Given the significant organizational changes that the U.S. Army Criminal Investigation Command has undergone in response to the Army's adoption of the Fort Hood Independent Report, the committee encourages the new director of U.S. Army Criminal Investigation Command to review the state of the organization before recommending further significant changes.

National Guard Active Guard Reserve Program

The committee notes that the Army National Guard relies on a percentage of its overall personnel to work in a full-time support capacity to ensure rapid emergency response, provide administrative and logistical execution of training events, and maintain National Guard facilities and community relations and recruitment of members. The number of full-time support personnel is based on the authorized Army National Guard end strength. This number is currently less than 62 percent of what is authorized across the 54 States and territories. The committee is also concerned about multiple consecutive National Guard tours in the National Capital Region. Therefore, the committee directs the Director of the National Guard Bureau, in consultation with the State Adjutants General, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than April 1, 2022, on the National Guard Bureau Title 10 Active Guard and Reserve Program. The specific elements of the report should:

- (1) describe the current composition of the National Guard title 10 program, including the current levels of Army and Air National Guard personnel on Active Duty in support of the Reserves; on title 10 duty in the National Capital Region; on title 10 duty outside of the National Capital Region; and average number of years spent consecutively on title 10 duty.

- (2) assess the feasibility of converting title 10 billets to 3-year nonconsecutive rotational billets between title 32 and title 10 sta-

tus including a recommended timeline of implementation; proposed billets to be converted; criteria used to determine which billets should be converted; effects on State management of officer career progression; and effects on recruiting and retention of the title 32 and title 10 Active Guard Reserve force.

(3) identify the total cost and any barriers to convert 1,000 traditional Guard positions to Active Guard positions every year for the next 10 years, for a total of 10,000 nationwide.

(4) identify any additional legislative language deemed necessary to convert title 10 billets to rotational duty.

National Guard Drill Periods

The committee is concerned that two decades of continual deployment of the National Guard and increasing use of the National Guard for domestic missions including security and more frequent national disaster response, combined with increased drill periods, is exacting a heavier toll on the force and on individual guardsmen than was ever intended. Ignoring or failing to examine this issue and to consider opportunities to mitigate the impact on guardsmen through modifications to drill periods and compensation risks long-term damage to the National Guard and the service it provides to the country.

The committee directs the Chief of the National Guard Bureau to submit a report to the Committees on Armed Services of the Senate and the House of Representatives by February 1, 2022, including, for fiscal years 2019 and 2020, data on the number of guardsmen who were required to drill on more than 10 weekdays during the year; data on the number of guardsmen who were required to drill for more than 38 total days during the year; the distribution of the number of drilling days for guardsmen disaggregated by the 10th, 25th, 50th, 75th, and 90th percentile; and also analyses of the effects of increased mobilization periods and weekday drill periods on National Guard readiness and retention, the adequacy of the current National Guard drill pay structure for drill periods covering weekdays or periods that bring a guardsman's total days drilled above 38 per year, and the impact of potential duty status reform on these issues.

National Guard Force Apportionment

The committee notes that the current process for National Guard Bureau force structure allocation to the States is based on various factors, including sustainability to man, equip, and ready the unit for its Federal mission. However, this apportionment of the Guard does not consider a State's demands for its domestic missions, and how those domestic missions may affect a unit's readiness for the Federal mission.

The committee appreciates the tremendous and extraordinary efforts of the National Guard over the past year that included COVID-19 response, civil unrest, and natural disasters to go along with their regular Federal missions. These deployments in support of civil authorities are a critical component of the Guard mission. However, these domestic missions have put a strain on State Guard bureaus, especially in those States with lower Guard personnel to population ratios. These States must protect a larger por-

tion of their citizens with fewer resources and personnel, meaning greater deployments. The committee is concerned that these increasing domestic deployments may have an impact on recruiting and retaining qualified individuals and on a State's ability to man, equip, and ready a unit for its Federal mission.

Therefore, the committee directs the Secretary of Defense, in coordination with the Chief of the National Guard Bureau, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than March 1, 2022, on how the criteria factors in apportionment of personnel to the States consider a State's demands for its domestic response missions and how those missions affect its readiness for the Federal mission, and whether priority should be given to States meeting their recruitment goals that have the lowest Guard to civilian population ratios and how that may relate to other States' force structure allocation.

Report on a Digital Technical Skills in the Department of Defense

The committee notes the critical need for military personnel skilled in areas related to Artificial Intelligence (AI) and other digital technical related skill areas important to national security. The final report of the National Security Commission on Artificial Intelligence (NSCAI), dated March 1, 2021, stated "national security agencies need more digital experts now or they will remain unprepared to buy, build, and use AI and associated technologies. The talent deficit in the Department of Defense and the Intelligence Community represents the greatest impediment to being AI-ready by 2025. The government needs new talent pipelines, including a United States Digital Service Academy to train current and future employees". Therefore, the committee directs the Secretary of Defense, in coordination with the Secretaries of the military department and the Chairman of the Joint Chiefs of Staff, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives, not later than March 1, 2022, regarding the following:

(1) The military manning requirements and career specialties related to AI, cyber and digital warfare;

(2) An assessment of digital technical fields as defined by the NSCAI which include artificial intelligence, software engineering, electrical science and engineering, computer science, molecular biology, computational biology, biological engineering, cybersecurity, data science, mathematics, physics, human-computer interaction, robotics, and design and any additional fields mentioned in the report;

(3) The future military manning requirements in AI, cyber and digital technical warfare areas as they relate to emerging mission requirements;

(4) The training and education requirements for these types of specialties;

(5) How the Military Service Academies, Senior Military Colleges, War Colleges, Military Post Graduate Institutions and other DoD training and education activities are meeting these mission requirements;

(6) An assessment of the NSCAI report recommendations that create a United States Digital Service Academy;

(7) An assessment of the NSCAI report recommendation related to the emphasis on civil service vs. military service;

(8) An assessment of what portions of the NCSAI recommendations should be considered for potential action by the Department of Defense;

(9) An estimate of the education and training costs related to AI, cyber and digital technical warfare fields over the past 5 years and over the Future Years Defense Program.

Report on Data Compromise and Payday Lending

The committee is concerned that service members may be harmed by pervasive breaches of personal data, including payment card breaches at point of sale and card-not-present transactions, by governments and private-sector entities that have occurred in the United States, as well as the use of payday and title loans with disadvantageous terms. The committee directs the Under Secretary of Defense for Personnel and Readiness to provide a briefing to the House Committee on Armed Services by February 1, 2022, assessing the impact and costs of personal data breaches on military personnel, especially those on Active Duty, and the utilization by military personnel of payday and title loans, including the impact on the financial health of service members and the impact on readiness to the Armed Forces.

Reserve Component Command-Directed Investigations of Sexual Assault

The committee is concerned about the lack of resources available to commanders in the Services' Reserve Components to investigate a sexual assault allegation against a Reserve Component service member when there is not Uniform Code of Military Justice jurisdiction and local law enforcement officials did not investigate the allegation or did not complete an investigation of sufficient thoroughness to inform commanders regarding potential administrative action.

The committee notes that this gap is unique to the Reserve Component context and that the National Guard Bureau has addressed a similar problem by creating an Office of Complex Investigations, which maintains trained and experienced personnel to investigate a sexual assault allegation against a Guardsman at the request of an Adjutant General.

The committee directs the Secretary of Defense, in coordination with each Secretary of a military department, to submit a report to the Committees on Armed Service of the Senate and the House of Representatives by March 1, 2022, that:

(1) identifies resources available to investigate allegations of sexual assault against a Reserve Component service member both on and off-duty;

(2) indicates the policies of the Department and the services related to command-directed investigations pertaining to allegations of sexual assault against a Reserve Component service member;

(3) weighs the costs and benefits of expanding Military Criminal Investigative Organizations' jurisdiction to investigate sexual assault allegations in the Reserve Component that would otherwise be investigated by a command directed investigation;

(4) weighs the costs and benefits of creating a program to provide Reserve Component commanders with access to independent and experienced administrative investigators from outside their commands to investigate sexual assault allegations in the Reserve Component that would otherwise be investigated by a command-directed investigation; and

(5) evaluates any other potential alternatives to command-directed investigations of sexual assault in the Reserve Components that the Secretary considers appropriate.

ROTC Scholarship Funding

The committee recognizes that not all U.S. colleges and universities have the opportunity or resources to host Reserve Officers' Training Corps (ROTC) programs. The committee is concerned that there is limited available information on what schools seek and receive ROTC funding and how that funding is allocated to students. As such, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services by June 30, 2022 evaluating the ROTC scholarship process. The report should include a list of which schools seek and receive ROTC funding, how those schools are chosen, how the amount of funding available through ROTC has changed since 2010, how funding changes have that impacted the ability of students to attend various universities, from what geographic areas are students applying and selected for ROTC scholarships, from what ethnic backgrounds are students applying and subsequently selected, and recommendations for how to expand the ROTC scholarship programs more equitably across U.S. colleges and universities. The report should include input from each of the military services.

Service Commitments for Graduates of Military Service Academies and Professional Athletics

The committee is concerned that the military services have not faithfully enforced the provisions of the cadet and midshipman service agreements that relate to graduates of military service academies who seek employment as professional athletes before completing their military service commitment. The committee notes that Sec. 543 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115—91) required the military services to revise the cadet and midshipman service agreements to include a provision that the cadet or midshipman will not seek release from the commissioned service obligation to obtain employment as a professional athlete following graduation until the cadet or midshipman completes at least two consecutive years of military service. Despite this contractual provision, the Department of Defense has routinely granted waivers to service academy graduates to pursue professional athletics careers before completing any portion of their military service commitment.

The committee notes that, in 2018 (the most recent available data), the cost to taxpayers to produce a single graduate from the military service academies was \$415,208 at the United States Military Academy, \$439,372 at the United States Naval Academy, and \$560,208 at the United States Air Force Academy. Given the significant taxpayer investment in graduates of the military service

academies and the purpose of the academies, which is to produce commissioned officers for the military services, a policy or practice of routinely waiving provisions in the cadet and midshipman service agreements is inconsistent with good stewardship of public funds and contravenes the legislative intent of the statute. The committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and the House of Representatives by March 1, 2022, on the Department's plans to update the current policy, dated November 8, 2019, concerning graduates seeking waivers for participation in professional sports; to enforce cadet and midshipman service agreements as they pertain to seeking employment as a professional athlete; the conditions under which waivers regarding this provision will be considered and approved; and the Department's justification for the value of such waivers to the Department in light of the purpose of the military service academies and the significant taxpayer investment therein.

Small Unit Leadership Training

The committee is concerned that there may be challenges with equipping small unit leaders across the military services with the skills to build trust and enduring relationships with junior service members. The committee also understands the detrimental effect that sexual assault, sexual harassment, extremism, hazing, suicide and other issues have on unit cohesion. Therefore the committee directs the Secretary of Defense, in coordination with the Secretaries of the military departments, to submit a report to the Committee on Armed Services of the House of Representatives not later than February 1, 2022, that provides the following:

- (1) a review of small unit leader training across the military services that highlights challenge areas and opportunities for improvement;
- (2) a taxonomy of training and grid that ties small unit leaders to the issues raised above and any other issues that may affect good order and discipline not herein contained;
- (3) the metrics, both measures of performance and more importantly measures of effectiveness, that lead to changes in behavior;
- (4) the current state of funding and the optimal level of funding that will allow the military services to fully address these training issues;
- (5) desired end state of this training;
- (6) the plan of actions and milestones from each military service that depicts when they will meet desired end state; and
- (7) any additional legislation or policy recommendations that should be considered to ensure transformation and timely implementation.

Training for Military Prosecutors

The committee remains concerned that many military prosecutors lack sufficient training and experience for the increasingly complex cases they are assigned, as discussed in Recommendation 1.4 of the July 1, 2021, report, "Hard Truths and the Duty to Change: Recommendations from the Independent Review Commission on Sexual Assault in the Military."

The committee notes the commitment of the Department of Defense to revise personnel structures to allow for judge advocates to specialize in military justice litigation and that at least one service has already established a military justice specialty track. While these efforts are admirable and will, no doubt, prove beneficial, they do not specifically address the training such personnel receive to best equip them for the challenges of complex litigation.

The committee directs the Secretary of Defense, in coordination with each Secretary of a military department, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives by March 1, 2022, that describes the training plan for military justice practitioners and identifies the plan's costs and benefits.

Using Commercially Available Technology for Sexual Assault Reporting

Eliminating sexual harassment and sexual assault in the military is critical to creating a safe environment for all members of the armed forces. The Committee is concerned by the lack of centralized reporting mechanisms available to victims and survivors within the military services that could give Department leaders a holistic view of the problem as it works toward a solution. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services no later than April 1, 2022 detailing how the Department could develop such tools to accept and track reports of sexual assault and harassment and the ways the Department could leverage commercial technology to develop them.

Wargaming at War Colleges and Military Postgraduate Education Institutions

The committee notes the importance of wargaming as an integral component of military training, education, and research. Wargaming has been an essential tool for military commanders across the tactical, operational, and strategic levels of warfare. It also helps military leaders better understand the range of possible warfighting futures, innovate and express new ideas, challenge current warfighting assumptions, and integrate technologies and capabilities into operations and force structure. However, there appears to be a lack of coordination in the wargaming community and in the Department of Defense's academic institutions, challenges with sharing lessons learned in an agile and adaptive manner, and little coordination to ensure programmatic budget decisions are influenced by these sometime crucial military insights.

Therefore, the committee directs the Secretary of Defense, in coordination with the Secretaries of the military departments and the Chairman of the Joint Chiefs of Staff, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than March 1, 2022, regarding the use of wargaming within the Department of Defense War Colleges and military postgraduate institutions that includes the following:

(1) a description of how and if wargaming is used and how frequently it has been used over the last 10 years;

(2) how wargaming enriches the student learning experiences and how it intersects with Joint Professional Military Education;

(3) how many students and faculty have been exposed to wargaming over the last 10 years;

(4) how are the lessons learned from wargaming captured, disseminated, and integrated;

(5) how much has been spent on wargaming over the last 10 years;

(6) how are wargaming scenarios updated to ensure they continue to meet the challenge of tomorrow's adversary;

(7) how are best practices used to ensure currency, accuracy, and relevance, including the use of classified information, to provide forward-looking war games as instructional tools; and

(8) any recommendations to improve and enhance the use of wargaming at War Colleges and military postgraduate institutions.

Women's Military History Day

The committee recognizes the significance of women's contributions to the United States Armed Forces and broader national security history dating back to the Revolutionary War. Throughout American history, women have served with great distinction in every military conflict since the American Revolution. Despite significant challenges, female service members persevered and remain integral to the global dominance of the U.S. military. The committee acknowledges the courage and sacrifices of trailblazing women, such as Loretta Perfectus Walsh, the first woman to formally enlist in the U.S. military and break the gender barrier. These courageous women have inspired generations of American women to serve, and demonstrated tremendous valor, dedication, professionalism, and willingness to sacrifice for the nation. The committee strongly encourages the Department of Defense to select a dedicated day to honor the pivotal role of these selfless women, and all of those who have subsequently served.

World War I Medal of Honor Recipients Report

The committee appreciates the Department's efforts to review the service records of certain World War I veterans for potential eligibility for a posthumously awarded Medal of Honor. However, it is imperative that Congress ensures progress is made to honor these veterans for their valor. As such, the committee directs the Secretary of Defense to provide a report to the House Committee on Armed Services no later than March 1, 2022, on the status of Medal of Honor reviews for veterans who participated in World War I, particularly for veterans of African American, Asian American, Hispanic American, and Jewish American descent.

LEGISLATIVE PROVISIONS

SUBTITLE A—RESERVE COMPONENT MANAGEMENT

Section 501—Grade of Certain Chiefs of Reserve Components

This section would authorize the Chief of each service Reserve Component be in the grade of three-star officer.

Section 502—Grade of Vice Chief of the National Guard Bureau

This section would authorize the Vice Chief of the National Guard Bureau to be appointed to serve in the grade of general.

Section 503—Prohibition on Private Funding for Interstate Deployment of National Guard

This section would prohibit private funds from being used to fund any State's National Guard deployment in another State, except for natural disaster emergencies.

Section 504—Requirement of Consent of the Chief Executive Officer for Certain Full-Time National Guard Duty Performed in a State, Territory, or the District of Columbia

This section would require the consent of the chief executives of both the sending State or territory and receiving State or territory, should the President deploy National Guard units out of State under section 502 (f) of title 32, United States Code.

Section 505—Continued National Guard Support for FireGuard Program

This section would require the Secretary of Defense to continue supporting the FireGuard program until at least September 30, 2026.

Section 506—Study on Reapportionment of National Guard Force Structure Based on Domestic Responses

This section would direct the Secretary of Defense to conduct a study to determine whether to reapportion the force structure of the National Guard based on wartime and domestic response requirements.

Section 507—Report on Feasibility and Advisability of Including Cybersecurity Operations and Missions to Protect Critical Infrastructure by Members of the National Guard in Connection with Training or Other Duty

This section would mandate a report by the Secretary of Defense within 1 year after the date of the enactment of this Act on the feasibility and advisability of treating cyberspace operations as a matter of training for members of the National Guard at the request of the Governor of the State concerned.

Section 508—Access to Tour of Duty System

This section would direct the Secretary of the Army to ensure that a member of the Reserve Components of the Army may access the Tour of Duty system using a private internet-enabled device.

SUBTITLE B—GENERAL SERVICE AUTHORITIES AND MILITARY RECORDS

Section 511—Prohibition on Commissioning or Enlistment in the Armed Forces of an Individual Convicted of a Felony Hate Crime

This section would prevent individuals who are convicted of a hate crime from commissioning or enlisting in the Armed Forces.

Section 512—Reduction in Service Commitment Required for Participation in Career Intermission Program of a Military Department

This section would amend section 710 of title 10, United States Code, to reduce the commitment required for participation in the Career Intermission Program.

Section 513—Modernization of the Selective Service System

This section would modernize the Selective Service System to ensure that the Selective Service System is prepared to support the mobilization needs of the Department of Defense if the all-volunteer model is no longer able to recruit enough people during a time of national crisis.

Section 514—Improvements to Military Accessions in Armed Forces under the Jurisdiction of the Secretaries of the Military Departments

This section would require the Secretary concerned to take directed steps to improve the military accessions process of their service.

Section 515—Authorization of Permissive Temporary Duty for Wellness

This section would authorize a service member to take not more than 2 weeks of permissive temporary duty each year to attend a seminar, retreat, workshop, or outdoor recreational therapy event hosted by a non-profit that focuses on psychological, physical, spiritual, or social wellness.

Section 516—Required Staffing of Administrative Separation Boards

This section would ensure all administrative separation boards have a recorder and legal advisor. This section would also require the recorder to be a legal officer under the authority of the staff judge advocate for the separation authority.

Section 517—Administrative Separation: Miscellaneous Authorities and Requirements

This section would require the Secretaries of the military departments to prescribe regulations which permit the Secretary to characterize an administrative discharge, considered by an administrative separation board under any conditions (including other than honorable) notwithstanding the recommendation of the administrative separation board. This section would also allow an individual

subject to a separation board to request that at least one voting member of the board be of the same gender, race, or ethnicity.

Section 518—Prohibition on Algorithmic Career Termination

This section would prohibit the sole use of automated algorithmic, mathematical, or other analytic tools used in the evaluation of publicly available social media posts or other publicly available online activity attributable to such member for discipline unless the Secretary concerned determines an imminent threat of physical violence exists.

Section 519—Prohibition on Discipline against a Member Based on Certain Social Media

This section would prohibit funds authorized to be appropriated by this Act to be used to subject a member of the Armed Forces under the jurisdiction of a Secretary of a military department to discipline of any kind solely based on a comment, post, or other activity originating from a third party regarding a political matter on an online account, forum, or other electronic means owned, controlled, or operated by the member.

Section 519A—Command Oversight of Military Privatized Housing as Element of Performance Evaluations

This section would require that military privatized housing oversight is documented on the performance evaluation of an individual responsible for such oversight.

Section 519B—Feasibility Study on Establishment of Housing History for Members of the Armed Forces Who Reside in Housing Provided by the United States

This section would direct the Department of Defense to submit a report on a feasibility study of providing housing history statements to service members in Department-provided housing, privatized housing, and economy housing so they can prove their tenant history to future landlords.

Section 519C—Seaman to Admiral-21 Program: Credit towards Retirement

This section would authorize the Secretary of the Navy to include time spent in a baccalaureate degree program when computing years of service and retired or retainer pay for certain participants in the Seaman to Admiral-21 program during fiscal years 2010 through 2014.

Section 519D—Progress Report on Implementation of GAO Recommendations Regarding Career Paths for Surface Warfare Officers of the Navy

This section would require the Secretary of the Navy to submit a report to the congressional defense committees on the progress of implementing the recommendations of the Government Accountability Office report titled “Navy Readiness: Actions Needed to Evaluate and Improve Surface Warfare Officer Career Path” (GAO-21-168).

Section 519E—Independent Assessment of Retention of Female
Surface Warfare Officers

This section would require the Secretary of Defense to enter into a contract with a nonprofit entity or a federally funded research and development center to conduct research and analysis on the gender gap in retention of surface warfare officers in the Navy.

SUBTITLE C—MILITARY JUSTICE AND OTHER LEGAL MATTERS

Section 521—Rights of the Victim of an Offense under the Uniform
Code of Military Justice

This section would require the Secretary of Defense to establish a uniform policy for the sharing of information relating to the victim of an offense with a Special Victims' Counsel or Victims' Legal Counsel representing such victim. The information would include recorded statements of the victim to investigators, the record of any forensic examination of the person or property of the victim, and any other personal or medical record of the victim that is in the possession of investigators or the government.

Section 522—Commanding Officer's Non-Judicial Punishment

This section would require a commander to consult with a legal officer before imposing nonjudicial punishment and the subject of nonjudicial punishment must have the opportunity to meet with counsel prior to the imposition of nonjudicial punishment unless an exception applies.

Section 523—Selection Process for Members to Serve on Courts-
Martial

This section would allow for the randomized selection of panel members to serve on courts-martial.

Section 524—Petition for DNA Testing under the Uniform Code of
Military Justice

This section would permit an accused sentenced to imprisonment or death to petition the Judge Advocate General to order DNA testing of specific evidence if the Judge Advocate General finds that petition meets certain criteria.

Section 525—Punitive Article on Violent Extremism

This section would create a punitive article on violent extremism in the Uniform Code of Military Justice.

Section 526—Clarifications of Procedure in Investigations of Per-
sonnel Actions Taken against Members of the Armed Forces in
Retaliation for Protected Communications

This section would clarify procedures in investigation of personnel actions taken against service members in retaliation for protected communications.

Section 527—Activities to Improve Family Violence Prevention and Response

This section would examine the staffing levels of family advocacy programs and the measures of effectiveness for family violence prevention and response programs.

Section 528—Mandatory Notification of Members of the Armed Forces Identified in Certain Records of Criminal Investigations

This section would require military criminal investigative organizations to notify a service member and former service members (including the Reserve Component) when they have been designated, or have been previously designated, as a suspect in a case in any official investigative report, and provide instructions on how to appeal the decision.

Section 529—Authority of Military Judges and Military Magistrates to Issue Military Court Protective Orders

This section would permit military judges and military magistrates to issue military court protective orders.

Section 529A—Countering Extremism in the Armed Forces

This section would require the Secretary of Defense to provide a definition of extremism within 60 days. This section would also create the Office of Countering Extremism within the Department of Defense; provide for training and education on extremism; ensure data collection on extremist activities; and prescribe reporting requirements.

Section 529B—Reform and Improvement of Military Criminal Investigative Organizations

This section would require the military services to reform their criminal investigative organizations consistent with the guidance provided and submit a report through the Secretary of Defense to the Committees on Armed Services of the Senate and the House of Representatives not later than 1 year after the date of the enactment of this Act. This section would also prohibit the Department of Defense from changing the locations of military criminal investigative training until the implementation plan for reforming military criminal investigative organizations is submitted to Congress and the Department of Defense provides 60 days' notice of its intent to move such training.

Section 529C—Measures to Improve the Safety and Security of Members of the Armed Forces

This section would improve the safety and security of service members and the processes related to missing service members.

Section 529D—Distribution of Information on the Availability of Civilian Victim Services

This section would require the Secretary of Defense to require each military legal service provider to provide, to each victim referred to such provider, a list of approved civilian victim service or-

ganizations from which the victim may seek legal assistance, legal representation, or other related services. This section also would require the Sexual Assault Prevention and Response Office of the Department of Defense to carry out activities to ensure the widespread distribution, throughout the Department, of information on the availability of services from civilian victim service organizations.

Section 529E—Report on Mandatory Restitution

This section would require the Secretary of Defense to submit to the Committees on Armed Services of the Senate and the House of Representatives a report on the Department's progress in evaluating the feasibility and advisability of authorizing mandatory restitution.

SUBTITLE D—IMPLEMENTATION OF RECOMMENDATIONS OF THE INDEPENDENT REVIEW COMMISSION ON SEXUAL ASSAULT IN THE MILITARY

Section 531—Short Title

This section would cite this subtitle as the IRC implementation Act of 2021”.

Part 1—Special Victim Prosecutors and Special Victim Offenses

Section 532—Special Victim Prosecutors

This section would create one O6 special victim prosecutor for each Armed Force appointed by the appropriate service secretary as well as such number of special victim prosecutors as appropriate to assist the special victim prosecutor. This section would establish the qualifications for the special victim prosecutors and the assistant special victim prosecutors. This section would also establish the roles and responsibilities for the special victim prosecutors and the assistant special victim prosecutors.

Section 533—Department of Defense Policies with Respect to Special Victim Prosecutors and Establishment of Offices of Special Victim Prosecutors within Military Departments

This section would require the Secretary of Defense to establish policies with the appropriate mechanisms and procedures that the Secretaries of the military departments to guide the establishment and operation of each Office of the Special Victim Prosecutors. This section would ensure the special victim prosecutor is under the sole jurisdiction of the Secretary concerned and enables the Judge Advocate General of a military department to assign as many assistant special victim prosecutors as needed.

Section 534—Definitions of Military Magistrate, Special Victim Offense, and Special Victim Prosecutor

The section would define military magistrate, special victim offense, and special victim prosecutor.

Section 535—Clarification Relating to Who May Convene Courts-Martial

This section would amend section 822(b) of title 10, United States Code (article 229b of the Uniform Code of Military Justice) to clarify who may convene special and general courts-martial.

Section 536—Detail of Trial Counsel

This section would amend section 827 of title 10, United States Code (article 27 of the Uniform Code of Military Justice) to require a special victim prosecutor or assistant special victim prosecutor to be detailed to special and general courts-martial referred by a special victim prosecutor.

Section 537—Preliminary Hearing

This section would amend section 832 of title 10, United States Code (article 32 of the Uniform Code of Military Justice) to require a special victim prosecutor to appoint a military judge or military magistrate as the hearing officer for a preliminary hearing for all cases where a special victim prosecutor is exercising their authority.

Section 538—Advice to Convening Authority before Referral for Trial

This section would amend section 834 of title 10, United States Code (article 34 of the Uniform Code of Military Justice) to permit referral of charges and specifications over which a special victim prosecutor exercises authority by only the special victim prosecutor or by the convening authority where the charges and specifications do not allege a special victim offense or where a special victim declines to refer charges.

Section 539—Former Jeopardy

This section would amend section 844(c) of title 10, United States Code (article 44(c) of the Uniform Code of Military Justice) by inserting “or the special victim prosecutor after the convening authority” each place that it appears.

Section 539A—Plea Agreements

This section would amend subsection (a) of section 853a of title 10, United States Code (article 53a of the Uniform Code of Military Justice) by permitting special victim prosecutors to enter into plea agreements with respect to charges and specifications referred to court-martial by a special victim prosecutor.

Section 539B—Determinations of Impracticality of Rehearing

This section would amend section 865(e)(3)(B) of title 10, United States Code (article 65(e)(3)(B) of the Uniform Code of Military Justice) by permitting special victim prosecutors to determine whether a rehearing is impractical and dismiss charges if the case was referred to trial by a special victim prosecutor.

Section 539C—Punitive Article on Sexual Harassment

This section would amend subchapter X of chapter 47 of title 10, United States Code (the Uniform Code of Military Justice), by creating a new article (120d) criminalizing sexual harassment.

Section 539D—Clarification of Applicability of Domestic Violence and Stalking to Dating Partners

This section would amend section 928(b) of title 10, United States Code (article 128b of the Uniform Code of Military Justice) by striking “any person” and inserting “a dating partner” at each place it appears. Additionally, this section would define the terms dating partner, immediate family, and intimate partner as the meaning in section 930 of title 10, United States Code (article 130 of the Uniform Code of Military Justice). This section would also amend section 930 of title 10, United States Code (article 130; stalking) to include the term dating partner as defined.

Section 539E—Effective Date

This section would establish an effective date for 2 years after the date of enactment of this Act unless otherwise specified.

Part 2—Sentencing Reform

Section 539F—Sentencing Reform

This section would amend section 853 of title 10, United States Code (article 53 of the Uniform Code of Military Justice) and except in the case of capital offenses, require judge-alone if an accused is convicted by a general or special court-martial. Additionally, this section would establish a Military Sentencing Parameters and Criteria Board to determine sentencing parameters and criteria for the military judge to consider in determining appropriate sentences.

Part 3—Reports and Other Matters

Section 539G—Report on Modification of Disposition Authority for Offenses Other than Special Victim Offenses

This section would require the Secretary of Defense to submit a report on the feasibility, advisability, and potential effects of modifying chapter 47 of title 10, United States Code, to require that determinations as to whether to prefer or refer charges for trial by court-martial for offenses other than special victim offenses should be made by an individual outside the chain of command.

Section 539H—Report on Implementation of Certain Recommendations of the Independent Review Commission on Sexual Assault in the Military

This section would require the Department of Defense to provide a report on the following lines of effort from the Independent Review Commission on Sexual Assault in the Military: Line of Effort 1: Accountability; Line of Effort 2: Prevention; Line of Effort 3: Climate and Culture; and Line of Effort 4: Victim Care and Support.

Section 539I—Report on Implementation of Recommendations and Other Activities to Address Racial, Ethnic, and Gender Disparities in the Military Justice System

This section would require the Secretary of Defense to report on the Department’s efforts to implement the recommendations from the May 2019 report of the Government Accountability Office titled: “Military Justice: DOD and the Coast Guard Need to Improve Their Capabilities to Assess Racial and Gender Disparities.”

SUBTITLE E—OTHER SEXUAL ASSAULT-RELATED MATTERS

Section 541—Independent Investigation of Complaints of Sexual Harassment

This section would require independent investigations of sexual harassment complaints outside the chain of command of the subject and victim.

Section 542—Modification of Notice to Victims of Pendency of Further Administrative Action Following a Determination Not to Refer to Trial by Court-Martial

This section would strike “alleged sexual assault” and insert “an alleged sex-related offense” as defined in section 1044e(h) of title 10, United States Code, and require commanders to notify victims of sex-related offenses of the outcomes of administrative actions.

Section 543—Modifications to Annual Report Regarding Sexual Assaults Involving Members of the Armed Forces

This section would extend the reporting requirement of section 1631 of the Ike Skelton National Defense Authorization Act for Fiscal Year 2011 (Public Law 111–383) for 5 years and require the annual report to include the race and ethnicity of the victim and accused.

Section 544—Civilian Positions to Support Special Victims’ Counsel

This section would permit the Secretary of a military department to establish one or more civilian positions within each office of the Special Victims’ Counsel under the jurisdiction of such Secretary to provide support to Special Victims’ Counsel and to ensure continuity.

Section 545—Feasibility Study on Establishment of Clearinghouse of Evidence-Based Practices to Prevent Sexual Assault, Suicide, and Other Harmful Behaviors among Members of the Armed Forces and Military Families

This section would direct the Secretary of Defense to study the feasibility of establishing a single, centralized clearinghouse of evidence-based practices supporting military service members and their families’ health and well-being.

SUBTITLE F—MEMBER EDUCATION, TRAINING, AND TRANSITION

Section 551—Training on Consequences of Committing a Crime in Preseparation Counseling of the Transition Assistance Program

This section would require preseparation training regarding the consequences to a member who is convicted of a crime, specifically regarding the loss of benefits from the Federal Government to such a member.

Section 552—Participation of Members of the Reserve Components of the Armed Forces in the SkillBridge Program

This section would authorize members of the Reserve Component of the Armed Forces to participate in the SkillBridge program of the Department of Defense.

Section 553—Expansion and Codification of Matters Covered by Diversity Training in the Department of Defense

This section would require that the Secretary of a military department conduct ongoing training programs regarding human relations, diversity, equity, and inclusion for all covered individuals under the jurisdiction of the Secretary of a military department. This section would also inform potential military members of the armed services of the military oath and responsibilities under it.

Section 554—Expansion of Junior Reserve Officers' Training Corps Program

This section would authorize the Secretary of Defense to expand the Junior Reserve Officers' Training Corps (JROTC) Program curriculum and increase the number of JROTC units, and would require a report on the JROTC program.

Section 555—Defense Language Institute Foreign Language Center

This section would amend section 2168 of title 10, United States Code, to permit the Defense Language Institute to confer Bachelor degrees, in addition to Associate degrees, to graduates that meet the appropriate requirements for that degree.

Section 556—Allocation of Authority for Nominations to the Military Service Academies in the Event of the Death, Resignation, or Expulsion From Office of a Member of Congress

This section would authorize an alternative nomination allocation in the event of the death, resignation, or expulsion of a Member of Congress.

Section 557—Votes Required to Call a Meeting of the Board of Visitors of a Military Service Academy

This section would authorize a majority of the Board of Visitors of each of the three military service academies to call an official meeting of the Board at any time.

Section 558—United States Naval Community College

This section would establish the United States Naval Community College (USNCC) under the Department of the Navy and would provide the USNCC the authority to hire civilian faculty and award degrees.

Section 559—Codification of Establishment of United States Air Force Institute of Technology

This section would provide the authority for the United States Air Force Institute of Technology (AFIT) in title 10, United States Code, codifying AFIT's existing role to serve both the Air Force and the Space Force.

Section 559A—Clarifications regarding Scope of Employment and Reemployment Rights of Members of the Uniformed Services

This section would amend title 38, United States Code, to clarify the scope of procedural rights of members of the uniformed services with respect to their employment and reemployment rights.

Section 559B—Clarification and Expansion of Prohibition on Gender-Segregated Training in the Marine Corps

This section would further specify the level of gender integration required for Marine Corps enlisted and officer training.

Section 559C—Requirement to Issue Regulations Ensuring Certain Parental Guardianship Rights of Cadets and Midshipmen

This section would require the Department of Defense to issue regulations ensuring certain parental guardianship rights of cadets and midshipmen.

Section 559D—Defense Language Continuing Education Program

This section would require the Under Secretary of Defense for Personnel and Readiness to coordinate with the Director of the Defense Intelligence Agency to designate an executive agent for continuing foreign language training.

Section 559E—Public-Private Consortium to Improve Professional Military Education

This section would authorize the Secretary of Defense to establish and maintain a public-private consortium to improve and broaden professional military education for military officers and civilian employees of the Federal Government.

Section 559F—Standards for Training of Surface Warfare Officers and Enlisted Members

This section would require the Secretary of the Navy to establish standards and procedures by which Navy surface warfare officers and enlisted members may be issued a merchant mariner credential in accordance with part E of subtitle II of title 46, United States Code.

Section 559G—Professional Military Education: Report; Definition

This section would require the Secretary of Defense to review, assess, and standardize the definition of professional military education across the Department of Defense.

Section 559H—Study on Training and Education of Members of the Armed Forces Regarding Social Reform and Unhealthy Behaviors

This section would require a study on training and education of members of the Armed Forces regarding social reform and unhealthy behavior.

SUBTITLE G—MILITARY FAMILY READINESS AND DEPENDENTS' EDUCATION

Section 561—Establishment of Exceptional Family Member Program Advisory Council

This section would establish an Exceptional Family Member Program Advisory Council to better support military families who have members with special needs.

Section 562—Non-Medical Counseling Services for Military Families

This section would provide licensure portability for non-medical counseling services for military families by mental health care providers through the Department of Defense Family Readiness System.

Section 563—Expansion of Support Programs for Special Operations Forces Personnel and Immediate Family Members

This section would provide family support programs for Gold Star family members of special operations forces.

Section 564—Clarification of Qualifications for Attorneys Who Provide Legal Services to Families Enrolled in the Exceptional Family Member Program

This section would clarify the experience required by attorneys supporting Exceptional Family Member Program participants.

Section 565—Improvements to the Exceptional Family Member Program

This section would make improvements to the Exceptional Family Member Program.

Section 566—Database of Next of Kin of Deceased Members of the Armed Forces

This section would direct the Department of Defense to provide unit commanders access to contact information for next of kin of deceased service members of the same unit.

Section 567—Policy Regarding Remote Military Installations

This section would update policies for remote military installations and support services for military families.

Section 568—Feasibility Study on Program for Drop-In Child Care Furnished to Certain Military Spouses at Military Child Development Centers

This section would require a feasibility study on the possibilities of offering a drop-in childcare option for military spouses raising young children alone while their partners are deployed or away for extensive training.

Section 569—Comptroller General of the United States Reports on Employment Discrimination Against Military Spouses by Civilian Employers

This section would direct the Comptroller General of the United States to develop a report on employment discrimination against military spouses in the civilian job market.

Section 569A—Report on Efforts of Commanders of Military Installations to Connect Military Families With Local Entities That Provide Services to Military Families

This section would require the Secretary of Defense to submit a report reviewing if and how installation leadership connect families with local nonprofit and government providers who assist with housing and other wraparound services.

Section 569B—Report on Preservation of the Force and Family Program of United States Special Operations Command

This section would require the Commander, U.S. Special Operations Command, to submit a report on the effectiveness of the Preservation of the Force and Family human performance domains for the entire special operations community, including women and minority communities.

Section 569C—GAO Review of Preservation of the Force and Family Program of United States Special Operations Command

This section would require a comprehensive review of the Preservation of the Force and Family Program by the Comptroller General of the United States.

Section 569D—Continued Assistance to Schools With Significant Numbers of Military Dependent Students

This section would authorize \$50.0 million for the purpose of providing assistance to local educational agencies with military dependent students, and \$20.0 million for local educational agencies eligible to receive a payment for children with severe disabilities.

Section 569E—Verification of Reporting of Eligible Federally Connected Children for Purposes of Federal Impact Aid Programs

This section would direct, on an annual basis, each commander of a military installation under the jurisdiction of the Secretary of

a military department to submit a written certification verifying whether the commander has confirmed the information contained in all impact aid source check forms received from local educational agencies.

SUBTITLE H—DIVERSITY AND INCLUSION

Section 571—Information on Female and Minority Participation in Military Service Academies and the Senior Reserve Officers' Training Corps

This section would amend section 113 of title 10, United States Code, to include information on female and minority participation at the service academies and Senior Reserve Officers' Training Corps.

Section 572—Surveys on Diversity, Equity, and Inclusion and Annual Reports on Sexual Assaults and Racial and Ethnic Demographics in the Military Justice System

This section would modify surveys on diversity, equity, and inclusion; modify and require an annual report on sexual assault; and provide for the collection of racial and ethnic demographics in the military justice system.

Section 573—Amendments to Additional Deputy Inspector General of the Department of Defense

This section would amend section 554(a) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283).

Section 574—Extension of Deadline for GAO Report on Equal Opportunity at the Military Service Academies

This section would extend the deadline for the Comptroller General of the United States report on equal opportunity at the military service academies.

Section 575—GAO Review of Extremist Affiliations and Activity Among Members of the Armed Forces on Active Duty

This section would require the Comptroller General of the United States to perform a review to determine the prevalence of extremist affiliations and activity among members of the Armed Forces on Active Duty.

SUBTITLE I—DECORATIONS AND AWARDS

Section 581—Semiannual Reports Regarding Review of Service Records of Certain Veterans

This section would require the Department of Defense to provide semiannual reports to Congress on the findings from the review of service records of each Asian American and Pacific Islander war veteran who was awarded the Distinguished Service Cross, the Navy Cross, or the Air Force Cross during the Korean War or Vietnam War.

Section 582—Eligibility of Veterans of Operation End Sweep for Vietnam Service Medal

This section would authorize the Secretary concerned to award the Vietnam Service Medal to eligible veterans of Operation End Sweep.

Section 583—Establishment of the Atomic Veterans Service Medal

This section would authorize the establishment of a commemorative Atomic Veterans Service Medal to honor radiation-exposed retired and former members of the Armed Forces.

Section 584—Authorization for Award of the Medal of Honor to Marcelino Serna for Acts of Valor During World War I

This section would authorize the award of the Medal of Honor to Marcelino Serna for Acts of Valor During World War I.

SUBTITLE J—MISCELLANEOUS REPORTS AND OTHER MATTERS

Section 591—Command Climate Assessments: Independent Review; Reports

This section would direct the Secretary of Defense to establish an Independent Command Climate Review Board for each Armed Force.

Section 592—Healthy Eating in the Department of Defense

This section would establish an element of the Department of Defense responsible for implementing a plan to improve access to healthy food on military installations.

Section 593—Plant-Based Protein Pilot Program of the Navy

This section would require a pilot program to provide plant-based protein options to members of the Navy at no less than two naval facilities and would not preclude the consumption of regular meat-based products.

Section 594—Reports on Misconduct by Members of Special Operations Forces

This section would institutionalize reporting requirements for the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict (ASD SO/LIC). The ASD SO/LIC would be required to notify Congress of all instances of misconduct by members of special operations forces. Reporting requirements would remain consistent with the military services in accordance with existing service requirements.

Section 595—Updates and Preservation of Memorials to Chaplains at Arlington National Cemetery

This section would update and preserve memorials to chaplains at Arlington National Cemetery.

TITLE VI—COMPENSATION AND OTHER PERSONNEL BENEFITS

ITEMS OF SPECIAL INTEREST

Assessment of STEM Education in Department of Defense Education Activity Schools

The committee notes that many military children educated through the Department of Defense Education Activity (DODEA) system go on to serve in the military themselves. As part of the effort to build a science, technology, engineering, and mathematics (STEM) talent pipeline for both our uniformed and civilian services, the committee believes that DODEA should invest in STEM education to prepare students for careers in these fields, which are critical to national security. The committee therefore directs the Director of the Department of Defense Education Activity to assess the quality of STEM education programs within the DODEA system relative to best-in-class STEM curricula in U.S. public schools, evaluate the performance of DODEA-educated students on the STEM portion of standardized tests, and develop recommendations for strengthening the STEM curriculum in DODEA schools. The committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services not later than February 1, 2022, on the recommendations and an implementation plan.

Basic Allowance for Housing

The Committee is aware that rental and housing prices in Northwest Florida have, in recent years, spiked dramatically. This has caused significant hardship for junior enlisted military personnel. Due to a lack of on base housing, and tightening of the off base housing market, Basic Allowance for Housing (BAH) has not kept up with property price increases, placing an undue burden on the men and women in uniform and their families. As a result, the Committee understands the Department of Defense (DoD) is currently evaluating a potential BAH increase. Therefore, the Committee directs the Secretary of Defense to provide a briefing to the Committees on Armed Services of the House of Representatives, not later than March 1, 2022, that closely examines the rental properties and BAH rates in Northwest Florida and the surrounding locations, the effect these rates are having on the servicemember and their families in the local area and when the last BAH adjustment was made in this market.

Basic Allowance for Housing Calculation

The committee is concerned that the method of determining the Basic Allowance for Housing (BAH) is outdated and in need of modernization. The committee finds there can be limitations to the Department of Defense's calculations for BAH in rural areas or those with low housing stock. The smaller sample size can make it difficult for the Department to assess the median cost of 30–75 sample housing units. This can result in housing benefits that are lower than the actual area cost of living, causing financial hardship for military members, their families, and veterans accessing this

benefit as part of the Post 9/11 GI Bill. The committee also notes that concerns have been raised regarding BAH's method of calculation having a potential adverse impact on the ability of military privatized housing providers to finance identified housing upgrades.

The committee believes changes should be made to accommodate low housing stock and rural housing supply issues when the Department conducts its Basic Allowance for Housing sampling to improve the accuracy of the calculation and the reality of housing availability and cost in these areas.

Therefore, the committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives not later than February 25, 2022, on whether the process for calculating BAH meets area cost of living in rural military housing areas that did not meet the Department's standard sample size during the most recent assessment, and a plan for making adjustments to the data gathering and calculation process to better meet the needs in these kinds of communities. The report should additionally make available to the committee the details of the overall process and calculation of BAH across the Department of Defense and whether adjustments to the current methodology are necessary to more realistically determine the rates of BAH.

Bereavement Study

The committee notes the seriousness with which the Department of Defense takes the death of any service member and believes that a review of the programs and processes related to this issue is of importance to assure that family members are appropriately cared for during this trying time. Therefore, the committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives, not later than March 1, 2022, on the Department of Defense and military departments' Casualty and Mortuary Affairs programs, including an update on the status and effectiveness of the Gold Star Advocate Program and the status of implementation of Government Accountability Office recommendations (GAO-16-569) designed to enhance the effectiveness of the Gold Star Advocate Program. The report shall include information on the governance of the Casualty Assistance Program, goals and metrics used to track the effectiveness of the program, and information on the implementation of casualty assistance officer training and its effect on the quality of the program.

Child Development Centers

The committee continues to be concerned with the deficit between availability and demand for military child care across Department of Defense installations. As the COVID-19 pandemic has demonstrated, access to child care is vital to military family readiness and quality of life. As such, the committee notes that future resources for, and attention to, childcare services should be prioritized to enable readiness and maintain retention of service members. Accordingly, the Department should consider incentives to encourage military spouses to seek employment as nationally accredited childcare service providers. The committee strongly en-

courages the Department of Defense to continue its efforts to expand access to child care; provide quality, affordable services; improve children's educational programs; and incentivize employment opportunities to attract qualified childcare staff.

Childcare Best Practices

The committee continues to be concerned that military families continue to face shortages in the availability of child care as the waitlists continue to grow. Child care is also a readiness issue that needs to be addressed and the military services should research new, innovative solutions to this problem. The committee notes that some military installations have had success in establishing community partnerships with school districts, colleges, and non-profit organizations. This has allowed military installations to lease vacant facilities for childcare operations or has led to creative community partnerships. The committee believes that every military installation should be attempting to replicate these efforts to expand childcare access.

Therefore, the committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives not later than February 1, 2022, on what efforts nationwide and across the military services are being undertaken to expand community relationships and partnerships with community-based childcare providers. The report should also highlight what barriers exist that deter innovative solutions to the expansion of military childcare facilities.

Comptroller General of the United States Review of Certain Professional Development Activities of Department of Defense Education Activity Employees

The committee directs the Comptroller General of the United States to conduct an assessment of professional development activities offered or required by the Department of Defense Education Activity (DODEA) of teacher and other school-level employees, including an evaluation of how useful and effective DODEA school-level employees find this professional development. The report shall also include a comparative review of DODEA's professional development activities for school-level employees and a representative sample of such activities in school districts in the United States, as selected by the Comptroller General. The report shall also include an evaluation of the benefits and utility of DODEA's requirement that certain school-level employees perform 24 hours of uncompensated professional development activities each school quarter outside of normal working hours.

The committee directs the Comptroller General to provide a report to the House Committee on Armed Services on its findings by May 9, 2022.

Department of Defense Education Activity Standardized Record System

The committee is concerned about the standardization of all student records throughout the Department of Defense Education Activity (DODEA) and the specific tracking of students that are gifted or have exceptional needs, including formal Exceptional Family

Member Program students. Therefore, the committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives not later than April 1, 2022, that assesses the feasibility of developing an electronic records system that follows students through the DODEA system when they move between permanent change of duty stations. This feasibility assessment will consider the inclusion of their standardized test scores and placement data so that routinely retaking courses or tests is unnecessary.

Hazardous Duty Pay Parity

The committee recognizes the important contributions of paratroopers serving throughout the military. However, the committee is concerned that a disparity in hazardous duty pay may exist between Active Component and Reserve Component paratroopers. Therefore, the committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than April 1, 2022, assessing whether a hazardous duty pay disparity exists between components, rationale for any potential disparity, any cost associated with bringing these pays in direct alignment, and recommendations that should be considered for legislative action.

In-Home Childcare Licensures

The committee continues to be concerned about the availability of child care and the emphasis that the Department of Defense has put on in-home childcare licensures. Therefore, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services not later than February 1, 2022, on childcare licensures and in-home provider care on military installations. The report will answer the following questions:

- (1) how many in-home licenses have been applied for;
- (2) how many were granted;
- (3) how many are needed;
- (4) how long does the licensing process take;
- (5) is the process too cumbersome and bureaucratic to be useful as it stands; and
- (6) how can the application process be shortened or speeded up.

Military Families' Safety on Installations

The committee is aware of concerns over physical safety for families living on and off some Department of Defense installations. Most recently, the November 2020 Fort Hood Independent Review Committee findings suggested a significant and growing concern from soldiers and their families not feeling safe in their own homes on and off post. The committee views this as a potential problem beyond Fort Hood, Texas, that may include other installations. The committee encourages the Department of Defense to assess the safety needs of service members and their families. Moreover, the committee strongly urges the Department of Defense to add questions about physical safety on and off post to the biennial military spouse survey as required by section 1782 of title 10, United States Code.

Military Internship Program Feasibility Study

The committee recognizes the importance of the Military's recruitment efforts and an installation's relationship with the local civilian community. Additionally, the Military is uniquely situated to enhance the educational system of local civilian school systems due to the Military's deep pool of talent and wide variety of unique learning opportunities. The committee notes that the Military relies on a wide array of highly technical and skilled servicemembers who operate in the field of Science, Technology, Engineering, and Mathematics (STEM). Partnering STEM-oriented servicemembers with local civilian students in an internship program may improve interest in STEM curricula and the long-term STEM talent in the U.S. economy overall. Enlarging the talent pool of well-educated STEM professionals in the U.S. will also improve our position against near-peer competitors who are investing significant resources and effort into STEM-related fields.

Accordingly, the committee is seeking information from the Department of Defense about the feasibility of executing a STEM internship program with local civilian schools and universities to expand military relationships in the community and boost STEM-related educational opportunities for local civilian students. The committee directs the Secretary of Defense to provide a report to the Committee on Armed Services of the House of Representatives not later than June 1, 2022 on whether it is feasible to execute a STEM-centric internship program with civilian educational institutions. A "civilian educational institution" is any civilian high-school, college, vocational school, community or junior college, or university. The committee further directs the Secretary of Defense to include information and recommendations based on, but not limited to:

- (1) A summary of any existing military internship programs or similar partnership with civilian educational institutions;
- (2) The cost of executing a military internship program and the estimated benefit to the military, local community, and overall U.S. economy;
- (3) Anticipated difficulties with executing or implementing such an internship program, including possible legal liability concerns;
- (4) Military installation physical security considerations implicated with civilian students temporarily traveling on and off installation for the internship program;
- (5) Limitations for the internship program due to classification or other security requirements;
- (6) Considerations specific to civilian students within the Department of Defense Education Activity;
- (7) Logistics regarding the local travel of apprentices and service members to execute the military internship program;
- (8) A vetting process for servicemembers selected to supervise a civilian apprentice;
- (9) The availability of interactive, hands-on learning and skill-building opportunities for the civilian internship;
- (10) The possibility of the military internship providing school credit hours or degree competition credit;
- (11) The relation of internship program participation and Service recruiting efforts;

(12) The possibility of a military service commitment as a pay-back for participation in the military internship program; and

(13) Recommendations for three military installations in which to execute a pilot program for a STEM-centric military internship program.

Portability of Professional Licenses of Servicemembers and their Spouses

The committee believes that a service member or the spouse of a service member with a professional license in good standing in a jurisdiction that relocates his or her residency because of military orders for military service to a location that is not in such jurisdiction, the professional license or certification of such servicemember or spouse should be considered valid at a similar scope of practice and in the discipline applied for in the jurisdiction of such new residency for the duration of such military orders. The committee believes that the professional license or certification of such servicemember shall be considered valid if they provide a copy of such military orders to the licensing authority in the jurisdiction in which the new residency is located, remain in good standing with the licensing authority that issued the license, and submits to the authority of the licensing authority in the new jurisdiction for the purposes of standards of practice, discipline, and fulfillment of any continuing education requirements.

Therefore, the committee directs the Secretary of Defense to issue a report to the House Armed Services Committee no later than March 31, 2022 detailing the status of existing interstate compacts, how many have been completed, the costs associated and the challenges that remain to implement a uniform process across the Department of Defense. The report should further detail the annual breakdown by state and profession of military spouses that seek state re-licensing after relocating due to military orders.

Report on Access to Financial Institutions on Military Installations

The Committee recognizes the importance of access to financial services for the military community. Furthermore, the committee recognizes that competition helps to facilitate more affordable and tailored products for consumers and protection from predatory lenders. Limited access to financial services, particularly for those posted at geographically isolated military installations can cause hardship for servicemembers and their families. Greater insight into the availability of financial services on military installations is needed. Accordingly, the Committee directs the Secretary of Defense to submit a report to the Committee of Armed Services of the Senate and House of Representatives, not later than July 1, 2022 on the following:

(1) The availability of financial services institutions on military installations.

(2) The degree to which servicemembers and other personnel that live or work on military installations have the ability to choose between different financial services providers, including banks and credit unions on military installations.

(3) Federal policies and regulations impacting access for financial services providers that seek to offer their services on military installations.

(4) A description of how the Department calculates the in-kind value of services provided by financial institutions on military installations, and whether the in-kind value calculated for these services can be used to partially or fully satisfy the fair market value requirement for leasing non-excess property on military installations pursuant to section 2667 of title 10, United States Code.

Report on Naval Special Warfare

Naval Special Warfare (NSW) has been at the forefront of the Navy's counterterrorism (CT) mission since the terrorist attacks on September 11, 2001 and the force has grown exponentially since. Non-SEAL NSW support personnel performing administrative duties, intelligence collection and communications have assisted and gone into the fight alongside the Navy SEALs on the battlefields of Afghanistan, Iraq and beyond.

However, while NSW are performing Type-2 Sea Duty, their level of incentive-based pay differs significantly from their counterparts performing the same duties onboard a ship. This disparity in compensation can be up to \$8,000 per year.

The committee believes this disparity creates a financial burden on these Sailors and their families that can affect retention of experienced NSW sailors, which may affect mission readiness.

Therefore, the committee directs the Secretary of the Navy to submit a report, no later than February 1, 2022, to the House Committee on Armed Services, analyzing their "sea time" eligibility and the pay discrepancy between Type-2 Sea Duty tours in NSW and onboard ships, how this may affect readiness, and a proposal to address this concern.

Report on STEM Talent Recruitment and Retention

The committee is concerned with the Department of Defense's ability to recruit personnel with specialized degrees. Therefore, the Secretary of Defense shall submit a report to the House Armed Services Committee and the Senate Armed Services Committee, no later than April 1, 2022, with a list of degrees, certificates, and certifications in areas of critical need, including but not limited to science, technology, engineering, mathematics, cyber security, artificial intelligence, quantum computing and language-based security, that the Department is failing to meet recruitment and its retention goals. The report should include the challenges the Department is facing to meet such goals and recommendations for improving recruitment and retention of personnel with specialized degrees and certifications that the Department is failing to recruit and retain.

Report on the counting of military servicemembers and their families for purposes of completing the decennial census

The committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives by February 1, 2022, on recommendations to more ac-

curately count military servicemembers and their families for purposes of completing the decennial census.

The committee further directs the report to include:

(1) Whether increased coordination between the Department of Defense and the Census Bureau would contribute to a more accurate decennial census count; and

(2) What type of coordination between the Department of Defense and the Census Bureau might contribute to a more accurate decennial census count while maintaining privacy protections of military servicemembers and their families.

Reserve Component Service Member Benefits

The committee is concerned that the earned post-service benefits for Reserve Component service members, specifically career reservists, are not being communicated to them in a clear, concise, and easily understandable manner and therefore these service members may not ultimately access these earned benefits. Because of the nature of Reserve Component service with breaks in activation, or the length of time between service and discharge or retirement, a clear communication and understanding of how to qualify for or have access to post-service benefits for reservists is critical. Therefore, the committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives, not later than March 1, 2022, that describes and assesses the process, timing, and comprehensiveness of the communication of available post-service benefits to Reserve Component service members, how many full-time reservists access the GI Bill and at what rate as well as any recommendations to increase GI Bill benefits for reservists.

Support for Teachers in Military Impacted Communities

The committee notes that the Department of the Air Force's annual Support of Military Families report, which scores communities on the quality of their public primary education, is an attempt to encourage military-impacted communities to do more to support military families. While the committee understands the importance of such a report, there is concern that the Department of Defense is not offering enough support to address the highlighted areas of concern. As the Department of the Navy and the Department of the Army each work to develop their own reports, the committee is exploring ways to help military-impacted communities to address identified deficiencies, including improved support for teachers.

Therefore, the committee directs the Secretary of Defense, in coordination with the Secretary of Education when necessary, to submit a report to the House Committee on Armed Services by March 1, 2022 on the following:

(1) Challenges faced by military-impacted communities when recruiting and retaining teachers;

(2) Suggestions on how to improve recruitment and retention of teachers in military impacted-communities;

(3) Recommendations on how the Department of Defense can better support teachers in military-impacted communities;

(4) Comparison of teacher salaries and position openings in military-impacted schools against state-wide averages.

LEGISLATIVE PROVISIONS

SUBTITLE A—PAY AND ALLOWANCES

Section 601—Basic Needs Allowance for Low-Income Regular Members

This section would amend section 402 of title 37, United States Code, to authorize the Secretary of Defense to pay a basic needs allowance to a qualified service member.

Section 602—Equal Incentive Pay for Members of the Reserve Components of the Armed Forces

This section would require the Department of Defense to provide Reserve and National Guard service members incentive and special duty pays at the same rate as their Active Duty counterparts.

Section 603—Expansions of Certain Travel and Transportation Authorities

This section would amend titles 10 and 37, United States Code, to make permanent existing travel and transportation authorities that will expire after December 31, 2021. Section 631 of the National Defense Authorization Act for Fiscal Year 2012 (Public Law 112–81) consolidated travel and transportation allowances with the intent for the Department of Defense to reform and update those policies using the new broader travel and transportation authorities.

Section 604—Unreimbursed Moving Expenses for Members of the Armed Forces: Report; Policy

This section would direct a report by the Department of Defense on unreimbursed expenses for service members and their families during their moves broken out by rank, service, and military housing area.

Section 605—Report on Relationship between Basic Allowance for Housing and Sizes of Military Families

This section would require a report by the Department of Defense on whether the basic allowance for housing is sufficient for the average family size of members of the Armed Forces, broken out by service, rank, and military housing area.

Section 606—Report on Temporary Lodging Expenses in Competitive Housing Markets

This section would direct the Department of Defense to report on the appropriateness of the 10 days of per diem for Temporary Lodging Expense in highly competitive housing markets.

Section 607—Report on Rental Partnership Programs

This section would require a report on rental partnership programs including the effectiveness of the programs and usage by service members who live off post.

SUBTITLE B—BONUSES AND INCENTIVE PAYS

Section 611—One-Year Extension of Certain Expiring Bonus and Special Pay Authorities

This section would extend, through December 31, 2022, income replacement payments for Reserve Component members experiencing extended and frequent mobilization for Active Duty service; two critical recruitment and retention incentive programs for Reserve Component healthcare professionals; accession and retention incentives for nuclear-qualified officers; and the consolidated special and incentive pay authorities.

SUBTITLE C—FAMILY AND SURVIVOR BENEFITS

Section 621—Expansion of Parental Leave for Members of the Armed Forces

This section would amend section 701 of title 10, United States Code, to expand parental leave for qualified service members to 12 weeks.

Section 622—Transitional Compensation and Benefits for the Former Spouse of a Member of the Armed Forces Who Allegedly Committed a Dependent-Abuse Offense during Marriage

This section would modify section 1059 of title 10, United States Code, to clarify the timing for eligibility of transitional compensation for dependent-abuse offenses during marriage to a service member.

Section 623—Claims Relating to the Return of Personal Effects of a Deceased Member of the Armed Forces

This section would authorize claims for reimbursement for the personal effects of deceased members of the Armed Forces that were damaged, lost, or destroyed when being returned to designated persons.

Section 624—Expansion of Pilot Program to Provide Financial Assistance to Members of the Armed Forces for In-Home Child Care

This section would authorize the expansion of the in-home childcare fee assistance pilot program.

Section 625—Continuation of Paid Parental Leave for a Member of the Armed Forces upon Death of Child

This section would authorize commanders to allow service members to complete the remainder of their preapproved primary or secondary caregiver leave following the death of the child for whom the leave was taken.

Section 626—Casualty Assistance Program: Reform; Establishment of Working Group

This section would establish a Casualty Assistance Reform Working Group to assess the casualty affairs programs across the Department of Defense.

SUBTITLE D—DEFENSE RESALE MATTERS

Section 631—Additional Sources of Funds Available for Construction, Repair, Improvement, and Maintenance of Commissary Stores

This section would provide the Defense Commissary Agency (DeCA) with flexibility in addressing commissary store construction, renovation, repairs, and upgrades by allowing DeCA to deposit additional revenues into the surcharge account established pursuant to section 2484 of title 10, United States Code.

SUBTITLE E—MISCELLANEOUS RIGHTS AND BENEFITS

Section 641—Electronic or Online Notarization for Members of the Armed Forces

This section would authorize electronic notarization for members of the Armed Forces.

TITLE VII—HEALTH CARE PROVISIONS

ITEMS OF SPECIAL INTEREST

Acceleration of Malaria Treatments

The committee remains concerned about the negative impact to mission readiness resulting from poor compliance with malaria prevention regimens in Active Duty forces. Advances in the development of oral, ultra-long-acting drug delivery platforms have the potential for significant health improvement, drug efficacy, and cost savings for the Department of Defense. The committee encourages the acceleration of the development of oral, ultra-long-acting, sustained-release delivery platforms for bioavailable therapies for treatment of service members deployed in malaria-endemic areas.

Adverse Event Reporting

The committee commends the Department of Defense for its continued educational efforts to service members on dietary supplement use and safety through the Operation Supplement Safety Program (OPSS). The committee recognizes dietary supplement use is 20 percent higher in service members than the civilian population, with a minimum of 60 percent of healthcare providers observing adverse events in service members. Adverse events from dietary supplements for weight loss, muscle building, and energy affect service members' health, readiness, and performance. The Food and Drug Administration's (FDA's) adverse events reporting data shows that these types of dietary supplements are three times more likely to cause severe medical injury than vitamins or minerals. Research shows that adverse events from these dietary sup-

plements include organ failure, heart attack, seizure, stroke, tremors, and other medical injury including death. The committee acknowledges the FDA's existing adverse event reporting system and recognizes the Military Health System's need to track adverse events data and share with the FDA to better protect the health, readiness, and performance of service members. The committee encourages the Department of Defense to include adverse event reporting for dietary supplements within military electronic health records and to regularly share these data with the FDA's system for tracking adverse event reports.

Adverse Events Reported for Dietary Supplements

The committee commends the Department of Defense (DOD) for its efforts to educate service members on safe dietary supplement use through the Operation Supplement Safety Program. The committee acknowledges the FDA's existing adverse event reporting system and recommends that the DOD include adverse event reporting for dietary supplements within military electronic health records. The Committee directs the Secretary of Defense to provide a report to the congressional defense committees not later than March 1, 2022 on the instances of adverse events reported for dietary supplements.

Blast Injury Health Policy Review

The committee commends the Department of Defense for its continued research and development activities related to blast injuries and the diagnosis and treatment of traumatic brain injury (TBI).

Although the Department has spent approximately \$1.8 billion over the last 10 years on TBI-related research and development, it has pursued only a handful of projects focused on TBI preventative devices. The committee is aware of the U.S. Special Forces Command's Comprehensive Strategy for Special Operations Forces Warfighter Brain Health and the Blast Exposure Monitoring (BEMO) initiative to operationalize and deploy automated blast exposure monitoring among service members and recommends the Department evaluate BEMO as a model for service-wide blast exposure monitoring. The committee also urges the Department to develop a comprehensive strategy for deployment of automated blast monitoring across the force to include development, program management, and acquisition, and consider non-helmet TBI preventative devices as part of the effort to reduce the risk of blast and non-blast related TBI in training and in combat.

The committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services, not later than February 1, 2022, that includes the following:

- (1) a comprehensive Department of Defense strategy to provide joint strategic direction to the Department and Military Health System including standardized operational requirements for neurotrauma prevention, detection, diagnosis, treatment (to include non-combat related concussion and blast exposure), and integration of training programs for innovative solutions necessary to enhance warfighter performance through targeted specific mental health assessment, data metrics, data analysis, training, and implementation.

(2) an incorporation of findings and recommendations of the forthcoming National Academies of Science, Engineering, and Medicine study on neurotrauma.

(3) an assessment of the impact of broadening the definition of a military acute concussive event for establishing the collection and documentation of exposure information that will support the Department of Defense as it sets formal thresholds and then modifies those thresholds as the science develops further.

(4) an assessment of non-helmet TBI preventative devices that have Food and Drug Administration clearance and are in use by numerous professional athletes that should be a key component of the Department of Defense's holistic effort to combat TBI, both in training and in combat.

(5) an assessment of the effectiveness of appropriated defense research dollars (including Congressionally Directed Medical Research Programs) in producing measurable improvements in the prevention, detection, diagnosis, and treatment of brain injury for service members with recommendations on improvement to defense brain injury research oversight.

Burn and Wound Care Innovation

The committee understands that polytrauma injuries, such as massive burns and open wounds, are among the most common combat injuries. Burn wounds usually require debridement as soon as possible after injury to preserve skin, remove dead tissue, and avoid infection, which requires resources that are typically unavailable in a battlefield environment. Burn wounds have a high risk of infection that can lead to amputations, longer hospital stays, and complications, resulting in longer, more challenging rehabilitation for service members, including the possibility of being unable to return to duty or active life. The committee directs the Secretary of Defense to provide a briefing to the Committee on Armed Services of the House of Representatives by February 1, 2022, that assesses possible burn care innovations that can be used without a surgeon or sterile environment that can treat burn wounds and result in equal or better patient outcomes.

Chemical, Biological, Radiological and Nuclear Medical Response

The committee applauds the Secretary of Defense's deployment of military assets to speed ongoing COVID-19 vaccination efforts in the United States. The committee also notes that the Department of Defense provided significant support to State and local agencies in the initial stages of the national pandemic response in 2020. Not only did medical units from the Army, Navy, and Air Force render invaluable support, but other elements of the force, particularly the National Guard, provided essential logistical and security support to overwhelmed State and local governments and medical facilities. While individual units did outstanding work, the committee believes the Department's response could have been better coordinated. Such coordination is essential, given the disruptive nature and frequency of these events, from the West African Ebola response in 2014 to the present.

The committee believes that the United States military will always be a primary supporting responder to mass events, whether

caused by infectious disease or an adversary-generated chemical, biological, radiological, or nuclear (CBRN) event. Unfortunately, the first time that line units, military medical providers, and local authorities ever acted jointly is in the occurrence of an actual event, as was the case of the 101st Airborne Division (Air Assault) during the Ebola mission to Africa. At no time were CBRN first line responders, military healthcare providers, and local officials afforded the opportunity to train jointly in the operational medical response to an epidemic or CBRN attack. This deficiency must be addressed. To that end, the committee understands that the CBRN School at Fort Leonard Wood, Missouri, as well as other locations with CBRN military capabilities may provide integrated medical and line unit training for these types of contingencies to remedy these gaps in training.

Therefore, the committee directs the Secretary of Defense to submit a report to the congressional defense committees by March 1, 2022, on plans to institute integrated medical, line unit, and civil authority training for an epidemic or CBRN event, to include possible locations for such training and the capabilities that may be used during the training to include throughput.

Clinical Trials for Freeze-Dried Platelets for Trauma

The committee remains concerned that platelet shortage for hemorrhage control continues to impact battlefield casualties. The committee is aware that forward deployed forces in austere environments have limited resources available to treat injuries on the frontline. The committee believes that ruggedized packaging of freeze-dried plasma and platelets potentially offers greater capabilities than currently fielded systems and has the potential to reduce the loss of life in combat and other environments. Therefore, the committee recommends the Department of Defense continue to develop these products and accelerate the clinical trials for trauma of freeze-dried hemostatic products, to include platelet-derived products, and the development of packaging suitable for far forward forces.

Coverage of Chiropractic Care Services under the TRICARE Program

The committee is aware that since 1985, the Department of Defense has conducted several demonstration projects designed to examine the cost and feasibility of chiropractic healthcare services for its beneficiaries. The results of these projects have concluded that it is feasible to implement chiropractic services as part of the military health care benefit, and the resulting patient satisfaction is higher than that seen with traditional medical care. Moreover, complementary, and alternative medicine is increasingly available in the private sector and chiropractic care is covered by Medicare and some private sector insurers. The committee understands the Department of Defense is currently evaluating chiropractic care services and similar therapies. Therefore, the committee strongly encourages the Department of Defense to expand the TRICARE benefit to include chiropractic care for service members and beneficiaries.

Creative Arts Therapies

The committee recognizes that clinical research findings indicate creative arts therapies (CATs) offered through the Department of Defense appear to be having some successful outcomes, including facilitating recovery from physical and psychological injury, reducing symptoms associated with post-traumatic stress disorder, regulating emotion, enhancing resilience, and encouraging healthy independent coping mechanisms. CATs have been used within the Department to improve outcomes for service members experiencing trauma dating back to World War II. However, there has been increased focus, attention, and research in this area over the past decade. The Department is currently compiling a report on the current use of CATs and the outcomes of these therapies as well as demand and resource requirements to expand these services. The committee encourages the Department of Defense to further examine the effectiveness of these treatments and potentially expand initiatives involving CAT once patient outcomes are better understood.

Determination of Eligibility for Adult Incapacitated Children of Service Members

The committee understands there are approximately 31,000 incapacitated adult child dependents enrolled for benefits in the Defense Enrollment Eligibility Reporting System. An incapacitated adult child must be dependent on the Active Duty or retired service member for over one-half of the child's support. The Government Accountability Office (GAO) Report 20-335 found the Department of Defense policy provides limited guidance and inconsistent standards resulting in the military services developing fragmented approaches for processing applications. It also discovered that the calculations for some incapacitated adult children were made based on a formula called the Family Unit Rule. Moreover, the Marine Corps apparently assigns all adults in the household, including incapacitated adult children, two shares of household expenses, and minor children one share, whereas the Defense Finance Accounting Service, Army, Navy, and Air Force calculate these shares differently, which creates an inconsistent application of policy.

Therefore, the committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and the House of Representatives, not later than February 1, 2022, that includes the following:

(1) revised guidance for financial determinations and consistent medical standards for all of the military services to use in determining the dependency status of incapacitated adult children.

(2) consistent application of the Family Unit Rule which assigns all adults in the household, including incapacitated adult children, two shares of household expenses, and minor children one share.

(3) clarification of the definition of a nondependent family member in DOD Instruction 1315.19 and the circumstances under which nondependent family members should be considered for services provided by the Exceptional Family Member Program.

(4) clearly defined oversight responsibilities of the Department of Defense Human Resources Activity and the military services for the incapacitated adult child dependency process, including the

consistent tracking, monitoring, and reporting of reliable data on incapacitated adult child dependency applications and determinations across the military services for use in data-driven decision-making.

(5) the status of other recommendations as reported in GAO Report 20–335.

Discrimination against Military Dependents with Prior Mental Health Conditions

The committee remains concerned that military children are unfairly disadvantaged when they decide to join a military service. Children in military families face stressful situations—from their parents' deployment, frequent moves, and changes in schools throughout their young lives—which may result in them seeking mental health services and other forms of counseling. These services are most often for temporary or adolescent conditions where they show demonstrable improvement. However, the use of these services may prevent them from joining the military. The committee urges the Department of Defense and the military services to amend their accession criteria to address this specific scenario when making determinations about medical waivers for accession.

Health Threat Travel Information

The committee is aware that the Department of Defense has relied upon a combination of open-source information and contracted resources to determine health threats and associated force protection recommendations for Service members and Department personnel during international travel. Expert-reviewed information plays a critical role in assisting medical planners and providers to better advise groups or individual travelers, research threats, and save time.

Currently, the Department collects information at the country-level, leading to gaps in knowledge when travel is focused on sub-regions and/or cities. As a result, Department planners and providers often must determine which country-level information may or may not be relevant to specific sub-region; and where sub-region-specific information is available, oftentimes, it is less robust than available country-level information. At the same time, the Committee is also aware of user desire for additional information and functionality, including information pertaining to environmental health threats and ability to access health threat travel information in classified, unclassified, and disconnected environments. User-friendly access to health threat travel information is a critical tool to help keep Service members and DoD personnel safe.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the Committee on Armed Services of the House of Representatives not later than February 1, 2022, on any additional requirements it might have for health travel threat information, including but not limited to:

- (1) Environmental health threats;
- (2) Poisonous animals and plants;
- (3) City and sub-regional level data;

(4) Ability to access all information sources on both classified and unclassified systems;

(5) Ability to access existing health threat information in a disconnected and mobile environment.

Heat Illness Report

The committee recognizes that while effective techniques and guidelines are in place to prevent exertional heat illness (EHI), servicemembers continue to develop EHI with sometimes fatal outcomes. The Armed Forces Health Surveillance Branch (AFHSB) identified 475 incident cases of heat stroke and 1,667 incident cases of heat exhaustion among active component service members in 2020. The Army Public Health Center reports that 2–3 soldiers die annually from heat illness. The projected rise in the intensity and frequency of extreme heat conditions underscores that this threat will continue to grow and pose dangerous health risks to servicemembers. Discrepancies continue to exist in how heat-related clinical illnesses are managed and reported, undermining valid comparisons across locations and settings.

Therefore, the committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and House of Representatives by September 1, 2022, detailing the efforts to reduce heat-related illnesses at U.S. military installations. The study and report shall include information and recommendations based on, but not limited to:

(1) An analysis of the number of heat stroke and heat exhaustion cases that did not prompt mandatory reports through the Reportable Medical Events System, and how the guidelines for mandatory reporting, including diagnosis codes, of heat illnesses should be updated.

(2) An analysis of whether the Department of Defense should update heat related health guidelines to better reflect current risks and projections of worsening extreme heat, especially whether specific guidelines are needed for recruit training centers.

(3) A description of the training and education on the detection and prevention of heat-related illness that are taking place across the military services.

(4) An accounting of how many black flag days were declared at each military training location over the last five years, as well as a plan to track black flag days on military installations and compile the data in a central location, accessible to the public.

(5) A survey military leaders' understanding and adherence to medical protocols and best practices when personnel fall ill due to extreme heat.

(6) An assessment of whether a public-facing online resource center with scientific and educational resources that provides data and guidance on heat related illness would be valuable to increase servicemember knowledge and help reduce the frequency of heat-related illnesses.

Holistic Health and Fitness Programs

The committee recognizes that preventable musculoskeletal injuries negatively impact soldier health, Army readiness, and impose a significant healthcare cost burden. The committee also under-

stands that the Army Holistic Health and Fitness (H2F) Program is designed to optimize individual performance and create stronger, fitter, and faster soldiers better prepared for the practical challenges they face both on and off the battlefield. Moreover, the committee recognizes that equipment and facilities are essential elements of the H2F system and that the Soldier Performance Readiness Center (SPRC) is an integral part of the H2F programming, as it provides a supportive individually focused fitness training environment where comprehensive, integrated, and immersive physical and nonphysical programming is delivered.

Therefore, the committee directs the Secretary of Defense, in coordination with the Secretary of the Army and the Army H2F Program, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives, not later than April 1, 2022, that includes the following:

(1) musculoskeletal injury prevention research efforts focused on identifying risk factors for musculoskeletal injuries among members of the Armed Forces and creating a better understanding for adaptive musculoskeletal and bone formation during initial entry military training.

(2) gaps in musculoskeletal injury prevention research to include anticipated budget that would be suitable to fill these gaps.

(3) recommendations on the designation of a program executive office that would have oversight and management of the Army's performance health and fitness equipment and facility acquisition, contracting, and sustainment processes.

(4) recommendations to include a timeline on the establishment of a sustainment cycle for SPRCs, container gyms, Army Combat Fitness Test lane equipment, and used gyms-in-a-box.

Impact of Mental Health Copays Report

The committee is concerned that increases in certain TRICARE specialty care copays have had an impact on the utilization of outpatient mental health visits and physical, speech, and occupational therapy visits by Group A beneficiaries. Therefore, the committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than March 1, 2022, that includes an analysis comparing the utilization rates of outpatient mental health visits and physical, speech, and occupational therapy visits by Group A beneficiaries in 2016 and 2017 (before copays increased) to utilization rates of these services in 2018 and 2019 (after copays increased.) Data for 2020 will not be included due to the impact of COVID-19 on healthcare utilization. Utilization will be measured by unique users, average/median number of visits per user, percent of users with only one visit, distribution of users across binned number of visits (1 visit only; 2-3 visits; 4-6 visits; 7-9 visits; 10-12 visits; more than 12 visits) and other measures the Secretary deems appropriate. For TRICARE Prime beneficiaries, the analysis will assess the percentage of patients referred for these services who actually accessed care. The analysis shall cross tabulate data for each beneficiary sponsor category (Active Duty versus retired versus medically retired) and TRICARE Plan (Prime versus Select), given that copays vary across these groups.

Individual First-Aid Kits Improvements

The committee understands that improving troop readiness and reducing preventable deaths on the battlefield are top priorities. Individual first-aid kits (IFAKs) and combat lifesaver kits (CLS) contain products that are designed to improve lifesaving performance by every combatant. A simplified supply chain with synchronized manufacturing for these products is critical to serving the warfighter and effectively using funding. The committee is concerned that the current logistics systems may be unsynchronized and that IFAKs/CLSs in tactical units require extensive management of approximately 180,000 single items, from depots to the individual service member level, each with its own expiration date and Food and Drug Administration (FDA) manufacturer lot number. Therefore, the committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than May 1, 2022, that includes the following:

(1) comprehensive review of the current procurement system for the IFAKs/CLSs, including the following: the effects of purchasing, and the locations and destination of IFAK components from different contractors via different procurement channels; shipping, fees and storage costs of the IFAK/CLS components prior to kitting; personnel costs associated with labeling and kitting the IFAKs; storage and shipping costs of the IFAK/CLS prior to delivering the IFAK/CLS to the service members; the different shelf life for each component in the IFAK/CLS and its impact on readiness; estimated brigade unit-level man-hours associated with monthly, quarterly, annual requirements for inspection, inventory, documentation, and reporting requirements for maintaining IFAKs/CLSs; and the ability of the services and warfighter to track and conduct an FDA-directed safety recall of an IFAK/CLS component.

(2) a review of the benefits of synchronizing the manufacturing and kitting of individual IFAK/CLS components throughout the entire supply chain in an FDA-registered facility to ensure the quality of the first-aid kits and combat lifesaver kits.

Innovations in Suicide Prevention Efforts

The committee recognizes that suicides are tragic events that affect the military community on a daily basis and that the military's response to suicidal thoughts, attempts, and deaths involves clinical and non-clinical approaches. Clinical efforts may include depression and suicide-specific screening in primary care and during annual periodic health assessments. Non-clinical efforts include activities such as facilitating training of service members in problem-solving, coping skills, and financial literacy. The committee is concerned that despite these efforts to reduce the risk of suicide, the suicide rate appears to be increasing at an alarming rate. Therefore, the committee directs the Secretary of Defense to provide a briefing to the Committee on Armed Services of the House of Representatives, not later than March 1, 2022, on how the Department of Defense and the military services are incorporating innovative technologies such as artificial intelligence and machine learning in identifying at-risk individuals, as well as the usefulness of predictive analytics in this arena. In addition, the briefing should in-

clude how the Department of Defense and the military services are measuring the effectiveness of recently deployed risk reduction tools such as the Army Commander Risk Reduction Toolkit, the Navy's Commander Risk Mitigation Dashboard, the National Guard's Springboard, and the Marine Corps' Command Individual Risk and Resiliency Assessment System at aggregating risk indicators for suicide prevention.

Medication Optimization Plan

The committee recognizes that 99 percent of those who have served in the military have at least one actionable pharmacogenomic variant, every 2 minutes someone dies from an adverse drug event (ADE), and over half of people are prescribed at least one drug where pharmacogenomic information would be critical to dosage or patient harm. Moreover, pharmacogenomic testing, analysis, alerting, and entry into the military electronic health record system may be an essential part of precision medicine and has the potential to save service members' lives, improve outcomes, and lower expenditures.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, on how the Department of Defense may be able to implement a plan to optimize medications and reduce ADEs among service members and dependents. This plan should include an assessment of:

- (1) the current strategies used to optimize medications and reduce ADEs, including the role of pharmacists;
- (2) the feasibility of incorporating pharmacogenomic testing and clinical decision support tools and aligning efforts across the Defense Health Agency, the military departments and the Military Health System;
- (3) an implementation plan to integrate pharmacogenomic testing results into the electronic health record in a manner that informs medication management decisions long term;
- (4) any existing acquisition authorities that may be used to catalyze innovative partnerships to rapidly achieve this effort; and
- (5) any costs associated with the potential implementation plan.

Mental Health Services

The committee is concerned that the demand for mental health-related services within the Department of Defense may be at a critical breaking point. The recently released Government Accountability Office Report 21-437R indicated that COVID-19 has further exacerbated mental health access challenges across the United States. The Centers for Disease Control and Prevention surveys found about 38 percent of respondents reported symptoms of anxiety or depression from April 2020 through February 2021, up from about 11 percent in 2019. Emergency department visits for overdoses and suicide attempts from mid-March to mid-October 2020 were up 36 percent and 26 percent, respectively, from 2019. Many behavioral health service providers reported increasing demand and decreasing staff sizes.

Therefore, the committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate

and the House of Representatives, not later than February 1, 2022, that includes the following:

(1) a review of how the Health Professions Scholarship Program can be expanded to increase the number of mental health-related scholarships granted, with the goal of increasing the pipeline of mental health providers.

(2) a review of how the Department of Defense can prioritize an increase in Special and Incentive Pays to maximize the retention of Active Duty mental health providers.

(3) a review of how the Department of Defense can increase General Schedule paygrades for mental health providers working in military treatment facilities.

(4) a plan to establish a pilot program that uses information technology-based human performance synthetic training systems capable of advanced biometric data collection and reporting that can be used to: establish and monitor cognitive and physical baselines for service members throughout their careers and aid in forecasting, assessment, and diagnosis of mental health issues, including post-traumatic stress disorder (PTSD); explore the effectiveness of integrating PTSD resiliency skills with warfighter tactical training; and utilize data analytics to improve training protocols and effective mitigation strategies and tactics.

Military Wellness Programs

Congress is aware of the significant challenges the Department faces regarding both the readiness and health of the force. The Committee commends the Department for placing a priority on and making a concerted investment in these matters.

A key aspect to this focus is the integration of human and technological factors to enhance traditional approaches to readiness. The explosive growth in membership to a military wellness community of interest should serve as an indicator that our soldiers, sailors, marines and airmen are reaching out for assistance at an alarming rate. The significant interest of programs like this give credence that proven, digital resources may provide a connection and community for members is in high demand.

Given the increasing costs associated with recruiting, training and sustaining the armed forces, Congress encourages the Department to continue their investment in existing technologies within the private and non-profit sectors that enhances their ability to analyze readiness data to better inform the decision-making process. Accordingly, the committee urges the Department to continue to resource these programs. The Committee also directs the Secretary of Defense to submit a report to the Committees of Armed Services of the Senate and the House of Representatives no later than February 1, 2022, on their plan to leverage existing digital solutions and capabilities to aid DoD efforts to improve and sustain force readiness.

Modernization of Antibiotics Acquisition Process

The committee is alarmed by the Future of Defense Task Force findings that 80 percent of ingredients used to manufacture drugs and 97 percent of antibiotics ingredients are sourced from China. The committee is concerned about any reliance on adversarial re-

gimes and insecure supply chains capable of crippling or halting access to critical medicines. While the committee notes the increasing threat posed by antimicrobial resistance and the threat of supply chain disruption of critical ingredients and antibiotics, the committee is also concerned that adversaries are engineering bio-weapons designed to defeat our outdated legacy countermeasures. The committee recognizes the need for more effective novel antibiotic countermeasures available for combat care and bioterrorism response in the United States. The committee strongly supports existing efforts to ensure domestic sourcing of ingredients and production of novel antibiotics and encourages the Department of Defense to modernize acquisition and prioritize procurement of novel antibiotics.

National Disaster Medical System Medical Surge Pilot

The committee affirms the primary mission of the Military Health System to ensure the medical readiness of the Armed Forces and the combat effectiveness of the defense establishment. While this fundamental cornerstone of defense health is undisputed, the committee is concerned that more attention must be placed on medical capabilities and surge capacity required for the global pandemic and homeland defense mission. To address this need, section 741 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) directed implementation of a pilot program for civilian and military partnerships to increase medical surge capability and enhance interoperability of the National Disaster Medical System (NDMS). The committee also observes that the House Appropriations Committee Subcommittee on Defense, in its committee report to accompany the Department of Defense Appropriations Bill, 2021 (H. Rept. 116–453), similarly directed accelerated execution of this pilot program and directed that a first location partnership be underway in calendar year 2021. The congressional defense committees remain concerned about the medical, surveillance, and preventive medicine capabilities of the Military Health System to support both a global pandemic and homeland defense mission.

In view of these mission requirements and clear congressional authorization, the committee is also concerned that funding for this program was not included in the Defense Department's Fiscal Year 2022 budget request and notes that without sufficient resources, the transition from planning to execution could be jeopardized. Therefore, the committee urges the Secretary of Defense to include sufficient funding in the department's Fiscal Year 2023 budget request necessary to execute a full-scale operational public-private partnership prototype of an all-hazards medical surge capability.

Therefore, the committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the Senate and the House of Representatives, not later than March 1, 2022, that includes the following:

- (1) the medical, surveillance, and preventive medicine capabilities that would be used to support a global pandemic and health-related homeland defense missions;
- (2) a list of the coordination, exercises, and support agreements between the Department of Defense and NDMS partners;

(3) a rough order of magnitude on the bed capacity that would be available to the Department of Defense through NDMS partner healthcare facilities;

(4) the gaps that currently exist between the Department of Defense and NDMS partners; and

(5) a rough estimate of cost associated with fixing any gaps that would improve the capabilities between the Department of Defense and NDMS partners.

National Guard Telehealth Capability

The committee notes that the Periodic Health Assessment (PHA) is a screening tool used by the Armed Forces to evaluate the individual medical readiness of service members. It is the first of what may be several activities that provide the information needed by the surgeons general to assess individual mission readiness. Administration of the PHA for the Guard and Reserves is uniquely challenging.

Members of the Guard and Reserves, who generally live and work in their communities rather than on a military installation, have multiple training requirements and limited time during drill weekends. Currently, the PHA must be completed with a secure military facility computer or via a Common Access Card (CAC)-enabled computer (not a mobile device). Completion of the PHA requires that the Guard or Reserve member have access to a computer and CAC card reader, take time off work and travel to a military facility to use a military computer, or take time away from training to complete the PHA during training time. It is logistically and administratively difficult and places burden on members of the Guard and Reserves.

As a result, the committee urges the National Guard to establish a secure mobile application that provides the capability for a member of the National Guard to complete the PHA self-assessment and follow-up information and screenings on a personally owned smartphone, tablet computer, or other handheld mobile device that can communicate with a military network. Therefore, the committee directs the Chief of the National Guard Bureau to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than March 1, 2022, on the plan and progress for implementing telehealth Periodic Health Assessments.

Ocular Trauma Specialized Care

The committee understands the goals of the Department of Defense Vision Center of Excellence are to improve vision health, optimize readiness, and enhance quality of life for service members and veterans. However, the committee is concerned that recent medical manning divestitures taken on by the military medical departments of the services may adversely impact the availability of ocular services throughout the Department of Defense. Therefore, the committee directs the Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff and the Secretaries of the military departments, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives, not later than March 1, 2022, that includes the following:

(1) a review of medical manpower warfighter readiness, requirements, and capabilities for vision trauma and ocular care to include training and Graduate Medical Education as they relate to all national defense strategy scenarios.

(2) any planned military medical manning divestitures in all areas of ocular to include sensory injuries with ophthalmology and optometry requirements by service and location.

(3) the feasibility of establishing at least four regional medical hubs for enhanced treatment of ocular trauma and traumatic brain injury vision dysfunction injuries with the hubs associated with a major military medical center as the primary center for providing specialized medical services in that region and co-located with major aerial debarkation points within the medical evacuation system.

(4) an analysis of access standards and funding for ocular services over the last 5 years in both the direct care system and purchased care.

Omega-3 Fatty Acids

The Committee is aware the Department of Defense is taking steps to improve the health, performance, and combat effectiveness of service members by modifying the food and beverages offered at such dining halls, including looking at ways that minimize the change for service members. Moreover, the Committee understands that there is a positive relationship between a high quality, nutrient dense diet that includes Omega-3 fatty acids and Service member health and performance that has been well established through decades of historical knowledge within the nutrition community, along with a series of recent research studies. However, the Committee notes that the Department of Defense needs to provide additional information on the way forward regarding diet and nutrition. Therefore, the Committee directs the Secretary of defense to provide a briefing to the Committee on Armed Services of the House of Representatives no later than March 1, 2022 on the plan to move forward with the development of the DoD Nutrition Committee framework and governance structure, the identification of the organizational champion and leader, and the plan of action and milestones for implementation of DoD diet and nutrition.

Prohibition on Sale of Genetic Testing Kits

The Committee remains concerned that some direct to consumer genetic testing companies continue to encourage service-members to purchase genetic ancestry and health information by offering discounts and other incentives. These direct-to-consumer tests are largely unregulated and could expose genetic and personal information with unintended security consequences and risk to the mission of the joint force. In some instances, this genetic testing material may fall into the hands of near peer competitors that may use this information to gain a national security advantage. Moreover, testing outside the Military Health System is unlikely to include a clear description of this risk. The Department of Defense has advised service-members to refrain from the purchase and use of direct to consumer genetic services. Therefore, the Committee directs the Secretary of Defense to submit a report to the Committees on

Armed Services of the Senate and the House of Representatives, not later than February 1, 2022, that includes the efforts being undertaken throughout the Department of Defense and the Military Departments to educate and inform service-members on the personal and professional security risks of direct to consumer genetic testing and any policy guidance provided to the joint force on the security concerns posed by consumer genetic testing of military service members.

Rare Cancer Treatment Report

The committee commends the Department of Defense for starting to address exposure risks that can correlate with cancer, but remains concerned about how care is provided to service members following diagnosis of cancer. Over 60 cancers disproportionately impact those who have served in the military and most are rare cancers, defined as fewer than 6 new cases per 100,000 Americans per year. Few targeted treatments are being developed and made available for service members and understanding the specific molecular driver for each patient's cancer is vital to informing the best treatment.

The committee directs the Secretary of Defense to submit a report to the Senate Committee on Armed Services and the House Committee on Armed Services not later than March 1, 2022, that includes the following:

(1) a description of the specific types of molecular diagnostics, such as microarray, whole exome, and RNA sequencing, which the Department of Defense is providing to beneficiaries diagnosed with cancer and their frequency of use;

(2) the Department's detailed policy for data-sharing practices for cancer cell lines and models with the external research community;

(3) the feasibility of the Department to engage in public-private partnerships to use a next-generation, precision-oncology platform that integrates bioinformatics, machine learning, and mathematics to unveil unprecedented insights into cancer and moves beyond a single-target-based approach. This approach should seek to identify complex and interconnected mechanisms responsible for drug response and resistance revealed in the human transcriptome to determine the best treatments and facilitate developing new ones and any potential costs associated with this; and

(4) the method by which the Department provides information to all clinicians treating TRICARE and Military Health System patients on the value of using molecular diagnostics for all cancer patients and reimburses for these important diagnostics at the time of diagnosis.

Retrofitting Buildings with Lactation Rooms

The Committee believes that access to clean and private spaces for lactating and nursing individuals is important for the health of military families and our efforts to recruit and retain nursing parents in the military and the DOD civilian service. The Committee urges the Department to utilize funds provided in the Facilities, Sustainment, Restoration and modernization account to retrofit existing DOD facilities with lactation spaces. The Committee directs the Under Secretary of Defense for Acquisition & Sustainment to

provide a report to the congressional defense committees no later than June 1, 2022 regarding its plan for a phased retrofit of facilities to include private nursing and lactation rooms in buildings likely to be regularly frequented by nursing mothers who are members of the uniformed services, civilian employees of the Department of Defense, contractor personnel, or visitors.

Review of Efforts to Address Service Member Fatigue

The committee notes that the Department of Defense's own reports have found that sleep deprivation is common in the military, and this impacts military performance and readiness. In its March 2021 report prepared in response to section 749 of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116-92), the Department noted that although military leaders are increasingly recognizing the importance of adequate sleep, further shifts in cultural attitudes regarding sleep deprivation will help ensure the optimization and sustainment of service member performance and health. This report recommended that the Department establish policy to promote a culture shift with regard to prioritizing adequate sleep in the military and noted several actions would be needed to accomplish this culture shift. However, the committee notes the difficulty of accomplishing such a cultural shift in the military. The Government Accountability Office's 2021 report examining fatigue management in the Navy's surface fleet in the wake of the deadly collisions in 2017 found that the Navy's fatigue management policy had been inconsistently implemented, had not been successful in ensuring adequate sleep throughout the fleet, and was hindered by a lack of quality information on the extent of fatigue and the contributing factors. As a result, the committee remains concerned about the Department's broader efforts to limit sleep deprivation.

Therefore, the committee directs the Comptroller General of the United States to undertake a comprehensive review of the Department's efforts to limit sleep deprivation and manage fatigue. This review should address the following:

(1) the extent to which the Department and the services have established and implemented fatigue management policies throughout the force that prioritize service members obtaining adequate sleep.

(2) the extent to which the Department and the services systematically collect quality and timely fatigue data from service members, and whether that data is accessible to operational commanders to support operational decision-making throughout the force.

(3) the extent to which the Department and the services use collected data, if any, on service member fatigue to identify, monitor, evaluate, and implement effective mitigations to address the factors contributing to fatigue and inadequate sleep.

(4) any other related matters the Comptroller General considers appropriate.

The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services by April 1, 2022, on preliminary findings of the Comptroller General's evaluation, and present final results in a format and timeframe agreed to at the briefing.

Study on Alternate Treatments for Suicide Prevention

The committee recognizes that research on suicide prevention continues to evolve, with new evidence-informed practices continuing to come to light. Research, compiled by the Costs of War Project at Brown University, found an estimated 30,177 active duty personnel and veterans who have served in the military since 9/11 have died by suicide, compared with 7,057 killed in post 9/11 military operations. Alternate forms of therapy such as seminars, retreats, workshops, or outdoor recreational therapy events are gaining attention in potentially preventing suicides. While attendance by servicemembers at such seminars, retreats, workshops, or outdoor recreational therapy events might increase their wellness and well-being, there is insufficient evidence about their efficacy in reducing suicides in the military community. Therefore, the committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives not later than April 1, 2022, that assesses the feasibility of incorporating these types of alternate suicide prevention treatments into current DoD suicide prevention treatment plans. The feasibility assessment should include any evidence on the benefits or drawbacks of these treatments.

Telehealth Licensure Flexibility Review

The committee recognizes that the Department of Defense implemented several temporary policy changes because of the COVID-19 pandemic. The committee is interested in the feasibility of retaining some of those policy changes in effect, such as the waiving of certain licensing requirements allowing interstate telehealth appointments with TRICARE-authorized providers. Therefore, the committee directs the Secretary of Defense to submit a report to the Senate Committee on Armed Services and the House Committee on Armed Services by March 1, 2022, on the feasibility and estimated cost of extending these flexibilities permanently.

Traumatic Brain Injury Test Devices

The committee is encouraged by the recent Food and Drug Administration (FDA) approval of a hand-held rapid blood test for traumatic brain injury and commends the collaborative partnership between the Department of Defense, industry, and academia which produced this significant medical achievement. The committee acknowledges the leadership of the U.S. Army Medical Materiel Development Activity (USAMMDA) product management team, their industry partners, and the significant contributions of the Transforming Research and Clinical Knowledge in Traumatic Brain Injury (TRACK-TBI) clinical research team in this multi-year effort. The committee believes this achievement represents a significant advancement in warrior brain health and will enhance the Department's ability to quickly and objectively evaluate service-members who have suffered a potential brain injury during combat, training, or routine daily activities. Based on its potential to improve surveillance and early diagnosis of brain injuries across the joint force, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by December 1, 2021 on the Department's strategy, fielding plan, and anticipated re-

source requirements to equip medical element and treatment facilities across the military health system with FDA-approved blood-based TBI detection devices.

Tri-Service Nursing Research Program

The committee notes the Department of Defense has significantly benefited from the research conducted by the Tri-Service Nursing Research Program (TSNRP), yet its cooperative agreement with the Uniformed Services University to conduct those activities is to be terminated in fiscal year 2022. Since 1992, the TSNRP has continuously advanced the science and research of military nursing to support mission readiness, improve the health and quality of life of military personnel and beneficiaries, and provide high-caliber nursing care around the globe. Therefore, the committee strongly encourages the Defense Health Agency, the Uniformed Services University, and the services to renegotiate an agreement to allow the Tri-Service Nursing Research Program to continue its critical work in support of the Department of Defense and service members.

TRICARE Dental Contracting

The committee recognizes the importance and value of the TRICARE Dental Program (TDP) to service members and their beneficiaries. The committee is also aware that the plan to transfer TDP to the Federal Employees Dental and Vision Insurance Program (FEDVIP) resulted in unintended consequences: increased beneficiary choices came at an increased cost to them and limited the Department's ability to provide the benefit to beneficiaries living overseas. The FEDVIP option would also result in potential increased cost to government, convoluted requirements between agencies to provide subsidies, and complicated communication with beneficiaries. Therefore, the committee directs the Secretary of Defense to provide a briefing to the Committee on Armed Services of the House of Representatives not later than February 1, 2022, on the plan to transition the TDP contract that addresses the challenges raised above.

TRICARE Healthcare Demonstration Project

The Committee notes that the Defense Health Agency's (DHA) report on its objectives for the TRICARE program includes efforts to incorporate industry best practices and innovation to contain costs and increase beneficiary choice and access.

The Committee concurs with DHA's plans to implement demonstrations to test a local market approach via direct contracts that allow private sector health care plans and providers to address the needs of beneficiaries with innovative, value-based care; allow for more collaboration between the plans and DHA; increase competition; improve quality; benefit beneficiaries; and, contain costs.

The Committee recognizes there may be impediments for these entities, particularly in federal contracting. We believe DHA should explore ways to enable broader participation through demonstration projects and innovation as do other federal agencies that have authorities for alternative acquisition methods.

Therefore, the Committee directs the Secretary of Defense to consider the feasibility of multiple acquisition approaches, to include

authorities for direct contracts with local health care plans and providers for the purposes of temporary demonstration projects only, that safeguard the government's interests while providing contracting flexibility. Furthermore, the Committee directs the Secretary of Defense to provide a briefing to the House Armed Services Committee not later than March 1, 2022 on these demonstrations, the timeline to implement them, and what authorities are needed for alternative acquisition methods.

TRICARE Reimbursement of Critical Access Hospitals

The committee is concerned about the impact of inadequate TRICARE reimbursement for care in Critical Access Hospitals. Therefore, the committee directs the Secretary of Defense to submit a report to the Senate Committee on Armed Services and the House Committee on Armed Services by February 1, 2022, that includes the following:

(1) a review of current TRICARE reimbursements for all Critical Access Hospitals nearby military installations;

(2) a geographic review and comparison of reimbursement rates for all other hospitals participating in TRICARE;

(3) a review and identification of healthcare providers currently receiving rates less than current comparable Medicaid rates for TRICARE services; and

(4) a review of the impact of healthcare provider closures on military access to health care and readiness, including Critical Access Hospitals or Rural Access Hospitals that currently receive less than Medicaid rate for a portion of TRICARE services provided.

Warstopper Program

The committee recognizes the contributions of the Defense Logistics Agency's Warstopper program in bolstering the resilience and responsiveness of the defense industrial base to meeting "go-to-war" materiel requirements for deploying units. The Warstopper Program was utilized during the COVID-19 national emergency to provide over 6.4 million N95 respirators to DOD as well as ventilators and other critical personal protective equipment. Warstopper medical readiness contracts cover hundreds of pharmaceutical items and account for approximately half of the Warstopper budget. The Committee believes that the Defense Logistics Agency should develop a program, either within the authorities of the Warstopper program or building from Warstopper's success, to ensure medication supply stability and guarantee access to commonly-used pharmaceutical items for not just deploying units but all servicemembers, their dependents, and others who access care through the Military Health System. The Committee also urges the Defense Logistics Agency to expand the Warstopper program's portfolio of wartime requirements to include a global pandemic scenario. The Committee directs the Director of the Defense Logistics Agency, in consultation with the Director of the Defense Health Agency, to provide a report to the Senate Committee on Armed Services and the House Committee on Armed Services no later than April 1, 2022 assessing the feasibility of expanding the Warstopper program. This report should include an assessment of resources or authorities required to ensure access to at least a six

month supply of at least thirty generic pharmaceuticals the Directors determine to be at risk of shortage, especially during a public health emergency, for all MHS users. Further, the Committee directs the Comptroller General of the United States to conduct an assessment of the Warstopper program and provide the Senate Committee on Armed Services and the House Committee on Armed Services with a report on its findings no later than January 1, 2023.

LEGISLATIVE PROVISIONS

SUBTITLE A—TRICARE AND OTHER HEALTH CARE BENEFITS

Section 701—Improvement of Postpartum Care for Certain Members of the Armed Forces and Dependents

This section would require a pilot program in support of postnatal care, to include pelvic health rehabilitation, and the issuance of policy guidance to develop and to implement standard protocols across the Military Health System to treat obstetric hemorrhage.

Section 702—Eating Disorders Treatment for Certain Members of the Armed Forces and Dependents

This section would provide for eating disorders treatment for members of the Armed Forces and certain dependents of members and former members of the uniformed services, and for other purposes.

Section 703—Modifications Relating to Coverage of Telehealth Services under TRICARE Program and Other Matters

This section would modify telehealth services under the TRICARE Program and authorize a limited Survivor Benefit Plan open season.

Section 704—Modifications to Pilot Program on Health Care Assistance System

This section would extend the deadline and scope of the report required following this pilot.

Section 705—Temporary Requirement for Contraception Coverage Parity under the TRICARE Program

This section would eliminate cost-sharing for contraception for 1 year.

SUBTITLE B—HEALTH CARE ADMINISTRATION

Section 711—Modification of Certain Defense Health Agency Organization Requirements

This section would modify certain Defense Health Agency requirements.

Section 712—Requirements for Consultations Related to Military Medical Research and Defense Health Agency Research and Development

This section would require additional consultation between the Department of Defense and the services relating to the transfer of medical research and development organizations.

Section 713—Authorization of Program to Prevent Fraud and Abuse in the Military Health System

This section would establish a program to prevent fraud and abuse in the Military Health System.

Section 714—Mandatory Referral for Mental Health Evaluation

This section would amend section 1090a of title 10, United States Code, To improve the process by which a service member may be referred for a mental health evaluation.

Section 715—Inclusion of Exposure to Perfluoroalkyl and Polyfluoroalkyl Substances as Component of Periodic Health Assessments

This section would require the Department of Defense to offer perfluoroalkyl and polyfluoroalkyl substances exposure evaluation and testing for service members who want it as part of their annual health assessment.

Section 716—Prohibition on Adverse Personnel Actions Taken against Certain Members of the Armed Forces Based on Declining COVID-19 Vaccine

This section would prohibit certain adverse actions for service members who decline the COVID-19 vaccine.

Section 717—Establishment of Department of Defense System To Track and Record Information on Vaccine Administration

This section would establish a process for the Department of Defense to track vaccines administered by the Department, including adverse reactions and refusals.

Section 718—Authorization of Provision of Instruction at Uniformed Services University of the Health Sciences to Certain Federal Employees

This section would expand eligibility for enrollment in the Uniformed Services University.

Section 719—Mandatory Training on Health Effects of Burn Pits

This section would direct the Secretary of Defense to provide military health system medical providers with mandatory training with respect to the potential health effects of burn pits.

Section 720—Department of Defense Procedures for Exemptions from Mandatory COVID-19 Vaccines

This section would direct the Secretary of Defense to establish a uniform procedure for administrative, medical, or religious exemptions to the mandatory COVID-19 vaccine.

Section 721—Modifications and Report Related to Reduction or Realignment of Military Medical Manning and Medical Billets

This section would modify previous limitations on the realignment or reduction of military medical manning and strength in light of emerging requirements.

Section 722—Cross-Functional Team for Emerging Threat Relating to Anomalous Health Incidents

This section would require the Secretary of Defense to create a cross-functional team to address the national security challenges related to anomalous health incidents. It would also require the Secretary to provide a briefing to the appropriate congressional committees with respect to the efforts of the Department of Defense regarding anomalous health incidents.

Section 723—Implementation of Integrated Product for Management of Population Health across Military Health System

This section would require the implementation of a population health platform that integrates healthcare data for all military health system beneficiaries, including care delivered through purchased care and direct care.

Section 724—Digital Health Strategy of Department of Defense

This section would require the Secretary of Defense to develop a Digital Health Strategy to incorporate new and emerging technologies.

Section 725—Development and Update of Certain Policies Relating to Military Health System and Integrated Medical Operations

This section would require the Secretary of Defense, in coordination with the Secretaries of the military departments and the Joint Chiefs of Staff, to develop and update certain policies related to integrated medical operations in the continental United States, plans for global patient movement, and bio-surveillance and medical research capabilities. In addition, this section would require the Secretary of Defense to conduct an analysis of whether the current organizational structure of the military health system allows for the updated plans based on the integrated medical operations requirements.

Section 726—Standardization of Definitions Used by the Department of Defense for Terms Related to Suicide

This section would require the Department of Defense to standardize suicide attempt and suicidal ideation definitions across all of the military services.

SUBTITLE C—REPORTS AND OTHER MATTERS

Section 731—Grant Program for Increased Cooperation on Post-Traumatic Stress Disorder Research between United States and Israel

This section would authorize collaborative research between the United States and Israel with respect to post-traumatic stress disorder.

Section 732—Pilot Program on Cardiac Screening at Certain Military Service Academies

This section would expand an ongoing pilot to conduct cardiac screening for incoming candidates at the military service academies.

Section 733—Pilot Program on Cryopreservation and Storage

This section would create a pilot program to give participating service members the option of cryopreserving their gametes before deploying to a combat zone.

Section 734—Pilot Program on Assistance for Mental Health Appointment Scheduling at Military Medical Treatment Facilities

This section would direct the Secretary of Defense to create a pilot program to provide direct assistance for mental health appointment scheduling at military medical treatment facilities and clinics, and provide a report assessing the program.

Section 735—Pilot Program on Oral Rehydration Solutions

This section would authorize a pilot program for oral rehydration solutions.

Section 736—Authorization of Pilot Program to Survey Access to Mental Health Care under Military Health System

This section would direct the Secretary of Defense to conduct a 1-year pilot program that surveys mental healthcare stigma and access.

Section 737—Prohibition on Availability of Funds for Research Connected to China

This section would prohibit Department of Defense fiscal year 2022 funding from being spent on research conducted in China or with entities owned or controlled by the Chinese government unless the Secretary of Defense provides a waiver for national security reasons. If the Secretary grants a waiver, the Secretary must submit to the congressional defense committees a justification not later than 14 days after the waiver is provided.

Section 738—Independent Analysis of Department of Defense Comprehensive Autism Care Demonstration Program

This section would require an independent review of the Department of Defense Comprehensive Autism Care Demonstration pro-

gram to be completed by the National Academies of Sciences, Engineering, and Medicine.

Section 739—Independent Review of Suicide Prevention and Response at Military Installations

This section would establish a committee to undertake an independent review of suicide prevention and response at not fewer than three military installations.

Section 740—Feasibility and Advisability Study on Establishment of Aeromedical Squadron at Joint Base Pearl Harbor-Hickam

This section would require a feasibility and advisability study on establishing a Hawaii Air National Guard Aeromedical Evacuation Squadron at Joint Base Pearl Harbor-Hickam.

Section 741—Plan to Address Findings Related to Access to Contraception for Members of the Armed Forces

This section would require the Secretary of Defense to submit a plan to address findings related to access to contraception.

Section 742—GAO Biennial Study on Individual Longitudinal Exposure Record Program

This section would direct the Comptroller General of the United States to conduct a study of the Individual Longitudinal Exposure Record program as it rolls out to catch problems and identify opportunities for expansion.

Section 743—GAO Study on Exclusion of Certain Remarried Individuals from Medical and Dental Coverage under TRICARE Program

This section would require the Comptroller General to conduct a study on the purpose and effects of limiting medical and dental coverage under the TRICARE program to exclude remarried widows, widowers, and former spouses of members or former members of the uniformed services.

Section 744—Study on Joint Fund of the Department of Defense and the Department of Veterans Affairs for Federal Electronic Health Record Modernization Office

This section would require the Department of Defense and the Department of Veterans Affairs to evaluate the effectiveness and future of the Federal Electronic Health Record Modernization Office.

Section 745—Briefing on Domestic Production of Critical Active Pharmaceutical Ingredients

This section would require a briefing on the development of a domestic production capability for critical active pharmaceutical ingredients and final dosage form medicines.

Section 746—Briefing on Anomalous Health Incidents Involving
Members of the Armed Forces

This section would require the Secretary of Defense to provide a briefing on anomalous health incidents, recommendations for improving data collection, and identification of a senior official responsible for internal Department coordination on this issue and for interfacing with the interagency.

Section 747—Sense of Congress on National Warrior Call Day

This section would express support for the designation of National Warrior Call Day and recognize the importance of connecting our warriors to support structures necessary to transitioning from the battlefield.

**TITLE VIII—ACQUISITION POLICY, ACQUISITION
MANAGEMENT, AND RELATED MATTERS**

ITEMS OF SPECIAL INTEREST

**Artificial Intelligence and Machine Learning in the Defense
Contracting Process**

The committee notes its continued encouragement of Department of Defense efforts to experiment with new capabilities that incorporate artificial intelligence and machine learning to increase efficiencies in the Department's contracting processes. The military services have utilized these technologies to streamline procurement decision activities related to identifying cost data, determining pricing methods, and verifying price estimates. These efforts have demonstrated the potential for artificial intelligence and machine learning to enhance efficiency and produce cost savings. However, in order to evaluate the scalability, full range of benefits, and appropriate safeguards for the application of existing technologies and emerging capabilities to the Department's contracting processes, deeper evaluation is needed.

Therefore, the committee directs the Secretary of Defense to submit a briefing to the House Armed Services Committee, no later than March 31, 2022 that shall include:

(1) identification of any artificial intelligence and machine learning applications currently used within the Department to assist contracting processes;

(2) assessment of the feasibility, costs, and benefits of more broadly employing artificial intelligence and machine learning technologies to further streamline the Department's contracting processes and improve efficiencies;

(3) identification of ongoing research into artificial intelligence and machine learning related to contracting practices, as well as market research on the current availability of such technologies; and

(4) evaluation of whether artificial intelligence and machine learning could reduce the time required to execute contracting processes, and to identify whether such technologies could provide the Department with cost savings when balanced with the costs as-

sociated with safeguarding the technology and training the workforce.

Artificial Intelligence-Enabled Autonomous Systems

The committee's Future of Defense Task Force 2020 report found that advancements in artificial intelligence will have an outsized impact on national security and the Department of Defense. The committee believes that to ensure technological and military superiority, the Department must lead in both developing and quickly integrating artificial intelligence capability into its systems and operational concepts, particularly its major defense acquisition programs to make them more reliable, networked, and effective.

Thus, the committee directs the Secretary of Defense to brief the House Armed Services Committee no later than March 31, 2022, on the following:

- (1) how the Department plans to integrate artificial intelligence-enabled autonomous systems into its future operational concepts;
- (2) how the Department evaluates the need and feasibility of integrating artificial intelligence capability into its current and future major defense acquisition programs;
- (3) how the Department evaluates artificial intelligence-enabled autonomous systems as an alternative to major defense acquisition programs;
- (4) the potential use of artificial intelligence-enabled systems and programs to ensure connectivity and interoperability between existing and future systems, particularly in support of the Joint All Domain Command and Control concept; and
- (5) the Department's efforts to leverage universities and non-traditional companies to advance these objectives.

Assessment and Mitigation Strategy for Microelectronics Supply Chain Vulnerabilities for Army Ground Vehicles

The committee directs the Secretary of the Army, in consultation with the Army Venture Capital Initiative, to conduct an assessment of the risks and vulnerabilities in the supply of microelectronics for use in current and next-generation ground vehicles and submit a strategy to the congressional defense committees by September 1, 2022, to address the risks and vulnerabilities identified, and considers the development of a secure, domestic supply chain for microelectronics for ground vehicles. The strategy should include:

- (1) How to best leverage public-private partnerships to achieve greater security in microelectronics supply chains.
- (2) How to best incorporate private capital and investment in domestic microelectronics manufacturing to support the development of secure, domestic supply chains for microelectronics for ground vehicles.
- (3) The commercial automobile industry's challenges throughout 2021 in securing microelectronics for vehicles, and whether the Army should engage and cooperate with the domestic commercial automobile industry to potentially seek commercial investment to develop a secure, domestic supply chain for microelectronics for use in both military and commercial vehicles to take advantage of economies of scale.

To develop this strategy, the Secretary of the Army shall consult with the Army Venture Capital Initiative, established pursuant to Section 8150 of the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act (Public Law 107–117).

Briefing on Navy Ship Repair Withholds

The committee recognizes that, per section 2307 of title 10, United States Code, the Navy has the ability to withhold as much as ten percent or as little as one percent on private shipyard repair contracts. The private repair industry and the Navy have struggled with the transition from cost plus contracts to fixed price contracts for repair work on Navy surface ships with regard to addressing issues such as unexpected growth work and contract modifications. These issues have led to extended repair availabilities which subsequently have impacts to fleet deployments. Rather than using the flexibility provided in statute for withholds as a punitive measure, the committee believes that the Navy should be using that mechanism as an incentive to drive performance. The committee notes that the Navy could obligate the maximum amount at award for shipyards that have demonstrated consistent performance and have delivered ships on schedule and on cost.

Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by February 1, 2022 on what efforts the Navy is making to utilize contract withholdings as an incentive to drive improved performance in the private surface ship repair industry.

Cost Data and Software Effort

The committee commends the initiative of the Director of Cost Assessment and Program Evaluation (CAPE), in collaboration with the Department of Defense's cost community from across the military departments and Department-wide agencies, to create a unified effort to ensure the strategic collection, curation, and use of acquisition, cost, and technical data for improved analysis and decision making. In the past decade, CAPE and the Department's cost community have come together to move towards:

- (1) digitizing data collection, storage, and sharing to expedite availability for analysis;
- (2) expanding the type of data collected and the set of programs and large contracts from which the data is collected;
- (3) strategically planning and collecting data rather than issuing ad hoc and belated data calls; and
- (4) reducing the reporting burden on contractors while improving data quality and insight for analysis.

The committee is concerned that without adequate funding, CAPE's cost data and software initiative will slow, efficient availability of up-to-date data will decrease, and the lack of strategic planning will cause irreparable data gaps in the future. Strategic collection of cost and technical data and continued improvements to advanced analytical capabilities are crucial for CAPE's ability to develop independent cost estimates and provide accurate information and realistic estimates of cost for the Department's acquisition programs, as required by section 2334 of title 10, United States

Code. Indeed, this committee has often relied on the independent analysis provided by the Director based on comprehensive and quality data to inform the decisions and actions the committee takes in drafting its annual National Defense Authorization Acts. Therefore, the committee encourages the Secretary of Defense to increase support for the Director's cost data and software effort.

Creation of a Consortium Focused on Semiconductor Supply and Alignment of Foreign Direct Investment to National Defense Strategy

The committee encourages the Department of Defense to support a consortium comprised of U.S. entities and entities originating from allied countries to focus on semiconductor research and development, securing global supply chains, and alignment of foreign direct investment with the National Defense Strategy. Therefore, the committee directs a briefing to the House Committee on Armed Services from the Under Secretary of Defense for Acquisition and Sustainment on semiconductor research and development by February 1, 2022.

Department of Defense Use of GSA's Fourth-Party Logistics (4PL) program

The committee notes the Department of Defense's continued successful use of the General Services Administration's (GSA's) long-standing Fourth-Party Logistics (4PL) program to provide crucial industrial supplies and services to the U.S. Military worldwide. For over ten years, the 4PL program has allowed the Department of Defense to leverage GSA's acquisition expertise and experience in fulfilling the military's industrial product requirements. Through the 4PL program, GSA has worked with the Army, Navy, Air Force, and Marine Corps to strengthen their global supply chain across 70 countries.

To make certain that the 4PL program achieves its objectives, GSA conducts comprehensive competitive solicitations among qualified providers. GSA has awarded contracts to qualified industrial supply companies through fair and open competition comporting fully with the Competition in Contracting Act of 1984 (41 U.S.C. 253). GSA extends its reach by selecting companies with strong supply chain, broad product inventory, financial and logistic strength, global reach and rigorous compliance to all procurement regulations. In addition, the 4PL program is incredibly cost-effective for the government. While the companies under contract maintain millions of dollars' worth of product inventory, the military only pays when it needs an item.

GSA's 4PL program, which provides cost-effective, reliable products and services when they are needed, is a significant asset to the Department of Defense. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services no later than January 30, 2022, on the status and further access and expansion of the Fourth Party Logistics Solutions program for the military services.

Evaluating Employee Ownership in Department of Defense Government Contractors

The committee recognizes that businesses that are established as S corporations with 100 percent of the outstanding stock held through an employee stock ownership plan (ESOP), as defined in section 4975(e)(7) of the Internal Revenue Code, are uniquely resilient during a financial crisis.

Therefore, the committee directs the Secretary of Defense to evaluate whether the corporate structure of nontraditional defense contractors wholly owned by ESOPs enables them to successfully transition between experimental prototyping to full-scale development, by identifying a contracting activity, such as the Defense Innovation Unit, and prescribing minimally burdensome procedures for businesses entering agreements with that contracting activity to verify that they are wholly owned through an ESOP.

The committee further directs the Secretary of Defense to submit a report to the House Committee on Armed Services, not later than March 1, 2022, that includes:

- (1) the number of firms wholly owned through ESOPs that were awarded prototyping agreements during the past year;
- (2) data on the ability of firms wholly owned through ESOPs to attract and retain a talented workforce in a competitive market;
- (3) an evaluation of how these firms were able to leverage the capital needed to bridge the funding gap between prototype demonstration and full-scale development; and
- (4) any challenges that prevent firms wholly owned through ESOPs from partnering with the Department of Defense to scale their technologies and capabilities.

The committee further directs the Comptroller General of the United States to provide a briefing to the House Committee on Armed Services, not later than July 1, 2022, on the Comptroller General's preliminary review of the report submitted by the Secretary. At a minimum, the review shall address acquisition authorities that could be used to incentivize businesses to become qualified businesses wholly owned through ESOPs and to overcome challenges to partnering with the Department.

Expansion of Canadian ITAR Exception to NTIB Members

The committee believes that the unique and close relationship between the United States and Canada has provided significant advantages to both nations' security and economic well-being. In particular, the committee notes Canada's exemption from the International Traffic in Arms Regulations (ITAR). The committee is aware of proposals to provide a similar exemption for other members of the National Technological Industrial Base (NTIB), and arguments that such an exemption could be beneficial. Therefore, the committee directs the Secretary of Defense, in coordination with the Secretary of State, to brief the House Committee on Armed Services no later than January 1, 2022 on the feasibility and desirability of expanding the Canadian ITAR exemption to other members of the NTIB.

GSA E-Commerce Clarification

In its final report on increasing competition and streamlining the acquisition process, the Section 809 Panel, established by the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114–92), recommended that the Department of Defense use e-commerce portals as a tool to gain transparency and improve management of micro-purchases, including achieving visibility into AbilityOne and Federal Prisons Industries spending patterns. When Congress established a program to procure commercial products through commercial e-commerce portals in Section 846 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91), it stated that the purpose of the pilot was to enhance competition, enable market research, and ensure reasonable pricing of commercial products. In the joint explanatory statement accompanying the bill, Congress expressed its expectation that the Department of Defense would participate in the initial rollout phase of the e-commerce portal. In June 2020, the U.S. General Services Administration (GSA) awarded contracts to three e-marketplace platform providers for a proof-of-concept, but to date, no Department of Defense acquisition offices have volunteered to participate in the program.

In order to achieve the assessment that can only be gained by testing the current proof-of-concept, the Committee expects that the Under Secretary for Acquisition and Sustainment collaborate with the GSA to educate acquisition professionals within each service branch and related Defense acquisition activities on the availability, operation, and intent of the GSA Commercial Platforms Initiative. Therefore, the committee directs the Under Secretary to submit a brief to the House Committee on Armed Services by March 1, 2022, on the training it is providing acquisition professionals, to include: (1) an assessment of workforce hesitation to participate in the proof-of-concept; (2) information on how to use the platform providers, and the extent to which the current proof-of-concept meets statutory requirements, Department of Defense acquisition regulations and directives; and (3) other relevant information to ensure the Department of Defense agencies are aware of and have the maximum opportunity to use the proof-of-concept for micro-purchase acquisitions of commercial items.

Implementation of Enhanced Post-Award Debriefings

The committee remains concerned that more should be done to address findings made in a RAND Corporation report, directed by section 885 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328), that “debriefings that are evasive or adversarial will lead to a bid protest in most cases.” The committee emphasizes the value of meaningful debriefings, and observes that an April 2016 Defense Procurement and Acquisition Policy Memorandum provides that “timely and thorough debriefings increase competition, encourage offerors to continue to invest resources in the Government marketplace, and enhance the Government’s relationship and credibility with Industry.”

The committee is encouraged that in evaluating the extent to which the bid protest system affects or is perceived to affect the quality or quantity of pre-proposal discussions, discussions of pro-

posals, or post-award debriefings, the RAND report found that some Department of Defense agencies are improving dialogue with companies to increase the transparency of the procurement process and dissuade unsuccessful offerors from filing bid protests.

The committee is further encouraged that the enhanced debriefing rights established in section 818 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91) were immediately implemented as a class deviation and expects the related Defense Federal Acquisition Regulation Supplement case to be resolved soon.

In order for the Department to gain the full benefit of enhanced debriefings, the committee emphasizes the demonstrated value of meaningful, in-person debriefings to avoid unnecessarily costly and time-consuming bid protests. Therefore the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing to the House Committee on Armed Services by December 30, 2021, on the Department’s efforts to implement enhanced debriefings with disappointed offerors and to conduct training for and sharing of best practices with contracting officers to ensure debriefings are responsive and informative, and on the resulting impact on the number of post-award bid protest filings. The briefing shall also include an assessment of the costs and benefits of revising Department policy to require post-award debriefings on contracts over \$500.0 million be conducted in person.

Industrial Base Analysis and Sustainment Support

The committee notes Congressional support over the past several fiscal years for Industrial Base Analysis and Sustainment (IBAS) funding addressing several specific domestic defense industrial base and supply chain shortfalls, particularly in the areas of radar resiliency and directed energy systems.

The committee strongly supports IBAS initiatives being overseen and coordinated on a Defense-wide basis by the Office of the Assistant Secretary of Defense for Industrial Policy, and is concerned that the Department may be leaving the individual military services to deal with their own individual supply chain or industrial base concerns. If allowed to proceed, this approach would represent a step backwards in assuring our fragile defense industrial base, and would imperil important advances that have been made in recent years to address supply chain resiliency and future sustainment of critical defense radar systems.

Therefore, the committee directs the Secretary of Defense to report to the congressional defense committees no later than March 1, 2022 on a five-year plan to support current and future IBAS projects with a particular emphasis on how it intends to assure a coordinated and robust domestic industrial base and supply chain with a particular focus on sustainment of radar and directed energy systems.

Interoperability and Commercial Solutions for Combined Joint All-Domain Command and Control

The committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by December 31, 2021 as a part of a quarterly update on the Joint All-Domain

Command and Control required under section 1076 of the William M. (Mac) Thornberry National Defense Authorization for Fiscal Year 2021 (Public Law 116–283) on the following matters:

(1) Availability and functionality of commercially available battlefield management software systems for use as part of the Joint All-Domain Command and Control;

(2) Interoperability among each of the military services;

(3) Interoperability among allied communications systems;

(4) Employment of existing program of record open-architecture solutions.

Minority- and Veteran-Owned Defense Supplier Development in the Aerospace Supply Chain Network

The committee recognizes the need to ensure the resiliency of the aerospace supply chain network, particularly with regard to small unmanned aircraft systems (sUAS), particularly in light of a shrinking number of suppliers and limited availability of skilled workforce at all levels of production. Specifically, the committee notes the Department of Defense's Fiscal Year 2020 Industrial Capabilities Report identified just 5 U.S. companies in the top 10 of U.S. sUAS market shareholders.

The committee is aware that the National Aeronautics and Space Administration (NASA) Aeronautics Research Institute (ARI) is building a modeling and simulation capability that will enable parametric sensitivity analysis of various demand profiles and their effects on the supply chain, from systems and parts to raw materials. The committee encourages the Department to explore ways to partner with the NASA ARI to ensure the aerospace supply chain can meet current and future needs for readiness, resiliency, production targets, and competitiveness in the complete life cycle.

Further, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services, not later than December 31, 2022, that includes an assessment of current supply chain risks in the sUAS industrial base, an analysis of efforts needed to ensure a strong and resilient supply chain ecosystem to meet future and emerging needs, and an assessment of benefits that could be gained through a shared services agreement between the Department and NASA. The briefing shall also include an examination of the workforce skills and talents needed to support the evolving aerospace industry, with a specific focus on bringing minority-owned and veteran-owned suppliers into the supply chain.

Modeling and Simulation

The committee supports efforts by the Department of Defense to use modeling and simulation technologies to enhance rapid and efficient development and fielding of weapon systems and subsystems. These technologies have important applications in various aspects of programs, including research and development, design, production, delivery, maintenance, and sustainment. Therefore, the committee directs the Under Secretary of Defense for Research and Engineering, in coordination with the Under Secretary of Defense for Acquisition and Sustainment and the senior acquisition execu-

tives of each of the military departments, to provide a briefing to the House Committee on Armed Services by April 1, 2022, on current and contemplated efforts to increase speed to market, reduce risk, and foster interoperability in the industrial base through the use of modeling and simulation. The briefing shall include a discussion of ways to include artificial intelligence and digital twin technologies in these efforts.

National Security Implications of Chinese Influence on Agriculture

In general, the committee is concerned about foreign influence, including the influence of the government of the People's Republic of China, in critical U.S. supply chains. The committee is further concerned whether there is such influence in agricultural supply chains that could impact the food for U.S. servicemembers and have national security implications. Therefore, the committee directs the Secretary of Defense to submit a briefing to the House Committee on Armed Services no later than March 1, 2022, on the vulnerability of Department of Defense food supply chains to foreign influence, and any mitigation plans to avoid national security implications of such influence.

Refining Capacity in the United States

The committee remains attentive to the national security implications of assured access to energy. Although refining capacity for fossil fuels remains important in the near term, the committee is encouraged by ongoing developments in sustainable aviation fuels with comparable performance characteristics to traditional fuels and capability with existing fuel infrastructure and equipment. The committee emphasizes the importance of a robust domestic market for both legacy and emerging fuel technology as well as emerging markets for non-agricultural domestic feedstocks. Accordingly, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing to the House Committee on Armed Services by April 1, 2022, on the Department of Defense efforts to sustain and expand sources of fuel to meet operational requirements. The briefing shall address the national security implications of reduced refinery capacity in the United States, including the national security implications of diminished regional diversity of refining capacity attributable to closures over the last several years, any financial impacts of those closures, the potential impacts of the closures on the fuel supply chain and the risks associated with reliance on foreign sources of fossil fuels, including finished petroleum products. The briefing shall also address the status of the Department's work to integrate hydrogen-based fuels and sustainable fuel refining capabilities and describe how the Department is integrating those emerging capabilities into overall plans for delivering fuel.

Registered Apprenticeship Program Corrosion Prevention and Control Training

The Committee notes the importance of investing in training and professional activities for civilian employees and military personnel to perform corrosion prevention and control (CPC) work. In the committee report accompanying the National Defense Authoriza-

tion Act of 2020 (H. Rept. 116–442), the committee directed the Assistant Secretary of Defense for Sustainment to assess the capability and capacity of the Department of Defense workforce to perform CPC work, including the application of preventative coatings. In its assessment, the Department determined the need for additional training facility capacity yet noted that the “high initial investment and reoccurring costs as well as the implementation risks associated with establishing a physical painting training preclude recommending this option.” Therefore, the committee encourages the Department to take advantage of existing registered apprenticeship programs to train personnel and directs the Assistant Secretary of Defense for Sustainment to brief the House Committee on Armed Services not later than March 14, 2022 on inclusion of registered apprenticeship programs in its plan to increase CPC training capacity.

Report on Ship Components

The Secretary of the Navy is directed to provide a report to the congressional defense committees by September 1, 2022 as to cost and schedule impacts associated with requiring the following components to be procured consistent with section 2534 of title 10, U.S.C.: Ship shafts, electric power generators, electric propulsion motors, degaussing systems, power distribution equipment, breakers, switchgear, load center, power panels, power conversion equipment, rectifiers, frequency converters, inverters, machinery control, damage control, sensors, or programs for command, control, communications, computers, and intelligence (commonly known as ‘C4I’).

Securing Allies’ 5G Networks

The committee recognizes the importance of 5G telecommunications networks and the role that this next generation technology plays in the national security community. The committee also recognizes that foreign strategic competitors have the potential to exploit communications technology to influence democratic processes, whether through political and economic leverage and subversion or technological espionage and trade secret theft. The committee believes that the United States should use its defense, military, and intelligence apparatus and economy of scale to encourage and incentivize treaty allies and close partners to adopt secure communications and follow best practices to defend against malign influence, including disinformation and misinformation from strategic competitors like China and Russia.

Therefore the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services, not later than March 1, 2022, on existing United States efforts to help NATO allies secure national 5G communications networks. The briefing shall include: (1) the status and membership of the NATO Multinational 5G Working Group (MM5G); (2) the United States’ goals and objectives for participating in the Working Group; (3) opportunities to expand the Working Group to include other allies within the NATO Alliance; (4) challenges and/or barriers to allies developing a shared understanding of standards, military use cases, and risks that certain providers pose to their systems; (5) ex-

isting cooperation with the United States' European partners and how those relationships can improve efforts to help NATO allies secure their 5G networks; and (6) existing arrangements and new opportunities for strengthening cooperation between the Department of Defense and other federal agencies in helping allies secure their 5G networks.

Securing Critical Mineral Supply Chains

The committee applauds the Department of Defense for recognizing that critical minerals are imperative to national security and developing a strategy to mitigate dangerous supply chain vulnerabilities. The committee supports the Department's significant investments into the defense industrial base to establish the domestic production of rare earth elements, materials necessary for important weapon systems, civilian technology, and increasing renewable energy needs. The committee is concerned, however, that the Department has refrained from addressing supply chain shortfalls for other minerals identified by the government as critical to national security and susceptible to disruption. In 2018, the Secretary of the Interior identified 35 critical minerals with significant foreign reliance but essential to the national defense. The committee notes that disruptions to the supply chains for tin, tantalum, tungsten, and niobium would expose the United States to national security vulnerabilities that foreign adversaries are capable of exploiting. As such, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by June 30, 2022 on the progress of the Department's efforts to understand the disruptions to the supply chain that shortfalls of these and other critical materials cause and update the committee on strategies to mitigate current and potential supply chain vulnerabilities.

Shipbuilding and Naval Capability

The committee remains concerned by the challenges facing the shipbuilding industry in the United States. The acquisition and development of a capable fleet, both military and commercial, will be critical in addressing the threats from near peer adversaries and advancing other national security interests over the next five to ten years. Although the committee acknowledges that the Navy has provided previous reports about sourcing of specific components, the committee believes a broader report is warranted in light of the wide-ranging supply chain disruptions that the COVID-19 pandemic precipitated.

Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by June 1, 2022 on the principal factors presenting risks to U.S. shipbuilding, specifically focusing on those factors that could lead to cost increases or supply chain vulnerabilities, and recommendations to reduce those risks.

Sourcing in Major and Critical Defense Acquisition Programs

The committee continues to emphasize the importance of aligning the Department of Defense acquisition processes with the standards of the Buy American Act (Public Law 72-428). In the

committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116–442), the committee required a report assessing the source content of procurement carried out in support of major defense acquisition programs (MDAPs). The committee received that report more than a month after its required due date. Further, the findings were heavily qualified by references to constraints of collecting underlying data. The committee appreciates the Department's proactive coordination with the Secretaries of the military departments to conduct in-depth reviews of certain MDAPs, as described in the report. However, the relatively short timeframe for those in-depth reviews resulted in a cursory section of the report that restated problems and offered few practical solutions.

Therefore, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing to the House Committee on Armed Services, not later than March 1, 2022, to update the assessments performed in the prior report. Specifically, the briefing shall discuss year-over-year changes to:

(1) the proportion of items and services procured in connection with an MDAP, or other critical government acquisition programs that the Secretary identifies, such as program elements of the national security space and strategic architecture, or other critical government acquisition programs manufactured or developed in the United States which are substantially all from articles, materials, or supplies mined, produced, or manufactured in the United States; and

(2) the components of the programs captured in (1) that are sole sourced from a foreign supplier, including those sourced from a member of the North Atlantic Treaty Organization or a country that otherwise qualifies for a waiver under the Buy American Act. The briefing shall also address the extent to which such procurement is developed from ideas, concepts, or information originating from individuals or companies inside the United States. Finally, the briefing shall include a detailed set of options, including realistic cost and timing estimates, to overcome the challenges of data analysis and supply chain illumination that the prior report identified in connection with the in-depth reviews. In developing those potential courses of action, the briefing shall consider relevant software, services, and other tools available in and from the private sector.

Sourcing in Major Defense Acquisition Programs

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Status of Procurement Technical Assistance Program Integration into Office of Industrial Policy

The committee supports the Procurement Technical Assistance Program (PTAP) and its Procurement Technical Assistance Centers (PTACs) throughout the nation as a critical resource for the warfighter and large and small businesses, especially as the economy recovers from the COVID-19 pandemic. PTACs create a unique communication channel with subcontractors and suppliers, who often have limited or no direct interaction with government, but are critical to the defense supply chain. The committee supports the integration of the PTAP into the Office of Industrial Policy in compliance with section 852 of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116-92). The committee's intent for the move was to better integrate the PTAP into the Office of the Under Secretary of Defense for Acquisition and Sustainment to enhance the defense industrial base and find new and better ways to utilize the program beyond its core mission.

The committee further encourages the Office of the Under Secretary of Defense for Acquisition and Sustainment to work closely and collaboratively with the Association of PTACs, and to implement the recommendations published in a Comptroller General of the United States report (GAO-21-287), issued in response to the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116-442), to ensure the overlap between PTACs and the Small Business Administration's Small Business Development Centers is collaborative. The committee directs the Assistant Secretary of Defense (Industrial Policy) to provide a briefing to the House Committee on Armed Services not later than November 1, 2021, on spe-

cific efforts, both planned and implemented, to expand the role of the PTAP in acquisition, the defense industrial base, and its ability to serve more clients.

Supply Chain Management Leveraging Cross Domain Artificial Intelligence Technologies

The committee supports the Department of Defense and its Joint Artificial Intelligence Center (JAIC) efforts to accelerate the delivery and adoption of Artificial Intelligence capabilities across the department, its services, and agencies. The Defense Critical Supply Chain Task Force believed the Department must use the available tools, scale efforts, and partner with industry to achieve supply chain transparency and make strategic assessments. The Task Force also believed that the Department could leverage artificial intelligence (AI) and machine learning to collect multiple inputs, connect disparate data sets, and then share with the services to identify and address obsolescence or single-source risks.

Therefore, the committee directs the Secretary of Defense to develop a plan on how to leverage new cross-enterprise AI technologies to improve the Department's predictive supply chain management for critical and essential materials and brief the House Committee on Armed Services on its plan no later than March 1, 2022. The plan will include at a minimum the use of AI in the following elements: providing visibility into all supply chains, service patterns and their external drivers; ability to assess and rate Defense Industrial Base and Organic Industrial Base suppliers; ability to quickly link data within and across the Department, and predict impending supply constraints, optimize inventories, ordering and transport to increase mission readiness.

Titanium Supply

The Defense Logistics Agency Strategic Materials office (DLA-SM) serves as the program manager for the National Defense Stockpile (NDS). The committee understands that DLA-SM has identified titanium as a priority NDS material. Titanium is a high-strength, corrosion-resistant metal with properties that make it critical for use in aerospace applications, including structural components of military aviation platforms. The U.S. titanium industry has historically been reliant on imports of titanium sponge, a key feedstock used in the titanium production process. More than 90 percent of titanium sponge is sourced from Japan, a U.S. ally. The last remaining titanium sponge manufacturing facility in the United States closed indefinitely in 2020. As a result, the U.S. industrial base depends on imports of this material. The committee understands that DLA-SM has sought authority and resources to acquire 1,500 metric tons of titanium for the NDS. The committee supports efforts to stockpile titanium in a variety of forms as a cost-effective method to increase assured access to domestic supplies. A reserve supply will provide availability to meet national security needs, even in the event of a market disruption, and will bolster domestic titanium industry capabilities in the near term.

Use of Multi-role Contractor Owned Contractor Operated Aircraft

The committee understands that Combatant Commanders continue to manage air assets to maximize ability to meet mission requirements in their Area of Responsibility. It also understands those forces are composed of a combination of organic and contractor personnel operating single-role and multi-role aircraft and that currently, all contractor owned contractor operated Intelligence Surveillance and Reconnaissance (ISR) aircraft are dedicated to ISR missions and contractor owned contractor operated Mobility/Casualty Evacuation aircraft are dedicated to mobility/casualty evacuation missions. As a result, there are missed opportunities for cross-over or economies of scale. The committee believes an increase in the use of multi-role assets could provide Combatant Commanders additional flexibility in executing day-to-day mission requirements. Any contractor owned contractor operated solutions considered should be responsive to validated Joint Service gaps and should be incorporated into their Force Development processes. However, the committee is concerned about potential tasking and funding restrictions on the use of contractor owned multi-role capable aircraft and the ability to execute missions such as air mobility, medical and casualty evacuation and ISR.

Therefore, the committee directs the Secretary of Defense to provide the congressional defense committees a briefing, not later than June 1, 2022, on the Department of Defense's ability to utilize contractor owned contractor operated aircraft in a multi-use role. At a minimum, the briefing will include:

- (1) challenges and opportunities associated with a single or fleet of contractor owned contractor operated aircraft equipped to carry out multiple functions and missions;
- (2) cost associated with single-role versus multi-use contractor operated contractor owned aircraft;
- (3) comparison of operational value associated with single-role versus multi-use contractor operated contractor owned aircraft;
- (4) capability of swapping payloads in a timely manner to meet changing mission requirements;
- (5) assessment of types of aircraft available to meet multi-role mission requirements;
- (6) assessment of single role mission capabilities with similar mission capabilities on a multi-role aircraft;
- (7) potential contracting challenges associated with executing multi-role missions using contractor operated contractor owned aircraft (i.e. air mobility, medical/casualty evacuation, ISR, etc.);
- (8) mission prioritization and tasking constraints;
- (9) and analysis that weighs the costs, benefits, and risks required to determine the expected impact on costs and on mission achievement;
- (10) methods to ensure that multi-role aircraft that will transport service members are certified to the proper standard; and
- (11) processes for evaluating functions that could be categorized as inherently governmental or closely associated to governmental services.

Value of Foreign Direct Investment and Engaging Allies in Rapid Innovation

The committee is encouraged by the Under Secretary of Defense for Acquisition and Sustainment's efforts to integrate foreign direct investment and global collaboration with trusted allies and partners and the Under Secretary of Defense for Research and Engineering's work with allies and partners on foreign comparative testing, which both help the Department pursue rapid innovation and fielding of new technologies, and secure global supply chains, procurement and sustainment strategies.

The committee directs the Under Secretary of Defense for Acquisition and Sustainment and the Under Secretary of Defense for Research and Engineering to jointly provide a briefing to the committee by March 1, 2022 on the Department's ongoing efforts, including the role the Department plays in the committee on Foreign Investment in the United States process and foreign comparative testing, and how they work together to identify promising innovative technology in support of National Defense Strategy priority areas and promote strategic engagements between foreign governments, institutions, and private sector entities from allied countries that improve the Department's access to and sustainment of technologies that are critical to national security.

LEGISLATIVE PROVISIONS

SUBTITLE A—ACQUISITION POLICY AND MANAGEMENT

Section 801—Acquisition Workforce Educational Partnerships

This section would direct the president of the Defense Acquisition University (DAU) to create a program and designate a program manager to partner with outside entities to augment the DAU curriculum with experiential learning opportunities and ensure the entire acquisition workforce receive training related to critical operational challenges. The section would further establish a formal partnership with outside faculty and require an annual report on legislative proposals and recommendations related to emerging acquisition policy issues.

Section 802—Special Emergency Reimbursement Authority

This section would establish special emergency authority for the Secretary of Defense to reimburse contractors for certain costs during a covered emergency.

Section 803—Prohibition on Procurement of Personal Protective Equipment from Non-Allied Foreign Nations

This section would prohibit the procurement of certain personal protective equipment from designated nations.

Section 804—Minimum Wage for Employees of Department of Defense Contractors

This section would establish a minimum wage of \$15 per hour for covered employees of Department of Defense contractors performing on covered contracts.

Section 805—Diversity and Inclusion Reporting Requirements for Covered Contractors

This section would require covered contractors to submit annual reports regarding diversity and inclusion within their workforce and would require the Secretary of Defense to submit an annual report on the consolidated findings.

Section 806—Website for Certain Domestic Procurement Waivers

This section would amend section 4814 of title 10, United States Code, to require the Secretary of Defense to establish and maintain a publicly available website for the purpose of publishing information related to the type and reasoning for each waiver or exception granted to the Buy American Act sourcing requirements.

Section 807—Suspension or Debarment Referral for Egregious Violations of Certain Domestic Preference Laws

This section would require a contracting officer to refer to the appropriate suspension or debarment official any current or former Department of Defense contractor if the contracting officer believes the contractor has egregiously violated the domestic preference requirements of section 2533a of title 10, United States Code, Berry Amendment, or section 2533b of title 10, United States Code, Restrictions on Specialty Metals. The section would include a safe harbor exception where a contractor reasonably acted in good-faith reliance on a written waiver from an authorized individual, or on a representation by a third party about the origin of goods, articles, materials, or supplies.

SUBTITLE B—AMENDMENTS TO GENERAL CONTRACTING AUTHORITIES, PROCEDURES, AND LIMITATIONS

Section 811—Extension of Authorization for the Defense Civilian Acquisition Workforce Personnel Demonstration Project

This section would extend the United States Air Force's Acquisition Demonstration program by 2 years, to 2025.

Section 812—Modifications to Contracts Subject to Cost or Pricing Data Certification

This section would make technical changes to section 2306a of title 10, United States Code, to conform to amendments made by section 814 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283).

Section 813—Office of Corrosion Policy and Oversight Employee Training Requirements

This section would require the Director of the Office of Corrosion Policy and Oversight to ensure that contractors preventing and mitigating corrosion of Department of Defense equipment and infrastructure make use of qualified training programs for hiring and that the Department do the same for training or professional development of military personnel and civilian employees.

Section 814—Standard Guidelines for Evaluation of Requirements for Services Contracts

This section would amend section 2329 of title 10, United States Code, to include standard guidelines based on the checklist in use by the Department of the Army and to require the senior official supervising requirements to certify that task orders and statements of work comply with such standards.

Section 815—Extension of Requirement to Submit Selected Acquisition Reports

This section would restore the requirement for a report at the end of each fiscal-year quarter on current major defense acquisition programs and any program to exceed \$300.0 million.

Section 816—Limitation on Procurement of Welded Shipboard Anchor and Mooring Chain for Naval Vessels

This section would amend section 2534 of title 10, United States Code, to require that all shipboard anchor chains be manufactured in the national technology and industrial base.

Section 817—Competition Requirements for Purchases from Federal Prison Industries

This section would amend section 3905 of title 10, United States Code, to restore the mandatory preference for the Department of Defense to purchase from Federal Prison Industries so long as market research demonstrates the product is comparable to products available from the private sector and best meets the needs of the Department in terms of price, quality, and time of delivery.

Section 818—Repeal of Preference for Fixed-Price Contracts

This section would repeal section 829 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328), which established a statutory preference for fixed-price type contracts and a requirement for senior acquisition executives to approve the award of cost-type contracts over \$25.0 million.

Section 819—Modification to the Pilot Program for Streamlining Awards for Innovative Technology Projects

This section would amend section 873 of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114–92), Pilot Program for Streamlining Awards for Innovative Technology Projects, as amended by section 832 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283), to extend the deadline by 2 years to October 1, 2024. This section would also require the Secretary of Defense to submit a recommendation to the congressional defense committees by April 1, 2023, as to whether the pilot should be further extended, and if so include with it the lessons learned from this pilot and usage data.

Section 820—Other Transaction Authority Information
Accessibility

This section would require the Department of Defense to provide recommendations to make other transaction authority data more accessible and improve the reporting structure.

SUBTITLE C—PROVISIONS RELATING TO SUPPLY CHAIN SECURITY

Section 831—Department of Defense Research and Development
Priorities

This section would require Department of Defense priorities to be addressed in research and development programs focused on alternative technologies to, and methods for the extraction, processing, and recycling of, critical minerals.

Section 832—Defense Supply Chain Risk Assessment Framework

This section would require the Department of Defense to develop a supply chain risk assessment framework leveraging of supply chain illumination tools.

Section 833—Plan to Reduce Reliance on Supplies and Materials
from Adversaries in the Defense Supply Chain

This section would require a plan to reduce reliance on certain materials obtained from sources located in geographic areas controlled by foreign adversaries.

Section 834—Enhanced Domestic Content Requirement for Major
Defense Acquisition Programs

This section would establish certain thresholds for domestic content requirements, and would require a related assessment.

Section 835—Reduction of Fluctuations of Supply and Demand for
Certain Covered Items

This section would direct the Secretary of Defense to specify methods and processes to track fluctuations in supply chain forecasting and demand requirements for certain items and implement policies to encourage predictable demand requirements. The section would also require a quarterly report on supply chain forecasting fluctuations to the Under Secretary of Defense for Acquisition and Sustainment.

Section 836—Prohibition on Certain Procurements from the
Xinjiang Uyghur Autonomous Region

This section would prohibit Department of Defense funds for certain procurements from the Xinjiang Uyghur Autonomous Region of China. This section would also require the issuance of rules for contracts with the Department of Defense related to such prohibition.

SUBTITLE D—INDUSTRIAL BASE MATTERS

Section 841—Modification of Pilot Program for Development of Technology-Enhanced Capabilities with Partnership Intermediaries

This section would amend the pilot program authorized in section 851 of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92) to raise the aggregate amount allowed to be spent on the pilot from \$2.0 million to \$20.0 million, to allow for other entities in the Department of Defense that make awards under the Small Business Innovation Research program to transfer funding to the Commander of the U.S. Special Operations Command to use in the pilot, and to extend the activity from September 30, 2021, through September 30, 2025. The annual reporting requirement would be modified to include additional data and information requirements and extended to cover the duration of the pilot program.

Section 842—Designating Certain SBIR and STTR Programs as Entrepreneurial Innovation Projects

This section would direct the Secretary of Defense and the Secretaries of the military departments to each carry out a pilot program to more effectively transition Small Business Innovation Research programs and Small Business Technology Transfer programs into Phase III. This section would direct the Secretaries to each designate five completed Phase II programs to include in the next Future Years Defense Program as Entrepreneurial Innovation Projects, and to consider them as part of the Department of Defense’s planning, programming, budgeting, and execution process. The Secretary of Defense would be responsible for submitting a report annually to the congressional defense committees on the programs selected for the duration of the 5-year pilot.

Section 843—Modifications to Printed Circuit Board Acquisition Restrictions

This section would amend section 2533d of title 10, United States Code, and section 841 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283), which prohibited acquisitions of certain printed circuit boards by the Department of Defense.

Section 844—Defense Industrial Base Coalition for Career Development

This section would require the establishment of a coalition among covered institutions of higher education, career and technical education programs, workforce development boards, labor organizations, and organizations representing defense industrial base contractors to focus on career pathways for individuals seeking careers in manufacturing as well as a report on current efforts and offer recommendations.

Section 845—Additional Testing of Commercial E-Commerce Portal Models

This section would direct the Administrator of General Services to begin testing other e-commerce portal models and provide a report to congressional defense committees with a summary of their findings and testing results.

Section 846—Support for Industry Participation in Global Standards Organizations

This section would create a grant program to assist domestic businesses with the high costs of participating in standards development, including conducting relevant research, developing requisite skills and expertise, preparing standards proposals, and attending technical standards-setting meetings.

SUBTITLE E—OTHER MATTERS

Section 851—Mission Management Pilot Program

This section would establish a mission management pilot program led by the Strategic Capabilities Office to identify lessons learned and improved mission outcomes achieved by quickly delivering solutions that fulfill cross-service operational needs.

Section 852—Pilot Program to Determine the Cost Competitiveness of Drop-In Fuels

This section would direct the Secretary of Defense to establish a 5-year pilot program to determine the cost competitiveness of the fully burdened cost of drop-in fuels compared with the fully burdened cost of traditional fuel using a commercially available scenario-based strategic sourcing tool, and to submit an annual report on the impact of the pilot program.

Section 853—Assuring Integrity of Overseas Fuel Supplies

This section would amend section 813(c)(3) of the National Defense Authorization Act for Fiscal Year 2017 by adding fuel procurement and fuel-related services to the list of acquisition activities that shall avoid use of lowest price technically acceptable source selection, to the maximum extent practicable.

This section would also add certification requirements for overseas contingency fuel contracting.

Section 854—Cadre of Software Development and Acquisition Experts

This section would require the Department of Defense to create a software development and acquisition cadre. The cadre will assist the Department with developing and acquiring software by providing expert advice, assistance, and resources.

Section 855—Acquisition Practices and Policies Assessment

This section would direct the Department of Defense Climate Working Group to assess and develop recommendations for implementing sustainable acquisition practices and policies in regula-

tions and to submit a report on the assessment and recommendations.

TITLE IX—DEPARTMENT OF DEFENSE ORGANIZATION AND MANAGEMENT

ITEMS OF SPECIAL INTEREST

Report on the Office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict

The committee reaffirms its commitment to the fundamental principle of civilian control of the military. Civilian leadership within the Department of Defense includes the roles and responsibilities of the office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict in overseeing various military functions, especially those activities of the United States Special Operations Command to organize, train, and equip special operations forces to carry out assigned missions. The committee is concerned that the current size and composition of the office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict may not be proportionate to the scope of its roles and responsibilities.

Therefore, the committee directs the Secretary of Defense to review the organizational structure of the office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict and to provide a report to the congressional defense committees, not later than March 1, 2022, on the organizational requirements of the office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict and any plans that the Secretary may develop to reorganize that office. The report shall include a detailed description of the office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict's roles and responsibilities; a detailed description of the office's organizational structure; the number and type of billets funded by the Department of Defense that the Secretary determines are required to support the office's roles and responsibilities; a detailed description of the process and a timeline for validating those billets; a detailed description of any extant organizational gaps or redundancies; and a plan for remediating any such gaps or redundancies.

LEGISLATIVE PROVISIONS

SUBTITLE A—OFFICE OF THE SECRETARY OF DEFENSE AND RELATED MATTERS

Section 901—Modification of Requirements for Appointment of a Person as Secretary of Defense after Relief from Active Duty

This section would modify the limitation on a person who may be appointed as Secretary of Defense that is required by section 113(a) of title 10, United States Code, by increasing the limitation to 10 years after departure from Active Duty and applying the limitation only to commissioned officers of the pay grade 0–6 or above.

This section would also allow the appointment of a person as Secretary of Defense notwithstanding this limitation if Congress en-

acts a joint resolution of approval with an affirmative vote of three-fourths of the Senate and the House of Representatives.

Section 902—Implementation of Repeal of Chief Management Officer of the Department of Defense

This section would remove the restriction that prohibits an individual who served as the Chief Management Officer before the date of the enactment of this Act to be assigned duties or responsibilities previously served by the Chief Management Officer.

Section 903—Designation of Senior Official for Implementation of Electromagnetic Spectrum Superiority Strategy

This section would require the Department of Defense to designate a sole senior official responsible for implementing any current or future electromagnetic spectrum superiority strategy of the Department. This section would also require the Secretary of Defense to submit a report to the congressional defense committees on the sufficiency of electromagnetic warfare rules of engagement. In addition, this section would require the Secretary to provide the congressional defense committees with a copy of the implementation plan signed by the Secretary in July 2021 for the Electromagnetic Spectrum Superiority Strategy. It would also limit funds for the Office of the Under Secretary of Defense for Acquisition and Sustainment for travel until the Secretary meets various briefing requirements related to the status of the implementation plan.

SUBTITLE B—OTHER DEPARTMENT OF DEFENSE ORGANIZATION AND MANAGEMENT MATTERS

Section 911—Clarification of Treatment of Office of Local Defense Community Cooperation as a Department of Defense Field Activity

This section would clarify that the Office of Local Defense Community Cooperation is to be treated as a Department of Defense Field Activity.

Section 912—Use of Combatant Commander Initiative Fund for Certain Environmental Matters

This section would add resilience of military installations, ranges, and supporting infrastructure to the list of permissible uses for the Combatant Commander Initiative Fund.

Section 913—Inclusion of Explosive Ordnance Disposal in Special Operations Activities

This section would amend section 167(k) of title 10, United States Code, regarding the inclusion of explosive ordnance disposal into special operations activities.

Section 914—Coordination of Certain Naval Activities with the Space Force

This section would amend section 8062(d) of title 10, United States Code, and would establish the Space Force as a matter of joint concern to the Navy.

Section 915—Space Force Organizational Matters and Modification of Certain Space-Related Acquisition Authorities

This section would provide a sense of Congress regarding the intent behind establishing the U.S. Space Force, and the organizational structure of the military service. This section would further emphasize the need for Space Force to remain a lean, agile, and fast organization, and encourage continued communication with Congress on areas for which legislative action is needed to enable the service to reach full operational capability.

This section would also amend the National Defense Authorization Act for Fiscal Year 2020 by modifying the implementation date for having a Service Acquisition Executive for Space in place to not later than October 1, 2022. This section would also allow the Secretary of the Air Force to assign the Assistant Secretary of the Air Force for Space Acquisition and Integration duties and authorities of the senior procurement executive for space systems and programs.

Section 916—Report on Establishment of Office to Oversee Sanctions with Respect to Chinese Military Companies

This section would require the Secretary of Defense to submit a report on the feasibility of establishing an office within the Department of Defense to oversee sanctions with respect to Chinese military companies.

Section 917—Independent Review of and Report on the Unified Command Plan

This section would require an independent review of the current Unified Command Plan and a report on the findings of that review.

SUBTITLE C—SPACE NATIONAL GUARD

Section 921—Establishment of Space National Guard

This section would establish a Space National Guard as part of the United States Space Force.

Section 922—No Effect on Military Installations

This section would clarify that nothing in this subtitle would require or authorize the relocation of any facility, infrastructure, or military installation of the Space National Guard or Air National Guard.

Section 923—Implementation of Space National Guard

This section would require the Secretary of the Air Force and the Chief of the National Guard Bureau to implement the changes authorized not later than 18 months after the date of the enactment of this Act.

Section 924—Conforming Amendments and Clarification of Authorities

This section would authorize the required conforming amendments.

TITLE X—GENERAL PROVISIONS

ITEMS OF SPECIAL INTEREST

Anti-Surface Integration

The committee remains focused on deterring ever-increasing Chinese aggression, specifically the threat of military force against Taiwan, and ensuring combatant commanders are well-equipped to defeat the threat should a regional crisis materialize in the near term. The committee seeks to strengthen the credibility of American deterrence while simultaneously ensuring sufficient combat-ready U.S. forces in the Indo-Pacific to prevent China from seizing or maintaining the advantage early in a conflict. To that end, the committee is encouraged by the Navy's efforts to leverage proven aviation platforms to combat China's growing fleet of assault ships; for example, integration of the Long-Range Anti-Ship Missile (LRASM) onto the Multi-Mission P-8 aircraft, which is also utilized for Anti-Submarine Warfare and ISR missions by strategic regional allies such as India and Australia. Additionally, the committee remains supportive of the Maritime Strike Tomahawk, Harpoon block II, offensive mining initiatives and other related strike options to better advance surface strike capabilities. Therefore, the committee directs the Commander of the U.S. Indo-Pacific Command to provide a briefing to the House Committee on Armed Services by March 1, 2022 as to an assessment of the current number of available anti-ship fires in the region and anticipated capabilities and capacities of options projected to be available in the next five years. The briefing should also include an assessment of how additional fires would impact the ability of the command to meet operational requirements.

Cultivating Special Operations Forces Technical Skills

Foreign adversaries are increasingly operating below the level of armed conflict, engaging in disinformation operations, cyber espionage, and economic coercion against the United States and partners and allies of the United States. The committee understands that certain niche technical skills, such as computer programming, psychological operations, and foreign language proficiency are essential to the conduct of irregular warfare. While the committee recognizes that irregular warfare is a necessary whole-of-government tradecraft in which the Department of Defense is a critical component, special operations forces (SOF) can—and do—play an important role in irregular warfare. The committee believes that the United States should prioritize recruiting, enhancing, and retaining such technical skills within SOF as a means to proactively posture against malign influence.

Therefore, the committee directs the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict, in coordination with the Under Secretary of Defense for Personnel and Readiness, to provide a report to the House Committee on Armed Services by June 30, 2022, on a five-year strategy to identify, recruit, and retain individuals from the military services for SOF who possess an aptitude for or technical skills in computer programming, machine learning and artificial intelligence, psycho-

logical operations, threat finance, and biological engineering. As framed by the Interim National Security Strategic Guidance, the report shall also include:

(1) a definition and baseline of those technical skillsets deemed critical by U.S. Special Operations Command extant within the SOF formation, articulated by military service component and technical skill;

(2) a baseline of such technical skills in computer programming, machine learning and artificial intelligence, psychological operations, threat finance, and biological engineering, if distinct from assessed capabilities currently resident within the SOF formation in reporting element (1);

(3) annual recruitment targets (for each of the five years covered by the strategy) for candidates with demonstrated technical skills specified in reporting elements (1) and (2) to be selected for participation in the initial assessment and qualification programs of the special operations forces;

(4) any gaps between recruitment/retainment targets and those SOF members with the demonstrated technical skills specified in reporting elements (1) and (2);

(5) a description of any training programs used to maintain or enhance technical skills within SOF, including any non-governmental programs used;

(6) an annual plan (for each of the five years covered by the strategy) to maintain and enhance technical skills within SOF; and

(7) an annual plan (for each of the five years covered by the strategy) to retain those SOF members who have the specified technical skills.

Defense Counterintelligence and Security Agency Working Capital Fund Operations

The committee notes that when it was responsible for Federal background investigations, the Office of Personnel Management (OPM) struggled to manage its working capital fund in accordance with best practices, project its workload, and set appropriate and transparent rates for its customers. The Defense Counterintelligence and Security Agency (DCSA) became the Government's primary investigative service provider in October 2020, and also intends to finance its background investigation activities using a working capital fund. It is critical that appropriate controls, processes, and procedures be established from the onset to ensure that DCSA management of the working capital fund amounts is in accordance with best practices.

Therefore, the committee directs the Comptroller General of the United States to review the processes, procedures, and operations of DCSA's defense working capital fund. This review should address the following elements:

(1) the transfer of funds from OPM's working capital fund to DCSA's working capital fund and the effect the loss of revenue from background investigations has had on OPM's operations;

(2) DCSA's use of different revenue streams to fund its operations and the controls, processes, and procedures it has put in place to ensure working capital fund amounts are used only for eligible activities;

(3) the extent to which DCSA has maintained its working capital fund cash balance within appropriate upper and lower thresholds and the drivers behind increases or decreases in the DCSA working capital fund cash balance;

(4) DCSA's efforts to effectively manage its working capital fund by applying lessons learned and using best practices for working capital fund operations; and

(5) DCSA's efforts to plan for changes in costs as Trusted Workforce 2.0 and continuous vetting are implemented, as well as the effect this is expected to have on rates charged to customers, including administrative overhead costs.

The committee further directs the Comptroller General to provide a briefing on the review to the House Committee on Armed Services not later than March 1, 2022, and to submit a final report on a date agreed to at the time of the briefing.

Department of Defense's Use of Independent Public Accounting Firms for Audit Remediation Services

The committee notes the significant work that has been done to improve auditing practices within the Department of Defense. The Department has invested a substantial amount of time and money on audit and audit remediation efforts. The committee encourages the Department to continue to ensure a free and open competition for audit remediation services.

Deployment-to-Dwell Ratio of Special Operation Forces

The committee understands that special operations forces (SOF) sustained a near 1:1 deployment-to-dwell operational tempo for the last 20 years in support of geographic combatant commands to counter violent extremist organizations. The committee is aware that the 20 years of constant deployments has profoundly challenged SOF culture and readiness, and is encouraged by efforts to increase the time between deployments across the formation.

Therefore, the committee directs the Assistant Secretary of Special Operations and Low Intensity Conflict to provide a report to the congressional defense committees by January 28, 2022, on the current and projected deployment to dwell ratio for special operations forces. The report shall consider the Global Force Management Allocation Plan and any Request for Forces related to SOF. Further, in addition to specifically addressing the deployment to dwell ratio for support forces, the report must include the National Guard and Reserve Components.

Dictionary of American Naval Fighting Ships

The committee understands the importance of naval history to sailors and their families like. The Dictionary of American Naval Fighting Ships is the official reference work on the basic facts about ships commissioned by the U.S. Navy since October 13, 1775. The committee is concerned that the Dictionary of American Naval Fighting Ships is severely out of date.

Therefore, the committee directs the Secretary of the Navy brief the House Committee on Armed Services by March 1, 2022, on efforts to update the Dictionary of American Naval Fighting Ships. The briefing will include at a minimum: (1) timeline; (2) scope of

project; and (3) existing and proposed budget needed to update the Dictionary of American Naval Fighting Ships within five years.

Fire Boats

The committee recognizes the lack of fire boats at U.S. naval bases. This lack of access to dedicated fire boats may be a safety hazard to sailors and civilian workers and may expose warships worth tens of billions of dollars to unnecessary danger. The committee is particularly concerned about the loss of the USS Bonhomme Richard in 2020 and how fire boat access contributed to the complete loss of this warship.

Therefore, the committee directs the Secretary of the Navy to prepare a brief to the House Committee on Armed Services by March 1, 2022 that: details the findings associated with the USS Bonhomme Richard accident investigation and deficiencies identified that would have allowed Navy to more adequately respond to the loss of the USS Bonhomme Richard; and, develop a fire boat response plan at major U.S. naval bases. The plan will include at a minimum the scope, budget and timelines necessary to implement such plan.

Increased Access to Oceanographic Data

The committee directs the Secretary of the Navy to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than March 1, 2022, regarding such steps as may be necessary to ensure the release of and public access to unclassified and declassified oceanographic data, subject to applicable regulatory restrictions.

Integration of Nonstandard Data

The committee is aware that the Department of Defense is exploring multiple options for the nondisruptive ingestion of data from nonstandard sources and locations. This data “fabric” is created when data is created or collected from various systems and sensors.

However, such data presents issues with formatting, latency, and other obstacles to integration and exploitation. This data “fabric” is analogous to the creation of numerous “threads” that may or may not have the ability to talk to each other and be interpreted in a sensible way.

The committee is pleased that the Department, especially in the special operations community, is developing capabilities to access and analyze this data, including the use of artificial intelligence and machine learning services that are dedicated to data fabric integration to meet national security needs.

The committee directs the Secretary of the Army to brief the House Committee on Armed Services no later than March 2, 2022 on the progress that the Army is making in ensuring that all units, both in special operations and conventional forces, have access to contracted data fabric integration capabilities when necessary to meet operational requirements.

Irregular Warfare Annex Implementation Plan

The committee recognizes that the shift from countering violent extremism to countering strategic competition necessitates a fully synchronized effort across the Department of Defense. While the Department must always prepare for high-intensity traditional warfare, the future state of strategic competition is more likely to be dominated by irregular warfare. The committee is concerned that a fully integrated and proactive approach to planning for and implementing irregular warfare has not yet been fulsomely adopted by those Department of Defense organizations which are tantamount to the success of such a shift in the conduct of warfare. Thus, the committee believes that, to achieve truly comprehensive national security, the Department of Defense must pursue the development of capabilities in both the traditional and irregular warfare constructs.

The committee believes that the office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict (ASD SO/LIC) commands a unique perspective in the shaping and integration of irregular warfare resourcing, requirements, training, and force posture adjustments across the Department of Defense due to the strategic civilian oversight responsibilities of special operations forces, which are an exemplar force in the conduct of irregular warfare. The committee is aware of ASD SO/LIC's efforts, in partnership with the Joint Staff, to support the Department of Defense's development of an irregular warfare implementation plan for the Joint Force which will undoubtedly facilitate a more thorough understanding of how to expand the competitive space through irregular warfare methodology.

Therefore, the committee directs the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict to provide a briefing to the House Committee on Armed Services not later than February 25, 2022, on its progress supporting the Department of Defense's efforts towards institutionalizing irregular warfare as a core competency for the Joint Force. The briefing shall include how the Department is developing and planning to leverage a Functional Center for Security Studies in Irregular Warfare, as previously directed in the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116-442).

National Background Investigation Services

The committee notes that the Defense Counterintelligence and Security Agency (DCSA) is developing the National Background Investigation Services (NBIS) system, which will be the Federal Government's primary information technology system for end-to-end personnel vetting and will replace the suite of legacy background investigation and case management systems previously operated by the Office of Personnel Management. The NBIS system will be the centerpiece of the Federal Government's transformation to a modernized personnel vetting system and will functionalize critical innovations such as continuous vetting as the background investigations enterprise moves from periodic reinvestigations to real-time automated record checks. However, the committee is concerned by the NBIS system's cost, delayed delivery schedule, potential secu-

rity vulnerabilities, and information sharing challenges with key stakeholders.

Therefore, the committee directs the Comptroller General of the United States to review the NBIS system. This review should address the following elements:

(1) the amount of funding requested, expended, and projected thus far for the NBIS system and the associated capabilities that have been delivered;

(2) the extent to which DCSA has planned for and implemented cybersecurity controls for both the NBIS system and legacy background investigation systems;

(3) the extent to which DCSA is engaging stakeholders in the development of NBIS requirements and capabilities; and

(4) any other related matters the Comptroller General considers appropriate.

The committee further directs the Comptroller General to provide preliminary observations to the House Committee on Armed Services not later than March 1, 2022, and to submit a final report on a date agreed to at the time of the briefing.

Optimizing AMBIT Adjustments

The committee is aware of the upcoming auction of the 3450–3550 MHz band of mid-band spectrum currently under exclusive license to the Department of Defense. Enabling commercial access to this band will, when combined with existing commercial spectrum, make significant contributions to the effectiveness and efficiency of U.S. 5G and 5G-enabled technologies, benefiting Americans while also bolstering our economic competitiveness.

However, the sale will also require major adjustments to a number of Department of Defense spectrum-dependent systems. Through the Spectrum Relocation Fund (SRF), proceeds from the upcoming auction will help to defray the costs associated with those adjustments. However, SRF funding may only be used for costs associated with achieving “comparable capability” to that lost by the affected systems.

At the same time, there is broad recognition that such “comparable capability” is no longer sufficient to deliver U.S. advantage in a spectrum environment that is increasingly constrained, congested, and contested. That recognition has driven the creation of the Electromagnetic Spectrum (EMS) Superiority Strategy and associated Implementation Plan, though funding to support the scope and scale of necessary advances to support that plan remains scarce.

As the mid-band-dependent systems affected by the upcoming auction make the required adjustments, this presents the Department with an opportunity to achieve leap-ahead advances toward more agile spectrum use. Capitalizing on this opportunity will require deliberate, careful alignment of SRF and appropriated funding to ensure both funding sources are used appropriately, but to maximum combined effect.

To ensure this alignment, the committee directs the Senior Designated Official for EMS, supported by the Office of the Secretary of Defense Chief Information Office, the Under Secretary of Defense for Acquisition and Sustainment, the Under Secretary of Defense for Research and Engineering, and the Under Secretary of

Defense, Comptroller, to provide a briefing to the House Committee on Armed Services not later than January 15, 2022. The briefing shall describe the Department's plan to align adjustments to the affected mid-band-dependent systems with the goals of the EMS Superiority Strategy, the expected uses of various funding sources in support of that plan, and the oversight mechanisms to ensure appropriate adherence to the plan.

Other Potential Uses for Decommissioned Naval Assets

The Committee believes there is merit in examining other possible uses of ships proposed to be decommissioned by the US Navy. The Committee is aware of interest on the part of foreign allies in some of these ships which could be beneficial to the US Navy and allied relationships. The Navy has proposed additional retirements of several Littoral Combat ships, as well as Aegis cruisers. Both these classes of ships offer the opportunity for interoperability and commonality with allied navies either due to Hull, Mechanical and Electrical (HM&E) characteristics or similarities with combat or weapons systems.

Therefore, the committee directs the Secretary of the Navy to provide a report to the House Committee on Armed Services by March 1, 2022 on the viability of transferring ships planned for decommissioning to allied Navies, to include Ticonderoga Class Cruisers the Littoral Combat Ships. The report should explore all options, with associated costs and risks, in effecting the transfer, including a full transfer or a potential leasing mechanism that would allow for the ultimate transfer of the asset back to the US Navy upon completion of the lease term. The report should also examine modifications and repairs that would be necessary to address operational deficiencies and other modifications necessary for operation by allied Navies.

Report on Congressional Increases to the Defense Budget

The committee directs the Secretary of Defense to submit a report to the congressional defense committees as an unclassified appendix to the Fiscal Year 2023 Department of Defense budget request on the programs and activities of the Department for which Congress provided authorization or appropriations levels in the Fiscal Year 2022 National Defense Authorization Act or the Fiscal Year 2022 Defense Appropriations Act that exceeded the amount requested for such program or activity in the budget for the Department of Defense submitted to Congress by the President for Fiscal Year 2022.

The report shall include information on:

(1) Any program or activity that the Department of Defense sought to divest from entirely, or requested zero units, but that was restored wholly or in part by Congress, and;

(2) Any program or activity that Congress authorized or appropriated at a level exceeding the amount requested by the Department of Defense in its Fiscal Year 2022 budget request by \$20,000,000 or more.

(3) Each program or activity listed in this report shall include an assessment of whether and how the program or activity does or does not meet requirements in support of the priorities articulated

in the 2018 National Defense Strategy and the 2021 Interim National Security Strategic Guidance.

In addition to being appended to the Department of Defense's Fiscal Year 2023 budget request, this report shall be made publicly available on the website of the Under Secretary of Defense (Comptroller).

Report on Need for Additional Ice Breakers in the Great Lakes Region

The committee directs the Secretary of Defense to submit a report to the congressional defense committees by March 1, 2022 on whether additional ice breaking vessels are necessary in the Great Lakes region. The report must include an analysis on the necessity for ice breaking vessels in the St. Clair River.

Report on Posture of Special Operations Forces in the U.S. Central Command Area of Responsibility

The committee recognizes that U.S. Special Operations Forces (USSOF) are a potent force that is deployed globally and provides critical capability and tradecraft in locations in and outside of areas of active hostilities. Given the ongoing conflicts in U.S. Central Command's (USCENTCOM) area of responsibility (AOR) and the forthcoming withdrawal from Afghanistan, the committee is interested in understanding SOF posture across the USCENTCOM AOR.

Therefore, the committee directs the the Secretary of Defense to provide a report to the congressional defense committees by January 28, 2022, on any possible special operations forces in the USCENTCOM AOR. The report shall describe:

(1) the location(s), disposition, mission, and rules of engagement for special operations forces in the USCENTCOM AOR, exclusive of Afghanistan and Iraq;

(2) any potential combat engagements within the USCENTCOM AOR, exclusive of Afghanistan and Iraq, within the period of 1 year preceding the date of the submission of the report; and

(3) any plans or anticipated adjustments to force posture of USSOF in the areas described in reporting element (2) within the 1-year period following the date of the submission of the report, to include the Afghanistan retrograde.

The report must be submitted in unclassified form but may contain a classified annex.

Report on United States Contributions to Multilateral and International Organizations

The committee believes that U.S. support for multilateral and international organizations is critical to national security. A wide diversity of multilateral and international organizations are aligned with the United States' national interest. However, the committee wishes to become better informed on the extent to which U.S. funding contributions to those organizations are aligned with the strategic objectives identified by the National Defense Strategy.

Therefore, the committee directs the Secretary of Defense, in consultation with the Secretary of State, to provide a report, not later

than March 31, 2022, to the House Committee on Armed Services, with the following information:

(1) the aggregate amount of the United States' monetary contributions to multilateral and international organizations and the amount of such contributions toward purposes that are aligned with the strategic objectives of the National Defense Strategy; and

(2) analysis relating to: (a) the progress or record of achievement of each recipient organization regarding the purposes aligned with the strategic objectives of the National Defense Strategy that are associated with the United States' contributions; (b) any demonstrable proof of fraud, waste, or abuse in connection with such contributions; and (c) whether U.S. contributions received by each such organization were in turn provided directly or indirectly to: the People's Republic of China, the Russian Federation, the Democratic People's Republic of Korea, the Bolivarian Republic of Venezuela, the Syrian Arab Republic, the Taliban, or any organization designated as a foreign terrorist organization pursuant to section 210 of the Immigration and Nationality Act (8 U.S.C. 19 1189).

Secure Congressional Communications

The Defense Information Systems Agency (DISA) has provided the House Committee on Armed Services with support, services, and equipment for secure voice and video communications through the Distributed Continuity Integrated Network—Top Secret (DCIN-TS) Gold System. This support is provided through an interagency service agreement that currently runs through January 3, 2022. The committee notes that having assured access to secure voice and video communications has assisted the committee with its oversight responsibilities while also providing additional flexibility and efficiencies to the Department of Defense, Members of Congress, and committee staff. While the committee is planning to renew the interagency agreement beyond fiscal year 2022, the committee believes that providing a programmatic increase to DISA's operation and maintenance account is a more appropriate and efficient way for covering the sustainment and support costs associated with the committee's use of the DCIN-TS Gold System. Therefore, the committee recommends a \$35,000 increase for DISA to cover the costs associated with providing support, services, and equipment to the committee for secure voice and video communications. Furthermore, the committee encourages DISA to consider planning and programming for these recurring costs in future budget requests.

Special Operations Forces Activities in Latin America and the Caribbean

The committee recognizes that today's threats are globally diffuse and characterized by transnational networks that transcend geographic boundaries. The committee further notes that violent extremist organizations and near peer adversaries often take advantage of regions which have historically been focused on demands for conventional military forces and capabilities, including in Latin America and the Caribbean. The committee recognizes that a whole of government approach can address diffuse threats,

including the unique capabilities of U.S. Special Operations Forces (USSOF).

Therefore, the committee directs the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict, in coordination with the Commander, U.S. Special Operations Command, to provide a report to the House Committee on Armed Services by January 28, 2022, on the current and projected force posture, assigned capabilities, and related activities by USSOF in Latin America and the Caribbean. The report shall address how USSOF posture, capabilities, and activities advance U.S. national security interests, address evolving threats from state and non-state actors operating in the region, and support the objectives set forth in extant national security strategic guidance. Finally, the report shall identify any capability or capacity gaps and the reasons for those gaps.

Update on the Limitation of Funds to Institutions of Higher Education Hosting Confucius Institute

Section 1062 of the Fiscal Year 2021 (FY21) National Defense Authorization Act (NDAA) (PL 116–617) placed a limitation on the provision of Department of Defense funds to institutions of higher education that hosted Confucius Institute, unless the Secretary of Defense, in consultation with the National Academies of Sciences, Engineering, and Medicine, determines a waiver is appropriate. Section 1299C of the same bill established an academic liaison in the Department responsible for working with the academic and research communities to protect Department-sponsored academic research of concern from undue foreign influence and threats. Section 1062 directed that academic liaison manage the waiver process on behalf of the Secretary, and that waivers may be granted to institutions of higher education that have taken steps to:

- (1) Protect academic freedom at the institution;
- (2) Prohibit the application of any foreign law on any campus of the institution;
- (3) Grant full managerial authority of the Confucius Institute to the institution, including full control over what is being taught, the activities carried out, the research grants that are made, and who is employed at the Confucius Institute; and
- (4) Engage with the Academic Liaison Officer in the Under Secretary of Defense for Research and Engineering, and take appropriate measures to safeguard defense-funded fundamental research activities.

The conferees directed that the Secretary brief the congressional defense committees on the establishment of the waiver process, including the institutions for which the waiver has been invoked. The committee is now aware that the majority of universities have closed or ended their agreements with Confucius Institute, and that there are fewer than 20 universities with these contracts today.

Therefore, the Committee directs the Secretary to provide a briefing to the Committee on Armed Services of the House of Representatives, not later than March 1, 2022, on which of these universities that have obtained waivers from the Secretary and therefore still receive Department funding also host or coordinate Department programs such as the Reserve Officers' Training Corps or innova-

tion programs including the National Security Innovation Network (NSIN).

USNS Bridge and USNS Rainier

The committee understands that there is a lack of organic sea-going tanker capacity in the Navy's Combat Logistics Force (CLF). The committee further recognizes that the USNS *Bridge* and USNS *Rainier* were deactivated with additional service life remaining as a cost savings measure and are currently in reserve status. These two ships could immediately add additional, much-needed CLF capability in the critical U.S. Indo-Pacific Command area of responsibility. Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by March 1, 2022, on the cost benefit of reactivating the USNS *Bridge* and USNS *Rainier*.

LEGISLATIVE PROVISIONS

SUBTITLE A—FINANCIAL MATTERS

Section 1001—General Transfer Authority

This section would allow the Secretary of Defense, with certain limitations, to make transfers between amounts authorized for fiscal year 2022 in division A of this Act. This section would limit the total amount transferred under this authority to \$6.50 billion.

Section 1002—Determination of Budgetary Effects

This section would state the budgetary effects of this Act for the purpose of complying with the Statutory Pay-As-You-Go Act of 2010.

Section 1003—Budget Justification for Operation and Maintenance

This section would require the Secretary of Defense, in consultation with the Secretary of each of the military departments, to provide an unclassified budget display to identify the material readiness objectives for each major weapon system, as well as the funds obligated, budgeted, and programmed for the purpose of achieving the material readiness objectives.

SUBTITLE B—NAVAL VESSELS

Section 1011—Critical Components of National Sea-Based Deterrence Vessels

This section would add additional components to the continuous production authority that resides within the National Sea-Based Deterrence Fund.

Section 1012—Biennial Report on Shipbuilder Training and the Defense Industrial Base

This section would make technical changes to section 1026 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283).

Section 1013—Revision of Sustainment Key Performance Parameters for Shipbuilding Programs

This section would require the Secretary of the Navy to include sustainment and lifecycle planning as a key performance parameter in any new ship class.

Section 1014—Prohibition on Use of Funds for Retirement of Mark VI Patrol Boats

This section would prohibit the Secretary of the Navy from retiring any Mark VI patrol boat in fiscal year 2022. This section would also require the Secretary of the Navy to provide a report on the Mark VI patrol boat.

Section 1015—Assessment of Security of Global Maritime Chokepoints

This section would require the Secretary of Defense to provide a report to the congressional defense committees not later than 180 days after the date of the enactment of this Act on the security of all global maritime chokepoints.

Section 1016—Annual Report on Ship Maintenance

This section would amend chapter 863 of title 10, United States Code, to require the Secretary of the Navy to submit to the Committees on Armed Services of the Senate and the House of Representatives an annual report on ship maintenance.

Section 1017—Availability of Funds for Retirement or Inactivation of Ticonderoga Class Cruisers

This section would restrict the Secretary of the Navy from deactivating three guided middle cruisers.

SUBTITLE C—COUNTERTERRORISM

Section 1021—Inclusion in Counterterrorism Briefings of Information on Use of Military Force in Collective Self-Defense

This section would amend section 485(b) of title 10, United States Code, to include additional reporting requirements regarding all instances of the use of military force by special operations forces under the notion of the collective self-defense of foreign partners into the monthly counterterrorism operations briefings.

Section 1022—Extension of Authority for Joint Task Forces to Provide Support to Law Enforcement Agencies Conducting Counterterrorism Activities

This section would extend section 1022(b) of the National Defense Authorization Act for Fiscal Year 2004 (Public Law 108–136) by 2 years.

Section 1023—Prohibition on Use of Funds for Transfer or Release of Individuals Detained at United States Naval Station, Guantanamo Bay, Cuba, to Certain Countries

This section would prohibit the use of funding authorized to be appropriated or otherwise made available for the Department of Defense during the period beginning on the date of the enactment of this Act and ending on December 31, 2022, to transfer, release, or assist in the transfer or release of any individual detained at U.S. Naval Station, Guantanamo Bay, Cuba, to Libya, Somalia, Syria, and Yemen.

SUBTITLE D—MISCELLANEOUS AUTHORITIES AND LIMITATIONS

Section 1031—Navy Coordination with Coast Guard on Aircraft, Weapons, Tactics, Technique, Organization, and Equipment of Joint Concern

This section would amend section 8062(d) of title 10, United States Code, and would establish the United States Coast Guard as a matter of joint concern to the Navy.

Section 1032—Prohibition on Use of Navy, Marine Corps, and Space Force as Posse Comitatus

This section would prohibit the use of any part of the Navy, the Marine Corps, or the Space Force as a posse comitatus, except in cases and under circumstances expressly authorized by the Constitution or an Act of Congress.

Section 1033—Program to Improve Relations between Members of the Armed Forces and Military Communities

This section would require the Secretary of Defense to conduct a biennial survey related to the relations between members of the armed services and the military communities in which they serve.

Section 1034—Authority to Provide Space and Services to Military Welfare Societies

This section would add Coast Guard Mutual Assistance to the list of military welfare societies that can be provided space on military installations.

Section 1035—Required Revision of Department of Defense Unmanned Aircraft Systems Categorization

This section would require the Under Secretary of Defense for Acquisition and Sustainment to conduct a review of and initiate a process to modify the existing Department of Defense Unmanned Aerial Systems (UAS) categorization. The section would require the Under Secretary to consult with the Secretaries of the military departments, the Chairman of the Joint Chiefs of Staff, and the Administrator of the Federal Aviation Administration (FAA) when conducting the required review. This section would also require the Under Secretary to submit a report to the congressional defense committees, the House Committee on Transportation and Infrastructure, and the Senate Committee on Commerce, Science, and

Transportation on the result of the directed review and any revisions planned to the UAS categories.

The current UAS categorization defines UAS into five discrete groups, based on speed, maximum gross take-off weight (MGTOW), and altitude. The committee notes that the five UAS groups were originally determined by the Joint UAS Center of Excellence in 2008, partially based on the three UAS categories as defined by the FAA.

The committee believes that significant technology and capability advancements in such areas as autonomy, propulsion, and sensor payloads require modifications be made to the UAS group definitions. This is particularly the case for the group 3 category, which includes any UAS that has a MGTOW between 55 pounds and 1,320 pounds. The wide range in MGTOW in the group 3 category has resulted in a category of UAS that have quite different capabilities and operational usage. The committee remains concerned that the broad definition used by the Department of Defense for group 3 UAS is overly burdensome for small UAS. These internal policies create a high cost of ownership for group 3 UAS that not only limit the ability of the military services to rapidly field small group 3 UAS to support warfighting concepts and needs, but also discourage industry from pursuing internally funded development efforts in that weight class. The committee encourages the Department to consider these factors during the review process.

Section 1036—Limitation on Funding for Information Operations Matters

This section would limit funding available for Office of the Secretary of Defense travel until the Secretary provides the information operations strategy and posture review required by the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92).

Section 1037—Prohibition on Provision of Equipment to Other Departments and Agencies for Protection of Certain Facilities and Assets from Unmanned Aircraft

This section would prohibit the obligation or expenditure of funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2022 for the Department of Defense to acquire, loan, transfer, sell, or otherwise provide equipment to a department or Federal agency for use in exercising authorities or taking actions pursuant to section 210G of the Homeland Security Act of 2002 (6 U.S.C. 124n).

Section 1038—Limitation on Use of Funds for United States Space Command Headquarters

This section would prohibit the Department of Defense from using authorized fiscal year 2022 funds to plan, design, or construct a United States Space Command headquarters building, until the Department of Defense Inspector General and the Government Accountability Office complete their reports on the basing process for United States Space Command.

SUBTITLE E—STUDIES AND REPORTS

Section 1041—Congressional Oversight of Alternative
Compensatory Control Measures

This section would require the Under Secretary of Defense for Policy to notify the congressional defense committees upon the establishment or disestablishment of all alternative compensatory control measures. This section would also require an annual report to the congressional defense committees.

Section 1042—Comparative Testing Reports for Certain Aircraft

This section would require the Director, Operational Test and Evaluation and the Secretary of the Air Force to submit to the congressional defense committees not later than 45 days after the date of the enactment of this Act, the tactical aircraft comparative testing reports required by section 134(b) of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328).

Section 1043—Extension of Reporting Requirement regarding Enhancement of Information Sharing and Coordination of Military Training between Department of Homeland Security and Department of Defense

This section would extend until December 31, 2023, a report required by section 1014 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328), on the coordination of Department of Defense training missions with the Department of Homeland Security (DHS) operational needs at the international borders of the United States and the information provided to DHS as a result of the coordinated training.

Section 1044—Continuation of Certain Department of Defense Reporting Requirements

This section would extend the requirement for biennial analysis and a subsequent report on strategic and critical materials.

Section 1045—Geographic Combatant Command Risk Assessment of Air Force Airborne Intelligence, Surveillance, and Reconnaissance Modernization Plan

This section would require each commander of a geographic combatant command to submit to the congressional defense committees not later than March 31, 2022, an assessment of the operational risk to that command posed by the restructuring and inventory divestments projected in the Modernization Plan for Airborne Intelligence, Surveillance, and Reconnaissance for the Department of the Air Force as required by the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283).

Section 1046—Biennial Assessments of Air Force Test Center

This section would require the Secretary of the Air Force to provide a report to the congressional defense committees not later than 30 days after the President's budget request is submitted for fiscal years 2023, 2025, and 2027, that updates the information

contained in the reports required by the committee report accompanying the National Defense Authorization Act for Fiscal Year 2018 (H. Rept. 115–200) and the committee report accompanying the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (H. Rept. 116–442).

The committee continues to recognize the importance of the Air Force Test Center enterprise and its role as a cornerstone for developmental test and evaluation of air, space, and cyber systems. The committee acknowledges that given technology advancements and the emergence of peer competitors globally, innovative and modernized weapons system testing and development capabilities are needed to support development and acquisition of effective deterrence and combat capabilities.

Section 1047—Comparative Study on .338 Norma Magnum Platform

This section would require the Secretary of the Army to conduct a comparative study among medium caliber machine gun ammunition.

Section 1048—Comptroller General Report on Aging Department of Defense Equipment

This section would require the Comptroller General to submit a report to the House Committee on Armed Services on legacy platforms within the Department of Defense and their relevance and resiliency of such platforms to emerging threats.

Section 1049—Report on Acquisition, Delivery, and Use of Mobility Assets that Enable Implementation of Expeditionary Advanced Base Operations

This section would require the Secretary of Defense to submit a report to the congressional defense committees on the efforts being made to implement expeditionary advanced base operations.

Section 1050—Force Posture in the Indo-Pacific Region

This section would express the sense of Congress regarding force posture in the Indo-Pacific region and require the Commander of U.S. Indo-Pacific Command to submit a report to the congressional defense committees regarding the force posture in the Indo-Pacific region.

Section 1051—Assessment of United States Military Infrastructure in Diego Garcia, British Indian Ocean Territory

This section would require the Secretary of Defense to submit a report containing an assessment of military infrastructure related to Diego Garcia.

Section 1052—Report on 2019 World Military Games

This section would require a report regarding service members who participated in the 2019 World Military Games and the COVID–19 virus.

Section 1053—Reports and Briefings regarding Oversight of Afghanistan

This section would require briefings and reports on the Department of Defense’s counterterrorism capabilities regarding Afghanistan, plans to evacuate Afghans eligible for the special immigrant visa program, military equipment left in Afghanistan, updated threat assessments, and any military cooperation with specified countries.

Section 1054—Report and Briefing on United States Equipment, Property, and Classified Material That Was Destroyed, Surrendered, and Abandoned in the Withdrawal from Afghanistan

This section would require a report and briefing to Congress on military equipment left in Afghanistan.

Section 1055—Report on Defense Utility of United States Territories and Possessions

This section would require a report on the defense utility of United States territories and possessions in the Pacific.

Section 1056—Report on Coast Guard Explosive Ordnance Disposal

This section would require the Secretary of Homeland Security to submit to Congress a report on the viability of establishing an explosive ordnance disposal program in the Coast Guard by February 15, 2023.

Section 1057—Independent Assessment with Respect to the Arctic Region

This section would require an independent assessment on achieving specific objectives in the Arctic for fiscal years 2023–2027.

Section 1058—Annual Report and Briefing on Global Force Management Allocation Plan

This section would require an annual report and a briefing on the Global Force Management Allocation Plan and its implementation.

SUBTITLE F—DISTRICT OF COLUMBIA NATIONAL GUARD HOME RULE

Section 1066—Short Title

This section would cite the short title as the “District of Columbia National Guard Home Rule Act”.

Section 1067—Extension of National Guard Authorities to Mayor of the District of Columbia

This section would extend the authorities over the National Guard of the District of Columbia to the Mayor of the District of Columbia in the same manner as the Governor of a State.

Section 1068—Conforming Amendments to Title 10, United States Code

This section would add conforming amendments to title 10, United States Code.

Section 1069—Conforming Amendments to Title 32, United States Code

This section would add conforming amendments to title 32, United States Code.

Section 1070—Conforming Amendment to the District of Columbia Home Rule Act

This section would add conforming amendments to the District of Columbia Home Rule Act.

SUBTITLE G—OTHER MATTERS

Section 1071—Technical, Conforming, and Clerical Amendments

This section would make technical, conforming, and clerical amendments to existing law.

Section 1072—Assistant Secretary of Defense for Indo-Pacific Security Affairs

This section would codify the position of the Assistant Secretary of Defense for Indo-Pacific Security Affairs and the principal duties of such position.

Section 1073—Improvement of Transparency and Congressional Oversight of Civil Reserve Air Fleet

This section would amend Section 2640 of title 10, United States Code, and subject Department of Defense charter air cargo transportation services to the same safety requirements as those required for Department of Defense charter air transportation for members of the Armed Forces.

This section would require an annual report on instances when Department of Defense cargo transportation service contracts are awarded to carriers who do not meet the requirements of subparagraph (d) of this section.

Section 1074—Enhancements to National Mobilization Exercises

This section would direct the Secretary of Defense, every 5 years, as part of the major mobilization exercise, to include the processes of the Selective Service System in preparation for a draft, and submit a report on the results of that exercise.

Section 1075—Providing End-to-End Electronic Voting Services for Absent Uniformed Services Voters in Locations with Limited or Immature Postal Service

This section would explore electronic solutions for reducing voting barriers for service members in remote locations.

Section 1076—Responsibilities for National Mobilization; Personnel Requirements

This section would require the Secretary of Defense to designate an official as the Executive Agent for National Mobilization and to submit a plan for obtaining draft inductees as part of a mobilization timeline for the Selective Service System.

Section 1077—Update of Joint Evacuation Publication 3–68: Non-Combatant Evacuation Operations

This section would require the Chairman of the Joint Chiefs of Staff to update Joint Publication 3–68: Noncombatant Evacuation Operations by March 1, 2022.

Section 1078—Treatment of Operational Data from Afghanistan

This section would require the retention of operational data from Afghanistan and a briefing on how the Department of Defense has removed, retained, and assured long term access to this operational data.

Section 1079—Defense Resource Budgeting and Allocation Commission

This section would establish a Defense Resource Budgeting and Allocation Commission to develop a consensus on an effective and strategic approach to Department of Defense resource budgeting and allocation, including by conducting an examination of the planning, programming, budgeting, and execution methodology of the Department; and by considering potential alternatives to such methodology to maximize the ability of the Department to equip itself in a timely manner to respond to current and emerging threats.

Section 1080—Commission on Afghanistan

This section would establish a commission on the war in Afghanistan and require it to make recommendations about lessons learned. The commission would cover 20 years of the U.S. and NATO conflict in Afghanistan and the period of Taliban control prior to the U.S. led invasion of 2001.

Section 1081—Technology Pilot Program to Support Ballot Transmission for Absent Uniformed Services and Overseas Votes

This section would direct the Department of Defense to conduct a pilot program to provide grants to States and local jurisdictions in support of absent uniformed services personnel and overseas votes.

Section 1082—Recognition of the Memorial, Memorial Garden, and K9 Memorial of the National Navy UDT–SEAL Museum in Fort Pierce, Florida, as the Official National Memorial, Memorial Garden, and K9 Memorial, Respectively, of Navy SEALs and Their Predecessors

This section would recognize the memorial, memorial garden, and K9 memorial of the National Navy UDT–SEAL Museum as the official memorial of the Navy SEALs and their predecessors.

Section 1083—Sense of Congress on the Legacy, Contributions, and Sacrifices of American Indian and Alaska Natives in the Armed Forces

This section would recognize and honor the legacy and contributions of American Indian and Alaska Natives and tribal communities to the military of the United States and would commit to ensuring progress for American Indian and Alaska Native members of the Armed Forces and veterans with regard to representation in senior military leadership positions, improving access to culturally competent resources and services, and supporting families and tribal communities.

Section 1084—Name of Naval Medical Center Camp Lejeune

This section would designate the Naval Medical Center Camp Lejeune as the “Walter B. Jones Naval Medical Center”.

Section 1085—Sense of Congress regarding Naming a Warship the USS Fallujah

This section would express the sense of Congress that the Secretary of the Navy should name a warship the “USS *Fallujah*”.

Section 1086—Name of Air Force Utah Test and Training Range

This section would designate the Utah Test and Training Range as the “Bishop Utah Test and Training Range”.

Section 1087—Name of Air Force Utah Test and Training Range Consolidated Mission Control Center

This section would designate the Air Force Utah Test and Training Range Consolidated Mission Control Center the “Robert W. Bishop Utah Test and Training Range Mission Control Center”.

Section 1088—Sense of Congress regarding Crisis at the Southwest Border

This section would express the sense of Congress regarding the Southwest border.

Section 1089—Improvements and Clarifications Relating to Unauthorized Use of Computers of Department of Defense

This section would require the Secretary of Defense to ensure that the electronic banner that appears on the screens of computers of the Department of Defense upon access of such computers is updated to include language prohibiting users from using Government email for an unauthorized purpose.

TITLE XI—CIVILIAN PERSONNEL MATTERS

ITEMS OF SPECIAL INTEREST

Appointment of Recently Retired Members of the Armed Forces to Civil Service Positions

The committee is aware of continued workforce challenges at the military depots. As the military modernizes, it has become increasingly difficult to compete with industry for the skilled technicians needed to maintain modern weapon systems. The committee notes that section 1108 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) established a 3-year waiver of the “180-Day Rule” to permit the appointment of recently retired service members to positions at the GS–13 level and below at organic industrial base facilities. The committee looks forward to receiving information on the Department of Defense’s use of this authority and remains interested in exploring options to enable the hiring of the talent needed at our military depots while preserving competitive and merit-based hiring principles.

Civilian Personnel in the Office of the Secretary of Defense

The committee notes that civilian oversight and control of the Armed Forces is essential to ensure accountability, readiness, and the deployment of the Armed Forces in the national interest. A strong civilian workforce in the Office of the Secretary of Defense (OSD), particularly in the Office of the Under Secretary of Defense for Policy (OUSDP), is essential to maintain this principle of civilian control of the military. However, hiring freezes and attrition in OUSDP have led to a manpower reduction of almost 27 percent over the last 11 years. This has resulted in an inappropriate reliance on contractors and undermined OUSDP’s ability to carry out robust civilian control and oversight of the Armed Forces. The committee encourages the Department of Defense to undertake an assessment of the civilian billets in OUSDP and consider increasing the size of the OUSDP civilian workforce to better reflect mission needs and reduce reliance on contracted personnel.

Further, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services not later than January 31, 2022, that includes the following:

- (1) the number of military and civilian personnel assigned to or employed by each OSD component in each of the previous 10 fiscal years;
- (2) the number of contractor personnel supporting each OSD component, including contractor personnel performing “inherently governmental functions,” “closely associated with inherently governmental functions,” “critical functions” (as defined in sections 129a and 2463 of title 10, United States Code), as well as the number of staff augmentation contractors supporting each component in each of the previous 10 fiscal years;
- (3) the share of civilian OSD personnel allocated to OUSDP in each of the previous 10 fiscal years; and
- (4) an assessment of whether the number of civilian billets has kept pace with changes in OUSDP’s mission over time and whether

an increase to the personnel cap established by section 143 of title 10, United States Code, is necessary to ensure sufficient civilian staffing in OUSDP and enable corrective action for any inappropriate contracting.

Prevention and Response Efforts in the National Nuclear Security Administration Nuclear Security Forces regarding Sexual Assault

The committee commends the work of the Comptroller General of the United States in reviewing the National Nuclear Security Administration's (NNSA's) policies, programs, and responses to preventing sexual assault in NNSA's security forces and its recent report (GAO-21-307). The committee further commends the Secretary of Energy's commitment to implementing the Comptroller General's recommendations in this regard. Ensuring that all Federal employees and contractors of the NNSA are able to serve the nuclear enterprise without fear of harassment is a national security issue, in addition to one of workplace rights. Therefore, the committee directs the Administrator of the National Nuclear Security Administration to provide a briefing to the House Committee on Armed Services not later than January 15, 2022, on implementing the Comptroller General report's recommendations. The briefing should include:

- (1) a plan to fully implement the report's recommendations;
- (2) progress toward implementing the report's recommendations;
- (3) options available to the Department of Energy to penalize contractors for not upholding their obligations regarding sexual assault; and
- (4) a plan to conduct an independent review of the NNSA's progress on implementing the Government Accountability Office recommendations.

Technical and Digital Talent

The committee recognizes the technical and digital talent deficit within the Department of Defense. In order to attract the necessary technical and digital talent to serve within the military or at the Department, the Government must understand the public's perception and knowledge of technical and digital jobs available within the Department. Therefore, the committee directs the Under Secretary of Defense for Personnel and Readiness to provide a report to the House Committee on Armed Services not later than January 15, 2022, regarding:

- (1) the awareness and opinions of science, technology, engineering, and mathematics (STEM) job opportunities within the Department and military held by young professionals, defined as individuals under the age of 35, employed full- or part-time in the technology industry or pursuing a degree in a STEM field;
- (2) the work incentives and pay structures used by the technology industry, including publicly- or privately-held companies of any size with a focus on delivering technology products or services, compared with Government incentives and structures;
- (3) the willingness of young professionals, defined as adults under the age of 35, employed full- or -part- in the technology industry or pursuing a degree in a STEM field, to serve part-time in

the military or government, or rotate between the private sector and Government;

(4) barriers that prevent defined as adults under the age of 35, employed full- or -part- in the technology industry or pursuing a degree in a STEM field, from working for the Department or serve within the military;

(5) the approximate proportion of individuals, under the age of 35, working within the STEM fields that have previously worked for the Department or served in the military; and

(6) any information available regarding why individuals, under the age of 35, choose to leave Department or military service STEM careers for those in the private sector.

LEGISLATIVE PROVISIONS

Section 1101—One-Year Extension of Authority to Waive Annual Limitation on Premium Pay and Aggregate Limitation on Pay for Federal Civilian Employees Working Overseas

This section would amend section 1101 of the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (Public Law 110–417) by extending premium pay for Federal civilian employees working overseas until the end of 2022.

Section 1102—One-Year Extension of Temporary Authority to Grant Allowances, Benefits, and Gratuities to Civilian Personnel on Official Duty in a Combat Zone

This section would amend section 1106 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) by extending the temporary authority granting allowances, benefits, and gratuities to civilian personnel on official duty in a combat zone by 1 year.

Section 1103—DARPA Personnel Management Authority to Attract Science and Engineering Experts

This section would amend section 1599h(b) of title 10, United States Code, by adding the ability for the Defense Advanced Research Projects Agency to pay for travel, transportation, and relocation expenses and services when hiring up to 15 individuals in any fiscal year.

Section 1104—Civilian Personnel Management

This section would amend section 129 of title 10, United States Code, to strengthen the prohibition against managing civilian personnel according to a constraint or limitation on man-years, end strength, or full-time equivalent positions. This section would also prohibit the use of term or temporary hiring authorities for enduring functions.

Section 1105—Comptroller General Review of Naval Audit Service Operations

This section would prohibit changes to the size or function of the Naval Audit Service until the Comptroller General of the United

States completes a report on the operations of the Naval Audit Service.

Section 1106—Implementation of GAO Recommendations on Tracking, Response, and Training for Civilian Employees of the Department of Defense regarding Sexual Harassment and Assault

This section would require the Secretary of Defense to develop a plan to address the recommendations contained in the Comptroller General of the United States report entitled “Sexual Harassment and Assault: Guidance Needed to Ensure Consistent Tracking, Response, and Training for Department of Defense Civilians.”

Section 1107—Guidelines for Reductions in Civilian Positions

This section would amend section 1597 of title 10, United States Code, to require that, in implementing any reduction in force of civilian positions in the Department of Defense, the determination of employees to be separated shall be made primarily on the basis of seniority and veterans preference.

Section 1108—Repeal of 2-Year Probationary Period

This section would repeal the 2-year probationary period for Department of Defense civilians provided in section 1599e of title 10, United States Code.

Section 1109—Amendment to Diversity and Inclusion Reporting

This section would amend section 113 of title 10, United States Code, to require that the Department of Defense establish relevant metrics, collect and report on diversity statistics, and report on the status of diversity and inclusion efforts among the civilian workforce.

Section 1110—Including Active Duty in the Armed Forces in Meeting Service Requirement for Federal Employee Family and Medical Leave

This section would establish Active Duty service in the Armed Forces as having met the service requirements for eligibility toward Federal Employee Family and Medical Leave.

Section 1111—Treatment of Hours Worked under a Qualified Trade-of-Time Arrangement

This section would amend section 5542 of title 5, United States Code, to exclude hours worked as part of any trade-of-time arrangement from the calculation of overtime pay for Federal firefighters.

Section 1112—Modification of Temporary Authority to Appoint Retired Members of the Armed Forces to Positions in the Department of Defense

This section would amend section 1108(b) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) to provide that the temporary authority to appoint retired members of the Armed Forces to civilian

positions applies to positions at any industrial base facility, range, or test facility.

Section 1113—Increase in Allowance Based on Duty at Remote Worksites

This section would direct the Director of the Office of Personnel Management to conduct an assessment of the remote site pay allowance.

Section 1114—Limiting the Number of Local Wage Areas Defined within a Pay Locality

This section would amend section 5343 of title 5, United States Code, to prohibit the Office of Personnel Management from including more than one local wage area within a General Schedule pay locality in order to align Federal Wage System areas with General Schedule locality pay areas.

TITLE XII—MATTERS RELATING TO FOREIGN NATIONS

ITEMS OF SPECIAL INTEREST

Accountability and Security of Biometric Data

The Committee recognizes the importance of collecting and analyzing biometric data from noncombatants, combatants, and unlawful combatants during military operations. There are over one million entries saved in the Department of Defense's Automatic Biometrics Identification System. With the sudden fall of Afghanistan to the Taliban, the committee is very concerned about the possibility of this data trove falling into the hands of the Taliban or another enemy of the United States, particularly because recent media reports allege that the Taliban has seized some of the devices the U.S. military used to collect biometrics.

Allowing the Taliban to access the Automatic Biometrics Identification System would be a catastrophic loss that permanently undermines the safety of Afghan citizens who helped the U.S. during twenty years of war and occupation. It would also fundamentally weaken Department of Defense biometric collection efforts moving forward because of actual or perceived data security concerns.

Therefore, the Committee directs the Department of Defense to provide a report to the Committee on Armed Services of the House of Representatives no later than December 31, 2021 regarding the current integrity of the Department's Automatic Biometrics Identification System and whether the Taliban or other unauthorized group or individual may have access to this system or related Department biometric system. The Committee further directs the Secretary of Defense to include information based on, but not limited to:

(1) A summary of actual or potential biometric-related equipment or tools currently possessed or believed to be possessed by the Taliban or other unauthorized user in Afghanistan;

(2) An accounting of abandoned or destroyed biometric-related equipment or tools as a result of the U.S. withdrawal from Afghanistan;

(3) An assessment of whether or not the Taliban or another unauthorized user has access to all or a portion of the Department of Defense's Automatic Biometrics Identification System, or any similar biometrics database controlled by the Department of Defense;

(4) Current efforts to ensure the data security and integrity of the Department of Defense biometric data and data collection enterprise; and,

(5) Recommendations to Congress on how the Department of Defense can improve the security and integrity of its biometric data collection efforts.

Afghanistan Intelligence Assessment

The committee directs the Secretary of the Defense to submit a report to the House Armed Services Committee no later than March 1, 2022, on the effectiveness of the production and communication of the intelligence and other information provided by the Department of Defense relating to the withdrawal of United States troops from Afghanistan. The assessment shall include an analysis on how intelligence officials could have improved all-source intelligence direction, collection, processing, exploitation, and dissemination as circumstances in Afghanistan changed in response to the U.S. announcement of a withdrawal of U.S. military personnel and the implementation of the withdrawal plans; and recommendations on how to improve intelligence direction, collection, processing, exploitation, and dissemination relating to future military withdrawals in regions with terrorist or hostile military threats to better inform policymaking.

Aviation Contractor Support to the Afghan Air Force

The committee notes that the defeat of the Afghan Air Force was largely due to the inability of the Afghan Air Force to properly maintain its fleet of aircraft without U.S. contracted maintenance support. During the May 12, 2021 House Committee on Armed Services hearing, the Department of Defense was asked to provide the committee with a plan on how it would continue to provide maintenance support to the Afghan Air Force to include the possibility of any in country support provided by U.S. contracted personnel. This information was never provided to the committee. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by November 1, 2021, on the Department of Defense's plan to provide contractor support to the Afghan Air Force. This briefing should include, but not be limited to, why the plan was not executed and the effects that had on the Afghan Air Force.

Bagram Air Base

The committee notes the strategic and tactical importance of Bagram Air Base during Operation Enduring Freedom. The committee also notes that the U.S. military retrograded from Bagram Air Base in July 2021 as part of the withdrawal from Afghanistan,

leaving the Hamid Karzai International Airport in Kabul the only airfield accessible to the United States and our partners. The committee is interested in understanding the strategic decision behind leaving Bagram Air Base. Therefore, the committee directs the Secretary of Defense brief the House Committee on Armed Services by November 1, 2021, on the Department of Defense's decision to leave Bagram Air Base.

Briefing on Authorities to Build Partner Capacity of Security Forces of Friendly Foreign Countries

The committee recognizes the impactful work done under the authorities within section 333 of title 10, United States Code. The committee also recognizes current authorities may not meet the needs for all programs, particularly with regards to the use of funds to pay for the personnel expenses of the national security forces of a friendly foreign country to participate in a training program conducted by the national security forces of another friendly foreign country.

Therefore, the committee directs the Under Secretary of Defense for Policy to provide a briefing, not later than March 31, 2022 to the congressional defense committees on the feasibility and advisability of an authority that allows for payment of personnel expenses as mentioned above.

Briefing on Foreign Military Sales to Poland

The Committee continues to place high priority on deterring Russian aggressive action on NATO's Eastern flank and in empowering our allies in the region. Since the illegal seizure of Ukraine's Crimea region, Russia has supported continued conflict in Ukraine's Donbas province, massed and maintained armed forces on Ukraine's Eastern borders, harassed NATO allies and activities in the Black Sea, and discussed integration of Russian and Belarusian military forces on Poland's border.

Poland has become the anchor of NATO's deterrence strategy on the Eastern European flank and the United States' strongest ally. It continues to meet defense budget targets in accordance with the Wales Summit Declaration by which the NATO member states agreed to spend 2 percent of their Gross Domestic Product on defense, 20 percent of which is spent on major equipment, including related research and development. Poland has also aggressively pursued modernization of its military capability, emphasizing interoperability with U.S. Army and Air Force capabilities based in Poland.

The Committee approves of Poland's recent decision to purchase 250 of the most modern versions of the U.S. Abrams main battle tank to increase the capability of its armored forces. This will enhance NATO's ability to deter Russian aggression on its Eastern flank and the Committee encourages the Administration to facilitate this foreign military sale as soon as possible.

Therefore, the Committee directs the Secretary of Defense, in consultation with the Director, Defense Security Cooperation Agency, to brief the congressional defense committees not later than December 31, 2021 on the process and timeline to facilitate the foreign military sales of U.S. Abrams tanks to Poland.

Countering Hybrid Threats

The committee supports the Department of Defense's efforts to develop resilience and build capacity to counter hybrid threats through research, training, and exercises with diverse partners, including at centers of excellence such as the European Centre of Excellence for Countering Hybrid Threats. The committee also supports efforts to incorporate learning from public, private, and academic sectors. Further, the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) authorized the participation of members of the U.S. Armed Forces and Department of Defense civilian personnel at the European Centre of Excellence for Countering Hybrid Threats. The committee therefore encourages the Department to explore opportunities to participate with the European Centre of Excellence for Countering Hybrid Threats on activities that incorporate best practices in addressing hybrid threats and enhance the ability of the military forces and civilian personnel of participating countries to conduct joint exercises and international military operations, as well as improve interoperability between the armed forces of such countries. The committee further directs the Secretary of Defense to provide a report to the House Committee on Armed Services not later than February 1, 2022, on Department activities to participate in the European Centre of Excellence for Countering Hybrid Threats.

Defense Cooperation with Compacts of Free Association States

The committee supports expanded defense cooperation with Compacts of Free Association states. The committee welcomes statements from Compact State leaders, such as President Surangel Whipps Jr. of the Republic of Palau, in support of closer ties with the United States, including potential military presence. As the Department of Defense considers options to improve the design and posture of the joint force in the Indo-Pacific region west of the International Date Line, the committee strongly urges the Department to consider the strategic geography of these crucial partners. Therefore, the committee directs the Secretary of Defense to submit a report to the Committee on Armed Services of the House of Representatives no later than March 1, 2022, describing:

- (1) The manner in which Compacts of Free Association states could contribute to national security objectives;
- (2) The advantages and disadvantages of various options related to presence of United States military forces in Compacts of Free Association states to support national security objectives, including through Expeditionary Advanced Base Operations;
- (3) An assessment of the resources required to carry out the various options related to the presence of United States military forces in Compacts of Free Association states;
- (4) Additional logistical requirements or considerations associated with the requirements of paragraph (3);
- (5) Further avenues for defense cooperation with Compacts of Free Association States;
- (6) Any other matters the Secretary of Defense considers appropriate.

Defense Security Cooperation Agency Briefing on Lessons Learned from the Failure of the ANSF and Partner Forces with Less Capable Security Forces

The committee is concerned about the failure of the Afghan National Security Forces (ANSF) to sustain security operations after the withdrawal of American forces. The rapid failure of the ANSF raises questions about the Department's ability to oversee security cooperation programs. After years of training, funding, and embedding with the ANSF, their mission failure raises serious concerns about how the United States trains and equips certain partner forces. Training less capable partner forces to fight with American technology and assets, to include multi-domain intelligence, intelligence, surveillance, and reconnaissance, close air support, and other sophisticated technology that is not present organically for host nations, may not achieve U.S. security cooperation objectives nor develop an enduring capability for partner nations. The committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than December 1, 2021, that includes how the agency plans to incorporate lessons learned from the failure of the ANSF and how the agency trains other partner forces with less capable security forces.

Department of Defense State Partnership Program Support to U.S. Security Cooperation Objectives

The committee maintains a continuing interest in the Department of Defense State Partnership Program (SPP). The committee recognizes that SPP is an important component of U.S. security cooperation efforts. Further, the committee notes that SPP has expanded significantly in size and scope since its inception.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, regarding SPP. Such briefing shall include an evaluation of the support provided by SPP to the security cooperation objectives of the United States in support of the National Security Strategy and the National Defense Strategy; an analysis of the National Guard's SPP requirements and resources (to include state-level components and associated personnel); an analysis of the roles played by National Guard bilateral affairs officers in support of the SPP; and any other matters regarding the status of the SPP that the Secretary determines relevant.

Feasibility of Delivering a Plan to Congress Prior to and After a Withdrawal of U.S. Forces from a Country

The committee is concerned with the lack of information that was provided in the months leading up to the withdrawal of U.S. forces from Afghanistan.

Therefore, the committee directs the Secretary of Defense to deliver a report to the House Committee on Armed Services by March 1, 2022 on the feasibility of providing future reports to the committee prior to and after the complete withdrawal of U.S. forces from a country. The report should identify a means for the Department of Defense to deliver reports to the committee at the earliest possible time on the plans for a withdrawal. Additionally, the report should detail how the Department would plan to keep the

committee updated on conditions in the country after the withdrawal. The committee believes that these updates should be focused on communicating a clear plan, contingencies that must be accounted for, description of conditions on the ground, anticipation of increased terror activity, and an assessment of needs for U.S. forces on the ground.

Global Fragility Act Implementation

The committee notes that the Global Fragility Act of 2019 (Public Law 116–94) passed with strong support and that successful implementation is intended to improve the interagency’s approach to stabilization in conflict-affected areas and prevent violence and fragility globally. The committee also notes that successful implementation requires attention at the appropriate level within the respective departments and agencies. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than December 1, 2021, that identifies the official, as required by law, at the appropriate and commensurate level who has been delegated responsibility for overseeing and leading the Global Fragility Initiative, including coordination within the Department. The Secretary is further directed to identify in that briefing any gaps in staffing, authorities, or other requirements needed to implement the law and what limitations, if any, continue to impede the progress of implementation.

Mine Warfare

Given advances in mine warfare and the important role it could play in a high-intensity conflict, the committee is concerned about the People’s Liberation Army Navy (PLAN) in both mine warfare capability and capacity. The committee requires additional information regarding the U.S. Navy’s own offensive and defensive mine warfare capabilities. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services, not later than March 1, 2022, detailing the projected impact to U.S. operational plans of PLAN mine warfare operations, including but not limited to, a conflict over Taiwan. The briefing should examine the following questions:

(1) What would be the objectives of Chinese employment of mine warfare in an invasion of Taiwan?

(2) Do present PLAN mine warfare capabilities allow the People’s Republic of China to meet the objectives described in paragraph (1)?

(3) What countermeasures are Taiwan, the United States, and other partners able to employ that might reduce the effectiveness of the PLAN’s mine warfare?

(4) What would be the optimal use of U.S. and Taiwanese offensive and defense mine warfare capabilities to contribute to efforts to deny a fait accompli against Taiwan?

(5) Do either the U.S. or Taiwanese Navy currently maintain the capabilities described in paragraph (4)? If not, what resources, platforms, or ordinances would be required to obtain said capabilities?

(6) How would the additions described in paragraph (5) contribute to the ability of the Department of Defense to execute its operational plans?

Operational Concepts

The committee aims to ensure that Department of Defense operational concepts with regard to challenges from near-peer competitors are adequately developed and appropriately coordinated with the Department's strategies, resources, and activities. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than January 15, 2022, on operational concepts developed for the purpose of countering the Government of the People's Republic of China (PRC) and Russia. This briefing shall include, at a minimum:

(1) an assessment of the operational challenges presented by the PRC and Russia;

(2) a detailed overview of the Department's past and present efforts to develop operational concepts to address these challenges in every military domain, including the land, air, sea, space, and cyber domains;

(3) a detailed overview of the Department's past and present efforts to develop operational concepts to counter hybrid warfare and aggression occurring below the threshold of armed conflict, including cyber-attacks and disinformation campaigns;

(4) a detailed overview of the Department's past and present efforts to develop operational concepts to defeat aggression by the PRC or Russia should deterrence fail;

(5) a detailed overview of what metrics the Department is using to measure progress in development of these operational concepts;

(6) a detailed overview of how the Department is working to link these operational concepts to objectives, capabilities, and force posture;

(7) a detailed overview of how the Department coordinates and deconflicts operational concepts between the military services;

(8) an assessment of relevant operational concepts of the PRC and Russia;

(9) with regard to the overviews and assessments included in the briefing, a quantification of the proportion of relevant work that has been devoted respectively to the PRC and to Russia; and,

(10) any other aspects of an operational assessment the Secretary determines is necessary or useful to the committee's understanding of the operational concepts under evaluation and development.

Operational Energy Readiness

The Committee is concerned about the Department's pattern of ignoring potential logistical challenges that could occur in a conflict while conducting major overseas exercises. Exercises in the European Command and Indo-Pacific Command areas of responsibility have neglected to fully account for the challenges posed by a contested logistics environments and fuel supplies subject to the control of adversaries assumed in such exercises. Logistical assumptions and caveats represent substantial tactical and strategic assumptions that may not reflect combat conditions and which may diminish the value of field exercises in learning to overcome these challenges.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by March 1, 2022 on exercises in the European Command and Indo-

Pacific Command areas of responsibility where fuel supplies for combat and non-combat units actively participating in such exercises originated from sources that could be disrupted or made completely unavailable by the notional adversary portrayed in such exercise.

PLA Civilian Strategic Mobility Capacity

The committee remains focused on deterring Chinese aggression, and particularly the threat of military force against Taiwan. To that end, the committee is concerned by the recent reports surrounding the People's Liberation Army Navy's (PLAN's) potential use of civilian vessels to expand the size of its amphibious lift capacity as well as the potential use of other non-military, state-owned or private assets to assist in the invasion of Taiwan. Consequently, the committee directs the Commander of U.S. Indo-Pacific Command to submit a report to the congressional defense committees no later than January 1, 2022, including:

(1) An assessment of the People's Liberation Army Navy amphibious transport capacity, including an analysis of the role that commercial ferries and other relevant private or publicly-owned vessels could play during an invasion of Taiwan;

(2) An assessment of the potential use of civilian airliners for military purposes, including to support of an invasion of Taiwan;

(3) An analysis of how the capabilities outlined in paragraphs (1) and (2) could impact the ability of the People's Republic of China to execute a successful invasion of Taiwan, the operational planning assumptions of Indo-Pacific command, and any required capability or force structure changes to successfully prevent a fait accompli against Taiwan.

Potential Department of Defense Funding for the Wuhan Institute of Virology

The committee directs the Secretary of Defense to submit a report to the Armed Services Committee of the House of Representatives not later than January 1, 2022 describing:

(1) All contracts the Department of Defense signed with the EcoHealth Alliance or its affiliates by year from 2012–2021 in spreadsheet format, to include purpose, location where contract was performed, cost, metrics, contract number, contract oversight organization, and whether any funds were provided ultimately to the Wuhan Institute of Virology;

(2) Whether any DoD-funded research projects involving EcoHealth Alliance or its affiliates were performed in China or in support of research performed in China, and if so, a description of the projects, the work performed, and the risk assessments DoD used to evaluate the project;

(3) Whether DoD issued any awards to the EcoHealth Alliance or its affiliates that are not available on [USASpending.gov](https://www.usaspending.gov);

(4) Whether the Department sponsored any classified research involving EcoHealth Alliance or its affiliates; and

(5) Copies of the agreements, initial research reports, and all progress and final reports from the EcoHealth Alliance or its affiliates.

This report shall be submitted in unclassified form and made publicly available on an internet website in a searchable format, but may contain a classified annex.

Report on Anti-Ship Systems for Defense of Taiwan

The committee supports the strategic partnership between the United States and Taiwan, and notes the importance of anti-ship systems in defending the territorial integrity of the Government of Taiwan. The committee further notes the urgent need for ground-based anti-ship cruise missiles, ground-based cruise missiles, and anti-ship mines to defend United States and allied forces in the Indo-Pacific against growing threats and deter conflict in the region. The committee strongly supports an effort to expand defense industrial cooperation with the Government of Taiwan. Therefore, the committee directs the Secretary of Defense to submit to the congressional defense committees a report by January 31, 2022, on what anti-ship systems and capabilities in the extant U.S. military hardware inventory might be used to enhance the defense of Taiwan, and plans on how these systems and capabilities could be incorporated into the current military of the Government of Taiwan to enhance their self-defense capabilities.

Report on Engaging Taiwan in Indo-Pacific Regional Dialogues or Forums

The committee recognizes the value of Taiwan-U.S. relations, and the importance Taiwan plays in the Indo-Pacific region.

As such, the committee directs the Secretary of Defense, to submit a report to the House Committee on Armed Services by March 1, 2022, on the Department of Defense's plan to meaningfully engage Taiwan in regional security dialogues or forums that shall include the following:

- (1) An assessment of list of security regional dialogues or forums that would fit for Taiwan's participation.
- (2) A discussion of current and future plans to achieve engaging Taiwan in regional security dialogues or forums.
- (3) An evaluation of the feasibility of cooperating on a range of activities with the aforementioned security dialogues or forums, including: (a) humanitarian-assistance and disaster-relief; (b) supply chain security; (c) cyber security; (d) coast guard; and (e) any other matters the Secretary of Defense determines appropriate.

Report on Evacuation of Remaining American Citizens and Counterterrorism Operations in Afghanistan

The committee remains concerned about the safety of American citizens still remaining in Afghanistan who seek to leave and the ability to safely evacuate them with U.S. Armed Forces no longer in Afghanistan. Furthermore, the Committee continues to seek information regarding the risk of Afghanistan becoming a terrorist safe haven. The committee is particularly concerned that it has not been presented with clearly defined plans to conduct counterterrorism operations and respond to terrorist threats emanating from Afghanistan.

Therefore, not later than October 1, 2021, the Committee directs the Secretary of Defense to submit to the Committees on Armed

Services of the Senate and the House of Representatives a plan describing how the Secretary intends to carry out the following operations in Afghanistan:

(1) support to the evacuation of American citizens or legal permanent residents seeking evacuation by the Department of State.

(2) maintain air superiority.

(3) intelligence, surveillance, and reconnaissance missions.

(4) counterterrorism operations.

For each of these operations, the plan shall include—

(1) an estimate of the number of servicemembers required to carry out such operations;

(2) the assets, resources, and other capabilities the Department will employ to carry out such operations, including those required for Special Operations Forces peculiar assets and irregular warfare programs;

(3) the location where such troops, assets, resources, and capabilities will be based;

(4) intelligence requirements to maintain situational awareness;

(5) the costs associated with carrying out such operations; and

(6) whether other authorities or operational requirements for the continued counterterrorism mission in Afghanistan, including operations in and from adjacent regions, are required.

Report on Iranian Support for Military Forces Committing Severe Human Rights Abuses

By March 1, 2022, the Committee directs the Secretary of Defense to submit a report to the committees on Armed Services of the House of Representatives and the Senate that includes a detailed assessment of tactics used by Iran's internal security forces, including the Basij, Ansar Hezbollah, and law enforcement forces including all subunits and special forces, as well as any religious police to suppress opposition groups or violate human rights.

Report on Iranian Support for the Assad Regime

By March 1, 2022, the Committee directs the Secretary of Defense to submit a report to the Committees on Armed Services of the House of Representatives and the Senate that includes a detailed description of ongoing or recent Iranian material support for the government of Bashar al-Assad and the role this support may have played in the losses of American or coalition forces.

Report on Iranian Support for the Taliban in Afghanistan

By March 1, 2022, the committee directs the Secretary of Defense to submit to the Committees on Armed Services of the House of Representatives and the Senate a report that includes a detailed description of ongoing or recent Iranian material support for the Taliban and the role this support may have played in the losses of American or coalition forces.

Report on Personal Identifiable Information Shared by the Department of Defense with the Taliban during Evacuation Operations

The committee directs the Secretary of Defense to submit a report on disclosure of personally identifying information and bio-

metrics to the Taliban to the committees on armed services of the House and Senate no later than December 31st, 2021.

The report should include—

(1) A disclosure of the identifying information that the Department shared with the Taliban regarding Americans, allies, and Afghan civilians who worked with the coalition force, including: (a) The number of individuals who had their information shared; and (b) The types of information shared including names, addresses, green cards, passports, or any other identifying information. (2) An assessment of how the Taliban has or plans to utilize this identifying information to target or harm individuals in acts of reprisal.

Report on Security Impact of Taliban Prisoner Releases

The Committee directs the Secretary of Defense to submit a report to the congressional defense committees by November 1, 2021 on the impacts that prisoners released by the Taliban are having on the security environment in Afghanistan, threats such released prisoners pose to servicemembers in the Central Command Area of Responsibility, and any impact on United States military operations in the Central Command Area of Responsibility.

Report on Security of Pakistan's Nuclear Arsenal

The committee directs the Secretary of Defense to submit a report to the congressional defense committees not later than December 31, 2021, on the vulnerability of the nuclear arsenal of the Government of Pakistan to seizure or control, that includes considerations of known extremism among personnel of the Inter-Services Intelligence and the possibility of terror group threats from Afghanistan.

Report on the Progress and Development of ICBM Silos in Eastern XinJiang, Gansu, and Jinlantai Provinces

The committee also directs the Secretary of Defense provide a report to the House Committee on Armed Services, no later than March 31, 2022 on the current progress and development of inter-continental ballistic missile silos in Eastern Xinjiang, Gansu and Jinlantai provinces of the People's Republic of China (PRC). The report should also include a current assessment of silo capabilities, an analysis of the infrastructure concept behind development of such silos, updates on the size of over the horizon force with respect to such silos, updates on the locations of such silos, and anticipated completion dates of such silos, and a comparative assessment of the modernization efforts of the PRC's nuclear triad.

Report to Congress on the Status of Abandoned United States Military Air Capabilities in Afghanistan

The committee directs the Secretary of Defense to submit a report on the inventory of aircraft left behind by the United States during the 2021 withdrawal of forces from Afghanistan to the committees on armed services of the House and Senate no later than March 1st, 2022.

The report should include an inventory of both rotary and fixed wing aircraft left behind in Afghanistan as well as the number of aircraft that were returned to the United States.

The report should also include a plan from the Department to recoup or reduce the United States aircraft that are in the hands of the Taliban.

SIGAR Performance Evaluation of the Afghan National Security and Defense Forces

The committee recognizes the value of the Special Inspector General for Afghanistan Reconstruction's assessments of United States engagement in Afghanistan. The committee also notes the Afghan National Security and Defense Forces (ANDSF)'s inability to defend Afghanistan following the withdrawal of U.S. military personnel. Therefore, the committee directs the Special Inspector General for Afghanistan Reconstruction to conduct an evaluation of the performance of the ANDSF for the period between February 2020 and August 2021. The committee also directs the Special Inspector General for Afghanistan Reconstruction to submit a report to the Committees on Armed Services of the Senate and the House of Representatives and the Secretary of Defense by March 1, 2022, on the findings of such evaluation, including why the ANDSF proved unable to defend Afghanistan from the Taliban following the withdrawal of U.S. military personnel; the impact of the withdrawal of U.S. military personnel had on the performance of the ANDSF; elements of the U.S. military's efforts since 2001 to provide training, assistance, and advising to the ANDSF that impacted the ANDSF's performance following the U.S. military withdrawal; the current status of U.S.-provided equipment to the ANDSF; the current status of U.S.-trained ANDSF personnel; and any other matters the Special Inspector General for Afghanistan Reconstruction deems appropriate. The report shall be provided in unclassified form, but may include a classified appendix.

Provided further, the Secretary of Defense shall, insofar as is practicable and not in contravention of any existing law, furnish all such information or assistance to the Special Inspector General as the Special Inspector General may request for the purpose of conducting the evaluation required by this section.

Special Inspector General of Afghanistan Reconstruction (SIGAR) Evaluation of Performance of Afghan National Defense and Security Forces (ANDSF)

The Committee recognizes the work of SIGAR with respect to U.S. military engagement in Afghanistan and directs the agency to conduct an evaluation of performance of the Afghan National Security and Defense Forces for the period between February 2020 and August 2021. The report shall include, and is not limited to, findings towards the following questions:

(1) Why the ANDSF proved unable to defend Afghanistan from the Taliban following the withdrawal of U.S. military personnel.

(2) The impact the withdrawal of U.S. military personnel had on the performance of the ANDSF;

(3) Elements of the U.S. military's efforts since 2001 to provide training, assistance, and advising to the ANDSF that impacted the ANDSF's performance following the U.S. military withdrawal;

(4) The current status of U.S.-provided equipment to the ANDSF;

(5) The current status of U.S.-trained ANDSF personnel; and

(6) Any other matters the Special Inspector General for Afghanistan Reconstruction deems appropriate;

The committee also directs SIGAR to submit a report of these findings to the Committees on Armed Services of the Senate and the House of Representatives and the Secretary of Defense by February 1, 2022. The report shall be provided in unclassified form but may include a classified appendix.

Further, the Secretary of Defense shall, insofar as is practicable and not in contravention of any existing law, furnish all such information or assistance to the Special Inspector General as the Special Inspector General may request for the purpose of conducting the evaluation required by this section.

Special Operations Forces Cooperation with Israel

The committee recognizes that allies and partners are a crucial component of U.S. national security. The committee also recognizes that strong relationships between U.S. Special Operations Forces (USSOF) and the corresponding forces of our allies and partners serve as an important anchor in addressing complex threats. The committee notes that the challenges presented by state and non-state actors in the Middle East and the Levant underscore the need for reliable relationships, including interoperable relationships if feasible, in which USSOF can partner to deter and challenge those threats.

Therefore, the committee directs the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict, in coordination with the Commander, U.S. Special Operations Command, to provide a briefing to the House Committee on Armed Services by December 31, 2021, on all current, developing, and planned cooperative and collaborative activities and initiatives between USSOF and Israeli special operations forces.

Status of Operation Atlantic Resolve

The committee believes it is important for the Department of Defense and Congress to be definitionally clear on the official status of Operation Atlantic Resolve. Therefore, the committee directs the Secretary of Defense to provide to the House Committee on Armed Services not later than January 5, 2022, a determination in writing as to whether or not Operation Atlantic Resolve officially constitutes a named operation or not, along with an assessment of the legal and policy implications of that status.

Strategy for Preserving the Rights of Women and Girls in Afghanistan

The committee is concerned about the impact of the withdrawal of U.S. forces from Afghanistan on Afghan women and girls. The committee notes that the U.S. military has many capabilities that could be used to support regional security partners. Therefore, the committee directs the Secretary of Defense, in coordination and

consultation with the Secretary of State, to submit a report to the House Committee on Armed Services and House Committee on Foreign Affairs by March 1, 2022, including a comprehensive strategy for how U.S. military capabilities and partnerships could be used to promote the protection of the rights of women and girls in Afghanistan. The strategy should include:

(1) an analysis of any programs in the region that could be leveraged to protect the rights of women and girls, preserve the gains made by women and girls, and best ensure the meaningful participation of Afghan women in any transitional security arrangements and any future political or peace processes, in accordance with the Women, Peace and Security Act of 2017 (Public Law 115–68; 22 U.S.C. 2151).

(2) an assessment of military capabilities that could be used to assist with State Department-led efforts to protect the rights of Afghan women and girls relating to Afghanistan and the region.

(3) an assessment of additional statutory authority needed to permit the effective use of Department of Defense capabilities to protect the rights of women and girls and ensure opportunity of meaningful participation in any future Afghan political processes.

(4) ways to ensure that activities carried out under the strategy employ rigorous monitoring and evaluation methodologies and are informed by gender analysis as defined by the Women’s Entrepreneurship and Economic Empowerment Act of 2018 (Public Law 115–428) and required by the U.S. Strategy on Women, Peace, and Security.

Such strategy must be submitted in an unclassified format but may contain a classified annex.

Strategy to Mitigate Modifications to Defender Europe

The committee notes that the Department of Defense cancelled the large-scale theater level Defender Europe exercise for fiscal year 2022 at a time of increased escalatory Russian military activity and replaced it with smaller-scale activities. Large-scale theater level Defender Europe exercises have been a cornerstone of United States deterrence activity against Russia and demonstrate the United States capacity to rapidly reinforce the European continent in a contingency while building readiness, demonstrating resolve, enhancing capability, and strengthening alliances and partnerships. The committee further notes that this change could impact Defender Pacific exercises in the Indo-Pacific. Therefore, the committee directs the Secretary of Defense to provide to the congressional defense committees not later than January 5, 2022, a strategy in writing that details how it will mitigate the impacts on readiness, deterrence, and interoperability of the modifications made to this exercise.

The committee is concerned that the decision to modify the Defender Europe exercise was made years ago but was not shared with Congress until the fiscal year 2022 President’s Budget request. The committee urges the Department of Defense to review this decision and the benefits of conducting a theater-level European exercise to deter Russia in future years.

Strategy to Mitigate U.S. Army V Corps in the Continental United States Challenges

The committee notes previous military advice indicating that U.S. Army V Corps should be forward-stationed in Europe and the potential operational impacts of the stationing of V Corps in the continental United States. Therefore, the committee directs the Under Secretary of Defense for Policy, in coordination with the Under Secretary of Defense for Acquisition and Sustainment, the Secretary of the Army, and the Commander, United States European Command, to provide a strategy to the congressional defense committees not later than January 5, 2022, to mitigate any logistical and policy challenges posed by hybrid rotational structure to Europe. The strategy shall include measures to address challenges posed by potential Russian actions to disrupt V Corps interaction with the European theater, substantial time zone differences, limitations on the ability to coordinate with and assure allies due to physical distance, staffing and logistical challenges inherent in spreading a Corps headquarters between North America and Europe, and all other relevant issues. The strategy shall include, for each mitigation measure, an assessment of the effectiveness that each measure would have in addressing each relevant challenge, as well as a comparative assessment of the effectiveness that each measure would have in comparison to forward-stationing V Corps in Europe as well as a comparative assessment of the cost of the current hybrid structure as compared to fully forward stationing V Corps in Europe.

Sustaining Deterrence in Europe

The Committee asserts that sustained deterrence against Russian aggression on Europe's eastern flank is an essential element of our global posture. Further, it is more critical than ever that the United States demonstrate a continuing commitment to its alliances and partnerships in Europe.

The Committee asserts that there is operational and strategic value in permanent forward presence and in some locations where it is most appropriate, continued rotational presence. Forward-positioned forces:

- (1) reduce time and space limitations by providing rapid response capabilities to geographic combatant commanders;
- (2) serve as a deterrent to potential adversaries while assuring partners and allies;
- (3) can reduce cost, given that the use of rotational forces encumbers at least three units to support the one rotation: the unit currently performing the rotational mission, the unit training to assume the rotational mission, and the unit undergoing reset after completing the rotational mission, so that the financial costs of supporting "heel-to-toe" rotational units over several years may be greater than correlating costs for permanently forward-stationed units;
- (4) can enable increased deterrence in multiple theaters given the three-to-one ratio of units required to sustain rotational deployments, so that permanent forces can facilitate greater deterrent focus using a comparable amount of forces;

(5) enable U.S. forces to develop and sustain expertise on the terrain, supporting infrastructure, sustainable lines of communication, and regional security forces in the region, while building closer relationships with ally and partner forces, and improved understanding of the cultural and regional context in which deterrence and potential conflict occur;

(6) benefit military families by enabling families to accompany service members on deployments and reducing the wear and tear on service members and their family relations inherent in a constant rotational redeployment and training cycle;

(7) facilitate cooperative efforts to build and develop partner country security capabilities; and

(8) help mitigate contested logistics risks and vulnerabilities inherent to rotational forces.

Moreover, the Committee notes that since Fiscal Year 2016, and nearly every year thereafter, Congress has consistently advocated for an approach to U.S. defense posture in Europe that includes a greater emphasis on permanent forward positioned forces. Due to these factors, the Committee asserts that it may best serve the United States operational and strategic interests to maintain additional permanently stationed forces on Europe's eastern periphery, in order to: provide rapid response capabilities; deter potential adversaries; assure partners and allies; enhance U.S. forces understanding of the local environment; reduce cost; free up logistical resources to enhance U.S. forward presence in multiple theaters where closer relationships and enhanced deterrence are needed; counter the challenges inherent in deployment from the continental United States to a contested logistics environment; and facilitate cooperative efforts to build and develop partner-nation security capabilities.

Therefore, the Committee directs the Secretary of Defense, in consultation with the service secretaries, to submit a report to the congressional defense committees not later than March 15, 2022, on the Department's strategy for enhancing the United States forward presence on NATO's eastern periphery, to include assessments of possibilities for potential force structure enhancements at a minimum in Romania, Poland, and the Baltic states, along with options for enhanced deterrent posture in Ukraine. The report shall include,

(1) an assessment of the impact on deterrence of increased forward presence;

(2) an assessment of the impact on relationships with allies and partners in the region that would result from increased forward presence;

(3) a comparative assessments of the costs and benefits of increased permanent forces versus rotational forces;

(4) an assessment of the synergies that might be implemented via additional presence and participation of other allied and partner forces;

(5) the current and potential state of host nation contributions to collective defense and any synergies with potential enhanced U.S. posture;

(6) the impact of forward positioned forces versus rotational forces on mitigating contested logistics risks;

- (7) the feasibility of deploying forces to train and advise in their defense against active Russian-backed aggression; and
- (8) any other information the Secretary deems relevant.

Taliban Financial Assets Report

The Committee directs the Secretary of Defense to submit a report on the Taliban's access to rare earth minerals, financial resources, and United States military equipment, to the Committees on Armed Services of the House of Representatives not later than March 1, 2022. The report should include—

- (1) the estimated value of Afghanistan's rare earth mineral resources currently under control of the Taliban;
- (2) the estimated value of the cash reserves of the previous government of the Islamic Republic of Afghanistan that are now in the hands of the Taliban;
- (3) a detailed accounting articles of United States and NATO military equipment now in the hands of the Taliban;
- (4) the estimated net wealth of the Taliban as an organization, and how much that net wealth grew after the fall of the government of the Islamic Republic of Afghanistan;
- (5) a detailed estimation of the Haqqani Network's access to military, financial and rare earth mineral resources after the fall of the government of the Islamic Republic of Afghanistan;
- (6) the impact that the United States withdrawal from Afghanistan had on the military, financial and rare earth mineral resources of al-Qaeda in Afghanistan;
- (7) a detailed assessment of all sources of Taliban, al-Qaeda, and Haqqani Network financing in Afghanistan including from the sale of illicit drugs such as opium; and
- (8) the current state of United States and United Nations sanctions with respect to Afghanistan and their feasibility at blocking the Taliban, including the Haqqani network, as well as al-Qaeda from accessing such financial and military resources.

Taliban relationship with Foreign Terrorist Organizations

The Committee directs the Secretary of Defense to submit a report on the Taliban's associations, affiliations, and relationships with Foreign Terrorist Organizations to the Committee on Armed Services of the House of Representatives not later than March 1, 2022. The report should include—

- (1) The Haqqani network's economic, political and military relationship and association with the Taliban.
- (2) Tehrik-e Taliban Pakistan (TTP) economic, political and military relationship and association with the Taliban.
- (3) Al Qaeda economic, political and military relationship and association with the Taliban.
- (4) Whether the Taliban has provided material support for Al Qaeda, Haqqani, and TTP.

Tracking Local National Support to U.S. Armed Forces

The committee recognizes the invaluable support provided to the United States military by local nationals who serve in a variety of different positions from linguist, cultural advisors, and other sup-

port positions. Without their support, the ability to accomplish our mission would be more difficult.

To ensure the Department of Defense is able to support routine immigration requests as well as emergency evacuations, the committee directs the Secretary of Defense to provide a briefing by March 1, 2022, to the House Committee on Armed Services and Senate Committee on Armed Services detailing the feasibility of maintaining a comprehensive database of local nationals that work in support of the United States military during armed conflicts.

LEGISLATIVE PROVISIONS

SUBTITLE A—ASSISTANCE AND TRAINING

Section 1201—Extension of Support of Special Operations for Irregular Warfare

This section would modify section 1202(a) of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91), as most recently amended by section 1207 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283), by striking “2023” and inserting “2025”.

SUBTITLE B—MATTERS RELATING TO AFGHANISTAN AND PAKISTAN

Section 1211—Clarification of Certain Matters regarding Protection of Afghan Allies

This section would modify the Afghan Allies Protection Act of 2009 (Public Law 111–8). The committee notes the critical importance of the Special Immigrant Visa Program and remains committed to Afghan citizens who, at great personal risk, supported United States operations in Afghanistan.

Section 1212—Afghanistan Security Forces Fund

This section would extend the Afghanistan Security Forces Fund through fiscal year 2022 for the termination of contracts associated with Afghan National Defense and Security Forces, the return of equipment to Department of Defense stocks, and other close out activities. This section also would require a quarterly report on the progress and cost associated with the utilization of this authority.

Section 1213—Prohibition on Providing Funds or Material Resources of the Department of Defense to the Taliban

This section would prohibit Department of Defense funds or material resources to the Taliban.

Section 1214—Prohibition on Transporting Currency to the Taliban and the Islamic Emirate of Afghanistan

This section would prohibit Department of Defense aircraft from transporting currency or other items of value to the Taliban, the Islamic Emirate of Afghanistan, or any subsidiary.

Section 1215—Extension and Modification of Authority for Reimbursement of Certain Coalition Nations for Support Provided to United States Military Operations

This section would extend through December 31, 2022, the authority to make Coalition Support Fund payments under section 1233 of the National Defense Authorization Act for Fiscal Year 2008 (Public Law 110–181).

Section 1216—Quarterly Briefings on the Security Environment in Afghanistan and United States Military Operations Related to the Security of, and Threats Emanating from, Afghanistan

This section would require quarterly briefings on the security environment in Afghanistan and U.S. military operations related to the security and threats emanating from Afghanistan.

Section 1217—Quarterly Report on the Threat Potential of Al-Qaeda and Related Terrorist Groups under a Taliban Regime in Afghanistan

This section would require a quarterly report on the threat of al-Qaeda and related terrorist groups under a Taliban regime in Afghanistan.

Section 1218—Sense of Congress

This section would provide the sense of Congress recognizing the men and women of the Armed Forces for their heroic and noble service securing Hamid Karzai International Airport and supporting the largest Noncombatant Evacuation Operation in United States history. The sense of Congress would also recognize the ultimate sacrifice of the 11 Marines, the sailor, and the soldier who gave their lives for this mission.

SUBTITLE C—MATTERS RELATING TO SYRIA, IRAQ, AND IRAN

Section 1221—Extension and Modification of Authority to Provide Assistance to Vetted Syrian Groups and Individuals

This section would extend and modify section 1209 of the Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015 (Public Law 113–291), by extending the authority to support vetted Syrian groups and individuals through December 31, 2022, and the required notice before the provision of assistance.

Section 1222—Extension and Modification of Authority to Support Operations and Activities of the Office of Security Cooperation in Iraq

This section would extend by 1 year, section 1215 of the National Defense Authorization Act for Fiscal Year 2012 (10 U.S.C. 113), the Office of Security Cooperation-Iraq authority.

Section 1223—Extension and Modification of Authority to Provide Assistance to Counter the Islamic State of Iraq and Syria

This section would modify section 1236 of the Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015 (Public Law 113–291) to provide assistance to the security forces of the Government of Iraq to counter the Islamic State of Iraq and Syria and extend the authority through December 31, 2022. This section would also limit the obligation and execution of some funds until the Secretary of Defense and Secretary of State submit security cooperation and security sector reform plans for Iraq.

The committee notes the importance of building sustainable partner forces that share common security goals. The committee further notes the absence of an integrated plan for security cooperation in Iraq, beyond the current phase of Operation Inherent Resolve. The committee encourages security cooperation with Iraqi military partners, including the Kurdish Peshmerga Regional Guard Brigades, that emphasizes training and equipping and seeks to achieve the objective of building lasting, sustainable military capacity. Therefore, the committee further urges the Department to use funds authorized by this Act to be used predominantly to train and equip partner forces toward that objective. Finally, the committee believes U.S. security cooperation and military activities should nest within a whole-of-government approach, executed in coordination with coalition and NATO partners, to strengthen Iraq’s governance and institutions of national defense, promote stability, shared economic prosperity, and broad reform.

Section 1224—Prohibition of Transfers to Badr Organization

This section would prohibit Department of Defense funds to be made available to the Badr Organization.

Section 1225—Prohibition on Transfers to Iran

This section would prohibit Department of Defense funds to be used to transfer or facilitate a transfer of pallets of currency, currency, or other items of value to the Government of Iran, or any subsidiary, agent, or instrumentality of the Government of Iran.

Section 1226—Report on Iran-China Military Ties

This section would require an annual report on military ties between China and Iran.

Section 1227—Report on Iranian Military Capabilities

This section would require a recurring report on Iranian military capabilities and the impact that removal of sanctions would have on such capabilities.

Section 1228—Report on Iranian Terrorist Proxies

This section would require a recurring report on improvements of military capabilities of Iran-backed militias and the impact that removal of sanctions would have on such capabilities.

SUBTITLE D—MATTERS RELATING TO RUSSIA

Section 1231—Extension of Limitation on Military Cooperation between the United States and Russia

This section would extend for 1 year section 1232(a) of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328). This section would limit the use of fiscal year 2022 funds for bilateral military-to-military cooperation between the Government of the United States and Russia until the Secretary of Defense, in coordination with the Secretary of State, provides a certification to appropriate congressional committees relating to certain actions by Russia.

Section 1232—Prohibition on Availability of Funds Relating to Sovereignty of Russia over Crimea

This section would extend by 1 year the prohibition imposed by section 1245 of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114–92). This section would prohibit the use of fiscal year 2022 funds to implement any activity that recognizes the sovereignty of Russia over Crimea. This section would also allow the Secretary of Defense, with the concurrence of the Secretary of State, to waive the prohibition if the Secretary of Defense determines that doing so would be in the national security interest of the United States and submits a notification to the House Committee on Armed Services, the Senate Committee on Armed Services, the Senate Committee on Foreign Relations, and the House Committee on Foreign Affairs.

Section 1233—Modification and Extension of Ukraine Security Assistance Initiative

This section would extend by 1 year section 1250 of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114–92) to authorize the Secretary of Defense to provide security assistance and intelligence support to the Government of Ukraine, with the concurrence of the Secretary of State. This section would also authorize \$300.0 million to carry out this authority in fiscal year 2022.

Section 1234—Report on Options for Assisting the Government of Ukraine in Addressing Integrated Air and Missile Defense Gaps

This section would require a report on options for the United States to support Ukraine in addressing integrated air and missile defense gaps.

Section 1235—Biennial Report on Russian Influence Operations and Campaigns Targeting Military Alliances and Partnerships of Which the United States is a Member

This section would require a biennial report on Russia's influence operations and campaigns targeting U.S. military alliances and partnerships.

Section 1236—Sense of Congress on Georgia

This section would express the sense of Congress regarding Georgia.

SUBTITLE E—MATTERS RELATING TO THE INDO-PACIFIC REGION

Section 1241—Sense of Congress on a Free and Open Indo-Pacific Region

This section would express the sense of Congress on the United States' steadfast commitment to a free and open Indo-Pacific region, including the central role of close U.S. alliances and partnerships in deterring aggression and countering malign activity by the Governments of the People's Republic of China and North Korea. This section would also express the sense of Congress that the United States should continue to invest in military posture and capabilities in the Indo-Pacific.

The committee condemns aggressive actions by the Government of the People's Republic of China to disrupt U.S. alliances, values, and partnerships; threaten its neighbors; renege on its commitments regarding autonomy, democracy, and freedom of expression in Hong Kong; and violate fundamental human rights in Xinjiang. The committee supports the executive branch's continued efforts to counter the Government of the People's Republic of China's aggressive behavior, territorial claims, and violations of rules and international norms, and to increase cooperation with allies and partners in the Indo-Pacific and worldwide against these challenges.

Section 1242—Clarification of Required Budget Information Related to the Indo-Pacific

This section would clarify the required budget information related to the Indo-Pacific.

Section 1243—Report on Cooperation Between the National Guard and Taiwan

This section would require the Secretary of Defense to submit a report on the feasibility and advisability of enhanced cooperation between the National Guard and Taiwan.

Section 1244—Report on Military and Security Developments Involving the People's Republic of China

This section would modify current annual reporting requirements on military and security developments involving the People's Republic of China.

Section 1245—Biennial Report on Influence Operations and Campaigns of the Government of the People's Republic of China Targeting Military Alliances and Partnerships of Which the United States Is a Member

This section would require a biennial report on the Government of the People's Republic of China's influence operations and campaigns targeting U.S. military alliances and partnerships.

Section 1246—Report on Efforts by the People’s Republic of China to Expand Its Presence and Influence in Latin America and the Caribbean

This section would direct the Secretary of Defense, with concurrence of the Secretary of State, and in coordination with the Secretary of the Treasury and the Director of National Intelligence, to submit a report on the Government of the People’s Republic of China’s efforts to expand its presence and influence in Latin America and the Caribbean.

Section 1247—Sense of Congress on Taiwan Defense Relations

This section would express the sense of Congress regarding Taiwan defense relations.

Section 1248—Sense of Congress on Inviting Taiwan to the Rim of the Pacific Exercise

This section would express the sense of Congress that the naval forces of Taiwan should be invited to participate in the Rim of the Pacific exercise conducted in 2022.

Section 1249—Sense of Congress on Enhancing Defense and Security Cooperation with Singapore

This section would express the sense of Congress on enhancing defense and security cooperation with Singapore.

Section 1250—Sense of Congress

This section would express the sense of Congress in support of U.S. Armed Forces presence in South Korea.

Section 1251—Sense of Congress with Respect to Qatar

This section would provide the sense of Congress on the relationship between the United States and Qatar.

Section 1252—Statement of Policy

This section would state that it shall be the policy of the United States to maintain the ability of the United States Armed Forces to deny a fait accompli by a strategic competitor against a covered defense partner.

TITLE XIII—OTHER MATTERS RELATING TO FOREIGN NATIONS

LEGISLATIVE PROVISIONS

SUBTITLE A—MATTERS RELATING TO EUROPE AND NATO

Section 1301—Report on the State of United States Military Investment in Europe including the European Deterrence Initiative

This section would require a report outlining the current state of U.S. defense investments in Europe.

Section 1302—Sense of Congress on United States Defense Posture
in Europe

This section would express the sense of Congress on United States defense posture in Europe.

Section 1303—Sense of Congress on Security Assistance to the
Baltic Countries

This section would express the sense of Congress on security assistance to the Baltic countries.

SUBTITLE B—SECURITY COOPERATION AND ASSISTANCE

Section 1311—Extension of Authority for Certain Payments to
Redress Injury and Loss

This section would extend through December 31, 2023, the authority to make *ex gratia* payments for damage, personal injury, or death that is incident to combat operations of the United States Armed Forces, under section 1213 of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92).

Section 1312—Foreign Area Officer Assessment and Review

This section would require an independent assessment and comprehensive review of the development, advancement, retention, and utilization of Foreign Area Officers (FAOs) and the feasibility of billeting more Senior Defense Official roles to FAOs.

Section 1313—Women, Peace, and Security Act Implementation at
Military Service Academies

This section would express the sense of Congress regarding funding for Women, Peace, and Security Act of 2017 (Public Law 115–68) implementation funding, requires professional military education activities as well as a briefing on security cooperation activities consistent with such Act, encourages admission of diverse individuals at military service academies, and requires the Department to partner with schools and nonprofit organizations.

SUBTITLE C—OTHER MATTERS

Section 1321—Extension of Authority for Department of Defense
Support for Stabilization Activities in National Security Interest
of the United States

This section would extend the authority to conduct programs authorized under section 1210A of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92), Defense Support for Stabilization Activities in National Security Interest of the United States.

Section 1322—Notification Relating to Overseas Humanitarian, Disaster, and Civic Aid Funds Obligated in Support of Operation Allies Refuge

This section would require a report on overseas humanitarian, disaster, and civic aid (OHDACA) funds obligated for expenses in support of Operation Allies Refuge.

Section 1323—Limitation on Use of Funds for the 2022 Olympic and Paralympic Winter Games in China

This section would prohibit the Department of Defense from providing transportation of United States Officers and United States Officials to the 2022 Olympic and Paralympic Winter Games in the People's Republic of China.

Section 1324—Report on Hostilities Involving United States Armed Forces

This section would require the President to submit a report, not later than 48 hours after any incident in which the United States Armed Forces are involved in hostilities unless the relevant incident is reported under the requirements of section 4 of the War Powers Resolution (50 U.S.C. 1543) or occurred pursuant to an authority for the use of force that has been reported according to section 1264 of the National Defense Authorization Act for Fiscal Year 2018 (50 U.S.C. 1549).

TITLE XIV—OTHER AUTHORIZATIONS

LEGISLATIVE PROVISIONS

SUBTITLE A—MILITARY PROGRAMS

Section 1401—Working Capital Funds

This section would authorize appropriations for Defense Working Capital Funds at the levels identified in section 4501 of division D of this Act.

Section 1402—Chemical Agents and Munitions Destruction, Defense

This section would authorize appropriations for Chemical Agents and Munitions Destruction, Defense at the levels identified in section 4501 of division D of this Act.

Section 1403—Drug Interdiction and Counter-Drug Activities, Defense-Wide

This section would authorize appropriations for Drug Interdiction and Counter-Drug Activities, Defense-wide at the levels identified in section 4501 of division D of this Act.

Section 1404—Defense Inspector General

This section would authorize appropriations for the Office of the Inspector General of the Department of Defense at the levels identified in section 4501 of division D of this Act.

Section 1405—Defense Health Program

This section would authorize appropriations for the Defense Health Program at the levels identified in section 4501 of division D of this Act.

SUBTITLE B—OTHER MATTERS

Section 1411—Acquisition of Strategic and Critical Materials from the National Technology and Industrial Base

This section would prioritize the acquisition of certain materials from the National Technology and Industrial Base.

Section 1412—Authority for Transfer of Funds to Joint Department of Defense-Department of Veterans Affairs Medical Facility Demonstration Fund for Captain James A. Lovell Health Care Center, Illinois

This section would authorize the transfer of funds to the Joint Department of Defense-Department of Veterans Affairs Medical Facility Demonstration Fund.

Section 1413—Authorization of Appropriations for Armed Forces Retirement Home

This section would authorize appropriations for the operation of the Armed Forces Retirement Home.

TITLE XV—CYBERSPACE-RELATED MATTERS

ITEMS OF SPECIAL INTEREST

21st Century IDEA Compliance

The Assistant to the Secretary of Defense for Public Affairs recently appointed the Defense Media Activity (DMA) as the lead agency for consolidating all DoD component public website management into a central DoD Public Web Program. The Committee is supportive of this much-needed website consolidation and modernization effort that will allow DoD to fully comply with the 21st Century Integrated Digital Experience Act “21st Century IDEA” (Public Law 115–336). The committee views a modernized DoD Public Web Program as essential to ensure DoD websites are more secure, accessible, consistent in appearance, user-centered and mobile friendly to all who use them, including active duty and civilian personnel, military families and the broader defense community. The committee directs the Assistant to the Secretary of Defense for Public Affairs, in coordination with the Director of the Defense Media Activity, to brief the committee on the Public Web Program no later than April 1, 2022.

Africa Data Science Center

The committee recognizes and commends the work of the Africa Data Science Center within the U.S. Army Intelligence and Security Command’s 207th Military Intelligence Brigade-Theater. With support from U.S. Army Africa and U.S. Africa Command

(USAFRICOM), this pilot program serves as a model for the innovation needed to meet Department of Defense modernization priorities. With a small staff and limited funds, the team has been able to leverage best practices from across the intelligence community, applying leading-edge data science tradecraft to fulfill operational intelligence requirements. Their work has been invaluable in helping USAFRICOM better understand near-peer adversary activities across Africa. The committee believes the Africa Data Science Center is an exemplar of operationalizing innovative technological solutions in an Area of Responsibility with limited resources aligned against it. In understanding how the lessons of the Africa Data Science Center can be applied to other national security and regional challenges, the committee directs the Chief of Staff of the Army to provide a briefing to the committee no later than May 1st, 2022 on how other regionally-aligned Army elements can incorporate best practices of the Africa Data Science Center to the maximum extent practicable.

Briefing on the Joint Artificial Intelligence Center's Data Efforts

The committee supports the Joint Artificial Intelligence Center's creation of the Department of Defense Artificial Intelligence (AI) Enterprise Infrastructure and Cybersecurity Committee and encourages the Department to invest in the necessary machine learning data infrastructure to support Department-wide artificial intelligence efforts. This effort should incorporate foundational data readiness required for ongoing and future AI algorithm development into all programs of record, as appropriate. The committee directs the Director of the Joint Artificial Intelligence Center to provide a briefing to the House Committee on Armed Services not later than January 15, 2022, on the activities and priorities, including data infrastructure development, of the Department of Defense AI Enterprise Infrastructure and Cybersecurity Committee.

Comptroller General Review of Department of Defense Training to Prepare for Leadership and Operations in a Contested Information Environment

The committee notes the importance of maintaining U.S. dominance in the information environment and ensuring proper training so that leaders can function effectively in a contested information environment.

Accordingly, the committee directs the Comptroller General of the United States to submit a report to the Committees on Armed Services of the Senate and the House of Representatives not later than July 2, 2022, reviewing Department of Defense decision-making policy and training for service members and commanders operating in a contested information environment. The review should assess policy, training and exercises where service members develop and maintain decision-making skills in an information environment where information may be inaccurate, incomplete, or manipulated. The review should also assess the extent to which regulations and tactics, techniques, and procedure allow commanders to apply critical thinking skills and flexible decision making in a contested information environment.

Cyber Institutes Program

The Committee directs the Principal Cyber Advisor to submit a report to the House Committee on Armed Services by May 31, 2022 on the effectiveness of the cyber institutes program under section 1640 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. 2200 note; Public Law 115–232). The report should include information about the number of students within that school’s Reserve Officers’ Training Corps (ROTC) who participate in the institutes’ activities, the occupational specialties of ROTC students having participated in the institutes’ activities, and information related to research by professors and students affiliated with the institutes’ activities.

Department of Defense Data Strategy

The committee commends the Department of Defense for developing the 2020 Department of Defense Data Strategy, understanding that data is an important resource that must be managed and secured in order for it to be used for operational effects. Ensuring the trustworthiness and security of this data should be at the foundation of implementation efforts across the Department. The strategy notes that the Department must protect its own data while at rest, in motion, and in use. It also lays out several approaches to data protection, including attribute-based access control. However, it is unclear to the committee how the Department plans to implement this strategy. The committee directs the Chief Information Officer of the Department of Defense, in coordination with the Director of the Defense Information Systems Agency, to provide a briefing to the House Committee on Armed Services not later than February 1, 2022, on efforts to build cohesive data standards, monitoring for compliance and adherence to common frameworks, and planned efforts over the Future Years Defense Program.

Department of Defense Website and Forms Modernization Program

The 21st Century Integrated Digital Experience Act (Public Law 115–336), enacted in December 2018, required that the Department of Defense make all websites and forms related to serving the public available in a secure, consistent, accessible, fully usable and mobile friendly format by December 2020. To ensure that the Department of Defense continues its path towards compliance, the committee directs the Department of Defense Chief Information Officer to provide a briefing to the House Committee on Armed Services not later than February 15, 2022, on its current trajectory toward form modernization.

Directive Authority for National Security Systems

The committee recognizes the advancement of government-wide cybersecurity through directive authorities, such as those held by the Department of Homeland Security, and binding operational directives for civilian agencies, and those of the Department of Defense, through Joint Functional Headquarters-Department of Defense Information Network (JFHQ-DODIN), for the military and subordinate components. However, while these agencies are able to

direct required actions to the majority of the federal government, there appear to be impediments to a comparable authority over National Security Systems (NSS).

As such, the committee directs the Director of the National Security Agency to provide a report to the House Committee on Armed Services no later than March 2, 2022, on impediments to the effective use of directive authorities by the NSA over National Security Systems. The report shall also include recommendations to maximize the impact directive authority over National Security Systems can have in mitigating risk to the federal government, as well as steps taken to date.

Director of Operational Test & Evaluation Software Academic Technical Expertise

The Fiscal Year 2019 Director of Operational Test and Evaluation's (DOT&E) annual report to Congress argues that a wealth of software and cyber expertise is available in the United States' academic sector, but that the Department of Defense has yet to apply significant resources to harness the capabilities of American universities. Alternatively, the report notes that competing nations have been harnessing United States academic capabilities for decades and recommends that the Department make a concerted effort to employ more of the software and cyber experts in academia in the defense of our Nation. To this end, the committee recommends that the Director of Operational Test and Evaluation support a university-based test and evaluation software and cyber Center of Excellence to modernize assessments of, and improve confidence in, the operational effectiveness, suitability, and survivability of software intensive and cyber physical systems. Additionally, the committee encourages the Director to support commensurate scholarships and internships to grow a workforce pipeline into the software and cyber test and evaluation workforce. Therefore, the committee directs the DOT&E to submit an implementation plan to the congressional defense committees by March 31, 2022 on how the DOT&E will support and implement both a test and evaluation software and cyber Center of Excellence and commensurate scholarships and internships.

Effectiveness Metrics for Information Operations

The committee directs the Comptroller General of the United States to submit a report to the Committees on Armed Services of the Senate and the House of Representatives on the effectiveness and sufficiency of the Department of Defense's assessment capability for defining and measuring the impact of Department information operations. The report will be due not later than 180 days after the Department of Defense designates a Department entity and develops, applies, and refines an assessment capability for defining and measuring the impact of information operations in compliance with section 1749 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283).

Enterprise Network Endpoint Monitoring

The committee commends actions taken to date by the Department of Defense to increase and improve the visibility across the network of its assets to include endpoints. Nevertheless, the committee remains concerned by the inability of the Department, the Chief Information Officer, and Joint Forces Headquarters-Department of Defense Information Networks (JFHQ-DODIN) to compel components under directive authority for cyberspace operations (DACO) authorities to be configured for and provide live data to JFHQ-DODIN. A key aspect of the Department's vulnerabilities lay in its numerous endpoint devices, with each service and component possibly taking unique approaches toward endpoint monitoring. To address these concerns, the committee directs the Department of Defense Chief Information Officer, in coordination with the JFHQ-DODIN, to provide a briefing to the House Committee on Armed Services not later than April 1, 2022, on the efforts of the Department to increase and ensure compliance at the component level of network endpoint monitoring, and plans to update network patching standards to reflect current industry approaches and practices. Additionally, the briefing should address barriers which prevent or hinder the ability of components under JFHQ-DODIN's authority to provide live data.

Enterprise Telecommunications Security

The committee asserts that the military forces require a robust telecommunications infrastructure with built-in resilience and persistent risk mitigations measures. While the Department must develop enterprise-wide efforts, the regional combatant commands must also consider regionally specific considerations. These often include analyses of military-managed and commercially managed infrastructures. To understand these region-specific considerations devised by combatant commands, the committee directs the Chief Information Officer of the Department of Defense, in coordination with the combatant commands, to brief the committee no later than May 31, 2022 on the evolution of the Department's secure communications infrastructure. The committee further directs that the briefing should place greater emphasis on European Command and Indo-Pacific Command, in line with the National Defense Strategy. The briefing should specifically address how integration with U.S. hosted commercial capabilities could improve mission effectiveness, including considerations of reduced latency and increased fidelity through emerging technologies.

Investing in Robust Data Infrastructure for Artificial Intelligence

The committee recognizes that the Department of Defense is deploying artificial intelligence (AI) and machine learning to increase warfighter capability, decrease operational costs, and ensure civilian safety. The Department should incorporate the foundational data readiness required for ongoing and future AI algorithm development into all programs and systems of records. The Department should endeavor to ensure these program and system data holdings are structured with consistent and accurate annotations that have known and measurable recall and precision to ensure production-level performance and efficient AI development. Furthermore, the

committee is pleased by Joint Artificial Intelligence Center creation of the Department of Defense AI Enterprise Infrastructure and Cybersecurity Subcommittee.

Strategy and Posture Review for Information Operations

The committee notes that Information Operations (IO) play a critical role in military advantage. Our national security depends on our ability to influence and disrupt adversary information flow and decision-making, as well as defend and bolster our own. IO can include a range of capabilities, from electromagnetic warfare and cyber operations to operations security and information assurance. Near-peer competitors are currently using IO to achieve objectives below the threshold of armed conflict. Russia has repeatedly leveraged cyberattacks and disinformation campaigns to undermine U.S. institutions and allies and China has invested heavily in electronic warfare capabilities to counter our own.

These tactics are particularly effective in “gray zone” warfare, where adversaries operate below the level of armed conflict. Department of Defense leadership has acknowledged China and Russia’s extremely effective use of gray zone warfare and the risk to the Department of Defense if it doesn’t learn to operate in that space effectively. IO will play a critical role in making the Department more competitive in the “gray zone.”

Currently, the Department defines IO inconsistently across components of the organization and does not have clear policy for it. Section 1631(g) of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92) directed the Secretary of Defense to submit a Strategy and Posture Review to the House Armed Services Committee and the Senate Armed Services Committee no later than 270 days after the Act was enacted. The committee notes that this report has not yet been submitted.

Accordingly, the committee directs the Secretary of Defense, acting through the Principal Information Operations Advisor under Section 397 of Title 10, United States Code, to submit this report to the House Armed Services Committee as soon as possible. This report should make sure to complete a detailed evaluation of any organizational changes that may be necessary within the Office of the Secretary of Defense including changes to the role of the Principal Information Operations Advisor in IO governance and leadership as required in Section 1631(g)(3)(B) of the National Defense Authorization Act for Fiscal Year 2020.

Additionally, the committee directs the Principal Information Operations Advisor to brief the House Armed Services Committee no later than February 1, 2022, on the progress of the Principal Information Operations Advisor’s office standup and ongoing IO efforts, as well as the Department of Defense’s broader efforts in IO.

Support for Zero Trust Within the Department of Defense

The committee supports the Department of Defense’s efforts undertaken in the past year to progress toward adoption of a zero trust security model to protect its systems and data, including:

(1) the Department’s collaboration with industry stakeholders to research, develop, pilot and test a zero trust architecture, under which network operators assume that an environment is breached

and require that every user, device, and network component request for access to data be verified; and

(2) the issuance of guidance by the National Security Agency on Embracing a Zero Trust Security Model which describes zero trust guiding principles and design concepts in greater detail.

The committee encourages the Department to continue its adoption of a zero trust security model in accordance with the above-referenced National Security Agency guidance, which will ensure that the Department will be better positioned to more rapidly detect and respond to malicious activity and limit the consequences of a successful breach.

LEGISLATIVE PROVISIONS

SUBTITLE A—CYBER THREATS

Section 1501—Cyber Threat Information Collaboration Environment

This section would direct the Secretary of Homeland Security, in coordination with the Secretary of Defense and the Director of National Intelligence, acting through the Director of the National Security Agency, to develop an information collaboration environment that enables entities to identify, mitigate, and prevent malicious cyber activity. The collaboration environment would provide limited access to appropriate operationally relevant data about cybersecurity risks and cybersecurity threats, including malware forensics and data from network sensor programs, on a platform that enables query and analysis.

Section 1502—Enterprise-Wide Procurement of Commercial Cyber Threat Information Products

This section would direct Joint Forces Headquarters-Department of Defense Information Networks to establish a program management office for the purposes of procuring and managing the Department of Defense's enterprise-wide licensing and use of commercial threat information products.

SUBTITLE B—CYBER SYSTEMS AND OPERATIONS

Section 1511—Legacy Information Technologies and Systems Accountability

This section would mandate that each military service initiate an effort to account for the legacy information technology (IT) systems, applications, and software. Efforts to discover and inventory legacy IT systems, applications, and software ensure that redundant and unnecessary investments can be better aligned to departmental priorities.

Section 1512—Update Relating to Responsibilities of Chief Information Officer

This section would update the responsibilities of the Chief Information Officer to reflect the new organization at the National Security Agency responsible for cybersecurity.

Section 1513—Protective Domain Name System within the Department of Defense

This section would require the Secretary of Defense, within 120 days after the date of the enactment of this Act, to ensure that each component of the Department of Defense uses a Protective Domain Name System instantiation offered by the Department.

SUBTITLE C—CYBER WEAPONS

Section 1521—Notification Requirements regarding Cyber Weapons

This section would establish a limitation of funds on the Office of the Secretary of Defense, to remain until the congressional defense committees are presented with a report from the Secretary of Defense establishing a definition for a “cyber capability” which includes software, hardware, toolkits and other information technologies developed using funds from the Cyberspace Activities Budget of the Department of Defense that may be used in operations authorized under title 10, United States Code.

Section 1522—Cybersecurity of Weapon Systems

This section would modify section 1640 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91) to add two mission elements to the portfolio of the Strategic Cybersecurity Program. Additionally, this section would add a requirement for a biannual report to the congressional defense committees on the work of the Strategic Cybersecurity Program.

SUBTITLE D—OTHER CYBER MATTERS

Section 1531—Feasibility Study regarding Establishment within the Department of Defense a Designated Central Program Office, Headed by a Senior Department Official, Responsible for Overseeing All Academic Engagement Programs Focusing on Creating Cyber Talent across the Department

This section would mandate a feasibility study to be conducted by the Secretary of Defense of a designated central program office, headed by a senior Department of Defense official, responsible for overseeing all academic engagement programs focusing on creating cyber talent across the Department. This feasibility study would be required to be submitted to the congressional defense committees not later than 270 days after the date of the enactment of this Act.

Section 1532—Prohibition on Chief Information Officer of the Department of Defense Serving as Principal Cyber Advisor of the Department

This section would prohibit the Department of Defense Chief Information Officer from serving concurrently as the Principal Cyber Advisor.

TITLE XVI—SPACE ACTIVITIES, STRATEGIC PROGRAMS,
AND INTELLIGENCE MATTERS

ITEMS OF SPECIAL INTEREST

SPACE ACTIVITIES

Alternate Global Positioning System Constellation

The committee remains concerned about potential threats to the Global Positioning System (GPS) program and position, navigation, and timing (PNT) resiliency. The committee supports the current GPS III program, but believes there should be redundant PNT capabilities to mitigate threats posed to our current GPS architecture. The committee understands that in 2019, the U.S. Air Force designated the Navigation Technology Satellite-3 (NTS-3) program as one of three Air Force “Vanguard” programs that integrate science and technology advances to demonstrate transformational military technologies and operational concepts. Additionally, the committee understands that NTS-3 is the first satellite navigation (SATNAV) space experiment in 40 years that is intended to test new hardware including an electronically steerable, high-power phased array antenna coupled with a digital signal generator that can be reprogrammed on orbit, enabling operators to quickly deploy newly developed, advanced signals as they encounter electronic threats.

Furthermore, NTS-3 will be working on PNT enhancements such as experimental antennas, flexible and secure signals, increased automation, and use of commercial assets. NTS-3 technology is intended to complement and add resiliency to GPS satellites that fly in Medium Earth Orbit (MEO). The committee understands NTS-3 technology enhances space-based SATNAV systems by investing in capabilities to mitigate and increase resiliency from harmful interference. The committee believes the Air Force must prioritize GPS resiliency by ensuring the Department of Defense has an alternate PNT capability available should GPS be denied.

Therefore, the committee directs the Secretary of the Air Force, in coordination with the Director of the Air Force Research Lab and the Chief of Space Operations, to provide a briefing to the House Committee on Armed Services not later than December 31, 2021, on a detailed funding, development, procurement, and launch plan to deploy an alternate PNT constellation that provides the following capabilities:

- (1) rapid deployment of PNT satellites to address emerging electronic warfare threats to GPS;
- (2) regional military signal protection to resist jamming and on-orbit reprogrammability to counter spoofing; and
- (3) active Electronically Steered Phased Array antenna that can be configured to support simultaneous area of operations broadcasting independent and unique signal configurations.

Arctic Satellite Ground Station

The committee notes a gap in US satellite ground station coverage in the arctic region, and the fact that extremely high latitude ground stations are critical as they provide frequent daily contact with polar orbiting satellites. The committee further notes buildup

of strategic competitors military assets in the non-US Arctic and increasing frequency and scope of military exercises in the High North indicate that it could become a location for a future incident. To address these concerns and gaps, the committee directs the Chief of Space Operations to submit a report no later than February 28, 2022 to the House Armed Services Committee on the feasibility of deploying an arctic satellite ground station.

Commercial Cloud for Military Space Programs

The Department of Defense has stated that it “is embarking on the most significant transformation in the history of the U.S. national security space program” according to the 2020 Defense Space Strategy. This transformation will require the Department of Defense, and in particular the U.S. Space Force, to rapidly embrace modern and advanced commercial technologies to address the challenges in space and ensure U.S. leadership in this vital domain. The committee commends the Chief of Space Operations’ goal to create a “digital service from the ground up.”

When creating a digital service, the committee recognizes the importance of the collection, transport, and processing of data for space development and operations. The space community has been challenged by the processing of massive amounts of data from space systems, fusing the disparate information across multiple security levels, and providing the relevant information to the necessary users at speed and scale. The committee fully supports commercial cloud adoption for military space programs and believes that cloud-based technologies are essential to these challenges and fundamentally modernize the infrastructure of space mission systems.

Therefore, the committee directs the U.S. Space Force Chief Technology and Innovation Officer, in coordination with the Commander of the Space and Missile Systems Center, to provide a briefing to the House Committee on Armed Services by December 31, 2021, on how the U.S. Space Force will work with the Department of Defense Chief Information Officer, as well as the Chief Information Officer of the Department of the Air Force, to leverage modern cloud computing technologies for space programs and systems. The plan should include, at a minimum:

- (1) an inventory of current space programs with a description of how the activities do, or do not, leverage cloud-based technologies;
- (2) opportunities to increase modern commercial cloud technology adoption, including full and open competitions for industry providers;
- (3) challenges or impediments related to adoption of such technology; and
- (4) timelines and resources required to execute the plan for cloud technology adoption for space programs.

Commercial Imagery Capabilities

The committee recognizes U.S. commercial remote sensing capabilities serve a critical national security function for the Department of Defense, intelligence community, and combatant commands. Timely, accurate geospatial intelligence (GEOINT) and satellite imagery is integral to the safety and success of our nation’s

warfighters. The committee supports programs and exercises that leverage commercial GEOINT satellites, automatic target recognition systems using the latest artificial intelligence capabilities, and direct downlinks to remote ground terminals to help military leaders rapidly execute long-range precision fires.

The committee also recognizes the requirement for U.S. Special Operations Command (USSOCOM) to maintain situational awareness in operational environments and the role intelligence, surveillance, and reconnaissance plays in ensuring a complete battlefield picture. The committee notes that multiple commercial Earth observation companies provide global imagery that may be able to fill gaps and provide value to USSOCOM and regional combatant commands.

Therefore, the committee directs the Secretary of Defense, in coordination with the Directors of the National Reconnaissance Office and National Geospatial-Intelligence Agency as required, to submit a report to the House Committee on Armed Services not later than December 31, 2021, identifying each commercial vendor that provides global imagery to support Department of Defense combatant commands, any gaps that exist in GEOINT intelligence, surveillance, and reconnaissance capacity the Department of Defense combatant commands most in need of taskless global daily imagery to support mission requirements, and an assessment of how commercial capabilities can be integrated into the current and planned sensor-to-shooter programs across the services.

Commercial Radio Frequency Capabilities

The committee recognizes the benefits to national security that commercial space-based radio frequency (RF) capabilities can provide in satisfying national security user needs, enabling greater international cooperation, increasing architectural resilience and diversity, and extending U.S. technological advantage in space. The committee believes more concrete steps must be taken to deliver and integrate U.S. commercial space-based RF capabilities. The committee expects the Secretary of Defense to provide direction on leveraging U.S. commercial space-based RF capabilities, explicitly data, products, and services, to appropriate components through planning and programming guidance, and to include funding for such capabilities in the Department's Future Years Defense Program, in accordance with section 1612 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283). Therefore, the committee directs the Secretary of Defense, in consultation with the Director of National Intelligence, to submit a report to the congressional defense and intelligence committees by January 31, 2022, that describes how the Department of Defense, in collaboration with the intelligence community, is implementing such policy in its planning, programming, and budgeting guidance.

Commercial Satellite Weather

The committee notes that the Air Force Weather Services (AFWS) supports worldwide operations across the services, special operation forces, and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed lo-

cations. These funds integrate government and commercial environmental data with AFWS for processing, storing, exploiting, and disseminating weather data for analysis, forecasting, and mission integration at the strategic, operational, and tactical levels. Global Positioning System (GPS) Radio Occultation on-orbit data sources are a priority for the Air Force, viewed as the most promising commercial satellite weather data available, and will provide immediate forecast improvement and help support new applications within the Department of Defense and space weather enterprise.

The committee supports the Commercial Weather Data Pilot program's transition from a pilot to procurement of operational data, ultimately adding higher resolution, lower latency, and further augmenting the measurements made by large government weather satellites. In moving forward with this program, the committee strongly encourages the Air Force to allow for maximum competition from commercial weather data entrants to partner with and compete for Air Force data contracts.

Commercial Space Situational Awareness

The committee believes that, in an increasingly congested and threatened environment, the space situational awareness (SSA) and space domain awareness (SDA) missions are essential to U.S. Government, allied, and commercial space operations. The committee views the use of commercial data for this mission as an important part of an integrated approach to achieving a full, comprehensive common operational picture of the space environment from traffic management and threat awareness in all orbits. However, the committee notes the lack of clear Department of Defense plans for incorporating commercial space situational awareness, including radio frequency (RF) sensing, into the wider commercial SSA architecture to support Joint All Domain Command and Control (JADC2) and a broad range of intelligence operations. Therefore, the committee directs the Chief of Space Operations to provide a briefing to the House Committee on Armed Services by March 1, 2022, on a comprehensive acquisition strategy that incorporates commercial RF sensing capabilities into a resilient and integrated SSA/SDA architecture to augment and inform multi-orbit, all-weather, and day/night collection capability for the Department.

Further, the committee directs the Comptroller General of the United States to submit a report to the congressional defense committees by February 1, 2022, on the following:

- (1) an assessment of current U.S. space situational awareness and space domain awareness capabilities that includes an analysis of the number and size of objects tracked in low-Earth orbit, geosynchronous-Earth orbit, and cislunar orbit;

- (2) a review of planned systems development and procurement of commercial space situational awareness and space domain awareness across the Future Years Defense Program, including cost and schedule estimates;

- (3) an overview of the U.S. Space Force Unified Data Library that includes current volume, access to new observational data, U.S. Space Command utilization; and

- (4) recommendations to improve the use of commercial space situational awareness and space domain awareness data services.

Efforts to Reduce Space Debris

The committee recognizes the importance of Space Development Agency's efforts to deliver space-based capability to the joint force by harnessing commercial development to achieve a proliferated and resilient architecture. The committee also recognizes that the proliferation of larger constellations of smaller satellites in low-earth orbit is increasing the need for better space surveillance technology and investment in technologies that reduce future space debris. According to U.S. Space Command, the organization is tracking almost 35,000 objects in low earth orbit, a 22 increase in two years and a result of new mega constellations and debris generating events. The committee is interested in better understanding defense investments in technologies that may reduce future space debris, including nontoxic or non-reactive alternatives to Hall Thrusters. Therefore, the committee directs the Secretary of Defense to provide a report to the House Committee on Armed Services, not later than June 1, 2022, on the Department's efforts to reduce future space debris. The report shall include at a minimum the following:

- (1) the degree to which the Department of Defense has assessed the impact of space debris on the National Defense Space Architecture;
- (2) an assessment of the risk posed by the proliferation of commercial or military satellites in low-earth orbit;
- (3) the extent to which the Department of Defense is engaging allies and partners on efforts to develop technologies that reduce space debris;
- (4) the identification of specific defense research and development efforts to minimize future debris-creating events, including alternatives to traditional propellant propulsion systems.

Hybrid Space Architecture

The committee recognizes U.S. Government and commercial space capabilities are vital to our national and economic security. These capabilities are increasingly threatened militarily by potential adversaries, and commercially by foreign government-backed competition. To meet these challenges and retain U.S. primacy in space, the U.S. Government should take advantage of the revolution in the commercial capabilities by integrating them with traditional government systems as part of a "Hybrid Space Architecture" approach.

The committee is pleased that most national security space organizations have publicly embraced the Hybrid Space Architecture concept, notably the Space Force, National Reconnaissance Office, National Geospatial-Intelligence Agency, and the Space Development Agency. However, the committee further notes that funding for the Hybrid Space Architecture has historically lagged in budget submissions. Accordingly, the committee believes that funds authorized in this bill, to the extent appropriated, should be executed in a manner consistent with promotion of a future Hybrid Space Architecture.

Launch of Experimental Spaceflight Activities

The committee notes increased activities by commercial space launch providers with regards to experimental spaceflight capabilities that have potential current and future national security applications. Therefore, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services not later than February 1, 2022, on the execution of experimental spaceflight activities for next-generation launch vehicle systems and technologies that have national security space launch applications, particularly in relation to maintaining U.S. space technology leadership over China. The report shall address:

(1) permissions and authorities required to support expedited approval for experimental spaceflight activities, including Department of Defense procedures to approve experimental spaceflight activities determined to be in the national security interests of the United States;

(2) how safety to the public will be ensured during experimental spaceflight activities authorized by the Department of Defense, as well as detailed requirements for private insurance coverage for potential third-party losses due to experimental spaceflight activities; and

(3) how to expedite timelines and reduce costs to providers for experimental spaceflight activities that support national security space launch and foster rapid innovation and development to address future requirements.

Long-term Plan for Preserving American Space Dominance

The committee reaffirms its recognition of the primacy of space in importance to our economy, national security, and way of life. The committee also recognizes the extraordinary efforts of our space professionals throughout the Department of Defense and intelligence community to reform the national security space enterprise. Furthermore, the committee notes with increasing alarm the rate at which our near-peer rivals are rapidly enhancing their own space capabilities with a view to challenging American space dominance and nullifying the capabilities and services of our space assets. While the committee appreciates the ongoing hard work of our nation's space professionals at reforming our national security enterprise, there is interest in continuing to accelerate the pace at which new capabilities and technologies which will solidify American space dominance are developed and procured. There is also significant interest in ensuring the U.S. maintain freedom of movement and action on the Moon and in lunar and cislunar space. Therefore, the committee directs the Chief of Space Operations to provide a report to the congressional defense committees on the most likely and most dangerous threats to American space dominance in the short term (within the next three years) and in the long term (within the next ten years), options to maintain American space dominance for the next ten years, and any capabilities needed to support that plan by February 25, 2022. The Chief of Space Operations may consult with any entities they choose in the development of this report. The committee encourages the report to include an executive summary at no higher a classification level than SECRET if at all practicable.

Positioning, Navigation, and Timing Infrastructure Resilience

The committee is aware of significant vulnerabilities to the Global Positioning System (GPS) enterprise its associated position, navigation, and timing (PNT) infrastructure. As the threats to this critical infrastructure continue to grow, the committee affirms the urgency of ensuring the resiliency and survivability of this vital asset and urges the Department of Defense to fully leverage technologies to harden and reinforce PNT infrastructure. Therefore, the committee directs the Under Secretary of Defense for Research & Engineering, in consultation with the Secretaries of the Military Departments, to provide a briefing to the House Committee on Armed Services no later than March 1, 2022 addressing the Department's strategy to address current and projected vulnerabilities in GPS/PNT infrastructure and its plan to increase resiliency. The briefing should include how the Department plans to employ technologies to provide highly secure and precision time coherency for all federally funded GPS satellites in addition to its plans to integrate innovative technologies, such as small spacecraft of low size, weight, and power (SWaP), which can operate independently from GPS and can be hosted on air, space, and surface platforms.

Report Language for Satellite Cybersecurity—Space Development Agency

To address cyber vulnerabilities to space-based systems utilizing small satellites for communications, intelligence, weather and more, the committee supports the Space Development Agency's Defense in Depth as Mission Assurance for Spacecraft (DiDaMAS) program to explore concepts for cyber protection. DiDaMAS will leverage the Air Force's Firestarter program by incorporating its capabilities in a defense-in-depth layered approach with an emphasis on mission assurance. DiDaMAS will also incorporate Zero Trust Architecture and on-board Machine Learning algorithms for monitoring and intelligent response. To further negate cyber-attacks, Mission Essential Functions (MEFs) will be identified and prioritized. Accordingly the Committee directs the Director of Space Development Agency no later than March 1, 2022, provide a report to the House Armed Services Committee on the Space Development Agency's Depth as Mission Assurance for Spacecraft (DiDaMAS) program to explore concepts for cyber protection.

SATCOM Transition Path for Future Capabilities

The Committee notes the Space Force plans to transition from a legacy Advanced Extremely High Frequency (AEHF) satellite constellation to a more resilient Evolved Strategic SATCOM (ESS) satellite constellation which will sustain and enhance the Nation's critical strategic SATCOM services, modernize and enhance the protected waveform payload, and provide increased space vehicle and constellation resiliency to address rapidly increasing threats to space capabilities. The Committee also recognizes the Space Force ESS Space Segment prototype phase contracts are underway to enable a follow-on ESS production phase, which will, per the current plan, deploy initial ESS satellites by end fiscal year 2030 to achieve initial operating capability by end fiscal year 2032.

This Committee is concerned that the Nation's Strategic SATCOM capability will have growing vulnerabilities during the transition period as currently planned, and wants to ensure that this critical capability is sustained and evolved as responsively as possible to the rapidly emerging and evolving threat environment. The Committee further notes that industry concepts have emerged to optimize the transition by leveraging proven commercial on-orbit servicing satellites coupled with mature communications payload equipment to assure legacy AEHF sustainment while providing an accelerated transition to a more resilient ESS capability. Therefore, the committee directs the Secretary of the Air Force to provide a report that defines and validates technical concepts, cost, schedule, risks, policy, and benefits of on-orbit servicing of current strategic communications satellites and evaluate the merits of the concept in providing a transition path for future capabilities. The report shall be submitted to the House Armed Services Committee not later than March 1, 2022, and may include a classified annex, as necessary.

Space Warfare Analysis Center

The committee notes the requested legislative proposal by the Department of Defense to establish a new field operating activity for the Space Warfare Analysis Center (SWAC), which would report to the Chief of Space Operations and be responsible for setting requirements and overall satellite architecture for future programs. The committee further notes that this activity has to date fallen under the joint-Department of Defense and Director for National Intelligence Space Security and Defense Program (SSDP), and there has not been clear communication with the committee on how these two organizations will interact, and who will ultimately be responsible for those activities which cross over both title 10 and title 50, United States Code, equities. The committee is supportive of efforts undertaken to re-look at the current missile warning, track and defense design, and ensure resilience and future threats are taken into account when designing the architecture, and is encouraged that other mission areas, such as communications, will be assessed next.

While the committee is generally supportive of the intent in establishing the SWAC, alignment to the Chief of Space Operations should be reassessed, and alignment to the Assistant Secretary of the Air Force for Space Acquisition and Integration should be considered to ensure that both requirements and acquisition are fully integrated at the decision-making level to avoid previous failures of space acquisition where these functions have been disaggregated. Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services not later than January 31, 2022, on future alignment of the SWAC and funding and personnel required to stand-up and sustain the center. The Secretary should further consider a co-reporting structure to the Chief of Space Operations to ensure a direct line to the operational community with regards to architecture studies.

MISSILE DEFENSE PROGRAMS

Layered Defense for the Homeland

The committee notes advances in long-range missile capabilities by rogue states, particularly by making significant developments towards more sophisticated missile and rocket technologies, from use of solid fuels to developing new submarine-launched ballistic missiles. The committee continues to encourage the Department of Defense to analyze and assess these variable threats posed by these missile and rocket capabilities, as well as provide an analysis of gaps in homeland missile defense, with focus on missile defense gaps along the east coast of the United States. As such, the committee looks forward to receiving from the Department a report on layered homeland missile defense system as directed by section 1648 of H.R. 6395, the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, as passed by the House.

Further, the committee notes the successful test of the Aegis Weapon System (AWS) and Standard Missile-3 (SM-3) Block IIA against an intercontinental-range ballistic missile (ICBM) in November 2020, and funding requested by the Missile Defense Agency to continue development of a layered defense architecture. Therefore, the committee directs the Director of the Missile Defense Agency, in coordination with the Under Secretary of Defense for Policy, Chief of Naval Operations, and Commander of U.S. Northern Command, to submit a report to the House Committee on Armed Services by December 31, 2021, on development and deployment plans for using the AWS with SM-3 Block IIA interceptors as part of a layered missile defense system. The report shall include:

(1) requirements for deploying a layered defense using the AWS and SM-3 Block IIA for defense of the continental United States (CONUS);

(2) analysis of future AWS and SM-3 Block IIA locations that would support improved defensive coverage of CONUS, and how the preferred location of Fort Drum, NY, for a CONUS interceptor site using Ground-Based Interceptors could be leveraged for a future layered defense system;

(3) analysis of how deploying Arleigh Burke-class guided-missile destroyers for the homeland missile defense mission would impact Navy readiness and global force management;

(4) should land-based AWS systems be deployed for layered homeland defense, the applicable manning strategy; and

(5) any applicable lessons learned from analysis conducted for the Guam Defense System that could be applied to a layered homeland defense architecture, particularly for locations previously evaluated and preferred for a CONUS interceptor site.

Leveraging AN/TPY-2 Radar Foreign Military Sales for U.S.
Programs

The committee is aware of a limited opportunity for the United States to leverage the Army/Navy Transportable Radar Surveillance (AN/TPY-2) production line restart driven by recent Terminal High Altitude Area Defense (THAAD) foreign military sales

(FMS) case. In fiscal year 2021, Congress supported the production of a 13th AN/TPY-2 radar, which will be the first U.S. production of the modernized Gallium Nitride (GaN) configuration of the system, providing greater range and discrimination.

The Missile Defense Agency (MDA) plans to keep the current system antenna viable through 2040, initially with a removal and replacement (R&R) strategy of Transmit Receive Integrated Microwave Modules (TRIMMs) and beginning in 2026, the full radar replacement of TRIMMs with GaN. The R&R sustainment strategy would not achieve the capability improvements associated with a full GaN refresh of TRIMMs. Therefore, the committee directs the Director of the Missile Defense Agency to provide a briefing to the House Committee on Armed Services by February 1, 2022, on:

- (1) current and planned production rates of TRIMMs through 2025;
- (2) opportunities to increase production rates above the current plan; and
- (3) recommendations to accelerate procurement delivery of TRIMMs to support a full refresh of existing radars.

Lower Tier Air and Missile Defense Sensor (LTAMDS) Program Protection

The Committee is concerned that inadequate funding was requested by the Secretary of the Army for Lower Tier Air and Missile Defense Sensor (LTAMDS) Program Protection to be included as part of Pre-Planned Product Improvements. LTAMDS will replace legacy Patriot radars and will be the foundation of the Army's air and missile defense architecture for the next three decades. Patriot battalions are some of the most deployed units in the Department and are often located in austere locations. Program Protection ensures that critical technologies like this advanced radar are fully protected in an expeditionary environment. The Committee understands that this effort must be initiated no later than Fiscal Year 2022 to align with the Army fielding plan.

Therefore, the Committee directs the Secretary of the Army to provide a report to the House Armed Services Committee no later than January 31, 2022 on the overall Program Protection plan for LTAMDS through fielding and what additional funding is required throughout the Future Years Defense Program to complete the program and support fielding to US batteries, including additional Program Protection requirements that would be needed for potential future foreign military sale of LTAMDS.

Radar Upgrades for Hypersonic Weapons Identification

The committee is concerned about the inability of current radar systems to detect, track, engage, and defeat emerging threats from hypersonic weapons. As identified by the National Defense Strategy, the Department of Defense has an immediate need to reinforce efforts to counter these weapons. The committee encourages the Air Force and the Missile Defense Agency to assess current hypersonic missile defense efforts and to evaluate whether the agencies are sufficiently taking into account innovative and cost-effective solutions available commercially.

The committee directs the Secretary of the United States Air Force and the Director of the Missile Defense Agency, in consultation with the Commander of United States Northern Command, to brief the House Armed Services Committee, not later than November 30, 2021, on the status of Department-wide efforts to rapidly develop the ability to detect low-flying hypersonic weapons via radar. In particular, the briefing shall address—

- (1) An evaluation of the Air Force's current ability to detect hypersonic weapons;
- (2) Plans to ensure comprehensive assessment of commercially available technology for radar technology improvements;
- (3) A description of any investments in planned upgrades to existing radar systems in support of hypersonic detection;
- (4) A description of any investments in standalone gap filler radars in support of hypersonic detection;
- (5) A cost comparison of those investments versus what is available commercially off-the-shelf; and
- (6) An estimate of future budget requirements in FY23 and beyond to complete necessary upgrades and gap filler deployments.

NUCLEAR FORCES

Cybersecurity Requirements in the Nuclear Modernization Life Cycle

The committee recognizes that the Department of Defense has taken actions recently to make high-tech weapon systems more secure and less vulnerable to cyberattacks. However, the committee is concerned about cybersecurity vulnerabilities and digital security in the nuclear modernization acquisition process. The committee believes that digital systems must meet established security and reliability thresholds before being integrated into the nuclear enterprise. As noted in a March 2021 Government Accountability Office report (GAO-21-179), the Department should issue additional guidance to better communicate requirements to contractors. In addition, the report noted that Department of Defense Chief Information Officer officials support development of another overlay for nuclear command, control, and communications systems.

Therefore, the committee directs the Under Secretary of Defense for Research and Engineering, in coordination with the Under Secretary of Defense for Acquisition and Sustainment, to submit a report to the House Committee on Armed Services not later than December 31, 2021, on cybersecurity requirements in the nuclear modernization acquisition life cycle. The report shall include at a minimum the following:

- (1) current digital security standards for the nuclear modernization process;
- (2) the degree to which the Department has considered requiring additional digital security and reliability metrics during the acquisitions process; and
- (3) an assessment of requiring third-party, independent tests to confirm that security and reliability requirements are met before a system becomes operational.

Report on Nuclear Command, Control, and Communications Enterprise Modernization

The committee notes that the age, complexity, and dispersed nature of the legacy nuclear command, control, and communications (NC3) enterprise requires sustained and coordinated investments. Adding to this complex problem are upgraded and modernized systems coming online replacing legacy systems. The committee further notes that the Department of Defense cannot afford delays or unaligned acquisitions, given the importance of this mission.

Therefore, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services not later than May 1, 2022, on the Department's modernization strategy with respect to NC3. The report shall include at a minimum the following:

- (1) a definition of the future NC3 enterprise;
- (2) a description of critical NC3 capability gaps;
- (3) projected NC3 operational requirements through 2026;
- (4) a proposed acquisition strategy;
- (5) consideration of all available software development authorities; and
- (6) associated timelines and cost estimates for critical elements of the NC3 enterprise through 2026.

INTELLIGENCE MATTERS

Intelligence Collection Prioritization on Advanced Technologies of Adversaries

The committee recognizes that strategic competitors and adversaries of the United States are innovating rapidly to develop and exploit technology-enabled tools that may harm the United States and allies of the United States. The committee is concerned that the Defense Intelligence Enterprise has not adequately prioritized collection of these emerging scientific and technical developments. The committee believes the Defense Intelligence Enterprise must prioritize collection of emerging technologies of strategic competitors and adversaries of the United States to better understand those capabilities and intentions.

Therefore, the committee directs the Under Secretary of Defense for Intelligence and Security to provide a briefing to the House Committee on Armed Services not later than December 31, 2021, on steps taken within the Defense Intelligence Enterprise to prioritize collection of emerging technologies being pursued by strategic competitors and adversaries of the United States, including developments in biotechnology, artificial intelligence and machine learning, lethal autonomous weapons, hypersonic weapons, and directed energy weapons.

Intelligence Sharing Frameworks

The committee recognizes the special intelligence sharing relationship that the United States has maintained with Australia, New Zealand, Canada, and the United Kingdom (the Five Eyes) since World War II. The committee also recognizes that this community of trust did not develop overnight but that over decades these countries have developed unique ways to gather and share

intelligence, and thereby strengthen the relationship. The committee acknowledges that the threat landscape has vastly changed since the inception of the Five Eyes arrangement, with primary threats now emanating from China and Russia. The committee believes that, in confronting great power competition, the Five Eye countries must work closer together, as well as expand the circle of trust to other like-minded democracies.

The committee directs the Director of National Intelligence, in coordination with the Secretary of Defense, to provide a report to the House Committee on Armed Services, the Senate Committee on Armed Services, and the congressional intelligence committees, not later than May 20, 2022, on current intelligence and resource sharing agreements between the United States and the countries of Australia, Canada, New Zealand, and the United Kingdom; as well as opportunities to expand intelligence sharing with South Korea, Japan, India, and Germany. The review shall include:

(1) the current state of the Five Eyes sharing agreement, including any potential shortcomings of the agreement, and proposed changes to implement efficiencies and enhance security;

(2) the current resource sharing efforts among the Five Eyes, to include military and intelligence efforts, and proposed future resource sharing opportunities; and

(3) the benefits of expanding the Five Eyes arrangement to include South Korea, Japan, India, and Germany, including the nature of insights that each of these countries may be in a position to contribute, any technology limitations that prevent closer sharing and actions needed to remediate those technology limitations, identification of the risks associated with expanding intelligence sharing arrangements, and suggestions on how to safely incorporate each country into a closer sharing framework.

Prophet Enhanced Signals Processing Kits

The budget request for fiscal year 2022 contained \$39.0 million in PE 9912BZ9750 for Prophet Enhanced Modifications. This request supports Prophet Enhanced Signals Processing (ESP) Kit modifications to retrofit, test, train, and support previously fielded Prophet ESP systems.

The committee recognizes that the period of performance for the Prophet ESP Kits concludes in fiscal year 2022. The committee recognizes that the requested fiscal year 2022 authorization will support a hybrid sustainment approach and will serve as a bridge to the Terrestrial Layer System, which is the Army's long-term integrated electronic warfare and signals intelligence program. The committee therefore supports the President's request.

Report on Challenges to U.S. Security in Space

The committee notes that in February 2019 the Defense Intelligence Agency published a report titled "Challenges to Security in Space" that examined the space and counterspace programs that could challenge U.S. or partner interests in the space domain. Due to the rapidly changing domain of space, the committee directs the Director of the Defense Intelligence Agency to submit to the House Armed Services Committee, no later than October 1, 2021, an unclassified update to the 2019 space security report.

Report on China's People's Liberation Army Strategic Support Force

The committee recognizes that the People's Liberation Army has undertaken dramatic reforms over the past several years through the establishment of the Strategic Support Force (SSF). By centralizing psychological warfare capabilities with electronic, space, and cyber capabilities, the SSF seeks to build synergies between otherwise disparate capabilities to optimize strategic information operations.

Given the imperative to prevail against our competitors in the information domain, the committee recognizes the imperative to more fully understand the SSF. The Committee urges the Defense Intelligence Agency to prioritize collection and analysis of the PLA's SSF.

Therefore, the committee directs the Director of the Defense Intelligence Agency to provide the House Committee on Armed Services by February 1, 2022, a classified report and briefing on the SSF. The report shall include an analysis of SSF doctrine and capabilities, information operations targeted at other countries in the Asia-Pacific region, SSF exercises or engagements with other countries, and multilateral efforts to share intelligence about PLA information operations targeting U.S. allies and partners.

Report on Intelligence Collection Capabilities and Activities of U.S. Forces Korea

The committee directs the Commander of U.S. Indo-Pacific Command, in consultation with the Commander of U.S. Forces Korea and the Commander of U.S. Special Operations Command, to submit a report to the House Committee on Armed Services not later than February 25, 2022, on intelligence collection capabilities and activities in the U.S. Forces Korea area of operations, including with respect to spaceborne, airborne, ground, maritime, and cyber intelligence, surveillance, and reconnaissance capabilities. The report shall be unclassified but may contain a classified annex. At a minimum, the report shall include:

- (1) validated intelligence requirements, by specific intelligence capability type, and how each intelligence capability type supports such requirements;
- (2) the fulfillment rate for each validated intelligence requirement, by specific intelligence capability type;
- (3) a summary of critical gaps and deficiencies, by specific intelligence capability type;
- (4) additional impediments to efforts to collect, process, analyze, and share intelligence;
- (5) efforts to ensure the joint force and the interagency provide combatant commanders with relevant intelligence capabilities;
- (6) a summary of risk mitigation strategies to address deficiencies and impediments; and
- (7) any other relevant matters that the Commander of U.S. Forces Korea determines should be included.

Report on the origins of SARS-CoV-2 and the COVID-19 global pandemic

The committee directs the Secretary of Defense, in coordination with the Director of the Defense Intelligence Agency and the Director of National Intelligence, to submit a report to the Committees on Armed Services of the Senate and the House of Representatives by December 31, 2021, on the origins of SARS-CoV-2 and the COVID-19 global pandemic.

The committee further directs the report to include:

(1) A detailed analysis of coronavirus research conducted at the Wuhan Institute of Virology (WIV), including intelligence reporting collected or held by the Defense Intelligence Agency (DIA);

(2) A detailed analysis of the actions of the Chinese Communist Party to conceal the type of research being conducted at the WIV, including intelligence reporting collected or held by the DIA;

(3) A detailed assessment of any actions taken by the Chinese Communist Party and the WIV from August 2019 to March 2020 to conceal the possibility that SARS-CoV-2 could have leaked from the WIV, including intelligence reporting collected or held by the DIA; and

(4) A detailed assessment of whether SARS-CoV-2 leaked from the WIV, thus creating the COVID-19 global pandemic, including intelligence reporting collected or held by the DIA.

The report shall be submitted in unclassified form, but may include a classified annex.

Report on Threats Regarding Weapons of Mass Destruction by China and Russia

The Committee directs the Director of the Defense Intelligence Agency to submit an unclassified report to the House Armed Services Committee by March 4, 2022 containing a description of the efforts underway by China and Russia regarding chemical and biological weaponization.

Secretary of Defense briefing related to influence efforts on U.S. employees by foreign governments

The Committee recognizes that foreign competitors and adversaries target for espionage employees of the Department of Defense or employees of contractors of the Department of Defense. The committee also recognizes the potential for grave damage to national security when such employees are persuaded by foreign governments to steal information, intellectual property, or maliciously access Department of Defense systems. The Department has a responsibility to inform and educate those companies and entities on the risk of employees being targeted to commit espionage. Therefore, the Committee directs the Under Secretary of Defense for Intelligence and Security to provide a briefing to the House Committee on Armed Services by March 2, 2022, on the Department's efforts to inform and educate entities contracting with the Department about efforts targeting employees to commit espionage.

Ubiquitous Technical Surveillance

The committee recognizes the risks presented by the proliferation of ubiquitous technical surveillance (UTS) technologies, particularly in the era of Great Power Competition, and commends the Department of Defense's efforts to comprehensively address the issue. The committee urges the Director of the Defense Intelligence Agency, as the leader in providing virtual security to the Department of Defense, to prioritize and resource advanced technologies, training, tactics, and procedures that enable the intelligence community and special operation forces to counter UTS and successfully execute traditional and irregular warfare operations.

Therefore, the committee directs the Director of the Defense Intelligence Agency to provide a briefing to the House Committee on Armed Services by February 4, 2022, on current, developing, and anticipated UTS challenges as well as current tactics, supporting technologies, techniques, policies, procedures, and requirements.

OTHER MATTERS

Chemical Weapons Stockpile Destruction

The committee recognizes that, as a signatory to the Chemical Weapons Convention, the United States is obligated to destroy the U.S. inventory of lethal chemical agents and munitions. The committee further recognizes that the Department of Defense is responsible for and working toward destroying 100 percent of the remaining chemical weapons stockpile no later than December 31, 2023, as required by section 1521 of title 50, United States Code, as amended. The committee expects that all necessary efforts will be undertaken to ensure that the United States remains in compliance with this mandatory destruction date. Therefore, the committee directs the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs to provide a briefing to the House Committee on Armed Services not later than December 31, 2021, on the status and progress of this requirement, and any challenges to meeting the mandatory destruction date.

Defense Biosecurity Efforts

The committee recognizes the importance of biosecurity and the potential threats posed by the proliferation of advanced gene editing technologies by state and non-state actors. During the course of its regular operations, the Department of Defense (DoD) routinely comes into possession of personally identifiable information, biometrics, and other sensitive personal information. The committee recognizes the importance of ensuring we protect our service members' sensitive information against current and future threats posed by nefarious actors or mishandling of data. As biotechnology capabilities have become more democratized and globally accessible, the strategic importance of securing service members' genetic data has become more critical, as highlighted in a December 2019 memorandum from the Under Secretary of Defense for Intelligence and Security stating, "Exposing sensitive genetic information to outside parties poses personal and operational risk to service members." The committee is concerned that the potential threats posed by the proliferation of advanced gene editing technologies and ge-

netic data has become more worrisome in light of the COVID–19 global pandemic and its impact on military readiness and U.S. economic and national security. These concerns have been heightened based on the significant increase in high profile cyber-attacks and breaches that have impacted U.S. government agencies, including the Department of Defense, defense industrial base entities, and the impact these breaches may have on service member’s genetic information. Therefore, the committee directs the Secretary of Defense to provide an unclassified report, with the option of a classified appendix, to the House Committee on Armed Services, not later than June 1, 2022, on biosecurity efforts across the Department of Defense. To the extent possible, the unclassified report shall include the following:

(1) the degree to which the Department of Defense has assessed the biosecurity of its systems maintaining or processing service member’s genetic information;

(2) the identification of any Department of Defense or contractor breaches over the previous five years that may have exposed service member’s genetic information;

(3) an assessment of the risk posed by the proliferation of gene editing technologies;

(4) an assessment of the risk posed by the transfer of service member’s genetic data to foreign countries, including China;

(5) the extent to which the Department of Defense provides biosecurity guidelines or standards in defense funded research and development programs;

(6) the extent to which the Department of Defense has invested in new technologies to secure service members’ genetic data.

Fielding of the Conventional Prompt Strike Weapons System

The Committee commends the Department’s plan to rapidly field the Conventional Prompt Strike (CPS) weapon system. The Committee believes similar commitment and transparency is required to develop new technologies and advanced capabilities needed for CPS to keep pace and ultimately surpass the capabilities of our adversaries. Therefore, the Committee encourages the Secretary of the Navy to budget CPS Advanced Capabilities activities in a separate project its next budget submission. The Committee directs the Secretary of the Navy to provide a report to the House Armed Services Committee on the fielding of the Conventional Prompt Strike program by March 1, 2022.

Strategy for Biological Defense Vaccines

The committee recognizes the devastating impact that biological threats, whether naturally occurring or deliberate, can have on U.S. national security, as evidenced by the COVID–19 pandemic. The committee believes that advances in science and biotechnology underscore the need for U.S. Food and Drug Administration (FDA) approved vaccines to protect the warfighter.

The committee understands that the Department of Defense defunded two vaccine programs, the botulinum toxin vaccine and plague vaccine, after persistent manufacturing challenges. Nonetheless, the committee recognizes the imperative that the Department of Defense ensure reliable access to safe and effective vac-

cines to protect U.S. service members against biological agents, including against botulinum toxin and plague.

Therefore, the committee directs the Secretary of Defense to submit a report to the congressional defense committees by December 31, 2021, on the strategy for acquiring vaccines for the Department of Defense. The report shall include the following:

(1) identification of each vaccine currently being pursued, and for each, an assessment of the time and cost to achieve a viable, FDA-approved product;

(2) identification of the work completed on botulinum toxin and plague and details on potential courses of action for utilizing the work conducted for those programs, including cost and time;

(3) countermeasures being developed for each biological agent identified in (1) and (2); and

(4) an assessment of the collaboration undertaken with partners and allies to develop or otherwise procure vaccines.

Testing Infrastructure to Support Strategic and Missile Defense Programs

The committee notes that developing and fielding hypersonic offensive and defensive capabilities continues to be a priority for the Department of Defense, with multiple programs of record across the services and agencies. As a component of each of these efforts, testing infrastructure continues to be highlighted as an area in which the United States lacks infrastructure and capacity to conduct needed subscale, developmental, and operational testing, in addition to extensive modeling and simulation needed to validate system performance prior to production and deployment. The same infrastructure is also needed for other strategic systems, such as the Ground Based Strategic Deterrent (GBSD), Long Range Stand Off Weapon (LRSO), and Next Generation Interceptor (NGI).

Therefore, the committee directs the Under Secretary of Defense for Research and Engineering, in coordination with the Secretaries of the military departments, Director of Operational Test and Evaluation, and Director of the Missile Defense Agency, to submit a report to the congressional defense committees not later than February 28, 2022, on an integrated master plan for the required testing infrastructure needed across hypersonic, strategic, and missile defense portfolios over the next 10-year timeframe, including:

(1) an integrated ground and flight test schedule for hypersonic offensive and defensive programs in addition to GBSD, LRSO, and NGI, for fiscal years 2022 through 2028;

(2) an inventory of flight and ground test ranges and other needed testing infrastructure, such as wind tunnels and arc heaters, required to meet subscale, developmental, and operational testing of programs of record;

(3) a list of modernization efforts that support strategic and missile defense testing, including a listing of projects and the associated National Environmental Policy Act initiatives and timelines;

(4) a list of existing and planned facilities at academic institutions and other Federal agencies (e.g., National Aeronautics and Space Administration) that have hypersonic testing capability, including propulsion systems, combustor testing for transition from gas turbine to scramjet, and scramjet testing for dual mode propulsion;

(5) deficiencies that exist either in flight test ranges or areas such as wind tunnels and arc heaters, that would need to be addressed in the next 10-year timeframe to support required testing; and

(6) how high fidelity modeling and simulation could augment ground and flight testing requirements.

LEGISLATIVE PROVISIONS

SUBTITLE A—SPACE ACTIVITIES

Section 1601—Improvements to Tactically Responsive Space Launch Program

This section would express the sense of Congress regarding the successful tactically responsive launch-2 mission conducted by the U.S. Space Force, and how it should be used as a pathfinder to inform future concepts of operation for responsive launches. This section would further modify section 1609 of the William M. (Mac) National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) to require the Secretary of Defense, in consultation with the Director of National Intelligence, to support the tactically responsive launch program to ensure that the program addresses: (1) The ability to rapidly place on-orbit systems to respond to urgent needs of the commanders of the combatant commands or to reconstitute space assets and capabilities to support national security priorities; and (2) The entire launch process, including with respect to launch services, satellite bus and payload availability, and operations and sustainment on-orbit.

This section would also require the Secretary of Defense to submit a plan to Congress on the future of the tactically responsive space launch program.

Section 1602—National Security Space Launch Program

This section would express a sense of congress that the Department of Defense and National Reconnaissance Office (NRO) should, to the extent possible, use services under phase two of the National Security Space Launch (NSSL) program. This section would also establish policy that the NSSL program should be used to the maximum extent possible for space launches that fall within the requirements of phase two and maximize continuous competition as the U.S. Space Force initiates planning for phase three of the program.

This section would further require a congressional notification within seven days in the event the Department or NRO determines a launch that could be met under the requirements of NSSL phase two will use an alternative launch procurement approach. Lastly, the section would require the Secretary of Defense, in coordination with the Director of National Intelligence, Chief of Space Operations, and the Director of the Space Development Agency, submit a report within 90 days after the date of enactment of this Act on plans of the Secretary to address, with respect to launches that would be procured in addition to or outside of launches under NSSL phase two, emerging launch requirements in the areas of space access, mobility, and logistics.

Section 1603—Classification Review of Programs of the Space Force

This section would require the Chief of Space Operations to conduct a classification review of each classified program under the authority of the Space Force to determine if any programs should be reclassified or declassified. The review would need to be conducted in coordination with the Assistant Secretary of Defense for Space Policy, and any other heads of elements of the Department of Defense as appropriate. This section would also require the Chief of Space Operations to submit a report to the congressional defense committees on any programs that would be subject to a classification change due to the review conducted.

Section 1604—Report on Range of the Future Initiative of the Space Force

This section would express the sense of Congress regarding the importance of improving infrastructure on U.S. Space Force launch ranges to meet future demand. The section would also require the Chief of Space Operations to submit a report to the congressional defense committees on the Space Force “Range of the Future” initiative, specific legal authorities that would need to be changed to address long-term challenges to the long-term physical infrastructure at U.S. Space Force launch ranges, and any proposals to further improve infrastructure at the ranges, including legislative action needed to implement those proposals.

Section 1605—Norms of Behavior for International Rules-Based Order in Space

This section would require the covered officials to each submit to the National Space Council, not later than 90 days after the date of the enactment of this Act, a list of prioritized objectives with respect to establishing norms of behavior in space to be addressed through bilateral and multilateral negotiations relating to an international rules-based order in space. The goal would be to bolster and further develop the international rules-based order, particularly as it applies to the space domain. The list of covered officials includes:

- (1) the Under Secretary of Defense for Policy, in consultation with the Chief of Space Operations, the Commander of U.S. Space Command, and the Director of National Geospatial-Intelligence Agency;
- (2) the Assistant Secretary of State for Arms Control, Verification, and Compliance;
- (3) the Administrator of the National Aeronautics and Space Administration; and
- (4) the Director of the National Reconnaissance Office.

This section would further require the National Space Council to consolidate the lists received, and the Secretary of State, in collaboration with other heads of relevant departments and agencies of the Federal Government, to use such consolidated list as a guide to establish a framework for bilateral and multilateral negotiations.

Lastly, this section would require the National Space Council to provide the consolidated list of priorities to the congressional de-

fense committees; the Committee on Foreign Affairs, the Committee on Science, Space, and Technology, and the Permanent Select Committee on Intelligence of the House of Representatives; and the Committee on Foreign Relations, the Committee on Commerce, Science, and Transportation, and the Select Committee on Intelligence of the Senate.

Section 1606—Programs of Record of Space Force and Commercial Capabilities

This section would prohibit the Service Acquisition Executive for Space Systems and Programs from establishing a new program of record until a certification has been provided to the congressional defense committees that there is no commercially available capability that would meet the threshold objectives for that proposed program.

Section 1607—Clarification of Domestic Services and Capabilities in Leveraging Commercial Satellite Remote Sensing

This section would modify section 1612(c) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) by further defining the definition of the term “domestic” to include companies that operate in the United States and have active mitigation agreements pursuant to the National Industrial Security Program.

Section 1608—National Security Council Briefing on Potential Harmful Interference to Global Positioning System

This section would require the Secretary of Defense to provide a briefing at the highest level of classification to the National Security Council, the Department of Commerce, and the Federal Communications Commission, within 30 days after the date of the enactment of this Act, on the harmful interference from the 1525 to 1559 megahertz bands and 1626.5 to 1660.5 megahertz bands to the Global Positioning System or other tactical Department of Defense systems. Within 7 days after providing the briefing, the Secretary of Defense shall provide the same briefing to congressional defense and commerce committees.

SUBTITLE B—DEFENSE INTELLIGENCE AND INTELLIGENCE-RELATED ACTIVITIES

Section 1611—Notification of Certain Threats to United States Armed Forces by Foreign Governments

This section would require the Secretary of Defense to notify Congress when the Secretary determines with high confidence that an official of a foreign government plans or takes some other substantive step that is intended to cause the death of, or serious bodily injury to, any member of the United States Armed Forces.

Section 1612—Strategy and Plan to Implement Certain Defense Intelligence Reforms

This section would require the Director of National Intelligence, in coordination with the Under Secretary of Defense for Intel-

ligence and Security, to develop and implement a strategy and plan to support the priorities of the combatant commanders, including efforts to counter the malign activities of adversaries of the United States.

Section 1613—Authority of Under Secretary of Defense for Intelligence and Security to Engage in Fundraising for Certain Non-profit Organizations

This section would authorize the Under Secretary of Defense for Intelligence and Security to engage in certain fundraising in an official capacity for the benefit of nonprofit organizations that provide support to surviving dependents of deceased employees of the Defense Intelligence Enterprise or for the welfare, education, or recreation of employees and former employees of the Defense Intelligence Enterprise and the dependents of such employees and former employees.

Section 1614—Executive Agent for Explosive Ordnance Intelligence

This section would designate the Director of the Defense Intelligence Agency as the executive agent for explosive ordnance intelligence.

Section 1615—Inclusion of Explosive Ordnance Intelligence in Defense Intelligence Agency Activities

This section would add explosive ordnance intelligence to the activities of the Defense Intelligence Agency.

SUBTITLE C—NUCLEAR FORCES

Section 1621—Exercises of Nuclear Command, Control, and Communications System

This section would require the President to participate in at least one large-scale nuclear command, control, and communications exercise within the first year of assuming office, per term, and would include waiver authority on a case-by-case basis.

Section 1622—Independent Review of Nuclear Command, Control, and Communications System

This section would require the Secretary of Defense to enter into an agreement with the National Academies of Sciences, Engineering, and Medicine to conduct a review of the current plans, policies, and programs of the nuclear command, control, and communications system, and such plans, policies, and programs that are planned through 2030. This section also would require an interim briefing on the review not later than September 1, 2022.

Section 1623—Review of Safety, Security, and Reliability of Nuclear Weapons and Related Systems

This section would direct the Secretary of Defense to create an independent advisory committee to review the safety, security, and reliability of U.S. nuclear weapons systems; nuclear command, control, and communications; and the integrated tactical warning/attack assessment system. This section also contains findings that

discuss a similar previous study conducted in 1990. The review would last not more than 1 year and provide options and recommendations to the Secretary of Defense on altering U.S. nuclear modernization programs to cybersecurity, strengthen safeguards, and prevent unauthorized or inadvertent incidents. The review would also provide options for nuclear risk reduction measures focused on confidence and predictability that United States could carry out alone or with near-peer adversaries.

Section 1624—Review of Engineering and Manufacturing Development Contract for Ground-Based Strategic Deterrent Program

This section would require the Secretary of the Air Force to conduct a review of the Ground Based Strategic Deterrent program and provide a report to the congressional defense committees within 270 days after the date of the enactment of this Act. This section would also require the Secretary of the Air Force to provide a briefing to the congressional defense committees on implementation of the recommendations of the review within 90 days of submittal of the report to the congressional defense committees. The review would examine:

- (1) the schedule, cost, and execution of Ground Based Strategic Deterrent Program;
- (2) the ability of the program to leverage competition during the operations and maintenance phase of the program;
- (3) the ability of the program to implement industry best practices; and
- (4) the ability of the program to leverage digital engineering.

This section would require the Secretary of the Air Force to appoint at least two experts with expertise from outside of the defense industry to the review.

Section 1625—Long-Range Standoff Weapon

This section would require the Secretary of the Air Force, before awarding the procurement portion of the long-range standoff weapon (LRSO) contract, to provide the following the congressional defense committees:

- (1) an updated cost estimate for the procurement portion of the LRSO;
- (2) a certification that Future Years Defense Program funding includes or will include estimated funding for the program specified in such cost estimate; and
- (3) a copy of the justification and approval documentation regarding the Secretary determining to award a sole-source contract for the program, including with respect to how the Secretary will manage the cost of the program in the absence of competition.

This section would also require the Secretary of the Air Force to provide a briefing, not later than 90 days after the date of the enactment of this Act, on how the timely development of the LRSO may serve as a hedge to delays in other nuclear modernization efforts, how potential W80-4 warhead delays may affect the LRSO initial operational capability, options to adjust the budget profile of the LRSO to ensure the program remains on schedule, a plan to reconcile the cost estimates of the Air Force and the Director of Cost Assessment and Program Evaluation, and a plan to ensure

best value to the United States for the procurement portion of the program.

Section 1626—Prohibition on Reduction of the Intercontinental Ballistic Missiles of the United States

This section would prohibit the Department of Defense from reducing, or preparing to reduce, the responsiveness or alert level of the intercontinental ballistic missiles of the United States during fiscal year 2022. It would also prohibit the Department from reducing the number of intercontinental ballistic missiles of the United States below 400. The provision contains exceptions to the prohibition for maintenance, sustainment, safety, security, and reliability.

Section 1627—Limitation on Availability of Certain Funds until Submission of Information Relating to Proposed Budget for Nuclear-Armed Sea-Launched Cruise Missile

This section would limit the availability of not more than 75 percent of the funds for the Office of the Secretary of the Navy for travel until the Secretary submits to the congressional defense committees all written communications by the personnel of the Department of Defense regarding the proposed budget amount or limitation for the nuclear-armed sea-launched cruise missile.

Section 1628—Limitation on Availability of Certain Funds until Submission of Information Relating to Nuclear-Armed Sea-Launched Cruise Missile

This section would limit the funds available to the Office of the Secretary of Defense for travel to not more than 75 percent, except for the Secretary and the Deputy Secretary, until the Secretary submits the analysis of alternatives for the nuclear-armed sea-launched cruise missile and provides a briefing on the analysis.

Section 1629—Annual Certification on Readiness of Minuteman III Intercontinental Ballistic Missiles

This section would require, not later than March 1, 2022, and annually thereafter until the ground-based strategic deterrent program achieves initial operating capability, the Chairman of the Joint Chiefs to certify whether the state of readiness of the Minuteman III missile system requires placing heavy bombers equipped with nuclear warheads and associated refueling tanker aircraft on alert status.

Section 1630—Cost Estimate to Re-Alert Long-Range Bombers

This section would require the Secretary of the Air Force to develop a cost estimate to re-alert the long-range bombers in the absence of a ground-based leg of the nuclear triad. It also contains findings of the Commander of Strategic Command related to the issue.

Section 1631—Notification regarding Intercontinental Ballistic Missiles of China

This section would require the Commander of Strategic Command to notify the congressional defense committees in the event

that the commander determines that the number of intercontinental ballistic missiles in China's active inventory exceeds those of the United States, or that the number of warheads equipped on such missiles exceeds the number equipped on those of the United States. It would further require the commander to provide an assessment of Chinese intercontinental ballistic missiles and associated warheads, and a strategy to deter China.

Section 1632—Information regarding Review of Minuteman III
Service Life Extension Program

This section would require the Secretary of Defense to provide information to the congressional defense committees regarding any review undertaken by a federally funded research and development center regarding a service life extension program for the Minuteman III missile system.

Section 1633—Sense of Congress regarding Nuclear Posture
Review

This section would contain the sense of Congress on issues that should be considered as part of the Nuclear Posture Review initiated in 2021.

SUBTITLE D—MISSILE DEFENSE PROGRAMS

Section 1641—Directed Energy Programs for Ballistic and
Hypersonic Missile Defense

This section would provide findings that there are promising directed energy technologies for ballistic and hypersonic defense applications, and that those efforts have consistently not been funded in the Missile Defense Agency budget for the past several fiscal year budget requests, despite continued support from yearly appropriation and authorization bills. The section would also express the sense of Congress that these efforts should continue within the Missile Defense Agency for potential future hypersonic and ballistic missile defense capabilities. Finally, the section would provide authority to the Secretary of Defense to delegate to the Director of the Missile Defense Agency the authority to budget for, direct, and manage directed energy programs applicable for ballistic and hypersonic missile defense.

Section 1642—Notification of Changes to Non-Standard Acquisition
and Requirements Processes and Responsibilities of Missile De-
fense Agency

This section would prohibit the Secretary of Defense from making any changes to the Missile Defense Agency non-standard acquisition and requirements processes until certain conditions were met including consulting with several offices within the Department of Defense, providing certifications, and report to the congressional defense committees detailing the intended changes, and waiting 120 days after submission of the aforementioned report before implementing any changes.

Section 1643—Missile Defense Radar in Hawaii

This section would provide a sense of Congress that the State of Hawaii should have equivalent discrimination radar coverage as that of the continental United States and Alaska once the long range discrimination radar is made operational, and to achieve that, the Secretary of Defense should restore the Hawaii discrimination radar with adequate planned funding to achieve operational status by December 31, 2028, to coincide with delivery of the next generation interceptor. This section would further require a certification as a part of the defense materials provided for the fiscal year 2023 budget request that the radar has been funded across the Future Years Defense Program and the radar will be operational, with associated communications systems, not later than December 31, 2028.

Section 1644—Guam Integrated Air and Missile Defense System

This section would require the Secretary of Defense to identify an architecture and acquisition approach for an integrated air and missile defense system to protect the territory of Guam from cruise, ballistic, and hypersonic missile threats. The section would further require the architecture to address certain technical requirements, including sensor and command and control attributes, in addition to leveraging existing systems to the extent possible, including the ability to be upgradable in the future, and incentivizing competition where appropriate. In addition to the identification of an architecture and acquisition approach, the section would require the Secretary of Defense to submit a report on the Guam Integrated Air and Missile Defense System not later than 60 days after the date of the enactment of this Act.

Section 1645—Limitation on Availability of Funds Until Receipt of Certain Report on Guam

This section would fence funding for the Office of Cost Assessment Program Evaluation until the Secretary of Defense submits a report required by the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) on the defense of Guam from integrated air and missile threats.

Section 1646—Repeal of Transition of Ballistic Missile Defense Programs to Military Departments

This section would repeal section 1676 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91) regarding transition of programs from the Missile Defense Agency to the military departments.

Section 1647—Certification Required for Russia and China to Tour Certain Missile Defense Sites

This section would require a congressional notification prior to the Secretary of Defense allowing a foreign national of Russia or China to tour a missile defense site as covered in the section.

Section 1648—Sense of Congress on Next Generation Interceptor Program

This section would express the sense of Congress that it is in the national security interest of the United States to design, test, and begin deployment of the next generation interceptor by not later than September 30, 2028.

SUBTITLE E—OTHER MATTERS

Section 1651—Cooperative Threat Reduction Funds

This section would allocate specific funding amounts for each program under the Department of Defense Cooperative Threat Reduction (CTR) Program from within the overall \$344.8 million that the committee would authorize for the Cooperative Threat Reduction Program. The allocation under this section reflects the amount of the budget request for fiscal year 2022.

This section would specify that funds authorized to be appropriated to the Department of Defense for the Cooperative Threat Reduction Program, established under the Department of Defense Cooperative Threat Reduction Act (50 U.S.C. 3711), would be available for obligation for fiscal years 2022, 2023, and 2024.

Section 1652—Establishment of Office to Address Unidentified Aerial Phenomena

This section would establish an office within the Office of the Secretary of Defense to carry out the mission currently performed by the Unidentified Aerial Phenomenon Task Force and would require an annual report.

Section 1653—Matters regarding Integrated Deterrence Review

This section would require the Secretary of Defense to provide each report, assessment, and guidance document produced by the Department of Defense during the Integrated Deterrence Review (IDR), as well as actions taken to implement the IDR, and a report on how it differs from the previous review. The provision also would require the Chairman and the Vice Chairman of the Joint Chiefs of Staff, as well as the Commander of Strategic Command, to certify they had input into the review and to describe how the review differs from their input, or what their input would have been should they not have had the opportunity to provide input.

Section 1654—Sense of Congress on Indemnification and the Conventional Prompt Global Strike Weapon System

This section would provide the sense of Congress that the Secretary of the Navy should take maximum practicable advantage of existing statutory authority to provide indemnification for large rocket programs employing “unusually hazardous” propulsion systems for both nuclear and non-nuclear strategic systems, and develop a policy for more consistently applying such authority.

**TITLE XVII—TECHNICAL AMENDMENTS RELATED
TO THE TRANSFER AND REORGANIZATION OF
DEFENSE ACQUISITION STATUTES**

LEGISLATIVE PROVISIONS

**Section 1701—Technical, Conforming, and Clerical Amendments
Related to the Transfer and Reorganization of Defense Acquisition
Statutes**

This section would make technical, conforming, and clerical amendments to certain provisions in title XVIII of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283).

**Section 1702—Conforming Cross Reference Technical Amendments
Related to the Transfer and Reorganization of Defense Acquisition
Statutes**

This section would adopt conforming cross reference amendments in the U.S. Code due to redesignations made by title 18 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283).

**DIVISION B—MILITARY CONSTRUCTION
AUTHORIZATIONS**

PURPOSE

Division B provides military construction, family housing, and related authorities in support of the military departments during fiscal year 2022. As recommended by the committee, division B would authorize appropriations in the amount of \$13,420,950,000 for construction in support of the Active Forces, Reserve Components, defense agencies, and the North Atlantic Treaty Organization Security Investment Program for fiscal year 2022.

**MILITARY CONSTRUCTION AND FAMILY HOUSING
OVERVIEW**

The Department of Defense requested \$8,139,332,000 for military construction, \$284,639,000 for Base Realignment and Closure activities, and \$1,423,060,000 for family housing for fiscal year 2022. The committee recommends authorization of appropriations of \$13,420,950,000 for military construction, \$434,639,000 for Base Realignment and Closure activities, and \$1,469,560 for family housing in fiscal year 2022.

Section 2001—Short Title

This section would cite division B of this Act as the “Military Construction Authorization Act for Fiscal Year 2022”.

Section 2002—Expiration of Authorizations and Amounts Required
To Be Specified by Law

This section would ensure that the authorizations provided in titles XXI through XXVII of this Act shall expire on October 1, 2024, or the date of the enactment of an Act authorizing funds for military construction for fiscal year 2025, whichever is later.

Section 2003—Effective Date

This section would provide that titles XXI through XXVII of this Act would take effect on October 1, 2021, or the date of the enactment of this Act, whichever is later.

TITLE XXI—ARMY MILITARY CONSTRUCTION

SUMMARY

The budget request contained \$834,692,000 for Army military construction and \$491,076,000 for family housing for fiscal year 2022. The committee recommends authorization of appropriations of \$1,252,673,000 for military construction and \$537,576,000 for family housing for the Army in fiscal year 2022.

ITEMS OF SPECIAL INTEREST

Explanation of Funding Adjustments

The committee recommends the inclusion of funding for projects requested by the Army but not contained in the budget request for military construction and family housing. This increase is as follows:

- (1) \$100.0 million for Barracks at Fort Stewart, Georgia;
- (2) \$66.0 million for an AIT Barracks Complex at Fort Rucker, Alabama;
- (3) \$61.0 million for Barracks at Fort Hood, Texas;
- (4) \$56.0 million for Barracks at Fort Polk, Louisiana;
- (5) \$34.0 million for a Child Development Center at Fort Leavenworth, Kansas;
- (6) \$29.2 million for Barracks at Fort Hood, Texas;
- (7) \$27.0 million for a Child Development Center at Fort Knox, Kentucky;
- (8) \$25.0 million for Welding Facility at Anniston Army Depot, Alabama;
- (9) \$24.0 million for a Medical Waste Incinerator at Fort Detrick, Maryland;
- (10) \$21.0 million for Reception Barracks, Phase 1 at Fort Jackson, South Carolina;
- (11) \$16.0 million for an AIT Barracks Complex, Phase 4, at Joint Base Langley-Eustis, Virginia;
- (12) \$14.0 million for Family Housing Replacement Construction at Fort Buchanan, Puerto Rico;
- (13) \$10.0 million for Family Housing Replacement Construction at Kwajalein Atoll, Republic of the Marshall Islands;
- (14) \$7.5 million for Family Housing Replacement Construction at Tobyhanna Army Depot, Pennsylvania; and

(15) \$1.8 million for Igloo Storage and Installation at Picatinny Arsenal, New Jersey.

In addition, the committee recommends an authorization of appropriation of \$134.6 million for activities related to planning and design, an increase of \$10.0 million, to support the continued timely development of projects.

The committee also recommends an authorization of appropriation of \$22.6 million for activities related to family housing planning and design, an increase of \$15.0 million, to support the advancement of developing family housing projects.

Finally, the committee recommends a reduction of \$53.0 million for the Barracks and Dining Facility at East Camp Grafenwoehr, Germany. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Army cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of appropriation of \$50.0 million, a reduction of \$53.0 million, for this project.

LEGISLATIVE PROVISIONS

Section 2101—Authorized Army Construction and Land Acquisition Projects

This section would contain a list of authorized Army construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2102—Family Housing

This section would authorize new construction, improvements, and planning and design of family housing units for the Army for fiscal year 2022.

Section 2103—Authorization of Appropriations, Army

This section would authorize appropriations for Army military construction levels identified in section 4601 of division D of this Act.

Section 2104—Extension of Authority to Carry Out Certain Fiscal Year 2017 Project

This section would extend the authorization of a certain fiscal year 2017 project until October 1, 2023.

Section 2105—Modification of Authority to Carry Out Certain Fiscal Year 2021 Project

This section would modify the authority provided by section 2101 of the Military Construction Authorization Act for Fiscal Year 2021 (division B of Public Law 116–283) and authorize the Secretary of

the Army to make certain modifications to the authorized cost of a previously authorized construction project.

Section 2106—Additional Authorized Funding Source for Certain
Fiscal Year 2022 Project

This section would authorize the Secretary of the Army to use funds available to the Secretary under section 2667(e)(1)(C) of title 10, United States Code, as a funding source for this fiscal year 2022 project.

TITLE XXII—NAVY MILITARY CONSTRUCTION

SUMMARY

The budget request contained \$2,368,352,000 for Department of the Navy military construction and \$434,957,000 for family housing for fiscal year 2022. The committee recommends authorization of appropriations of \$2,408,548,000 for military construction and \$434,957,000 for family housing for the Department of the Navy for fiscal year 2022.

ITEMS OF SPECIAL INTEREST

Explanation of Funding Adjustments

The committee recommends the inclusion of funding for projects requested by the Navy but not contained in the budget request for military construction and family housing. This increase is as follows:

- (1) \$101.2 million for Bachelor Enlisted Quarters, Phase 2, at Marine Corps Base Kaneohe;
- (2) \$99.6 million for Bachelor Enlisted Quarters at Marine Corps Air Station Yuma, Arizona;
- (3) \$45.0 million for a Wastewater Treatment Facility at Marine Corps Air Ground Combat Center Twentynine Palms, California;
- (4) \$7.0 million for Planning and Design for Lighterage and Small Craft at Naval Air Station Jacksonville, Florida;
- (5) \$2.5 million for Planning and Design for a Fire Rescue Safety Center at Naval Air Station Kingsville, Texas;
- (6) \$1.5 million for Planning and Design for an Aircraft Prototyping Facility, Phase 3 at Naval Air Station Patuxent River, Maryland;
- (7) \$1.5 million for Planning and Design for a Controlled Burn Facility at Naval Surface Warfare Center, Indian Head, Maryland.

In addition, the committee recommends an authorization of appropriation of \$225.0 million for activities related to the Shipyard Infrastructure Optimization Program (SIOP), an increase of \$225.0 million, to support the continued modernization and recapitalization of shipyard infrastructure.

The committee also recommends an authorization of appropriation of \$63.0 million for activities related to planning and design of SIOP infrastructure, an increase of \$63.0 million, to support the program.

Finally, the committee recommends a reduction of funding for projects contained in the budget request submitted by the Navy for military construction. These reductions are:

(1) \$147.9 million for the Aircraft Maintenance Hangar at Cherry Point Marine Corps Air Station, North Carolina. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Navy cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of appropriation of \$60.0 million, a reduction of \$147.9 million, for this project;

(2) \$126.4 million for the Dry Dock Saltwater System for CVN-78 at Norfolk Naval Shipyard, Virginia. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Navy cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of appropriation of \$30.0 million, a reduction of \$126.4 million, for this project;

(3) \$83.5 million for the F-35 Flight Line Utilities Modernization, Phase 2 at Cherry Point Marine Corps Air Station, North Carolina. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Navy cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of appropriation of \$30.0 million, a reduction of \$83.5 million, for this project;

(4) \$52.0 million for the X-Ray Wharf Berth 2 at Joint Region Marianas, Guam. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Navy cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of appropriation of \$52.0 million, a reduction of \$52.0 million, for this project;

(5) \$41.7 million for the Joint Mobility Processing Center at Naval Support Activity Souda Bay, Greece. The committee supports the requirement for this project and provided the full project authorization of \$41.7 million included in the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232). However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. For this project, the committee believes that the Department of the Navy cannot fully expend the requested funding in fiscal year 2022, and therefore recommends no funds, a reduction of \$41.7 million, for this project;

(6) \$29.5 million for the 4th Marines Regiment Facilities at Joint Region Marianas, Guam. The committee supports the requirement

for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Navy cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of appropriation of \$80.0 million, a reduction of \$29.5 million, for this project; and

(7) \$25.1 million for the F-35C Hangar 6 Phase 2 (Mod 3/4) at Naval Air Station Lemoore, California. The committee supports the requirement for this project and provided the full project authorization of \$128.1 million included in the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283). However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. For this project, the committee believes that the Department of the Navy cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of appropriation of \$50.0 million, a reduction of \$25.1 million, for this project.

LEGISLATIVE PROVISIONS

Section 2201—Authorized Navy Construction and Land Acquisition Projects

This section would contain a list of authorized Department of the Navy construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2202—Family Housing

This section would authorize new construction, improvements, and planning and design of family housing units for the Department of the Navy for fiscal year 2022.

Section 2203—Authorization of Appropriations, Navy

This section would authorize appropriations for Department of Navy military construction levels identified in section 4601 of division D of this Act.

TITLE XXIII—AIR FORCE MILITARY CONSTRUCTION

SUMMARY

The budget request contained \$2,102,690,000 for Department of the Air Force military construction and \$441,161,000 for family housing for fiscal year 2022. The committee recommends authorization of appropriations of \$2,067,150,000 for military construction and \$441,161,000 for family housing for the Department of the Air Force in fiscal year 2022.

ITEMS OF SPECIAL INTEREST

Explanation of Funding Adjustments

The committee recommends the inclusion of funding for projects requested by the Air Force but not contained in the budget request for military construction and family housing. This increase is as follows:

- (1) \$36.0 million for a New Entrance Road and Gate Complex at Barksdale Air Force Base, Louisiana;
- (2) \$30.0 million for an ADAL Fitness Center at Schriever Air Force Base, Colorado;
- (3) \$30.0 million for a Fire and Rescue Station at Joint Base Charleston, South Carolina;
- (3) \$29.0 million for a Child Development Center at Joint Base San Antonio—Fort Sam Houston, Texas;
- (4) \$24.0 million for a Child Development Center at Wright-Patterson Air Force Base, Ohio;
- (6) \$24.0 million for a Fuel Systems Maintenance Dock at Joint Base Langley-Eustis, Virginia;
- (5) \$24.0 million for a F-35A Child Development Center at Royal Air Force Lakenheath, United Kingdom;
- (6) \$22.0 million for a Child Development Center at Joint Base San Antonio—Lackland Air Force Base, Texas;
- (7) \$20.0 million for Air Force Intelligence, Surveillance, and Reconnaissance Planning and Design;
- (8) \$7.8 million for a Military Working Dog Kennel at Joint Base Andrews, Maryland;
- (9) \$5.0 million to Replace Trestle F312 at Offutt Air Force Base, Nebraska;
- (10) \$4.5 million for an SFS OPS Confinement Facility at Joint Base McGuire-Dix-Lakehurst, New Jersey;
- (11) \$4.4 million for High Bay Vehicle Maintenance at the United States Air Force Academy, Colorado.

The committee also recommends an authorization of appropriation of \$25.0 million for activities related to planning and design for the European Deterrence Initiative, an increase of \$25.0 million, for the development of projects to support the capacity and security of United States allies.

In addition, the committee recommends an authorization of appropriation of \$25.0 million for activities related to planning and design for the Pacific Deterrence Initiative, an increase of \$25.0 million, for the development of projects to support allied and partner capabilities.

Finally, the committee recommends a reduction of funding for projects contained in the budget request submitted by the Air Force for military construction. These reductions are:

- (1) \$101.0 million for the BMT Recruit Dormitory 7 at Joint Base San Antonio, Texas. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Air Force cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an

authorization of \$40.0 million, a reduction of \$101.0 million, for this project;

(2) \$100.0 million for the KC-46A 3-Bay Depot Maintenance Hangar at Tinker Air Force Base, Oklahoma. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Air Force cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of \$60.0 million, a reduction of \$100.0 million, for this project;

(3) \$84.2 million for the Helicopter Rescue Ops Maintenance Hangar at Kadena Air Base, Japan. The committee supports the requirement for this project and has fully authorized the project. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Air Force cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of \$83.8 million, a reduction of \$84.2 million, for this project;

(4) \$41.0 million for the B-21 2-Bay LO Restoration Facility, Increment 2 at Ellsworth Air Force Base, South Dakota. The committee supports the requirement for this project, and notes that the project was fully authorized in Public Law 116-283. However, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Air Force cannot fully expend the requested funding in fiscal year 2022, and therefore recommends an authorization of \$50.0 million, a reduction of \$41.0 million, for this project; and

(5) \$20.0 million for Air Force Planning and Design. The committee supports the requirement for this project, however, the committee supports the authorization of appropriations in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. The committee believes that the Department of the Air Force cannot fully expend the request funding in fiscal year 2022, and therefore recommends an authorization of appropriations of \$181,453, a reduction of \$20.0 million, for this project.

LEGISLATIVE PROVISIONS

Section 2301—Authorized Air Force Construction and Land Acquisition Projects

This section would contain a list of authorized Air Force construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2302—Family Housing

This section would authorize new construction, improvements, and planning and design of family housing units for the Department of the Air Force for fiscal year 2022.

Section 2303—Authorization of Appropriations, Air Force

This section would authorize appropriations for Air Force military construction levels identified in section 4601 of division D of this Act.

Section 2304—Extension of Authority to Carry Out Certain Fiscal Year 2017 Projects

This section would extend the authorization of certain fiscal year 2017 projects until October 1, 2023.

Section 2305—Modification of Authority to Carry Out Military Construction Projects at Tyndall Air Force Base, Florida

This section would modify the authorization of certain military construction projects at Tyndall Air Force Base, Florida.

TITLE XXIV—DEFENSE AGENCIES MILITARY CONSTRUCTION

SUMMARY

The budget request contained \$1,957,289,000 for defense agency military construction and \$55,866,000 for family housing for fiscal year 2022. The committee recommends authorization of appropriations of \$2,154,116,000 for military construction and \$55,866,000 for family housing for defense agencies in fiscal year 2022.

ITEMS OF SPECIAL INTEREST

Explanation of Funding Adjustments

The committee recommends the inclusion of funding for projects requested by the Department of Defense but not contained in the budget request for military construction and family housing. This increase is as follows:

- (1) \$38.3 million for Inner Apra Harbor Resiliency Upgrades (Phase 1) at Naval Base Guam, Guam;
- (2) \$34.5 million for a 10 MW Generation Plant and Feeder Level Microgrid System at Camp Shelby, Mississippi;
- (3) \$33.8 million for a Water Treatment Plant and Pump Station at Mountain Home Air Force Base, Idaho;
- (4) \$29.0 million for PV Carports at Joint Base Anacostia-Bolling, District of Columbia;
- (5) \$27.0 million for a Wellfield Resiliency Expansion Project at Fort Drum, New York;
- (6) \$24.2 million for PCARS Emergency Power Plant Fuel Storage at Cavalier Air Force Station, North Dakota;
- (7) \$24.0 million for a 10MW RICE Generator Plant and MicroGrid Controls at Fort Rucker, Alabama;

(8) \$22.0 million for Transmission and Switching Stations at MacDill Air Force Base, Florida;

(9) \$22.0 million for a 10MW Generation Plant, with Microgrid Controls at Fort Stewart, Georgia;

(10) \$20.5 million for a SOF Training Command at Naval Amphibious Base Coronado, California;

(11) \$19.5 million for 10MW Microgrid Utilizing Existing and New Generators at Fort Bragg, North Carolina;

(12) \$19.3 million for Electrical Transmission and Distribution at Kings Bay Naval Submarine Base, Georgia;

(13) \$17.6 million for a 4.8MW Generation Plant and Microgrid at Fort Benning, Georgia;

(14) \$15.0 million for a Microgrid Controller, 1.25 MW Solar PV, and 1.5 MWh Battery at Camp Arifjan, Kuwait;

(15) \$12.2 million for a 10 MW Generation Plant and Feeder Level Microgrid System at Fort Allen, Puerto Rico;

(16) \$11.2 million for Electrical Distribution Infrastructure Undergrounding Hardening at Camp Shelby, Mississippi;

(17) \$10.1 million for a Microgrid Control System, 460 kW PV. 275 kW Generator, and 660 kWh BESS at Ramey Unit School, Puerto Rico;

(18) \$9.1 million for a Solar Energy Storage System at Naval Air Weapons Station China Lake, California;

(19) \$7.7 million for an Emergency Water System at Fort Bragg, North Carolina;

(20) \$5.7 million for a 650kW Gas-Fired Micro-Turbine Generation System at Camp Grayling, Michigan;

(21) \$5.3 million for North Campus East Electrical Redundancy at National Geospatial-Intelligence Agency Springfield, Virginia;

(22) \$4.8 million for PV Arrays and Battery Storage at Memphis International Airport, Tennessee; and

(23) \$4.7 million for a Base-Wide Microgrid with Natural Gas Generator, Photovoltaic, and Battery Storage at Springfield-Beckley Municipal Airport, Ohio;

(24) \$4.1 million for Additional LFG Power Meter Station at Marine Corps Air Station Miramar, California;

(25) \$3.8 million for a Smart Grid for Utility and Facility Controls at Naval Air Facility Atsugi, Japan;

(26) \$3.0 million for an LED Upgrade Package and Recommissioning of HVAC Systems at Various Locations, Virginia; and

(27) \$2.3 million for Cooling Towers and Cond Pumps at Joint Base Anacostia-Bolling, District of Columbia.

In addition, the committee recommends an authorization of appropriation of \$68.2 million for planning and design activities associated with U.S. Indo-Pacific Command (USINDOPACOM), an increase of \$68.2 million, to support the continued development of projects in the USINDOPACOM area of responsibility.

Finally, the committee recommends a reduction of funding for projects contained in the budget request submitted by the Department of Defense for military construction. These reductions are:

(1) \$55.3 million for the Hangar/AMU at Yokota Air Base, Japan. The committee supports the requirement for this project and provided the full project authorization included in the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115-91). However, the committee supports the authorization of appropria-

tions in an amount equivalent to the ability of the Department to execute in the year of the authorization for appropriations. For this project, the committee believes that the Department of Defense cannot fully expend the requested funding in fiscal year 2022. Therefore, the committee recommends an authorization of appropriation of \$53.0 million, a reduction of \$55.3 million, for this project.

LEGISLATIVE PROVISIONS

Section 2401—Authorized Defense Agencies Construction and Land Acquisition Projects

This section would contain a list of authorized defense agencies construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2402—Authorized Energy Resilience and Conservation Investment Program Projects

This section would contain a list of authorized energy resilience and conservation investment projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2403—Authorization of Appropriations, Defense Agencies

This section would authorize appropriations for defense agencies' military construction at the levels identified in section 4601 of division D of this Act.

Section 2404—Extension of Authority to Carry Out Certain Fiscal Year 2017 Project

This section would extend the authorization of a certain fiscal year 2017 project until October 1, 2023.

TITLE XXV—INTERNATIONAL PROGRAMS

SUMMARY

The budget request contained \$205,853,000 for the North Atlantic Treaty Organization Security Investment Program (NSIP) for fiscal year 2022. The committee recommends authorization of appropriations of \$205,853,000 NSIP for fiscal year 2022.

LEGISLATIVE PROVISIONS

SUBTITLE A—NORTH ATLANTIC TREATY ORGANIZATION SECURITY INVESTMENT PROGRAM

Section 2501—Authorized NATO Construction and Land Acquisition Projects

This section would authorize the Secretary of Defense to make contributions to the North Atlantic Treaty Organization Security

Investment Program in an amount not to exceed the sum of the amount specifically authorized in section 2502 of this Act and the amount collected from the North Atlantic Treaty Organization as a result of construction previously financed by the United States.

Section 2502—Authorization of Appropriations, NATO

This section would authorize appropriations for the North Atlantic Treaty Organization Security Investment Program at the levels identified in section 4601 of division D of this Act.

SUBTITLE B—HOST COUNTRY IN-KIND CONTRIBUTIONS

Section 2511—Republic of Korea Funded Construction Projects

This section would authorize the Secretary of Defense to accept six military construction projects totaling \$505.2 million pursuant to agreement with the Republic of Korea for required in-kind contributions.

Section 2512—Republic of Poland Funded Construction Projects

This section would authorize the Secretary of Defense to accept two military construction projects totaling \$37,000,000 pursuant to agreement with the Republic of Poland for required in-kind contributions.

TITLE XXVI—GUARD AND RESERVE FORCES FACILITIES

SUMMARY

The budget request contained \$669,962,000 for military construction of National Guard and Reserve facilities for fiscal year 2022. The committee recommends authorization of appropriations of \$925,367,000 for military construction for the National Guard and Reserves for fiscal year 2022.

ITEMS OF SPECIAL INTEREST

Explanation of Funding Adjustments

The committee recommends the inclusion of funding for projects requested by the Department of the Army for the National Guard and Reserve Components but not contained in the budget request for military construction and family housing. These increases include:

- (1) \$33.0 million for SQ OPS and AMU Complex at Beale Air Force Base, California;
- (2) \$29.2 million for a Transient Training Enlisted Barracks at Fort McCoy, Wisconsin;
- (3) \$29.2 million for a Transient Training Enlisted Barracks at Fort McCoy, Wisconsin;
- (4) \$24.0 million for a Transient Training Enlisted Barracks at Fort McCoy, Wisconsin;
- (5) \$16.0 million for a National Guard Readiness Center at Camp Grayling, Michigan;

(6) \$15.5 million for a Maneuver Area Training Equipment Site at Camp Shelby, Mississippi;

(7) \$13.8 million for Collective Training Unaccompanied Housing at Camp Minden, Louisiana;

(8) \$11.0 million for Collective Training Unaccompanied Housing at Camp Ashland, Nebraska;

(9) \$9.0 million for a Hazardous Cargo Pad at McEntire Joint National Guard Base, South Carolina;

(10) \$5.8 million for an Aircraft Maintenance Hangar at Virginia Army National Guard Sandston, Virginia; and

(11) \$5.0 million for Planning and Design for a National Guard Readiness Center at Joint Base Elmendorf-Richardson, Alaska.

In addition, the committee recommends an authorization of appropriation of \$28.0 million for planning and design activities associated with the Department of the Army for the National Guard Component, an increase of \$6.0 million.

The committee also recommends the inclusion of funding for projects requested by the Department of the Air Force for the Air National Guard and Reserve Components but not contained in the budget request for military construction and family housing. These increases include:

(1) \$17.5 million for a Replace Fuel Cell/Corrosion Control Hangar at Newcastle Air National Guard Base, Delaware;

(2) \$10.2 million for a Civil Engineering Facility at Abraham Capital Airport, Illinois;

(3) \$8.7 million for an Assault Strip Widening at Youngstown Air Reserve Station, Ohio; and

(4) \$6.5 million for a Medical Training Facility at Boise Air National Guard Base, Idaho.

Additionally, the committee recommends an authorization of appropriation of \$34.4 million for planning and design activities with the Department of the Air Force for the National Guard Component, an increase of \$16.0 million.

Finally, the committee recommends a reduction of \$1.0 million for the Department of the Navy Reserve Component for activities related to unspecified minor construction, an authorization of appropriation of \$1.4 million.

LEGISLATIVE PROVISIONS

Section 2601—Authorized Army National Guard Construction and Land Acquisition Projects

This section would contain the list of authorized Army National Guard construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2602—Authorized Army Reserve Construction and Land Acquisition Projects

This section would contain the list of authorized Army Reserve construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list

contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2603—Authorized Navy Reserve and Marine Corps Reserve Construction and Land Acquisition Projects

This section would contain the list of authorized Navy Reserve and Marine Corps Reserve construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2604—Authorized Air National Guard Construction and Land Acquisition Projects

This section would contain the list of authorized Air National Guard construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2605—Authorized Air Force Reserve Construction and Land Acquisition Projects

This section would contain the list of authorized Air Force Reserve construction projects for fiscal year 2022. The authorized amounts are listed on an installation-by-installation basis. The State list contained in this Act is intended to be the binding list of the specific projects authorized at each location.

Section 2606—Authorization of Appropriations, National Guard and Reserve

This section would authorize appropriations for the National Guard and Reserve military construction at the levels identified in section 4601 of division D of this Act.

TITLE XXVII—BASE REALIGNMENT AND CLOSURE ACTIVITIES

SUMMARY

The budget request contained \$284,639,000 for activities related to Base Realignment and Closure (BRAC) activities in fiscal year 2022. The committee recommends authorization of appropriations of \$434,639,000 for BRAC activities in fiscal year 2022.

ITEMS OF SPECIAL INTEREST

Explanation of Funding Adjustments

The budget request submitted by the Department of Defense for activities related to Base Realignment and Closure (BRAC) included \$284.6 million for activities related to recommendations from the previous BRAC rounds. The committee notes that additional resources may allow for acceleration of certain activities and also allow the Department to address emerging contaminants such

as perfluorooctane sulfonate and perfluorooctanoic acid. Therefore, the committee recommends an authorization of appropriations of \$115.3 million, an increase of \$50.0 million, for the Army Base Realignment and Closure activities, an authorization of appropriations of \$161.2 million, an increase of \$50.0 million, for the Navy Base Realignment and Closure activities, and an authorization of appropriations of \$154.2 million, an increase of \$50.0 million, for the Air Force Base Realignment and Closure activities in fiscal year 2022.

LEGISLATIVE PROVISIONS

Section 2701—Authorization of Appropriations for Base Realignment and Closure Activities Funded through the Department of Defense Base Closure Account

This section would authorize appropriations for ongoing activities that are required to implement the Base Realignment and Closure activities authorized by the Defense Base Closure and Realignment Act of 1990 (part A of title XXIX of Public Law 101–510), at the levels identified in section 4601 of division D of this Act.

Section 2702—Conditions on Closure of Pueblo Chemical Depot and Chemical Agent Destruction Pilot Plant, Colorado

This section would require the Secretary of the Army to submit a final closure and disposal plan for Pueblo Chemical Depot and Chemical Agent Destruction Pilot Plant within 180 days of the date of the enactment of this Act.

TITLE XXVIII—MILITARY CONSTRUCTION GENERAL PROVISIONS

ITEMS OF SPECIAL INTEREST

Air Purification Assessment

The committee remains concerned about airborne environmental and public health hazards inside buildings on military installations. The committee notes that there is a wide range of potential hazards including infectious diseases, mold spores, and other airborne pollutants. The committee believes that some commercial, off-the-shelf air purification devices are capable of capturing and destroying viruses, bacteria, mold spores, and other microscopic airborne pollutants, such as volatile organic compounds, and these positive attributes have recently been highlighted as part of an effective response to COVID–19. Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services by February 1, 2022, on an assessment of the Unified Facilities Criteria with respect to air purification standards and whether more widespread deployment of portable air purification technology should be considered to improve the air quality of base housing and other on-base facilities.

All-American Abode

The committee remains concerned about deficiencies within the Military Housing Privatization Initiative. The committee views safe and quality housing as a critical component to the readiness, morale, and retention of the entire force. In the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116–92), the committee required the Secretary of the Army to carry out a pilot program to build and monitor the use of not fewer than five single family homes for members of the Army and their families, at no less than two installations of the Army located in different climate regions of the United States, utilizing the All-American Abode design from the suburban single-family division design by the United States Military Academy.

Thus, the committee directs the Secretary of the Army to submit a report to the House Committee on Armed Services not later than March 1, 2022, regarding the status of the pilot program including, but not limited to, the number of homes constructed to date, the location and determining factors of the home construction, the current occupancy of the homes, and recommendations for expansion of the pilot program.

Army Compatible Use Buffer Program

The committee notes that the Army Compatible Use Buffer (ACUB) policy does not consider relocation assistance an allowable expense for local governments to meet the cost share agreement required within a Compatible Use Buffer Cooperative Agreement. Current ACUB policy also prohibits the use of ACUB funds for demolition costs. The committee further notes that some States, including Washington, require relocation assistance for public works projects. The committee is concerned that the current policy may unduly limit opportunities to address encroachment. The committee encourages the Secretary of the Army to review the ACUB policy's limitations on allowed expenses for local match requirements and consider whether a change of policy is warranted.

Arresting Further Science and Technology Infrastructure Decline

The committee notes that the science and technology sector of the Department of Defense is facing an accelerating infrastructure degradation and that these increasingly inadequate facilities require frequent updates to keep pace with modern standards, increase secure processing capability, and ensure safe operation. The committee further notes that in the last 5 years there have been several authorities including the ability to use up to \$6.0 million in operations and maintenance funding for available military construction not otherwise authorized by law. The committee observes that these authorities have been underutilized.

The committee encourages the Secretary of Defense to develop policies, guidelines, and procedures for authorized innovative alternative financing mechanisms to share construction and maintenance costs with the private sector to reduce risks, provide greater flexibility, generate cost savings; and, to leverage the existing lease authorities in section 2667 of title 10, United States Code, for potential out-lease of existing property on Federal land to the private sector.

Therefore, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services by December 1, 2022, that addresses the use of existing authorities to prevent further degradation of laboratory facilities. The report should address at a minimum the following:

(1) the potential increase in funding streams for maintenance by charging a 4 percent fee for service under section 2363 of title 10, United States Code, by service;

(2) the amount of projects obligated using operations and maintenance funds through section 2805 of title 10, United States Code, over the last 5 years, by service;

(3) opportunities to out-lease defense real estate to generate further funds for recapitalization;

(4) an assessment of statutory and policy impediments to executing leasing options to arrest further decline of the science and technology sector; and

(5) an assessment of the existing science and technology sector facilities condition and the impact of that condition on mission requirements, by service.

Assessment of Army Privatized Housing Initiative

The committee is concerned about reports of maintenance, livability, and safety problems with military family housing constructed and operated under the Military Housing Privatization Initiative (MHPI). The committee notes that the long-term nature of the agreements made pursuant to MHPI, typically for 50 years, provides the military services with limited recourse in the event of poor construction quality or service. Therefore, the initial negotiation, implementation, and oversight of such agreements are especially critical.

Given these concerns, the committee directs the Comptroller General of the United States to assess the Department of the Army's \$1.1 billion initiative to improve privatized housing at six locations, including Fort Hood, Fort Campbell, Fort Knox, Fort Wainwright, Fort Drum, and Army housing on Oahu. The assessment shall include an analysis of:

(1) the terms of the Army's negotiated agreement with the owner/operator of the privatized housing;

(2) the status of the effort at each of the six locations, including the status of the renovation of existing homes and the construction of new homes;

(3) the impact of the \$1.1 billion in private sector financing on the sustainment plans for the MHPI projects covered by each of the six locations;

(4) the extent to which the Department of the Army has developed and implemented plans to oversee and assess the effectiveness of this housing improvement effort; and

(5) any other matter that the Comptroller General deems necessary. The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services by March 30, 2022, on preliminary findings and present final results in a format and timeframe agreed to at the briefing.

Assessment of Childcare Facilities Needs

The committee is cognizant of the critical need among service men and women and Department of Defense civilians for child care. The committee notes that a lack of child care can impact retention and therefore is an important readiness issue. With approximately 200,000 children under the Department's purview, availability of child care is a topic that impacts families around the globe. Further, the committee is aware of reports that a significant number of children on childcare waitlists are age 3 and under. Therefore, the committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment to submit a report to the House Committee on Armed Services not later than February 15, 2022, assessing at a minimum the following:

(1) a list of domestic installation childcare facilities including the average size of facility waitlist and the average wait time for military families with immediate need for childcare over a previous 3-year period;

(2) an assessment of efforts by the Department of Defense to identify solutions to improve childcare availability and reduce waitlist time;

(3) a review of the extent to which childcare facility staffing availability is a factor for childcare availability; and

(4) an assessment of whether including childcare facilities and their administration in agreements for new privatized military family housing projects would be a viable solution.

Briefing on the Navy's Future Base Design in Hampton Roads

The committee recognizes that the United States Navy maintains several bases and facilities that occupy significant land holdings in the Hampton Roads area of Virginia and that the Navy is an integral component to the region with deep ties to the community. The committee is aware that the Navy is currently conducting a study on Future Base Design in the Hampton Roads area with the stated purpose of finding innovating solutions to infrastructure and service delivery challenges and expanding relationships with municipal partners. The committee notes that this innovative approach provides mutually beneficial opportunities for local municipalities to purchase property no longer needed by the Navy.

Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by March 1, 2022 on the status of its Future Base Design effort within the Hampton Roads region.

CNO Integrated Vulnerability Report

The committee directs the Secretary of the Navy to provide a report to the House Committee on Armed Services on all current installations that have unresolved vulnerabilities identified during CNO Integrated Vulnerability inspections, which installations do not meet established Anti-Terror/Force Protection (AT/FP) requirements, and how the service plans to address these shortfalls by June 1, 2022.

Conditions of Unaccompanied Personnel Housing

The committee is concerned that the military services have not allocated sufficient resources to the sustainment of unaccompanied personnel housing such as barracks and dormitories. The committee notes that for the last two decades the military services have taken risk in the sustainment of their infrastructure portfolios writ large, and that quality of life infrastructure such as unaccompanied personnel housing has suffered considerable degradation. The committee is concerned that the military services do not have a plan to budget for the mounting costs of remedying the deficiencies in unaccompanied housing and that this will in turn have a detrimental impact on the retention of our best and brightest service members.

The committee notes that the Army has announced a 10-year, nearly \$10.0 billion plan to renovate or replace barracks so that none are in poor (Q3) or failing (Q4) condition. However, the other military services have not provided a similarly detailed assessment of the unaccompanied housing. Accordingly, the committee directs the Secretary of the Air Force, the Secretary of the Navy, and the Secretary of the Army to each submit a report to the House Committee on Armed Services by June 1, 2022, that includes at a minimum the following:

- (1) a listing of unaccompanied personnel housing facilities that are in a poor (Q3) or failing (Q4) condition;
- (2) the cost to renovate or replace each facility to bring it up to a good (Q1) condition; and
- (3) the service's 10-year plan to address its unaccompanied personnel housing discrepancies.

Dillingham Airfield Water System

The committee is aware of ongoing negotiations between the Army, U.S. Department of Transportation, and Hawaii Department of Transportation regarding the long-term lease of Dillingham Airfield. The committee is aware that Dillingham Airfield is used for military rotary-wing aircraft. The committee is aware that there is a water system co-located with the airfield that provided potable water to the airfield as well as certain city- and county-operated locations and several private residences. The committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services by December 1, 2021, on the current status and potential long-term options for Dillingham Airfield, to include an assessment of whether this property is in excess and could be returned to the State of Hawai'i. This briefing shall include options that would facilitate establishment of a water utility cooperative or other regime to manage the water system on the airfield.

DoD Housing Compliance, Disclosure, and Evaluation of Housing Facilities

The committee remains concerned about the issues facing servicemembers and military families in DoD Housing facilities. The committee believes that all providers of privatized military housing should comply with all applicable housing codes and laws and disclose issues with housing units to each new tenant as required by the Tenants Bill of Rights. Further, the committee is con-

cerned about potential disparities in quality between housing available to enlisted servicemembers and officers. Therefore, the committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment to provide a briefing to the House Committee on Armed Services no later than March 1, 2022 regarding:

(1) an evaluation of whether privatized military housing organizations are appropriately complying with local and state housing and disclosure policies, as required by the Tenants Bill of Rights;

(2) an evaluation of the conditions of housing available to enlisted servicemembers and officers and any disparities between the two;

(3) an analysis of any trends or discrepancies between the maintenance request and repair response times between officers and enlisted servicemembers.

Energy Infrastructure at Former Naval Air Station Barbers Point

The committee recalls that Naval Air Station Barbers Point was closed as a result of recommendations of the 1993 Base Closure and Realignment Commission. The committee notes that of the total 3,833 acres of land, the Navy retained 1,238 acres which included utilities infrastructure impacting the local community. The committee further notes that in the years following the initial land transfer in 1999, the Navy has worked with private entities to transfer the water and sewer infrastructure but continues to retain the electrical infrastructure. The committee is concerned that the electrical infrastructure in the Kalaeloa area has degraded over time and now requires significant and costly upgrades. Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services not later than February 1, 2022, that at minimum addresses the following:

(1) a cost estimate of the design costs and required electrical utility infrastructure upgrades;

(2) the nature of the upgrades required, to include improvement in resiliency, reliability, and necessary upgrades to bring existing infrastructure up to current code requirements;

(3) a summary of stakeholder engagement with local governments and utility providers;

(4) a description of funding mechanisms that have been explored to include third-party financing and in-kind contributions; and

(5) any statutory changes that would be required to support these upgrades.

Emergency Generators for Energy Resiliency

The committee continues to have concerns regarding the resiliency and efficiency of the Department of Defense's critical infrastructure, and specifically the slow pace at which the military departments are leveraging existing authority to improve their energy efficiency and improve resiliency, including the use of energy savings contracts such as those authorized under section 2913 of title 10, United States Code. The committee commends the military departments for expanding their use of technologies such as microgrids to reduce demand for backup generators, but remains

concerned that the military departments continue to exclude consideration of more efficient and emerging technologies.

Given the concerns, the committee directs the Secretary of Defense to submit a report to the House Committee on Armed Services, not later than February 1, 2022, that includes at a minimum the following elements:

(1) a summary of current Department of Defense, military department, and Defense Agency guidance regarding the procurement of backup generators for military installations as part of a stand-alone procurement or as part of an Energy Savings Performance Contract;

(2) a list of the backup generators purchased by the military departments and Defense Agencies during the last 5 years, broken down by installation, with a breakdown of whether the purchased generators were powered by diesel, natural gas, propane, or some other alternative fuel; and

(3) business case analysis of assessment of various backup generator technologies as a means of improving efficiency.

Hawai'i Infrastructure Readiness Initiative

The committee notes that the Indo-Pacific area of responsibility is a critical element of the Department of Defense's global posture. The committee further notes that all of the military departments, but particularly the Department of the Army, hold key training lands and assets in Hawai'i that are vital to the strength of security posture in the region. The committee recalls that in fiscal year 2019, Congress directed the Department of the Army to create the Hawai'i Infrastructure Readiness Initiative (HIRI) to ensure there would be adequate attention to these lands and facilities. As a result of the program, the Department of the Army noted several major facility and infrastructure deficiencies, including aviation maintenance facilities, operations facilities, tactical equipment maintenance facilities, Pohakuloa Training Area, West Loch Ammunition Storage, and base operations and acknowledged that approximately 45 percent of all Army infrastructure in Hawai'i was in failed or failing condition.

The committee is dismayed that this program was terminated without advance notification and briefing to congressional leaders, including the Hawai'i delegation. The committee is now aware that the HIRI has been terminated and that Hawai'i infrastructure needs have been folded into the Army's broader Facilities Investment Plan. The committee is concerned that this shift will not provide adequate focus on the infrastructure needs to support our posture in the Pacific. Accordingly, the committee directs the Secretary of the Army to provide a report to the House and Senate Committees on Armed Services by March 1, 2022 laying out a detailed plan for infrastructure formerly covered by the HIRI.

The report shall include at a minimum the following:

(1) the Army's current plan for upholding its previous resource allocation commitments for infrastructure investment in Hawai'i through FY2030;

(2) the Army's prioritized list for projects in the Indo-Pacific across the Future Years Defense Program (FYDP);

(3) the Army's strategy for balancing service and combatant commander priorities and how this will impact infrastructure in the region; and

(4) the Army's congressional engagement plan to keep relevant Members of Congress and their staff apprised of their plans.

Housing Assessment for Military and Federal Civilian Employees

The Committee is concerned about the access to affordable housing for service-members and Department civilian employees, especially in parts of the country with the highest cost of living. These costs to personnel and their families can amount to a pay cut, thus making such assignments to these areas more challenging and an undue burden. The Committee also notes that there are thousands of underutilized, unused, or abandoned federal real properties spread across the nation. The Committee believes that some of these properties, if transferred to the Department of Defense, could be converted for affordable housing for military personnel and the Federal civilian workforce supporting the Department's mission.

Therefore, the Committee directs the Secretary of Defense to prepare a report to the congressional defense committees, the House Committee on Oversight and Reform, and the Senate Committee on Homeland Security and Governmental Affairs by October 1, 2022 as to the adequacy of military housing on base and affordable housing off base specific to South Florida (including Miami and Key West) and Washington State (including Joint Base Lewis McChord). Specifically, such report shall include the following items: in coordination with the Administrator of the General Service Administration, conduct an inventory of excess and surplus federal real properties at, and within 25 miles of, such military installations and assess the suitability and viability of such properties for the purpose of housing military personnel and Department civilian employees; adequacy of civilian and military family housing within the pay and benefits provided; options to acquire, refurbish, or build on such properties for military personnel and Department civilian employees, to include other Federal employees supporting the Department's mission; and, an overall timeline and plan to remedy deficient or unreasonable housing options.

Innovative Building Technologies

The committee is encouraged by innovative building techniques and materials that have the potential to provide enhanced resiliency and cost savings in military construction. The committee is particularly interested in the potential these techniques and materials have for building in polar regions and other challenging locations as well as lowering the cost of replacing degraded quality of life infrastructure. The committee is aware of precision manufactured building kits, three-dimensional printed concrete buildings, and materials such as mass timber that could help to reduce the number of unaccompanied housing facilities in poor and failing condition while at the same time enhancing installation resiliency.

Accordingly, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide a briefing to the House Committee on Armed Services by April 1, 2022, on the potential these materials and techniques have for military construc-

tion applications. The briefing shall include at a minimum the following:

(1) the results of the Department of Defense's review of innovative building techniques and materials to include the potential for cost savings, use in remote or challenging environments, and potential to increase installation resiliency;

(2) any materials or techniques that have been or will be reviewed by the Environmental Security Technology Certification Program; and

(3) should these materials and techniques prove promising, whether changes to the unified facilities code are planned.

Installation Security Improvements

The committee recognizes that the physical security of Department of Defense permanent domestic installations and forward operating bases is critical to the safety of our service members, and our national security. The committee believes it is imperative that Department entry control points be properly manned and monitored and that they should work diligently to fill any holes in coverage and awareness that might exist. Furthermore, the Department must keep domain awareness at the forefront and consider a diverse set of options when considering technological advances and other investments that will help secure installations including, but not limited to, counter unmanned aerial vehicle technology, sentry towers, and advanced cameras.

Therefore, the committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment to submit a report to the House Committee on Armed Services by February 15, 2022, on viable options to increase the security of Department facilities, both domestic and forward deployed, and provide recommendations on possible enhancements. This report shall include at a minimum the following:

(1) a review of the standard security infrastructure currently in place at our domestic facilities and forward-operation bases;

(2) a discussion of both traditional and technologically advanced multi-domain counter intrusion security options that the Department believes will improve security;

(3) a description of the manpower needs for each option and whether technological solutions can alleviate manpower shortages;

(4) a description of any concerns related to the surrounding domestic civilian communities and solutions for mitigating any civil liberty issues that might arise;

(5) a cost comparison of the improvements considered; and

(6) a list of recommended security improvements and estimated timeline for installation.

Installations of the Future

The committee notes the Department of Defense's efforts to develop "Installations of the Future" concepts for each of the services. The committee recognizes the need to ensure that these "Installations of the Future" concepts must have certain enabling technologies to ensure that the different applications and capabilities are able to function as envisioned. Further, the committee notes that National Defense Strategy and the Department of Defense

2020 Data Strategy highlights that the Department is a “data-centric organization that uses data at speed and scale for operational advantage and increased efficiency.” As such, the committee is aware of the Department of Defense’s future infrastructure requirements to meet rapidly expanding bandwidth and speed requirements to meet future needs.

Furthermore, as the Department of Defense continues to refine its “Installations of the Future” concepts, the committee urges the Department to clearly articulate and understand their future infrastructure needs so that a variety of different capabilities can work within the “Installations of the Future.” Accordingly, the committee directs the Secretary of Defense to provide a report to the House Committee on Armed Services, not later than May 31, 2022, on the Department’s efforts to ensure installations of the future incorporate construction techniques that ensure facilities are able to incorporate technologies of the future. The report should include how the Department of Defense is incorporating future data transmission requirements into technology refreshes and facilities construction to support new weapon systems, technologies, and training. The report should also include an estimate of the costs and savings generated from deployment of fiber-to-the-edge in current and future facilities, as well as a review of Department-wide guidance on adoption of next generation data architecture and recommendations to update the Unified Facilities Criteria and other policies to facilitate the use of new network architectures.

Integrated Project Delivery

The committee is aware of construction projects utilizing an Integrated Project Delivery (IPD) approach that incentivizes collaboration between the owner, architecture/engineering firm, the constructor, subcontractors, and trade partners, where parties seek to jointly share risk, reward, and align interests via a single multi-party agreement. The committee observes that IPD is commonly used in the international market and its use is expanding in North America, with positive indications of delivering projects on time and on budget, while reducing claims and litigation between parties. Accordingly, the committee directs the Secretary of Defense to provide a brief to the House Committee on Armed Services by March 1, 2022 assessing the utility of implementing IPD principles in Department of Defense construction contracts to improve project performance. The brief shall include:

- (1) a review of best practices in the global construction market with an emphasis on large or complex projects;
- (2) a summary IPD’s effectiveness in delivering large or complex projects with an identification of construction projects by type where an IPD proved advantageous;
- (3) a summary of legislative and regulatory barriers to IPD implementation with associated mitigation and relief recommendations; and
- (4) a summary of training and experience requirements for government managers responsible for delivery of complex projects including identification of common and significant training and experience shortfalls.

Intergovernmental Support Agreements

The committee is concerned about the continued degradation of Department of Defense facilities and tremendous backlog of current mission military construction requirements across the Department. The committee is also aware of the risk the Department has taken in infrastructure funding over the last 20 years and does not believe that facility risk will diminish. The committee further notes that many service members and civilian employees work in substandard and potentially unsafe facilities. This phenomenon has a significant impact on the Department's ability to recruit and retain the best and brightest talent and to accomplish the mission. The committee observes that section 2809 of title 10, United States Code, was initially included in the Military Construction Authorization Act, 1986 (Public Law 99-167) but due to Office of Management and Budget scoring implications has not been used to its fullest potential. This authority provides the Department with a much-needed alternative to military construction that could be used to upgrade facilities.

Therefore, the committee directs the Secretary of Defense, after consultation with the Director of the Office of Management and Budget, to provide a briefing to the House Committee on Armed Services by January 15, 2022, that assesses options to use the authority of section 2809, to include use limited to first-year operation and maintenance payment with termination liability, as an alternative method to accelerate military construction.

The briefing shall contain at a minimum an assessment of the operability and effect for achieving the aforementioned goals via the statutory language contained in sections 2809(c)(1)–(3) of title 10, United States Code, relating to obligations of the United States relating to requirements associated with the obligation of funds for long-term facilities contracts for certain activities and services.

Land Exchange with the Nisqually Tribe of Indians

The committee commends the Army and Nisqually Tribe of Indians for restarting discussions to facilitate a mutually acceptable land exchange and mend an important relationship. The committee encourages continued good-faith negotiations to resolve this issue swiftly, and facilitate an improved relationship between the Army and the Nisqually Tribe of Indians. To that end, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than February 1, 2022, on the status of the negotiations, and, if agreed, a specific timeline for the exchange of land.

Leveraging Opportunities for Public-Private Partnerships on U.S. Military Installations

The committee directs the Secretary of Defense to provide a report to the House Committee on Armed Services by no later than March 1, 2022 on recommendations for reducing barriers and streamlining processes to enable private companies to build partnerships with federal and state-owned military installations, including all-domain training centers, and installations operated by the National Guard.

The report shall include, at a minimum:

(1) recommendations regarding opportunities to leverage public-private partnerships to enable private companies to create synergies work with servicemembers and the National Guard;

(2) currently existing authorities allowing private companies to lease, rent, or otherwise permitted to operate on and improve, state and federally-owned military installations, to include support research, development, testing, and evaluation (RDT&E) of defense technologies;

(3) identifying the instrumentation and equipment needs necessary for increased RDT&E at all-domain training centers that are able to support training, testing and exercises for aircraft, maritime, littoral, amphibious, joint fire support, maneuver coordinated with fires and effects, multi-echelon sustainment, combined arms live fire, decisive major combat operations scenarios, air mobility, cyber operations, space operations, electronic warfare spectrum availability, mission command, remotely piloted aircraft launch and recovery, and four seasons capabilities; and

(4) any statutory or regulatory barriers to such opportunities.

Lualualei Naval Road/Kolekole Pass

The committee commends the Navy for entering into a memorandum of understanding with the City and County of Honolulu for emergency access to Lualualei Naval Road/Kolekole Pass. The committee is concerned that portions of the Navy-controlled road are in a hazardous condition that presents risk to both service members and emergency responders. Accordingly, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, which shall include at a minimum the following:

(1) the result of engineering assessment of the hazards present on the Navy-controlled portions of the road to include potential rockfall areas;

(2) an assessment of the cost and feasibility of mitigating these hazards;

(3) the timeline for executing the mitigation measures for these hazards; and

(4) a description of how these efforts have been coordinated with local authorities including the Hawaii Department of Transportation and City and County of Honolulu.

(5) update on the status of negotiations related to the renewal of existing memorandum between DOD personnel, the City and County of Honolulu, and interested parties to reestablish daily access for credentialed DoD individuals.

Naval Air Weapons Station China Lake Modernization

The committee recognizes the significance of Naval Air Weapons Station (NAWS) China Lake and the important research, development, acquisition, test, and evaluation of U.S. military weapon systems conducted throughout the base. The committee understands that as threats develop, NAWS China Lake faces obstacles in fulfilling its mission. These challenges include funding for maintenance and repair of critical research, test facilities, and ranges to maintain mission effectiveness; key sustainment, restoration, and modernization of research and test capabilities and equipment; ef-

fectively supporting multiple tenants and their applicable missions; development and growth of manned and unmanned aerial system capabilities; the installation's water security efforts; and increasing workforce recruitment, retention, and expertise. The committee notes that in addition to these challenges, NAWS China Lake is recovering from the 2019 earthquake that caused significant damage to the installation. As NAWS China Lake continues its reconstruction process, the committee acknowledges the close coordination with supporting communities to maximize these rebuilding efforts and continues to encourage open communication with the supporting communities to ensure the projects stay on track for timely completion.

The committee believes that given the current growth of requirements, the extensive reconstruction efforts, and the need for state-of-the-art weapon systems development capabilities, an assessment is necessary to provide relevant information on the challenges confronting NAWS China Lake. Therefore, the committee directs the Secretary of the Navy to submit a report to the House Committee on Armed Services by February 1, 2022, that details at a minimum the following related to NAWS China Lake:

- (1) projected mission growth requirements;
- (2) anticipated personnel and facilities plan to meet these requirements;
- (3) water security planning;
- (4) anticipated construction milestones to complete earthquake recovery efforts; and
- (5) a description of any other challenges that NAWS China Lake faces in the next 5 years.

Officer and Enlisted Housing Conditions

The committee recognizes the importance of uniform housing standards as it relates to military privatized housing. The committee believes that service members, regardless of whether they are officers or enlisted, deserve housing accommodations that are safe, secure, and free of any encumbrances that could negatively affect the health of the service members or their families. It is incumbent on the services to work diligently to provide accommodations and repairs that meet these standards, thereby helping maintain readiness standards throughout the force. The committee therefore encourages the Assistant Secretary of the Navy for Energy, Installations and Environment, the Assistant Secretary of the Army for Installations, Energy and Environment, and the Assistant Secretary of the Air Force for Installations, Environment and Energy to work to ensure that maintenance response times for issues including, but not limited to, health hazards, roofing issues, electrical or pipe complications, mold remediation, and heating, ventilation, and air conditioning units, be handled in a diligent and timely fashion regardless of whether the service member is an officer or enlisted member of the Armed Forces.

Prioritizing Prototyping Facilities

The committee notes the importance of microelectronics in Great Power Competition. The committee further notes that modernizing the nation's labs is essential to maintaining and furthering our

qualitative edge in microelectronics research and development. The committee is concerned that many of these facilities are in worsening condition. One of these labs, the Massachusetts Institute of Technology (MIT) Lincoln Labs, has developed a master plan for modernization. The committee strongly supported the Air Force's Fiscal Year 2016 budget request that included funding for the West Lab project and is pleased to see the first phase of that project, the Compound Semi-Conductor Laboratory and Microelectronics Integration Facility, is proceeding relatively on schedule. The committee is aware that there is a second phase of the West Lab project, the Engineering Prototyping Facility (EPF) that is designed to continue the modernization of MIT Lincoln Labs. Modern facilities of this kind are vital to driving innovation across the services and secondarily support the recruitment and retention of the most talented STEM graduates in support of the national defense mission.

Accordingly, the committee directs the Secretary of the Air Force to provide the House Committee on Armed Services a briefing by no later than February 1, 2022, on its current plans for lab modernization to support innovation and prototyping across the nation's lab enterprises, including its plans for MIT Lincoln Labs.

Privatized On-Base Lodging Programs

The committee has long been supportive of Department of Defense efforts to find appropriate savings in its non-core functions and to apply those resources to critical defense priorities. One such area is in official traveler lodging, or on-base lodging. The committee commends the Army's successful lodging privatization program, and notes with interest the recent Government Accountability Office study on the Department's lodging programs. This study made clear that the Army's lodging program has resulted in upgraded lodging facilities, increased traveler satisfaction, significant costs savings, and a fully self-sustaining lodging program.

The committee believes that the Department of the Navy and Air Force can also benefit from a transition to a similar privatization model, and encourages the sharing of information and best practices among the Army and the other services. Accordingly, the committee directs the Secretary of Defense to provide a report to the congressional defense committees by March 1, 2022 on the status of privatizing the remainder of the Department of Defense official traveler lodging facilities. This report shall include the following:

(1) lessons learned from the Army's twelve-year privatization experience, and how these lessons can be applied toward privatization of Navy and Air Force lodging programs,

(2) a summary of the Department of the Navy and Department of the Air Force views on lodging privatization,

(3) an assessment of options to transition Navy and Air Force to a lodging privatization model, including recommendations on the size and scope of the initial conveyances, as well as the optimal time frame to move to full privatization,

(4) an assessment of the efficacy of an expanded DOD-wide lodging privatization portfolio based on the Army model.

Scoring Improvements and Defense Community Support Authority

The committee is concerned about the backlog of current mission military construction requirements across the Department of Defense and the impact this has on our military departments and their ability to operate and project forces around the globe. The committee is aware the risk the Department of Defense has taken in infrastructure funding over the last twenty years is not likely to change in any substantive way. Many of our military members and civilian employees across the DoD are working in substandard, and in many cases, unsafe, facilities and this has a significant impact on the Department's ability to recruit the best and brightest talent and to accomplish the mission. The committee is also aware of the poor and failing conditions in many of the Department of Defense's barracks and dormitories. The committee notes that section 2809 of title 10, U.S.C. was incorporated in the Military Construction Authorization Act, 1986 (P.L. 99-167) and due predominantly to scoring implications has not been used. This authority provides the DoD with a much-needed alternative to military construction to provide safe and adequate facilities.

The committee believes OMB "scoring" associated with section 2809 should be limited to first year Operation and Maintenance payment plus Termination Liability, if any, utilizing the requirement that: (i) "obligations of the United States to make payments under the contract in any fiscal year is subject to appropriations being provided specifically for that fiscal year and specifically for that project . . ." 10 USC 2809(c)(1), and (ii) ". . . such a commitment given under the authority of this section does not constitute an obligation of the United States" Section 2809(c)(3).

Further, this committee is also aware of the significant partnerships that have been executed and the savings that have been realized between communities and their neighboring military installations under authority provided under section 2679 of title 10 U.S.C. The committee believes that an expansion of this authority to specifically include the authority for the construction, management, and operation of a facility on or near a military installation would provide the opportunity for a community to provide much needed facilities for the neighboring military installation. The committee believes that the services to be provided at that facility can be more economically provided through the use of an intergovernmental support service contract than through the use of conventional means. Currently, adoption of this expansion of authority have triggered OMB scoring despite noting the long-term savings that would be possible, along with improved working conditions and enhanced mission performance.

Therefore, the committee directs the Secretary of Defense to prepare a brief to the House Committee on Armed Services by March 1, 2022 as to: options to address scoring limitations associated with these provisions; further statutory modifications that could be made to implement sections 2809 intent; and, additional options to expand section 2679 authority.

Soo Locks, Sault Ste. Marie, Michigan

The committee understands that the Soo Locks on the St. Marys River at Sault Ste. Marie, Michigan, are the only waterway connec-

tion from Lake Superior to the rest of the Lower Great Lakes and the St. Lawrence Seaway. The committee notes that a failure at the Soo Locks would have a potentially significant impact on national security as a key waypoint in the U.S. iron mining-integrated steel production-manufacturing supply chain. Without redundancy, any unexpected outage at the Soo Locks would likely cripple steel production that is used for national defense priorities. Therefore, the committee supports a second 1,200-foot lock and believes that such a lock is necessary to maintain redundancy and resiliency at the Soo Locks and further protects our national defense priorities.

Support for Gould Island demolition

The Committee recognizes the importance of ensuring communities that host defense installations are safe from any structural or environmental hazards that result from activities at such sites. The Committee is also aware of the Navy's efforts to demolish and restore sections of installations on the northern part of Gould Island in Rhode Island, and as such directs the Secretary of the Navy to submit a report to the House Committee on Armed Services by January 1, 2022 on the challenges facing such demolition efforts, a draft timeframe within which the project could be accomplished, and funding needs related to such efforts.

Three Rivers Levee Authority

The committee commends the Air Force for working with the Three Rivers Levee Authority to provide an easement to help facilitate their Goldfields 200-year levee project for southern Yuba County. The committee understands that the easement is associated with a 0.218 acre parcel of land that is geographically separated from Beale Air Force Base and is not currently being used by the Air Force nor is there any planned use for this parcel. Given that the levee project is a life-safety project, and fee simple ownership would allow the Three Rivers Levee Authority maximum flexibility in conducting their flood control mandate, the committee encourages the Air Force to continue to work expeditiously with the Three Rivers Levee Authority to explore the possibility of a public benefit land transfer of this parcel. Accordingly, the committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services on November 1, 2021, January 1, 2022, and March 1, 2022, to provide detailed updates on the progress being made toward a transfer of this parcel.

Update on Tenant's Bill of Rights Implementation

The committee is aware that full implementation of the tenant's bill of rights by Department of Defense's privatized military family housing partners is expected in fiscal year 2021. The committee considers full implementation a major step toward ensuring safe and quality housing for our service men and women as well as their families. The committee views safe and quality housing as a critical component to the readiness, morale, and retention of the entire force. As such, the committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment to provide a briefing to the House Committee on Armed Services by February

15, 2022, on the implementation of the tenant's bill of rights across the privatized military family enterprise. The report shall include at a minimum the following:

(1) a description of how the tenant's bill of rights implementation functioned during the summer 2021 permanent change of station season;

(2) a description of any barriers to full implementation or executability challenges observed;

(3) a review of the next steps privatized military family housing partners can take toward improving tenant satisfaction; and

(4) a discussion on the feasibility of privatized military family housing partners voluntarily providing 7-year histories to all prospective tenants.

Wait Times for On-Base Housing

The Committee is concerned that certain military installations located in highly competitive housing markets are not providing adequate on-basing opportunities for service men and women. Therefore, the Committee directs the Assistant Secretary of Defense for Energy, Installations, and Environment to provide a briefing to the House Committee on Armed Services by February 15, 2022, on wait times for housing located on military installations located in competitive housing markets with a rental vacancy of less than 7%. This briefing shall include at a minimum the following:

(1) a review of those installations in competitive housing markets with a rental vacancy of less than 7% with the longest waitlist lists;

(2) the feasibility of developing a baseline for acceptable waiting list times for on-base housing;

(3) a strategy for addressing the demand for on-base housing in these markets.

LEGISLATIVE PROVISIONS

SUBTITLE A—MILITARY CONSTRUCTION PROGRAM CHANGES

Section 2801—Special Construction Authority to Use Operation and Maintenance Funds to Meet Certain United States Military-Related Construction Needs in Friendly Foreign Countries

This section would amend section 2804 of title 10, United States Code, to allow the Secretaries of the military departments to use operation and maintenance funds for certain combatant command construction priorities.

Section 2802—Increase in Maximum Amount Authorized for Use of Unspecified Minor Military Construction Project Authority

This section would increase the limit for unspecified minor military construction from \$6,000,000 to \$8,000,000.

Section 2803—Increased Transparency and Public Availability of Information regarding Solicitation and Award of Subcontracts under Military Construction Contracts

This section would increase transparency of information regarding the award of subcontracts to military construction contracts.

Section 2804—Public Availability of Information on Facilities Sustainment, Restoration, and Modernization Projects and Activities

This section would amend section 2851(c)(1)(A) of title 10, United States Code, to include facilities sustainment, restoration, and modernization projects over \$15,000,000.

Section 2805—Limitations on Authorized Cost and Scope of Work Variations

This section would amend section 2853 of title 10, United States Code, to place limitations on the cost and scope of work variations for which the military departments can use notification procedures.

Section 2806—Use of Qualified Apprentices by Military Construction Contractors

This section would require the Secretary of Defense to update the Defense Federal Acquisition Regulation Supplement to require each offeror for a military construction project to certify that if awarded such contract, the offeror will establish a goal that not less than 20 percent of the total workforce employed in the performance of such a contract are qualified apprentices and develop incentives for contracts for military construction projects to meet or exceed that goal. It also would require status update reports on the progress of implementation of this requirement.

Section 2807—Modification and Extension of Temporary, Limited Authority to Use Operation and Maintenance Funds for Construction Projects in Certain Areas outside the United States

This section would modify and extend the limited authority to use operation and maintenance funds for construction projects in certain locations outside the United States.

SUBTITLE B—CONTINUATION OF MILITARY HOUSING REFORMS

Section 2811—Applicability of Window Fall Prevention Requirements to All Military Family Housing whether Privatized or Government-Owned and Government-Controlled

This section would clarify that window fall prevention requirements apply to all military family housing regardless of whether the housing is privatized or owned and operated by the Government.

Section 2812—Modification of Military Housing to Accommodate Tenants with Disabilities

This section would amend section 2891a of title 10, United States Code, by clarifying military privatized family housing landlord responsibilities in relation to those tenants with a disability. Once informed of a tenant with special needs, the landlord would be responsible for modifying the housing unit to comply with Americans with Disabilities Act standards.

Section 2813—Required Investments in Improving Military Unaccompanied Housing

This section would require the military departments to reserve a percentage of their Facilities Sustainment, Restoration, and Modernization funds for investment in permanent unaccompanied housing for service members.

Section 2814—Improvement of Department of Defense Child Development Centers and Increased Availability of Child Care for Children of Military Personnel

This section would require the military departments to conduct safety inspections at Department of Defense Child Development Centers and develop 10-year facility improvement plans for these child development centers.

SUBTITLE C—REAL PROPERTY AND FACILITIES ADMINISTRATION

Section 2821—Secretary of the Navy Authority to Support Development and Operation of National Museum of the United States Navy

This section would authorize the Secretary of the Navy to enter into cooperative agreements or contracts in support of the development and operation of the National Museum of the United States Navy.

Section 2822—Expansion of Secretary of the Navy Authority to Lease and License United States Navy Museum Facilities to Generate Revenue to Support Museum Administration and Operations

This section would amend section 2852 of the Military Construction Authorization Act for Fiscal Year 2006 (division B of Public Law 109–163) to expand the Secretary of the Navy’s authority to lease and license Navy Museum facilities.

Section 2823—Department of Defense Monitoring of Real Property Ownership and Occupancy in Vicinity of Military Installations to Identify Foreign Adversary Ownership or Occupancy

This section would require the Secretary of Defense to monitor real property ownership and transactions in the vicinity of military installations, and to make certain reports based on that information.

SUBTITLE D—MILITARY FACILITIES MASTER PLAN REQUIREMENTS

Section 2831—Cooperation with State and Local Governments in Development of Master Plans for Major Military Installations

This section would require the commanders of major military installations to consult with State and local communities in the development of installation master plans.

Section 2832—Prompt Completion of Military Installation Resilience Component of Master Plans for At-Risk Major Military Installations

This section would require each military department to complete the extreme weather resilience component of a military installation master plan at two of its installations within 1 year of the date of the enactment of this Act.

Section 2833—Congressional Oversight of Master Plans for Army Ammunition Plants Guiding Future Infrastructure, Facility, and Production Equipment Improvements

This section would require the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to submit to the congressional defense committees not later than March 31, 2022, and annually for the following 4 years, the facilities master plans for the government-owned, contractor-operated ammunition plants, that includes cost estimates prioritized by activity.

SUBTITLE E—MATTERS RELATED TO UNIFIED FACILITIES CRITERIA AND MILITARY CONSTRUCTION PLANNING AND DESIGN

Section 2841—Amendment of Unified Facilities Criteria to Require Inclusion of Private Nursing and Lactation Space in Certain Military Construction Projects

This section would require the Secretary of Defense to amend the Unified Facilities Criteria to include a requirement for private nursing areas in certain Department of Defense facilities.

Section 2842—Additional Department of Defense Activities to Improve Energy Resiliency of Military Installations

This section would require the Department of Defense to update the Unified Facilities Criteria to include considerations related to the construction of microgrids as part of new construction projects.

Section 2843—Consideration of Anticipated Increased Share of Electric Vehicles in Department of Defense Vehicle Fleet and Owned by Members of the Armed Forces and Department Employees

This section would require the Secretary of Defense to amend the Unified Facilities Criteria to require consideration of electric vehicle charging considerations as part of new construction. This section would also lay out planning criteria for deployment of electric vehicle charging stations.

Section 2844—Conditions on Revision of Unified Facilities Criteria or Unified Facilities Guide Specifications Regarding Use of Variable Refrigerant Flow Systems

This section would require the Department of Defense to notify the House Committee on Armed Services prior to making any changes to the Unified Facilities Criteria related to variable refrigerant flow air conditioning systems.

SUBTITLE F—LAND CONVEYANCES

Section 2851—Modification of Restrictions on Use of Former Navy Property Conveyed to University of California, San Diego

This section would modify the Navy's reversionary interest in property conveyed to the University of California, San Diego.

Section 2852—Land Conveyance, Joint Base Cape Cod, Bourne, Massachusetts

This section would authorize the Secretary of the Air Force to transfer certain lands to the Commonwealth of Massachusetts.

Section 2853—Land Conveyance, Rosecrans Air National Guard Base, Saint Joseph, Missouri

This section would allow the Secretary of the Air Force to convey an approximately 54 acres at Rosecrans Air National Guard Base to the City of Saint Joseph, Missouri.

Section 2854—Land Conveyance, Naval Air Station Oceana, Virginia Beach, Virginia

This section would allow the Secretary of the Navy to convey approximately 2.77 acres at Naval Air Station Oceana, Virginia Beach, Virginia, to the School Board of the City of Virginia Beach, Virginia.

SUBTITLE G—AUTHORIZED PILOT PROGRAMS

Section 2861—Pilot Program on Increased Use of Mass Timber in Military Construction

This section would require the military departments to conduct a pilot program for the use of mass timber products in military construction.

Section 2862—Pilot Program on Increased Use of Sustainable Building Materials in Military Construction

This section would require the Secretary of Defense to initiate a pilot program for use of sustainable building materials in military construction.

Section 2863—Pilot Program on Establishment of Account for Reimbursement for Use of Testing Facilities at Installations of the Department of the Air Force

This section would require the Secretary of the Air Force to establish a pilot program to authorize installation commanders to create an account for the purpose of receiving reimbursement funds for the use of testing and training facilities on their installation.

Section 2864—Pilot Program to Expedite 5G Telecommunications on Military Installations through Deployment of Telecommunications Infrastructure

This section would authorize each Secretary of a military department to establish a pilot program to evaluate the feasibility of de-

ploying telecommunications infrastructure to expedite the availability of 5G telecommunications on military installations.

SUBTITLE H—ASIA-PACIFIC AND INDO-PACIFIC ISSUES

Section 2871—Improved Oversight of Certain Infrastructure Services Provided by Naval Facilities Engineering Systems Command Pacific

This section would require the Secretary of the Navy to designate a position at the Naval Facilities Engineering Systems Command Pacific to provide oversight and continuity over leased property in Hawaii.

SUBTITLE I—MISCELLANEOUS STUDIES AND REPORTS

Section 2881—Identification of Organic Industrial Base Gaps and Vulnerabilities Related to Climate Change and Defensive Cybersecurity Capabilities

This section would amend section 2504 of title 10, United States Code, to require annual reporting on climate and cyber vulnerabilities in industrial base infrastructure.

SUBTITLE J—OTHER MATTERS

Section 2891—Clarification of Installation and Maintenance Requirements Regarding Fire Extinguishers in Department of Defense Facilities

This section would clarify that the Department of Defense is required to adopt the National Fire Protection Association's NFPA 1, Fire Code.

TITLE XXIX—ADDITIONAL MILITARY CONSTRUCTION PROJECTS RELATED TO SCIENCE, TECHNOLOGY, TEST, AND EVALUATION

LEGISLATIVE PROVISIONS

Section 2901—Authorized Army Construction and Land Acquisition Projects

This section would authorize the Secretary of the Army to acquire real property and carry out the military construction projects related to science, technology, test, and evaluation for the installations or locations inside the United States.

Section 2902—Authorized Navy Construction and Land Acquisition Projects

This section would authorize the Secretary of the Navy to acquire real property and carry out the military construction projects related to science, technology, test, and evaluation for the installations or locations inside the United States.

Section 2903—Authorized Air Force Construction and Land Acquisition Projects

This section would authorize the Secretary of the Air Force to acquire real property and carry out the military construction projects related to science, technology, test, and evaluation for the installations or locations inside the United States.

Section 2904—Authorization of Appropriations

This section would authorize funding for military construction projects related to science, technology, test, and evaluation authorized by this title, as specified in the funding table in section 4601.

DIVISION C—DEPARTMENT OF ENERGY NATIONAL SECURITY AUTHORIZATIONS AND OTHER AUTHORIZATIONS

TITLE XXXI—DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS

ITEMS OF SPECIAL INTEREST

Advanced Simulation and Computing for Stockpile Stewardship

The Committee notes that the ability of the National Nuclear Security Administration to continue to rely on high-fidelity computer modeling to perform mission critical stockpile stewardship faces heavy challenges from the exponentially increasing size of simulation data sets, resulting in corresponding exponential growth in energy consumption and computational code run times. Industry experts have estimated that future exascale systems could require 2 gigawatts of power within the next six years. NNSA must ensure that its existing Integrated Design Codes (IDCs), which took more than a decade to develop and validate, will continue to perform on the next-generation compute platforms in order to maintain confidence in the nuclear stockpile without the need for nuclear explosive testing.

Central to adapting existing IDCs to systems that solve the burgeoning energy consumption and code run time challenges will be the development of hardware and software solutions capable of reading, analyzing and acting on data either where it is generated or stored, rather than requiring caching or movement of data to a CPU as often required by legacy compute architecture. Co-design collaborations between the national labs and industry to develop such scalable hardware and software solutions can ensure that existing and new IDCs will perform well on future high performance computing systems.

Therefore, the committee directs the Administrator to provide a briefing to the House Committee on Armed Services by June 1, 2022, on its plans to manage the growing energy consumption and computation code run time requirements stemming from high-fidelity computer modeling to perform mission critical stockpile stewardship, including the co-design and procurement of software and hardware linked to exascale computing applications.

Briefing on Capabilities, Plans, and Strategy With Regard to Artificial Intelligence, Machine Learning, and Data Science

The National Nuclear Security Administration (NNSA) laboratories maintain and foster important capabilities for the Nation with regard to artificial intelligence, machine learning, and data science. Additionally, advances in these areas provide opportunities, challenges, and risks to the nuclear security enterprise. Given their cross-cutting nature, the committee directs the Administrator of the National Nuclear Security Administration to provide a briefing to the House Committee on Armed Services not later than March 1, 2022, on the NNSA's plans for an enterprise-wide strategy with regard to artificial intelligence, machine learning, and data science. The briefing should include:

- (1) an inventory of the NNSA laboratories' capabilities in this area;
- (2) opportunities to expand such capabilities;
- (3) what investments in software, data, and infrastructure are necessary to improve capabilities; and
- (4) whether any realignment or new organizational structures may be necessary to further foster the development of such capabilities.

Comptroller General Review of Insider Threats to the Nuclear Security Enterprise

The National Nuclear Security Administration (NNSA) is undergoing the largest expansion of its workforce in decades resulting in the hiring of thousands of employees per year. Given the sensitivity of the work conducted within the nuclear enterprise, the NNSA must ensure its facilities, information, and workforce are protected from a range of threats, including potential insider threats. Therefore, the committee directs the Comptroller General of the United States to undertake a review of the Department of Energy's insider threat programs with respect to the nuclear security enterprise. The Comptroller General should review the adequacy of such programs to respond to modern threats and the adequacy of funding for insider threat programs.

The committee further directs the Comptroller General of the United States to provide a briefing to the House Committee on Armed Services by February 1, 2022, on the Comptroller General's preliminary findings and to submit a final report on a date agreed to at the time of the briefing.

Comptroller General Review of the Enhanced Capability for Subcritical Experiments Program

The National Nuclear Security Administration's (NNSA) Stockpile Stewardship Program seeks to maintain confidence in the safety, security, and reliability of U.S. nuclear weapons without nuclear testing. As part of the program, NNSA conducts experiments to obtain scientific data on the behavior of nuclear weapon materials, such as plutonium, with the use of complex, high-speed diagnostic instruments.

To address these needs, NNSA developed the Enhanced Capabilities for Subcritical Experiments (ECSE) program. Executing the ECSE program relies on a number of construction projects and ac-

tivities at the U1a Complex. When the ESCE program and its associated construction projects are considered together, NNSA is proposing to spend several billion dollars over the next 5 years.

Therefore, the committee directs the Comptroller General of the United States to review the ECSE program, including its adequacy to support the plutonium pit production program and plutonium science programs. The committee further directs the Comptroller General to provide an interim briefing to the House Committee on Armed Services not later than December 31, 2021, and a final report to the committee not later than April 1, 2022.

Cost Estimating Practices of the National Nuclear Security Administration

The Department of Energy / National Nuclear Security Administration (DOE / NNSA) 413.3B process outlines how NNSA capital projects mature and uses five critical decisions (CDs) or phases, progressing from broadly-stated mission needs into well-defined requirements. These CDs are gates that ensure that a project is on track (cost and schedule), is consistent with its intended purpose (scope) and has the support of senior leadership.

While the Committee commends the NNSA for largely keeping projects on time / budget from CD-1 to CD-4 for projects that have begun over the last five years and recognizes that it is the cost and schedule developed at the time of CD-2 approval to which a project is held and evaluated against, it has been frustrated that the CD-0 and Analysis of Alternatives (AoA) cost and schedule estimates have consistently risen as projects have matured from the CD-0 / AoA to CD-1.

Given this, the committee directs the Administrator of the National Nuclear Security Administration to provide a briefing to the House Committee on Armed Services not later than April 1, 2022, on the NNSA's plans to improve and more accurately represent costs at the CD-0 and AoA phases of the 413.3B process. The briefing should include:

- (1) Changes and improvements NNSA made to more accurately represent costs at the CD-0 and AoA stages of the 413.3B process; and
- (2) How NNSA engaged with external facility and project planning expertise to address deficiencies in the process.

Incentivizing Disposition of Radioactive Sources

The committee directs the Comptroller General of the Government Accountability Office to review and provide recommendations, including proposals for Congressional action if necessary, to incentivize private industry to dispose of radioactive sources, including consideration of whether to establish a fee to create a Federally administered fund to ensure private industry has reserved sufficient funds to cover the costs of such disposal. These recommendations should be provided to the House Committee on Armed Services no later than December 1, 2022.

Independent Review Team Report on the B61–12 Life Extension Program and W88 Alteration 370 Technical Issue

The committee commends the work of the Independent Review Team (IRT) in studying the root causes of the capacitor technical issue associated with the B61–12 life extension program and the W88 alteration 370 program. The issue resulted in significant delays and cost increases in the W88 and B61 programs. The IRT's work resulted in numerous recommendations to ensure future life extension programs and major alterations do not incur similar issues. Of note, the IRT found that: "Recognizing the nuclear security enterprise has not sufficiently incorporated lessons learned from prior and on-going modernization programs, the IRT concludes there is a likelihood of more widespread, latent issues stemming from early program decisions." As such, the committee urges the Administrator of the National Nuclear Security Administration (NNSA) to reconstitute the IRT at the appropriate time to gauge the NNSA's progress in implementing its recommendations. Therefore, the committee directs the Administrator of the National Nuclear Security Administration to provide a briefing to the House Committee on Armed Services not later than February 28, 2022, on the implementation of the IRT recommendations, with a focus on changes made to ensure future Life Extension Programs, namely the W80–4, will not incur similar issues.

Leveraging Artificial Intelligence and Innovative Commercially Available Technology to Secure Department of Energy Installations

The committee notes that recent advances in commercially available technologies, including artificial intelligence, computer vision, and sensor fusion capabilities, have made it possible to deploy innovative technology to detect, track, classify, and identify threats at scale to meet force protection and installation security requirements. These efforts have demonstrated improvements in security, while augmenting the cognitive ability of human operators and drastically lowering both the manpower burden and fully burdened cost to secure critical infrastructure. The committee is aware that such initiatives are occurring with other government agencies, including the Department of Defense and Department of Homeland Security Customs and Border Protection.

The committee directs the Secretary of Energy to conduct a review of its security requirements across the entire complex, including Department of Energy laboratories, Environmental Management facilities, and National Nuclear Security Administration labs, plants, and sites, to assess how and if the use of artificial intelligence and commercially available technology could improve security efficiencies while possibly reducing security overall costs and mission impacts from security controls. Additionally, the review should include an evaluation of risks and vulnerabilities potentially introduced through commercial artificial intelligence capabilities. The Department shall provide a briefing to the House and Senate Armed Services Committees detailing its findings not later than August 1, 2022. The report shall include recommendations on the feasibility of a pilot program at one or more sites within the complex to field commercially available capabilities, as required by sec-

tion 3307 of title 41, United States Code, to assess these capabilities to enhance security and reduce overall security costs.

NNSA Management and Operation Contract Risk Mitigation

The committee is concerned that the lack of clarity and sometimes sustained periods of time before a contract is awarded for a management and operation (M&O) contract for the National Nuclear Security Administration's (NNSA) facilities can provide uncertainty for employees at the facilities and for industry partners seeking to work with the federal government.

The committee recognizes the value of the Small Business Administration's Mentor Protégé Program and the qualified small businesses that support NNSA's critical mission to meet a required capability. As such, it is of concern to the committee that by causing uncertainty through contract award delays that the NNSA is discouraging small businesses from taking part in this program and working to support the NNSA going forward. In the efforts to modernize much of the infrastructure throughout the Nuclear complex, support from industry partners will be critical.

Therefore, the committee directs the Administrator of the National Nuclear Security Administration, in coordination with the Administrator of the Small Business Administration when necessary, to submit a report to the House Committee on Armed Services by March 1, 2022, on the following:

- (1) An assessment of the time required to award M&O contracts throughout the NNSA complex;
- (2) A discussion of the risks and how they are mitigated when an M&O contract is ending and the benefits that accrue from M&O contract competitions;
- (3) Recommendations on how delays in awarding of a contract can be avoided in the future;
- (4) Recommendations on how to improve and better utilize the Small Business Administration's Mentor Protégé Program to meet the NNSA's mission objectives;
- (5) A discussion of how transitions are managed between M&O contracts and any recommendations for improvement;
- (6) A discussion of provisions included in M&O contracts to ensure stability for employees and small businesses who are doing contracted work at NNSA sites and any recommendations for improving these provisions;
- (7) Recommendations on ways to improve the transition process to ensure that a change in a management and operation contract does not hinder the work done at the facilities going forward.

Sustaining and Improving Monitoring, Detection, and Verification Test Bed Capabilities

The committee notes the important work of the National Academies study on "Nuclear Proliferation and Arms Control Monitoring, Detection, and Verification." In its interim report, the study noted the importance of test beds to the monitoring, detection, and verification mission. In particular, it found that, "The test beds are a cost-effective, innovative use of the Department of Energy's National Nuclear Security Administration complex to provide research facilities to the nonproliferation and arms control research, devel-

opment, test, and evaluation community. The vision, communication, and access to the test beds have potential for improvement.” Therefore, the committee directs the Administrator of the National Nuclear Security Administration to provide a briefing to the House Committee on Armed Services not later than February 1, 2022, on expanding the Monitoring, Detection and Verification (MDV) test bed capability of the United States. The briefing should include:

- (1) a plan to expand the MDV test bed capability over the next 10 years;
- (2) costs and schedules to implement such a plan;
- (3) an external review of test bed capabilities; and
- (4) options for ensuring test bed capabilities are available to and leveraged by universities.

Transition to Independent Audits of Management and Operating Contractors’ Annual Statements of Costs Incurred and Claimed

The committee commends the Department of Energy Inspector General on its Special Report on the Transition to Independent Audits of Management and Operating Contractors’ Annual Statements of Costs Incurred and Claimed (DOE–OIG–21–26). The Inspector General’s multi-year review coincides with committee interest in this issue from last year’s committee report which directed the Administrator of the National Nuclear Security Administration to provide a plan to independently audit its management and operating contractors every 3 years. In particular, the committee notes the Inspector General’s finding that, “the Inspector General Act explicitly requires independent audits, including audits of incurred costs” of the Department’s management and operating contractors. Given the historically high levels of funding for the Department of Energy’s Atomic Energy Defense programs, ensuring proper use of taxpayer dollars is vital. The committee urges Department of Energy leadership, as well as the Inspector General, to ensure the committee is kept informed throughout the implementation period of its new auditing program.

LEGISLATIVE PROVISIONS

SUBTITLE A—NATIONAL SECURITY PROGRAM AUTHORIZATIONS

Section 3101—National Nuclear Security Administration

This section would authorize appropriations for the National Nuclear Security Administration of the Department of Energy for fiscal year 2022 at the levels specified in the funding table in division D of this Act.

Section 3102—Defense Environmental Cleanup

This section would authorize appropriations for defense environmental cleanup for the Department of Energy for fiscal year 2022 at the levels specified in the funding table in division D of this Act.

Section 3103—Other Defense Activities

This section would authorize appropriations for other defense activities for the Department of Energy for fiscal year 2022 at the levels specified in the funding table in division D of this Act.

Section 3104—Nuclear Energy

This section would authorize appropriations for nuclear energy for the Department of Energy for fiscal year 2022 at the levels specified in the funding table in division D of this Act.

SUBTITLE B—PROGRAM AUTHORIZATIONS, RESTRICTIONS, LIMITATIONS, AND OTHER MATTERS

Section 3111—Improvements to Annual Reports on Condition of the United States Nuclear Stockpile

This section would modify section 4205(e)(3) of the Atomic Energy Defense Act (50 U.S.C. 2525(e)(3)) to include a review of the cybersecurity of the U.S. nuclear stockpile as part of the annual assessment of the nuclear weapons stockpile.

Section 3112—Modifications to Certain Reporting Requirements

This section would consolidate, amend, and repeal various reporting requirements of the Secretary of Energy and the Administrator of the National Nuclear Security Administration.

Section 3113—Plutonium Pit Production Capacity

This section would require briefings, reports, and a certification related to the National Nuclear Security Administration's plutonium enterprise.

This section contains a certification requirement, to be provided jointly by the Assistant Secretary for Environmental Management and the Deputy Administrator of the National Nuclear Security Administration for Defense Programs, when a plutonium pit production project achieves a critical decision milestone, that the operations, infrastructure, and workforce are adequate to carry out delivery and disposal of waste shipments. If certification is not possible, the Assistant Secretary for Environmental Management and the Deputy Administrator for Defense Programs must provide a plan to ensure such shipments and disposal can be carried out.

This section would also require the Administrator of the National Nuclear Security Administration to provide yearly reports, after achieving critical decision 2 on a plutonium pit production project, on the pit production requirements, risks and challenges, options available to the Administrator to balance scope, cost, and production requirements to decrease risk, and an explanation of any changes from the previous year's report.

This section would also require a briefing from the Director of the Cost Estimation and Program Evaluation and the Administrator on the adequacy of the Federal workforce to carry out the plutonium mission.

Section 3114—Report on Runit Dome and Related Hazards

This section would require the Secretary of the Interior to submit to the congressional defense committees a report, prepared by independent experts, on the impacts of climate change on the Runit Dome nuclear waste disposal site in Enewetak Atoll, Marshall Islands. This section would require a detailed scientific analysis of any threats to the environment, and to the health and safety, of

the residents of Enewetak Atoll. This section would also require that the report include participation by Marshallese experts and be posted to the Federal Register for public comment for not less than 60 days.

Section 3115—University-Based Nuclear Non Proliferation
Collaboration Program

This section would require the Administrator of the National Nuclear Security Administration to establish a university-based nuclear nonproliferation collaboration program. The program would provide support to universities and nonprofit entities for the purpose of conducting research and education related to nuclear nonproliferation, arms control, nuclear deterrence, the study of foreign nuclear programs, nuclear security, and the education of the next generation of nuclear nonproliferation experts.

Section 3116—Prohibition on the Availability of Funds to
Reconvert or Retire W76–2 Warheads

This section would prohibit the Administrator of the National Nuclear Security Administration from reconverting or retiring W76–2 warheads. This section contains a waiver whereby the Administrator of the National Nuclear Security Administration, in consultation with the Secretary of Defense, the Director of National Intelligence, and the Chairman of the Joint Chiefs of Staff, would certify to the congressional defense committees that Russia and China do not possess naval capabilities similar to the W76–2.

**TITLE XXXII—DEFENSE NUCLEAR FACILITIES
SAFETY BOARD**

LEGISLATIVE PROVISIONS

Section 3201—Authorization

This section would authorize \$31.0 million for the Defense Nuclear Facilities Safety Board.

Section 3202—Technical Amendments regarding Chair and Vice
Chair of Defense Nuclear Facilities Safety Board

This section would change the title of the Chairman of the Defense Nuclear Facilities Safety Board from Chairman to Chair.

TITLE XXXIV—NAVAL PETROLEUM RESERVES

LEGISLATIVE PROVISIONS

Section 3401—Authorization of Appropriations

This section would authorize \$13,650,000 for fiscal year 2022 for operation and maintenance of the Naval Petroleum Reserves.

TITLE XXXV—MARITIME ADMINISTRATION

LEGISLATIVE PROVISIONS

SUBTITLE A—MARITIME ADMINISTRATION

Section 3501—Authorization of the Maritime Administration

This section would authorize appropriations for the Maritime Administration.

Section 3502—Maritime Administration

This section would make a conforming amendment to section 109 of title 49, United States Code.

SUBTITLE B—OTHER MATTERS

Section 3511—Effective Period for Issuance of Documentation for Recreational Vessels

This section would make a technical correction that would allow the Coast Guard to issue a recreational vessel a certificate of documentation for up to 5 years.

Section 3512—America’s Marine Highway Program

This section would amend section 55601 of title 46, United States Code, and would require the Secretary of Transportation to establish a marine highway program.

Section 3513—Committees on Maritime Matters

This section would make various conforming amendments to section 8332(b)(1) of the Elijah E. Cummings Coast Guard Authorization Act of 2020 (division G of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283)).

Section 3514—Port Infrastructure Development Program

This section would make various conforming amendments to the Port Infrastructure Development Program.

Section 3515—Uses of Emerging Marine Technologies and Practices

This section would amend section 50307 of title 46, United States Code, and would designate the uses of emerging marine technologies and practices.

Section 3516—Prohibition on Participation of Long Term Charters in Tanker Security Fleet

This section would amend section 53401 of title 46, United States Code, and would restrict any product vessel that is under long term charter with the United States Government from participating in the Tanker Security Fleet.

Section 3517—Coastwise Endorsement

This section would authorize the Secretary of the department in which the Coast Guard is operating to issue a certificate of documentation with a coastwise endorsement for the vessel WIDGEON (United States official number 1299656).

Section 3518—Report on Efforts of Combatant Commands to Combat Threats Posed by Illegal, Unreported, and Unregulated Fishing

This section would require the Secretary of the Navy, in consultation with the Director of the Office of Naval Research and the heads of other relevant agencies, to report to the relevant congressional committees on the combatant commands' maritime domain awareness efforts to combat the threats posed by illegal, unreported, and unregulated fishing.

Section 3519—Coast Guard Yard Improvement

This section would authorize \$175,000,000 to improve facilities at the Coast Guard Yard in Baltimore, Maryland.

Section 3520—Authorization to Purchase Duplicate Medals

This section would authorize the Maritime Administrator to use certain appropriated funds to purchase duplicate medals authorized under Merchant Mariners of World War II Congressional Gold Medal Act of 2020 (Public Law 116–125).

DIVISION D—FUNDING TABLES

Section 4001—Authorization of Amounts in Funding Tables

This section would provide for the allocation of funds among programs, projects, and activities in accordance with the tables in division D of this Act, subject to reprogramming guidance in accordance with established procedures.

Consistent with the previously expressed views of the committee, this section would also require that a decision by an agency head to commit, obligate, or expend funds to a specific entity on the basis of such funding tables be based on merit-based selection procedures in accordance with the requirements of section 2304(k) and section 2374 of title 10, United States Code, and other applicable provisions of law, except when the project, program, or activity is identified as Community Project Funding in section 4201.

SUMMARY OF NATIONAL DEFENSE AUTHORIZATIONS FOR FISCAL YEAR 2022

(In Thousands of Dollars)

	FY 2022 Request	House Change	House Authorized
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DISCRETIONARY AUTHORIZATIONS WITHIN THE JURISDICTION OF THE ARMED SERVICES COMMITTEE

National Defense Funding, Base Budget Request

SUMMARY OF NATIONAL DEFENSE AUTHORIZATIONS FOR FISCAL YEAR 2022—Continued

(In Thousands of Dollars)

	FY 2022 Request	House Change	House Authorized
Function 051, Department of Defense-Military			
Division A: Department of Defense Authorizations			
Title I—Procurement			
Aircraft Procurement, Army	2,806,452	502,579	3,309,031
Missile Procurement, Army	3,556,251	98,000	3,654,251
Weapons & Tracked Combat Vehicles, Army	3,875,893	846,882	4,722,775
Procurement of Ammunition, Army	2,158,110	286,617	2,444,727
Other Procurement, Army	8,873,558	52,602	8,926,160
Aircraft Procurement, Navy	16,477,178	3,131,535	19,608,713
Weapons Procurement, Navy	4,220,705	-94,701	4,126,004
Procurement of Ammunition, Navy & Marine Corps	988,018	-10,500	977,518
Shipbuilding & Conversion, Navy	22,571,059	5,847,132	28,418,191
Other Procurement, Navy	10,875,912	156,141	11,032,053
Procurement, Marine Corps	3,043,091	573,800	3,616,891
Aircraft Procurement, Air Force	15,727,669	1,741,130	17,468,799
Missile Procurement, Air Force	2,669,811	-100,000	2,569,811
Procurement of Ammunition, Air Force	795,168	-5,000	790,168
Other Procurement, Air Force	25,251,137	539,257	25,790,394
Procurement, Space Force	2,766,854	6,500	2,773,354
Procurement, Defense-Wide	5,548,212	337,472	5,885,684
National Guard & Reserve Equipment	0	950,000	950,000
Subtotal, Title I—Procurement	132,205,078	14,859,446	147,064,524
Title II—Research, Development, Test and Evaluation			
Research, Development, Test & Evaluation, Army	12,799,645	633,330	13,432,975
Research, Development, Test & Evaluation, Navy	22,639,362	541,631	23,180,993
Research, Development, Test & Evaluation, Air Force	39,184,328	239,596	39,423,924
Research, Development, Test & Evaluation, Space Force	11,266,387	328,400	11,594,787
Research, Development, Test & Evaluation, Defense- Wide	25,857,875	4,359,855	30,217,730
Operational Test & Evaluation, Defense	216,591	6,500	223,091
Subtotal, Title II—Research, Development, Test and Evaluation	111,964,188	6,109,312	118,073,500
Title III—Operation and Maintenance			
Operation & Maintenance, Army	54,616,397	-2,074,249	52,542,148
Operation & Maintenance, Army Reserve	3,000,635		3,000,635
Operation & Maintenance, Army National Guard	7,647,209	42,700	7,689,909
Afghanistan Security Forces Fund	3,327,810	-3,002,810	325,000
Counter-ISIS Train and Equip Fund	522,000		522,000
Operation & Maintenance, Navy	60,441,228	1,368,431	61,809,659
Operation & Maintenance, Marine Corps	9,024,791	45,300	9,070,091
Operation & Maintenance, Navy Reserve	1,148,698		1,148,698
Operation & Maintenance, Marine Corps Reserve	285,050	45,900	330,950
Operation & Maintenance, Air Force	53,876,475	-457,799	53,418,676
Operation & Maintenance, Space Force	3,440,712	310,700	3,751,412
Operation & Maintenance, Air Force Reserve	3,352,106	-160,037	3,192,069

SUMMARY OF NATIONAL DEFENSE AUTHORIZATIONS FOR FISCAL YEAR 2022—Continued

(In Thousands of Dollars)

	FY 2022 Request	House Change	House Authorized
Operation & Maintenance, Air National Guard	6,574,020	-24,100	6,549,920
Operation & Maintenance, Defense-Wide	44,918,366	1,696,741	46,615,107
Ukraine Security Assistance	0	300,000	300,000
United States Court of Appeals for the Armed Forces	15,589		15,589
DOD Acquisition Workforce Development Fund	54,679		54,679
Overseas Humanitarian, Disaster, and Civic Aid	110,051	540,000	650,051
Cooperative Threat Reduction Account	239,849	105,000	344,849
Environmental Restoration	1,028,187	673,000	1,701,187
Subtotal, Title III—Operation and Maintenance	253,623,852	-591,223	253,032,629
Title IV—Military Personnel			
Military Personnel Appropriations	157,947,920	-426,000	157,521,920
Medicare-Eligible Retiree Health Fund Contributions ...	9,337,175		9,337,175
Subtotal, Title IV—Military Personnel	167,285,095	-426,000	166,859,095
Title XIV—Other Authorizations			
Working Capital Fund, Army	384,711		384,711
Working Capital Fund, Navy	150,000		150,000
Working Capital Fund, Air Force	77,453		77,453
Working Capital Fund, Defense-Wide	127,765		127,765
Working Capital Fund, DECA	1,162,071		1,162,071
Chemical Agents & Munitions Destruction	1,094,352		1,094,352
Drug Interdiction and Counter Drug Activities	821,908		821,908
Office of the Inspector General	438,363		438,363
Defense Health Program	35,592,407	1,224,425	36,816,832
Subtotal, Title XIV—Other Authorizations	39,849,030	1,224,425	41,073,455
Total, Division A: Department of Defense Authoriza- tions	704,927,243	21,175,960	726,103,203
Division B: Military Construction Authorizations			
Military Construction			
Army	834,692	657,162	1,491,854
Navy	2,368,352	1,105,347	3,473,699
Air Force	2,102,690	1,162,678	3,265,368
Defense-Wide	1,957,289	196,827	2,154,116
NATO Security Investment Program	205,853		205,853
Army National Guard	257,103	115,105	372,208
Army Reserve	64,911	82,400	147,311
Navy and Marine Corps Reserve	71,804	-1,000	70,804
Air National Guard	197,770	50,200	247,970
Air Force Reserve	78,374	8,700	87,074
Unaccompanied Housing Improvement Fund	494		494
Subtotal, Military Construction	8,139,332	3,377,419	11,516,751
Family Housing			
Construction, Army	99,849	46,500	146,349
Operation & Maintenance, Army	391,227		391,227
Construction, Navy and Marine Corps	77,616		77,616

SUMMARY OF NATIONAL DEFENSE AUTHORIZATIONS FOR FISCAL YEAR 2022—Continued

(In Thousands of Dollars)

	FY 2022 Request	House Change	House Authorized
Operation & Maintenance, Navy and Marine Corps	357,341		357,341
Construction, Air Force	115,716		115,716
Operation & Maintenance, Air Force	325,445		325,445
Operation & Maintenance, Defense-Wide	49,785		49,785
Improvement Fund	6,081		6,081
Subtotal, Family Housing	1,423,060	46,500	1,469,560
Base Realignment and Closure			
Base Realignment and Closure—Army	65,301	50,000	115,301
Base Realignment and Closure—Navy	111,155	50,000	161,155
Base Realignment and Closure—Air Force	104,216	50,000	154,216
Base Realignment and Closure—Defense-wide	3,967		3,967
Subtotal, Base Realignment and Closure	284,639	150,000	434,639
Total, Division B: Military Construction Authoriza- tions	9,847,031	3,573,919	13,420,950
Total, 051, Department of Defense-Military	714,774,274	24,749,879	739,524,153
Division C: Department of Energy National Security Authorization and Other Authorizations			
Function 053, Atomic Energy Defense Activities			
Environmental and Other Defense Activities			
Nuclear Energy	149,800		149,800
Weapons Activities	15,484,295	460,000	15,944,295
Defense Nuclear Nonproliferation	1,934,000	60,500	1,994,500
Naval Reactors	1,860,705		1,860,705
Federal Salaries and Expenses	464,000		464,000
Defense Environmental Cleanup	6,841,670	6,500	6,848,170
Other Defense Activities	1,170,000	-250,000	920,000
Defense Nuclear Waste Disposal	0		0
Subtotal, Environmental and Other Defense Activi- ties	27,904,470	277,000	28,181,470
Independent Federal Agency Authorization			
Defense Nuclear Facilities Safety Board	31,000		31,000
Subtotal, Independent Federal Agency Authorization	31,000	0	31,000
Subtotal, 053, Atomic Energy Defense Activities	27,935,470	277,000	28,212,470
Function 054, Defense-Related Activities			
Other Agency Authorizations			
Maritime Security Program	318,000		318,000
Tanker Security Program	60,000		60,000
Subtotal, Other Agency Authorizations	378,000	0	378,000
Subtotal, 054, Defense-Related Activities	378,000	0	378,000

SUMMARY OF NATIONAL DEFENSE AUTHORIZATIONS FOR FISCAL YEAR 2022—Continued

(In Thousands of Dollars)

	FY 2022 Request	House Change	House Authorized
Subtotal, Division C: Department of Energy National Security Authorization and Other Authorizations ..	28,313,470	277,000	28,590,470
Total, National Defense	743,087,744	25,026,879	768,114,623
MEMORANDUM: NON-DEFENSE AUTHORIZATIONS	882,454	546,181	1,428,635
Title XIV—Armed Forces Retirement Home (Function 700)	75,300		75,300
Title XXXIV—Naval Petroleum and Oil Shale Reserves (Function 270)	13,650		13,650
Title XXXV—Maritime Administration (Function 400) ..	793,504	546,181	1,339,685
MEMORANDUM: TRANSFER AUTHORITIES (NON-ADD)			
Title X—General Transfer Authority	[8,000,000]	[-1,500,000]	[6,500,000]
MEMORANDUM: DEFENSE AUTHORIZATIONS NOT UNDER THE JURISDICTION OF THE ARMED SERVICES COMMITTEE (NON-ADD)			
Defense Production Act	340,927		

NATIONAL DEFENSE BUDGET AUTHORITY IMPLICATION

(In Thousands of Dollars)

	FY 2022 Request	House Change	House Authorized
Summary, Discretionary Authorizations Within the Jurisdiction of the Armed Services Committee			
SUBTOTAL, DEPARTMENT OF DEFENSE (051)	714,774,274	24,749,879	739,524,153
SUBTOTAL, ATOMIC ENERGY DEFENSE PROGRAMS (053)	27,935,470	277,000	28,212,470
SUBTOTAL, DEFENSE-RELATED ACTIVITIES (054)	378,000		378,000
TOTAL, NATIONAL DEFENSE	743,087,744	25,026,879	768,114,623
Scoring adjustments			
Transfers to non-Defense budget functions (051)	-152,000		-152,000
Assumed reductions to previously enacted funding levels (054)	-42,000		-42,000
Subtotal, Scoring Adjustments	-194,000		-194,000
National Defense Discretionary Programs that are Not In the Jurisdiction of the Armed Services Committee or Do Not Require Additional Authorization (CBO Estimates)			
Defense Production Act Purchases	340,927		340,927
Indefinite Account: Disposal Of DOD Real Property	9,000		9,000
Indefinite Account: Lease Of DOD Real Property	36,000		36,000
Department of Homeland Security, Operations and Support	9,000		9,000
Subtotal, Budget Sub-Function 051	394,927		394,927
Other Discretionary Programs	9,587,000		9,587,000
Subtotal, Budget Sub-Function 054	9,587,000		9,587,000
Total Defense Discretionary Adjustments (050)	9,787,927		9,787,927
Budget Authority Implication, National Defense Discretionary			
Department of Defense--Military (051)	715,017,201	24,749,879	739,767,080
Atomic Energy Defense Activities (053)	27,935,470	277,000	28,212,470
Defense-Related Activities (054)	9,923,000		9,923,000
Total BA Implication, National Defense Discretionary	752,875,671	25,026,879	777,902,550
National Defense Mandatory Programs, Current Law (CBO Baseline)			
Concurrent receipt accrual payments to the Military Retirement Fund	10,528,000		10,528,000
Revolving, trust and other DOD Mandatory	1,671,000		1,671,000
Offsetting receipts	-2,003,000		-2,003,000
Subtotal, Budget Sub-Function 051	10,196,000		10,196,000
Energy employees occupational illness compensation programs and other	1,808,000		1,808,000
Subtotal, Budget Sub-Function 053	1,808,000		1,808,000
Radiation exposure compensation trust fund	59,000		59,000
Payment to CIA retirement fund and other	514,000		514,000
Subtotal, Budget Sub-Function 054	573,000		573,000
Total National Defense Mandatory (050)	12,577,000		12,577,000
Budget Authority Implication, National Defense Discretionary and Mandatory			
Department of Defense--Military (051)	725,213,201	24,749,879	749,963,080
Atomic Energy Defense Activities (053)	29,743,470	277,000	30,020,470

NATIONAL DEFENSE BUDGET AUTHORITY IMPLICATION—Continued

(In Thousands of Dollars)

	FY 2022 Request	House Change	House Authorized
Defense-Related Activities (054)	10,496,000		10,496,000
Total BA Implication, National Defense Discretionary and Mandatory	765,452,671	25,026,879	790,479,550

TITLE XLI—PROCUREMENT

SEC. 4101. PROCUREMENT.

SEC. 4101. PROCUREMENT (In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
AIRCRAFT PROCUREMENT, ARMY							
FIXED WING							
001	UTILITY F/W AIRCRAFT				20,000		20,000
	Avionics upgrade				[20,000]		
004	SMALL UNMANNED AIRCRAFT SYSTEM		16,005				16,005
ROTARY							
007	AH-64 APACHE BLOCK IIIA REMAN	30	504,136		-10,000	30	494,136
	Unit cost growth				[-10,000]		
008	AH-64 APACHE BLOCK IIIA REMAN AP		192,230				192,230
010	UH-60 BLACKHAWK M MODEL (MYP)	24	630,263		-48,000	24	582,263
	Unit cost growth				[-48,000]		
011	UH-60 BLACKHAWK M MODEL (MYP) AP		146,068	9	211,500	9	357,568
	UH-60 Black Hawk for Army Guard			[9]	[211,500]		
012	UH-60 BLACK HAWK L AND V MODELS	24	166,205			24	166,205
013	CH-47 HELICOPTER	6	145,218	5	252,000	11	397,218
	Army UPL				[111,100]		
	Program increase—F Block II Army UPL			[5]	[140,900]		
014	CH-47 HELICOPTER AP		18,559		29,000		47,559
	Program increase—F Block II				[29,000]		
MODIFICATION OF AIRCRAFT							

017	GRAY EAGLE MODS2	3,143	3	30,000	3	33,143
	Recapitalization of MQ-1 aircraft to extended range Multi Domain Operations configuration.		[3]	[30,000]		
018	MULTI SENSOR ABN RECON	127,665		-11,755		115,910
	ABN ISR Mods—insufficient justification			[-4,000]		
	ARL Payloads—MEP SIL reduction			[-3,000]		
	Unjustified cost—spares			[-4,755]		
019	AH-64 MODS	118,560		-5,000		113,560
	Unjustified cost—Spike NLOS integration			[-5,000]		
020	CH-47 CARGO HELICOPTER MODS (MYP)	9,918				9,918
021	GRCS SEMA MODS	2,762				2,762
022	ARL SEMA MODS	9,437				9,437
023	EMARSS SEMA MODS	1,568				1,568
024	UTILITY/CARGO AIRPLANE MODS	8,530				8,530
025	UTILITY HELICOPTER MODS	15,826		36,000		51,826
	Program increase			[11,000]		
	UH-72 modernization			[25,000]		
026	NETWORK AND MISSION PLAN	29,206				29,206
027	COMMS, NAV SURVEILLANCE	58,117				58,117
029	AVIATION ASSURED PNT	47,028		-1,166		45,862
	Excess to need			[-1,166]		
030	GATM ROLLUP	16,776				16,776
032	UAS MODS	3,840				3,840
	GROUND SUPPORT AVIONICS					
033	AIRCRAFT SURVIVABILITY EQUIPMENT	64,561				64,561
034	SURVIVABILITY CM	5,104				5,104
035	CMWS	148,570				148,570
036	COMMON INFRARED COUNTERMEASURES (CIRC)	240,412			101	240,412
	OTHER SUPPORT					
038	COMMON GROUND EQUIPMENT	13,561				13,561
039	AIRCREW INTEGRATED SYSTEMS	41,425				41,425
040	AIR TRAFFIC CONTROL	21,759				21,759

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
	TOTAL AIRCRAFT PROCUREMENT, ARMY	185	2,806,452	17	502,579	202	3,309,031
	MISSILE PROCUREMENT, ARMY						
	SURFACE-TO-AIR MISSILE SYSTEM						
002	LOWER TIER AIR AND MISSILE DEFENSE (AMD) SEN		35,473				35,473
003	M-SHORAD—PROCUREMENT	37	331,575			37	331,575
004	MSE MISSILE	180	776,696			180	776,696
005	PRECISION STRIKE MISSILE (PRSM)	110	166,130			110	166,130
006	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I		25,253		-5,000		20,253
	Maintain level of effort				[-5,000]		
	AIR-TO-SURFACE MISSILE SYSTEM						
007	HELLFIRE SYS SUMMARY	802	118,800		-3,000	802	115,800
	Unit cost growth				[-3,000]		
008	JOINT AIR-TO-GROUND MSLs (JAGM)	386	152,177	293	62,000	679	214,177
	Army UPL			[293]	[67,000]		
	Unit cost growth				[-5,000]		
009	LONG RANGE PRECISION MUNITION	179	44,744		-4,000	179	40,744
	Early to need				[-4,000]		
	ANTI-TANK/ASSAULT MISSILE SYS						
010	JAVELIN (AAWS-M) SYSTEM SUMMARY	376	120,842	67	10,000	443	130,842
	Early to need				[-5,000]		
011	JAVELIN Lightweight Command Launch Units (LWCLU)—Army UPL			[67]	[15,000]		
	TOW 2 SYSTEM SUMMARY	887	104,412		-2,000	887	102,412
	Excess to need				[-2,000]		
012	GUIDED MLRS ROCKET (GMLRS)	5,817	935,917	174	40,000	5,991	975,917
	Army UPL				[20,000]		

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
009	Program increase Army UPL			[13]	[149,485]		
010	IMPROVED RECOVERY VEHICLE (M88A2 HERCULES)		52,059				52,059
013	ASSAULT BRIDGE (MOD)		2,136				2,136
	JOINT ASSAULT BRIDGE	23	110,773			23	110,773
	Cost growth				[-4,000]		
	Program increase				[4,000]		
015	ABRAMS UPGRADE PROGRAM	70	981,337	17	369,000	87	1,350,337
	Army UPL				[234,457]		
	Excess carryover				[-40,457]		
	Program increase			[17]	[175,000]		
016	VEHICLE PROTECTION SYSTEMS (VPS)		80,286				80,286
	WEAPONS & OTHER COMBAT VEHICLES						
018	MULTI-ROLE ANTI-ARMOR ANTI-PERSONNEL WEAPON S		31,623				31,623
019	MORTAR SYSTEMS		37,485		12,853		50,338
	Mortar cannons—Army UPL				[12,853]		
020	XM320 GRENADE LAUNCHER MODULE (GLM)		8,666				8,666
021	PRECISION SNIPER RIFLE		11,040				11,040
023	CARBINE		4,434				4,434
024	NEXT GENERATION SQUAD WEAPON		97,087				97,087
026	HANDGUN		4,930				4,930
	MOD OF WEAPONS AND OTHER COMBAT VEH						
027	MK-19 GRENADE MACHINE GUN MODS		13,027				13,027
028	M777 MODS		21,976		1,795		23,771
	S/W Defined Radio-Hardware Integration kits—Army UPL				[1,795]		
030	M2 50 CAL MACHINE GUN MODS		3,612	1,060	17,915	1,060	21,527
	M2A1 machine guns—Army UPL			[1,060]	[17,915]		

036	SUPPORT EQUIPMENT & FACILITIES								
	ITEMS LESS THAN \$5.0M (WOCV-WTCV)	1,068							1,068
037	PRODUCTION BASE SUPPORT (WOCV-WTCV)	90,819							90,819
	TOTAL PROCUREMENT OF W&TCV, ARMY	3,875,893	328	1,090	846,862	1,418			4,722,775
001	PROCUREMENT OF AMMUNITION, ARMY								
	SMALL/MEDIUM CAL AMMUNITION								
	CTG, 5.56MM, ALL TYPES	47,490			32,400				79,890
	Program increase				[16,480]				
	Small Caliber Ammo—Army UPL				[15,920]				
002	CTG, 7.62MM, ALL TYPES	74,870			28,473				103,343
	Program increase				[28,473]				
003	NEXT GENERATION SQUAD WEAPON AMMUNITION	76,794							76,794
004	CTG, HANDGUN, ALL TYPES	7,812							7,812
005	CTG, .50 CAL, ALL TYPES	29,716			28,400				58,116
	Program increase				[28,400]				
006	CTG, 20MM, ALL TYPES	4,371							4,371
008	CTG, 30MM, ALL TYPES	34,511							34,511
009	CTG, 40MM, ALL TYPES	35,231			14,000				49,231
	Medium Caliber Ammo—Army UPL				[14,000]				
	MORTAR AMMUNITION								
010	60MM MORTAR, ALL TYPES	23,219							23,219
011	81MM MORTAR, ALL TYPES	52,135							52,135
012	120MM MORTAR, ALL TYPES	104,144							104,144
	TANK AMMUNITION								
013	CARTRIDGES, TANK, 105MM AND 120MM, ALL TYPES	224,503			-6,000				218,503
	Early to need				[-6,000]				
	ARTILLERY AMMUNITION								
014	ARTILLERY CARTRIDGES, 75MM & 105MM, ALL TYPES	26,709			28,044				54,753
	Army UPL				[30,844]				
	Prior-year carryover				[-2,800]				
015	ARTILLERY PROJECTILE, 155MM, ALL TYPES	174,015			-26,000				148,015

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
016	Prior-year carryover						
	PROJ 155MM EXTENDED RANGE M982	350	73,498			350	61,498
	Unit cost growth						
	ARTILLERY PROPELLANTS, FUZES AND PRIMERS, ALL		150,873				150,873
017	MINES						
	MINES & CLEARING CHARGES, ALL TYPES		25,980		-5,000		20,980
	Excess to need						
	CLOSE TERRAIN SHAPING OBSTACLE		34,761		-5,000		29,761
	Contract Delay						
	Contract Delay						
018	ROCKETS						
	SHOULDER LAUNCHED MUNITIONS, ALL TYPES		24,408		-2,000		22,408
	Excess to need						
	ROCKET, HYDRA 70, ALL TYPES		109,536		13,800		123,336
	Program increase						
	Program increase						
019	OTHER AMMUNITION						
	CAD/PAD, ALL TYPES		6,549				6,549
	DEMOLITION MUNITIONS, ALL TYPES		27,904				27,904
	GRENADES, ALL TYPES		37,437				37,437
	SIGNALS, ALL TYPES		7,530				7,530
	SIMULATORS, ALL TYPES		8,350				8,350
	REACTIVE ARMOR TILES		17,755				17,755
020	MISCELLANEOUS						
	AMMO COMPONENTS, ALL TYPES		2,784				2,784
	ITEMS LESS THAN \$5 MILLION (AMMO)		17,797				17,797
	AMMUNITION PECULIAR EQUIPMENT		12,290				12,290
	FIRST DESTINATION TRANSPORTATION (AMMO)		4,331				4,331

032	CLOSEOUT LIABILITIES	99			
	PRODUCTION BASE SUPPORT				
034	INDUSTRIAL FACILITIES	538,120	104,500	642,620	
	Demo/Environmental remediation (RAAP)—Army UPL		[40,000]		
	Environmental, Safety, Construction, Maintenance and Repair GOCO— Army UPL		[40,000]		
035	Pyrotechnics Energetic Capability (LCAAP)—Army UPL		[12,000]		
	Solvent Propellant Facility (RAAP)—Army UPL		[12,500]		
	CONVENTIONAL MUNITIONS DEMILITARIZATION	139,410	93,000	232,410	
	Program increase		[93,000]		
036	ARMS INITIATIVE	3,178		3,178	
	TOTAL PROCUREMENT OF AMMUNITION, ARMY	2,158,110	286,617	2,444,727	
		350		350	
	OTHER PROCUREMENT, ARMY				
	TACTICAL VEHICLES				
002	SEMITRAILERS, FLATBED:	12,539	6,392	18,931	
	M872M4 trailer—Army UPL		[6,392]		
003	SEMITRAILERS, TANKERS	17,985		17,985	
004	HI MOB MULTI-PURP WHLD VEH (HMMWV)	60,706		60,706	
005	GROUND MOBILITY VEHICLES (GMV)	29,807	15,000	44,807	
	Program increase for ISV		[15,000]		
008	JOINT LIGHT TACTICAL VEHICLE FAMILY OF VEHICL	574,562	31,000	605,562	
	Early to need		[–89,000]		
	Program increase		[120,000]		
009	TRUCK, DUMP, 20T (CCE)	9,882	19,500	29,382	
	Heavy Dump, M917A3		[10,000]		
	Program increase		[9,500]		
010	FAMILY OF MEDIUM TACTICAL VEH (FMTV)	36,885	40,000	76,885	
	Program Increase		[40,000]		
011	FAMILY OF COLD WEATHER ALL-TERRAIN VEHICLE (C	16,450	–2,627	13,823	
	Cost growth		[–2,627]		
012	FIRETRUCKS & ASSOCIATED FIREFIGHTING EQUIP	26,256		26,256	
					359

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
013	FAMILY OF HEAVY TACTICAL VEHICLES (FHTV)		64,282				64,282
014	PLS ESP		16,943				16,943
015	HVY EXPANDED MOBILE TACTICAL TRUCK EXT SERV				109,000		109,000
	Program increase				[109,000]		
017	TACTICAL WHEELED VEHICLE PROTECTION KITS		17,957				17,957
018	MODIFICATION OF IN SVC EQUIP		29,349		183,301		212,650
	HMMV modifications				[183,301]		
	NON-TACTICAL VEHICLES						
020	PASSENGER CARRYING VEHICLES		1,232				1,232
021	NONTACTICAL VEHICLES, OTHER		24,246		-5,000		19,246
	Excess carryover				[-5,000]		
	COMM—JOINT COMMUNICATIONS						
022	SIGNAL MODERNIZATION PROGRAM		140,036				140,036
023	TACTICAL NETWORK TECHNOLOGY MOD IN SVC		436,524		-7,500		429,024
	Excess to need				[-7,500]		
025	DISASTER INCIDENT RESPONSE COMMS TERMINAL		3,863				3,863
026	JCSE EQUIPMENT (USRDECOM)		4,845				4,845
	COMM—SATELLITE COMMUNICATIONS						
029	DEFENSE ENTERPRISE WIDEBAND SATCOM SYSTEMS		97,369				97,369
030	TRANSPORTABLE TACTICAL COMMAND COMMUNICATIONS		120,550		-5,000		115,550
	Early to need				[-5,000]		
031	SHF TERM		38,129				38,129
032	ASSURED POSITIONING, NAVIGATION AND TIMING		115,291		-2,500		112,791
	Excess to need				[-2,500]		
033	SMART-T (SPACE)		15,407				15,407
034	GLOBAL BRDCST SVC—GBS		2,763				2,763

037	COMM—C3 SYSTEM						
	COE TACTICAL SERVER INFRASTRUCTURE (TSI)	99,858		99,858			99,858
	COMM—COMBAT COMMUNICATIONS						
038	HANDHELD MANPACK SMALL FORM FIT (HMS)	775,069		775,069			730,069
	Cost deviation					-45,000	
	Single Channel Data Radio program decrease					[-5,000]	
	Support cost excess to need					[-35,000]	
	Army Link 16 Systems	17,749		17,749		[-5,000]	17,749
042	UNIFIED COMMAND SUITE	17,984		17,984			17,984
043	COTS COMMUNICATIONS EQUIPMENT	191,702		191,702		-6,000	185,702
	Unit cost growth					[-6,000]	
044	FAMILY OF MED COMM FOR COMBAT CASUALTY CARE	15,957		15,957			15,957
045	ARMY COMMUNICATIONS & ELECTRONICS	89,441		89,441		-10,000	79,441
	Insufficient justification					[-10,000]	
	COMM—INTELLIGENCE COMM						
047	CI AUTOMATION ARCHITECTURE-INTEL	13,317		13,317			13,317
048	DEFENSE MILITARY DECEPTION INITIATIVE	5,207		5,207			5,207
049	MULTI-DOMAIN INTELLIGENCE	20,095		20,095			20,095
	INFORMATION SECURITY						
051	INFORMATION SYSTEM SECURITY PROGRAM-ISSP	987		987			987
052	COMMUNICATIONS SECURITY (COMSEC)	126,273		126,273			126,273
053	DEFENSIVE CYBER OPERATIONS	27,389		27,389		4,100	31,489
	Cybersecurity / IT network mapping					[4,100]	
056	SIO CAPABILITY	21,303		21,303			21,303
057	BIOMETRIC ENABLING CAPABILITY (BEC)	914		914			914
	COMM—LONG HAUL COMMUNICATIONS						
059	BASE SUPPORT COMMUNICATIONS	9,209		9,209		15,000	24,209
	Land Mobile Radios					[-15,000]	
	COMM—BASE COMMUNICATIONS						
060	INFORMATION SYSTEMS	219,026		219,026			219,026
061	EMERGENCY MANAGEMENT MODERNIZATION PROGRAM	4,875		4,875			4,875
064	INSTALLATION INFO INFRASTRUCTURE MOD PROGRAM	223,001		223,001		2,040	225,041

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
	EUCOM—MPE USAREUR				[2,040]		
	ELECT EQUIP—TACT INT REL ACT (TIARA)						
067	JTT/CIBS-M		5,463				5,463
068	TERRESTRIAL LAYER SYSTEMS (TLS)		39,240				39,240
070	DCGS-A-INTEL		92,613		21,950		114,563
	Army UPL				[26,950]		
	Program decrease				[-5,000]		
071	JOINT TACTICAL GROUND STATION (JTGS)-INTEL		8,088				8,088
072	TROJAN		30,828				30,828
073	MOD OF IN-SVC EQUIP (INTEL SPT)		39,039				39,039
074	BIOMETRIC TACTICAL COLLECTION DEVICES		11,097				11,097
	ELECT EQUIP—ELECTRONIC WARFARE (EW)						
076	EW PLANNING & MANAGEMENT TOOLS (EWPMT)		783				783
077	AIR VIGILANCE (AV)		13,486		-2,500		10,986
	Program decrease				[-2,500]		
079	FAMILY OF PERSISTENT SURVEILLANCE CAP.		14,414				14,414
080	COUNTERINTELLIGENCE/SECURITY COUNTERMEASURES		19,111				19,111
081	CI MODERNIZATION		421				421
	ELECT EQUIP—TACTICAL SURV. (TAC SURV)						
082	SENTINEL MODS		47,642				47,642
083	NIGHT VISION DEVICES		1,092,341		-263,466		828,875
	IVAS program delay				[-213,466]		
	Transfer to RDT&E, Army line 98				[-50,000]		
084	SMALL TACTICAL OPTICAL RIFLE MOUNTED MLRF		21,103				21,103
085	INDIRECT FIRE PROTECTION FAMILY OF SYSTEMS		6,153				6,153
086	FAMILY OF WEAPON SIGHTS (FWS)		184,145				184,145

087	ENHANCED PORTABLE INDUCTIVE ARTILLERY FUZE SE	2,371	2,371	
088	FORWARD LOOKING INFRARED (FLIR)	11,929	11,929	
089	COUNTER SMALL UNMANNED AERIAL SYSTEM (C-SUAS)	60,058	60,058	
090	JOINT BATTLE COMMAND—PLATFORM (JBC-P)	263,661	259,661	-4,000
	Excess carryover			[-4,000]
091	JOINT EFFECTS TARGETING SYSTEM (JETS)	62,082	62,082	
093	COMPUTER BALLISTICS: LHMCB XM32	2,811	2,811	
094	MORTAR FIRE CONTROL SYSTEM	17,236	17,236	
095	MORTAR FIRE CONTROL SYSTEMS MODIFICATIONS	2,830	2,830	
096	COUNTERFIRE RADARS	31,694	26,694	-5,000
	Excess to need			[-5,000]
	ELECT EQUIP—TACTICAL C2 SYSTEMS			
097	ARMY COMMAND POST INTEGRATED INFRASTRUCTURE (.....	49,410	49,410	
098	FIRE SUPPORT C2 FAMILY	9,853	9,853	
099	AIR & MSL DEFENSE PLANNING & CONTROL SYS	67,193	67,193	
100	IAMD BATTLE COMMAND SYSTEM	301,872	291,872	-10,000
	Excess costs previously funded			[-10,000]
101	LIFE CYCLE SOFTWARE SUPPORT (LCSS)	5,182	5,182	
102	NETWORK MANAGEMENT INITIALIZATION AND SERVICE	31,349	31,349	
104	GLOBAL COMBAT SUPPORT SYSTEM-ARMY (GCSS-A)	11,271	11,271	
105	INTEGRATED PERSONNEL AND PAY SYSTEM-ARMY (IPP)	16,077	16,077	
107	MOD OF IN-SVC EQUIPMENT (ENFIRE)	3,160	9,160	6,000
	GPS laser survey equipment			[6,000]
	ELECT EQUIP—AUTOMATION			
108	ARMY TRAINING MODERNIZATION	9,833	9,833	
109	AUTOMATED DATA PROCESSING EQUIP	130,924	133,924	3,000
	ATRRS Unlimited Data Rights			[3,000]
110	ACCESSIONS INFORMATION ENVIRONMENT (AIE)	44,635	39,635	-5,000
	Program decrease			[-5,000]
111	GENERAL FUND ENTERPRISE BUSINESS SYSTEMS FAM	1,452	1,452	
112	HIGH PERF COMPUTING MOD PGM (HPCMP)	69,943	69,943	
113	CONTRACT WRITING SYSTEM	16,957	16,957	

SEC. 4101. PROCUREMENT (In Thousands of Dollars)									
Line	Item	FY 2022 Request		House Change		House Authorized			
		Qty	Cost	Qty	Cost	Qty	Cost		
114	CSS COMMUNICATIONS		73,110				73,110		
115	RESERVE COMPONENT AUTOMATION SYS (RCAS)		12,905				12,905		
	ELECT EQUIP—SUPPORT								
117	BCT EMERGING TECHNOLOGIES		13,835				13,835		
	CLASSIFIED PROGRAMS								
117A	CLASSIFIED PROGRAMS		18,304				18,304		
	CHEMICAL DEFENSIVE EQUIPMENT								
119	BASE DEFENSE SYSTEMS (BDS)		62,295				62,295		
120	CBRN DEFENSE		55,632				55,632		
	BRIDGING EQUIPMENT								
122	TACTICAL BRIDGING		9,625				9,625		
123	TACTICAL BRIDGE, FLOAT-RIBBON		76,082				76,082		
124	BRIDGE SUPPLEMENTAL SET		19,867		-13,000		6,867		
	Excess carryover				[-13,000]				
	Cost growth				-10,457				
125	COMMON BRIDGE TRANSPORTER (GBT) RECAP		109,796		[-10,457]		99,339		
	ENGINEER (NON-CONSTRUCTION) EQUIPMENT								
126	HANDHELD STANDOFF MINEFIELD DETECTION SYS-HST		5,628				5,628		
128	HUSKY MOUNTED DETECTION SYSTEM (HMDS)		26,823				26,823		
131	ROBOTICS AND APPLIQUE SYSTEMS		124,233				124,233		
	Common Robotic System—Individual (CRS-I) - Army UPL				[10,000]				
	Excess carryover CRS-I				[-10,000]				
132	RENDER SAFE SETS KITS OUTFITS		84,000		3,158		87,158		
	Army UPL				[3,158]				
	COMBAT SERVICE SUPPORT EQUIPMENT								
134	HEATERS AND ECUS		7,116		-2,000		5,116		

135	Contract delay					
	SOLDIER ENHANCEMENT	1,286			7,786	
	Program increase					
136	PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)	9,741			9,741	
137	GROUND SOLDIER SYSTEM	150,244			150,244	
138	MOBILE SOLDIER POWER	17,815			17,815	
139	FORCE PROVIDER	28,860			28,860	
140	FIELD FEEDING EQUIPMENT	2,321			2,321	
141	CARGO AERIAL DEL & PERSONNEL PARACHUTE SYSTEM	40,240			40,240	
142	FAMILY OF ENGR COMBAT AND CONSTRUCTION SETS	36,163			36,163	
	PETROLEUM EQUIPMENT					
144	QUALITY SURVEILLANCE EQUIPMENT	744			744	
145	DISTRIBUTION SYSTEMS, PETROLEUM & WATER	72,296			65,657	
	Army UPL					
	Excess to need					
	MEDICAL EQUIPMENT					
146	COMBAT SUPPORT MEDICAL	122,145			128,395	
	Mobile digital x-ray units					
	MAINTENANCE EQUIPMENT					
147	MOBILE MAINTENANCE EQUIPMENT SYSTEMS	14,756			12,856	
	Excess carryover					
	CONSTRUCTION EQUIPMENT					
154	ALL TERRAIN CRANES	112,784			107,784	
	Cost savings					
156	CONST EQUIP ESP	8,694			8,694	
	RAIL FLOAT CONTAINERIZATION EQUIPMENT					
158	ARMY WATERCRAFT ESP	44,409			44,409	
159	MANEUVER SUPPORT VESSEL (MSV)	76,660			76,660	
	GENERATORS					
161	GENERATORS AND ASSOCIATED EQUIP	47,606			47,606	
162	TACTICAL ELECTRIC POWER RECAPITALIZATION	10,500			10,500	
	MATERIAL HANDLING EQUIPMENT					

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SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
163	FAMILY OF FORKLIFTS		13,325				13,325
	TRAINING EQUIPMENT						
164	COMBAT TRAINING CENTERS SUPPORT		79,565				79,565
165	TRAINING DEVICES, NONSYSTEM		174,644				174,644
166	SYNTHETIC TRAINING ENVIRONMENT (STE)		122,104				122,104
168	GAMING TECHNOLOGY IN SUPPORT OF ARMY TRAINING		11,642		-1,000		10,642
	Excess carryover				[-1,000]		
	TEST MEASURE AND DIG EQUIPMENT (TMD)						
170	INTEGRATED FAMILY OF TEST EQUIPMENT (IFTE)		42,934				42,934
172	TEST EQUIPMENT MODERNIZATION (TEMOD)	399	24,304			399	24,304
	OTHER SUPPORT EQUIPMENT						
174	PHYSICAL SECURITY SYSTEMS (OPA3)		86,930				86,930
175	BASE LEVEL COMMON EQUIPMENT		27,823				27,823
176	MODIFICATION OF IN-SVC EQUIPMENT (OPA-3)		32,392				32,392
177	BUILDING, PRE-FAB, RELOCATABLE		32,227				32,227
179	SPECIAL EQUIPMENT FOR TEST AND EVALUATION		76,917		-6,000		70,917
	Program decrease				[-6,000]		
	OPAZ						
180	INITIAL SPARES—C&E		9,272				9,272
	TOTAL OTHER PROCUREMENT, ARMY	399	8,873,558		52,602	399	8,926,160
	AIRCRAFT PROCUREMENT, NAVY						
	COMBAT AIRCRAFT						
001	F/A-18E/F (FIGHTER) HORNET		87,832	12	1,080,329	12	1,168,161
	Aircraft increase			[12]	[970,000]		
	Production line shutdown				[-10,671]		

003	Program increase							
	JOINT STRIKE FIGHTER CV	20	2,111,009	[121,000]	20	2,047,709		
	Target cost savings			[-63,300]				
	[-63,300]							
004	JOINT STRIKE FIGHTER CV AP		246,781			246,781		
005	JSF STOVL	17	2,256,829	[128,800]	17	2,317,929		
	F-35B PGSE & Depot Support—USMC UPL			[-67,700]				
	Target cost savings							
006	JSF STOVL AP		216,720			216,720		
007	CH-53K (HEAVY LIFT)	9	1,286,296	[-29,782]	9	1,256,514		
	Excess to need—Pub/tech data			[-14,782]				
	Unjustified growth—NRE production capacity			[-15,000]				
008	CH-53K (HEAVY LIFT) AP		182,871			182,871		
009	V-22 (MEDIUM LIFT)	8	751,716		13	1,166,116		
	5 additional aircraft—Navy UPL				5			
	[5]							
011	H-1 UPGRADES (UH-1Y/AH-1Z)		939			939		
013	P-8A POSEIDON		44,595		4	724,595		
	Four additional aircraft				4			
	[4]							
014	E-2D ADV HAWKEYE	5	766,788		6	957,788		
	Navy UPL							
	[1]							
015	E-2D ADV HAWKEYE AP		118,095			118,095		
016	TRAINER AIRCRAFT							
	ADVANCED HELICOPTER TRAINING SYSTEM		163,490		36	163,490		
017	OTHER AIRCRAFT							
	KC-130J	6	520,787		10	914,787		
	Two additional aircraft—USMC UPL				4			
	[2]							
	Two additional C-130J aircraft—Navy UPL				2			
	[2]							
018	KC-130J AP		68,088			68,088		
021	MQ-4 TRITON		160,151		1	351,151		
	One additional aircraft				1			
	[1]							
023	MQ-8 UAV		49,249			49,249		
024	STUASLO UAV		13,151			13,151		
025	MQ-25 AP		47,468			47,468		

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
026	MQ-9A REAPER			2	40,000	2	40,000
	Navy UPL			[2]	[40,000]		
027	MARINE GROUP 5 UAS	6	233,686			6	233,686
	MODIFICATION OF AIRCRAFT						
030	F-18 A-D UNIQUE		163,095	8	82,500	8	245,595
	AESA Radar Upgrades—USMC UPL			[8]	[27,500]		
	RWR Upgrades—USMC UPL				[55,000]		
031	F-18E/F AND EA-18G MODERNIZATION AND SUSTAINM		482,899				482,899
032	MARINE GROUP 5 UAS SERIES		1,982				1,982
033	AEA SYSTEMS		23,296		-3,075		20,221
	Excess support costs				[-3,075]		
034	AV-8 SERIES		17,882				17,882
035	INFRARED SEARCH AND TRACK (IRST)		138,827				138,827
036	ADVERSARY		143,571				143,571
037	F-18 SERIES		327,571				327,571
038	H-53 SERIES		112,436		-3,300		109,136
	Excess to need				[-3,300]		
039	MH-60 SERIES		94,794				94,794
040	H-1 SERIES		124,194		-5,337		118,857
	Excess to need				[-5,337]		
041	EP-3 SERIES		28,848				28,848
042	E-2 SERIES		204,826				204,826
043	TRAINER A/C SERIES		7,849				7,849
044	C-2A		2,843				2,843
045	C-130 SERIES		145,610				145,610
046	FEWSG		734				734

047	CARGO/TRANSPORT A/C SERIES	10,682			10,682
048	E-6 SERIES	128,029			128,029
049	EXECUTIVE HELICOPTERS SERIES	45,326			45,326
051	T-45 SERIES	158,772			158,772
052	POWER PLANT CHANGES	24,915			24,915
053	JPATS SERIES	22,955			22,955
054	AVIATION LIFE SUPPORT MODS	2,477			2,477
055	COMMON ECM EQUIPMENT	119,574			119,574
056	COMMON AVIONICS CHANGES	118,839			118,839
057	COMMON DEFENSIVE WEAPON SYSTEM	5,476			5,476
058	ID SYSTEMS	13,154			13,154
059	P-8 SERIES	131,298			131,298
060	MAGTF EW FOR AVIATION	29,151			29,151
061	MQ-8 SERIES	31,624			31,624
062	V-22 (TILT/ROTOR ACFT) OSPREY	312,835			312,835
063	NEXT GENERATION JAMMER (NGJ)	266,676			266,676
064	F-35 STOVL SERIES	177,054			168,154
	TR-3/B4 Delay		-8,900		
065	F-35 CV SERIES	138,269		[-8,900]	131,369
	TR-3/B4 Delay			[-6,900]	
066	QRC	98,563			98,563
067	MQ-4 SERIES	7,100			7,100
068	RQ-21 SERIES	14,123			14,123
	AIRCRAFT SPARES AND REPAIR PARTS				
072	SPARES AND REPAIR PARTS	2,339,077			2,456,877
	F-35B spare engines—USMC UPL				
	AIRCRAFT SUPPORT EQUIP & FACILITIES				
073	COMMON GROUND EQUIPMENT	517,267			517,267
074	AIRCRAFT INDUSTRIAL FACILITIES	80,500			80,500
075	WAR CONSUMABLES	42,496			42,496
076	OTHER PRODUCTION CHARGES	21,374			21,374
077	SPECIAL SUPPORT EQUIPMENT	271,774			271,774
			4	117,800	
			[4]	[117,800]	

SEC. 4101. PROCUREMENT (In Thousands of Dollars)							
Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
	TOTAL AIRCRAFT PROCUREMENT, NAVY	107	16,477,178	41	3,131,535	148	19,608,713
	WEAPONS PROCUREMENT, NAVY						
	MODIFICATION OF MISSILES						
001	TRIDENT II MODS		1,144,446				1,144,446
002	SUPPORT EQUIPMENT & FACILITIES		7,319				7,319
	MISSILE INDUSTRIAL FACILITIES						
	STRATEGIC MISSILES						
003	TOMAHAWK	60	124,513	10	13,627	70	138,140
	Program increase			[10]	[13,627]		
	TACTICAL MISSILES						
005	SIDEWINDER	178	86,366			178	86,366
006	STANDARD MISSILE	125	521,814			125	521,814
007	STANDARD MISSILE AP		45,357				45,357
008	JASSM	25	37,039			25	37,039
009	SMALL DIAMETER BOMB II	180	40,877			180	40,877
010	RAM	100	92,981		-20,000	100	72,981
	Contract award delay				[-20,000]		
011	JOINT AIR GROUND MISSILE (JAGM)	164	49,702			164	49,702
012	HELLFIRE	120	7,557			120	7,557
013	AERIAL TARGETS		150,339				150,339
014	DRONES AND DECOYS	18	30,321			18	30,321
015	OTHER MISSILE SUPPORT		3,474				3,474
016	LRASM	48	161,212			48	161,212
017	NAVAL STRIKE MISSILE (NSM)	34	59,331		-6,954	34	52,377
	Program decrease				[-6,954]		

018	MODIFICATION OF MISSILES						
019	TOMAHAWK MODS	108	206,233			206,233	
	ESSM		248,619		-87,100	161,519	108
	ESSM block 2 contract award delays				[-87,100]		
021	AARGM	54	116,345			116,345	54
022	STANDARD MISSILES MODS		148,834			148,834	
	SUPPORT EQUIPMENT & FACILITIES						
023	WEAPONS INDUSTRIAL FACILITIES		1,819			1,819	
026	ORDNANCE SUPPORT EQUIPMENT		191,905			191,905	
	ORDNANCE SUPPORT EQUIPMENT						
027	TORPEDOES AND RELATED EQUIP						
	SSTD		4,545			4,545	
028	MK-48 TORPEDO	58	159,107	24	13,370	172,477	82
	Contract award delay				[-34,000]		
	Heavyweight Torpedo—Navy UPL			[24]	[50,000]		
	Program decrease				[-2,630]		
029	ASW TARGETS		13,630			13,630	
	MOD OF TORPEDOES AND RELATED EQUIP						
030	MK-54 TORPEDO MODS		106,112		-11,944	94,168	
	Program decrease				[-11,944]		
031	MK-48 TORPEDO ADCAP MODS		35,680			35,680	
032	MARITIME MINES		8,567			8,567	
	SUPPORT EQUIPMENT						
033	TORPEDO SUPPORT EQUIPMENT		93,400			93,400	
034	ASW RANGE SUPPORT		3,997			3,997	
	DESTINATION TRANSPORTATION						
035	FIRST DESTINATION TRANSPORTATION		4,023			4,023	
	GUNS AND GUN MOUNTS						
036	SMALL ARMS AND WEAPONS		14,909			14,909	
	MODIFICATION OF GUNS AND GUN MOUNTS						
037	CIWS MODS		6,274			6,274	
038	COAST GUARD WEAPONS		45,958			45,958	

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
039	GUN MOUNT MODS		68,775				68,775
040	LCS MODULE WEAPONS	14	2,121			14	2,121
041	AIRBORNE MINE NEUTRALIZATION SYSTEMS		14,822				14,822
	SPARES AND REPAIR PARTS						
043	SPARES AND REPAIR PARTS		162,382		4,300		166,682
	Maritime Outfitting and Spares				[4,300]		
	TOTAL WEAPONS PROCUREMENT, NAVY	1,286	4,220,705	34	-94,701	1,320	4,126,004
	PROCUREMENT OF AMMO, NAVY & MC						
	NAVY AMMUNITION						
001	GENERAL PURPOSE BOMBS		48,635				48,635
002	JDAM	2,971	74,140			2,971	74,140
003	AIRBORNE ROCKETS, ALL TYPES		75,383				75,383
004	MACHINE GUN AMMUNITION		11,215				11,215
005	PRACTICE BOMBS		52,225				52,225
006	CARTRIDGES & CART ACTUATED DEVICES		70,876				70,876
007	AIR EXPENDABLE COUNTERMEASURES		61,600				61,600
008	JATOS		6,620				6,620
009	5 INCH/54 GUN AMMUNITION		28,922				28,922
010	INTERMEDIATE CALIBER GUN AMMUNITION		36,038				36,038
011	OTHER SHIP GUN AMMUNITION		39,070				39,070
012	SMALL ARMS & LANDING PARTY AMMO		45,493				45,493
013	PYROTECHNIC AND DEMOLITION		9,163				9,163
015	AMMUNITION LESS THAN \$5 MILLION		1,575				1,575
	MARINE CORPS AMMUNITION						
016	MORTARS		50,707				50,707

017	DIRECT SUPPORT MUNITIONS	120,037			120,037
018	INFANTRY WEAPONS AMMUNITION	94,001			94,001
019	COMBAT SUPPORT MUNITIONS	35,247			35,247
020	AMMO MODERNIZATION	16,267			16,267
021	ARTILLERY MUNITIONS	105,669			95,169
	Contract Delay				[-10,500]
022	ITEMS LESS THAN \$5 MILLION	5,135			5,135
	TOTAL PROCUREMENT OF AMMO, NAVY & MC	988,018	2,971	2,971	977,518
SHIPBUILDING AND CONVERSION, NAVY					
FLEET BALLISTIC MISSILE SHIPS					
001	OHIO REPLACEMENT SUBMARINE	3,003,000			2,923,012
	Columbia partial restoral				[75,000]
	Excessive cost growth				[-154,988]
002	OHIO REPLACEMENT SUBMARINE AP	1,643,980			1,843,584
	Submarine supplier development				[300,000]
	Submarine supplier development reduction				[-100,396]
OTHER WARSHIPS					
003	CARRIER REPLACEMENT PROGRAM	1,068,705			1,062,205
	Program decrease				[-6,500]
004	CVN-81	1,299,764			1,287,719
	Program decrease				[-12,045]
005	VIRGINIA CLASS SUBMARINE	4,249,240	2		4,816,240
	Industrial base expansion to 3 VA class/year starting in FY 2025				[567,000]
006	VIRGINIA CLASS SUBMARINE AP	2,120,407			2,120,407
007	CVN REFUELING OVERHAULS	2,456,018			2,232,018
	Full funding rephase				[-224,000]
008	CVN REFUELING OVERHAULS AP	66,262			66,262
009	DDG 1000	56,597			56,597
010	DDG-51	2,016,787	2		5,058,424
	AP for a third ship in FY 2023				[130,000]
	Change order excessive cost growth				[-12,300]

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
	Electronics excessive cost growth				[-35,500]		
	One additional ship			[2]	[3,059,900]		
	Plans cost excessive cost growth				[-47,000]		
	Program decrease				[-20,463]		
	Termination liability not required				[-33,000]		
013	FFG-FRIGATE	1	1,087,900			1	1,087,900
014	FFG-FRIGATE AP		69,100				69,100
	AMPHIBIOUS SHIPS						
015	LPD FLIGHT II		60,636				60,636
019	LHA REPLACEMENT		68,637	1	1,200,000	1	1,268,637
	One additional ship			[1]	[1,200,000]		
020	EXPEDITIONARY FAST TRANSPORT (EPF)		540,000	2	540,000	2	540,000
	Two additional ships			[2]	[540,000]		
	AUXILIARIES, CRAFT AND PRIOR YR PROGRAM COST						
021	TAO FLEET OILER	1	668,184	1	668,200	2	1,336,384
	One additional ship			[1]	[668,200]		
022	TAO FLEET OILER AP		76,012				76,012
023	TAGOS SURTASS SHIPS	1	434,384			1	434,384
024	TOWING, SALVAGE, AND RESCUE SHIP (ATS)	2	183,800	-1	-103,000	1	80,800
	One ship excess to Program of Record			[-1]	[-103,000]		
025	LCU 1700	4	67,928			4	67,928
026	OUTFITTING		655,707				581,931
	Outfitting early to need						
	Program decrease						
027	SHIP TO SHORE CONNECTOR	2	156,738	2	130,000	4	286,738
	Ship to Shore Connector			[2]	[130,000]		

028	SERVICE CRAFT	67,866			67,866
029	LCAC SLEP	32,712	2		32,712
030	AUXILIARY VESSELS (USED SEALIFT)	299,900	5		299,900
031	COMPLETION OF PY SHIPBUILDING PROGRAMS	660,795			660,795
	TOTAL SHIPBUILDING AND CONVERSION, NAVY	22,571,059	21	5,847,132	28,418,191
	OTHER PROCUREMENT, NAVY				
	SHIP PROPULSION EQUIPMENT				
001	SURFACE POWER EQUIPMENT	41,414			41,414
002	GENERATORS				
	SURFACE COMBATANT HM&E	83,746		-12,692	71,054
	Program decrease			[-12,692]	
003	NAVIGATION EQUIPMENT				
	OTHER NAVIGATION EQUIPMENT	72,300			72,300
	OTHER SHIPBOARD EQUIPMENT				
004	SUB PERRISCOPE, IMAGING AND SUPT EQUIP PROG	234,932			234,932
005	DDG MOD	583,136			583,136
006	FIREFIGHTING EQUIPMENT	15,040			15,040
007	COMMAND AND CONTROL SWITCHBOARD	2,194			2,194
008	LHA/LHD MIDLIFE	133,627		-12,773	120,854
	Program decrease			[-12,773]	
009	LCC 19/20 EXTENDED SERVICE LIFE PROGRAM	4,387			4,387
010	POLLUTION CONTROL EQUIPMENT	18,159			18,159
011	SUBMARINE SUPPORT EQUIPMENT	88,284			88,284
012	VIRGINIA CLASS SUPPORT EQUIPMENT	22,669			22,669
013	LCS CLASS SUPPORT EQUIPMENT	9,640			9,640
014	SUBMARINE BATTERIES	21,834			21,834
015	LPD CLASS SUPPORT EQUIPMENT	34,292		-4,814	29,478
	Program decrease			[-4,814]	
016	DDG 1000 CLASS SUPPORT EQUIPMENT	126,107		-20,000	106,107
	Program decrease			[-20,000]	
017	STRATEGIC PLATFORM SUPPORT EQUIP	12,256			12,256

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
018	DSSP EQUIPMENT		10,682				10,682
019	CG MODERNIZATION		156,951				156,951
020	LCAC		21,314				21,314
021	UNDERWATER EOD EQUIPMENT		24,146				24,146
022	ITEMS LESS THAN \$5 MILLION		84,789				84,789
023	CHEMICAL WARFARE DETECTORS		2,997				2,997
	REACTOR PLANT EQUIPMENT						
025	SHIP MAINTENANCE, REPAIR AND MODERNIZATION		1,307,651		167,400		1,475,051
	A-120 Availabilities				[167,400]		
026	REACTOR POWER UNITS		3,270				3,270
027	REACTOR COMPONENTS		438,729				438,729
	OCEAN ENGINEERING						
028	DIVING AND SALVAGE EQUIPMENT		10,772				10,772
	SMALL BOATS						
029	STANDARD BOATS		58,770				58,770
	PRODUCTION FACILITIES EQUIPMENT						
030	OPERATING FORCES IPE		168,822		-18,000		150,822
	Program decrease				[-18,000]		
	OTHER SHIP SUPPORT						
031	LCS COMMON MISSION MODULES EQUIPMENT		74,231				74,231
032	LCS MCM MISSION MODULES		40,630		-10,511		30,119
	Program decrease				[-10,511]		
033	LCS ASW MISSION MODULES		1,565				1,565
034	LCS SUW MISSION MODULES		3,395				3,395
035	LCS IN-SERVICE MODERNIZATION		122,591				122,591
036	SMALL & MEDIUM UUV		32,534				32,534

038	SHIP SONARS	15,927		15,927	
039	SPQ-9B RADAR	131,829		126,871	
	AN/SQQ-89 SURF ASW COMBAT SYSTEM				-4,958
	Program decrease				[-4,958]
040	SSN ACOUSTIC EQUIPMENT	379,850		341,898	
	Program decrease				[-37,952]
	Virginia class technical insertion kits previously funded				[-18,952]
041	UNDERSEA WARFARE SUPPORT EQUIPMENT	13,965		13,965	
	ASW ELECTRONIC EQUIPMENT				
042	SUBMARINE ACOUSTIC WARFARE SYSTEM	24,578		24,578	
043	SSTD	11,010		11,010	
044	FIXED SURVEILLANCE SYSTEM	363,651		363,651	
045	SURTASS	67,500		67,500	
	ELECTRONIC WARFARE EQUIPMENT				
046	AN/SIQ-32	370,559		257,644	
	Block 3 kit early to need				-112,915
	Program decrease				[-56,500]
					[-56,415]
	RECONNAISSANCE EQUIPMENT				
047	SHIPBOARD IW EXPLOIT	261,735		261,735	
048	AUTOMATED IDENTIFICATION SYSTEM (AIS)	3,777		3,777	
	OTHER SHIP ELECTRONIC EQUIPMENT				
049	COOPERATIVE ENGAGEMENT CAPABILITY	24,641		46,924	
	Maritime Outfitting and Spares				22,283
	Navy Tactical Grid Development for JADC2				[13,300]
	NAVAL TACTICAL COMMAND SUPPORT SYSTEM (NTCSS)				[8,983]
050	ATDLS	14,439		14,439	
051	NAVY COMMAND AND CONTROL SYSTEM (NCCS)	101,595		101,595	
052	MINESWEEPING SYSTEM REPLACEMENT	3,535		3,535	
053	SHALLOW WATER MCM	15,640		15,640	
054	COBRA Block 1 mods excess to need	5,610		0	
					-5,610
					[-5,610]
055	NAVSTAR GPS RECEIVERS (SPACE)	33,097		33,097	
056	AMERICAN FORCES RADIO AND TV SERVICE	2,513		2,513	

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
057	STRATEGIC PLATFORM SUPPORT EQUIP		4,823				4,823
	AVIATION ELECTRONIC EQUIPMENT						
058	ASHORE ATC EQUIPMENT		83,464				83,464
059	AFLOAT ATC EQUIPMENT		67,055				67,055
060	ID SYSTEMS		46,918				46,918
061	JOINT PRECISION APPROACH AND LANDING SYSTEM		35,386				35,386
062	NAVAL MISSION PLANNING SYSTEMS		17,951				17,951
	OTHER SHORE ELECTRONIC EQUIPMENT						
063	MARITIME INTEGRATED BROADCAST SYSTEM		2,360				2,360
064	TACTICAL/MOBILE C4I SYSTEMS		18,919				18,919
065	DCGS-N		16,691				16,691
066	CANES		412,002		29,000		441,002
	Resilient PNT				[29,000]		
067	RADIAC		9,074				9,074
068	GAMES-INTELL		51,593				51,593
069	GPETE		23,930				23,930
070	MASF		8,795				8,795
071	INTEG COMBAT SYSTEM TEST FACILITY		5,829				5,829
072	EMI CONTROL INSTRUMENTATION		3,925				3,925
073	ITEMS LESS THAN \$5 MILLION		156,042				156,042
	SHIPBOARD COMMUNICATIONS						
074	SHIPBOARD TACTICAL COMMUNICATIONS		43,212				43,212
075	SHIP COMMUNICATIONS AUTOMATION		90,724		37,983		128,707
	Navy Tactical Grid Development for JADC2				[8,983]		
	Resilient PNT				[29,000]		
076	COMMUNICATIONS ITEMS UNDER \$5M		44,447				44,447

077	SUBMARINE COMMUNICATIONS			
	SUBMARINE BROADCAST SUPPORT	47,579		47,579
078	SUBMARINE COMMUNICATION EQUIPMENT	64,642		64,642
	SATELLITE COMMUNICATIONS			
079	SATELLITE COMMUNICATIONS SYSTEMS	38,636		38,636
080	NAVY MULTIBAND TERMINAL (NMT)	34,723		34,723
	SHORE COMMUNICATIONS			
081	JOINT COMMUNICATIONS SUPPORT ELEMENT (JCSE)	2,651		2,651
	CRYPTOGRAPHIC EQUIPMENT			
082	INFO SYSTEMS SECURITY PROGRAM (ISSP)	146,879		146,879
083	MIO INTEL EXPLOITATION TEAM	977		977
	CRYPTOLOGIC EQUIPMENT			
084	CRYPTOLOGIC COMMUNICATIONS EQUIP	17,809		17,809
	OTHER ELECTRONIC SUPPORT			
092	COAST GUARD EQUIPMENT	63,214		63,214
	SONOBUOYS			
094	SONOBUOYS—ALL TYPES	249,121	54,400	303,521
	Navy UPL		[54,400]	
	AIRCRAFT SUPPORT EQUIPMENT			
095	MINOTAUR	4,963		4,963
096	WEAPONS RANGE SUPPORT EQUIPMENT	98,898		98,898
097	AIRCRAFT SUPPORT EQUIPMENT	178,647		178,647
098	ADVANCED ARRESTING GEAR (AAG)	22,265		22,265
099	METEOROLOGICAL EQUIPMENT	13,687		13,687
100	LEGACY AIRBORNE MCM	4,446		4,446
101	LAMPS EQUIPMENT	1,470		1,470
102	AVIATION SUPPORT EQUIPMENT	70,665		70,665
103	UMCS-UNMAN CARRIER AVIATION(UCA)MISSION CNTRL	86,584		86,584
	SHIP GUN SYSTEM EQUIPMENT			
104	SHIP GUN SYSTEMS EQUIPMENT	5,536		5,536
	SHIP MISSILE SYSTEMS EQUIPMENT			
105	HARPOON SUPPORT EQUIPMENT	204		204

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
106	SHIP MISSILE SUPPORT EQUIPMENT		237,987				237,987
107	TOMAHAWK SUPPORT EQUIPMENT		88,726				88,726
	FBM SUPPORT EQUIPMENT						
108	STRATEGIC MISSILE SYSTEMS EQUIP		281,259				281,259
	ASW SUPPORT EQUIPMENT						
109	SSN COMBAT CONTROL SYSTEMS		143,289				143,289
110	ASW SUPPORT EQUIPMENT		30,595				30,595
	OTHER ORDNANCE SUPPORT EQUIPMENT						
111	EXPLOSIVE ORDNANCE DISPOSAL EQUIP		1,721				1,721
112	ITEMS LESS THAN \$5 MILLION		8,746				8,746
	OTHER EXPENDABLE ORDNANCE						
113	ANTI-SHIP MISSILE DECOY SYSTEM		76,994				76,994
114	SUBMARINE TRAINING DEVICE MODS		75,813				75,813
115	SURFACE TRAINING EQUIPMENT		127,814				127,814
	CIVIL ENGINEERING SUPPORT EQUIPMENT						
116	PASSENGER CARRYING VEHICLES		4,140				4,140
117	GENERAL PURPOSE TRUCKS		2,805				2,805
118	CONSTRUCTION & MAINTENANCE EQUIP		48,403				51,003
	Excess carryover				2,600		
	GPS laser survey equipment				[-2,000]		
	GPS laser survey equipment				[4,600]		
119	FIRE FIGHTING EQUIPMENT		15,084				15,084
120	TACTICAL VEHICLES		27,400				27,400
121	POLLUTION CONTROL EQUIPMENT		2,607				2,607
122	ITEMS LESS THAN \$5 MILLION		51,963				51,963
123	PHYSICAL SECURITY VEHICLES		1,165				1,165
	SUPPLY SUPPORT EQUIPMENT						

124	SUPPLY EQUIPMENT	24,698		24,698
125	FIRST DESTINATION TRANSPORTATION	5,385		5,385
126	SPECIAL PURPOSE SUPPLY SYSTEMS	660,750		660,750
	TRAINING DEVICES			
127	TRAINING SUPPORT EQUIPMENT	3,465		3,465
128	TRAINING AND EDUCATION EQUIPMENT	60,114		60,114
	COMMAND SUPPORT EQUIPMENT			
129	COMMAND SUPPORT EQUIPMENT	31,007		31,007
130	MEDICAL SUPPORT EQUIPMENT	7,346		7,346
132	NAVAL MIP SUPPORT EQUIPMENT	2,887		2,887
133	OPERATING FORCES SUPPORT EQUIPMENT	12,815		12,815
134	C4ISR EQUIPMENT	6,324		6,324
135	ENVIRONMENTAL SUPPORT EQUIPMENT	25,098		25,098
136	PHYSICAL SECURITY EQUIPMENT	110,647	-10,000	100,647
	Program decrease		[-10,000]	
137	ENTERPRISE INFORMATION TECHNOLOGY	31,709		31,709
	OTHER			
141	NEXT GENERATION ENTERPRISE SERVICE	41		41
142	CYBERSPACE ACTIVITIES	12,859		12,859
	CLASSIFIED PROGRAMS			
142A	CLASSIFIED PROGRAMS	19,808		19,808
	SPARES AND REPAIR PARTS			
143	SPARES AND REPAIR PARTS	424,405	92,700	517,105
	Maritime Outfitting and Spares		[92,700]	
	TOTAL OTHER PROCUREMENT, NAVY	10,875,912	156,141	11,032,053
	PROCUREMENT, MARINE CORPS			
	TRACKED COMBAT VEHICLES			
001	AAV7A1 PIP	36,836		36,836
002	AMPHIBIOUS COMBAT VEHICLE FAMILY OF VEHICLES	532,355		532,355
	Excess growth		92	
	Program increase		[-7,000]	
			[7,000]	

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
003	LAV PIP		23,476				23,476
	ARTILLERY AND OTHER WEAPONS						
004	155MM LIGHTWEIGHT TOWED HOWITZER		32				32
005	ARTILLERY WEAPONS SYSTEM		67,548		153,800		221,348
	Program increase—NSM USMC UPL				[57,800]		
	Program increase—TACTOM USMC UPL				[96,000]		
006	WEAPONS AND COMBAT VEHICLES UNDER \$5 MILLION		35,402				35,402
	GUIDED MISSILES						
008	GROUND BASED AIR DEFENSE		9,349				9,349
009	ANTI-ARMOR MISSILE-JAVELIN	1	937			1	937
010	FAMILY ANTI-ARMOR WEAPON SYSTEMS (FOAAWS)		20,481				20,481
011	ANTI-ARMOR MISSILE-TOW		14,359		-2,000		12,359
	Unit cost growth				[-2,000]		
012	GUIDED MLRS ROCKET (GMLRS)	654	98,299			654	98,299
	COMMAND AND CONTROL SYSTEMS						
013	COMMON AVIATION COMMAND AND CONTROL SYSTEM		18,247				18,247
014	REPAIR AND TEST EQUIPMENT		33,554				33,554
	OTHER SUPPORT (TEL)						
015	MODIFICATION KITS		167				167
	COMMAND AND CONTROL SYSTEM (NON-TEL)						
016	ITEMS UNDER \$5 MILLION (COMM & ELEC)		64,879		25,900		90,779
	Fly-Away Broadcast System (FABS)—USMC UPL				[9,000]		
	Improved Night/Day Observation Device (INOD) Block III—USMC UPL				[16,900]		
017	AIR OPERATIONS C2 SYSTEMS		1,291				1,291
	RADAR + EQUIPMENT (NON-TEL)						

019	GROUND/AIR TASK ORIENTED RADAR (GATOR)	8	297,369	44	348,000	52	645,369
	AN/TPS-80 Retrofit Kits—USMC UPL			[36]	[44,000]		
	AN/TPS-80 Procure (+8)—USMC UPL			[8]	[304,000]		
	INTEL/COMM EQUIPMENT (NON-TEL)						
020	GCSS-MC		604				604
021	FIRE SUPPORT SYSTEM		39,810				39,810
022	INTELLIGENCE SUPPORT EQUIPMENT		67,309		5,600		72,909
	SCINet—USMC UPL				[5,600]		
024	UNMANNED AIR SYSTEMS (INTEL)		24,299				24,299
025	DCGS-MC		28,633				28,633
026	UAS PAYLOADS		3,730				3,730
	OTHER SUPPORT (NON-TEL)						
029	NEXT GENERATION ENTERPRISE NETWORK (NGEN)		97,060		32,900		97,060
030	COMMON COMPUTER RESOURCES		83,606		[7,500]		116,506
	(SONIC)—Enterprise Infrastructure Modernization (EIM)				[6,300]		
	Marine Corps Hardware Suite (MCHS) End User Devices (EUD) Refresh ..				[19,100]		
	NGEN Infrastructure Refresh				-14,000		
031	COMMAND POST SYSTEMS		53,708		[-14,000]		39,708
	NOTM refresh early to need				[-10,000]		
032	RADIO SYSTEMS		468,678		-24,000		444,678
	TCM ground radios sparing previously funded				[-10,000]		
	Unjustified request				[-14,000]		
033	COMM SWITCHING & CONTROL SYSTEMS		49,600		-8,000		41,600
	Excess growth				[-8,000]		
034	COMM & ELEC INFRASTRUCTURE SUPPORT		110,835		5,800		116,635
	Excess growth				[-10,000]		
	NETWORK Base Telecommunications Infrastructure (BTI)—USMC UPL				[15,800]		
035	CYBERSPACE ACTIVITIES		25,377		21,200		46,577
	Defensive Cyber Operations (DCO)—Internal Defensive Measures (IDM)				[21,200]		
	Kits.						
	CLASSIFIED PROGRAMS						
037A	CLASSIFIED PROGRAMS		4,034				4,034

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SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
	ADMINISTRATIVE VEHICLES						
038	COMMERCIAL CARGO VEHICLES		17,848				17,848
	TACTICAL VEHICLES						
039	MOTOR TRANSPORT MODIFICATIONS		23,363		-4,000		19,363
	Excess growth				[-4,000]		
040	JOINT LIGHT TACTICAL VEHICLE	613	322,013			613	322,013
042	TRAILERS		9,876				9,876
	ENGINEER AND OTHER EQUIPMENT						
044	TACTICAL FUEL SYSTEMS		2,161				2,161
045	POWER EQUIPMENT ASSORTED		26,625				26,625
046	AMPHIBIOUS SUPPORT EQUIPMENT		17,119		-7,000		10,119
	Excess carryover				[-7,000]		
047	EOD SYSTEMS		94,472				107,672
	Buried Command Wire Detector (BCWD)—USMC UPL				13,200		
	Instrument Set, Recon and Survey (ENFIRE)—USMC UPL				[7,800]		
					[5,400]		
	MATERIALS HANDLING EQUIPMENT						
048	PHYSICAL SECURITY EQUIPMENT		84,513				84,513
	GENERAL PROPERTY						
049	FIELD MEDICAL EQUIPMENT		8,105				8,105
050	TRAINING DEVICES		37,814				37,814
051	FAMILY OF CONSTRUCTION EQUIPMENT		34,658		15,800		50,458
	All-Terrain Crane (ATC)—USMC UPL				[10,800]		
	Rough Terrain Container Handler (RTCH)—USMC UPL				[5,000]		
052	ULTRA-LIGHT TACTICAL VEHICLE (ULTV)		15,439				15,439
	OTHER SUPPORT						
053	ITEMS LESS THAN \$5 MILLION		4,402		10,600		15,002

	Lightweight Water Purification System—USMC UPL				[10,600]			
054	SPARES AND REPAIR PARTS						32,819	32,819
	SPARES AND REPAIR PARTS						3,043,091	3,043,091
	TOTAL PROCUREMENT, MARINE CORPS	1,368	3,043,091	44	573,800	1,412		3,616,891
	AIRCRAFT PROCUREMENT, AIR FORCE							
	STRATEGIC OFFENSIVE							
001	B-21 RAIDER AP		108,027					108,027
002	TACTICAL FORCES							
	F-35	48	4,167,604	-5	-194,100	43		3,973,504
	F135 PM Procurement—Air Force UPL				[175,000]			
	Sustainment Enterprise Support				[-429,100]			
	USG depot accleration				[60,000]			
003	F-35 AP		352,632					352,632
005	F-15EX	12	1,186,903	12	1,376,000	24		2,562,903
	12 additional aircraft				[1,376,000]			
006	F-15EX AP		147,919					147,919
	TACTICAL AIRLIFT							
007	KC-46A MDAP	14	2,380,315		-105,000	14		2,275,315
	Excess growth				[-105,000]			
	OTHER AIRLIFT							
008	C-130J	1	128,896			1		128,896
009	MC-130J	3	220,049			3		220,049
	UPT TRAINERS							
011	ADVANCED TRAINER REPLACEMENT T-X		10,397					10,397
	HELICOPTERS							
013	COMBAT RESCUE HELICOPTER	14	792,221			14		792,221
	MISSION SUPPORT AIRCRAFT							
016	CIVIL AIR PATROL A/C		2,813		8,600			11,413
	Recapitalization rate increase				[8,600]			
	OTHER AIRCRAFT							
017	TARGET DRONES	22	116,169			22		116,169

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SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
018	COMPASS CALL				75,000		75,000
	Add 5 spare engines—Air Force UPL				[75,000]		
019	E-11 BACN/HAG	2	124,435			2	124,435
021	MQ-9		3,288	6	115,000	6	118,288
	Add 6 aircraft			[6]	[115,000]		
	STRATEGIC AIRCRAFT						
023	B-2A		29,944				29,944
024	B-1B		30,518				30,518
025	B-52		74,957				74,957
026	COMBAT RESCUE HELICOPTER		61,191		-15,300		45,891
	Early to need—contract delay				[-15,300]		
027	LARGE AIRCRAFT INFRARED COUNTERMEASURES		57,001				57,001
	TACTICAL AIRCRAFT						
028	A-10		83,621		100,000		183,621
	Modernization and Upgrades				[100,000]		
029	E-11 BACN/HAG		68,955				68,955
030	F-15		234,340				234,340
031	F-16		613,166		120,000		733,166
	ANG AESA Radars				[100,000]		
	HUD upgrade				[20,000]		
032	F-22A		424,722				384,722
	Program decrease				-40,000		
033	F-35 MODIFICATIONS		304,135		4,800		308,935
	RMIP increase				[20,000]		
	TR-3/B4 delay				[-15,200]		
034	F-15 EPAW	18	149,797			18	149,797

036	KC-46A MDAP	1,984	1,984
	AIRLIFT AIRCRAFT		
037	C-5	25,431	25,431
038	C-17A	59,570	59,570
040	C-32A	1,949	1,949
041	C-37A	5,984	5,984
	TRAINER AIRCRAFT		
042	GLIDER MODS	142	142
043	T-6	8,735	8,735
044	T-1	3,872	3,872
045	T-38	49,851	49,851
	OTHER AIRCRAFT		
046	U-2 MODS	126,809	126,809
047	KC-10A (ATCA)	1,902	1,902
049	VC-25A MOD	96	96
050	C-40	262	262
051	C-130	29,071	140,700
	Modular Airborne Fire Fighting Systems		[15,000]
	NP-2000 modifications		[75,700]
	T-56 engine modifications		[50,000]
052	C-130J MODS	110,784	5,800
	Virtual reality maintenance training		[5,800]
053	C-135	61,376	61,376
054	COMPASS CALL	195,098	195,098
056	RC-135	207,596	207,596
057	E-3	109,855	109,855
058	E-4	19,081	19,081
059	E-8	16,312	43,312
	Program increase—CDL		27,000
060	AIRBORNE WARNING AND CNTRL SYS (AWACS) 40/45	30,327	[27,000]
	Block 40/45 carryover		-3,700
062	H-1	1,533	[-3,700]

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
063	H-60		13,709		18,430		32,139
	OLR mod early to need				[-1,570]		
	Restore degraded visual environment				[20,000]		
064	RQ-4 MODS		3,205				3,205
065	HC/MC-130 MODIFICATIONS		150,263				150,263
066	OTHER AIRCRAFT		54,828				54,828
067	MQ-9 MODS		144,287		-14,500		129,787
	Early to need—MQ-9 Upgrade				[-11,500]		
	Unjustified increase—MQ-9 Upgrade other government support				[-3,000]		
068	MQ-9 UAS PAYLOADS		40,800				40,800
069	SENIOR LEADER C3, SYSTEM—AIRCRAFT		23,554				23,554
070	CV-22 MODS		158,162		82,400		240,562
	Macelle improvement program				[5,000]		
	SOCOM—CV-22 Reliability Acceleration				[77,400]		
071	AIRCRAFT SPARES AND REPAIR PARTS		923,573				923,573
	INITIAL SPARES/REPAIR PARTS						
	COMMON SUPPORT EQUIPMENT						
072	AIRCRAFT REPLACEMENT SUPPORT EQUIP		138,761				138,761
	POST PRODUCTION SUPPORT						
073	B-2A		1,651				1,651
074	B-2B		38,811				38,811
075	B-52		5,602				5,602
078	F-15		2,324				2,324
079	F-16		10,456				10,456
081	RQ-4 POST PRODUCTION CHARGES		24,592				24,592
	INDUSTRIAL PREPAREDNESS						

082	INDUSTRIAL RESPONSIVENESS	18,110			18,110
	WAR CONSUMABLES				
083	WAR CONSUMABLES	35,866			35,866
	OTHER PRODUCTION CHARGES				
084	OTHER PRODUCTION CHARGES	979,388			1,019,388
	Classified modifications—program increase		40,000		
			[40,000]		
	CLASSIFIED PROGRAMS				
086A	CLASSIFIED PROGRAMS	18,092			18,092
	TOTAL AIRCRAFT PROCUREMENT, AIR FORCE	134	15,727,669	13	17,468,799
	MISSILE PROCUREMENT, AIR FORCE				
	MISSILE REPLACEMENT EQUIPMENT—BALLISTIC				
001	MISSILE REPLACEMENT EQ-BALLISTIC	57,793			57,793
002	BALLISTIC MISSILES				
	GROUND BASED STRATEGIC DETERENT	10,895			10,895
	Review of Engineering and Manufacturing Development Contract				
	TACTICAL				
003	REPLAC EQUIP & WAR CONSUMABLES	7,681			7,681
004	AGM-183A AIR-LAUNCHED RAPID RESPONSE WEAPON	160,850			110,850
	Procurement early to need		-50,000		
			[-50,000]		
006	JOINT AIR-SURFACE STANDOFF MISSILE	710,550		525	660,550
	Program decrease				
008	SIDEWINDER (AIM-9X)	107,587		243	107,587
009	AMRAAM	214,002		168	214,002
010	PREDATOR HELLFIRE MISSILE	103,684		1,176	103,684
011	SMALL DIAMETER BOMB	82,819		998	82,819
012	SMALL DIAMETER BOMB II	294,649		985	294,649
	INDUSTRIAL FACILITIES				
013	INDUSTRI'L PREPAREDNS/POL PREVENTION	757			757
	CLASS IV				
015	ICBM FUZE MOD	53,013		40	53,013
016	ICBM FUZE MOD AP	47,757			47,757

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
017	MM III MODIFICATIONS		88,579				88,579
019	AIR LAUNCH CRUISE MISSILE (ALCM)		46,799				46,799
	MISSILE SPARES AND REPAIR PARTS						
020	MSL SPRS/REPAIR PARTS (INITIAL)		14,212				14,212
021	MSL SPRS/REPAIR PARTS (REPLEN)		63,547				63,547
022	INITIAL SPARES/REPAIR PARTS		4,045				4,045
	SPECIAL PROGRAMS						
027	SPECIAL UPDATE PROGRAMS		30,352				30,352
	CLASSIFIED PROGRAMS						
027A	CLASSIFIED PROGRAMS		570,240				570,240
	TOTAL MISSILE PROCUREMENT, AIR FORCE	4,135	2,669,811		-100,000	4,135	2,569,811
	PROCUREMENT OF AMMUNITION, AIR FORCE						
	ROCKETS						
001	ROCKETS		36,597				36,597
	CARTRIDGES						
002	CARTRIDGES		169,163				164,163
	Excess to need						-5,000
							[-5,000]
	BOMBS						
003	PRACTICE BOMBS		48,745				48,745
004	GENERAL PURPOSE BOMBS		176,565				176,565
005	MASSIVE ORDNANCE PENETRATOR (MOP)		15,500				15,500
006	JOINT DIRECT ATTACK MUNITION	1,919	124,102			1,919	124,102
007	B-61		2,709				2,709
	OTHER ITEMS						
008	CAD/PAD		47,210				47,210

009	EXPLOSIVE ORDNANCE DISPOSAL (EOD)	6,151				6,151
010	SPARES AND REPAIR PARTS	535				535
011	MODIFICATIONS	292				292
012	ITEMS LESS THAN \$5,000,000	9,164				9,164
	FLARES					
013	FLARES	95,297				95,297
	FUZES					
014	FUZES	50,795				50,795
	SMALL ARMS					
015	SMALL ARMS	12,343				12,343
	TOTAL PROCUREMENT OF AMMUNITION, AIR FORCE	795,168		1,919	-5,000	790,168
	PROCUREMENT, SPACE FORCE					
	SPACE PROCUREMENT, SF					
002	AF SATELLITE COMM SYSTEM	43,655				43,655
003	COUNTERSPACE SYSTEMS	64,804				64,804
004	FAMILY OF BEYOND LINE-OF-SIGHT TERMINALS	39,444				39,444
005	GENERAL INFORMATION TECH—SPACE	3,316				3,316
	Increase satellite control capacity UPL			6,500		6,500
	Modernize Space Aggressor Equipment			[4,700]		[4,700]
				[1,800]		[1,800]
006	GPSIII FOLLOW ON	601,418				601,418
007	GPS III SPACE SEGMENT	84,452				84,452
008	GLOBAL POSITIONING (SPACE)	2,274				2,274
009	HERITAGE TRANSITION	13,529				13,529
010	SPACEBORNE EQUIP (COMSEC)	26,245				26,245
011	MILSATCOM	24,333				24,333
012	SBIR HIGH (SPACE)	154,526				154,526
013	SPECIAL SPACE ACTIVITIES	142,188				142,188
014	MOBILE USER OBJECTIVE SYSTEM	45,371				45,371
015	NATIONAL SECURITY SPACE LAUNCH	1,337,347				1,337,347
016	NUDET DETECTION SYSTEM	6,690				6,690
017	PTES HUB	7,406				7,406

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
018	ROCKET SYSTEMS LAUNCH PROGRAM		10,429				10,429
020	SPACE MODS		64,371				64,371
021	SPACELIFT RANGE SYSTEM SPACE		93,774				93,774
	SPARES						
022	SPARES AND REPAIR PARTS		1,282				1,282
	TOTAL PROCUREMENT, SPACE FORCE	7	2,766,854		6,500	7	2,773,354
	OTHER PROCUREMENT, AIR FORCE						
001	PASSENGER CARRYING VEHICLES						
	PASSENGER CARRYING VEHICLES		8,448				8,448
002	CARGO AND UTILITY VEHICLES						
	MEDIUM TACTICAL VEHICLE		5,804				5,804
003	CAP VEHICLES		1,066		734		1,800
	Program increase				[734]		
004	CARGO AND UTILITY VEHICLES		57,459		-7,500		49,959
	Prior-year underexecution				[-7,500]		
	SPECIAL PURPOSE VEHICLES						
005	JOINT LIGHT TACTICAL VEHICLE		97,326		-5,000		92,326
	Excess carryover				[-5,000]		
006	SECURITY AND TACTICAL VEHICLES		488				488
007	SPECIAL PURPOSE VEHICLES		75,694				75,694
	FIRE FIGHTING EQUIPMENT						
008	FIRE FIGHTING/CRASH RESCUE VEHICLES		12,525				12,525
	MATERIALS HANDLING EQUIPMENT						
009	MATERIALS HANDLING VEHICLES		34,933				34,933
	BASE MAINTENANCE SUPPORT						

010	RUNWAY SNOW REMOV AND CLEANING EQU	9,134		9,134
011	BASE MAINTENANCE SUPPORT VEHICLES	111,820	-24,807	87,013
	Insufficient justification		[-4,807]	
	Program decrease		[-20,000]	
	COMM SECURITY EQUIPMENT(COMSEC)			
013	COMSEC EQUIPMENT	66,022		66,022
014	STRATEGIC MICROELECTRONIC SUPPLY SYSTEM	885,051		885,051
	INTELLIGENCE PROGRAMS			
015	INTERNATIONAL INTEL TECH & ARCHITECTURES	5,809		5,809
016	INTELLIGENCE TRAINING EQUIPMENT	5,719		5,719
017	INTELLIGENCE COMM EQUIPMENT	25,844		25,844
	ELECTRONICS PROGRAMS			
018	AIR TRAFFIC CONTROL & LANDING SYS	44,516		44,516
019	BATTLE CONTROL SYSTEM—FIXED	2,940		2,940
020	THEATER AIR CONTROL SYS IMPROVEMEN	43,442		43,442
021	3D EXPEDITIONARY LONG-RANGE RADAR	96,186		96,186
	ANG/Cyber Requirements—AF UPL		211,500	307,686
	Build Command and Control Framework		[164,000]	
	Program decrease		[55,000]	
022	WEATHER OBSERVATION FORECAST	32,376		32,376
023	STRATEGIC COMMAND AND CONTROL	37,950		37,950
024	CHEYENNE MOUNTAIN COMPLEX	8,258		8,258
025	MISSION PLANNING SYSTEMS	14,717		14,717
	SPCL COMM-ELECTRONICS PROJECTS			
027	GENERAL INFORMATION TECHNOLOGY	43,917		43,917
	EUCOM—MPE MOB/FOB		72,330	116,247
	INDOPACOM Mission Partner Environment		[13,800]	
	MISO		[30,530]	
028	AF GLOBAL COMMAND & CONTROL SYS	414		414
030	MOBILITY COMMAND AND CONTROL	10,619		10,619
031	AIR FORCE PHYSICAL SECURITY SYSTEM	101,896		101,896
	Program decrease		-10,000	
			[-10,000]	

052	MODIFICATIONS				
	COMM ELECT MODS	18,607			18,607
053	PERSONAL SAFETY & RESCUE EQUIP				
	PERSONAL SAFETY AND RESCUE EQUIPMENT	106,449			106,449
054	DEPOT PLANT+MTRLS HANDLING EQ				
	POWER CONDITIONING EQUIPMENT	11,274			11,274
055	MECHANIZED MATERIAL HANDLING EQUIP	8,594			8,594
056	BASE SUPPORT EQUIPMENT				
	BASE PROCURED EQUIPMENT	1			1
057	ENGINEERING AND EOD EQUIPMENT	32,139			32,139
058	MOBILITY EQUIPMENT	63,814			63,814
059	FUELS SUPPORT EQUIPMENT (FSE)	17,928			17,928
060	BASE MAINTENANCE AND SUPPORT EQUIPMENT	48,534			48,534
	SPECIAL SUPPORT PROJECTS				
062	DARP RC135	27,359			27,359
063	DCGS-AF	261,070			261,070
065	SPECIAL UPDATE PROGRAM	777,652			777,652
	CLASSIFIED PROGRAMS				
065A	CLASSIFIED PROGRAMS	20,983,908		200,000	21,183,908
	Program Increase			[200,000]	
066	SPARES AND REPAIR PARTS				
	SPARES AND REPAIR PARTS (CYBER)	978			978
067	SPARES AND REPAIR PARTS	9,575			9,575
	TOTAL OTHER PROCUREMENT, AIR FORCE	25,251,137		539,257	25,790,394
	PROCUREMENT, DEFENSE-WIDE				
	MAJOR EQUIPMENT, SDA				
024	MAJOR EQUIPMENT, DPAA	494			494
047	MAJOR EQUIPMENT, OSD	31,420		10	31,420
048	JOINT CAPABILITY TECH DEMONSTRATION (JCTD)	74,060			74,060
	MAJOR EQUIPMENT, NSA				
046	INFORMATION SYSTEMS SECURITY PROGRAM (ISSP)	315			315

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
	MAJOR EQUIPMENT, DISA						
010	INFORMATION SYSTEMS SECURITY		18,923				18,923
011	TELEPORT PROGRAM		34,908				34,908
012	JOINT FORCES HEADQUARTERS—DODIN		1,968				1,968
013	ITEMS LESS THAN \$5 MILLION		42,270				42,270
014	DEFENSE INFORMATION SYSTEM NETWORK		18,025				18,025
015	WHITE HOUSE COMMUNICATION AGENCY		44,522				44,522
016	SENIOR LEADERSHIP ENTERPRISE		54,592				54,592
017	JOINT REGIONAL SECURITY STACKS (JRSS)		62,657				62,657
018	JOINT SERVICE PROVIDER		102,039				102,039
019	FOURTH ESTATE NETWORK OPTIMIZATION (4ENO)		80,645		-10,000		70,645
	Program execution				[-10,000]		
021	MAJOR EQUIPMENT, DLA						
	MAJOR EQUIPMENT		530,896		-20,000		510,896
	Excess growth				[-20,000]		
002	MAJOR EQUIPMENT, DCSA						
	MAJOR EQUIPMENT		3,014				3,014
049	MAJOR EQUIPMENT, TJS						
	MAJOR EQUIPMENT, TJS		7,830				7,830
029	MAJOR EQUIPMENT, MISSILE DEFENSE AGENCY						
	THAAD	18	251,543	12	109,579	30	361,122
	12 additional systems			[12]	[109,579]		
031	AEGIS BMD	40	334,621			40	334,621
032	AEGIS BMD AP		17,493				17,493
033	BMDs AN/TPY-2 RADARS		2,738				2,738
034	SM-3 IAS	8	295,322	2	41,500	10	336,822

SEC. 4101. PROCUREMENT
(In Thousands of Dollars)

Line	Item	FY 2022 Request		House Change		House Authorized	
		Qty	Cost	Qty	Cost	Qty	Cost
	SOCOM—CV-22 Reliability Acceleration				[5,810]		
062	MQ-9 UNMANNED AERIAL VEHICLE		8,020				8,020
063	PRECISION STRIKE PACKAGE		165,224				165,224
064	AC/MC-130J		205,216				205,216
065	C-130 MODIFICATIONS		13,373				13,373
	SHIPBUILDING						
066	UNDERWATER SYSTEMS		17,227		6,100		23,327
	SOCOM—Modernized Forward Look Sonar				[900]		
	SOCOM Combat Diving Advanced Equipment Acceleration				[5,200]		
	AMMUNITION PROGRAMS						
067	ORDNANCE ITEMS <\$5M		168,072				168,072
	OTHER PROCUREMENT PROGRAMS						
068	INTELLIGENCE SYSTEMS		131,889		-8,000		123,889
	Program decrease				[-8,000]		
069	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS		5,991				5,991
070	OTHER ITEMS <\$5M		62,722				62,722
071	COMBATANT CRAFT SYSTEMS		17,080				17,080
072	SPECIAL PROGRAMS		44,351		31,180		75,531
	SOCOM—Medium Fixed Wing Mobility Modifications				[31,180]		
073	TACTICAL VEHICLES		26,806				26,806
074	WARRIOR SYSTEMS <\$5M		284,548		20,000		304,548
	Radio Integration System Program Upgrade				[20,000]		
075	COMBAT MISSION REQUIREMENTS		27,513				27,513
077	OPERATIONAL ENHANCEMENTS INTELLIGENCE		20,252				20,252
078	OPERATIONAL ENHANCEMENTS		328,569		61,303		389,872
	SOCOM—Armored Ground Mobility Systems (AGMS) Acceleration				[33,303]		

	SOCOM—Fused Panoramic Night Vision Goggles Acceleration			[28,000]	
	CBDP				
079	CHEMICAL BIOLOGICAL SITUATIONAL AWARENESS	167,918			167,918
080	CB PROTECTION & HAZARD MITIGATION	189,265			189,265
	TOTAL PROCUREMENT, DEFENSE-WIDE	99	5,548,212	14	337,472
	TOTAL PROCUREMENT, DEFENSE-WIDE				113
	TOTAL PROCUREMENT, DEFENSE-WIDE				5,885,684
	NATIONAL GUARD AND RESERVE EQUIPMENT				
	UNDISTRIBUTED				
007	UNDISTRIBUTED			950,000	950,000
	Program increase			[950,000]	
	TOTAL NATIONAL GUARD AND RESERVE EQUIPMENT			950,000	950,000
	TOTAL PROCUREMENT	26,050	132,205,078	1,794	147,064,524
	TOTAL PROCUREMENT			14,859,446	27,844

TITLE XLII—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

SEC. 4201. RESEARCH, DEVELOPMENT, TEST, AND EVALUATION.

SEC. 4201. RESEARCH, DEVELOPMENT, TEST, AND EVALUATION (In Thousands of Dollars)

Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY					
BASIC RESEARCH					
001	0601102A	DEFENSE RESEARCH SCIENCES	297,241	27,047	324,288
		Lightweight, High Entropy Alloy Research		[5,000]	
		Program increase		[22,047]	
002	0601103A	UNIVERSITY RESEARCH INITIATIVES	66,981	5,828	72,809
		Program increase		[5,828]	
003	0601104A	UNIVERSITY AND INDUSTRY RESEARCH CENTERS	94,003	15,000	109,003
		Biotechnology advancements		[4,000]	
		Polar Research and Training		[6,000]	
		SMART and Cognitive Research for RF/ Radar		[5,000]	
004	0601121A	CYBER COLLABORATIVE RESEARCH ALLIANCE	5,067		5,067
005	0601601A	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING BASIC RESEARCH	10,183	5,000	15,183
		Program increase		[5,000]	
		SUBTOTAL BASIC RESEARCH	473,475	52,875	526,350
APPLIED RESEARCH					
006	0602115A	BIOMEDICAL TECHNOLOGY	11,925		11,925
007	0602134A	COUNTER IMPROVISED-THREAT ADVANCED STUDIES	1,976		1,976

008	0602141A	LETHALITY TECHNOLOGY	64,126	1,000	65,126
		CPF—Research and Development of Next Generation Explosives and Propellants		[1,000]	
009	0602142A	ARMY APPLIED RESEARCH	28,654		28,654
010	0602143A	SOLDIER LETHALITY TECHNOLOGY	105,168	10,000	115,168
		AFC Pathfinder Partnership Program—Air Assault		[10,000]	
011	0602144A	GROUND TECHNOLOGY	56,400	62,000	118,400
		Additive Manufacturing Materials		[9,000]	
		Advanced materials process		[10,000]	
		Chemical and Biological Detection		[5,000]	
		CPF—Army Research Lab (ARL) Additive Manufacturing/Machine Learning (AM/ML) Initiative		[5,000]	
		High performance polymers		[10,000]	
		Modeling Enabled Multifunctional Materials Development (MEMMD)		[6,000]	
		Program increase		[17,000]	
012	0602145A	NEXT GENERATION COMBAT VEHICLE TECHNOLOGY	172,166	18,000	190,166
		CPF—High-efficiency Truck Users Forum (HTUF)		[2,500]	
		CPF—Structural Thermoplastics Large-Scale Low-Cost Tooling Solutions		[4,500]	
		Prototyping Energy Smart Autonomous Ground Systems		[8,000]	
		Tactical Behaviors for Autonomous Maneuver		[3,000]	
013	0602146A	NETWORK C3I TECHNOLOGY	84,606	51,800	136,406
		Advanced fabrics for shelters		[9,000]	
		Alternative PNT		[15,000]	
		CPF—Future Nano- and Micro-Fabrication - Advanced Materials Engineering Research Institute		[6,800]	
		CPF—Multiple Drone, Multiple Sensor ISR Capabilities		[5,000]	
		Distributed Radio Frequency Sensor/Effector Technology for Strategic Defense		[10,000]	
		Intelligent Electronic Protection Technologies		[6,000]	
014	0602147A	LONG RANGE PRECISION FIRES TECHNOLOGY	64,285	30,250	94,535
		Machine Learning for Army Integrated Fires		[10,000]	
		Novel Printed Armaments Components		[15,000]	
		Precision Long Range Integrated Strike (PLRIS)		[5,250]	
015	0602148A	FUTURE VERTICLE LIFT TECHNOLOGY	91,411		91,411
016	0602150A	AIR AND MISSILE DEFENSE TECHNOLOGY	19,316	45,000	64,316
		Advancement of critical HEL technologies		[10,000]	

SEC. 4201. RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
(In Thousands of Dollars)

Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
		Cyber Electromagnetic (CEMA) Missile Defender		[15,000]	
		High energy laser integration		[20,000]	
017	0602180A	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING TECHNOLOGIES	15,034		15,034
018	0602181A	ALL DOMAIN CONVERGENCE APPLIED RESEARCH	25,967		25,967
019	0602182A	C3I APPLIED RESEARCH	12,406		12,406
020	0602183A	AIR PLATFORM APPLIED RESEARCH	6,597	10,000	16,597
		High density eVTOL power source		[10,000]	
021	0602184A	SOLDIER APPLIED RESEARCH	11,064	15,000	26,064
		Advanced AI/AA analytics		[5,000]	
		AFC Pathfinder Partnership Program		[10,000]	
022	0602213A	C3I APPLIED CYBER	12,123		12,123
023	0602386A	BIOTECHNOLOGY FOR MATERIALS—APPLIED RESEARCH	20,643		20,643
024	0602785A	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY	18,701		18,701
025	0602787A	MEDICAL TECHNOLOGY	91,720	4,000	95,720
		CPF—Human Performance Optimization (HPO) Center		[2,000]	
		CPF—Suicide Prevention with Focus on Rural, Remote, Isolated, and OCONUS Installations		[2,000]	
		SUBTOTAL APPLIED RESEARCH	914,288	247,050	1,161,338
ADVANCED TECHNOLOGY DEVELOPMENT					
026	0603002A	MEDICAL ADVANCED TECHNOLOGY	43,804		43,804
027	0603007A	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY	14,273		14,273
028	0603025A	ARMY AGILE INNOVATION AND DEMONSTRATION	22,231		22,231
029	0603040A	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING ADVANCED TECHNOLOGIES	909		909
030	0603041A	ALL DOMAIN CONVERGENCE ADVANCED TECHNOLOGY	17,743		17,743
031	0603042A	C3I ADVANCED TECHNOLOGY	3,151		3,151
032	0603043A	AIR PLATFORM ADVANCED TECHNOLOGY	754		754
033	0603044A	SOLDIER ADVANCED TECHNOLOGY	890		890

034	0603115A	MEDICAL DEVELOPMENT	26,521	26,521	26,521
035	0603116A	LETHALITY ADVANCED TECHNOLOGY	8,066	8,066	8,066
036	0603117A	ARMY ADVANCED TECHNOLOGY DEVELOPMENT	76,815	76,815	76,815
037	0603118A	SOLDIER LETHALITY ADVANCED TECHNOLOGY	107,966	107,966	107,966
038	0603119A	GROUND ADVANCED TECHNOLOGY	23,403	23,403	63,403
		Advanced Entry Control Point Design			40,000
		Cold weather military research			[5,000]
		CPF—Military Operations in a Permafrost Environment			[2,000]
		Ground Advanced Technology—3D Printed Structures			[3,000]
		Program increase			[12,000]
		Rapid entry and sustainment for the Arctic			[10,000]
		COUNTER IMPROVED-THREAT SIMULATION	24,747	24,747	[8,000]
039	0603134A	BIOTECHNOLOGY FOR MATERIALS—ADVANCED RESEARCH	53,736	53,736	
040	0603386A	C3I CYBER ADVANCED DEVELOPMENT	31,426	31,426	
041	0603457A	HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM	189,123	189,123	42,400
042	0603461A	Program increase			[42,400]
043	0603462A	NEXT GENERATION COMBAT VEHICLE ADVANCED TECHNOLOGY	164,951	164,951	5,000
		Vehicle Cyber Security Research			[5,000]
044	0603463A	NETWORK C3I ADVANCED TECHNOLOGY	155,867	155,867	18,400
		C3I Assured Position, Navigation, and Timing Technology			[10,000]
		Infrastructure Smart Technology			[8,400]
045	0603464A	LONG RANGE PRECISION FIRES ADVANCED TECHNOLOGY	93,909	93,909	30,000
		Extended Range Artillery Munition Suite (ERAMS)			[10,000]
		Missile effects planning tool development			[10,000]
		Project AG5			[10,000]
046	0603465A	FUTURE VERTICAL LIFT ADVANCED TECHNOLOGY	179,677	179,677	17,500
047	0603466A	AIR AND MISSILE DEFENSE ADVANCED TECHNOLOGY	48,826	48,826	[−2,500]
		Late contract award			[10,000]
		Program increase—Missile Mentor			[10,000]
		Vehicle-mounted high-energy laser weapon systems development			[10,000]
048	0603920A	HUMANITARIAN DEMINING	8,649	8,649	
		SUBTOTAL ADVANCED TECHNOLOGY DEVELOPMENT	1,297,437	1,297,437	153,300
					8,649
					1,450,737

SEC. 4201. RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
(In Thousands of Dollars)

Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
049	0603305A	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION	11,702	42,000	53,702
		Electro-Magnetic Denial and Protect		[10,000]	
		Flight Analysis Software Toolkit		[8,000]	
		PNT Resiliency Lab		[8,000]	
		Program increase		[10,000]	
		Scalable High Powered Microwave Technology		[6,000]	
050	0603308A	ARMY SPACE SYSTEMS INTEGRATION	18,755	3,000	21,755
		Multi-Mission Synthetic Aperture Radar Payload Development		[3,000]	
052	0603619A	LANDMINE WARFARE AND BARRIER—ADV DEV	50,314		50,314
053	0603639A	TANK AND MEDIUM CALIBER AMMUNITION	79,873		79,873
054	0603645A	ARMORED SYSTEM MODERNIZATION—ADV DEV	170,590	5,800	176,390
		Excess to need		[-4,000]	
		Ground vehicle modeling and simulation research and development		[9,800]	
055	0603747A	SOLDIER SUPPORT AND SURVIVABILITY	2,897		2,897
056	0603766A	TACTICAL ELECTRONIC SURVEILLANCE SYSTEM—ADV DEV	113,365		113,365
057	0603774A	NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT	18,000	3,804	21,804
		Soldier Maneuver Sensors Adv Dev Lethality Smart System—Army UPL		[3,804]	
058	0603779A	ENVIRONMENTAL QUALITY TECHNOLOGY—DEN/VAL	11,921		11,921
059	0603790A	NATO RESEARCH AND DEVELOPMENT	3,777		3,777
060	0603801A	AVIATION—ADV DEV	1,125,641	8,500	1,134,141
		Excess to need		[-24,500]	
		FLRAA risk reduction		[33,000]	
061	0603804A	LOGISTICS AND ENGINEER EQUIPMENT—ADV DEV	7,055		7,055
062	0603807A	MEDICAL SYSTEMS—ADV DEV	22,071		22,071
063	0603827A	SOLDIER SYSTEMS—ADVANCED DEVELOPMENT	17,459		17,459

064	0604017A	ROBOTICS DEVELOPMENT	87,198	-12,150	75,048
		Excess carryover		[-7,150]	
		Unjustified growth—other support costs		[-5,000]	
065	0604019A	EXPANDED MISSION AREA MISSILE (EMAM)	50,674	-7,000	43,674
		IFPC-HEL Late Contract Award		[-7,000]	
067	0604035A	LOW EARTH ORBIT (LEO) SATELLITE CAPABILITY	19,638	-5,050	14,588
068	0604036A	MULTI-DOMAIN SENSING SYSTEM (MDSS) ADV DEV	50,548	[-5,050]	45,498
		Insufficient justification			
069	0604037A	TACTICAL INTEL TARGETING ACCESS NODE (TITAN) ADV DEV	28,347		28,347
		ANALYSIS OF ALTERNATIVES	10,091		10,091
071	0604101A	SMALL UNMANNED AERIAL VEHICLE (SUAV) (6.4)	926		926
072	0604113A	FUTURE TACTICAL UNMANNED AIRCRAFT SYSTEM (FTUAS)	69,697		69,697
073	0604114A	LOWER TIER AIR MISSILE DEFENSE (LTAMD) SENSOR	327,690		327,690
074	0604115A	TECHNOLOGY MATURATION INITIATIVES	270,124	-89,800	180,324
		Insufficient justification		[-80,000]	
		Program decrease		[-9,800]	
075	0604117A	MANEUVER—SHORT RANGE AIR DEFENSE (M-SHORAD)	39,376	-6,400	32,976
		Excess carryover		[-6,400]	
076	0604119A	ARMY ADVANCED COMPONENT DEVELOPMENT & PROTOTYPING	189,483		189,483
077	0604120A	ASSURED POSITIONING, NAVIGATION AND TIMING (PNT)	96,679		96,679
078	0604121A	SYNTHETIC TRAINING ENVIRONMENT REFINEMENT & PROTOTYPING	194,195	-2,000	192,195
		Prior-year carryover		[-2,000]	
079	0604134A	COUNTER IMPROVISED-THREAT DEMONSTRATION, PROTOTYPE DEVELOPMENT, AND TESTING	13,379		13,379
080	0604182A	HYPERSONICS	300,928		300,928
081	0604403A	FUTURE INTERCEPTOR	7,895		7,895
082	0604531A	COUNTER—SMALL UNMANNED AIRCRAFT SYSTEMS ADVANCED DEVELOPMENT	19,148		19,148
083	0604541A	UNIFIED NETWORK TRANSPORT	35,409		35,409
084	0604644A	MOBILE MEDIUM RANGE MISSILE	286,457	-5,000	281,457
		Prior-year carryover		[-5,000]	
085	0604785A	INTEGRATED BASE DEFENSE (BUDGET ACTIVITY 4)	2,040		2,040
086	0305251A	CYBERSPACE OPERATIONS FORCES AND FORCE SUPPORT	52,988		52,988
		SUBTOTAL ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	3,806,330	-64,296	3,742,034

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Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
SYSTEM DEVELOPMENT & DEMONSTRATION					
089	0604201A	AIRCRAFT AVIONICS	6,654		6,654
090	0604270A	ELECTRONIC WARFARE DEVELOPMENT	30,840	-4,400	26,440
		Early to need		[-4,400]	
091	0604601A	INFANTRY SUPPORT WEAPONS	67,873	5,000	72,873
		Turret Gunner Survivability and Simulation Environment		[5,000]	
092	0604604A	MEDIUM TACTICAL VEHICLES	11,374		11,374
093	0604611A	JAVELIN	7,094		7,094
094	0604622A	FAMILY OF HEAVY TACTICAL VEHICLES	31,602		31,602
095	0604633A	AIR TRAFFIC CONTROL	4,405		4,405
096	0604642A	LIGHT TACTICAL WHEELED VEHICLES	2,055	5,600	7,655
		Electric Light Recon Vehicle—Army UPL		[5,600]	
097	0604645A	ARMORED SYSTEMS MODERNIZATION (ASM)—ENG DEV	137,256		137,256
098	0604710A	NIGHT VISION SYSTEMS—ENG DEV	62,690	50,000	112,690
		Transfer from Other Procurement, Army line 83		[50,000]	
099	0604713A	COMBAT FEEDING, CLOTHING, AND EQUIPMENT	1,658		1,658
100	0604715A	NON-SYSTEM TRAINING DEVICES—ENG DEV	26,540		26,540
101	0604741A	AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE—ENG DEV	59,518		59,518
102	0604742A	CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT	22,331		22,331
103	0604746A	AUTOMATIC TEST EQUIPMENT DEVELOPMENT	8,807		8,807
104	0604760A	DISTRIBUTIVE INTERACTIVE SIMULATIONS (OIS)—ENG DEV	7,453		7,453
107	0604798A	BRIGADE ANALYSIS, INTEGRATION AND EVALUATION	21,534		21,534
108	0604802A	WEAPONS AND MUNITIONS—ENG DEV	309,778		309,778
109	0604804A	LOGISTICS AND ENGINEER EQUIPMENT—ENG DEV	59,261	-7,000	52,261
		Excess carryover		[-7,000]	
110	0604805A	COMMAND, CONTROL, COMMUNICATIONS SYSTEMS—ENG DEV	20,121		20,121

111	0604807A	MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT—ENG DEV	44,424	44,424
112	0604808A	LANDMINE WARFARE/BARRIER—ENG DEV	14,137	9,137
		Insufficient justification		-5,000
				[-5,000]
113	0604818A	ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE	162,704	162,704
114	0604820A	RADAR DEVELOPMENT	127,919	127,919
115	0604822A	GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBs)	17,623	17,623
117	0604827A	SOLDIER SYSTEMS—WARRIOR DEM/VAL	6,454	6,454
118	0604852A	SUITE OF SURVIVABILITY ENHANCEMENT SYSTEMS—EMD	106,354	127,354
		Program increase for vehicle protection system research—Army UPL		21,000
				[21,000]
120	0605013A	INFORMATION TECHNOLOGY DEVELOPMENT	122,168	122,168
121	0605018A	INTEGRATED PERSONNEL AND PAY SYSTEM—ARMY (IPPS-A)	76,936	76,936
122	0605028A	ARMORED MULTI-PURPOSE VEHICLE (AMPV)	35,560	35,560
124	0605030A	JOINT TACTICAL NETWORK CENTER (JINC)	16,364	16,364
125	0605031A	JOINT TACTICAL NETWORK (JTN)	28,954	28,954
128	0605035A	COMMON INFRARED COUNTERMEASURES (CIRCM)	16,630	16,630
130	0605038A	NUCLEAR BIOLOGICAL CHEMICAL RECONNAISSANCE VEHICLE (NBCRV) SENSOR SUITE	7,618	7,618
131	0605041A	DEFENSIVE CYBER TOOL DEVELOPMENT	18,892	18,892
132	0605042A	TACTICAL NETWORK RADIO SYSTEMS (LOW-TIER)	28,849	28,849
133	0605047A	CONTRACT WRITING SYSTEM	22,960	22,960
135	0605051A	AIRCRAFT SURVIVABILITY DEVELOPMENT	65,603	65,603
136	0605052A	INDIRECT FIRE PROTECTION CAPABILITY INC 2—BLOCK 1	233,512	233,512
137	0605053A	GROUND ROBOTICS	18,241	18,241
138	0605054A	EMERGING TECHNOLOGY INITIATIVES	254,945	254,945
139	0605143A	BIOMETRICS ENABLING CAPABILITY (BEC)	4,326	4,326
140	0605144A	NEXT GENERATION LOAD DEVICE—MEDIUM	15,616	15,616
141	0605145A	MEDICAL PRODUCTS AND SUPPORT SYSTEMS DEVELOPMENT	962	962
142	0605148A	TACTICAL INTEL TARGETING ACCESS NODE (TITAN) EMD	54,972	54,972
143	0605203A	ARMY SYSTEM DEVELOPMENT & DEMONSTRATION	122,175	122,175
144	0605205A	SMALL UNMANNED AERIAL VEHICLE (SUAV) (6.5)	2,275	2,275
145	0605224A	MULTI-DOMAIN INTELLIGENCE	9,313	9,313
146	0605225A	SIO CAPABILITY DEVELOPMENT	22,713	22,713
147	0605231A	PRECISION STRIKE MISSILE (PRSM)	188,452	188,452

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Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
148	0605232A	HYPERSONICS EMD	111,473		111,473
149	0605233A	ACCESSIONS INFORMATION ENVIRONMENT (AIE)	18,790		18,790
150	0605450A	JOINT AIR-TO-GROUND MISSILE (JAGM)	2,134		2,134
151	0605457A	ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)	157,873		157,873
152	0605531A	COUNTER—SMALL UNMANNED AIRCRAFT SYSTEMS SYS DEV & DEMONSTRATION	33,386		33,386
153	0605625A	MANNED GROUND VEHICLE	225,106	-22,000	203,106
		Excess carryover		[-10,000]	
		Unjustified growth—other support costs		[-7,000]	
		Unjustified growth—program management		[-5,000]	
154	0605766A	NATIONAL CAPABILITIES INTEGRATION (MIP)	14,454		14,454
155	0605812A	JOINT LIGHT TACTICAL VEHICLE (JLTV) ENGINEERING AND MANUFACTURING DEVELOPMENT PH	2,564		2,564
156	0605830A	AVIATION GROUND SUPPORT EQUIPMENT	1,201		1,201
157	0303032A	TROJAN—RH12	3,362		3,362
161	0304270A	ELECTRONIC WARFARE DEVELOPMENT	75,520		75,520
		SUBTOTAL SYSTEM DEVELOPMENT & DEMONSTRATION	3,392,358	43,200	3,435,558
MANAGEMENT SUPPORT					
162	0604256A	THREAT SIMULATOR DEVELOPMENT	18,439		18,439
163	0604258A	TARGET SYSTEMS DEVELOPMENT	17,404		17,404
164	0604759A	MAJOR T&E INVESTMENT	68,139		68,139
165	0605103A	RAND ARROYO CENTER	33,126		33,126
166	0605301A	ARMY KWAJALEIN ATOLL	240,877		240,877
167	0605326A	CONCEPTS EXPERIMENTATION PROGRAM	79,710		79,710
169	0605601A	ARMY TEST RANGES AND FACILITIES	354,227		354,227
170	0605602A	ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS	49,253	20,486	69,739
		Modular Open System Architecture (MOSA) integration research and testing		[20,486]	
171	0605604A	SURVIVABILITY/LETHALITY ANALYSIS	36,389		36,389

172	0605606A	AIRCRAFT CERTIFICATION	2,489	2,489
173	0605702A	METEOROLOGICAL SUPPORT TO RD&E ACTIVITIES	6,689	6,689
174	0605706A	MATERIEL SYSTEMS ANALYSIS	21,558	21,558
175	0605709A	EXPLOITATION OF FOREIGN ITEMS	13,631	13,631
176	0605712A	SUPPORT OF OPERATIONAL TESTING	55,122	55,122
177	0605716A	ARMY EVALUATION CENTER	65,854	65,854
178	0605718A	ARMY MODELING & SIM X-CMD COLLABORATION & INTEG	2,633	2,633
179	0605801A	PROGRAMWIDE ACTIVITIES	96,589	96,589
180	0605803A	TECHNICAL INFORMATION ACTIVITIES	26,808	26,808
181	0605805A	MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY	43,042	43,042
		Program increase for Advanced Ammunition Material and Manufacturing Technologies	5,000	5,000
182	0605857A	ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT	[15,000]	[15,000]
183	0605898A	ARMY DIRECT REPORT HEADQUARTERS—R&D - MHA	1,789	1,789
185	0606002A	RONALD REAGAN BALLISTIC MISSILE DEFENSE TEST SITE	52,108	52,108
186	0606003A	COUNTERINTEL AND HUMAN INTEL MODERNIZATION	80,952	80,952
187	0606105A	MEDICAL PROGRAM-WIDE ACTIVITIES	5,363	5,363
188	0606942A	ASSESSMENTS AND EVALUATIONS CYBER VULNERABILITIES	39,041	39,041
		SUBTOTAL MANAGEMENT SUPPORT	5,466	5,466
			1,416,698	1,442,184
OPERATIONAL SYSTEMS DEVELOPMENT				
190	0603778A	MLRS PRODUCT IMPROVEMENT PROGRAM	12,314	12,314
191	0605024A	ANTI-TAMPER TECHNOLOGY SUPPORT	8,868	8,868
192	0607131A	WEAPONS AND MUNITIONS PRODUCT IMPROVEMENT PROGRAMS	22,828	22,828
		Agile Manufacturing for Advanced Armament Systems	16,000	16,000
194	0607136A	BLACKHAWK PRODUCT IMPROVEMENT PROGRAM	[16,000]	[16,000]
		Program increase	2,000	2,000
195	0607137A	CHINOOK PRODUCT IMPROVEMENT PROGRAM	[2,000]	[2,000]
		Program increase—T55-714C acceleration	10,000	10,000
196	0607139A	IMPROVED TURBINE ENGINE PROGRAM	[10,000]	[10,000]
		Army Improved Turbine Engine Program	40,000	40,000
197	0607142A	AVIATION ROCKET SYSTEM PRODUCT IMPROVEMENT AND DEVELOPMENT	275,024	315,024
198	0607143A	UNMANNED AIRCRAFT SYSTEM UNIVERSAL PRODUCTS	12,417	12,417
			4,594	4,594

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199	0607145A	APACHE FUTURE DEVELOPMENT	10,067	15,000	25,067
		Program increase—air vehicle advancement and advanced mission systems.		[15,000]	
200	0607148A	AW/TPQ-53 COUNTERFIRE TARGET ACQUISITION RADAR SYSTEM	56,681		56,681
201	0607150A	INTEL CYBER DEVELOPMENT	3,611	8,860	12,471
		Cyber-Info Dominance Center		[8,860]	
202	0607312A	ARMY OPERATIONAL SYSTEMS DEVELOPMENT	28,029		28,029
203	0607313A	ELECTRONIC WARFARE DEVELOPMENT	5,673		5,673
204	0607665A	FAMILY OF BIOMETRICS	1,178		1,178
205	0607865A	PATRIOT PRODUCT IMPROVEMENT	125,932		125,932
206	0203728A	JOINT AUTOMATED DEEP OPERATION COORDINATION SYSTEM (JADOCs)	25,547		25,547
207	0203735A	COMBAT VEHICLE IMPROVEMENT PROGRAMS	211,523	65,000	276,523
		Abrams tank modernization		[65,000]	
208	0203743A	155MM SELF-PROPELLED HOWITZER IMPROVEMENTS	213,281	-5,145	208,136
		Excess carryover		[-5,145]	
210	0203752A	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	132		132
211	0203758A	DIGITIZATION	3,936		3,936
212	0203801A	MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM	127		127
213	0203802A	OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS	10,265		10,265
214	0205412A	ENVIRONMENTAL QUALITY TECHNOLOGY—OPERATIONAL SYSTEM DEV	262		262
215	0205456A	LOWER TIER AIR AND MISSILE DEFENSE (AMD) SYSTEM	182		182
216	0205778A	GUIDED MULTIPLE-LAUNCH ROCKET SYSTEM (GMLRS)	63,937		63,937
217	0208053A	JOINT TACTICAL GROUND SYSTEM	13,379		13,379
219	0303028A	SECURITY AND INTELLIGENCE ACTIVITIES	24,531		24,531
220	0303140A	INFORMATION SYSTEMS SECURITY PROGRAM	15,720		15,720
221	0303141A	GLOBAL COMBAT SUPPORT SYSTEM	52,739	9,000	61,739
		ERP Convergence		[9,000]	
222	0303142A	SATCOM GROUND ENVIRONMENT (SPACE)	15,247		15,247

226	0305179A	INTEGRATED BROADCAST SERVICE (IBS)	5,430	5,430
227	0305204A	TACTICAL UNMANNED AERIAL VEHICLES	8,410	8,410
228	0305206A	AIRBORNE RECONNAISSANCE SYSTEMS	24,460	24,460
233	0307665A	BIOMETRICS ENABLED INTELLIGENCE	2,066	2,066
234	0708045A	END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES	61,720	15,000
		Digital Night Vision Cameras		(15,000)
236A	9999999999	CLASSIFIED PROGRAMS	2,993	2,993
		SUBTOTAL OPERATIONAL SYSTEMS DEVELOPMENT	1,380,248	175,715
		SUBTOTAL OPERATIONAL SYSTEMS DEVELOPMENT	1,380,248	1,555,963
SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS				
237	0608041A	DEFENSIVE CYBER—SOFTWARE PROTOTYPE DEVELOPMENT	118,811	118,811
		SUBTOTAL SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS	118,811	118,811
		TOTAL RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY	12,799,645	633,330
RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY				
BASIC RESEARCH				
001	0601103N	UNIVERSITY RESEARCH INITIATIVES	117,448	42,688
		Defense University Research Instrumentation Program		[20,000]
		Program increase		[22,688]
002	0601152N	IN-HOUSE LABORATORY INDEPENDENT RESEARCH	23,399	23,399
		Program increase		[23,399]
003	0601153N	DEFENSE RESEARCH SCIENCES	484,421	4,985
		CPF—Digital Twins for Navy Maintenance		[1,985]
		Program increase		[3,000]
		SUBTOTAL BASIC RESEARCH	601,869	71,072
APPLIED RESEARCH				
004	0602114N	POWER PROJECTION APPLIED RESEARCH	23,013	10,000
		Multi-Mission UAV-borne Electronic Attack		[10,000]
005	0602123N	FORCE PROTECTION APPLIED RESEARCH	122,888	20,500
		Program increase		[5,000]

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		Relative positioning of autonomous platforms		[5,000]	
		Talent and technology for Navy power and energy systems		[10,500]	
006	0602131M	MARINE CORPS LANDING FORCE TECHNOLOGY	51,112	10,000	61,112
		Unmanned logistics solutions		[10,000]	
007	0602235N	COMMON PICTURE APPLIED RESEARCH	51,477		51,477
008	0602236N	WARFIGHTER SUSTAINMENT APPLIED RESEARCH	70,547	10,000	80,547
		High Mobility Ground Robots to Assist Dismounted Infantry in Urban Operations		[5,000]	
		Humanoid robotics in complex unstructured environments		[5,000]	
009	0602271N	ELECTROMAGNETIC SYSTEMS APPLIED RESEARCH	85,157		85,157
010	0602435N	OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH	70,086	20,000	90,086
		Program increase		[20,000]	
011	0602651M	JOINT NON-LETHAL WEAPONS APPLIED RESEARCH	6,405		6,405
012	0602747N	UNDERSEA WARFARE APPLIED RESEARCH	57,484	55,000	112,484
		Academic partnerships for undersea vehicle research and manufacturing		[16,500]	
		Continuous distributed sensing systems		[20,000]	
		CPF—Connected AI for Autonomous UUV Systems		[5,000]	
		CPF—Persistent Maritime Surveillance		[5,000]	
		Program increase		[8,500]	
013	0602750N	FUTURE NAVAL CAPABILITIES APPLIED RESEARCH	173,356	20,000	193,356
		Remote acoustic sensing		[20,000]	
014	0602782N	MINE AND EXPEDITIONARY WARFARE APPLIED RESEARCH	32,160		32,160
015	0602792N	INNOVATIVE NAVAL PROTOTYPES (INP) APPLIED RESEARCH	152,976		152,976
016	0602861N	SCIENCE AND TECHNOLOGY MANAGEMENT—ONR FIELD ACTIVITIES	79,254		79,254
		SUBTOTAL APPLIED RESEARCH	975,915	145,500	1,121,415
017	0603123N	ADVANCED TECHNOLOGY DEVELOPMENT FORCE PROTECTION ADVANCED TECHNOLOGY	21,661		21,661

018	0603271N	ELECTROMAGNETIC SYSTEMS ADVANCED TECHNOLOGY	8,146		8,146
019	0603640M	USMC ADVANCED TECHNOLOGY DEMONSTRATION (ATD)	224,155	39,900	264,055
		Low Cost Attributable Aircraft Technology		[25,000]	
		Maritime Targeting Cell—Expeditionary (MTC-X)		[5,300]	
		Next Generation Logistics—Autonomous Littoral Connector		[9,600]	
020	0603651M	JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT	13,429		13,429
021	0603673N	FUTURE NAVAL CAPABILITIES ADVANCED TECHNOLOGY DEVELOPMENT	265,299		265,299
022	0603680N	MANUFACTURING TECHNOLOGY PROGRAM	57,236		57,236
023	0603729N	WARFIGHTER PROTECTION ADVANCED TECHNOLOGY	4,935		4,935
024	0603758N	NAVY WARFIGHTING EXPERIMENTS AND DEMONSTRATIONS	47,167	5,000	52,167
		Net-Zero and Resilient Energy Installations		[5,000]	
025	0603782N	MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY	1,981		1,981
026	0603801N	INNOVATIVE NAVAL PROTOTYPES (INP) ADVANCED TECHNOLOGY DEVELOPMENT	133,779	25,000	158,779
		Attributable Group III Ultra-Long Endurance Unmanned Aircraft for Persistent ISR		[10,000]	
		Program increase—raijgun		[15,000]	
		SUBTOTAL ADVANCED TECHNOLOGY DEVELOPMENT	777,788	69,900	847,688
ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
027	0603128N	UNMANNED AERIAL SYSTEM	16,879		16,879
028	0603178N	MEDIUM AND LARGE UNMANNED SURFACE VEHICLES (USVS)	144,846		144,846
029	0603207N	AIR/OCEAN TACTICAL APPLICATIONS	27,849		27,849
030	0603216N	AVIATION SURVIVABILITY	16,815		16,815
031	0603239N	NAVAL CONSTRUCTION FORCES	5,290		5,290
033	0603254N	ASW SYSTEMS DEVELOPMENT	17,612		17,612
034	0603261N	TACTICAL AIRBORNE RECONNAISSANCE	3,111		3,111
035	0603382N	ADVANCED COMBAT SYSTEMS TECHNOLOGY	32,310		32,310
036	0603502N	SURFACE AND SHALLOW WATER MINE COUNTERMEASURES	58,013		58,013
037	0603506N	SURFACE SHIP TORPEDO DEFENSE	1,862		1,862
038	0603512N	CARRIER SYSTEMS DEVELOPMENT	7,182		7,182
039	0603525N	PILOT FISH	408,087		408,087
040	0603527N	RETRACT LARCH	44,197		44,197
041	0603536N	RETRACT JUNIPER	144,541		144,541

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042	0603542N	RADIOLOGICAL CONTROL	761		761
043	0603553N	SURFACE ASW	1,144		1,144
044	0603561N	ADVANCED SUBMARINE SYSTEM DEVELOPMENT	99,782	-20,000	79,782
		Production delay		[-20,000]	
045	0603562N	SUBMARINE TACTICAL WARFARE SYSTEMS	14,059		14,059
046	0603563N	SHIP CONCEPT ADVANCED DESIGN	111,590		111,590
047	0603564N	SHIP PRELIMINARY DESIGN & FEASIBILITY STUDIES	106,957		106,957
048	0603570N	ADVANCED NUCLEAR POWER SYSTEMS	203,572		203,572
049	0603573N	ADVANCED SURFACE MACHINERY SYSTEMS	78,122		78,122
050	0603576N	CHALK EAGLE	80,270		80,270
051	0603581N	LITTORAL COMBAT SHIP (LCS)	84,924		84,924
052	0603582N	COMBAT SYSTEM INTEGRATION	17,322		17,322
053	0603595N	OHIO REPLACEMENT	296,231	-30,000	266,231
		Excessive cost growth		[-30,000]	
054	0603596N	LCS MISSION MODULES	75,995		75,995
055	0603597N	AUTOMATED TEST AND RE-TEST (ATRT)	7,805		7,805
056	0603599N	FRIGATE DEVELOPMENT	109,459		109,459
057	0603609N	CONVENTIONAL MUNITIONS	7,296		7,296
058	0603635M	MARINE CORPS GROUND COMBAT/SUPPORT SYSTEM	77,065		77,065
059	0603654N	JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT	34,785		34,785
060	0603713N	OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT	8,774		8,774
061	0603721N	ENVIRONMENTAL PROTECTION	20,677		20,677
062	0603724N	NAVY ENERGY PROGRAM	33,824	10,000	43,824
		AR3P Auto Refueling System		[10,000]	
063	0603725N	FACILITIES IMPROVEMENT	6,327		6,327
064	0603734N	CHALK CORAL	579,389		579,389
065	0603739N	NAVY LOGISTIC PRODUCTIVITY	669		669

066	0603746N	RETRACT MAPLE	295,295	
067	0603748N	LINK PLUMERIA	692,280	
068	0603751N	RETRACT ELM	83,904	
069	0603764M	LINK EVERGREEN	221,253	
071	0603790N	NATO RESEARCH AND DEVELOPMENT	5,805	
072	0603795N	LAND ATTACK TECHNOLOGY	4,017	
073	0603851M	JOINT NON-LETHAL WEAPONS TESTING	29,589	
074	0603860N	JOINT PRECISION APPROACH AND LANDING SYSTEMS—DEMIVAL	24,450	
075	0603925N	DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS	81,803	
076	0604014N	F/A -18 INFRARED SEARCH AND TRACK (IRST)	48,793	
077	0604027N	DIGITAL WARFARE OFFICE	46,769	8,983
		Navy Tactical Grid Development for JADC2		[8,983]
078	0604028N	SMALL AND MEDIUM UNMANNED UNDERSEA VEHICLES	84,676	
079	0604029N	UNMANNED UNDERSEA VEHICLE CORE TECHNOLOGIES	59,299	
081	0604031N	LARGE UNMANNED UNDERSEA VEHICLES	88,063	
082	0604112N	GERALD R. FORD CLASS NUCLEAR AIRCRAFT CARRIER (CVN 78—80)	121,509	35,000
		Integrated Digital Shipbuilding		[35,000]
083	0604126N	LITTORAL AIRBORNE MCM	18,669	69
		COBRA Block II early to need		[-18,600]
084	0604127N	SURFACE MINE COUNTERMEASURES	13,655	
085	0604272N	TACTICAL AIR DIRECTIONAL INFRARED COUNTERMEASURES (TADIRCM)	33,246	
086	0604289M	NEXT GENERATION LOGISTICS	1,071	5,000
		Additive Manufacturing Part Screening and Selection Software Tool		[5,000]
087	0604292N	FUTURE VERTICAL LIFT (MARTIME STRIKE)	9,825	
088	0604320M	RAPID TECHNOLOGY CAPABILITY PROTOTYPE	6,555	
089	0604454N	LX (R)	3,344	
090	0604536N	ADVANCED UNDERSEA PROTOTYPING	58,473	
091	0604636N	COUNTER UNMANNED AIRCRAFT SYSTEMS (C-UAS)	5,529	
092	0604659N	PRECISION STRIKE WEAPONS DEVELOPMENT PROGRAM	97,944	
093	0604707N	SPACE AND ELECTRONIC WARFARE (SEW) ARCHITECTURE/ENGINEERING SUPPORT	9,340	
094	0604786N	OFFENSIVE ANTI-SURFACE WARFARE WEAPON DEVELOPMENT	127,756	
095	0605512N	MEDIUM UNMANNED SURFACE VEHICLES (MUSVS)	60,028	41,700

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Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
096	0605513N	Carry out execution of CLIN 0101		[41,700]	
		UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES	170,838	-47,000	123,838
		USV machinery qualification insufficient justification		[-47,000]	
097	0605514M	GROUND BASED ANTI-SHIP MISSILE (MARFORRES)	102,716		102,716
098	0605516M	LONG RANGE FIRES (MARFORRES)	88,479		88,479
099	0605518N	CONVENTIONAL PROMPT STRIKE (CPS)	1,372,340	126,000	1,498,340
		Conventional Prompt Strike (CPS) RDT&E		[126,000]	
100	0303354N	ASW SYSTEMS DEVELOPMENT—MIP	8,571		8,571
101	0304240M	ADVANCED TACTICAL UNMANNED AIRCRAFT SYSTEM	16,204	47,400	63,604
		KMAX		[12,400]	
		Solar-powered UAS		[35,000]	
102	0304270N	ELECTRONIC WARFARE DEVELOPMENT—MIP	506		506
		SUBTOTAL ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	7,077,987	158,483	7,236,470
		SYSTEM DEVELOPMENT & DEMONSTRATION			
103	0603208N	TRAINING SYSTEM AIRCRAFT	5,864		5,864
104	0604212N	OTHER HELO DEVELOPMENT	56,444	-7,132	49,312
		AURA—excess to need		[-7,132]	
105	0604214M	AV-8B AIRCRAFT—ENG DEV	10,146		10,146
106	0604215N	STANDARDS DEVELOPMENT	4,082		4,082
107	0604216N	MULTI-MISSION HELICOPTER UPGRADE DEVELOPMENT	46,418	10,000	56,418
		Program increase—MH-60 modernization		[10,000]	
108	0604221N	P-3 MODERNIZATION PROGRAM	579		579
109	0604230N	WARFARE SUPPORT SYSTEM	10,167		10,167
110	0604231N	COMMAND AND CONTROL SYSTEMS	122,913		122,913
111	0604234N	ADVANCED HAWKEYE	386,860		386,860
112	0604245M	H-1 UPGRADES	50,158		50,158

113	0604261N	ACOUSTIC SEARCH SENSORS	46,066		46,066
114	0604262N	V-22A	107,984		107,984
115	0604264N	AIR CREW SYSTEMS DEVELOPMENT	22,746		22,746
116	0604269N	EA-18	68,425		68,425
117	0604270N	ELECTRONIC WARFARE DEVELOPMENT	139,535	-2,942	136,593
		Dual Band Decoy previously funded		[-2,942]	
118	0604273M	EXECUTIVE HELO DEVELOPMENT	45,932		45,932
119	0604274N	NEXT GENERATION JAMMER (NGJ)	243,923	1,500	245,423
		High band risk reduction		[10,000]	
		Test and evaluation delays		[-8,500]	
120	0604280N	JOINT TACTICAL RADIO SYSTEM—NAVY (JTRS-NAVY)	234,434	8,983	243,417
		Navy Tactical Grid Development for JADC2		[8,983]	
121	0604282N	NEXT GENERATION JAMMER (NGJ) INCREMENT II	248,096	-17,996	230,100
		Contract delays		[-17,996]	
122	0604307N	SURFACE COMBATANT COMBAT SYSTEM ENGINEERING	371,575		371,575
123	0604311N	LPD-17 CLASS SYSTEMS INTEGRATION	904		904
124	0604329N	SMALL DIAMETER BOMB (SDB)	46,769		46,769
125	0604366N	STANDARD MISSILE IMPROVEMENTS	343,511		343,511
126	0604373N	AIRBORNE MCM	10,881		10,881
127	0604378N	NAVAL INTEGRATED FIRE CONTROL—COUNTER AIR SYSTEMS ENGINEERING	46,121		46,121
129	0604501N	ADVANCED ABOVE WATER SENSORS	77,852		77,852
130	0604503N	SSN-688 AND TRIDENT MODERNIZATION	95,693		95,693
131	0604504N	AIR CONTROL	27,499		27,499
132	0604512N	SHIPBOARD AVIATION SYSTEMS	8,924		8,924
133	0604518N	COMBAT INFORMATION CENTER CONVERSION	11,631		11,631
134	0604522N	AIR AND MISSILE DEFENSE RADAR (AMDR) SYSTEM	96,556		96,556
135	0604530N	ADVANCED ARRESTING GEAR (AAG)	147		147
136	0604558N	NEW DESIGN SSN	503,252	150,000	653,252
		SSN Block VI design and advanced capabilities		[150,000]	
137	0604562N	SUBMARINE TACTICAL WARFARE SYSTEM	62,115	6,000	68,115
		Submarine Launched UAS		[6,000]	
138	0604567N	SHIP CONTRACT DESIGN/ LIVE FIRE T&E	54,829		54,829

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139	0604574N	NAVY TACTICAL COMPUTER RESOURCES	4,290		4,290
140	0604601N	MINE DEVELOPMENT	76,027		76,027
141	0604610N	LIGHTWEIGHT TORPEDO DEVELOPMENT	94,386		94,386
142	0604654N	JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT	8,348		8,348
143	0604657M	USMC GROUND COMBAT/SUPPORTING ARMS SYSTEMS—ENG DEV	42,144		42,144
144	0604703N	PERSONNEL, TRAINING, SIMULATION, AND HUMAN FACTORS	7,375		7,375
146	0604755N	SHIP SELF DEFENSE (DETECT & CONTROL)	149,433		149,433
147	0604756N	SHIP SELF DEFENSE (ENGAGE: HARD KILL)	87,862		87,862
148	0604757N	SHIP SELF DEFENSE (ENGAGE: SOFT KILL/EW)	69,006		69,006
149	0604761N	INTELLIGENCE ENGINEERING	20,684		20,684
150	0604771N	MEDICAL DEVELOPMENT	3,967	7,500	11,467
		Program increase – autonomous aerial technology for distributed logistics.		[7,500]	
151	0604777N	NAVIGATION/ID SYSTEM	48,837		48,837
152	0604800M	JOINT STRIKE FIGHTER (JSF)—EMD	577		577
153	0604800N	JOINT STRIKE FIGHTER (JSF)—EMD	262		262
154	0604850N	SSN(X)	29,829		29,829
155	0605013M	INFORMATION TECHNOLOGY DEVELOPMENT	11,277		11,277
156	0605013N	INFORMATION TECHNOLOGY DEVELOPMENT	243,828		243,828
157	0605024N	ANTI-TAMPER TECHNOLOGY SUPPORT	8,426		8,426
158	0605180N	TACAMO MODERNIZATION	150,592		150,592
		Unjustified air vehicle acquisition strategy		-60,120	
159	0605212M	CH-53K RDTE	256,903		256,903
160	0605215N	MISSION PLANNING	88,128		88,128
161	0605217N	COMMON AVIONICS	60,117	31,900	92,017
		MAGTF Agile Network Gateway Link (MANGL) Wholene Tactical		[31,900]	
162	0605220N	SHIP TO SHORE CONNECTOR (SSC)	6,320		6,320
163	0605327N	T-AO 205 CLASS	4,336		4,336

164	0605414N	UNMANNED CARRIER AVIATION (UCA)	268,937	268,937
165	0605450M	JOINT AIR-TO-GROUND MISSILE (JAGM)	356	356
166	0605500N	MULTI-MISSION MARITIME AIRCRAFT (MMA)	27,279	27,279
167	0605504N	MULTI-MISSION MARITIME (MMA) INCREMENT III	173,784	173,784
168	0605611M	MARINE CORPS ASSAULT VEHICLES SYSTEM DEVELOPMENT & DEMONSTRATION	80,709	80,709
169	0605813M	JOINT LIGHT TACTICAL VEHICLE (JLTV) SYSTEM DEVELOPMENT & DEMONSTRATION	2,005	2,005
170	0204202N	DDG-1000	112,576	112,576
174	0304785N	ISR & INFO OPERATIONS	136,140	126,140
		Program decrease		-10,000
				[-10,000]
175	0306250M	CYBER OPERATIONS TECHNOLOGY DEVELOPMENT	26,318	26,318
		SUBTOTAL SYSTEM DEVELOPMENT & DEMONSTRATION	5,910,089	6,027,762
				117,693
MANAGEMENT SUPPORT				
176	0604256N	THREAT SIMULATOR DEVELOPMENT	20,862	20,862
177	0604258N	TARGET SYSTEMS DEVELOPMENT	12,113	12,113
178	0604759N	MAJOR T&E INVESTMENT	84,617	84,617
179	0605152N	STUDIES AND ANALYSIS SUPPORT—NAVY	3,108	3,108
180	0605154N	CENTER FOR NAVAL ANALYSES	38,590	38,590
183	0605804N	TECHNICAL INFORMATION SERVICES	934	934
184	0605853N	MANAGEMENT, TECHNICAL & INTERNATIONAL SUPPORT	93,966	93,966
185	0605856N	STRATEGIC TECHNICAL SUPPORT	3,538	3,538
186	0605863N	RDI&E SHIP AND AIRCRAFT SUPPORT	135,149	135,149
187	0605864N	TEST AND EVALUATION SUPPORT	429,277	429,277
188	0605865N	OPERATIONAL TEST AND EVALUATION CAPABILITY	24,872	24,872
189	0605866N	NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT	17,653	17,653
190	0605867N	SEW SURVEILLANCE/RECONNAISSANCE SUPPORT	8,065	8,065
191	0605873M	MARINE CORPS PROGRAM WIDE SUPPORT	47,042	44,042
		Wargaming capability project restructured		-3,000
				[-3,000]
192	0605898N	MANAGEMENT HQ—R&D	35,614	35,614
193	0606355N	WARFARE INNOVATION MANAGEMENT	38,958	38,958
194	0305327N	INSIDER THREAT	2,581	2,581
195	0902498N	MANAGEMENT HEADQUARTERS (DEPARTMENTAL SUPPORT ACTIVITIES)	1,747	1,747

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		SUBTOTAL MANAGEMENT SUPPORT	988,686	-3,000	995,686
		OPERATIONAL SYSTEMS DEVELOPMENT			
199	0604840M	F-35 C2D2	515,746	-51,600	464,146
		TR-3/B4 cost growth		[-51,600]	
200	0604840N	F-35 C2D2	481,962	-48,200	433,762
		TR-3/B4 cost growth		[-48,200]	
201	0605520M	MARINE CORPS AIR DEFENSE WEAPONS SYSTEMS (MARFORRES)	65,381		65,381
202	0607658N	COOPERATIVE ENGAGEMENT CAPABILITY (CEC)	176,486		176,486
203	0101221N	STRATEGIC SUB & WEAPONS SYSTEM SUPPORT	177,098	9,000	186,098
		Next Generation Strategic Inertial Measurement Unit		[9,000]	
204	0101224N	SSBN SECURITY TECHNOLOGY PROGRAM	45,775		45,775
205	0101226N	SUBMARINE ACOUSTIC WARFARE DEVELOPMENT	64,752	10,000	74,752
		MK 5 acoustic device countermeasure		[10,000]	
206	0101402N	NAVY STRATEGIC COMMUNICATIONS	35,451		35,451
207	0204136N	F/A-18 SQUADRONS	189,224	4,000	193,224
		Jet Noise Reduction Technology		[4,000]	
208	0204228N	SURFACE SUPPORT	13,733		13,733
209	0204229N	TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER (TMPC)	132,181		132,181
210	0204311N	INTEGRATED SURVEILLANCE SYSTEM	84,276		84,276
211	0204313N	SHIP-TOWED ARRAY SURVEILLANCE SYSTEMS	6,261		6,261
212	0204413N	AMPHIBIOUS TACTICAL SUPPORT UNITS (DISPLACEMENT CRAFT)	1,657		1,657
213	0204460M	GROUND/AIR TASK ORIENTED RADAR (G/ATOR)	21,367	47,000	68,367
		Naval Integrated Fire Control—USMC UPL		[12,000]	
		Radar Signal Processor Refresh—USMC UPL		[12,000]	
		SENSOR AW/TPS-80 Ground/Air Task-Oriented Radar (G/ATOR): Air Traffic Control (ATC) Block IV Development—USMC UPL		[23,000]	

214	0204571N	CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT	56,741		56,741
215	0204575N	ELECTRONIC WARFARE (EW) READINESS SUPPORT	62,006		62,006
216	0205601N	ANTI-RADIATION MISSILE IMPROVEMENT	133,520	-10,000	123,520
		Program decrease		[-10,000]	
217	0205620N	SURFACE ASW COMBAT SYSTEM INTEGRATION	28,804		28,804
218	0205632N	MK-48 ADCAP	114,492		114,492
219	0205633N	AVIATION IMPROVEMENTS	132,486		132,486
220	0205675N	OPERATIONAL NUCLEAR POWER SYSTEMS	113,760		113,760
221	0206313M	MARINE CORPS COMMUNICATIONS SYSTEMS	89,897	2,800	92,697
		Compact Solid State Antenna (CSSA)—USMC UPL		[2,800]	
222	0206335M	COMMON AVIATION COMMAND AND CONTROL SYSTEM (CAC2S)	9,324		9,324
223	0206623M	MARINE CORPS GROUND COMBAT/SUPPORTING ARMS SYSTEMS	108,235		108,235
224	0206624M	MARINE CORPS COMBAT SERVICES SUPPORT	13,185		13,185
225	0206625M	USMC INTELLIGENCE/ELECTRONIC WARFARE SYSTEMS (MIP)	37,695		37,695
226	0206629M	AMPHIBIOUS ASSAULT VEHICLE	7,551		7,551
227	0207161N	TACTICAL AIM MISSILES	23,881		23,881
228	0207163N	ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)	32,564		32,564
229	0208043N	PLANNING AND DECISION AID SYSTEM (PDAS)	3,101		3,101
234	0303138N	AFLSAT NETWORKS	30,890	13,983	44,873
		Navy Tactical Grid Development for JADC2		[8,983]	
		Program increase		[5,000]	
235	0303140N	INFORMATION SYSTEMS SECURITY PROGRAM	33,311		33,311
236	0305192N	MILITARY INTELLIGENCE PROGRAM (MIP) ACTIVITIES	7,514		7,514
237	0305204N	TACTICAL UNMANNED AERIAL VEHICLES	9,837		9,837
238	0305205N	UAS INTEGRATION AND INTEROPERABILITY	9,797		9,797
239	0305208M	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	38,800		38,800
240	0305220N	MQ-4C TRITON	13,029		13,029
241	0305231N	MQ-8 UAV	26,543		26,543
242	0305232M	RQ-11 UAV	533		533
243	0305234N	SMALL (LEVEL 0) TACTICAL UAS (STUASLO)	1,772		1,772
245	0305241N	MULTI-INTELLIGENCE SENSOR DEVELOPMENT	59,252		59,252
246	0305242M	UNMANNED AERIAL SYSTEMS (UAS) PAYLOADS (MIP)	9,274		9,274

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247	0305251N	CYBERSPACE OPERATIONS FORCES AND FORCE SUPPORT	36,378		36,378
248	0305421N	RQ-4 MODERNIZATION	134,323		134,323
249	0307577N	INTELLIGENCE MISSION DATA (IMD)	907		907
250	0308601N	MODELING AND SIMULATION SUPPORT	9,772		9,772
251	0702207N	DEPOT MAINTENANCE (NON-IF)	36,880	5,000	41,880
		CPF—Defense Industrial Skills and Technology Training		[5,000]	
252	0708730N	MARITIME TECHNOLOGY (MARITECH)	3,329		3,329
253A	9999999999	CLASSIFIED PROGRAMS	1,872,586		1,872,586
		SUBTOTAL OPERATIONAL SYSTEMS DEVELOPMENT	5,313,319	-18,017	5,295,302
SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS					
254	0608013N	RISK MANAGEMENT INFORMATION—SOFTWARE PILOT PROGRAM	13,703		13,703
255	0608113N	NAVY NEXT GENERATION ENTERPRISE NETWORK (NGEN)—SOFTWARE PILOT PROGRAM	955,151		955,151
256	0608231N	MARITIME TACTICAL COMMAND AND CONTROL (MITC2)—SOFTWARE PILOT PROGRAM	14,855		14,855
		SUBTOTAL SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS	983,709		983,709
		TOTAL RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY	22,639,362	541,631	23,180,993
RESEARCH, DEVELOPMENT, TEST & EVAL, AF					
BASIC RESEARCH					
001	0601102F	DEFENSE RESEARCH SCIENCES	328,303	29,520	357,823
		Program increase		[19,520]	
		Space Force University Partnerships		[10,000]	
002	0601103F	UNIVERSITY RESEARCH INITIATIVES	162,403	13,311	175,714
		CPF—Neural-enabled Prosthetics		[1,500]	
		Program increase		[11,811]	
		SUBTOTAL BASIC RESEARCH	490,706	42,831	533,537

004	0602020F	APPLIED RESEARCH	79,901		79,901
005	0602102F	FUTURE AF CAPABILITIES APPLIED RESEARCH	113,460		160,960
		MATERIALS		47,500	
		CPF—Affordable Multifunctional Aerospace Composites		[10,000]	
		Digital Maintenance Advisor		[7,500]	
		Maturation of carbon/carbon thermal protection systems		[5,000]	
		Program increase		[25,000]	
006	0602201F	AEROSPACE VEHICLE TECHNOLOGIES	163,032	12,500	175,532
		Nano-UAS for the Military Warfighter		[2,500]	
		Novel advanced agile air platform technologies		[10,000]	
007	0602202F	HUMAN EFFECTIVENESS APPLIED RESEARCH	136,273		136,273
008	0602203F	AEROSPACE PROPULSION	174,683	-43,000	131,683
		Program decrease		[-43,000]	
009	0602204F	AEROSPACE SENSORS	193,514	17,700	211,214
		Chip-locking microelectronics security		[8,700]	
		Cyber Assurance and Assessment of Electronic Hardware Systems		[9,000]	
011	0602298F	SCIENCE AND TECHNOLOGY MANAGEMENT—MAJOR HEADQUARTERS ACTIVITIES	8,891		8,891
012	0602602F	CONVENTIONAL MUNITIONS	151,757		161,757
		Advanced Propulsion Technology for Hypersonic Systems		10,000	
013	0602605F	DIRECTED ENERGY TECHNOLOGY	121,869	[10,000]	124,369
		CPF—Directed Energy Research and Education for Workforce Development		2,500	
014	0602788F	DOMINANT INFORMATION SCIENCES AND METHODS	169,110	[2,500]	171,110
		CPF—Assessment of a National Laboratory for Transformational Computing		2,000	
		SUBTOTAL APPLIED RESEARCH	1,312,490	[49,200]	1,361,690
017	0603032F	ADVANCED TECHNOLOGY DEVELOPMENT	131,643		131,643
018	0603112F	FUTURE AF INTEGRATED TECHNOLOGY DEMOS	31,905	30,000	61,905
		ADVANCED MATERIALS FOR WEAPON SYSTEMS		[15,000]	
		Composites Research		[15,000]	
		Metals affordability research		[15,000]	
019	0603199F	SUSTAINMENT SCIENCE AND TECHNOLOGY (S&T)	21,057		21,057

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020	0603203F	ADVANCED AEROSPACE SENSORS	44,730	9,300	54,030
		Authorization Software for Autonomous Sensors		[9,300]	
021	0603211F	AEROSPACE TECHNOLOGY DEV/DEMO	70,486	15,000	85,486
		Enhanced Capability Hypersonic Airbreathing Testbed		[15,000]	
022	0603216F	AEROSPACE PROPULSION AND POWER TECHNOLOGY	75,273	94,500	169,773
		CPF—Development of Advanced Propulsion Technologies for Hypersonic Systems		[5,000]	
		Ground Testing of Reusable High Mach Turbine Engines		[20,000]	
		Next Generation UAS Propulsion Development		[30,000]	
		Reusable High Mach Turbine engine		[29,500]	
		Turbine engine technology		[10,000]	
023	0603270F	ELECTRONIC COMBAT TECHNOLOGY	46,591		46,591
026	0603456F	HUMAN EFFECTIVENESS ADVANCED TECHNOLOGY DEVELOPMENT	24,589		24,589
027	0603601F	CONVENTIONAL WEAPONS TECHNOLOGY	157,423		157,423
028	0603605F	ADVANCED WEAPONS TECHNOLOGY	28,258	5,000	33,258
		LIDAR CUAS Automated Target Recognition		[5,000]	
029	0603680F	MANUFACTURING TECHNOLOGY PROGRAM	45,259	130,000	175,259
		Aerospace and defense supply ecosystem		[6,000]	
		CPF—Additive Manufacturing and Ultra-High Performance Concrete		[5,000]	
		Program increase		[95,000]	
		Smart Manufacturing Digital Thread Initiative		[10,000]	
		Universal robotic controller		[6,000]	
		Virtual, Augmented, and Mixed Reality Readiness		[8,000]	
030	0603788F	BATTLESPACE KNOWLEDGE DEVELOPMENT AND DEMONSTRATION	56,772		56,772
		SUBTOTAL ADVANCED TECHNOLOGY DEVELOPMENT	733,986	283,800	1,017,786
031	0603260F	ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	5,795		5,795
		INTELLIGENCE ADVANCED DEVELOPMENT			

032	0603742F	COMBAT IDENTIFICATION TECHNOLOGY	21,939	21,939
033	0603790F	NATO RESEARCH AND DEVELOPMENT	4,114	4,114
034	0603851F	INTERCONTINENTAL BALLISTIC MISSILE—DEMAVAL	49,621	49,621
036	0604001F	NC3 ADVANCED CONCEPTS	6,900	6,900
037	0604002F	AIR FORCE WEATHER SERVICES RESEARCH	986	986
038	0604003F	ADVANCED BATTLE MANAGEMENT SYSTEM (ABMS)	203,849	178,849
		Program decrease	-25,000	-25,000
039	0604004F	ADVANCED ENGINE DEVELOPMENT	123,712	380,712
		Project 643608—AETP	[257,000]	[257,000]
040	0604006F	ARCHITECTURE INITIATIVES	82,438	43,438
		Program decrease	[-39,000]	[-39,000]
041	0604015F	LONG RANGE STRIKE—BOMBER	2,872,624	2,872,624
042	0604032F	DIRECTED ENERGY PROTOTYPING	10,820	10,820
043	0604033F	HYPERSONICS PROTOTYPING	438,378	438,378
044	0604201F	PNT RESILIENCY, MODS, AND IMPROVEMENTS	39,742	39,742
045	0604257F	ADVANCED TECHNOLOGY AND SENSORS	23,745	23,745
046	0604288F	SURVIVABLE AIRBORNE OPERATIONS CENTER	133,253	133,253
047	0604317F	TECHNOLOGY TRANSFER	15,768	15,768
048	0604327F	HARD AND DEEPLY BURIED TARGET DEFEAT SYSTEM (HDBTDS) PROGRAM	15,886	15,886
049	0604414F	CYBER RESILIENCY OF WEAPON SYSTEMS-ACS	71,229	71,229
050	0604776F	DEPLOYMENT & DISTRIBUTION ENTERPRISE R&D	40,103	40,103
051	0604858F	TECH TRANSITION PROGRAM	343,545	423,545
		NORTHCOM/NORAD—Proliferated Low Earth Orbit Arctic Communications (P-LEO)	80,000	80,000
052	0605230F	GROUND BASED STRATEGIC DETERRENT	[80,000]	[80,000]
054	0207110F	NEXT GENERATION AIR DOMINANCE	2,553,541	2,553,541
		High-Risk Technology Integration Plan	1,524,667	1,474,667
055	0207455F	THREE DIMENSIONAL LONG-RANGE RADAR (3DELRR)	50,000	50,000
		Build Command and Control Framework	[50,000]	[50,000]
056	0207322F	AIRBASE AIR DEFENSE SYSTEMS (ABADS)	10,905	10,905
057	0208030F	WAR RESERVE MATERIEL—AMMUNITION	3,943	3,943
059	0305236F	COMMON DATA LINK EXECUTIVE AGENT (CDL EA)	43,881	43,881
061	0305601F	MISSION PARTNER ENVIRONMENTS	16,420	16,420

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062	0306250F	CYBER OPERATIONS TECHNOLOGY SUPPORT	242,499		242,499
063	0306415F	ENABLED CYBER ACTIVITIES	16,578		16,578
066	0901410F	CONTRACTING INFORMATION TECHNOLOGY SYSTEM	20,343		20,343
		SUBTOTAL ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	8,937,224	273,000	9,210,224
		SYSTEM DEVELOPMENT & DEMONSTRATION			
078	0604200F	FUTURE ADVANCED WEAPON ANALYSIS & PROGRAMS	23,499		23,499
079	0604201F	PNT RESILIENCY, MODS, AND IMPROVEMENTS	167,520		167,520
080	0604222F	NUCLEAR WEAPONS SUPPORT	30,050		30,050
081	0604270F	ELECTRONIC WARFARE DEVELOPMENT	2,110	5,000	7,110
		Program increase—Ultra-Wideband Receiver		[5,000]	
082	0604281F	TACTICAL DATA NETWORKS ENTERPRISE	169,836		169,836
083	0604287F	PHYSICAL SECURITY EQUIPMENT	8,469		8,469
085	0604602F	ARMAMENT/ORDNANCE DEVELOPMENT	9,047		9,047
086	0604604F	SUBMUNITIONS	2,954		2,954
087	0604617F	AGILE COMBAT SUPPORT	16,603		16,603
089	0604706F	LIFE SUPPORT SYSTEMS	25,437		25,437
090	0604735F	COMBAT TRAINING RANGES	23,980		23,980
092	0604932F	LONG RANGE STANDOFF WEAPON	609,042		609,042
093	0604933F	ICBM FUZE MODERNIZATION	129,709		129,709
095	0605056F	OPEN ARCHITECTURE MANAGEMENT	37,109		37,109
096	0605221F	KC-46	1		1
097	0605223F	ADVANCED PILOT TRAINING	188,898	-18,900	169,998
		MS-C Delay		[-18,900]	
098	0605229F	HH-60W	66,355	-35,849	30,506
		Early to need—capability upgrades and modernization		[-35,849]	
101	0207171F	F-15 EPAWSS	112,012		112,012

102	0207328F	STAND IN ATTACK WEAPON	166,570	-5,019	161,551
		Program decrease		[-5,000]	
		SIAW Acq Strategy Change		[-19]	
103	0207701F	FULL COMBAT MISSION TRAINING	7,064	9,500	16,564
		Airborne Augmented Reality Technology		[9,500]	
105	0401221F	KC-46A TANKER SQUADRONS	73,458	-11,000	62,458
		RVS testing early to need		[-11,000]	
107	0401319F	VC-25B	680,665	-96,000	584,665
		Early to need		[-96,000]	
108	0701212F	AUTOMATED TEST SYSTEMS	15,445		15,445
109	0804772F	TRAINING DEVELOPMENTS	4,482		4,482
		SUBTOTAL SYSTEM DEVELOPMENT & DEMONSTRATION	2,570,315	-152,268	2,418,047
MANAGEMENT SUPPORT					
124	0604256F	THREAT SIMULATOR DEVELOPMENT	41,909	22,037	63,946
		Commercial Physics-Based Simulation and Modeling Technology		[5,000]	
		Program increase		[17,037]	
125	0604759F	MAJOR T&E INVESTMENT	130,766	3,000	133,766
		Gulf Test Range and Training Enhancements		[3,000]	
126	0605101F	RAND PROJECT AIR FORCE	36,017		36,017
128	0605712F	INITIAL OPERATIONAL TEST & EVALUATION	12,582		12,582
129	0605807F	TEST AND EVALUATION SUPPORT	811,032	-8,000	803,032
		Program decrease		[-8,000]	
131	0605827F	ACQ WORKFORCE- GLOBAL VIG & COMBAT SYS	243,796		243,796
132	0605828F	ACQ WORKFORCE- GLOBAL REACH	435,930		435,930
133	0605829F	ACQ WORKFORCE- CYBER, NETWORK, & BUS SYS	435,274		435,274
135	0605831F	ACQ WORKFORCE- CAPABILITY INTEGRATION	243,806		243,806
136	0605832F	ACQ WORKFORCE- ADVANCED PRGM TECHNOLOGY	103,041		103,041
137	0605833F	ACQ WORKFORCE- NUCLEAR SYSTEMS	226,055		226,055
138	0605898F	MANAGEMENT HQ—R&D	4,079		4,079
139	0605976F	FACILITIES RESTORATION AND MODERNIZATION—TEST AND EVALUATION SUPPORT	70,788		70,788
140	0605978F	FACILITIES SUSTAINMENT—TEST AND EVALUATION SUPPORT	30,057		30,057

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141	0606017F	REQUIREMENTS ANALYSIS AND MATURATION	85,799	-10,000	75,799
		Program decrease		[-10,000]	
142	0606398F	MANAGEMENT HQ—T&E	6,163		6,163
143	0303166F	SUPPORT TO INFORMATION OPERATIONS (IO) CAPABILITIES	537		537
144	0303255F	COMMAND, CONTROL, COMMUNICATION, AND COMPUTERS (C4)—STRATCOM	25,340	20,000	45,340
		Establishment of Rapid Engineering Architecture Engineering Hub—collaborative research net- work.		[-10,000]	
145	0308602F	Establishment of Rapid Engineering Architecture Engineering Hub—prototype development	28,720		28,720
146	0702806F	ENTERPRISE INFORMATION SERVICES (EIS)	37,211		37,211
147	0804731F	ACQUISITION AND MANAGEMENT SUPPORT	1,506		1,506
148	0804772F	GENERAL SKILL TRAINING	2,957		2,957
150	1001004F	TRAINING DEVELOPMENTS	2,420		2,420
150	1001004F	INTERNATIONAL ACTIVITIES			
155	1206864F	SPACE TEST PROGRAM (STP)	3		3
		SUBTOTAL MANAGEMENT SUPPORT	3,015,788	27,037	3,042,825
OPERATIONAL SYSTEMS DEVELOPMENT					
157	0604233F	SPECIALIZED UNDERGRADUATE FLIGHT TRAINING	5,509		5,509
158	0604445F	WIDE AREA SURVEILLANCE	2,760		2,760
160	0604840F	F-35 C2D2	985,404	-98,500	886,904
		TR-3/B4 cost growth		[-98,500]	
161	0605018F	AF INTEGRATED PERSONNEL AND PAY SYSTEM (AF-IPPS)	22,010		22,010
162	0605024F	ANTI-TAMPER TECHNOLOGY EXECUTIVE AGENCY	51,492		51,492
163	0605117F	FOREIGN MATERIEL ACQUISITION AND EXPLOITATION	71,391		71,391
164	0605278F	HC/MC-130 RECAP RDT&E	46,796		46,796
165	0606018F	NC3 INTEGRATION	26,532		26,532
167	0101113F	B-52 SQUADRONS	715,811	-147,000	568,811

168	0101122F	CERP contract delay early to need	453	453	
169	0101126F	AIR-LAUNCHED CRUISE MISSILE (ALCM)	29,127	29,127	
170	0101127F	B-1B SQUADRONS	144,047	144,047	
171	0101213F	B-2 SQUADRONS	113,622	113,622	
172	0101316F	MINUTEMAN SQUADRONS	15,202	15,202	
174	0101328F	WORLDWIDE JOINT STRATEGIC COMMUNICATIONS	96,313	96,313	
176	0102110F	ICBM REENTRY VEHICLES	16,132	16,132	
177	0102326F	UH-1N REPLACEMENT PROGRAM	771	771	
178	0102412F	REGION/SECTOR OPERATION CONTROL CENTER MODERNIZATION PROGRAM	99	99	
		NORTH WARNING SYSTEM (NWS)	25,100	25,100	
		NORTHCOM/NORAD—Over the Horizon Radar	[25,100]	[25,100]	
179	0102417F	OVER-THE-HORIZON BACKSCATTER RADAR	42,300	42,300	
180	0202834F	VEHICLES AND SUPPORT EQUIPMENT—GENERAL	5,889	5,889	
181	0205219F	MQ-9 UAV	85,135	84,121	-1,014
		Early to need—program protection technology insertion			[-1,014]
182	0205671F	JOINT COUNTER RCIED ELECTRONIC WARFARE	3,111	3,111	
183	0207040F	MULTI-PLATFORM ELECTRONIC WARFARE EQUIPMENT	36,607	36,607	
184	0207131F	A-10 SQUADRONS	39,224	39,224	
185	0207133F	F-16 SQUADRONS	224,573	224,573	
186	0207134F	F-15E SQUADRONS	239,616	239,616	
187	0207136F	MANNED DESTRUCTIVE SUPPRESSION	15,855	15,855	
188	0207138F	F-22A SQUADRONS	647,296	647,296	
189	0207142F	F-35 SQUADRONS	69,365	64,475	-4,890
		TR-3/B4 delay			[-4,890]
190	0207146F	F-15EX	118,126	118,126	
191	0207161F	TACTICAL AIM MISSILES	32,974	32,974	
192	0207163F	ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)	51,288	51,288	
193	0207227F	COMBAT RESCUE—PARARESCUE	852	852	
194	0207247F	AF TENCAP	23,685	23,685	
195	0207249F	PRECISION ATTACK SYSTEMS PROCUREMENT	12,083	12,083	
196	0207253F	COMPASS CALL	91,266	91,266	
197	0207268F	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	103,715	103,715	

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198	0207325F	JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)	117,325		117,325
199	0207327F	SMALL DIAMETER BOMB (SDB)	27,109		27,109
200	0207410F	AIR & SPACE OPERATIONS CENTER (AOC)	3		3
201	0207412F	CONTROL AND REPORTING CENTER (CRC)	9,875		9,875
202	0207417F	AIRBORNE WARNING AND CONTROL SYSTEM (AWACS)	171,014		171,014
203	0207418F	AFSPECWAR—TACP	4,598		4,598
205	0207431F	COMBAT AIR INTELLIGENCE SYSTEM ACTIVITIES	21,863		21,863
206	0207438F	THEATER BATTLE MANAGEMENT (TBM) C4I	7,905		7,905
207	0207439F	ELECTRONIC WARFARE INTEGRATED REPROGRAMMING (EWIR)	15,000		15,000
208	0207444F	TACTICAL AIR CONTROL PARTY-MOD	13,081		13,081
209	0207452F	DCAPES	4,305		4,305
210	0207521F	AIR FORCE CALIBRATION PROGRAMS	1,984		1,984
211	0207522F	AIRBASE AIR DEFENSE SYSTEMS (ABADS)	7,392		7,392
212	0207573F	NATIONAL TECHNICAL NUCLEAR FORENSICS	1,971		1,971
213	0207590F	SEEK EAGLE	30,539		30,539
214	0207601F	USAF MODELING AND SIMULATION	17,110		17,110
215	0207605F	WARGAMING AND SIMULATION CENTERS	7,535		7,535
216	0207610F	BATTLEFIELD ABN COMM NODE (BACN)	32,008		32,008
217	0207697F	DISTRIBUTED TRAINING AND EXERCISES	4,007		4,007
218	0208006F	MISSION PLANNING SYSTEMS	92,557		92,557
219	0208007F	TACTICAL DECEPTION	489		489
220	0208064F	OPERATIONAL HQ—CYBER	2,115		2,115
221	0208087F	DISTRIBUTED CYBER WARFARE OPERATIONS	72,487		72,487
222	0208088F	AF DEFENSIVE CYBERSPACE OPERATIONS	18,449		18,449
223	0208097F	JOINT CYBER COMMAND AND CONTROL (JCC2)	79,079		79,079
224	0208099F	UNIFIED PLATFORM (UP)	101,893		101,893
228	0208288F	INTEL DATA APPLICATIONS	493		493

229	0301025F	GEObASE	2,782	2,782	
231	0301113F	CYBER SECURITY INTELLIGENCE SUPPORT	5,224	5,224	
238	0301401F	AIR FORCE SPACE AND CYBER NON-TRADITIONAL ISR FOR BATTLESPACE AWARENESS	2,463	2,463	
239	0302015F	E-4B NATIONAL AIRBORNE OPERATIONS CENTER (NAOC)	26,331	26,331	
240	0303131F	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK (MEECN)	20,700	20,700	
242	0303140F	INFORMATION SYSTEMS SECURITY PROGRAM	8,032	8,032	
243	0303142F	GLOBAL FORCE MANAGEMENT—DATA INITIATIVE	452	452	
244	0303248F	ALL DOMAIN COMMON PLATFORM	64,000	64,000	
246	0304260F	AIRBORNE SIGINT ENTERPRISE	97,546	97,546	
		Excess carryover—Special projects		(4,000)	
247	0304310F	COMMERCIAL ECONOMIC ANALYSIS	3,770	3,770	
		CPF—Mobilizing Civilian Expertise for National Security Education on Geo-Economics, and Innovation in the Era of Great Power Competition		5,000	
				[5,000]	
251	0305020F	CCMD INTELLIGENCE INFORMATION TECHNOLOGY	1,663	1,663	
252	0305022F	ISR MODERNIZATION & AUTOMATION DVMT (IMAD)	18,888	15,888	
		Excess to need		(3,000)	
253	0305099F	GLOBAL AIR TRAFFIC MANAGEMENT (GATM)	4,672	4,672	
254	0305103F	CYBER SECURITY INITIATIVE	290	290	
255	0305111F	WEATHER SERVICE	26,228	26,228	
		Commercial Weather Data Pilot		10,000	
256	0305114F	AIR TRAFFIC CONTROL, APPROACH, AND LANDING SYSTEM (ATCALs)	8,749	8,749	
257	0305116F	AERIAL TARGETS	1,528	1,528	
260	0305128F	SECURITY AND INVESTIGATIVE ACTIVITIES	223	223	
262	0305146F	DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES	8,733	8,733	
264	0305179F	INTEGRATED BROADCAST SERVICE (IBS)	21,335	21,335	
265	0305202F	DRAGON U-2	17,146	17,146	
		ASARS processor and antenna development—AF UPL		19,000	
		ASARS RECONNAISSANCE SYSTEMS		[19,000]	
267	0305206F	ASARS processor and antenna development—AF UPL	71,791	71,791	
		Program increase—Sensor Open Systems Architecture (SOSA) High Altitude Project		95,300	
		Wide Area Motion Imagery sensor improvements		[67,000]	
268	0305207F	MANNED RECONNAISSANCE SYSTEMS	14,799	14,799	
				[18,300]	

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269	0305208F	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	24,568		24,568
270	0305220F	RQ-4 UAV	83,124		83,124
271	0305221F	NETWORK-CENTRIC COLLABORATIVE TARGETING	17,224		17,224
272	0305238F	NATO AGS	19,473		19,473
273	0305240F	SUPPORT TO DCGS ENTERPRISE	40,421		40,421
274	0305600F	INTERNATIONAL INTELLIGENCE TECHNOLOGY AND ARCHITECTURES	14,473		14,473
275	0305881F	RAPID CYBER ACQUISITION	4,326		4,326
276	0305984F	PERSONNEL RECOVERY COMMAND & CTRL (PRCZ)	2,567		2,567
277	0307577F	INTELLIGENCE MISSION DATA (IMD)	6,169		6,169
278	0401115F	C-130 AIRLIFT SQUADRON	9,752		9,752
279	0401119F	C-5 AIRLIFT SQUADRONS (IF)	17,507		17,507
280	0401130F	C-17 AIRCRAFT (IF)	16,360		16,360
281	0401132F	C-130J PROGRAM	14,112		14,112
282	0401134F	LARGE AIRCRAFT IR COUNTERMEASURES (LAIRCIM)	5,540		5,540
283	0401218F	KC-135S	3,564		3,564
285	0401318F	CV-22	17,189		17,189
286	0408011F	SPECIAL TACTICS / COMBAT CONTROL	6,640		6,640
288	0708055F	MAINTENANCE, REPAIR & OVERHAUL SYSTEM	26,921		26,921
289	0708610F	LOGISTICS INFORMATION TECHNOLOGY (LOGIT)	7,071		7,071
291	0804743F	OTHER FLIGHT TRAINING	1,999		1,999
293	0901202F	JOINT PERSONNEL RECOVERY AGENCY	1,841		1,841
294	0901218F	CIVILIAN COMPENSATION PROGRAM	3,560		3,560
295	0901220F	PERSONNEL ADMINISTRATION	3,368		3,368
296	0901226F	AIR FORCE STUDIES AND ANALYSIS AGENCY	1,248		1,248
297	0901538F	FINANCIAL MANAGEMENT INFORMATION SYSTEMS DEVELOPMENT	4,852		4,852
301	1202140F	SERVICE SUPPORT TO SPACECOM ACTIVITIES	6,737		6,737
316A	9999999999	CLASSIFIED PROGRAMS	15,868,973	-160,000	15,708,973

		Program, decrease			
		SUBTOTAL OPERATIONAL SYSTEMS DEVELOPMENT	21,705,541		[-160,000]
					-264,004
		SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS			
317	0608158F	STRATEGIC MISSION PLANNING AND EXECUTION SYSTEM—SOFTWARE PILOT PROGRAM	96,100		96,100
318	0608410F	AIR & SPACE OPERATIONS CENTER (AOC)—SOFTWARE PILOT PROGRAM	186,915		166,915
		Program, decrease			[-20,000]
319	0608920F	DEFENSE ENTERPRISE ACCOUNTING AND MANAGEMENT SYSTEM (DEAMS)—SOFTWARE PILOT PRO	135,263		135,263
		SUBTOTAL SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS	418,278		-20,000
		TOTAL RESEARCH, DEVELOPMENT, TEST & EVAL, AF	39,184,328		239,596
					39,423,924
		ROTE, SPACE FORCE			
		APPLIED RESEARCH			
001	1206601SF	SPACE TECHNOLOGY	175,796		65,000
		Hybrid Space Architecture			[20,000]
		Space Power and Collection Technology			[35,000]
		University Consortium Space Technology Development			[10,000]
		SUBTOTAL APPLIED RESEARCH	175,796		65,000
					240,796
		ADVANCED TECHNOLOGY DEVELOPMENT			
002	1206616SF	SPACE ADVANCED TECHNOLOGY DEVELOPMENT/DEMO	76,653		61,000
		Accelerate Cislunar Flight Experiment UPL			[61,000]
		SUBTOTAL ADVANCED TECHNOLOGY DEVELOPMENT	76,653		61,000
					137,653
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES			
003	1203164SF	NAVSTAR GLOBAL POSITIONING SYSTEM (USER EQUIPMENT) (SPACE)	434,194		434,194
004	1203710SF	EO/IR WEATHER SYSTEMS	162,274		162,274
005	1203905SF	SPACE SYSTEM SUPPORT	37,000		-37,000
		Surface Warfare Analysis Center, insufficient justification – partial transfer to SSDP			[-37,000]
006	1206422SF	WEATHER SYSTEM FOLLOW-ON	61,521		10,000
		Program Increase			[10,000]

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007	1206425SF	SPACE SITUATION AWARENESS SYSTEMS	123,262		123,262
008	1206427SF	SPACE SYSTEMS PROTOTYPE TRANSITIONS (SSPT)	101,851	28,000	129,851
		Expand Blackjack Radio Frequency Payloads UPL		[28,000]	
009	1206438SF	SPACE CONTROL TECHNOLOGY	32,931		32,931
010	1206730SF	SPACE SECURITY AND DEFENSE PROGRAM	56,546	25,000	81,546
		Program increase		[15,000]	
		Transfer from Surface Warfare Analysis Center		[10,000]	
011	1206760SF	PROTECTED TACTICAL ENTERPRISE SERVICE (PTES)	100,320		100,320
012	1206761SF	PROTECTED TACTICAL SERVICE (PTS)	243,285		243,285
013	1206855SF	EVOLVED STRATEGIC SATCOM (ESS)	160,056		160,056
014	1206857SF	SPACE RAPID CAPABILITIES OFFICE	66,193	2,900	69,093
		High Power Density Structural Heat Spreaders		[2,900]	
		SUBTOTAL ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	1,579,433	28,900	1,608,333
SYSTEM DEVELOPMENT & DEMONSTRATION					
015	1203269SF	GPS III FOLLOW-ON (GPS IIF)	264,265		264,265
016	1203940SF	SPACE SITUATION AWARENESS OPERATIONS	56,279		56,279
017	1206421SF	COUNTERSPACE SYSTEMS	38,063		38,063
018	1206422SF	WEATHER SYSTEM FOLLOW-ON	1,438		1,438
019	1206425SF	SPACE SITUATION AWARENESS SYSTEMS	127,026	9,000	136,026
		Space domain rapid innovation pathfinders UPL		[9,000]	
020	1206431SF	ADVANCED EHF MILSATCOM (SPACE)	28,218		28,218
021	1206432SF	POLAR MILSATCOM (SPACE)	127,870		127,870
022	1206442SF	NEXT GENERATION OPIR	2,451,256		2,451,256
023	1206445SF	COMMERCIAL SATCOM (COMSATCOM) INTEGRATION	23,400		23,400
024	1206853SF	NATIONAL SECURITY SPACE LAUNCH PROGRAM (SPACE)—EMD	221,510	59,200	280,710
		Liquid Oxygen Explosive Tests UPL		[9,200]	

		Maintain competition for Ph3 — DoD unique requirements			
		SUBTOTAL SYSTEM DEVELOPMENT & DEMONSTRATION	3,339,325	68,200	3,407,525
		MANAGEMENT SUPPORT			
025	1206116SF	SPACE TEST AND TRAINING RANGE DEVELOPMENT	19,319		19,319
026	1206392SF	ACQ WORKFORCE—SPACE & MISSILE SYSTEMS	214,051		214,051
027	1206398SF	SPACE & MISSILE SYSTEMS CENTER—MHA	12,119		12,119
028	1206759SF	MAJOR T&E INVESTMENT—SPACE	71,503	10,000	81,503
		Increase SCN Antenna Resources		[10,000]	
029	1206860SF	ROCKET SYSTEMS LAUNCH PROGRAM (SPACE)	17,769	4,000	21,769
		CPF—Small Rocket Program		[4,000]	
030	1206862SF	TACTICALLY RESPONSIVE LAUNCH		50,000	50,000
		Continue FY 2021 efforts		[50,000]	
031	1206864SF	SPACE TEST PROGRAM (STP)	20,881		20,881
		SUBTOTAL MANAGEMENT SUPPORT	355,642	64,000	419,642
		OPERATIONAL SYSTEM DEVELOPMENT			
033	1201017SF	GLOBAL SENSOR INTEGRATED ON NETWORK (GSIN)	4,731		4,731
034	1203001SF	FAMILY OF ADVANCED BLOS TERMINALS (FAB-T)	156,788		156,788
035	1203040SF	DCO-SPACE	2,150		2,150
036	1203109SF	NARROWBAND SATELLITE COMMUNICATIONS	112,012		112,012
037	1203110SF	SATELLITE CONTROL NETWORK (SPACE)	36,810		36,810
038	1203165SF	NAVSTAR GLOBAL POSITIONING SYSTEM (SPACE AND CONTROL SEGMENTS)	1,966		1,966
039	1203173SF	SPACE AND MISSILE TEST AND EVALUATION CENTER	1,699	4,000	5,699
		Improve operations of payload adapter UPL		[4,000]	
040	1203174SF	SPACE INNOVATION, INTEGRATION AND RAPID TECHNOLOGY DEVELOPMENT	18,054	15,300	33,354
		NSITR Digital Core Services UPL		[15,300]	
041	1203182SF	SPACELIFT RANGE SYSTEM (SPACE)	11,115	22,000	33,115
		High-Fidelity Open-Air Scene Target Generator		[10,000]	
		CPF—Tactically Responsive Launch/Deployable Spaceport		[7,000]	
		Program Increase		[5,000]	
042	1203265SF	GPS III SPACE SEGMENT	7,207		7,207

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Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
043	1203330SF	SPACE SUPERIORITY ISR	18,109		18,109
044	1203620SF	NATIONAL SPACE DEFENSE CENTER	1,280		1,280
045	1203873SF	BALLISTIC MISSILE DEFENSE RADARS	12,292		12,292
046	1203906SF	NCMC—TW/AA SYSTEM	9,858		9,858
047	1203913SF	NUDET DETECTION SYSTEM (SPACE)	45,887		45,887
048	1203940SF	SPACE SITUATION AWARENESS OPERATIONS	64,763		64,763
049	1206423SF	GLOBAL POSITIONING SYSTEM III—OPERATIONAL CONTROL SEGMENT	413,766		413,766
053	1206770SF	ENTERPRISE GROUND SERVICES	191,713		191,713
053A	9999999999	CLASSIFIED PROGRAMS	4,474,809		4,474,809
		SUBTOTAL OPERATIONAL SYSTEM DEVELOPMENT	5,585,009	41,300	5,626,309
SOFTWARE & DIGITAL TECHNOLOGY PILOT PROGRAMS					
054	1203614SF	JSPOC MISSION SYSTEM	154,529		154,529
		SUBTOTAL SOFTWARE & DIGITAL TECHNOLOGY PILOT PROGRAMS	154,529		154,529
		TOTAL RDTE, SPACE FORCE	11,266,387	328,400	11,594,787
RESEARCH, DEVELOPMENT, TEST & EVAL, DW					
BASIC RESEARCH					
001	0601000BR	DTRA BASIC RESEARCH	11,828	877	12,705
		Program increase		[877]	
002	0601101E	DEFENSE RESEARCH SCIENCES	395,781	58,500	454,281
		Adversary Influence Operations (IO) — Detection, Modeling, Mitigation.		[10,000]	
		Artificial Intelligence (AI) — Trustworthy, Human Integrated, Robust		[10,000]	
		Biotechnology for Challenging Environments		[7,000]	
		CPF—Novel Analytical and Empirical Approaches to the Prediction and Monitoring of Disease Transmission.		[1,500]	

003	0601108D8Z	ERI 2.0		[20,000]		
		High Assurance Software Systems – Resilient, Adaptable, Trustworthy		[10,000]		
		HIGH ENERGY LASER RESEARCH INITIATIVES	15,390			15,390
004	0601110D8Z	BASIC RESEARCH INITIATIVES	39,828			114,361
		Consortium to Study Irregular Warfare		74,533		
		CPF—Florida Memorial University Department of Natural Sciences STEM Equipment		[8,000]		
		CPF—SOUTHCOM Enhanced Domain Awareness (EDA) Initiative		[400]		
		Interagency AI Standards		[1,300]		
		Minerva research initiative restoration		[3,300]		
		MURI R&D Partnerships with allies—program enhancement		[13,000]		
		Program increase		[20,000]		
		Providing Research and End-user Products to Accelerate Readiness and Environmental Security (PREPARES)		[4,533]		
		(PREPARES)		[24,000]		
005	0601117E	BASIC OPERATIONAL MEDICAL RESEARCH SCIENCE	76,018	5,000		81,018
		Assessing Immune Memory		[5,000]		
006	0601120D8Z	NATIONAL DEFENSE EDUCATION PROGRAM	112,195	20,000		132,195
		Civics education		[2,000]		
		CPF—Florida Memorial Avionics Smart Scholars		[1,000]		
		SMART scholarships for AI related education		[13,000]		
		SMART scholarships program increase		[4,000]		
007	0601228D8Z	HISTORICALLY BLACK COLLEGES AND UNIVERSITIES/MINORITY INSTITUTIONS	31,136	42,111		73,247
		CPF—Augmenting Quantum Sensing Research, Education and Training in DoD CoE at DSU		[1,111]		
		CPF—HBCU Training for the Future of Aerospace		[1,000]		
		Diversity in SMART Scholarships		[20,000]		
		Program increase		[20,000]		
008	0601384BP	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	34,708	5,000		39,708
		Chemically Resistant, High-Performance Military Cordage, Rope, and Webbing		[5,000]		
		SUBTOTAL BASIC RESEARCH	716,884	206,021		922,905
		APPLIED RESEARCH				
009	0602000D8Z	JOINT MUNITIONS TECHNOLOGY	19,591			19,591
010	0602115E	BIOMEDICAL TECHNOLOGY	108,698	10,000		118,698

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Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
		Bridging the Gap After Spinal Cord Injury		[5,000]	
		Non-Invasive Neurotechnology Rehabilitation Take Home Trials		[5,000]	
012	0602230D8Z	DEFENSE TECHNOLOGY INNOVATION	22,918	10,000	32,918
		Artificial Intelligence (AI) – Trustworthy, Human Integrated, Robust		[10,000]	
013	0602234D8Z	LINCOLN LABORATORY RESEARCH PROGRAM	55,692	200,000	55,692
014	0602251D8Z	APPLIED RESEARCH FOR THE ADVANCEMENT OF S&T PRIORITIES	65,015	[200,000]	265,015
		AI Research and Development		325,000	
015	0602303E	INFORMATION & COMMUNICATIONS TECHNOLOGY	430,363	[15,000]	755,363
		High Assurance Software Systems – Resilient, Adaptable, Trustworthy		[250,000]	
		Program increase—artificial intelligence		[60,000]	
		Underexplored Approaches to Utility-Scale Quantum Computing			
016	0602383E	BIOLOGICAL WARFARE DEFENSE	31,421	6,500	31,421
017	0602384BP	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	206,956	[6,500]	213,456
		Biodefense System for Joint Force Infrastructure Protection		20,000	
018	0602668D8Z	CYBER SECURITY RESEARCH	15,380	[10,000]	35,380
		AI-enabled cyber defense acceleration study		[10,000]	
		Program increase		47,000	
019	0602702E	TACTICAL TECHNOLOGY	202,515	[2,000]	249,515
		Adapting Cross-domain Kill-Webs (ACK)		[15,000]	
		Adversary Influence Operations (IO) – Detection, Modeling, Mitigation.		[30,000]	
		MADFIRES		81,600	
020	0602715E	MATERIALS AND BIOLOGICAL TECHNOLOGY	317,024	[4,600]	398,624
		Adaptive Immunomodulation-Based Therapeutics (ElectRx)		[20,000]	
		Agile Chemical Manufacturing Technologies (ACMT)		[6,000]	
		Bioengineered Electronics and Electromagnetic Devices (Bio-INC)		[7,000]	
		Bioremediation of Battlefields		[5,000]	
		Maritime Materials Technologies (M2T)			

021	0602716E	ELECTRONICS TECHNOLOGY	357,384	[36,000]	393,384
		ERI 2.0			
022	0602718BR	COUNTER WEAPONS OF MASS DESTRUCTION APPLIED RESEARCH	197,011		197,011
023	0602751D8Z	SOFTWARE ENGINEERING INSTITUTE (SEI) APPLIED RESEARCH	9,601		9,601
024	0602890D8Z	HIGH ENERGY LASER RESEARCH	45,997		115,997
		Directed Energy Innovation—Improved beam control			
		Joint Directed Energy Transition Office			
025	1160401BB	SOF TECHNOLOGY DEVELOPMENT	44,829		54,829
		Brain Health Research and Treatment, Cognitive Performance			
		POTFF—Brain Health Research			
		SUBTOTAL APPLIED RESEARCH	2,130,395	816,100	2,946,495
ADVANCED TECHNOLOGY DEVELOPMENT					
026	0603000D8Z	JOINT MUNITIONS ADVANCED TECHNOLOGY	23,213		23,213
027	0603121D8Z	SO/LIC ADVANCED DEVELOPMENT	4,665		4,665
028	0603122D8Z	COMBATING TERRORISM TECHNOLOGY SUPPORT	69,376		69,376
029	0603133D8Z	FOREIGN COMPARATIVE TESTING	25,432		25,432
031	0603160BR	COUNTER WEAPONS OF MASS DESTRUCTION ADVANCED TECHNOLOGY DEVELOPMENT	399,362		404,362
		Reduced order models			
032	0603176C	ADVANCED CONCEPTS AND PERFORMANCE ASSESSMENT	15,800		29,700
		BATMAA BMDs Advanced Technology			
		Improvements to MDS Cybersecurity UPL			
033	0603180C	ADVANCED RESEARCH	21,466		21,466
034	0603183D8Z	JOINT HYPERSONIC TECHNOLOGY DEVELOPMENT & TRANSITION	51,340		51,340
035	0603225D8Z	JOINT DOD-DOE MUNITIONS TECHNOLOGY DEVELOPMENT	19,063		19,063
036	0603286E	ADVANCED AEROSPACE SYSTEMS	174,043		273,043
		Glide Breaker			
		HAWC			

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		Hypersonic Air-Breathing Weapon Concept (HAWC)		[10,000]	
		OpFires		[27,000]	
		Tactical Boost Glide (TBG)		[15,000]	
037	0603287E	SPACE PROGRAMS AND TECHNOLOGY	101,524	85,000	186,524
		Blackjack critical risk reduction		[25,000]	
		Blackjack schedule assurance		[30,000]	
		Robotic Servicing of Geosynchronous Satellites (RSGS)		[30,000]	
038	0603288D8Z	ANALYTIC ASSESSMENTS	24,012	10,000	34,012
		Analytic Assessments		[10,000]	
039	0603289D8Z	ADVANCED INNOVATIVE ANALYSIS AND CONCEPTS	51,513	5,000	56,513
		Innovative operational concepts		[5,000]	
042	0603338D8Z	DEFENSE MODERNIZATION AND PROTOTYPING	115,443	23,000	138,443
		Defense Critical Supply Chain Documentation and Monitoring		[3,000]	
		WLIF AI-enabled applications		[20,000]	
043	0603342D8Z	DEFENSE INNOVATION UNIT (DIU)	31,873		31,873
044	0603375D8Z	TECHNOLOGY INNOVATION	54,433		54,433
045	0603384BP	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM—ADVANCED DEVELOPMENT	197,824		197,824
046	0603527D8Z	RETRACT LARCH	99,175		99,175
047	0603618D8Z	JOINT ELECTRONIC ADVANCED TECHNOLOGY	18,221	20,000	38,221
		Accelerating Joint Electronic Advanced Technologies		[20,000]	
048	0603648D8Z	JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS	102,669		102,669
049	0603662D8Z	NETWORKED COMMUNICATIONS CAPABILITIES	2,984	7,000	9,984
		Cross-domain EMS communications capability		[7,000]	
050	0603680D8Z	DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY PROGRAM	134,022	342,300	476,322
		Additive manufacturing training		[5,000]	
		Biotechnology innovation—Enabling Modular and Scalable Bioindustrial & Reusable Assets		[200,000]	
		CPF—Cold Spray and Rapid Deposition Lab		[1,300]	

051	0603680S	HPC-enabled advanced manufacturing	[15,000]		
		Hypersonics material innovation—Silicon carbide matrix materials	[100,000]		
		Non-destructive evaluation of carbon-carbon composites	[3,000]		
		Program increase	[15,000]		
		Virtual reality-enabled smart installation experimentation	[3,000]		
		MANUFACTURING TECHNOLOGY PROGRAM	31,000	37,543	68,543
		Demonstration of automotive aftermarket capabilities	[6,000]		
		Modeling and Simulation Innovation Competition	[10,000]		
		Program increase	[5,000]		
		Steel Performance Initiative	[10,000]		
		EMERGING CAPABILITIES TECHNOLOGY DEVELOPMENT	[10,000]		
		AI Fund	202,400		202,400
		NORTHCOM/NORAD—Polar Over the Horizon Radar (POTHR)	[200,000]		
		GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS	[2,400]		
		STRATEGIC ENVIRONMENTAL RESEARCH PROGRAM	30,000	12,418	12,418
		AFF replacement	[15,000]	51,863	81,863
		PFAS environmental remediation and disposal	[15,000]		
		MICROELECTRONICS TECHNOLOGY DEVELOPMENT AND SUPPORT		160,821	160,821
		JOINT WARFIGHTING PROGRAM		2,169	2,169
		ADVANCED ELECTRONICS TECHNOLOGIES	24,000	116,716	140,716
		ERI 2.0	[24,000]		
		COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS	93,600	251,794	345,394
		Classified increase	[21,000]		
		Deep water active sonar	[15,000]		
		Network UP	[5,000]		
		Program increase—artificial intelligence	[50,000]		
		SHARE alignment with OTNK research	[1,100]		
		SHARE ICN performance enhancements for operational use	[1,500]		
		NETWORK-CENTRIC WARFARE TECHNOLOGY	94,475	584,771	679,246
		Air Combat Evolution (ACE)	[8,200]		
		Assault Breaker II	[50,000]		
		Classified increase	[20,400]		

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		Ocean of Things (OoT)		[875]	
		Ocean of Things phase 3 demonstration		[10,000]	
		Timely information for Maritime Engagements (TIMEly)		[5,000]	
060	0603767E	SENSOR TECHNOLOGY	294,792	72,600	367,392
		Classified increase		[27,800]	
		SECIRE Munitions Digital Twin for in Theater/Flight Target Additions and Performance Improve- ments.		[4,400]	
		Systems of Systems-Enhanced Small Units (SESU)		[4,400]	
		Thermal Imaging Technology Experiment-Recon (TITE-R)		[36,000]	
061	0603769D8Z	DISTRIBUTED LEARNING ADVANCED TECHNOLOGY DEVELOPMENT	6,398	2,800	9,198
		Systems of Systems-Enhanced Small Units (SESU)		[2,800]	
062	0603781D8Z	SOFTWARE ENGINEERING INSTITUTE	14,677	300	14,977
		CODE enhancements for SESU		[300]	
065	0603924D8Z	HIGH ENERGY LASER ADVANCED TECHNOLOGY PROGRAM	107,397	22,000	129,397
		Short pulse laser research		[10,000]	
		Thermal management scaling		[12,000]	
066	0603941D8Z	TEST & EVALUATION SCIENCE & TECHNOLOGY	267,161		267,161
067	0603950D8Z	NATIONAL SECURITY INNOVATION NETWORK	21,270	18,730	40,000
		Program increase		[18,730]	
068	0604055D8Z	OPERATIONAL ENERGY CAPABILITY IMPROVEMENT	74,300		74,300
070	0303310D8Z	CWMD SYSTEMS		5,000	5,000
		Data storage capabilities for special operations forces		[5,000]	
071	0303367D8Z	SPECTRUM ACCESS RESEARCH AND DEVELOPMENT		100,000	100,000
		Spectrum Management Analysis		[50,000]	
		Spectrum Management Architecture		[20,000]	
		Spectrum Management Modules for Fielded Systems		[30,000]	
074	1160402BB	SOF ADVANCED TECHNOLOGY DEVELOPMENT	93,415	5,000	98,415

075	1206310SDA	Sof Platform Agnostic Data Storage Capability	172,638	[5,000]	172,638
		SPACE SCIENCE AND TECHNOLOGY RESEARCH AND DEVELOPMENT	4,007,596	1,312,105	5,319,701
		SUBTOTAL ADVANCED TECHNOLOGY DEVELOPMENT			
ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
076	0603161D8Z	NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT RDT&E ADC&P	28,687		28,687
077	0603600D8Z	WALKOFF	108,652		108,652
078	0603821D8Z	ACQUISITION ENTERPRISE DATA & INFORMATION SERVICES		130,000	130,000
		CDO for ADA		[5,000]	
		CDO: Enterprise data sets		[125,000]	
079	0603851D8Z	ENVIRONMENTAL SECURITY TECHNICAL CERTIFICATION PROGRAM	71,429	25,000	96,429
		AFF innovation prize		[5,000]	
		AFF replacement		[5,000]	
		Environmental remediation and disposal		[10,000]	
		Military Energy Resilience Catalyst		[5,000]	
080	0603881C	BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT	277,949		277,949
		Program increase		[64,567]	
		Unjustified request, lacking acquisition strategy—LHD		[-64,567]	
081	0603882C	BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE SEGMENT	745,144	50,000	795,144
		Ensure BMD Interceptors do not fall below 40		[50,000]	
082	0603884BP	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM—DEMVAL	129,445		129,445
083	0603884C	BALLISTIC MISSILE DEFENSE SENSORS	224,750	3,012	227,762
		Improvements to MDS Cybersecurity UPL		[3,012]	
084	0603890C	BMD ENABLING PROGRAMS	595,301	91,996	687,297
		Cruise Missile Defense for HLD (NORTHCOM/NORAD—Elevated Radar)		[27,000]	
		Improvements to MDS Cybersecurity UPL		[44,830]	
		Pacing the Threat		[20,166]	
085	0603891C	SPECIAL PROGRAMS—MDA	413,374		413,374
086	0603892C	AEGIS BMD	732,512	48,400	780,912
		Navy SPY Radar Digital Upgrade		[48,400]	
087	0603896C	BALLISTIC MISSILE DEFENSE COMMAND AND CONTROL, BATTLE MANAGEMENT AND COMMUNICATI	603,448	6,480	609,928
		Improvements to MDS Cybersecurity UPL		[2,000]	

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		JADC2 Interface		[4,480]	
088	0603898C	BALLISTIC MISSILE DEFENSE JOINT WARRIGHTER SUPPORT	50,594		50,594
089	0603904C	MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)	52,403		52,403
090	0603906C	REGARDING TRENCH	11,952		11,952
091	0603907C	SEA BASED X-BAND RADAR (SBX)	147,241		147,241
092	0603913C	ISRAELI COOPERATIVE PROGRAMS	300,000		300,000
093	0603914C	BALLISTIC MISSILE DEFENSE TEST	362,906		362,906
094	0603915C	BALLISTIC MISSILE DEFENSE TARGETS	553,334	25,000	578,334
		Advanced Target Front End Configuration 3 Tech Maturation		[5,000]	
		Architecture RTS Development		[10,000]	
		MDS Architecture IAC Prototype		[10,000]	
096	0603923D8Z	COALITION WARFARE	5,103		5,103
097	0604011D8Z	NEXT GENERATION INFORMATION COMMUNICATIONS TECHNOLOGY (5G)	374,665		374,665
098	0604016D8Z	DEPARTMENT OF DEFENSE CORROSION PROGRAM	3,259		3,259
099	0604102C	GUAM DEFENSE DEVELOPMENT	78,300	194,450	272,750
		Guam Defense System		[194,450]	
100	0604115C	TECHNOLOGY MATURATION INITIATIVES		34,000	34,000
		Continue Diode Pumped Alkali Laser Demonstrator Development		[25,000]	
		Short Pulse Laser Directed Energy Demonstration		[9,000]	
103	0604181C	HYPERSONIC DEFENSE	247,931	62,000	309,931
		Program increase		[62,000]	
104	0604250D8Z	ADVANCED INNOVATIVE TECHNOLOGIES	716,456	100,000	816,456
		Mission-Based Acquisition		[100,000]	
		Program decrease		[8,000]	
		Program increase		[8,000]	
105	0604294D8Z	TRUSTED & ASSURED MICROELECTRONICS	509,195	39,800	548,995
		Advanced Analog & Mixed Signal Microelectronics Design and Manufacturing		[6,800]	

106	0604331D8Z	Radiation-Hardened Application Specific Integrated Circuits		[18,000]		
		Trusted and Assured GaN and GaAs RFIC Technology		[15,000]		
		RAPID PROTOTYPING PROGRAM	103,575	79,000		182,575
		ADA network resiliency/cloud		[79,000]		
107	0604341D8Z	DEFENSE INNOVATION UNIT (DIU) PROTOTYPING	11,213	15,000		26,213
		National Security Innovation Capital program increase		[15,000]		
108	0604400D8Z	DEPARTMENT OF DEFENSE (DOD) UNMANNED SYSTEM COMMON DEVELOPMENT	2,778			2,778
109	0604551BR	CATAPULT	7,166			7,166
110	0604555D8Z	OPERATIONAL ENERGY CAPABILITY IMPROVEMENT—NON S&T	23,200			23,200
111	0604672C	HOMELAND DEFENSE RADAR—HAWAII (HDR-H)		75,000		75,000
		Restore program		[75,000]		
113	0604682D8Z	WARGAMING AND SUPPORT FOR STRATEGIC ANALYSIS (SSA)	3,519			3,519
114	0604826J	JOINT C5 CAPABILITY DEVELOPMENT, INTEGRATION AND INTEROPERABILITY ASSESSMENTS	17,439			17,439
115	0604873C	LONG RANGE DISCRIMINATION RADAR (LRDR)	133,335			133,335
116	0604874C	IMPROVED HOMELAND DEFENSE INTERCEPTORS	926,125			926,125
117	0604876C	BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT TEST	32,697			32,697
118	0604878C	AEGIS BMD TEST	117,055			117,055
119	0604879C	BALLISTIC MISSILE DEFENSE SENSOR TEST	77,428			77,428
120	0604880C	LAND-BASED SM-3 (LBSM3)	43,158			43,158
121	0604887C	BALLISTIC MISSILE DEFENSE MIDCOURSE SEGMENT TEST	61,424			61,424
122	0202057C	SAFETY PROGRAM MANAGEMENT	2,323			2,323
123	0300206R	ENTERPRISE INFORMATION TECHNOLOGY SYSTEMS	2,568			2,568
125	0305103C	CYBER SECURITY INITIATIVE	1,142			1,142
126	1206410SDA	SPACE TECHNOLOGY DEVELOPMENT AND PROTOTYPING	636,179	6,000		642,179
		Laser Communication Terminal Technologies		[6,000]		
127	1206893C	SPACE TRACKING & SURVEILLANCE SYSTEM	15,176			15,176
128	1206895C	BALLISTIC MISSILE DEFENSE SYSTEM SPACE PROGRAMS	292,811			292,811
		SUBTOTAL ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	9,854,341	985,138		10,839,479
SYSTEM DEVELOPMENT & DEMONSTRATION						
129	0604161D8Z	NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT RDT&E SDD	5,682			5,682
131	0604384BP	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM—EMD	299,848	70,480		370,328

SEC. 4201. RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
(In Thousands of Dollars)

Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
		Joint Vaccine Acquisition Program		[70,480]	
132	0604771D8Z	JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)	9,345		9,345
133	0605000BR	COUNTER WEAPONS OF MASS DESTRUCTION SYSTEMS DEVELOPMENT	14,063		14,063
134	0605013BL	INFORMATION TECHNOLOGY DEVELOPMENT	4,265		4,265
135	0605021SE	HOMELAND PERSONNEL SECURITY INITIATIVE	7,205		7,205
136	0605022D8Z	DEFENSE EXPORTABILITY PROGRAM	5,447		5,447
137	0605027D8Z	USD(C) IT DEVELOPMENT INITIATIVES	16,892	18,000	34,892
		ADVANA for ADA		[18,000]	
138	0605070S	DOD ENTERPRISE SYSTEMS DEVELOPMENT AND DEMONSTRATION	679		679
140	0605080S	DEFENSE AGENCY INITIATIVES (DAI)—FINANCIAL SYSTEM	32,254		32,254
142	0605141BR	MISSION ASSURANCE RISK MANAGEMENT SYSTEM (MARMS)	5,500		5,500
143	0605210D8Z	DEFENSE-WIDE ELECTRONIC PROCUREMENT CAPABILITIES	7,148		7,148
144	0605294D8Z	TRUSTED & ASSURED MICROELECTRONICS	113,895		113,895
146	0605772D8Z	NUCLEAR COMMAND, CONTROL, & COMMUNICATIONS	3,991		3,991
149	0305304D8Z	DOD ENTERPRISE ENERGY INFORMATION MANAGEMENT (EEM)	2,227		2,227
150	0305310D8Z	CWMD SYSTEMS: SYSTEM DEVELOPMENT AND DEMONSTRATION	20,246		20,246
		SUBTOTAL SYSTEM DEVELOPMENT & DEMONSTRATION	548,687	88,480	637,167
		MANAGEMENT SUPPORT			
151	0603829J	JOINT CAPABILITY EXPERIMENTATION	8,444		8,444
152	0604774D8Z	DEFENSE READINESS REPORTING SYSTEM (DRRS)	7,508		7,508
153	0604875D8Z	JOINT SYSTEMS ARCHITECTURE DEVELOPMENT	7,859		7,859
154	0604940D8Z	CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT (CTEIP)	550,140	900	551,040
		Support Funding for Cyber Resiliency		[900]	
155	0604942D8Z	ASSESSMENTS AND EVALUATIONS	17,980		17,980
156	0605001E	MISSION SUPPORT	73,145		73,145
157	0605100D8Z	JOINT MISSION ENVIRONMENT TEST CAPABILITY (JMETC)	71,410		71,410

159	0605126J	JOINT INTEGRATED AIR AND MISSILE DEFENSE ORGANIZATION (JIAMDO)	52,671		52,671
161	0605142D8Z	SYSTEMS ENGINEERING	40,030		40,030
162	0605151D8Z	STUDIES AND ANALYSIS SUPPORT—OSD	4,612		4,612
163	0605161D8Z	NUCLEAR MATTERS—PHYSICAL SECURITY	14,429		14,429
164	0605170D8Z	SUPPORT TO NETWORKS AND INFORMATION INTEGRATION	4,759		4,759
165	0605200D8Z	GENERAL SUPPORT TO USD (INTELLIGENCE)	1,952		1,952
166	0605384BP	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	110,503		110,503
172	0605790D8Z	SMALL BUSINESS INNOVATION RESEARCH (SBIR)/ SMALL BUSINESS TECHNOLOGY TRANSFER Transition education for DEPSCoR and underserved communities	3,639	5,000	8,639
				[5,000]	
173	0605797D8Z	MAINTAINING TECHNOLOGY ADVANTAGE	25,889	38,000	63,889
		Regional Secure Computing Enclave Pilot		[38,000]	
174	0605798D8Z	DEFENSE TECHNOLOGY ANALYSIS	39,774	218,000	257,774
		ISR & information operations		[10,000]	
		PNT Modernization—Signals of Opportunity		[140,000]	
		Spectrum Innovation—Low SWaP-C directional sources		[68,000]	
175	0605801KA	DEFENSE TECHNICAL INFORMATION CENTER (DTIC)	61,453		61,453
176	0605803SE	R&D IN SUPPORT OF DOD ENLISTMENT, TESTING AND EVALUATION	18,762		18,762
177	0605804D8Z	DEVELOPMENT TEST AND EVALUATION	27,366		27,366
178	0605898E	MANAGEMENT HQ—R&D	12,740		12,740
179	0605998KA	MANAGEMENT HQ—DEFENSE TECHNICAL INFORMATION CENTER (DTIC)	3,549		3,549
180	0606100D8Z	BUDGET AND PROGRAM ASSESSMENTS	15,438		15,438
181	0606225D8Z	ODNA TECHNOLOGY AND RESOURCE ANALYSIS	2,897		2,897
182	0606589D8W	DEFENSE DIGITAL SERVICE (DDS) DEVELOPMENT SUPPORT	918		918
183	0606771D8Z	CYBER RESILIENCY AND CYBERSECURITY POLICY	31,638		31,638
184	0203345D8Z	DEFENSE OPERATIONS SECURITY INITIATIVE (DOSI)	2,925		2,925
185	0204571J	JOINT STAFF ANALYTICAL SUPPORT	977		977
186	0208045K	C4I INTEROPERABILITY	55,361	5,000	60,361
		Joint Warfighting Network Architecture		[5,000]	
189	0303140SE	INFORMATION SYSTEMS SECURITY PROGRAM	853		853
191	0303260D8Z	DEFENSE MILITARY DECEPTION PROGRAM OFFICE (DMDPO)	969		969
192	0305172K	COMBINED ADVANCED APPLICATIONS	15,696		15,696
194	0305208K	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	3,073		3,073

SEC. 4201. RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
(In Thousands of Dollars)

Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
197	0804768J	COCOM EXERCISE ENGAGEMENT AND TRAINING TRANSFORMATION (CE2T2)—NON-MHA AFRICOM—Joint Exercise Program CENTCOM—CE2T2 EAGER LION Exercises	29,530	38,000 [18,000] [20,000]	67,530
198	0808709SE	DEFENSE EQUAL OPPORTUNITY MANAGEMENT INSTITUTE (DEOMI)	689		689
199	0901598C	MANAGEMENT HQ—MDA	24,102		24,102
200	0903235K	JOINT SERVICE PROVIDER (JSP)	2,645		2,645
201A	9999999999	CLASSIFIED PROGRAMS	37,520		37,520
		SUBTOTAL MANAGEMENT SUPPORT	1,383,845	304,900	1,688,745
OPERATIONAL SYSTEMS DEVELOPMENT					
202	0604130V	ENTERPRISE SECURITY SYSTEM (ESS)	5,355		5,355
203	0604532K	JOINT ARTIFICIAL INTELLIGENCE AI-enabled logistics and sustainment Commercial AI for Business Applications	10,033	257,800 [100,000] [100,000]	267,833
		JAC for ADA		[57,800]	
206	0607210D8Z	INDUSTRIAL BASE ANALYSIS AND SUSTAINMENT SUPPORT 3D Heterogeneous Integration and Advanced Packaging for Microelectronics Accelerated Training in Defense Manufacturing (ATDM) Pilot Advanced Shipbuilding Workforce Development Carbon/carbon industrial base enhancement Directed Energy Supply Chain Assurance Machine and Advanced Manufacturing—IACMI Program increase	58,189	104,000 [16,600] [15,400] [10,000] [15,000] [2,000] [20,000] [20,000]	162,189
		Radar Resiliency		[5,000]	
207	0607310D8Z	CWMD SYSTEMS: OPERATIONAL SYSTEMS DEVELOPMENT	18,721		18,721
208	0607327T	GLOBAL THEATER SECURITY COOPERATION MANAGEMENT INFORMATION SYSTEMS (G-TSCMIS)	7,398		7,398
209	0607384BP	CHEMICAL AND BIOLOGICAL DEFENSE (OPERATIONAL SYSTEMS DEVELOPMENT)	58,261		58,261

215	0302019K	DEFENSE INFO INFRASTRUCTURE ENGINEERING AND INTEGRATION	16,233	16,233
216	0303126K	LONG-HAUL COMMUNICATIONS—DCS	10,275	10,275
217	0303131K	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK (MEECN)	4,892	4,892
218	0303136G	KEY MANAGEMENT INFRASTRUCTURE (KMI)	83,751	83,751
219	0303140D8Z	INFORMATION SYSTEMS SECURITY PROGRAM	49,191	49,191
220	0303140G	INFORMATION SYSTEMS SECURITY PROGRAM	423,745	177,100
		Hardening DOD Networks		[12,100]
		ISSP for GENCYBER		[15,000]
		JFHQ DODIN Staffing and Tools		[150,000]
221	0303140K	INFORMATION SYSTEMS SECURITY PROGRAM	5,707	5,707
222	0303150K	GLOBAL COMMAND AND CONTROL SYSTEM	4,150	4,150
223	0303153K	DEFENSE SPECTRUM ORGANIZATION	19,302	19,302
224	0303228K	JOINT REGIONAL SECURITY STACKS (JRSS)	9,342	9,342
226	0303430V	FEDERAL INVESTIGATIVE SERVICES INFORMATION TECHNOLOGY	15,326	15,326
232	0305128V	SECURITY AND INVESTIGATIVE ACTIVITIES	8,800	8,800
235	0305146V	DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES	3,820	3,820
237	0305186D8Z	POLICY R&D PROGRAMS	4,843	4,843
238	0305199D8Z	NET CENTRICITY	13,471	13,471
240	0305208BB	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	5,994	5,994
247	0305387D8Z	HOMELAND DEFENSE TECHNOLOGY TRANSFER PROGRAM	1,273	1,273
255	0708012K	LOGISTICS SUPPORT ACTIVITIES	1,690	1,690
256	0708012S	PACIFIC DISASTER CENTERS	1,799	1,799
257	0708047S	DEFENSE PROPERTY ACCOUNTABILITY SYSTEM	6,390	6,390
259	1105219BB	MQ-9 UAV	19,065	19,065
261	1160403BB	AVIATION SYSTEMS	173,537	173,537
262	1160405BB	INTELLIGENCE SYSTEMS DEVELOPMENT	32,766	32,766
263	1160408BB	OPERATIONAL ENHANCEMENTS	145,830	68,000
		AI in Small Unit Maneuver (AISUM)		[50,000]
		High-energy laser technologies		[5,000]
		Mobile Compact High Energy Laser (MCHEL)		[13,000]
264	1160431BB	WARRIOR SYSTEMS	78,592	4,211
		SOCOM—Maritime Scalable Effects Acceleration		[4,211]

SEC. 4201. RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
(In Thousands of Dollars)

Line	Program Element	Item	FY 2022 Request	House Change	House Authorized
265	1160432BB	SPECIAL PROGRAMS	6,486		6,486
266	1160434BB	UNMANNED ISR	18,006		18,006
267	1160480BB	SOF TACTICAL VEHICLES	7,703		7,703
268	1160483BB	MARITIME SYSTEMS	58,430		58,430
270	1160490BB	OPERATIONAL ENHANCEMENTS INTELLIGENCE	10,990		10,990
271A	9999999999	CLASSIFIED PROGRAMS	5,208,029		5,208,029
		SUBTOTAL OPERATIONAL SYSTEMS DEVELOPMENT	6,607,385	611,111	7,218,496
SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS					
272	0604532K	JOINT ARTIFICIAL INTELLIGENCE	186,639		186,639
273	0608197V	NATIONAL BACKGROUND INVESTIGATION SERVICES—SOFTWARE PILOT PROGRAM	123,570		123,570
274	0608648D8Z	ACQUISITION VISIBILITY—SOFTWARE PILOT PROGRAM	18,307		18,307
275	0303150K	GLOBAL COMMAND AND CONTROL SYSTEM	32,774		32,774
276	0308588D8Z	ALGORITHMIC WARFARE CROSS FUNCTIONAL TEAMS—SOFTWARE PILOT PROGRAM	247,452	36,000	283,452
		MAVEN for ADA		[36,000]	
		SUBTOTAL SOFTWARE AND DIGITAL TECHNOLOGY PILOT PROGRAMS	608,742	36,000	644,742
TOTAL RESEARCH, DEVELOPMENT, TEST & EVAL, DW					
			25,857,875	4,359,855	30,217,730
OPERATIONAL TEST & EVAL, DEFENSE					
MANAGEMENT SUPPORT					
001	0605118OTE	OPERATIONAL TEST AND EVALUATION	105,394		105,394
002	0605131OTE	LIVE FIRE TEST AND EVALUATION	68,549	6,500	75,049
		Thinking Red		[2,500]	
		University-based cyber and software centers of excellence for Operational Test & Evaluation		[4,000]	
003	0605814OTE	OPERATIONAL TEST ACTIVITIES AND ANALYSES	42,648		42,648
		SUBTOTAL MANAGEMENT SUPPORT	216,591	6,500	223,091

TOTAL OPERATIONAL TEST & EVAL, DEFENSE	216,591	6,500	223,091
TOTAL RDT&E	111,964,188	6,109,312	118,073,500

TITLE XLIII—OPERATION AND MAINTENANCE

SEC. 4301. OPERATION AND MAINTENANCE.

SEC. 4301. OPERATION AND MAINTENANCE (In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
OPERATING FORCES				
010	MANEUVER UNITS	3,563,856	-246,515	3,317,341
	OFS Drawdown		[-191,515]	
	Unjustified growth		[-55,000]	
020	MODULAR SUPPORT BRIGADES	142,082		142,082
030	ECHELONS ABOVE BRIGADE	758,174	-10,000	748,174
	Unjustified growth		[-10,000]	
040	THEATER LEVEL ASSETS	2,753,783	-1,139,341	1,614,442
	OFS Drawdown		[-998,027]	
	Program decrease		[-5,000]	
	Unjustified growth		[-136,314]	
050	LAND FORCES OPERATIONS SUPPORT	1,110,156		1,110,156
060	AVIATION ASSETS	1,795,522	-20,000	1,775,522
	Unjustified growth		[-20,000]	
070	FORCE READINESS OPERATIONS SUPPORT	7,442,976	-1,966,872	5,476,104
	Advanced Bomb Suit		[12,940]	
	Arctic Cold Weather Gloves		[13,867]	
	Arctic OCIE for Fort Drum, Fort Carson, and Alaska bases		[65,050]	
	CENTCOM—Heavy Lift Logistics		[40,300]	
	Extended Cold Weather Clothing System (ECWCS)		[8,999]	
	Female/Small Stature Body Armor		[81,750]	

	Garrison Installation Facilities-Related Control Systems (FRCS)		[13,070]	
	Industrial Base Special Installation Control Systems		[14,820]	
	Multi-Domain Operations—Live		[1,500]	
	OFS Drawdown		[-2,144,168]	
	Unjustified growth		[-75,000]	
080	LAND FORCES SYSTEMS READINESS	580,921	34,000	614,921
	CENTCOM—COMSAT air time transponder leases		[34,000]	
	Sustainment and maintenance of quality of life infrastructure		[20,000]	
	Unjustified growth		[-20,000]	
090	LAND FORCES DEPOT MAINTENANCE	1,257,959	89,017	1,346,976
	Tactical Combat Vehicle Repair Cycle Float (RCF)		[89,017]	
100	MEDICAL READINESS	1,102,964		1,102,964
110	BASE OPERATIONS SUPPORT	8,878,603		8,916,732
	Program decrease		[-14,000]	
	Subsistence		[52,129]	
120	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	4,051,869	451,380	4,503,249
	Program increase		[451,380]	
130	MANAGEMENT AND OPERATIONAL HEADQUARTERS	289,891	1,150	291,041
	Autonomic Security Operations Center		[1,150]	
140	ADDITIONAL ACTIVITIES	526,517	30,000	556,517
	Security Operations Center as a service		[30,000]	
160	RESET	397,196	-5,000	392,196
	Unjustified growth		[-5,000]	
170	US AFRICA COMMAND	384,791	83,500	468,291
	AFRICOM—COMSATCOM leases		[16,500]	
	AFRICOM Unmanned Contract ISR		[67,000]	
180	US EUROPEAN COMMAND	293,932	41,978	335,910
	EUCOM—Information Operations maintain FY21 level		[26,765]	
	EUCOM—MPE BICES rapid intel capabilities		[4,500]	
	EUCOM—MPE NATO C2 NATO Response Force		[9,708]	
	EUCOM—MPE OSINT		[1,005]	
190	US SOUTHERN COMMAND	196,726	7,800	204,526

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
	SOUTHCOM—Enhanced Domain Awareness		[3,400]	
	SOUTHCOM—HUMINT in the Cyber Domain		[4,400]	
200	US FORCES KOREA	67,052		67,052
210	CYBERSPACE ACTIVITIES—CYBERSPACE OPERATIONS	621,836	32,920	654,756
	Critical Infrastructure Risk Management Cyber Resiliency Mitigations (GOCO)		[13,630]	
	MRCT / Cyber I&W / Ops Cell		[4,660]	
	Security Operations Center as a Service		[14,630]	
220	CYBERSPACE ACTIVITIES—CYBERSECURITY	629,437	211,890	841,327
	C-SCRM Supplier Vetting and Equipment Inspection		[1,200]	
	Cyber—Supply Chain Risk Mgmt (C-SCRM) Program		[2,750]	
	Cybersecurity Control Systems Assessments		[89,889]	
	Cybersecurity Support Services Task Order (CSSTO)		[1,320]	
	Data and Applications Support Task Order (DASTO)		[12,886]	
	Defensive Cyber Sensors		[2,900]	
	Harden CSS VSAT Network		[10,066]	
	Information Technology Infrastructure Support (ITIS)		[15,469]	
	Weapon System Software Readiness		[75,410]	
	SUBTOTAL OPERATING FORCES	36,846,243	-2,365,964	34,480,279
MOBILIZATION				
230	STRATEGIC MOBILITY	353,967	31,487	385,454
	APS-4 South Humanitarian Assistance-Disaster Relief Site		[31,487]	
240	ARMY PREPOSITIONED STOCKS	381,192	70,716	451,908
	Second destination transportation		[70,716]	
250	INDUSTRIAL PREPAREDNESS	3,810		3,810
	SUBTOTAL MOBILIZATION	738,969	102,203	841,172

260	TRAINING AND RECRUITING			
270	OFFICER ACQUISITION	163,568		
280	RECRUIT TRAINING	75,140		
290	ONE STATION UNIT TRAINING	81,274		
300	SENIOR RESERVE OFFICERS TRAINING CORPS	520,973		
310	SPECIALIZED SKILL TRAINING	998,869		
320	FLIGHT TRAINING	1,309,556		
330	PROFESSIONAL DEVELOPMENT EDUCATION	218,651		
	TRAINING SUPPORT	616,380	18,100	634,480
	ATRRS Modernization		(18,100)	
340	RECRUITING AND ADVERTISING	683,569	1,394	684,963
	Enterprise Technology Integration, Governance, and Engineering Requirements (ETIGER)		(1,394)	
350	EXAMINING	169,442		169,442
360	OFF-DUTY AND VOLUNTARY EDUCATION	214,923	16,155	231,078
	Tuition assistance		(16,155)	
370	CIVILIAN EDUCATION AND TRAINING	220,589		220,589
380	JUNIOR RESERVE OFFICER TRAINING CORPS	187,569		187,569
	SUBTOTAL TRAINING AND RECRUITING	5,460,503	35,649	5,496,152
	ADMIN & SRWIDE ACTIVITIES			
400	SERVICEWIDE TRANSPORTATION	684,562	-12,000	672,562
	Unjustified growth		(-12,000)	
410	CENTRAL SUPPLY ACTIVITIES	808,895		808,895
420	LOGISTIC SUPPORT ACTIVITIES	767,053	29,100	796,153
	Preserve Logistics Data Analysis Capability While Transitioning to an Organic Civilian Workforce		(29,100)	
430	AMMUNITION MANAGEMENT	469,038		469,038
440	ADMINISTRATION	488,535	-20,000	468,535
	Unjustified growth		(-20,000)	
450	SERVICEWIDE COMMUNICATIONS	1,952,742	61,020	2,013,762
	CHRA IT Cloud		(5,300)	
	ERP Convergence		(49,420)	
	Mission Partner Environment		(6,300)	

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
460	MANPOWER MANAGEMENT	323,273	5,370	328,643
	Integrated Personnel Electronic Records Management Systems		[5,370]	
470	OTHER PERSONNEL SUPPORT	663,602	31,390	694,992
	Enterprise Technology Integration, Governance, and Engineering Requirements (ETIGER)		[1,390]	
	Personnel Security Investigations		[30,000]	
480	OTHER SERVICE SUPPORT	2,004,981	26,383	2,031,364
	DFAS bill to the Army		[49,983]	
	Unjustified growth		[-23,600]	
490	ARMY CLAIMS ACTIVITIES	180,178		180,178
500	REAL ESTATE MANAGEMENT	269,009		269,009
510	FINANCIAL MANAGEMENT AND AUDIT READINESS	437,940		437,940
520	INTERNATIONAL MILITARY HEADQUARTERS	482,571		482,571
530	MISC. SUPPORT OF OTHER NATIONS	29,670		29,670
575	CLASSIFIED PROGRAMS	2,008,633	32,600	2,041,233
	SOUTHCOM UPL		[32,600]	
	SUBTOTAL ADMIN & SRVWIDE ACTIVITIES	11,570,682	153,863	11,724,545
	TOTAL OPERATION & MAINTENANCE, ARMY	54,616,397	-2,074,249	52,542,148
OPERATION & MAINTENANCE, ARMY RES				
OPERATING FORCES				
010	MODULAR SUPPORT BRIGADES	10,465		10,465
020	ECHELONS ABOVE BRIGADE	554,992		554,992
030	THEATER LEVEL ASSETS	120,892		120,892
040	LAND FORCES OPERATIONS SUPPORT	597,718		597,718
050	AVIATION ASSETS	111,095		111,095
060	FORCE READINESS OPERATIONS SUPPORT	385,506		385,506

070	LAND FORCES SYSTEMS READINESS	98,021	98,021
080	LAND FORCES DEPOT MAINTENANCE	34,368	34,368
090	BASE OPERATIONS SUPPORT	584,513	584,513
100	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	342,433	342,433
110	MANAGEMENT AND OPERATIONAL HEADQUARTERS	22,472	22,472
120	CYBERSPACE ACTIVITIES—CYBERSPACE OPERATIONS	2,764	2,764
130	CYBERSPACE ACTIVITIES—CYBERSECURITY	7,476	7,476
	SUBTOTAL OPERATING FORCES	2,872,715	2,872,715

	ADMIN & SRVWD ACTIVITIES		
140	SERVICEWIDE TRANSPORTATION	15,400	15,400
150	ADMINISTRATION	19,611	19,611
160	SERVICEWIDE COMMUNICATIONS	37,458	37,458
170	MANPOWER MANAGEMENT	7,162	7,162
180	RECRUITING AND ADVERTISING	48,289	48,289
	SUBTOTAL ADMIN & SRVWD ACTIVITIES	127,920	127,920

TOTAL OPERATION & MAINTENANCE, ARMY RES **3,000,635**

	OPERATION & MAINTENANCE, ARNG		
	OPERATING FORCES		
010	MANEUVER UNITS	799,854	799,854
020	MODULAR SUPPORT BRIGADES	211,561	211,561
030	ECHELONS ABOVE BRIGADE	835,709	835,709
040	THEATER LEVEL ASSETS	101,179	101,179
050	LAND FORCES OPERATIONS SUPPORT	34,436	34,436
060	AVIATION ASSETS	1,110,416	1,110,416
070	FORCE READINESS OPERATIONS SUPPORT	704,827	704,827
	ARNG Weapons of Mass Destruction / Civil Support Teams (WMD-CST) Equipment Sustainment Program increase	30,100	30,100
		[5,100]	[5,100]
		[25,000]	[25,000]
080	LAND FORCES SYSTEMS READINESS	47,886	47,886
090	LAND FORCES DEPOT MAINTENANCE	244,439	244,439

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
100	BASE OPERATIONS SUPPORT	1,097,960		1,097,960
110	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	956,988		956,988
120	MANAGEMENT AND OPERATIONAL HEADQUARTERS	1,047,870		1,047,870
130	CYBERSPACE ACTIVITIES—CYBERSPACE OPERATIONS	8,071	6,300	14,371
	Joint Information Exchange Environment		[6,300]	
140	CYBERSPACE ACTIVITIES—CYBERSECURITY	7,828		7,828
	SUBTOTAL OPERATING FORCES	7,209,024	36,400	7,245,424
	ADMIN & SRVWD ACTIVITIES			
150	SERVICEWIDE TRANSPORTATION	8,017		8,017
160	ADMINISTRATION	76,993	6,300	83,293
	ARNG Joint Information Exchange Environment		[6,300]	
170	SERVICEWIDE COMMUNICATIONS	101,113		101,113
180	MANPOWER MANAGEMENT	8,920		8,920
190	OTHER PERSONNEL SUPPORT	240,292		240,292
200	REAL ESTATE MANAGEMENT	2,850		2,850
	SUBTOTAL ADMIN & SRVWD ACTIVITIES	438,185	6,300	444,485
	TOTAL OPERATION & MAINTENANCE, ARNG	7,647,209	42,700	7,689,909
	AFGHANISTAN SECURITY FORCES FUND			
	AFGHAN NATIONAL ARMY			
010	SUSTAINMENT	1,053,668	-1,053,668	
	OFS Drawdown		[-1,053,668]	
020	INFRASTRUCTURE	1,818	-1,818	
	OFS Drawdown		[-1,818]	
030	EQUIPMENT AND TRANSPORTATION	22,911	-22,911	

040	OFS Drawdown		[-22,911]
	TRAINING AND OPERATIONS	31,837	-31,837
	OFS Drawdown		[-31,837]
	SUBTOTAL AFGHAN NATIONAL ARMY	1,110,234	-1,110,234
	AFGHAN NATIONAL POLICE		
050	SUSTAINMENT	440,628	-440,628
	OFS Drawdown		[-440,628]
070	EQUIPMENT AND TRANSPORTATION	38,551	-38,551
	OFS Drawdown		[-38,551]
080	TRAINING AND OPERATIONS	38,152	-38,152
	OFS Drawdown		[-38,152]
	SUBTOTAL AFGHAN NATIONAL POLICE	517,331	-517,331
	AFGHAN AIR FORCE		
090	SUSTAINMENT	562,056	-562,056
	OFS Drawdown		[-562,056]
110	EQUIPMENT AND TRANSPORTATION	26,600	-26,600
	OFS Drawdown		[-26,600]
120	TRAINING AND OPERATIONS	169,684	-169,684
	OFS Drawdown		[-169,684]
	SUBTOTAL AFGHAN AIR FORCE	758,340	-758,340
	AFGHAN SPECIAL SECURITY FORCES		
130	SUSTAINMENT	685,176	-685,176
	OFS Drawdown		[-685,176]
150	EQUIPMENT AND TRANSPORTATION	78,962	-78,962
	OFS Drawdown		[-78,962]
160	TRAINING AND OPERATIONS	177,767	-177,767
	OFS Drawdown		[-177,767]
	SUBTOTAL AFGHAN SPECIAL SECURITY FORCES	941,905	-941,905

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
	UNDISTRIBUTED			
170	UNDISTRIBUTED		325,000	325,000
	Contract close-out and other close-out operations		[350,000]	
	Program decrease		[-25,000]	
	SUBTOTAL UNDISTRIBUTED		325,000	325,000
	TOTAL AFGHANISTAN SECURITY FORCES FUND	3,327,810	-3,002,810	325,000
	COUNTER ISIS TRAIN AND EQUIP FUND (CTEF)			
	COUNTER ISIS TRAIN AND EQUIP FUND (CTEF)			
010	IRAQ	345,000		345,000
020	SYRIA	177,000		177,000
	SUBTOTAL COUNTER ISIS TRAIN AND EQUIP FUND (CTEF)	522,000		522,000
	TOTAL COUNTER ISIS TRAIN AND EQUIP FUND (CTEF)	522,000		522,000
	OPERATION & MAINTENANCE, NAVY			
	OPERATING FORCES			
010	MISSION AND OTHER FLIGHT OPERATIONS	6,264,654	280,400	6,545,054
	Flying Hour Program (JAIA—Fleet Operations)		[280,400]	
020	FLEET AIR TRAINING	2,465,007		2,465,007
030	AVIATION TECHNICAL DATA & ENGINEERING SERVICES	55,140		55,140
040	AIR OPERATIONS AND SAFETY SUPPORT	197,904		197,904
050	AIR SYSTEMS SUPPORT	1,005,932		1,005,932
060	AIRCRAFT DEPOT MAINTENANCE	1,675,356	222,200	1,897,556
	Aircraft Depot Maintenance Events (Multiple Type/Model/Series)		[222,200]	
070	AIRCRAFT DEPOT OPERATIONS SUPPORT	65,518		65,518

080	AVIATION LOGISTICS	1,460,546	-20,000	1,440,546
	Historical underexecution		[-20,000]	
090	MISSION AND OTHER SHIP OPERATIONS	5,858,028	71,000	5,929,028
	Resilient PNT		[29,000]	
	Submarine Tender Overhaul		[42,000]	
100	SHIP OPERATIONS SUPPORT & TRAINING	1,154,696	8,983	1,163,679
	Navy Tactical Grid Development for JADC2		[8,983]	
110	SHIP DEPOT MAINTENANCE	10,300,078	176,700	10,476,778
	A-120 Availabilities		[39,800]	
	restore CG-56, CG-57, and CG-61		[136,900]	
120	SHIP DEPOT OPERATIONS SUPPORT	2,188,454		2,188,454
130	COMBAT COMMUNICATIONS AND ELECTRONIC WARFARE	1,551,846		1,551,846
140	SPACE SYSTEMS AND SURVEILLANCE	327,251		327,251
150	WARFARE TACTICS	798,082		798,082
160	OPERATIONAL METEOROLOGY AND OCEANOGRAPHY	447,486		447,486
170	COMBAT SUPPORT FORCES	2,250,756	47,100	2,297,856
	CENTCOM—Maintain Cyclone PCs and MK VI patrol boats		[47,100]	
180	EQUIPMENT MAINTENANCE AND DEPOT OPERATIONS SUPPORT	192,968		192,968
190	COMBATANT COMMANDERS CORE OPERATIONS	61,614		61,614
200	COMBATANT COMMANDERS DIRECT MISSION SUPPORT	198,596		198,596
	INDOPACOM—Critical Manpower Positions		305,840	
	INDOPACOM—Enhanced ISR Augmentation		[4,620]	
	INDOPACOM—Future fusion centers		[41,000]	
	INDOPACOM—Movement Coordination Center		[3,300]	
	INDOPACOM—Pacific Multi-Domain Training and Experimentation Capability (PMTEC)		[500]	
	INDOPACOM—Wargaming analytical tools		[114,410]	
	INDOPACOM Mission Partner Environment		[88,000]	
210	MILITARY INFORMATION SUPPORT OPERATIONS	8,984	[54,010]	36,984
	INDOPACOM Military Information Support Operations (MISO)		[28,000]	
220	CYBERSPACE ACTIVITIES	565,926		565,926
230	FLEET BALLISTIC MISSILE	1,476,247	-5,000	1,471,247
	Historical underexecution		[-5,000]	

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
240	WEAPONS MAINTENANCE	1,538,743	-25,000	1,513,743
	Historical underexecution		[-25,000]	
250	OTHER WEAPON SYSTEMS SUPPORT	592,357	-5,000	587,357
	Historical underexecution		[-5,000]	
260	ENTERPRISE INFORMATION	734,970	-20,000	714,970
	Program decrease		[-20,000]	
270	SUSTAINMENT, RESTORATION AND MODERNIZATION	2,961,937	450,000	3,411,937
	Program increase		[450,000]	
280	BASE OPERATING SUPPORT	4,826,314	-10,000	4,816,314
	Program decrease		[-10,000]	
	SUBTOTAL OPERATING FORCES	51,225,390	1,505,223	52,730,613
	MOBILIZATION			
290	SHIP PREPOSITIONING AND SURGE	457,015	-76,484	380,531
	Historical underexecution		[-76,484]	
300	READY RESERVE FORCE	645,522		645,522
310	SHIP ACTIVATIONS/INACTIVATIONS	353,530	-5,000	348,530
	Historical underexecution		[-5,000]	
320	EXPEDITIONARY HEALTH SERVICES SYSTEMS	149,384		149,384
330	COAST GUARD SUPPORT	20,639		20,639
	SUBTOTAL MOBILIZATION	1,626,090	-81,484	1,544,606
	TRAINING AND RECRUITING			
340	OFFICER ACQUISITION	172,913		172,913
350	RECRUIT TRAINING	13,813		13,813
360	RESERVE OFFICERS TRAINING CORPS	167,152		167,152
370	SPECIALIZED SKILL TRAINING	1,053,104		1,053,104

380	PROFESSIONAL DEVELOPMENT EDUCATION	311,209	4,300	315,509
	Sea Cadets		[4,300]	
390	TRAINING SUPPORT	306,302		306,302
400	RECRUITING AND ADVERTISING	205,219		205,219
410	OFF-DUTY AND VOLUNTARY EDUCATION	79,053		79,053
420	CIVILIAN EDUCATION AND TRAINING	109,754		109,754
430	JUNIOR ROTC	57,323		57,323
	SUBTOTAL TRAINING AND RECRUITING	2,475,842	4,300	2,480,142
	ADMIN & SRVWD ACTIVITIES			
440	ADMINISTRATION	1,268,961	-47,608	1,221,353
	Program decrease		[-75,000]	
	Restoration of cuts to Naval Audit Service		[27,392]	
450	CIVILIAN MANPOWER AND PERSONNEL MANAGEMENT	212,952		212,952
460	MILITARY MANPOWER AND PERSONNEL MANAGEMENT	562,546		562,546
470	MEDICAL ACTIVITIES	285,436		285,436
480	SERVICEWIDE TRANSPORTATION	217,782		217,782
500	PLANNING, ENGINEERING, AND PROGRAM SUPPORT	479,480		479,480
510	ACQUISITION, LOGISTICS, AND OVERSIGHT	741,045		741,045
520	INVESTIGATIVE AND SECURITY SERVICES	738,187	-12,000	726,187
	Historical underexecution		[-5,000]	
	Program decrease		[-7,000]	
665	CLASSIFIED PROGRAMS	607,517		607,517
	SUBTOTAL ADMIN & SRVWD ACTIVITIES	5,113,906	-59,608	5,054,298
	TOTAL OPERATION & MAINTENANCE, NAVY	60,441,228	1,368,431	61,809,659
	OPERATION & MAINTENANCE, MARINE CORPS			
010	OPERATING FORCES	1,587,456	45,300	1,632,756
	Plate Carrier Generation III		[45,300]	
020	FIELD LOGISTICS	1,532,630		1,532,630

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
030	DEPOT MAINTENANCE	215,949		215,949
040	MARITIME PREPOSITIONING	107,969		107,969
050	CYBERSPACE ACTIVITIES	233,486		233,486
060	SUSTAINMENT, RESTORATION & MODERNIZATION	1,221,117		1,221,117
070	BASE OPERATING SUPPORT	2,563,278		2,563,278
	SUBTOTAL OPERATING FORCES	7,461,885	45,300	7,507,185
	TRAINING AND RECRUITING			
080	RECRUIT TRAINING	24,729		24,729
090	OFFICER ACQUISITION	1,208		1,208
100	SPECIALIZED SKILL TRAINING	110,752		110,752
110	PROFESSIONAL DEVELOPMENT EDUCATION	61,539		61,539
120	TRAINING SUPPORT	490,975		490,975
130	RECRUITING AND ADVERTISING	223,643		223,643
140	OFF-DUTY AND VOLUNTARY EDUCATION	49,369		49,369
150	JUNIOR ROTC	26,065		26,065
	SUBTOTAL TRAINING AND RECRUITING	988,280		988,280
	ADMIN & SRVWD ACTIVITIES			
160	SERVICEWIDE TRANSPORTATION	100,475		100,475
170	ADMINISTRATION	410,729		410,729
215	CLASSIFIED PROGRAMS	63,422		63,422
	SUBTOTAL ADMIN & SRVWD ACTIVITIES	574,626		574,626
	TOTAL OPERATION & MAINTENANCE, MARINE CORPS	9,024,791	45,300	9,070,091
	OPERATION & MAINTENANCE, NAVY RES			

010	OPERATING FORCES		
020	MISSION AND OTHER FLIGHT OPERATIONS	628,522	628,522
030	INTERMEDIATE MAINTENANCE	9,593	9,593
040	AIRCRAFT DEPOT MAINTENANCE	135,280	135,280
050	AIRCRAFT DEPOT OPERATIONS SUPPORT	497	497
070	AVIATION LOGISTICS	29,435	29,435
080	COMBAT COMMUNICATIONS	18,469	18,469
090	COMBAT SUPPORT FORCES	136,710	136,710
100	CYBERSPACE ACTIVITIES	440	440
110	ENTERPRISE INFORMATION	26,628	26,628
120	SUSTAINMENT, RESTORATION AND MODERNIZATION	42,311	42,311
	BASE OPERATING SUPPORT	103,606	103,606
	SUBTOTAL OPERATING FORCES	1,131,491	1,131,491

130	ADMIN & SRWD ACTIVITIES		
140	ADMINISTRATION	1,943	1,943
150	MILITARY MANPOWER AND PERSONNEL MANAGEMENT	12,191	12,191
	ACQUISITION AND PROGRAM MANAGEMENT	3,073	3,073
	SUBTOTAL ADMIN & SRWD ACTIVITIES	17,207	17,207

TOTAL OPERATION & MAINTENANCE, NAVY RES **1,148,698**

010	OPERATION & MAINTENANCE, MC RESERVE		
020	OPERATING FORCES	102,271	148,171
030	Reserve Component Individual Combat Equipment	45,900	[45,900]
040	DEPOT MAINTENANCE	16,811	16,811
	SUSTAINMENT, RESTORATION AND MODERNIZATION	42,702	42,702
	BASE OPERATING SUPPORT	109,210	109,210
	SUBTOTAL OPERATING FORCES	270,994	316,894

ADMIN & SRWD ACTIVITIES

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
050	ADMINISTRATION	14,056		14,056
	SUBTOTAL ADMIN & SRVWD ACTIVITIES	14,056		14,056
	TOTAL OPERATION & MAINTENANCE, MC RESERVE	285,050	45,900	330,950
	OPERATION & MAINTENANCE, AIR FORCE			
	OPERATING FORCES			
010	PRIMARY COMBAT FORCES	706,860	-142,448	564,412
	Historical underexecution		[-75,000]	
	OFS Drawdown		[-67,448]	
020	COMBAT ENHANCEMENT FORCES	2,382,448	-260,919	2,121,529
	CENTCOM—MQ-9 Combat Lanes		[53,000]	
	OFS Drawdown		[-313,919]	
030	AIR OPERATIONS TRAINING (OJT, MAINTAIN SKILLS)	1,555,320	-198,778	1,356,542
	Contract Adversary Air		[5,000]	
	Historical underexecution		[-200,000]	
	OFS Drawdown		[-3,778]	
040	DEPOT PURCHASE EQUIPMENT MAINTENANCE	3,661,762	-20,000	3,641,762
	Historical underexecution		[-10,000]	
	Program decrease		[-10,000]	
050	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	3,867,114	450,000	4,317,114
	Program increase		[450,000]	
060	CYBERSPACE SUSTAINMENT	179,568		179,568
070	CONTRACTOR LOGISTICS SUPPORT AND SYSTEM SUPPORT	8,457,653	177,500	8,635,153
	F-35 WSS Air Force UPL		[185,000]	
	Program decrease		[-7,500]	
080	FLYING HOUR PROGRAM	5,646,730	-552,358	5,094,372

	Cyber Training		[23,300]	
	CYBERCOM—Acquisition Personnel		[4,800]	
	CYBERCOM—HUMINT		[500]	
	OFS Drawdown		[–560,958]	
	Program decrease	9,846,037	[–20,000]	9,869,037
090	BASE SUPPORT		23,000	
	Program decrease		[–15,000]	
	Sustainment and maintenance of quality of life infrastructure		[20,000]	
	U.S. Air Force Academy IT Modernization		[18,000]	
100	GLOBAL C3I AND EARLY WARNING	979,705	7,685	987,390
	EUCOM—MPE Air Component Battle Network		[9,200]	
	OFS Drawdown		[–1,515]	
110	OTHER COMBAT OPS SPT PROGRAMS	1,418,515	[–11,923]	1,406,592
	OFS Drawdown		[–11,923]	
120	CYBERSPACE ACTIVITIES	864,761		864,761
150	SPACE CONTROL SYSTEMS	13,223		13,223
160	US NORTHCOM/NORAD	196,774		196,774
170	US STRATCOM	475,015		475,015
180	US CYBERCOM	389,663		389,663
190	US CENTCOM	372,354	24,000	396,354
	CENTCOM Military Information Support Operations (MISO)		[24,000]	
200	US SOCOM	28,733		28,733
220	CENTCOM CYBERSPACE SUSTAINMENT	1,289		1,289
230	USSPACECOM	272,601	67,000	339,601
	Bridging Space Protection Gaps—Commercial SSA		[10,000]	
	Program increase		[57,000]	
235	CLASSIFIED PROGRAMS	1,454,383		1,454,383
	SUBTOTAL OPERATING FORCES	42,770,508	–437,241	42,333,267
	MOBILIZATION			
240	AIRLIFT OPERATIONS	2,422,784		2,422,784
250	MOBILIZATION PREPAREDNESS	667,851		667,851

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
	SUBTOTAL MOBILIZATION	3,090,635		3,090,635
	TRAINING AND RECRUITING			
260	OFFICER ACQUISITION	156,193		156,193
270	RECRUIT TRAINING	26,072		26,072
280	RESERVE OFFICERS TRAINING CORPS (ROTC)	127,693		127,693
290	SPECIALIZED SKILL TRAINING	491,286	-9,230	482,056
	OFS Drawdown		[-9,230]	
300	FLIGHT TRAINING	718,742		718,742
310	PROFESSIONAL DEVELOPMENT EDUCATION	302,092		302,092
320	TRAINING SUPPORT	162,165		162,165
330	RECRUITING AND ADVERTISING	171,339		171,339
340	EXAMINING	8,178		8,178
350	OFF-DUTY AND VOLUNTARY EDUCATION	236,760		236,760
360	CIVILIAN EDUCATION AND TRAINING	306,602		306,602
370	JUNIOR ROTC	65,940		65,940
	SUBTOTAL TRAINING AND RECRUITING	2,773,062	-9,230	2,763,832
	ADMIN & SRVWD ACTIVITIES			
380	LOGISTICS OPERATIONS	1,062,709		1,062,709
390	TECHNICAL SUPPORT ACTIVITIES	169,957		169,957
400	ADMINISTRATION	1,005,827	-18,500	987,327
	Program decrease		[-18,500]	
410	SERVICEWIDE COMMUNICATIONS	31,054		31,054
420	OTHER SERVICEWIDE ACTIVITIES	1,470,757	-11,000	1,459,757
	Program decrease		[-11,000]	
430	CIVIL AIR PATROL	29,128	18,172	47,300

450	Civil Air Patrol			[18,172]	81,118
	INTERNATIONAL SUPPORT		81,118		
455	CLASSIFIED PROGRAMS		1,391,720		1,391,720
	SUBTOTAL ADMIN & SRVWD ACTIVITIES		5,242,270	-11,328	5,230,942
	TOTAL OPERATION & MAINTENANCE, AIR FORCE		53,876,475	-457,799	53,418,676
	OPERATION & MAINTENANCE, SPACE FORCE				
	OPERATING FORCES				
010	GLOBAL C3I & EARLY WARNING		495,615		495,615
020	SPACE LAUNCH OPERATIONS		185,700		185,700
030	SPACE OPERATIONS		611,269		611,269
040	EDUCATION & TRAINING		22,887		22,887
060	DEPOT MAINTENANCE		280,165	52,400	332,565
	Space Force Weapons System Sustainment			[52,400]	
070	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION		213,347	66,300	279,647
	Cheyenne Mountain Improvements UPL			[66,300]	
080	CONTRACTOR LOGISTICS AND SYSTEM SUPPORT		1,158,707	192,000	1,350,707
	Space Force Weapons System Sustainment			[192,000]	
090	SPACE OPERATIONS -BOS		143,520		143,520
095	CLASSIFIED PROGRAMS		172,755		172,755
	SUBTOTAL OPERATING FORCES		3,283,965	310,700	3,594,665
	ADMINISTRATION AND SERVICE WIDE ACTIVITIES				
100	ADMINISTRATION		156,747		156,747
	SUBTOTAL ADMINISTRATION AND SERVICE WIDE ACTIVITIES		156,747		156,747
	TOTAL OPERATION & MAINTENANCE, SPACE FORCE		3,440,712	310,700	3,751,412
	OPERATION & MAINTENANCE, AF RESERVE				
	OPERATING FORCES				
010	PRIMARY COMBAT FORCES		1,665,015	-120,037	1,544,978

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
	Historical underexecution		[-100,000]	
	Program decrease		[-20,037]	
020	MISSION SUPPORT OPERATIONS	179,486	-10,000	169,486
	Historical underexecution		[-10,000]	
030	DEPOT PURCHASE EQUIPMENT MAINTENANCE	530,540	-20,000	510,540
	Program decrease		[-20,000]	
040	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	114,987		114,987
050	CONTRACTOR LOGISTICS SUPPORT AND SYSTEM SUPPORT	254,831	-10,000	244,831
	Program decrease		[-10,000]	
060	BASE SUPPORT	470,801		470,801
070	CYBERSPACE ACTIVITIES	1,372		1,372
	SUBTOTAL OPERATING FORCES	3,217,032	-160,037	3,056,995
	ADMINISTRATION AND SERVICEWIDE ACTIVITIES			
080	ADMINISTRATION	91,289		91,289
090	RECRUITING AND ADVERTISING	23,181		23,181
100	MILITARY MANPOWER AND PERS MGMT (ARPC)	13,966		13,966
110	OTHER PERS SUPPORT (DISABILITY COMP)	6,196		6,196
120	AUDIOVISUAL	442		442
	SUBTOTAL ADMINISTRATION AND SERVICEWIDE ACTIVITIES	135,074		135,074
	TOTAL OPERATION & MAINTENANCE, AF RESERVE	3,352,106	-160,037	3,192,069
	OPERATION & MAINTENANCE, ANG			
	OPERATING FORCES			
010	AIRCRAFT OPERATIONS	2,281,432		2,281,432
020	MISSION SUPPORT OPERATIONS	582,848	5,900	588,748

030	ANG HRF/CERFP Sustainment w/in WMD	1,241,318	[5,900]	1,221,318
	DEPOT PURCHASE EQUIPMENT MAINTENANCE		-20,000	
	Program decrease		[-20,000]	
040	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	353,193		353,193
050	CONTRACTOR LOGISTICS SUPPORT AND SYSTEM SUPPORT	1,077,654	-10,000	1,067,654
	Program decrease		[-10,000]	
060	BASE SUPPORT	908,198		908,198
070	CYBERSPACE SUSTAINMENT	23,895		23,895
080	CYBERSPACE ACTIVITIES	17,263		17,263
	SUBTOTAL OPERATING FORCES	6,485,801	-24,100	6,461,701
	ADMINISTRATION AND SERVICE-WIDE ACTIVITIES			
090	ADMINISTRATION	46,455		46,455
100	RECRUITING AND ADVERTISING	41,764		41,764
	SUBTOTAL ADMINISTRATION AND SERVICE-WIDE ACTIVITIES	88,219		88,219
	TOTAL OPERATION & MAINTENANCE, ANG	6,574,020	-24,100	6,549,920
	OPERATION AND MAINTENANCE, DEFENSE-WIDE			
	OPERATING FORCES			
010	JOINT CHIEFS OF STAFF	407,240		407,240
020	JOINT CHIEFS OF STAFF—CE2T2	554,634	35,100	589,734
	INDOPACOM—Joint Exercise Program		[35,100]	
030	JOINT CHIEFS OF STAFF—CYBER	8,098		8,098
050	SPECIAL OPERATIONS COMMAND COMBAT DEVELOPMENT ACTIVITIES	2,044,479	3,310	2,047,789
	SOCOM—Armored Ground Mobility Systems (AGMS) Acceleration		[3,310]	
060	SPECIAL OPERATIONS COMMAND CYBERSPACE ACTIVITIES	45,851		45,851
070	SPECIAL OPERATIONS COMMAND INTELLIGENCE	1,614,757		1,614,757
080	SPECIAL OPERATIONS COMMAND MAINTENANCE	1,081,869	8,341	1,090,210
	Advanced Engine Performance and Restoration Program (Nucleated Foam)		[2,000]	
	SOCOM—Modernized Forward Look Sonar		[900]	
	SOCOM—Personal Signature Management Acceleration		[5,441]	

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
090	SPECIAL OPERATIONS COMMAND MANAGEMENT/OPERATIONAL HEADQUARTERS	180,042	-10,000	170,042
	Program decrease		[-10,000]	
100	SPECIAL OPERATIONS COMMAND OPERATIONAL SUPPORT	1,202,060	3,000	1,205,060
	JMWC		[3,000]	
110	SPECIAL OPERATIONS COMMAND THEATER FORCES	3,175,789	10,000	3,185,789
	Program increase		[10,000]	
	SUBTOTAL OPERATING FORCES	10,314,819	49,751	10,364,570
	TRAINING AND RECRUITING			
130	DEFENSE ACQUISITION UNIVERSITY	171,607		171,607
140	JOINT CHIEFS OF STAFF	92,905		92,905
150	PROFESSIONAL DEVELOPMENT EDUCATION	31,669		31,669
	SUBTOTAL TRAINING AND RECRUITING	296,181		296,181
	ADMIN & SRWIDE ACTIVITIES			
170	CIVIL MILITARY PROGRAMS	137,311	91,000	228,311
	National Guard Youth Challenge		[50,000]	
	STARBASE		[41,000]	
190	DEFENSE CONTRACT AUDIT AGENCY	618,526		618,526
200	DEFENSE CONTRACT AUDIT AGENCY—CYBER	3,984		3,984
220	DEFENSE CONTRACT MANAGEMENT AGENCY	1,438,296		1,438,296
230	DEFENSE CONTRACT MANAGEMENT AGENCY—CYBER	11,999		11,999
240	DEFENSE COUNTERINTELLIGENCE AND SECURITY AGENCY	941,488		941,488
260	DEFENSE COUNTERINTELLIGENCE AND SECURITY AGENCY—CYBER	9,859		9,859
270	DEFENSE HUMAN RESOURCES ACTIVITY	816,168	70,000	886,168
	Defense Suicide Prevention Office		[5,000]	
	DHRA/DSP0—support FY 2021 congressional increases		[5,000]	

280	DHRA/SAPRO—FY 2021 baseline restoral	17,655	[60,000]	17,655
290	DEFENSE HUMAN RESOURCES ACTIVITY—CYBER	1,913,734	21,735	1,935,469
	DEFENSE INFORMATION SYSTEMS AGENCY		[11,000]	
	Cloud Migration and Technology (Mlicloud 2.0)		[2,700]	
	CYBERCOM—HUMINT		[-2,000]	
	Program decrease		[10,000]	
	Program increase—cloud migration and technology		[35]	
310	Secure Congressional communications	530,278	50,000	580,278
	DEFENSE INFORMATION SYSTEMS AGENCY—CYBER		[50,000]	
	Hardening DODIN			
350	DEFENSE LEGAL SERVICES AGENCY	229,498	4,800	229,498
360	DEFENSE LOGISTICS AGENCY	402,864	[4,800]	407,664
	Procurement Technical Assistance Program		2,000	
370	DEFENSE MEDIA ACTIVITY	222,655	[2,000]	224,655
	Public Web Program			
380	DEFENSE PERSONNEL ACCOUNTING AGENCY	130,174	25,000	155,174
	DPAA (POW/MIA)—support FY 2021 congressional increases		[-34,400]	
390	DEFENSE SECURITY COOPERATION AGENCY	2,067,446	[175,000]	2,033,046
	Baltic Security Initiative		[-175,000]	
	Offset for Baltic Security Initiative		[215,600]	
	Program increase		[-250,000]	
	Transfer to Ukraine Security Assistance			
420	DEFENSE TECHNOLOGY SECURITY ADMINISTRATION	39,305		39,305
440	DEFENSE THREAT REDUCTION AGENCY	885,749		885,749
460	DEFENSE THREAT REDUCTION AGENCY—CYBER	36,736		36,736
470	DEPARTMENT OF DEFENSE EDUCATION ACTIVITY	3,138,345	70,000	3,208,345
	Impact Aid		[50,000]	
	Impact Aid—Students with Disabilities		[20,000]	
490	MISSILE DEFENSE AGENCY	502,450		502,450
530	OFFICE OF THE LOCAL DEFENSE COMMUNITY COOPERATION—OSD	89,686	18,000	107,686
	Defense Community Infrastructure Program		[15,000]	
	Oversight Personnel		[3,000]	

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
540	OFFICE OF THE SECRETARY OF DEFENSE	1,766,614	35,800	1,802,414
	Assistant Secretary of Defense for Energy, Installation and Environment oversight personnel		[10,000]	
	Basic Needs Allowance		[50,000]	
	CAPE Civilian Technical Staff Increase		[3,000]	
	CAPE cost data and software initiative increase		[3,500]	
	Commission on Afghanistan		[5,000]	
	Defense Resource Budgeting & Allocation Commission		[4,000]	
	DIU Civilian Technical Staff Increase		[3,000]	
	DOT&E Civilian Technical Staff Increase		[3,000]	
	Military working dog pilot program		[10,000]	
	Program decrease		[-55,700]	
550	OFFICE OF THE SECRETARY OF DEFENSE—CYBER	32,851		32,851
560	SPACE DEVELOPMENT AGENCY	53,851		53,851
570	WASHINGTON HEADQUARTERS SERVICES	369,698	-29,000	340,698
	Program decrease		[-29,000]	
575	CLASSIFIED PROGRAMS	17,900,146		17,900,146
	SUBTOTAL ADMIN & SRVWIDE ACTIVITIES	34,307,366	324,935	34,632,301
	UNDISTRIBUTED			
580	UNDISTRIBUTED		1,322,055	1,322,055
	Afghanistan withdrawal contingency costs		[250,000]	
	Depot Capital Investment		[900,000]	
	FSRM increase for Defense-wide activities		[172,055]	
	SUBTOTAL UNDISTRIBUTED		1,322,055	1,322,055
	TOTAL OPERATION AND MAINTENANCE, DEFENSE-WIDE	44,918,366	1,696,741	46,615,107

010	UKRAINE SECURITY ASSISTANCE				
	UKRAINE SECURITY ASSISTANCE INITIATIVE	300,000			300,000
	Program increase	[50,000]			
	Transfer from Defense Security Cooperation Agency	[250,000]			
	SUBTOTAL UKRAINE SECURITY ASSISTANCE	300,000			300,000
	TOTAL UKRAINE SECURITY ASSISTANCE	300,000			300,000
	US COURT OF APPEALS FOR ARMED FORCES, DEF				
	ADMINISTRATION AND ASSOCIATED ACTIVITIES				
010	US COURT OF APPEALS FOR THE ARMED FORCES, DEFENSE	15,589			15,589
	SUBTOTAL ADMINISTRATION AND ASSOCIATED ACTIVITIES	15,589			15,589
	TOTAL US COURT OF APPEALS FOR ARMED FORCES, DEF	15,589			15,589
	DOD ACQUISITION WORKFORCE DEVELOPMENT FUND				
	ACQUISITION WORKFORCE DEVELOPMENT				
010	ACQ WORKFORCE DEV FD	54,679			54,679
	SUBTOTAL ACQUISITION WORKFORCE DEVELOPMENT	54,679			54,679
	TOTAL DOD ACQUISITION WORKFORCE DEVELOPMENT FUND	54,679			54,679
	OVERSEAS HUMANITARIAN, DISASTER, AND CIVIC AID				
	HUMANITARIAN ASSISTANCE				
010	OVERSEAS HUMANITARIAN, DISASTER AND CIVIC AID	110,051			650,051
	Afghan SIV costs	540,000			
	Program Increase	[500,000]			
	SUBTOTAL HUMANITARIAN ASSISTANCE	110,051			650,051
	TOTAL OVERSEAS HUMANITARIAN, DISASTER, AND CIVIC AID	110,051			650,051
	COOPERATIVE THREAT REDUCTION ACCOUNT				

SEC. 4301. OPERATION AND MAINTENANCE
(In Thousands of Dollars)

Line	Item	FY 2022 Request	House Change	House Authorized
010	COOPERATIVE THREAT REDUCTION	239,849	105,000	344,849
	Program increase		[105,000]	
	SUBTOTAL COOPERATIVE THREAT REDUCTION	239,849	105,000	344,849
	TOTAL COOPERATIVE THREAT REDUCTION ACCOUNT	239,849	105,000	344,849
	ENVIRONMENTAL RESTORATION			
	DEPARTMENT OF THE ARMY			
050	ENVIRONMENTAL RESTORATION, ARMY	200,806	100,000	300,806
	Program increase for PFAS		[100,000]	
	SUBTOTAL DEPARTMENT OF THE ARMY	200,806	100,000	300,806
	DEPARTMENT OF THE NAVY			
060	ENVIRONMENTAL RESTORATION, NAVY	298,250	174,000	472,250
	Program increase for PFAS		[174,000]	
	SUBTOTAL DEPARTMENT OF THE NAVY	298,250	174,000	472,250
	DEPARTMENT OF THE AIR FORCE			
070	ENVIRONMENTAL RESTORATION, AIR FORCE	301,768	175,000	476,768
	Program increase for PFAS		[175,000]	
	SUBTOTAL DEPARTMENT OF THE AIR FORCE	301,768	175,000	476,768
	DEFENSE-WIDE			
080	ENVIRONMENTAL RESTORATION, DEFENSE	8,783	50,000	58,783
	Military Munitions Response Program		[50,000]	
	SUBTOTAL DEFENSE-WIDE	8,783	50,000	58,783

090	DEFENSE-WIDE				
	ENVIRONMENTAL RESTORATION FORMERLY USED SITES	218,580	174,000	392,580	
	Program increase		[74,000]		
	Program increase for PFAS		[100,000]		
	SUBTOTAL DEFENSE-WIDE	218,580	174,000	392,580	
	TOTAL ENVIRONMENTAL RESTORATION	1,028,187	673,000	1,701,187	
	TOTAL OPERATION & MAINTENANCE	253,623,852	-591,223	253,032,629	

TITLE XLIV—MILITARY PERSONNEL

SEC. 4401. MILITARY PERSONNEL.

SEC. 4401. MILITARY PERSONNEL (In Thousands of Dollars)				
Item	FY 2022 Request	House Change	House Authorized	
MERHCF	9,337,175		9,337,175	
MILPERS	157,947,920	[-426,000]	157,521,920	
ARMG Chemical Biological Radiological Nuclear (CBRN) Response Forces Readiness		9,200		
Historical underexecution		[-500,000]		
Military Personnel, Navy—Manpower costs for CG-56, CG-57, and CG-61		64,800		

TITLE XLV—OTHER AUTHORIZATIONS

SEC. 4501. OTHER AUTHORIZATIONS.

SEC. 4501. OTHER AUTHORIZATIONS (In Thousands of Dollars)				
Item	FY 2022 Request	House Change	House Authorized	
WORKING CAPITAL FUND, ARMY				
ARMY ARSENALS INITIATIVE	26,935		26,935	
ARMY SUPPLY MANAGEMENT	357,776		357,776	
TOTAL WORKING CAPITAL FUND, ARMY	384,711		384,711	
WORKING CAPITAL FUND, NAVY				
SUPPLY MANAGEMENT—NAVY	150,000		150,000	
TOTAL WORKING CAPITAL FUND, NAVY	150,000		150,000	
WORKING CAPITAL FUND, AIR FORCE				
SUPPLY MANAGEMENT	77,453		77,453	
TOTAL WORKING CAPITAL FUND, AIR FORCE	77,453		77,453	
WORKING CAPITAL FUND, DEFENSE-WIDE				
ENERGY MANAGEMENT—DEFENSE	40,000		40,000	
SUPPLY CHAIN MANAGEMENT—DEFENSE	87,765		87,765	
TOTAL WORKING CAPITAL FUND, DEFENSE-WIDE	127,765		127,765	
WORKING CAPITAL FUND, DECA				
COMMISSARY OPERATIONS	1,162,071		1,162,071	
TOTAL WORKING CAPITAL FUND, DECA	1,162,071		1,162,071	

SEC. 4501. OTHER AUTHORIZATIONS
(In Thousands of Dollars)

Item	FY 2022 Request	House Change	House Authorized
CHEM AGENTS & MUNITIONS DESTRUCTION			
CHEM DEMILITARIZATION—O&M	93,121		93,121
CHEM DEMILITARIZATION—RDT&E	1,001,231		1,001,231
TOTAL CHEM AGENTS & MUNITIONS DESTRUCTION	1,094,352		1,094,352
DRUG INTERDICTION & CTR-DRUG ACTIVITIES, DEF			
COUNTER-NARCOTICS SUPPORT	593,250		593,250
DRUG DEMAND REDUCTION PROGRAM	126,024		126,024
NATIONAL GUARD COUNTER-DRUG PROGRAM	96,970		96,970
NATIONAL GUARD COUNTER-DRUG SCHOOLS	5,664		5,664
TOTAL DRUG INTERDICTION & CTR-DRUG ACTIVITIES, DEF	821,908		821,908
OFFICE OF THE INSPECTOR GENERAL			
OFFICE OF THE INSPECTOR GENERAL	434,700		434,700
OFFICE OF THE INSPECTOR GENERAL—CYBER	1,218		1,218
OFFICE OF THE INSPECTOR GENERAL—RDTE	2,365		2,365
OFFICE OF THE INSPECTOR GENERAL—PROCUREMENT	80		80
TOTAL OFFICE OF THE INSPECTOR GENERAL	438,363		438,363
DEFENSE HEALTH PROGRAM			
IN-HOUSE CARE	9,720,004	37,000	9,757,004
DHA—reverse DWR cuts to Defense Health Program		(37,000)	
PRIVATE SECTOR CARE	18,092,679		18,092,679
CONSOLIDATED HEALTH SUPPORT	1,541,122	774,925	2,316,047
Anomalous Health Incidents		(114,925)	
DHA—Global Emerging Infectious Surveillance System		(50,000)	

DHP COVID-related shortfalls				
Global Emerging Infectious Surveillance Program				
INFORMATION MANAGEMENT	2,233,677	[600,000]	2,233,677	
MANAGEMENT ACTIVITIES	335,138	[10,000]	335,138	
EDUCATION AND TRAINING	333,234		708,734	
DWR cut reversal to USUHS Basic Research Program		375,500		
USUHS BLDG usage: ID and Vax Research, Pandemic Response and Supply Chain Inde- pendence		[15,500]		
BASE OPERATIONS/COMMUNICATIONS	1,926,865	[360,000]	1,941,865	
National Disaster Medical System Surge Partnerships		15,000		
R&D RESEARCH	9,091	[15,000]	9,091	
R&D EXPLORATORY DEVELOPMENT	75,463		75,463	
R&D ADVANCED DEVELOPMENT	235,556		235,556	
R&D DEMONSTRATION/VALIDATION	142,252		142,252	
R&D ENGINEERING DEVELOPMENT	101,054	22,000	123,054	
Brainscope		[5,000]		
Freeze-dried platelets		[10,000]		
Program increase		[7,000]		
R&D MANAGEMENT AND SUPPORT	49,645		49,645	
R&D CAPABILITIES ENHANCEMENT	17,619		17,619	
PROC INITIAL OUTFITTING	20,926		20,926	
PROC REPLACEMENT & MODERNIZATION	250,366		250,366	
PROC MILITARY HEALTH SYSTEM—DESKTOP TO DATACENTER	72,302		72,302	
PROC DOD HEALTHCARE MANAGEMENT SYSTEM MODERNIZATION	435,414		435,414	
TOTAL DEFENSE HEALTH PROGRAM	35,592,407	1,224,425	36,816,832	
TOTAL OTHER AUTHORIZATIONS	39,849,030	1,224,425	41,073,455	

TITLE XLVI—MILITARY CONSTRUCTION

SEC. 4601. MILITARY CONSTRUCTION.

SEC. 4601. MILITARY CONSTRUCTION (In Thousands of Dollars)

Account	State/ Country	Installation	Project Title	FY 2022 Request	House Change	House Agreement
Army	ALABAMA	Anniston Army Depot	Welding Facility	0	25,000	25,000
Army	ALABAMA	Fort Rucker	AIT Barracks Complex	0	66,000	66,000
Army	ALABAMA	Redstone Arsenal	Propulsion Systems Lab	55,000		55,000
Army	BELGIUM	Shape Headquarters	Command and Control Facility	16,000		16,000
Army	CALIFORNIA	Fort Irwin	Simulations Center	52,000		52,000
Army	GEORGIA	Fort Gordon	Cyber Instructional Fac (Admin/Cmd), Inc. 2	69,000		69,000
Army	GEORGIA	Fort Stewart	Barracks	0	100,000	100,000
Army	GERMANY	East Camp Grafenwoehr	EDI: Barracks and Dining Facility	103,000	-53,000	50,000
Army	GERMANY	Smith Barracks	Indoor Small Arms Range	17,500		17,500
Army	GERMANY	Smith Barracks	Live Fire Exercise Shoothouse	16,000		16,000
Army	HAWAII	West Loch Nav Mag Annex	Ammunition Storage	51,000		51,000
Army	KANSAS	Fort Leavenworth	Child Development Center	0	34,000	34,000
Army	KENTUCKY	Fort Knox	Child Development Center	0	27,000	27,000
Army	LOUISIANA	Fort Polk, Louisiana	Joint Operations Center	55,000		55,000
Army	LOUISIANA	Fort Polk	Barracks	0	56,000	56,000
Army	MARYLAND	Aberdeen Proving Ground	Moving Target Simulator (Combat Systems Simula- tion Laboratory)	0	29,000	29,000
Army	MARYLAND	Fort Detrick	Medical Waste Incinerator	0	23,981	23,981
Army	MARYLAND	Fort Detrick	Medical Incinerator	0	23,981	23,981
Army	MARYLAND	Fort Detrick	USAMRMC Headquarters	0	94,000	94,000
Army	MARYLAND	Fort Meade	Barracks	81,000		81,000

Army	MISSISSIPPI	Engineer Research and Development Center	Communications Center	0	17,000	17,000
Army	MISSISSIPPI	Engineer Research and Development Center	Rtd&e (Risk Lab)	0	32,000	32,000
Army	NEW JERSEY	Picatinny Arsenal	Igloo Storage, Installation	0	1,800	1,800
Army	NEW MEXICO	White Sands Missile Range	Missile Assembly Support Facility	0	14,200	14,200
Army	NEW MEXICO	White Sands Missile Range	Missile Assembly Building	0	29,000	29,000
Army	NEW YORK	Fort Hamilton	Information Systems Facility	26,000	26,000	26,000
Army	NEW YORK	Watervliet Arsenal	Access Control Point	20,000	20,000	20,000
Army	PENNSYLVANIA	Letterkenny Army Depot	Fire Station	21,000	21,000	21,000
Army	SOUTH CAROLINA	Fort Jackson	Reception Barracks Complex, Ph2, Inc. 2	34,000	34,000	34,000
Army	SOUTH CAROLINA	Fort Jackson	Reception Barracks, Ph1	0	21,000	21,000
Army	TEXAS	Fort Hood	Barracks	0	61,000	61,000
Army	TEXAS	Fort Hood	Barracks	0	29,200	29,200
Army	VIRGINIA	Joint Base Langley-Eustis	AIT Barracks Complex, Ph4	0	16,000	16,000
Army	WORLDWIDE CLASSIFIED	Classified Location	Forward Operating Site	31,000	31,000	31,000
Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Host Nation Support	27,000	27,000	27,000
Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Minor Construction	35,543	35,543	35,543
Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Planning and Design	124,649	10,000	134,649
		Military Construction, Army Total		834,692	657,162	1,491,854
Navy	ARIZONA	Marine Corps Air Station Yuma	Bachelor Enlisted Quarters	0	99,600	99,600
Navy	CALIFORNIA	Air Ground Combat Center Twentynine Palms	Wastewater Treatment Facility	0	45,000	45,000
Navy	CALIFORNIA	Camp Pendleton	I MEF Consolidated Information Center Inc.	19,869	19,869	19,869
Navy	CALIFORNIA	Naval Air Station Lemoore	F-35C Hangar 6 Phase 2 (Mod 3/4) Inc.	75,070	-25,070	50,000
Navy	CALIFORNIA	Naval Information Warfare Center Pacific	Reconfigurable Cyber Laboratory	0	49,970	49,970
Navy	CALIFORNIA	Naval Weapons Station Seal Beach	Missile Magazines Inc.	10,840	10,840	10,840
Navy	CALIFORNIA	Naval Base San Diego	Pier 6 Replacement Inc.	50,000	50,000	50,000
Navy	CALIFORNIA	San Nicholas Island	Directed Energy Weapons Test Facilities	19,907	19,907	19,907

SEC. 4601, MILITARY CONSTRUCTION
(In Thousands of Dollars)

Account	State/ Country	Installation	Project Title	FY 2022 Request	House Change	House Agreement
Navy	DISTRICT OF COLUMBIA	Naval Research Laboratory	Electromagnetic & Cyber Countermeasures Laboratory.	0	95,271	95,271
Navy	DISTRICT OF COLUMBIA	Naval Research Laboratory	Biomolecular Science & Synthetic Biology Laboratory	0	58,940	58,940
Navy	FLORIDA	Naval Air Station Jacksonville	Planning and Design for Lighterage and Small Craft.	0	7,000	7,000
Navy	FLORIDA	Naval Surface Warfare Center Panama City Division	Unmanned Vehicle Littoral Combat Space	0	30,960	30,960
Navy	FLORIDA	Naval Surface Warfare Center Panama City Division	Mine Warfare RDT&E Facility	0	52,860	52,860
Navy	FLORIDA	Naval Undersea Warfare Center Newport Division	AUTEC Pier Facility 1902	0	37,980	37,980
Navy	FLORIDA	Naval Undersea Warfare Center Newport Division	Array Calibration Facility	0	6,530	6,530
Navy	GREECE	Naval Support Activity Souda Bay	EDI: Joint Mobility Processing Center	41,650	-41,650	0
Navy	GUAM	Andersen Air Force Base	Aviation Admin Building	50,890		50,890
Navy	GUAM	Joint Region Marianas	4th Marines Regiment Facilities	109,507	-29,507	80,000
Navy	GUAM	Joint Region Marianas	Bachelor Enlisted Quarters H Inc.	43,200		43,200
Navy	GUAM	Joint Region Marianas	Combat Logistics Battalion-4 Facility	92,710		92,710
Navy	GUAM	Joint Region Marianas	Consolidated Armory	43,470		43,470
Navy	GUAM	Joint Region Marianas	Infantry Battalion Company HQ	44,100		44,100
Navy	GUAM	Joint Region Marianas	Joint Communication Upgrade Inc.	84,000		84,000
Navy	GUAM	Joint Region Marianas	Marine Expeditionary Brigade Enablers	66,830		66,830
Navy	GUAM	Joint Region Marianas	Principal End Item (PEI) Warehouse	47,110		47,110
Navy	GUAM	Joint Region Marianas	X-Ray Wharf Berth 2	103,800	-51,900	51,900
Navy	HAWAII	Marine Corps Base Kaneohe	Bachelor Enlisted Quarters, Ph 2	0	101,200	101,200

Navy	IDAHO	Naval Surface Warfare Center Carderock Division	ARD Rangescraft Birthing Facility	0	6,140	6,140
Navy	INDIANA	Naval Surface Warfare Center Crane Division	Strategic Systems Engineering & Hardware Assurance Center.	0	27,350	27,350
Navy	INDIANA	Naval Surface Warfare Center Crane Division	Corporate Operations and Training Center	0	22,910	22,910
Navy	INDIANA	Naval Surface Warfare Center Crane Division	Anti-Ship Missile Defense Life Cycle Integration and Test Center.	0	36,660	36,660
Navy	JAPAN	Fleet Activities Yokosuka	Pier 5 (Berths 2 and 3) Inc.	15,292		15,292
Navy	JAPAN	Fleet Activities Yokosuka	Ship Handling & Combat Training Facilities	49,900		49,900
Navy	MAINE	Portsmouth Naval Shipyard	Multi-Mission Drydock #1 Extension Inc.	250,000		250,000
Navy	MARYLAND	Naval Air Station Patuxent River	Planning and Design for Aircraft Prototyping Facility, Ph 3.	0	1,500	1,500
Navy	MARYLAND	Naval Air Warfare Center Aircraft Division	Aircraft Prototyping Facility, Ph 3	0	40,920	40,920
Navy	MARYLAND	Naval Air Warfare Center Aircraft Division	Rotary Wing T&E Hangar Replacement	0	80,270	80,270
Navy	MARYLAND	Naval Surface Warfare Center Carderock Division	Ship Systems Design & Integration Facility	0	22,090	22,090
Navy	MARYLAND	Naval Surface Warfare Center Indian Head	Planning and Design for Contained Burn Facility	0	1,500	1,500
Navy	MARYLAND	Naval Surface Warfare Center Indian Head	Energetic Systems and Technology Laboratory Complex, Ph 2.	0	25,210	25,210
Navy	MARYLAND	Naval Surface Warfare Center Indian Head	Contained Burn Facility	0	14,980	14,980
Navy	MARYLAND	Naval Surface Warfare Center Indian Head	Energetic Chemical Scale-up	0	29,130	29,130
Navy	MARYLAND	Naval Surface Warfare Center Indian Head	Energetics Prototyping Facility	0	36,230	36,230
Navy	MARYLAND	Naval Surface Warfare Center Indian Head	Energetic Systems and Technology Laboratory Complex, Ph 3.	0	26,480	26,480
Navy	NEVADA	Naval Air Station Fallon	Training Range Land Acquisition—Ph 2	48,250		48,250

SEC. 4601. MILITARY CONSTRUCTION
(In Thousands of Dollars)

Account	State/ Country	Installation	Project Title	FY 2022 Request	House Change	House Agreement
Navy	NORTH CAROLINA	Camp Lejeune, North Carolina	II MEF Operations Center Replacement Inc.	42,200		42,200
Navy	NORTH CAROLINA	Cherry Point Marine Corps Air Station	Aircraft Maintenance Hangar	207,897	-147,897	60,000
Navy	NORTH CAROLINA	Cherry Point Marine Corps Air Station	F-35 Flightline Utilities Modernization Ph 2	113,520	-83,520	30,000
Navy	PENNSYLVANIA	Naval Surface Warfare Center Philadelphia Division	Machinery Control Development Center	0	77,290	77,290
Navy	PENNSYLVANIA	Naval Surface Warfare Center Philadelphia Division	Machinery Integration Lab, Ph 1	0	34,010	34,010
Navy	PENNSYLVANIA	Naval Surface Warfare Center Philadelphia Division	Power & Energy Tech Systems Integration Lab	0	48,740	48,740
Navy	POLAND	Redzikowo	AEGIS Ashore Barracks Planning and Design	0	3,000	3,000
Navy	RHODE ISLAND	Naval Undersea Warfare Center Newport Division	Next Generation Secure Submarine Platform Facility	0	40,760	40,760
Navy	RHODE ISLAND	Naval Undersea Warfare Center Newport Division	Next Generation Torpedo Integration Lab	0	12,870	12,870
Navy	RHODE ISLAND	Naval Undersea Warfare Center Newport Division	Submarine Payloads Integration Facility	0	14,430	14,430
Navy	RHODE ISLAND	Naval Undersea Warfare Center Newport Division	Consolidation RDT&E Systems Facility	0	17,290	17,290
Navy	TEXAS	Naval Air Station Kingsville	Planning and Design for Fire Rescue Safety Center	0	2,500	2,500
Navy	VIRGINIA	Naval Station Norfolk	Submarine Pier 3 Inc.	88,923		88,923
Navy	VIRGINIA	Naval Surface Warfare Center Carderock Division	Navy Combatant Craft Laboratory	0	17,210	17,210
Navy	VIRGINIA	Naval Surface Warfare Center Dahlgren Division	Cyber Threat & Weapon Systems Engineering Complex.	0	60,560	60,560

Navy	VIRGINIA	Naval Surface Warfare Center Dahlgren Division	High Powered Electric Weapons Laboratory	0	38,110	38,110
Navy	VIRGINIA	Norfolk Naval Shipyard	Dry Dock Saltwater System for CVN-78	156,380	-126,380	30,000
Navy	VIRGINIA	Marine Corps Base Quantico	Vehicle Inspection and Visitor Control Center	42,850		42,850
Navy	VIRGINIA	Marine Corps Base Quantico	Wargaming Center Inc.	30,500		30,500
Navy	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Planning and Design	363,252		363,252
Navy	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Shipyard Investment Optimization Program	0	225,000	225,000
Navy	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Shipyard Investment Optimization Program—Planning and Design.	0	62,820	62,820
Navy	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Unspecified Minor Construction	56,435		56,435
	Military Construction, Navy Total			2,368,352	1,105,347	3,473,699
AF	ALASKA	Joint Base Elmendorf-Richardson	Extend Runway 16/34, Inc. 1	79,000		79,000
AF	ARIZONA	Davis-Monthan Air Force Base	South Wilmot Gate	13,400		13,400
AF	ARIZONA	Luke Air Force Base	F-35A ADAL AMU Facility Squadron #6	28,000		28,000
AF	ARIZONA	Luke Air Force Base	F-35A Squadron Operations Facility #6	21,000		21,000
AF	AUSTRALIA	Royal Australian Air Force Base Darwin	Squadron Operations Facility	7,400		7,400
AF	AUSTRALIA	Royal Australian Air Force Base Tindal	Aircraft Maintenance Support Facility	6,200		6,200
AF	AUSTRALIA	Royal Australian Air Force Base Tindal	Squadron Operations Facility	8,200		8,200
AF	CALIFORNIA	Edwards Air Force Base	Flight Test Engineering Lab Complex	4,000		4,000
AF	CALIFORNIA	Edwards Air Force Base	Upgrade Munitions Complex	0	28,000	28,000
AF	CALIFORNIA	Edwards Air Force Base	Rocket Engineering, Analysis, and Collaboration HUB (REACH).	0	75,000	75,000
AF	CALIFORNIA	Vandenberg Air Force Base	GBSD Re-Entry Vehicle Facility	48,000		48,000
AF	CALIFORNIA	Vandenberg Air Force Base	GBSD Stage Processing Facility	19,000		19,000
AF	COLORADO	Schriever Air Force Base	ADAL Fitness Center	0	30,000	30,000
AF	COLORADO	United States Air Force Academy	Add High Bay Vehicle Maintenance	0	4,360	4,360
AF	DISTRICT OF COLUMBIA	Joint Base Anacostia Bolling	Joint Air Defense Operations Center Ph 2	24,000		24,000

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AF	FLORIDA	Eglin Air Force Base	Weapons Technology Integration Center	0	100,000	100,000
AF	FLORIDA	Eglin Air Force Base	HC-Blackflyre Facilities	0	91,000	91,000
AF	FLORIDA	Eglin Air Force Base	JADC2 & Abms Test Facility	0	21,000	21,000
AF	FLORIDA	Eglin Air Force Base	F-35A Development/Operational Test 2-Bay Hangar	0	39,000	39,000
AF	FLORIDA	Eglin Air Force Base	Integrated Control Facility	0	73,000	73,000
AF	FLORIDA	Eglin Air Force Base	F-35A Development Test 2-Bay MX Hangar	0	35,000	35,000
AF	GERMANY	Spangdahlem Air Base	F/A-22 LO/Composite Repair Facility	22,625		22,625
AF	GUAM	Joint Region Marianas	Airfield Damage Repair Warehouse	30,000		30,000
AF	GUAM	Joint Region Marianas	Hayman Munitions Storage Igloos, MSA2	9,824		9,824
AF	GUAM	Joint Region Marianas	Munitions Storage Igloos IV	55,000		55,000
AF	HAWAII	Maui Experimental Site #3	Secure Integration Support Lab W/ Land Acquisition	0	88,000	88,000
AF	HUNGARY	Keckskemet Air Base	ERI: Construct Airfield Upgrades	20,564		20,564
AF	HUNGARY	Keckskemet Air Base	ERI: Construct Parallel Taxiway	38,650		38,650
AF	JAPAN	Kadena Air Base	Airfield Damage Repair Storage Facility	38,000		38,000
AF	JAPAN	Kadena Air Base	Helicopter Rescue OPS Maintenance Hangar	168,000	-84,200	83,800
AF	JAPAN	Kadena Air Base	Replace Munitions Structures	26,100		26,100
AF	JAPAN	Misawa Air Base	Airfield Damage Repair Facility	25,000		25,000
AF	JAPAN	Yokota Air Base	C-130J Corrosion Control Hangar	67,000		67,000
AF	JAPAN	Yokota Air Base	Construct CATM Facility	25,000		25,000
AF	LOUISIANA	Barksdale Air Force Base	Weapons Generation Facility, Inc. 1	40,000		40,000
AF	LOUISIANA	Barksdale Air Force Base	New Entrance Road and Gate Complex	0	36,000	36,000
AF	MARYLAND	Joint Base Andrews	Fire Crash Rescue Station	26,000		26,000
AF	MARYLAND	Joint Base Andrews	Military Working Dog Kennel	0	7,800	7,800
AF	MASSACHUSETTS	Hanscom Air Force Base	NC3 Acquisitions Management Facility	66,000		66,000
AF	NEBRASKA	Offutt Air Force Base	Replace Trestle F312	0	5,000	5,000
AF	NEW MEXICO	Holloman Air Force Base	RAMS Indoor Target Flip Facility	0	26,000	26,000
AF	NEW MEXICO	Holloman Air Force Base	Holloman High Speed Test Track Recapitalization ...	0	100,000	100,000

AF	NEW MEXICO	Holloman Air Force Base	ADAL Fabrication Shop	0	10,600	10,600	10,600
AF	NEW MEXICO	Kirtland Air Force Base	High Power Electromagnetic (HPREM) Laboratory	0	58,000	58,000	58,000
AF	NEW MEXICO	Kirtland Air Force Base	Laser Effects & Simulation Laboratory	0	58,000	58,000	58,000
AF	NEW MEXICO	Kirtland Air Force Base	ADAL Systems & Engineering Lab	0	22,000	22,000	22,000
AF	NEW JERSEY	Joint Base McGuire-Dix-Lakehurst	SFS OPS Confinement Facility	0	4,500	4,500	4,500
AF	OHIO	Wright-Patterson Air Force Base	Child Development Center	0	24,000	24,000	24,000
AF	OHIO	Wright-Patterson Air Force Base	Human Performance Wing Laboratory	0	40,000	40,000	40,000
AF	OHIO	Wright-Patterson Air Force Base	Bionatronics Research Center Laboratory	0	100,000	100,000	100,000
AF	OKLAHOMA	Tinker Air Force Base	KC-46A 3-Bay Depot Maintenance Hangar	160,000	-100,000	60,000	60,000
AF	SOUTH CAROLINA	Joint Base Charleston	Fire and Rescue Station	0	30,000	30,000	30,000
AF	SOUTH DAKOTA	Ellsworth Air Force Base	B-21 2-Bay LO Restoration Facility, Inc. 2	91,000	-41,000	50,000	50,000
AF	SOUTH DAKOTA	Ellsworth Air Force Base	B-21 ADAL Flight Simulator	24,000	24,000	24,000	24,000
AF	SOUTH DAKOTA	Ellsworth Air Force Base	B-21 Field Training Detachment Facility	47,000	47,000	47,000	47,000
AF	SOUTH DAKOTA	Ellsworth Air Force Base	B-21 Formal Training Unit/AMU	70,000	70,000	70,000	70,000
AF	SOUTH DAKOTA	Ellsworth Air Force Base	B-21 Mission Operations Planning Facility	36,000	36,000	36,000	36,000
AF	SOUTH DAKOTA	Ellsworth Air Force Base	B-21 Washrack & Maintenance Hangar	65,000	65,000	65,000	65,000
AF	SPAIN	Moron Air Base	EDI-Hot Cargo Pad	8,542	8,542	8,542	8,542
AF	TENNESSEE	Arnold Air Force Base	Cooling Water Expansion, Rowland Creek 20009	0	15,500	15,500	15,500
AF	TENNESSEE	Arnold Air Force Base	Add/Alter Test Cell Delivery Bay	0	14,600	14,600	14,600
AF	TENNESSEE	Arnold Air Force Base	Primary Pumping Station Upgrades	0	90,518	90,518	90,518
AF	TEXAS	Joint Base San Antonio	BMT Recruit Dormitory 7	141,000	-101,000	40,000	40,000
AF	TEXAS	Joint Base San Antonio	BMT Recruit Dormitory 8, Inc. 3	31,000	31,000	31,000	31,000
AF	TEXAS	Joint Base San Antonio—Fort Sam Houston	Child Development Center	0	29,000	29,000	29,000
AF	TEXAS	Joint Base San Antonio—Fort Sam Houston	Directed Energy Research Center	0	113,000	113,000	113,000
AF	TEXAS	Joint Base San Antonio—Lackland Air Force Base	Child Development Center	0	22,000	22,000	22,000
AF	TEXAS	Sheppard Air Force Base	Child Development Center	20,000	20,000	20,000	20,000
AF	UNITED KINGDOM	Royal Air Force Fairford	EDI: Construct DABS-HEV Storage	94,000	94,000	94,000	94,000
AF	UNITED KINGDOM	Royal Air Force Lakenheath	F-35A Child Development Center	0	24,000	24,000	24,000

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AF	UNITED KINGDOM	Royal Air Force Lakenheath	F-35A Munition Inspection Facility	31,000		31,000
AF	UNITED KINGDOM	Royal Air Force Lakenheath	F-35A Weapons Load Training Facility	49,000		49,000
AF	UTAH	Hill Air Force Base	GBSD Organic Software Sustain Ctr, Inc. 2	31,000		31,000
AF	VIRGINIA	Joint Base Langley-Eustis	Fuel Systems Maintenance Dock	0	24,000	24,000
AF	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	EDI: Planning & Design	648	25,000	25,648
AF	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	PDI: Planning & Design	27,200	25,000	52,200
AF	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	Planning & Design	201,453	-40,000	161,453
AF	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	Planning & Design for Dormitories and Barracks	0	20,000	20,000
AF	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	Intelligence, Surveillance, and Reconnaissance In- infrastructure Planning and Design.	0	20,000	20,000
AF	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	Unspecified Minor Military Construction	58,884		58,884
			Military Construction, Air Force Total	2,102,690	1,162,678	3,265,368
Def-Wide	ALABAMA	Fort Rucker	10 MW RICE Generator Plant and Microgrid Controls	24,000		24,000
Def-Wide	BELGIUM	Chievres Air Force Base	Europe West District Superintendent's Office	15,000		15,000
Def-Wide	CALIFORNIA	Camp Pendleton	Veterinary Treatment Facility Replacement	13,600		13,600
Def-Wide	CALIFORNIA	Naval Amphibious Base Coro- nado	SOF ATC Operations Support Facility	21,700		21,700
Def-Wide	CALIFORNIA	Naval Amphibious Base Coro- nado	SOF NSWG11 Operations Support Facility	12,000		12,000
Def-Wide	CALIFORNIA	Marine Corps Air Station Miramar	Additional LFG Power Meter Station	4,054		4,054
Def-Wide	CALIFORNIA	Naval Air Weapons Station China Lake	Solar Energy Storage System	9,120		9,120
Def-Wide	CALIFORNIA	Naval Amphibious Base Coro- nado	SOF Training Command	0	20,500	20,500
Def-Wide	COLORADO	Buckley Air Force Base	JCC Expansion	20,000		20,000

Def-Wide	DISTRICT OF COLUMBIA	Joint Base Anacostia-Bolling	DIA HQ Cooling Towers and Cond Pumps	0	2,257	2,257
Def-Wide	DISTRICT OF COLUMBIA	Joint Base Anacostia-Bolling	PV Carports	0	29,004	29,004
Def-Wide	FLORIDA	MacDill Air Force Base	Transmission and Switching Stations	22,000		22,000
Def-Wide	GEORGIA	Fort Benning	4.8 MW Generation and Microgrid	17,593		17,593
Def-Wide	GEORGIA	Fort Benning	SOF Battalion Headquarters Facility	62,000		62,000
Def-Wide	GEORGIA	Fort Stewart	10 MW Generation Plant, With Microgrid Controls	22,000		22,000
Def-Wide	GEORGIA	Kings Bay Naval Submarine Base	Electrical Transmission and Distribution	19,314		19,314
Def-Wide	GERMANY	Ramstein Air Base	Ramstein Middle School	93,000		93,000
Def-Wide	GUAM	Naval Base Guam	Inner Apra Harbor Resiliency Upgrades Ph1	38,300		38,300
Def-Wide	HAWAII	Joint Base Pearl Harbor-Hickam	Veterinary Treatment Facility Replacement	29,800		29,800
Def-Wide	IDAHO	Mountain Home Air Force Base	Water Treatment Plant and Pump Station	33,800		33,800
Def-Wide	JAPAN	Iwakuni	Fuel Pier	57,700		57,700
Def-Wide	JAPAN	Kadena Air Base	Operations Support Facility	24,000		24,000
Def-Wide	JAPAN	Kadena Air Base	Truck Unload Facilities	22,300		22,300
Def-Wide	JAPAN	Misawa Air Base	Additive Injection Pump and Storage Sys	6,000		6,000
Def-Wide	JAPAN	Naval Air Facility Atsugi	Smart Grid for Utility and Facility Controls	3,810		3,810
Def-Wide	JAPAN	Yokota Air Base	Hangar/AMU	108,253	-55,253	53,000
Def-Wide	KUWAIT	Camp Arifjan	Microgrid Controller, 1.25 MW Solar PV, and 1.5 MWH Battery.	15,000		15,000
Def-Wide	MARYLAND	Bethesda Naval Hospital	MEDCEN Addition / Alteration, Inc. 5	153,233		153,233
Def-Wide	MARYLAND	Fort Meade	NSAW Mission OPS and Records Center Inc. 1	94,000		94,000
Def-Wide	MARYLAND	Fort Meade	NSAW Recap Building 4, Inc. 1	104,100		104,100
Def-Wide	MARYLAND	Fort Meade	SOF Operations Facility	100,000		100,000
Def-Wide	MICHIGAN	Camp Grayling	650 KW Gas-Fired Micro-Turbine Generation System	5,700		5,700
Def-Wide	MISSISSIPPI	Camp Shelby	10 MW Generation Plant an Feeder Level Microgrid System.	0	34,500	34,500
Def-Wide	MISSISSIPPI	Camp Shelby	Electrical Distribution Infrastructure Undergrounding Hardening Project.	0	11,155	11,155
Def-Wide	MISSOURI	Fort Leonard Wood	Hospital Replacement, Inc. 4	160,000		160,000
Def-Wide	NEW MEXICO	Kirtland Air Force Base	Environmental Health Facility Replacement	8,600		8,600
Def-Wide	NEW YORK	Fort Drum	Wellfield Expansion Resiliency Project	0	27,000	27,000

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Def-Wide	NORTH CAROLINA	Fort Bragg	10 MW Microgrid Utilizing Existing and New Generators.	19,464		19,464
Def-Wide	NORTH CAROLINA	Fort Bragg	Fort Bragg Emergency Water System	0	7,705	7,705
Def-Wide	NORTH DAKOTA	Cavalier Air Force Station	Pears Emergency Power Plant Fuel Storage	0	24,150	24,150
Def-Wide	OHIO	Springfield-Beckley Municipal Airport	Base-Wide Microgrid With Natural Gas Generator, Photovoltaic, and Battery Storage.	4,700		4,700
Def-Wide	PUERTO RICO	Fort Allen	Microgrid Control System, 690 KW PV, 275 KW Gen, 570 Kwh Bess.	0	12,190	12,190
Def-Wide	PUERTO RICO	Punta Borinquen	Ramey Unit School Replacement	84,000		84,000
Def-Wide	PUERTO RICO	Ramey Unit School	Microgrid Control System, 460 KW PV, 275 KW Generator, 660 Kwh Bess.	0	10,120	10,120
Def-Wide	TENNESSEE	Memphis International Airport	PV Arrays and Battery Storage	4,780		4,780
Def-Wide	TEXAS	Joint Base San Antonio	Ambulatory Care Center Ph 4	35,000		35,000
Def-Wide	UNITED KINGDOM	Menwith Hill Station	Rafmh Main Gate Rehabilitation	20,000		20,000
Def-Wide	UNITED KINGDOM	Royal Air Force Lakenheath	Hospital Replacement-Temporary Facilities	19,283		19,283
Def-Wide	VIRGINIA	Fort Belvoir	Veterinary Treatment Facility Replacement	29,800		29,800
Def-Wide	VIRGINIA	National Geospatial Intelligence Agency Springfield	North Campus East Electrical System Redundancy ..	0	5,299	5,299
Def-Wide	VIRGINIA	Pentagon	Consolidated Maintenance Complex (RRMC)	20,000		20,000
Def-Wide	VIRGINIA	Pentagon	Force Protection Perimeter Enhancements	8,608		8,608
Def-Wide	VIRGINIA	Pentagon	Public Works Support Facility	21,935		21,935
Def-Wide	VIRGINIA	Various Locations	Led Upgrade Package	365		365
Def-Wide	VIRGINIA	Various Locations	Recommissioning of Hvac Systems, Part B	2,600		2,600
Def-Wide	WASHINGTON	Oak Harbor	ACC / Dental Clinic (Oak Harbor)	59,000		59,000
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	DIA Planning and Design	11,000		11,000
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	DODEA Planning and Design	13,317		13,317
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	DODEA Unspecified Minor Construction	8,000		8,000

Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	ERICP Design	40,150		40,150
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Exercise Related Minor Construction	5,615		5,615
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	INDOPACOM—Planning and Design	0	68,200	68,200
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	MDA Unspecified Minor Construction	4,435		4,435
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	NSA Planning and Design	83,840		83,840
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	NSA Unspecified Minor Construction	12,000		12,000
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Planning and Design	14,194		14,194
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	SOCOM Unspecified Minor Construction	21,746		21,746
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	TJS Planning and Design	2,000		2,000
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Unspecified Minor Construction	3,000		3,000
Def-Wide	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	WHS Planning and Design	5,275		5,275
Def-Wide	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	DHA Planning and Design	35,099		35,099
Def-Wide	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	DLA Planning and Design	20,862		20,862
Def-Wide	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	DLA Unspecified Minor Construction	6,668		6,668
Def-Wide	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	SOCOM Planning and Design	20,576		20,576
	Military Construction, Defense-Wide Total			1,957,289	196,827	2,154,116
NATO	WORLDWIDE UNSPECIFIED	NATO Security Investment Program	NATO Security Investment Program	205,853		205,853
	NATO Security Investment Program Total			205,853	0	205,853
Army NG	ALASKA	Joint Base Elmendorf-Richardson	Planning and Design for National Guard Readiness Center.	0	5,000	5,000
Army NG	CALIFORNIA	Beale Air Force Base	940 ARW SQ OPS & AMU Complex	0	33,000	33,000
Army NG	CONNECTICUT	Putnam	National Guard Readiness Center	17,500		17,500
Army NG	GEORGIA	Fort Benning	Post-Initial Mil. Training Unaccomp. Housing	13,200		13,200
Army NG	GUAM	Barrigada	National Guard Readiness Center Addition	34,000		34,000
Army NG	IDAHO	Jerome	National Guard Readiness Center	15,000		15,000
Army NG	ILLINOIS	Bloomington	National Guard Vehicle Maintenance Shop	15,000		15,000
Army NG	KANSAS	Topeka	National Guard/Reserve Center Building	16,732		16,732
Army NG	LOUISIANA	Camp Minden	Collective Training Unaccompanied Housing	0	13,800	13,800
Army NG	LOUISIANA	Lake Charles	National Guard Readiness Center	18,500		18,500

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Army NG	MAINE	Saco	National Guard Vehicle Maintenance Shop	21,200		21,200
Army NG	MICHIGAN	Camp Grayling	National Guard Readiness Center	0	16,000	16,000
Army NG	MISSISSIPPI	Camp Shelby	Maneuver Area Training Equipment Site	0	15,500	15,500
Army NG	MONTANA	Butte	National Guard Readiness Center	16,000		16,000
Army NG	NEBRASKA	Camp Ashland	Collective Training Unaccompanied Housing	0	11,000	11,000
Army NG	NORTH DAKOTA	Dickinson	National Guard Readiness Center	15,500		15,500
Army NG	SOUTH CAROLINA	McEntire Joint National Guard Base	Hazardous Cargo Pad	0	9,000	9,000
Army NG	VIRGINIA	Troutville	Combined Support Maintenance Shop Addition	6,900		6,900
Army NG	VIRGINIA	Troutville	National Guard Readiness Center Addition	6,100		6,100
Army NG	VIRGINIA	Virginia Army National Guard Sandston	Aircraft Maintenance Hangar	0	5,805	5,805
Army NG	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Planning and Design	22,000	6,000	28,000
Army NG	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Unspecified Minor Construction	39,471		39,471
			Military Construction, Army National Guard Total	257,103	115,105	372,208
Army Res	MICHIGAN	Southfield	Area Maintenance Support Activity	12,000		12,000
Army Res	OHIO	Wright-Patterson Air Force Base	AR Center Training Building/ UHS	19,000		19,000
Army Res	WISCONSIN	Fort McCoy	Transient Training BN HQ	12,200		12,200
Army Res	WISCONSIN	Fort McCoy	Transient Training Enlisted Barracks	0	29,200	29,200
Army Res	WISCONSIN	Fort McCoy	Transient Training Enlisted Barracks	0	29,200	29,200
Army Res	WISCONSIN	Fort McCoy	Transient Training Enlisted Barracks	0	24,000	24,000
Army Res	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Planning and Design	7,167		7,167
Army Res	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Unspecified Minor Construction	14,544		14,544
			Military Construction, Army Reserve Total	64,911	82,400	147,311
N/MC Res	MICHIGAN	Battle Creek	Reserve Center & Vehicle Maintenance Facility	49,090		49,090

N/MC Res	MINNESOTA	Minneapolis	Joint Reserve Intelligence Center	14,350	14,350
N/MC Res	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	MCMR Planning & Design	1,257	1,257
N/MC Res	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	MCMR Unspecified Minor Construction	2,359	1,359
N/MC Res	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	USMCR Planning and Design	4,748	4,748
	Military Construction, Naval Reserve Total			71,804	70,804
Air NG	DELEWARE	Newcastle Air National Guard Base	Replace Fuel Cell/Corrosion Control Hangar	0	17,500
Air NG	IDAHO	Boise Air National Guard Base	Medical Training Facility	0	6,500
Air NG	ILLINOIS	Abraham Capital Airport	Civil Engineering Facility	0	10,200
Air NG	MASSACHUSETTS	Barnes Air National Guard	Combined Engine/ASE/NDI Shop	12,200	12,200
Air NG	MICHIGAN	Alpena County Regional Airport	Aircraft Maintenance Hangar/Shops	23,000	23,000
Air NG	MICHIGAN	W. K. Kellogg Regional Airport	Construct Main Base Entrance	10,000	10,000
Air NG	MISSISSIPPI	Jackson International Airport	Fire Crash and Rescue Station	9,300	9,300
Air NG	NEW YORK	Schenectady Municipal Airport	C-130 Flight Simulator Facility	10,800	10,800
Air NG	OHIO	Camp Perry	Red Horse Logistics Complex	7,800	7,800
Air NG	SOUTH CAROLINA	McEntire Joint National Guard Base	F-16 Mission Training Center	9,800	9,800
Air NG	SOUTH DAKOTA	Joe Foss Field	F-16 Mission Training Center	9,800	9,800
Air NG	WISCONSIN	Truax Field	F-35 3-Bay Specialized Hangar	31,000	31,000
Air NG	WISCONSIN	Truax Field	Medical Readiness Facility	13,200	13,200
Air NG	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Unspecified Minor Construction	29,068	29,068
Air NG	WORLDWIDE UNSPECIFIED	Various Worldwide Locations	Planning and Design	18,402	34,402
Air NG	WYOMING	Cheyenne Municipal Airport	Combined Vehicle Maintenance & ASE Complex	13,400	13,400
	Military Construction, Air National Guard Total			197,770	50,200
AF Res	FLORIDA	Homestead Air Force Reserve Base	Corrosion Control Facility	14,000	14,000
AF Res	FLORIDA	Patrick Air Force Base	Simulator C-130J	18,500	18,500
AF Res	MINNESOTA	Minneapolis-St Paul International Airport	Mission Support Group Facility	14,000	14,000

SEC. 4601, MILITARY CONSTRUCTION
(In Thousands of Dollars)

Account	State/ Country	Installation	Project Title	FY 2022 Request	House Change	House Agreement
AF Res	NEW YORK	Niagara Falls Air Reserve Sta- tion	Main Gate	10,600		10,600
AF Res	OHIO	Youngstown Air Reserve Station	Assault Strip Widening	0	8,700	8,700
AF Res	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Planning & Design	5,830		5,830
AF Res	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Unspecified Minor Military Construction	15,444		15,444
		Military Construction, Air Force Reserve Total		78,374	8,700	87,074
FH Com Army	ITALY	Vicenza	Family Housing New Construction	92,304		92,304
FH Com Army	KWAJALEIN ATOLL	Kwajalein Atoll	Family Housing Replacement Construction	0	10,000	10,000
FH Com Army	PENNSYLVANIA	Tobyhanna Army Depot	Family Housing Replacement Construction	0	7,500	7,500
FH Com Army	PUERTO RICO	Fort Buchanan	Family Housing Replacement Construction	0	14,000	14,000
FH Com Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Family Housing P & D	7,545	15,000	22,545
		Family Housing Construction, Army Total		99,849	46,500	146,349
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Furnishings	18,077		18,077
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Housing Privatization Support	38,404		38,404
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Leasing	128,110		128,110
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Maintenance	111,181		111,181
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Management	42,850		42,850
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Miscellaneous	556		556
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Services	8,277		8,277
FH Ops Army	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Utilities	43,772		43,772
		Family Housing Operation And Maintenance, Army Total		391,227	0	391,227
FH Com Navy	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Construction Improvements	71,884		71,884
FH Com Navy	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Planning & Design	3,634		3,634
FH Com Navy	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	USMC DPRI/Guam Planning and Design	2,098		2,098

Family Housing Construction, Navy And Marine Corps Total		77,616	0	77,616
FH Ops Navy	Worldwide Locations	16,537		16,537
FH Ops Navy	Unspecified Worldwide Locations	54,544		54,544
FH Ops Navy	Unspecified Worldwide Locations	62,567		62,567
FH Ops Navy	Unspecified Worldwide Locations	95,417		95,417
FH Ops Navy	Unspecified Worldwide Locations	54,083		54,083
FH Ops Navy	Unspecified Worldwide Locations	285		285
FH Ops Navy	Unspecified Worldwide Locations	17,637		17,637
FH Ops Navy	Unspecified Worldwide Locations	56,271		56,271
	Family Housing Operation And Maintenance, Navy And Marine Corps Total	357,341	0	357,341
FH Con AF	Georgia	6,000		6,000
FH Con AF	Nebraska	50,000		50,000
FH Con AF	Unspecified Worldwide Locations	49,258		49,258
FH Con AF	Unspecified Worldwide Locations	10,458		10,458
	Family Housing Construction, Air Force Total	115,716	0	115,716
FH Ops AF	Unspecified Worldwide Locations	26,842		26,842
FH Ops AF	Unspecified Worldwide Locations	23,275		23,275
FH Ops AF	Unspecified Worldwide Locations	9,520		9,520
FH Ops AF	Unspecified Worldwide Locations	141,754		141,754
FH Ops AF	Unspecified Worldwide Locations	70,062		70,062
FH Ops AF	Unspecified Worldwide Locations	2,200		2,200
FH Ops AF	Unspecified Worldwide Locations	8,124		8,124
FH Ops AF	Unspecified Worldwide Locations	43,668		43,668
	Family Housing Operation And Maintenance, Air Force Total	325,445	0	325,445
FH Ops DW	Unspecified Worldwide Locations	656		656
FH Ops DW	Unspecified Worldwide Locations	31,430		31,430
FH Ops DW	Unspecified Worldwide Locations	4,166		4,166
FH Ops DW	Unspecified Worldwide Locations	49		49

SEC. 4601. MILITARY CONSTRUCTION
(In Thousands of Dollars)

Account	State/ Country	Installation	Project Title	FY 2022 Request	House Change	House Agreement
FH Ops DW	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	NSA Furnishings	83		83
FH Ops DW	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	NSA Leasing	13,387		13,387
FH Ops DW	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	NSA Utilities	14		14
Family Housing Operation And Maintenance, Defense-Wide Total				49,785	0	49,785
FHIF	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Administrative Expenses—FHIF	6,081		6,081
Unaccompanied Housing Improvement Fund Total				6,081	0	6,081
UHIF	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Administrative Expenses—UHIF	494		494
Unaccompanied Housing Improvement Fund Total				494	0	494
BRAC	WORLDWIDE UNSPECIFIED	Base Realignment & Closure, Army	Base Realignment and Closure	65,301	50,000	115,301
Base Realignment and Closure—Army Total				65,301	50,000	115,301
BRAC	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Base Realignment & Closure	111,155	50,000	161,155
Base Realignment and Closure—Navy Total				111,155	50,000	161,155
BRAC	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	DOD BRAC Activities—Air Force	104,216	50,000	154,216
Base Realignment and Closure—Air Force Total				104,216	50,000	154,216
BRAC	WORLDWIDE UNSPECIFIED	Unspecified Worldwide Locations	Int-4: DLA Activities	3,967		3,967
Base Realignment and Closure—Defense-wide Total				3,967	0	3,967
Total, Military Construction				9,847,031	3,573,919	13,420,950

TITLE XLVII—DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS

SEC. 4701. DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS.

SEC. 4701. DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS (In Thousands of Dollars)

Program	FY 2022 Request	House Change	House Authorized
Discretionary Summary By Appropriation			
Energy And Water Development, And Related Agencies			
Appropriation Summary:			
Energy Programs			
Nuclear Energy	149,800		149,800
Atomic Energy Defense Activities			
National nuclear security administration:			
Weapons activities	15,484,295	460,000	15,944,295
Defense nuclear nonproliferation	1,934,000	60,500	1,994,500
Naval reactors	1,860,705	0	1,860,705
Federal salaries and expenses	464,000	0	464,000
Total, National Nuclear Security Administration	19,743,000	520,500	20,263,500
Environmental and other defense activities:			
Defense environmental cleanup	6,841,670	6,500	6,848,170
Other defense activities	1,170,000	-250,000	920,000
Total, Environmental & other defense activities	8,011,670	-243,500	7,768,170
Total, Atomic Energy Defense Activities	27,754,670	277,000	28,031,670

SEC. 4701. DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS
(In Thousands of Dollars)

Program	FY 2022 Request	House Change	House Authorized
Total, Discretionary Funding	27,904,470	277,000	28,181,470
Nuclear Energy			
Idaho site-wide safeguards and security	149,800		149,800
Total, Nuclear Energy	149,800	0	149,800
Stockpile Management			
Stockpile Major Modernization			
B61-12 Life extension program	771,664		771,664
W88 Alteration Program	207,157		207,157
W80-4 Life extension program	1,080,400		1,080,400
W80-4 ALT SLCM	10,000		10,000
W87-1 Modification Program	691,031		691,031
W93 Program	72,000		72,000
Total, Stockpile Major Modernization	2,832,252	0	2,832,252
Stockpile services			
Production Operations	568,941		568,941
Stockpile Sustainment	1,180,483	-52,000	1,128,483
No funds for B83 service life extension		[-52,000]	
Weapons Dismantlement and Disposition	51,000		51,000
Subtotal, Stockpile Services	1,800,424	-52,000	1,748,424
Total, Stockpile Management	4,632,676	-52,000	4,580,676
Weapons Activities			
Production Modernization			
Primary Capability Modernization			

Plutonium Modernization		
Los Alamos Plutonium Modernization		
Los Alamos Plutonium Operations	660,419	660,419
21-D-512 Plutonium Pk Production Project, LANL	350,000	350,000
Subtotal, Los Alamos Plutonium Modernization	0	1,010,419
Savannah River Plutonium Modernization		
Savannah River Plutonium Operations	128,000	128,000
21-D-511 Savannah River Plutonium Processing Facility, SRS	475,000	475,000
Subtotal, Savannah River Plutonium Modernization	0	603,000
Enterprise Plutonium Support	107,098	107,098
Total, Plutonium Modernization	0	1,720,517
High Explosives and Energetics	68,785	68,785
Total, Primary Capability Modernization	0	1,789,302
Secondary Capability Modernization	488,097	488,097
Tritium and Domestic Uranium Enrichment	489,017	489,017
Non-Nuclear Capability Modernization	144,563	144,563
Total, Production Modernization	0	2,910,979
Stockpile Research, Technology, and Engineering		
Assessment Science	689,578	689,578
Engineering and Integrated Assessments	336,766	351,766
Program increase for plutonium aging assessments	15,000	[15,000]
Inertial Confinement Fusion	71,000	600,000
Program Increase	[71,000]	
Advanced Simulation and Computing	747,012	747,012
Weapon Technology and Manufacturing Maturation	292,630	292,630
Academic Programs	85,645	85,645
Total, Stockpile Research, Technology, and Engineering	86,000	2,766,631
Infrastructure and Operations		
Operations of facilities	1,014,000	1,014,000

SEC. 4701. DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS
(In Thousands of Dollars)

Program	FY 2022 Request	House Change	House Authorized
Safety and environmental operations	165,354		165,354
Maintenance and repair of facilities	670,000	350,000	1,020,000
Program increase		[350,000]	
Recapitalization:			
Infrastructure and safety	508,664		508,664
Capability based investments	143,066		143,066
Total, Recapitalization	651,730	0	651,730
Construction:			
22-D-513 Power Sources Capability, SNL	13,827		13,827
21-D-510, HE Synthesis, Formulation, and Production Facility, PX	44,500		44,500
18-D-690, Lithium Processing Facility, Y-12	171,902		171,902
18-D-650, Tritium Finishing Facility, SRS	27,000		27,000
17-D-640, U1a Complex Enhancements Project, NNS	135,000		135,000
15-D-302, TA-55 Reinvestment Project—Phase 3, LANL	27,000		27,000
06-D-141, Uranium Processing Facility, Y-12	524,000	76,000	600,000
Program increase		[76,000]	
04-D-125, Chemistry and Metallurgy Research Replacement Project, LANL	138,123		138,123
22-D-514 Digital Infrastructure Capability Expansion	8,000		8,000
Total, Construction	1,089,352	76,000	1,165,352
Total, Infrastructure and operations	3,590,436	426,000	4,016,436
Secure transportation asset			
Operations and equipment	213,704		213,704
Program direction	123,060		123,060
Total, Secure transportation asset	336,764	0	336,764

Defense Nuclear Security			
Construction:	824,623	824,623	824,623
17-D-710 West end protected area reduction project, Y-12	23,000	23,000	23,000
Total, Defense nuclear security	847,623	847,623	847,623
Information technology and cybersecurity	406,530	406,530	406,530
Legacy contractor pensions	78,656	78,656	78,656
Total, Weapons Activities	15,484,295	15,484,295	15,944,295
Defense Nuclear Nonproliferation			
Defense Nuclear Nonproliferation Programs			
Global material security			
International nuclear security	79,939	79,939	79,939
Domestic radiological security	158,002	158,002	158,002
International radiological security	85,000	85,000	85,000
Nuclear smuggling detection and deterrence	175,000	175,000	175,000
Total, Global material security	497,941	497,941	497,941
Material management and minimization			
Conversion	100,660	100,660	100,660
Nuclear material removal	42,100	42,100	42,100
Material disposition	200,186	200,186	200,186
Total, Material management & minimization	342,946	342,946	342,946
Nonproliferation and arms control	184,795	184,795	184,795
National Technical Nuclear Forensics R&D	45,000	45,000	45,000
Defense nuclear nonproliferation R&D			
Proliferation Detection	269,407	269,407	299,407
	30,000	30,000	30,000

SEC. 4701. DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS
(In Thousands of Dollars)

Program	FY 2022 Request	House Change	House Authorized
Nuclear verification and detection, next-gen technologies		[30,000]	
Nuclear Detonation Detection	271,000		271,000
Nonproliferation Stewardship Program	87,329	18,500	105,829
Program increase		[18,500]	
Total, Defense nuclear nonproliferation R&D	627,736	48,500	676,236
Nonproliferation Construction:			
18-D-150 Surplus Plutonium Disposition Project, SRS	156,000	-6,500	149,500
Program decrease		[-6,500]	
Total, Nonproliferation construction	156,000	-6,500	149,500
Total, Defense Nuclear Nonproliferation Programs	1,854,418	42,000	1,896,418
Legacy contractor pensions	38,800		38,800
Nuclear counterterrorism and incident response program	356,185	18,500	374,685
Program increase		[18,500]	
Emergency Operations	14,597		14,597
Use of prior-year MOX balances	-330,000		-330,000
Total, Defense Nuclear Nonproliferation	1,934,000	60,500	1,994,500
Naval Reactors			
Naval reactors development	635,684		635,684
Columbia-Class reactor systems development	55,000		55,000
S8G Prototype refueling	126,000		126,000
Naval reactors operations and infrastructure	599,017		599,017
Construction:			
22-D-532 Security Upgrades KL	5,100		5,100

22-D-531 KL Chemistry & Radiological Health Building	41,620	41,620
14-D-901 Spent Fuel Handling Recapitalization Project, NRF	348,705	348,705
Use of prior year balances	-6,000	-6,000
Total, Construction	389,425	389,425
Program direction	55,579	55,579
Total, Naval Reactors	1,860,705	1,860,705
Federal Salaries And Expenses		
Program direction	464,000	464,000
Total, Office Of The Administrator	464,000	464,000
Defense Environmental Cleanup		
Closure sites:		
Closure sites administration	3,987	3,987
Richland:		
River corridor and other cleanup operations	196,000	196,000
Central plateau remediation	689,776	689,776
Richland community and regulatory support	5,121	5,121
Construction:		
18-D-404 Modification of Waste Encapsulation and Storage Facility	8,000	8,000
22-D-401 L-888, 400 Area Fire Station	15,200	15,200
22-D-402 L-897, 200 Area Water Treatment Facility	12,800	12,800
Total, Construction	36,000	36,000
Total, Hanford site	926,897	926,897
Office of River Protection:		
Waste Treatment Immobilization Plant Commissioning	50,000	50,000
Rad liquid tank waste stabilization and disposition	817,642	817,642
Tank farm activities	0	0

SEC. 4701. DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS
(In Thousands of Dollars)

Program	FY 2022 Request	House Change	House Authorized
Construction:			
18-D-16 Waste treatment and immobilization plant—LBI/Direct feed LAW	586,000		586,000
01-D-16D High-Level Waste Facility	60,000		60,000
01-D-16E Pretreatment Facility	20,000		20,000
Total, Construction	666,000	0	666,000
ORP Low-level waste offsite disposal	7,000		7,000
Total, Office of River Protection	1,540,642	0	1,540,642
Idaho National Laboratory:			
Idaho cleanup and waste disposition	358,925		358,925
Idaho excess facilities R&D			
Idaho community and regulatory support	2,658		2,658
Construction:			
22-D-403 Idaho Spent Nuclear Fuel Staging Facility	3,000		3,000
22-D-404 Additional ICDF Landfill Disposal Cell and Evaporation Ponds Project	5,000		5,000
Total, Construction	8,000	0	8,000
Total, Idaho National Laboratory	369,583	0	369,583
NNSA sites and Nevada off-sites			
Lawrence Livermore National Laboratory	1,806		1,806
LLNL Excess Facilities D&D	35,000		35,000
Nuclear facility D & D			
Separations Process Research Unit	15,000		15,000
Nevada	60,737		60,737
Sandia National Laboratories	4,576		4,576

Los Alamos National Laboratory	275,119	275,119	275,119
Los Alamos Excess Facilities D&D	58,381	58,381	58,381
Total, MNSA sites and Nevada off-sites	0	450,619	450,619
Oak Ridge Reservation:			
OR Nuclear facility D & D	274,923	274,923	274,923
Total, OR Nuclear facility D & D	0	274,923	274,923
U233 Disposition Program	55,000	55,000	55,000
OR cleanup and disposition	73,725	73,725	73,725
Construction:			
17-D-401 On-site waste disposal facility	12,500	12,500	12,500
Total, Construction	0	12,500	12,500
Total, OR cleanup and waste disposition	0	141,225	141,225
OR community & regulatory support	5,096	5,096	5,096
OR technology development and deployment	3,000	3,000	3,000
Total, Oak Ridge Reservation	0	424,244	424,244
Savannah River Sites:			
Savannah River risk management operations			
Nuclear Material	312,760	312,760	312,760
Solid Waste Stabilization and Disposition	45,968	45,968	45,968
Soil and Water Remediation	55,439	55,439	55,439
Risk Reduction Deactivation and Surveillance	21,000	21,000	21,000
Infrastructure and Land Management	17,557	17,557	17,557
Construction:			
18-D-402 Emergency Operations Center Replacement, SR	8,999	8,999	8,999
Total, risk management operations	0	461,723	461,723
Savannah River Legacy Pensions	130,882	130,882	130,882
SR community and regulatory support	6,500	6,500	6,500

SEC. 4701. DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS
(In Thousands of Dollars)

Program	FY 2022 Request	House Change	House Authorized
Program increase	890,865	[6,500]	890,865
Radioactive liquid tank waste stabilization and disposition			
Construction:			
20-D-401 Saltstone Disposal Unit #10, 11, 12	19,500		19,500
19-D-701 SR Security system replacement	5,000		5,000
18-D-402 Saltstone Disposal Unit #8/9	68,000		68,000
Total, Construction	92,500	0	92,500
Total, Savannah River site	1,581,775	6,500	1,588,275
Waste Isolation Pilot Plant			
Waste Isolation Pilot Plant	350,424		350,424
Construction:			
15-D-411 Safety significant confinement ventilation system, WIPP	55,000		55,000
15-D-412 Exhaust Shaft, WIPP	25,000		25,000
Total, Construction	80,000	0	80,000
Total, Waste Isolation Pilot Plant	430,424	0	430,424
Program direction	293,106		293,106
Program support	62,979		62,979
Technology development	25,000		25,000
Safeguards and Security	316,744		316,744
Federal Contribution to the Uranium Enrichment D&D Fund	415,670		415,670
Total, Defense Environmental Cleanup	6,841,670	6,500	6,848,170
Other Defense Activities			
Environment, health, safety and security			
Environment, health, safety and security	130,809		130,809

Program direction	75,511		75,511
Total, Environment, Health, safety and security	206,320	0	206,320
Independent enterprise assessments			
Independent enterprise assessments	27,335		27,335
Program direction	56,049		56,049
Total, Independent enterprise assessments	83,384	0	83,384
Specialized security activities	283,500		283,500
Office of Legacy Management			
Legacy management	408,797	-250,000	158,797
Rejection of proposed transfer of FUSRAP		[-250,000]	
Program direction	19,933		19,933
Total, Office of Legacy Management	428,730	-250,000	178,730
Defense related administrative support	163,710		163,710
Office of hearings and appeals	4,356		4,356
Subtotal, Other defense activities	1,170,000	-250,000	920,000
Total, Other Defense Activities	1,170,000	-250,000	920,000

**DIVISION E—NON-DEPARTMENT OF DEFENSE
MATTERS****TITLE L—BARRY GOLDWATER SCHOLARSHIP AND
EXCELLENCE IN EDUCATION MODERNIZATION
ACT**

Section 5001—Short Title

This section would create the short title for the “Barry Goldwater Scholarship and Excellence in Education Modernization Act of 2021”. This title would be a modification to the Barry Goldwater Scholarship and Excellence in Education Foundation Authorization included in the National Defense Authorization Act for Fiscal Year 1986 (Public Law 99–145) in honor of Senator Barry Goldwater.

Section 5002—Clarifying Amendments to Definitions

This section would amend section 1403 of the Barry Goldwater Scholarship and Excellence in Education Act (20 U.S.C. 4702) to include the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau.

Section 5003—Barry Goldwater Scholarship and Excellence in
Education Awards

This section would amend sections 1405(a) and 1405(b) of the Barry Goldwater Scholarship and Excellence in Education Act (20 U.S.C. 4704(a) and 20 U.S.C. 4704(b)) by adding research internships and expanding the fields of study to also include engineering. This section would also prioritize scholarships and research internships for students attending community colleges and minority-serving institutions.

Section 5004—Stipends

This section would amend section 1406 of the Barry Goldwater Scholarship and Excellence in Education Act (20 U.S.C. 4705) to include internship stipends.

Section 5005—Scholarship and Research Internship Conditions

This section would amend section 1407 of the Barry Goldwater Scholarship and Excellence in Education Act (20 U.S.C. 4706) to include conditions and reports for research internships.

Section 5006—Sustainable Investments of Funds

This section would amend section 1408 of the Barry Goldwater Scholarship and Excellence in Education Act (20 U.S.C. 4707) to allow under certain conditions for the investment of up to 40 percent of any public or private funds received by the Foundation after the date of enactment of the Barry Goldwater Scholarship and Excellence in Education Modernization Act of 2021 in securities other than public debt securities of the United States.

Section 5007—Administrative Provisions

This section would amend section 1411(a) of the Barry Goldwater Scholarship and Excellence in Education Act (20 U.S.C. 4710(a)) to allow for the appointment of no more than three employees to carry out the provisions of this title, without regard to the provisions in chapter 33 of title 5, United States Code, with certain exceptions.

TITLE LI—FINANCIAL SERVICES MATTERS

Section 5101—Enhanced Protection against Debt Collector Harassment of Servicemembers

This section would amend section 805 of the Fair Debt Collection Practices Act (15 U.S.C. 1692c) to prohibit a debt collector from using unfair threatening practices in connection with the collection of debt from servicemembers and veterans.

Section 5102—Comptroller General Study on Enhanced Protection against Debt Collector Harassment of Servicemembers

This section would require the Comptroller General of the United States to conduct a study and submit a report concerning the implementation of the enhanced protections of debt collector harassment of service members.

Section 5103—Support to Enhance the Capacity of International Monetary Fund Members to Evaluate the Legal and Financial Terms of Sovereign Debt Contracts

This section would require the Secretary of the Treasury to direct the United States Executive Director at the International Monetary Fund to advocate that the Fund provide technical assistance to Fund members seeking to enhance their capacity to evaluate the legal and financial terms of sovereign debt contracts.

Section 5104—Adverse Information in Cases of Trafficking

This section would prohibit a consumer reporting agency from furnishing a consumer report containing adverse items of information about a consumer that resulted from a severe form of trafficking in persons or sex trafficking.

Section 5105—United States Policy regarding International Financial Institution Assistance with Respect to Advanced Wireless Technologies

This section would require the Secretary of the Treasury to instruct the United States Executive Directors at each international financial institute to support assistance to advanced wireless technologies if they provide appropriate security for users, encourage assistance that facilitate the use of security advanced wireless technologies, and cooperate, to the maximum extent practicable, with member states to strengthen international support for such technologies. The section would further require annual reporting on progress made toward such policy.

TITLE LII—RECOMMENDATIONS OF THE NATIONAL SECURITY COMMISSION ON ARTIFICIAL INTELLIGENCE

ITEMS OF SPECIAL INTEREST

Additional Software Acquisition Contracting Mechanism

The committee appreciates the Defense Innovation Board (DIB) and its May 2019 software acquisition report. The report called for a new acquisition pathway for software that would prioritize continuous integration and delivery of working software in a secure manner, with continuous oversight from automated analytics. The report also included a recommendation for an accompanying rapid contracting mechanism to support the software pathway. This committee created the software pathway in Section 800 of the Fiscal Year 2020 National Defense Authorization Act (Public Law 116–333), and the Department of Defense issued its formal policy on the pathway on October 2, 2020. The committee is aware that the rapid contracting mechanism was never authorized nor implemented. Therefore, the committee directs the Secretary of Defense to provide a report to the House Committee on Armed Services no later than October 1, 2022 analyzing whether a new contracting mechanism would accelerate the delivery of critical software to warfighters and users and support the software acquisition pathway developed pursuant to section 800 of the FY2020 NDAA, and outlined in Department of Defense 5000.02 and 5000.87 policy. If the Secretary assesses that a new contracting mechanism would be beneficial, the Secretary shall include in the report a plan to develop and establish an agile contracting mechanism that would enable the Department to acquire software more rapidly than existing contracting mechanisms currently allow.

In the report, the Secretary shall consider whether and how a new agile mechanism could have the potential to—

- (1) streamline the processes for selection of software development contractors;
- (2) make use of contracts that ensure key software development personnel are used effectively;
- (3) allow the user community to provide input in a timelier manner than available under existing contracting mechanisms;
- (4) use cost estimates that reflect the anticipated size and complexity of the effort and leverage agile cost estimation best practices;
- (5) use performance metrics to measure deployment frequency, lead time, change fail rate, mean time to restore, and the speed of recovery from cybersecurity-related outages;
- (6) incorporate value assessments conducted by the user community to provide direct feedback regarding the usefulness, accessibility, and user experience of the software; and
- (7) improve the Department's overall ability to deliver effective and modern software to users and warfighters.

Comptroller General Report on STEM/AI Workforce Development

The National Security Commission on Artificial Intelligence's (AI) final report highlighted that the Department of Defense and

the Intelligence Community (IC) both face an alarming talent deficit in their digital and AI workforce and that America is not prepared to defend or compete in the AI era—a reality that demands comprehensive, whole-of-nation action. China’s ambition to surpass the United States as the world’s AI leader within a decade should be taken seriously. To address this daunting challenge, the Commission emphasized that the government must expand science, technology, engineering, and mathematics (STEM), to include AI, talent pipelines from universities to government service, to include streamlining the hiring process and building new training infrastructure such as a digital service academy. In 2018 the Comptroller General evaluated federal investment in STEM education fields and found that government efforts to assess the performance of STEM programs are limited and hinder efforts to identify effective programs. The United States government, and particularly the Department, cannot afford to fall behind in the development of a robust STEM workforce when AI and other emerging technology tools will be vital in future conflicts.

Therefore, the committee directs the Comptroller General to provide a briefing to the congressional defense committees not later than March 31, 2022, with a report to follow on the Department’s—including the defense intelligence components’—progress in developing a robust STEM, to include AI, workforce. The review shall assess the Department’s:

(1) current organization and workforce planning process for their STEM, to include AI, workforce needs, including the identification of STEM skills and the resources currently dedicated to the hiring, training, and retention of their STEM workforces;

(2) plans and efforts to expand hiring in their STEM workforce, including collaboration with industry and academia, the broadening of recruiting pipelines, and mechanisms to attract the best AI talent;

(3) efforts to grow the training infrastructure for their STEM workforce, such as special schools or online training programs, and continuing professional education; and

(4) efforts to improve the retention and visibility of their STEM workforce, including the availability of non-financial benefits, the implementation of flexible career paths, and the development of management structures to enhance the workforce.

Enhancing Department of Defense Innovation Efforts Focused on Policy Analytics and Insights

There are multiple innovation initiatives being developed organically within the Department of Defense and the committee believes it is critical to ensure these efforts can be scaled, including by transitioning them to programs of record. Initiatives generated by the internal Department innovation ecosystem to solve systemic problems, however, often lack a single proponent and rarely become programs of record.

The committee is aware that through the GAMECHANGER program built on the ADVANA platform, the Department is developing the ability to use artificial intelligence to map and analyze the vast and evolving landscape of Department policy, regulations, and strategies to provide decision makers the ability to quickly search millions of pages of documents to identify a comprehensive

catalogue of information to make more efficient policy decisions. This type of analytic capability has the ability to significantly advance how the Department and its workforce make decisions.

To this end, the committee directs the Director of the Joint Artificial Intelligence Center in consultation with the Chief Data Officer and the Comptroller to provide a briefing to the House Committee on Armed Services no later than February 1, 2022 on GAMECHANGER, its current usage inside the Department, the potential need to transition it to a program of record, and efforts to identify and encourage similar programs across the defense enterprise.

LEGISLATIVE PROVISIONS

Section 5201—Modification of National Defense Science and Technology Strategy

This section would modify the National Defense Science and Technology Strategy, required by section 218 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232), by expanding what the Under Secretary of Defense for Research and Engineering is responsible to consider and include, and require the Under Secretary to update the strategy and deliver a report to the congressional defense committees in the year following each fiscal year during which the National Defense Strategy is submitted.

Section 5202—Department of Defense Plan to Compete in the Global Information Environment

This section would require the Secretary of Defense to develop a strategy to ensure superiority in the global information environment and articulate how the Department of Defense intends to support the larger U.S. Government effort.

Section 5203—Resourcing Plan for Digital Ecosystem

This section would direct the Secretary of Defense to develop a plan detailing the requisite investments required to develop and implement Department of Defense strategy and guidance documents for a modern, robust digital ecosystem.

Section 5204—Digital Talent Recruiting Officer

This section would direct the Secretary of Defense to designate a chief digital recruiting officer within the Office of the Under Secretary of Defense for Personnel and Readiness responsible for identifying and recruiting individuals with specific types of civilian digital talent.

Section 5205—Occupational Series for Digital Career Fields

This section would direct the Director of the Office of Personnel Management to establish or update one or more occupational series for digital career fields.

Section 5206—Artificial Intelligence Readiness Goals

This section would require the Secretary of Defense to review the potential applications of artificial intelligence and digital technology to Department of Defense platforms, processes, and operations and establish performance objectives and accompanying metrics for the incorporation of artificial intelligence and digital readiness into such platforms, processes, and operations.

Section 5207—Pilot Program to Facilitate the Agile Acquisition of Technologies for Warfighters

This section would, subject to the availability of appropriations in a program element for this purpose, direct the Secretary of Defense to establish and carry out a 5 year pilot program to be known as the “Warfighter Innovation Transition Project” to provide grants to, or enter into contracts or other agreements with, innovative technology producers to transition their technologies from pilot programs, prototype projects, or other research and development programs into production for implementation within the Department of Defense. This section would also direct the Secretary to collect and analyze data and submit biannual reports to the congressional defense committees no later than March 1 and September 1 of each year, on the value of each grant, contract, or other agreement; the technology funded; the estimated future costs of the technology; and any lessons learned from the pilot effort.

Section 5208—Short Course on Emerging Technologies for Senior Civilian Leaders

This section would require the Secretary of Defense to establish a short course on emerging technologies for senior executive-level civilian leaders.

TITLE LIII—GREAT LAKES WINTER SHIPPING

Section 5301—Great Lakes Winter Shipping

This section would authorize the Great Lakes Winter Shipping Act of 2021.

TITLE LX—OTHER MATTERS

Section 6001—FAA Rating of Civilian Pilots of the Department of Defense

This section would require the Federal Aviation Administration (FAA) to modify section 61.73 of title 14, Code of Federal Regulations, so that Department of Defense civilian pilots who receive the same training, instruction, and qualifications as their Active Duty, Reserve, and National Guard counterparts receive the same treatment with respect to FAA recognition of pilot ratings.

Section 6002—Property Disposition for Affordable Housing

This section would amend section 5334(h)(1) of title 49, United States Code, and would allow for the transfer of government land for the use of affordable housing.

Section 6003—Requirement to Establish a National Network for
Microelectronics Research and Development

This would amend section 9903(b)(1) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283) to require the Secretary of Defense to establish a national network for microelectronics research and development.

Section 6004—Definition of State for Purposes of Omnibus Crime
Control and Safe Streets Act of 1968

This section would modify section 901 of the Omnibus Crime Control and Safe Streets Act of 1968 (Public Law 90–351) by treating American Samoa and Northern Mariana Islands as separate jurisdictions for Department of Justice Byrne Justice Assistance Grants.

Section 6005—Advancing Mutual Interests and Growing Our
Success

This section would identify Portugal as a described foreign state for the purposes of clauses (i) and (ii) of section 101(a)(15)(E) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(15)(E)) if the Government of Portugal provides similar nonimmigrant status to nationals of the United States and modify the eligibility criteria under that section of the Act for E visas.

Section 6006—Department of Veterans Affairs Governors
Challenge Grant Program

This section would allow the Department of Veterans Affairs to use its current Governors Challenge funds for implementation as well as development of veteran suicide programs in States.

Section 6007—Foreign Corruption Accountability

This section would authorize the President to impose visa sanctions on foreign persons for engaging in public corruption activities against a United States person and require submission to the appropriate Congressional committees of a yearly report on the use of this authority.

Section 6008—Justice for Victims of Kleptocracy

This section would amend chapter 46 of title 18, United States Code, to require a public accounting of any property relating to foreign government corruption that is forfeited to the United States under section 981 or 982.

Section 6009—Expansion of Scope of Department of Veterans Af-
fairs Open Burn Pit Registry to Include Open Burn Pits in Egypt
and Syria

This section would expand the open burn pit registry of the Department of Veterans Affairs to include open burn pits located in Egypt and Syria.

Section 6010—Extension of Period of Eligibility by Reason of School Closures Due to Emergency and Other Situations under Department of Veterans Affairs Training and Rehabilitation Program for Veterans with Service-Connected Disabilities

This section would authorize the Secretary of Veterans Affairs to stop GI Bill and veterans training and rehabilitation benefits expiring when a national emergency or other issue prevents attendance.

Section 6011—Extension of Time Limitation for Use of Entitlement under Department of Veterans Affairs Educational Assistance Programs by Reason of School Closures Due to Emergency and Other Situations

This section would authorize the Secretary of Veterans Affairs to extend the time limitation of GI Bill and post 9/11 educational assistance benefits from expiring in case of school closure.

Section 6012—Exemption of Certain Homeland Security Fees for Certain Immediate Relatives of an Individual Who Received the Purple Heart

This section would exempt the immediate family members (spouses, parents, children) of Purple Heart recipients from United States Citizenship and Immigration Services' naturalization processing fees.

DEPARTMENT OF DEFENSE AUTHORIZATION REQUEST

The Department of Defense requested legislation, in accordance with the program of the President, as illustrated by the correspondence set out below:

JUNE 7, 2021.

Hon. NANCY PELOSI,
Speaker of the House of Representatives,
Washington, DC.

DEAR MADAM SPEAKER: Enclosed please find a draft of proposed legislation, titled the "National Defense Authorization Act for Fiscal Year 2022", which the Department of Defense requests be enacted during the second session of the 117th Congress.

The purpose of each provision in the proposed bill is stated in the accompanying section-by-section analysis.

The Department is currently working with the Administration on additional legislative initiatives, which the Department hopes to transmit to Congress for its consideration in the coming weeks.

The Office of Management and Budget advises that there is no objection, from the standpoint of the Administration's program, to the presenting of these legislative proposals for your consideration and the consideration of Congress.

Sincerely yours,

LOUIS LAUTER,
Acting.

Enclosures: As Stated

JUNE 18, 2021.

Hon. NANCY PELOSI,
Speaker of the House of Representatives,
Washington, DC.

DEAR MADAM SPEAKER: Enclosed please find additional legislative proposals that the Department of Defense requests be enacted during the second session of the 117th Congress. The purpose of each proposal is stated in the accompanying section-by-section analysis. The Department submits these proposals as a follow-on to the earlier transmittal of our request for enactment of proposed legislation titled the "National Defense Authorization Act for Fiscal Year 2022"

The Department is currently working with the Administration on additional legislative initiatives, which the Department hopes to transmit to Congress for its consideration in the coming weeks.

The Office of Management and Budget advises that there is no objection, from the standpoint of the Administration's program, to the presenting of these legislative proposals for your consideration and the consideration of Congress.

Sincerely yours,

LOUIS LAUTER,
Acting.

Enclosures: As Stated

JUNE 24, 2021.

Hon. NANCY PELOSI,
Speaker of the House of Representatives,
Washington, DC.

DEAR MADAM SPEAKER: Enclosed please find additional legislative proposals that the Department of Defense requests be enacted during the first session of the 117th Congress. The purpose of each proposal is stated in the accompanying section-by-section analysis. The Department submits these proposals as a follow-on to the earlier transmittal of our request for enactment of proposed legislation titled the "National Defense Authorization Act for Fiscal Year 2022".

The Department is currently working with the Administration on additional legislative initiatives, which the Department hopes to transmit to Congress for its consideration in the coming weeks.

The Office of Management and Budget advises that there is no objection, from the standpoint of the Administration's program, to the presenting of these legislative proposals for your consideration and the consideration of Congress.

Sincerely yours,

LOUIS LAUTER,
Acting.

Enclosures: As Stated

JUNE 30, 2021.

Hon. NANCY PELOSI,
Speaker of the House of Representatives,
Washington, DC.

DEAR MADAM SPEAKER: Enclosed please find additional legislative proposals that the Department of Defense requests be enacted during the first session of the 117th Congress. The purpose of each proposal is stated in the accompanying section-by-section analysis. The Department submits these proposals as a follow-on to the earlier transmittal of our request for enactment of proposed legislation titled the "National Defense Authorization Act for Fiscal Year 2022".

The Department is currently working with the Administration on additional legislative initiatives, which the Department hopes to transmit to Congress for its consideration in the coming weeks.

The Office of Management and Budget advises that there is no objection, from the standpoint of the Administration's program, to the presenting of these legislative proposals for your consideration and the consideration of Congress.

Sincerely yours,

LOUIS LAUTER,
Acting.

Enclosures: As Stated

JULY 2, 2021.

Hon. NANCY PELOSI,
Speaker of the House of Representatives,
Washington, DC.

DEAR MADAM SPEAKER: Enclosed please find additional legislative proposals that the Department of Defense requests be enacted during the first session of the 117th Congress. The purpose of the proposal is stated in the accompanying section-by-section analysis. The Department submits this proposals as a follow-on to the earlier transmittal of our request for enactment of proposed legislation titled the "National Defense Authorization Act for Fiscal Year 2022".

The Department is currently working with the Administration on additional legislative initiatives, which the Department hopes to transmit to Congress for its consideration in the coming weeks.

Sincerely yours,

LOUIS LAUTER,
Acting.

Enclosures: As Stated

JULY 22, 2021.

Hon. NANCY PELOSI,
Speaker of the House of Representatives,
Washington, DC.

DEAR MADAM SPEAKER: Enclosed please find additional legislative proposals that the Department of Defense requests be enacted during the first session of the 117th Congress. The purpose of each proposal is stated in the accompanying section-by-section analysis. The Department submits these proposals as a follow-on to the earlier transmittal of our request for enactment of proposed legislation

titled the “National Defense Authorization Act for Fiscal Year 2022”.

The Department is currently working with the Administration on additional legislative initiatives, which the Department hopes to transmit to Congress for its consideration in the coming weeks.

The Office of Management and Budget advises that there is no objection, from the standpoint of the Administration’s program, to the presenting of these legislative proposals for your consideration and the consideration of Congress.

Sincerely yours,

LOUIS LAUTER,
Acting.

Enclosures: As Stated.

JULY 23, 2021.

Hon. NANCY PELOSI,
Speaker of the House of Representatives,
Washington, DC.

DEAR MADAM SPEAKER: Enclosed please find additional legislative proposals that the Department of Defense requests be enacted during the first session of the 117th Congress. The purpose of each proposal is stated in the accompanying section-by-section analysis. The Department submits these proposals as a follow-on to the earlier transmittal of our request for enactment of proposed legislation titled the “National Defense Authorization Act for Fiscal Year 2022”.

The Department is currently working with the Administration on additional legislative initiatives, which the Department hopes to transmit to Congress for its consideration in the coming weeks.

The Office of Management and Budget advises that there is no objection, from the standpoint of the Administration’s program, to the presenting of these legislative proposals for your consideration and the consideration of Congress.

Sincerely yours,

LOUIS LAUTER,
Acting.

Enclosures: As Stated.

COMMUNICATIONS FROM OTHER COMMITTEES

HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOUSE ADMINISTRATION,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on House Administration.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee’s right to sequential referral. I do so with the

understanding that by waiving consideration of the bill, the Committee on House Administration does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

ZOE LOFGREN,
Chairperson.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. ZOE LOFGREN,
*Chairperson, Committee on House Administration,
House of Representatives, Washington, DC.*

DEAR CHAIRPERSON LOFGREN: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on House Administration has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on House Administration is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Agriculture.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Agriculture does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to

name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

DAVID SCOTT,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. DAVID SCOTT,
*Chairman, Committee on Agriculture,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SCOTT: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Agriculture has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Agriculture is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON APPROPRIATIONS,
Washington, DC, September 9, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the rule X jurisdiction of the Committee on Appropriations.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Appropriations does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its rule X jurisdiction. I request that you urge the Speaker to name members of this Committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit

in which you have worked regarding this matter and others between our respective committees.

Sincerely,

ROSA L. DELAURO,
Chair.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. ROSA L. DELAURO,
*Chair, Committee on Appropriations,
House of Representatives, Washington, DC.*

DEAR CHAIR DELAURO: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Appropriations has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Appropriations is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
Washington, DC, September 7, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the House Budget Committee.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Budget Committee does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

JOHN YARMUTH,
Chair.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. JOHN YARMUTH,
Chair, Committee on the Budget
House of Representatives, Washington, DC.

DEAR CHAIR YARMUTH: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Budget Committee has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Budget Committee is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Education and Labor.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Education and Labor does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

ROBERT C. "BOBBY" SCOTT,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. ROBERT C. "BOBBY" SCOTT,
*Chairman, Education and Labor,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SCOTT: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Education and Labor has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Education and Labor is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Energy and Commerce.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Energy and Commerce does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

FRANK PALLONE, JR.,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. FRANK PALLONE, JR.,
Chairman, Committee on Energy and Commerce
House of Representatives, Washington, DC.

DEAR CHAIRMAN PALLONE: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Energy and Commerce has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Energy and Commerce is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON FINANCIAL SERVICES,
Washington, DC, September 7, 2021.

Hon. ADAM SMITH,
Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.

Dear MR. CHAIRMAN: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Financial Services.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Financial Services does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

MAXINE WATERS,
Chairwoman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. MAXINE WATERS,
*Chairwoman, Committee on Financial Services,
House of Representatives, Washington, DC.*

DEAR CHAIRWOMAN WATERS: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Financial Services has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Financial Services is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON FOREIGN AFFAIRS,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the House Committee on Foreign Affairs.

In the interest of permitting expeditious consideration of this legislation, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Foreign Affairs does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and the House Foreign Affairs looks forward to continue working the House Armed Services Committee on the FY 2022 National Defense Authorization Act.

Sincerely,

GREGORY W. MEEKS,
Chair.

HOUSE OF REPRESENTATIVES,
 COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. GREGORY W. MEEKS,
*Chair, Committee on Foreign Affairs,
 House of Representatives, Washington, DC.*

DEAR CHAIR MEEKS: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Foreign Affairs has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Foreign Affairs is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
 COMMITTEE ON HOMELAND SECURITY,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
 House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Homeland Security.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Homeland Security does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

BENNIE G. THOMPSON,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. BENNIE G. THOMPSON,
*Chairman, Committee on Homeland Security,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN THOMPSON: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Homeland Security has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Homeland Security is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE JUDICIARY,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the House Judiciary Committee.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the House Judiciary Committee does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

JERROLD NADLER,
Chairman.

HOUSE OF REPRESENTATIVES,
 COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. JERROLD NADLER,
*Chairman, Committee on the Judiciary,
 House of Representatives, Washington, DC.*

DEAR CHAIRMAN NADLER: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the House Judiciary Committee has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the House Judiciary Committee is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
 COMMITTEE ON NATURAL RESOURCES,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chair, Committee on Armed Services,
 House of Representatives, Washington, DC.*

DEAR CHAIR SMITH: In recognition of the goal of expediting consideration of H.R. 4350, the "National Defense Authorization Act for Fiscal Year 2022," the Committee on Natural Resources agrees to waive formal consideration of the bill as to provisions that fall within the Rule X jurisdiction of the Committee on Natural Resources.

The Committee on Natural Resources takes this action with the mutual understanding that, in doing so, we do not waive any jurisdiction over the subject matter contained in this or similar legislation, and that the Committee will be appropriately consulted and involved as the bill or similar legislation moves forward so that we may address any remaining issues within our jurisdiction. Our Committee also reserves the right to seek appointment of conferees to any House-Senate conference involving this or similar legislation.

Thank you for agreeing to include our exchange of letters in the Congressional Record. I appreciate your cooperation regarding this legislation and look forward to continuing to work with you as this measure moves through the legislative process.

Sincerely,

RAÚL M. GRIJALVA,
Chair.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. RAÚL M. GRIJALVA,
*Chair, Committee on Natural Resources,
House of Representatives, Washington, DC.*

DEAR CHAIR GRIJALVA: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Natural Resources has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Natural Resources is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON OVERSIGHT AND REFORM,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Oversight and Reform.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee does not waive any future jurisdictional claim over the subject matters contained in the bill that fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee that is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

CAROLYN B. MALONEY,
Chairwoman.

HOUSE OF REPRESENTATIVES,
 COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. CAROLYN B. MALONEY,
*Chairwoman, Committee on Oversight and Reform,
 House of Representatives, Washington, DC.*

DEAR CHAIRWOMAN MALONEY: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Oversight and Reform has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Oversight and Reform is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
 COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, DC, September 7, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
 House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Science, Space, and Technology.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Science, Space, and Technology does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

EDDIE BERNICE JOHNSON,
Chairwoman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. EDDIE BERNICE JOHNSON,
*Chairwoman, Committee on Science, Space, and Technology,
House of Representatives, Washington, DC.*

DEAR CHAIRWOMAN JOHNSON: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Science, Space, and Technology has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Science, Space, and Technology is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
Washington, DC, September 3, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Small Business.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Small Business does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

NYDIA M. VELÁZQUEZ,
Chairwoman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. NYDIA M. VELÁZQUEZ,
*Chairwoman, Committee on Small Business,
House of Representatives, Washington, DC.*

DEAR CHAIRWOMAN VELÁZQUEZ: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Small Business has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Small Business is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC, September 2, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Transportation and Infrastructure.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Transportation and Infrastructure does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

PETER A. DEFAZIO,
Chair.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. PETER A. DEFAZIO,
*Chair, Committee on Transportation and Infrastructure,
House of Representatives, Washington, DC.*

DEAR CHAIR DEFAZIO: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Transportation and Infrastructure has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Transportation and Infrastructure is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON VETERANS' AFFAIRS,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I am writing to you concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. There are certain provisions in the legislation that fall within the Rule X jurisdiction of the Committee on Veterans' Affairs.

In the interest of permitting your committee to proceed expeditiously to floor consideration of this important bill, I am willing to waive this committee's right to sequential referral. I do so with the understanding that by waiving consideration of the bill, the Committee on Veterans' Affairs does not waive any future jurisdictional claim over the subject matters contained in the bill which fall within its Rule X jurisdiction. I request that you urge the Speaker to name members of this committee to any conference committee which is named to consider such provisions.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

MARK TAKANO,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. MARK TAKANO,
*Chairman, Committee on Veterans' Affairs,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN TAKANO: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Committee on Veterans' Affairs has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Committee on Veterans' Affairs is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

HOUSE OF REPRESENTATIVES,
PERMANENT SELECT COMMITTEE ON INTELLIGENCE,
Washington, DC, September 8, 2021.

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SMITH: I write in response to your committee's request, and concerning H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. Certain provisions in the legislation fall within the jurisdiction of the Permanent Select Committee on Intelligence (the "Committee"), as established by Rule X of the Rules of the House of Representatives for the 117th Congress.

In the interest of expediting floor consideration of this important bill, I am willing to waive the Committee's right to request a sequential referral. By doing so, the Committee does not waive any future claim over subjects addressed in the bill which fall within the Committee's jurisdiction. I also request that you urge the Speaker to name members of the Committee to any conference committee on the bill.

Please place this letter into the committee report on H.R. 4350 and into the Congressional Record during consideration of the measure on the House floor. Thank you for the cooperative spirit in which you have worked regarding this matter and others between our respective committees.

Sincerely,

ADAM B. SCHIFF,
Chairman.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, September 9, 2021.

Hon. ADAM B. SCHIFF,
*Chairman, Permanent Select Committee on Intelligence,
House of Representatives, Washington, DC.*

DEAR CHAIRMAN SCHIFF: Thank you for your letter regarding H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022. I agree that the Permanent Select Committee on Intelligence has valid jurisdictional claims to certain provisions in this important legislation, and I am most appreciative of your decision not to request a referral in the interest of expediting consideration of the bill. I agree that by foregoing a sequential referral, the Permanent Select Committee on Intelligence is not waiving its jurisdiction. Further, this exchange of letters will be included in the committee report on the bill.

Sincerely,

ADAM SMITH,
Chairman.

CONGRESSIONAL BUDGET OFFICE ESTIMATE

In compliance with clause 3(c)(3) of rule XIII of the House of Representatives, the cost estimate prepared by the Congressional Budget Office and submitted pursuant to section 402 of the Congressional Budget Act of 1974 is as follows:

CONGRESSIONAL BUDGET OFFICE PRELIMINARY COST ESTIMATE

SEPTEMBER 9, 2021.

Re: Direct Spending and Revenue Effects of H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022

Hon. ADAM SMITH,
*Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has completed the enclosed estimate of the direct spending and revenue effects of H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022, as ordered reported by the House Committee on Armed Services on September 2, 2021. This estimate is based on the Committee Print 117–13 that was posted to the website of the House Committee on Rules on September 7, 2021.

Enacting the bill would have an insignificant effect on net direct spending and revenues, CBO estimates. Our complete cost estimate of H.R. 4350, including a discussion of discretionary authorizations and mandates under the Unfunded Mandates Reform Act, will be provided shortly.

Four provisions of the bill would significantly affect both direct spending and revenues. However, those effects would offset overall so that the net effect on the deficit would be insignificant over the 2022–2031 period (see Table 1).

- Section 713 would allow the Department of Defense (DoD) to levy fines on providers in the military health system who

commit fraud and abuse and would allow DoD to retain and spend those amounts without further appropriation. Fines are classified in the budget as revenues, and the spending of those amounts would constitute direct spending.

- Section 703(a) would require DoD to waive beneficiary cost sharing for telehealth services during public health emergencies, which would increase direct spending.

- Section 703(b) would authorize military retirees who serve in the Ready Reserve to receive both retired pay and duty pay, which would increase direct spending for retirement benefits.

- Section 703(c) would allow military retirees who declined to enroll in the Survivor Benefit Plan during the period provided in current law to enroll during the period beginning on the enactment date of the bill and ending January 1, 2023. That provision would decrease direct spending over the budget window.

Other provisions in H.R. 4350 would have insignificant effects on direct spending and revenues.

Because the bill would affect direct spending and revenues, statutory pay-as-you-go procedures apply.

CBO estimates that enacting H.R. 4350 would not increase on-budget deficits by more than \$5 billion in any of the four consecutive 10-year periods beginning in 2032.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Matt Schmit.

Sincerely,

PHILLIP L. SWAGEL,
Director.

Enclosure.

TABLE 1—ESTIMATED CHANGES IN DIRECT SPENDING AND REVENUES UNDER H.R. 4350, AS ORDERED REPORTED BY THE HOUSE COMMITTEE ON ARMED SERVICES ON SEPTEMBER 2, 2021, AND POSTED ON THE WEBSITE OF THE HOUSE COMMITTEE ON RULES AS COMMITTEE PRINT 117–13 ON SEPTEMBER 7, 2021

	By fiscal year, millions of dollars—													
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2021–2026	2021–2031	
INCREASES OR DECREASES (–) IN DIRECT SPENDING														
Military Health Fraud and Abuse Program μ 1A ^a														
Section 713														
Estimated Budget Authority ...	0	0	3	5	7	8	9	9	10	10	11	23	72	
Estimated Outlays	0	0	3	5	7	8	9	9	10	10	11	23	72	
Cost Sharing for Telehealth μ 1A ^b														
Section 703(a)														
Estimated Budget Authority ...	0	*	1	1	1	1	1	1	1	1	1	4	9	
Estimated Outlays	0	*	1	1	1	1	1	1	1	1	1	4	9	
Retirees in the Reserves μ 1A ^c														
Section 703(b)														
Estimated Budget Authority ...	0	1	1	1	1	2	2	2	2	2	2	6	16	
Estimated Outlays	0	1	1	1	1	2	2	2	2	2	2	6	16	
Survivor Benefit Plan μ 1A ^d														
Section 703(c)														
Estimated Budget Authority ...	0	–19	–2	–1	–1	–1	–1	*	*	*	*	–24	–25	
Estimated Outlays	0	–19	–2	–1	–1	–1	–1	*	*	*	*	–24	–25	

TABLE 1—ESTIMATED CHANGES IN DIRECT SPENDING AND REVENUES UNDER H.R. 4350, AS ORDERED REPORTED BY THE HOUSE COMMITTEE ON ARMED SERVICES ON SEPTEMBER 2, 2021, AND POSTED ON THE WEBSITE OF THE HOUSE COMMITTEE ON RULES AS COMMITTEE PRINT 117–13 ON SEPTEMBER 7, 2021—Continued

	By fiscal year, millions of dollars—													2021–2026	2021–2031
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031				
Total Changes in Direct Spending															
Estimated Budget Authority ...	0	–18	3	6	8	10	11	12	13	13	14	9	72		
Estimated Outlays	0	–18	3	6	8	10	11	12	13	13	14	9	72		
INCREASES IN REVENUES															
Military Health Fraud and Abuse Program ^{1A}	0	0	3	5	7	8	9	9	10	10	11	23	72		
NET INCREASE OR DECREASE (–) IN THE DEFICIT FROM CHANGES IN DIRECT SPENDING AND REVENUES															
Effect on the Deficit	0	–18	*	1	1	2	2	3	3	3	3	–14	*		

Components may not sum to totals because of rounding; * = between –\$500,000 and \$500,000. Estimates relative to CBO’s July 2021 baseline.

CBO estimates that enacting H.R. 4350 would not increase on-budget deficits by more than \$5 billion in any of the four consecutive 10-year periods beginning in 2032. Other provisions in H.R. 4350 would have insignificant effects on direct spending and revenues.

^{1A}Section 713 would allow the Department of Defense (DoD) to levy fines on providers in the military health system who commit fraud and abuse and would allow DoD to retain and spend those amounts without further appropriation. Fines are classified in the budget as revenues, and the spending of those amounts would constitute direct spending.

^{1A}Section 703(a) would require DoD to waive beneficiary cost sharing for telehealth appointments during public health emergencies. This would increase DoD’s cost of providing care to almost all beneficiaries of the military health system. Most of the costs would be discretionary, with the exception of costs related to retirees of the Coast Guard, National Oceanic and Atmospheric Administration, and Public Health Service. Those costs are paid from mandatory appropriations.

^{1A}Section 703(b) would allow military retirees who serve in the Ready Reserve to receive both retired pay and duty pay. Under current law retirees who serve must forfeit retired pay. CBO expects that more retirees would serve in the reserves as a result of the change. The accumulation of additional service time would increase their retired pay, which is paid from the Military Retirement Fund, a mandatory account.

^{1A}Section 703(c) would allow retirees of the uniformed services who declined to enroll in the Survivor Benefit Plan (SBP) during the period provided in current law to enroll during the period beginning on the date of enactment and ending on January 1, 2023. As a condition of their enrollment, they would be required to make retroactive premium payments back to the date on which they were originally eligible to enroll in SBP. On net, this would increase receipts in the near term; that reduction is classified as a decrease in direct spending. Spending would eventually increase over time as survivor benefits are paid from the Military Retirement Fund, a mandatory account.

STATEMENT REQUIRED BY THE CONGRESSIONAL BUDGET ACT

Pursuant to clause (3)(c)(2) of rule XIII of the Rules of the House of Representatives, and section 308(a) of the Congressional Budget Act of 1974 (Public Law 93–344):

(1) this legislation does not provide budget authority subject to an allocation made pursuant to section 302(b) of Public Law 93–344;

(2) the Congressional Budget Office (CBO) Estimate included in this report pursuant to clause (3)(c)(3) of rule XIII of the Rules of the House of Representatives contains CBO’s projection of how this legislation will affect the levels of budget authority, budget outlays, revenues, and tax expenditures for fiscal year 2022 and for the ensuing 5 fiscal years; and

(3) the CBO Estimate does not identify any new budget authority for assistance to state and local governments by this measure at the time that this report was filed.

COMMITTEE COST ESTIMATE

Pursuant to clause 3(d)(2)(B) of Rule XIII of the Rules of the House of Representatives, the Congressional Budget Office estimate included in this report satisfies the requirement for the committee to include an estimate by the committee of the costs incurred in carrying out this bill.

DISCLOSURE OF EARMARKS AND CONGRESSIONALLY
DIRECTED SPENDING ITEMS

The following table is submitted in compliance with clause 9 of rule XXI of the Rules of the House of Representatives, and lists the congressional earmarks (as defined in paragraph (e) of clause 9) contained in the bill or in this report. Neither the bill nor the report contain any limited tax benefits or limited tariff benefits as defined in paragraphs (f) or (g) of clause 9 of rule XXI.

COMPLIANCE WITH HOUSE RULE XXI
(Community Project Funding Items)

TITLE	ACCOUNT	PE	LINE	PROJECT NAME	PROJECT RECIPIENT	PROJECT LOCATION	AMOUNT (Dollars in Thou- sands)	MEMBER
4201	RDA	0602141A	008	Research and Development of Next Generation Explosives and Propellants	Virginia Polytechnic Institute and State University	Blacksburg, VA	1,000	Griffith, H. Morgan (VA)
4201	RDA	0602144A	011	The Army Research Lab's (ARL) Additive Manufacturing/Machine Learning (AM/ML) Initiative	Carnegie Mellon University	Pittsburgh, PA	5,000	Lamb, Conor (PA)
4201	RDA	0602145A	012	High-efficiency Truck Users Forum (HTUF)	CALSTART	Pasadena, CA	2,500	Chu, Judy (CA)
4201	RDA	0602145A	012	Structural Thermoplastics Large-Scale Low-Cost Tooling Solutions	University of Maine	Orono, ME	4,500	Golden, Jared F. (ME)
4201	RDA	0602146A	013	Future Nano- and Micro-Fabrication - Advanced Materials Engineering Research Institute	Florida International University	Miami-Dade County, FL	6,800	Wilson, Frederica S. (FL)
4201	RDA	0602146A	013	Multiple Drone, Multiple Sensor ISR Capabilities	University of Memphis	Memphis, TN	5,000	Cohen, Steve (TN)
4201	RDA	0602146A	013	Future Nano and Micro-Fabrication - Advanced Materials Engineering Research Institute	Florida International University	Miami-Dade, FL	6,800	Wasserman Schultz, Debbie (FL)
4201	RDA	0602787A	025	Human Performance Optimization (HPO) Center	University of Texas Health Science Center SA	San Antonio, TX	2,000	Cuellar, Henry (TX)
4201	RDA	0602787A	025	Suicide Prevention with Focus on Rural, Remote, Isolated, and OCONUS Installations	University of Alaska Fairbanks	Fairbanks, AK	2,000	Young, Don (AK)
4201	RDA	0603119A	038	Military Operations in a Permafrost Environment	US Army Corps of Engineers - CRREL	Fort Wainwright, AK	3,000	Young, Don (AK)
4201	RDN	0601153N	003	Digital Twins for Navy Maintenance	Morgan State University	Baltimore, MD	1,985	Brown, Anthony G. (MD)
4201	RDN	0602747N	012	Connected AI for Autonomous UUV Systems	Florida Atlantic University	Boca Raton, FL	5,000	Deutch, Theodore E. (FL)

COMPLIANCE WITH HOUSE RULE XXI—Continued
(Community Project Funding Items)

TITLE	ACCOUNT	PE	LINE	PROJECT NAME	PROJECT RECIPIENT	PROJECT LOCATION	AMOUNT (Dollars in Thou- sands)	MEMBER
4201	RDN	0602747N	012	Persistent Maritime Surveillance	Florida Atlantic University	Boca Raton, FL	5,000	Deutch, Theodore E. (FL)
4201	RDN	0602747N	012	Persistent Maritime Surveillance	Florida Atlantic University	Boca Raton, FL	5,000	Wasserman Schultz, Debbie (FL)
4201	RDN	0602747N	012	Connected AI for Autonomous UUV Systems	Florida Atlantic University	Boca Raton, FL	5,000	Wasserman Schultz, Debbie (FL)
4201	RDN	0702207N	251	Defense Industrial Skills and Technology Training	The Roux Institute at Northeastern University	Portland, ME	5,000	Golden, Jared F. (ME)
4201	RDAF	0601103F	002	Neural-enabled Prosthetics: Virtual and Remote Reality	Florida International Uni- versity	Miami-Dade, FL	1,500	Wilson, Frederica S. (FL)
4201	RDAF	0601103F	002	Neural-enabled Prosthetics	Florida International Uni- versity	Miami-Dade, FL	1,500	Wasserman Schultz, Debbie (FL)
4201	RDAF	0602102F	005	Affordable Multifunctional Aerospace Com- posites	FSU High Performance Ma- terials Institute	Tallahassee, FL	10,000	Lawson, Jr., Al (FL)
4201	RDAF	0602605F	013	Directed Energy Research and Education for Workforce Development	University of New Mexico	Albuquerque, NM	2,500	Leger Fernandez, Teresa (NM)
4201	RDAF	0602788F	014	Assessment of a National Laboratory for Transformational Computing	University of California San Diego	La Jolla, San Diego County, CA	2,000	Levin, Mike (CA)
4201	RDAF	0602788F	014	Assessment of a National Laboratory for Transformational Computing	University of California San Diego	La Jolla, San Diego County, CA	2,000	Peters, Scott H. (CA)
4201	RDAF	0603216F	022	Development of Advanced Propulsion Tech- nologies for Hypersonic Systems	FAMU-FSU College of Engi- neering	Tallahassee, FL	5,000	Lawson, Jr., Al (FL)
4201	RDAF	0603680F	029	Additive Manufacturing and Ultra-High Performance Concrete	Florida International Uni- versity	Miami-Dade, FL	5,000	Wilson, Frederica S. (FL)
4201	RDAF	0603680F	029	Additive Manufacturing and Ultra-High Performance Concrete	Florida International Uni- versity	Miami-Dade, FL	5,000	Wasserman Schultz, Debbie (FL)

4201	RDAF	0304310F	247	Mobilizing Civilian Expertise for National Security Education on Geo-Economics, and Innovation in the Era of Great Power Competition	University of California San Diego	La Jolla, San Diego County, CA	5,000	Levin, Mike (CA)
4201	RDAF	0304310F	247	Mobilizing Civilian Expertise for National Security Education on Geo-Economics, and Innovation in the Era of Great Power Competition	University of California San Diego	La Jolla, San Diego County, CA	5,000	Peters, Scott H. (CA)
4201	RDSF	1206860SF	029	Small Rocket Program	Alaska Aerospace Corporation - State of Alaska	Anchorage, AK	4,000	Young, Don (AK)
4201	RDSF	1203182SF	041	Tactically Responsive Launch/Deployable Spaceport	Alaska Aerospace Corporation - State of Alaska	Anchorage, AK	7,000	Young, Don (AK)
4201	RDDW	0601101E	002	Novel Analytical and Empirical Approaches to the Prediction and Monitoring of Disease Transmission	American Museum of Natural History	New York, NY	1,500	Nadler, Jerrold (NY)
4201	RDDW	0601110D8Z	004	Florida Memorial University Department of Natural Sciences STEM Equipment	Florida Memorial University	Miami Gardens, FL	400	Wilson, Frederica S. (FL)
4201	RDDW	0601110D8Z	004	SOUTHCOM Enhanced Domain Awareness (EDA) Initiative	Florida International University	Miami-Dade County, FL	1,300	Wilson, Frederica S. (FL)
4201	RDDW	0601110D8Z	004	SOUTHCOM Enhanced Domain Awareness (EDA) Initiative	Florida International University	Miami-Dade, FL	1,300	Wasserman Schultz, Debbie (FL)
4201	RDDW	0601120D8Z	006	Florida Memorial Avionics Smart Scholars	Florida Memorial University	Miami Gardens, FL	1,000	Wilson, Frederica S. (FL)
4201	RDDW	0601228D8Z	007	Augmenting Quantum Sensing Research, Education and Training in DoD CoE at DSU	Delaware State University	Dover, DE	1,111	Blunt Rochester, Lisa (DE)
4201	RDDW	0601228D8Z	007	HBCU Training for the Future of Aerospace	Florida Memorial University	Miami Gardens, FL	1,000	Wilson, Frederica S. (FL)
4201	RDDW	0603680D8Z	050	Cold Spray and Rapid Deposition Lab	Florida International University	Miami-Dade County, FL	1,300	Wilson, Frederica S. (FL)
4201	RDDW	0603680D8Z	050	Cold Spray and Rapid Deposition Lab	Florida International University	Miami-Dade, FL	1,300	Wasserman Schultz, Debbie (FL)
4601	MCA			Anniston Army Depot Welding Facility	Anniston Army Depot	Anniston, AL	25,000	Rogers, Mike (AL)
4601	MCA			Fort Detrick Medical Waste Incinerator	US Army Garrison, Fort Detrick	Frederick, MD	23,981	Trone, David J. (MD)

COMPLIANCE WITH HOUSE RULE XXI—Continued
(Community Project Funding Items)

TITLE	ACCOUNT	PE	LINE	PROJECT NAME	PROJECT RECIPIENT	PROJECT LOCATION	AMOUNT (Dollars in Thou- sands)	MEMBER
4601	MCA			Medical Waste Incinerator Building	Fort Detrick	Frederick, MD	23,981	Brown, Anthony G. (MD)
4601	MCA			Wellfield Expansion Resilience Project	Fort Drum	Fort Drum, NY	27,000	Stefanik, Elise M. (NY)
4601	MCN			P1231 - Wastewater Treatment Plant, MCAGCC 29 Palms, CA	MCAGCC 29 Palms	Twentynine Palms, CA	45,000	Oberroffe, Jay (CA)
4601	MCN			P021 - Lighterage and Small Craft Facility	Marine Corps Support Fa- cility Blount Island	Jacksonville, FL	7,000	Rutherford, John H. (FL)
4601	MCN			Contained Burn Facility	NSWC Indian Head	Indian Head, MD	1,500	Hoyer, Steny H. (MD)
4601	MCN			Contained Burn Facility	Naval Surface Warfare Center, Indian Head	Indian Head, MD	1,500	Brown, Anthony G. (MD)
4601	MCN			Aircraft Prototyping Facility Phase III	Patuxent River Naval Air Station	Patuxent River, MD	1,500	Hoyer, Steny H. (MD)
4601	MCN			Advanced Prototype Facility, Phase 3	Naval Air Station Patuxent River	Patuxent River, MD	1,500	Brown, Anthony G. (MD)
4601	MCN			Entry Control Point	Naval Air Station - Kingsville	Kingsville, TX	2,500	Vela, Filemon (TX)
4601	MCAF			New Entrance Road and Gate Complex-- Barksdale Air Force Base, Louisiana	United States Air Force	Bossier City, LA	36,000	Johnson, Mike (LA)
4601	MCAF			Military Working Dog Kennel	JB Andrews - Naval Air Facility	Joint Base Andrews, MD	7,800	Brown, Anthony G. (MD)
4601	MCAF			Fire Crash Rescue Station	JB Andrews	JB Andrews, MD	26,000	Brown, Anthony G. (MD)
4601	MCAF			Child Development Center, Wright Patter- son Air Force Base	Air Force Materiel Com- mand, US Air Force	Wright Patterson Air Force Base, OH	24,000	Turner, Michael R. (OH)

4601	MCAF	Child Development Center - Lackland Air Force Base	Lackland Air Force Base	San Antonio, TX	22,000	Gonzales, Tony (TX)
4601	MCDW	SOF Basic Training Command (P855), Coronado, CA	Naval Amphibious Base Coronado	San Diego, CA	20,500	Peters, Scott H. (CA)
4601	MCARNG	National Guard Readiness Center	Joint Base Elmendorf Richardson	Joint Base Elmendorf Richardson (JBER), AK	5,000	Young, Don (AK)
4601	MCARNG	281703 Maneuver Area Training Equipment Site (MATES) Project	Mississippi Army National Guard	Camp Shelby, MS	15,500	Palazzo, Steven M. (MS)
4601	MCARNG	Planning & Design Funding for Virginia Army National Guard Aviation Support Facility Relocation. "Aircraft Maintenance Hangar- Sandston, Virginia"	Aircraft Maintenance Hangar- Sandston, Virginia	Sandston, VA	5,805	McEachin, A. Donald (VA)
4601	MCANG	Replace Fuel Cell/Corrosion Control Hangar	Delaware National Guard	New Castle, DE	17,500	Blunt Rochester, Lisa (DE)
4601	MCANG	183d Wing, Civil Engineering Facility	183d Wing, Abraham Capital Airport, IL ANG	Springfield, IL	10,200	Underwood, Lauren (IL)
4601	MCANG	DCFT059018 - Construct Base Civil Engineer Complex	183d Wing, Illinois Air National Guard	Springfield, IL	10,200	LaHood, Darin (IL)
4601	MCANG	DCFT059018 - Construct Base Civil Engineer Complex	183d Wing, Illinois Air National Guard	Springfield, IL	10,200	Davis, Rodney (IL)
4601	MCANG	DCFT 059018 - Construct Base Civil Engineer Complex Abraham Lincoln Capital Airport (ANG), Springfield, Illinois	Illinois National Guard	Springfield, IL	10,200	Bustos, Cheri (IL)
4601	MCAFR	Medical Training Facility (BXRH189029)	Idaho Air National Guard	Boise, ID	6,500	Simpson, Michael K. (ID)
4601	MCAFR	Youngstown Air Reserve Station - Assault Strip Widening	Youngstown Air Reserve Station	Vienna, OH	8,700	Joyce, David P. (OH)
4601	MCAFR	Youngstown Air Reserve Station Assault Strip Widening	Youngstown Air Reserve Station	Vienna, OH	8,700	Ryan, Tim (OH)
4601	MCAFR	Camp Garfield Unpaved Assault Runway Construction	Youngstown Air Force Reserve Station	Ravenna, OH	8,700	Gonzalez, Anthony (OH)

OVERSIGHT FINDINGS

With respect to clause 3(c)(1) of rule XIII of the Rules of the House of Representatives, this legislation results from hearings and other oversight activities conducted by the committee pursuant to clause 2(b)(1) of rule X. The findings are reflected in the body of this report.

GENERAL PERFORMANCE GOALS AND OBJECTIVES

With respect to clause 3(c)(4) of rule XIII of the Rules of the House of Representatives, the general goals and objectives of H.R. 4350 are to maintain the national defense, to prepare the United States to meet current and future challenges to the national defense, and to accomplish each of those goals and objectives in a responsible manner.

The bill provides \$768.1 billion to support national defense requirements. The bill includes funding to provide a 2.7 percent pay raise for service members, to invest in key maintenance and readiness areas, and to modernize the force to deter potential adversaries.

The bill continues the longstanding work of the Committee on Armed Services to provide U.S. military forces with sufficient resources to maintain the national defense, and it fulfills the committee's duties under Article I, Section 8, of the Constitution.

STATEMENT OF FEDERAL MANDATES

The committee adopts as its own the estimate of Federal mandates prepared by the Director of the Congressional Budget Office pursuant to section 423 of the Unfunded Mandates Reform Act.

FEDERAL ADVISORY COMMITTEE STATEMENT

Consistent with the requirements of section 5(b) of the Federal Advisory Committee Act, the committee finds that the functions of the proposed advisory committees authorized in the bill are not currently being performed, nor could they be performed, by one or more agencies, an advisory committee already in existence, or by enlarging the mandate of an existing advisory committee.

APPLICABILITY TO THE LEGISLATIVE BRANCH

The committee finds that section 1110 of H.R. 4350 relates to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104-1).

Section 1110 of the bill would amend the Family and Medical Leave Act of 1993 to provide that 12 months of Active Duty service in the Armed Forces fulfills the service requirement for eligibility for Federal Employee Family and Medical Leave, a benefit that applies to legislative branch employees.

DUPLICATION OF FEDERAL PROGRAMS

Pursuant to clause 3(c)(5) of rule XIII, no provision of H.R. 4350 establishes or reauthorizes a program of the Federal Government known to be duplicative of another Federal program, a program

that was included in any report from the Government Accountability Office to Congress pursuant to section 21 of Public Law 111–139, or a program related to a program identified in the most recent Catalog of Federal Domestic Assistance.

COMMITTEE VOTES

In accordance with clause 3(b) of rule XIII of the Rules of the House of Representatives, record votes were taken with respect to the committee's consideration of H.R. 4350. The record of these votes is contained in the following pages.

The committee ordered H.R. 4350 to be reported to the House with a favorable recommendation by a vote of 57–2 a quorum being present.

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 1

H.R. 4350

On Slotkin Log 1123r1—To require the Department of Defense to adhere to the most stringent standard in each location when conducting PFAS remediation and removal.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers		x	
Mr. Langevin	x			Mr. Wilson		x	
Mr. Larsen	x			Mr. Turner		x	
Mr. Cooper	x			Mr. Lamborn		x	
Mr. Courtney	x			Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler		x	
Ms. Speier	x			Mr. Scott		x	
Mr. Norcross	x			Mr. Brooks		x	
Mr. Gallego	x			Mr. Graves			
Mr. Moulton	x			Ms. Stefanik		x	
Mr. Carbajal	x			Dr. DesJarlais		x	
Mr. Brown	x			Mr. Kelly		x	
Mr. Khanna	x			Mr. Gallagher		x	
Mr. Keating	x			Mr. Gaetz		x	
Mr. Vela	x			Mr. Bacon		x	
Mr. Kim	x			Mr. Banks		x	
Ms. Houlahan	x			Ms. Cheney		x	
Mr. Crow	x			Mr. Bergman		x	
Ms. Slotkin	x			Mr. Waltz			
Ms. Sherrill	x			Mr. Johnson		x	
Ms. Escobar	x			Mr. Green		x	
Mr. Golden	x			Mrs. Bice		x	
Mrs. Luria	x			Mr. Franklin		x	
Mr. Morelle	x			Mrs. McClain		x	
Ms. Jacobs	x			Mr. Jackson		x	
Mr. Kahele	x			Mr. Carl		x	
Ms. Strickland	x			Mr. Moore		x	
Mr. Veasey	x			Mr. Fallon		x	
Mr. Panetta	x						
Ms. Murphy	x						

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Horsford	x						
Roll Call Vote Total:	31	26	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 2

H.R. 4350

On Slotkin Log 1114—To prohibit DoD procurement of certain items containing a perfluoroalkyl substance or polyfluoroalkyl substance, including cookware, cooking utensils, cleaning products, and sunscreen.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers		x	
Mr. Langevin	x			Mr. Wilson		x	
Mr. Larsen	x			Mr. Turner		x	
Mr. Cooper	x			Mr. Lamborn		x	
Mr. Courtney	x			Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler		x	
Ms. Speier	x			Mr. Scott		x	
Mr. Norcross	x			Mr. Brooks		x	
Mr. Gallego	x			Mr. Graves			
Mr. Moulton	x			Ms. Stefanik		x	
Mr. Carbajal	x			Dr. DesJarlais		x	
Mr. Brown	x			Mr. Kelly		x	
Mr. Khanna	x			Mr. Gallagher		x	
Mr. Keating	x			Mr. Gaetz	x		
Mr. Vela	x			Mr. Bacon		x	
Mr. Kim	x			Mr. Banks		x	
Ms. Houlahan	x			Ms. Cheney		x	
Mr. Crow	x			Mr. Bergman		x	
Ms. Slotkin	x			Mr. Waltz		x	
Ms. Sherrill	x			Mr. Johnson		x	
Ms. Escobar	x			Mr. Green		x	
Mr. Golden	x			Mrs. Bice		x	
Mrs. Luria		x		Mr. Franklin		x	
Mr. Morelle	x			Mrs. McClain		x	
Ms. Jacobs	x			Mr. Jackson		x	
Mr. Kahele	x			Mr. Carl		x	
Ms. Strickland	x			Mr. Moore		x	
Mr. Veasey	x			Mr. Fallon		x	
Mr. Panetta	x						
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	31	27	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 3

H.R. 4350

On Banks Log 1001r1—To require a report related to the Joint Enterprise Defense Infrastructure cloud procurement for the Department of Defense.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves			
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria	x			Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	30	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 4

H.R. 4350

On Wittman Log 1497 (Substitute for Garamendi Log 1211)—To require the Secretary of the Navy to provide a report as to cost and schedule impacts associated with requiring certain components to be procured consistent with section 2534 of title 10, U.S.C.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton	x			Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria	x			Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy	x						
Mr. Horsford		x					
Roll Call Vote Total:	31	28	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 5

H.R. 4350

On Rogers Log 1463r1—To increase the fiscal year 2022 defense topline by \$23.9 billion.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin	x			Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney	x			Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton	x			Ms. Stefanik	x		
Mr. Carbajal	x			Dr. DesJarlais	x		
Mr. Brown	x			Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela	x			Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin	x			Mr. Waltz	x		
Ms. Sherrill	x			Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden	x			Mrs. Bice	x		
Mrs. Luria	x			Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele	x			Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey	x			Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	42	17	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 6

H.R. 4350

On Waltz Log 680—To ban the sale of products from sponsors of the Beijing 2022 Winter Olympics on military installations for four years.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner		x	
Mr. Cooper		x		Mr. Lamborn		x	
Mr. Courtney		x		Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler		x	
Ms. Speier		x		Mr. Scott		x	
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik			
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore		x	
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	22	36	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 7

H.R. 4350

On Hartzler Log 935—To require the Department of Defense to submit a report to Congress that provides a clear definition of the term extremism.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 8

H.R. 4350

On Kelly Log 1027r2—To strike subtitle F of title X, District of Columbia National Guard Home Rule.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 9

H.R. 4350

On Speier Log 700—To eliminate cost-sharing for contraception provided under TRICARE for one year.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers		x	
Mr. Langevin	x			Mr. Wilson		x	
Mr. Larsen	x			Mr. Turner		x	
Mr. Cooper	x			Mr. Lamborn		x	
Mr. Courtney	x			Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler		x	
Ms. Speier	x			Mr. Scott		x	
Mr. Norcross	x			Mr. Brooks		x	
Mr. Gallego	x			Mr. Graves		x	
Mr. Moulton	x			Ms. Stefanik		x	
Mr. Carbajal	x			Dr. DesJarlais		x	
Mr. Brown	x			Mr. Kelly		x	
Mr. Khanna	x			Mr. Gallagher		x	
Mr. Keating	x			Mr. Gaetz		x	
Mr. Vela	x			Mr. Bacon		x	
Mr. Kim	x			Mr. Banks		x	
Ms. Houlahan	x			Ms. Cheney		x	
Mr. Crow	x			Mr. Bergman		x	
Ms. Slotkin	x			Mr. Waltz		x	
Ms. Sherrill	x			Mr. Johnson		x	
Ms. Escobar	x			Mr. Green		x	
Mr. Golden	x			Mrs. Bice		x	
Mrs. Luria	x			Mr. Franklin		x	
Mr. Morelle	x			Mrs. McClain		x	
Ms. Jacobs	x			Mr. Jackson		x	
Mr. Kahele	x			Mr. Carl		x	
Ms. Strickland	x			Mr. Moore		x	
Mr. Veasey	x			Mr. Fallon		x	
Mr. Panetta	x						
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	31	28	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 10

H.R. 4350

On Speier Log 737—To authorize a survey of servicemembers on lethal-means safety.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers		x	
Mr. Langevin	x			Mr. Wilson		x	
Mr. Larsen	x			Mr. Turner		x	
Mr. Cooper	x			Mr. Lamborn		x	
Mr. Courtney	x			Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler		x	
Ms. Speier	x			Mr. Scott		x	
Mr. Norcross	x			Mr. Brooks		x	
Mr. Gallego	x			Mr. Graves		x	
Mr. Moulton	x			Ms. Stefanik		x	
Mr. Carbajal	x			Dr. DesJarlais		x	
Mr. Brown	x			Mr. Kelly		x	
Mr. Khanna	x			Mr. Gallagher		x	
Mr. Keating	x			Mr. Gaetz		x	
Mr. Vela	x			Mr. Bacon		x	
Mr. Kim	x			Mr. Banks		x	
Ms. Houlahan	x			Ms. Cheney		x	
Mr. Crow	x			Mr. Bergman		x	
Ms. Slotkin	x			Mr. Waltz		x	
Ms. Sherrill	x			Mr. Johnson		x	
Ms. Escobar	x			Mr. Green		x	
Mr. Golden		x		Mrs. Bice		x	
Mrs. Luria		x		Mr. Franklin		x	
Mr. Morelle	x			Mrs. McClain		x	
Ms. Jacobs	x			Mr. Jackson		x	
Mr. Kahele	x			Mr. Carl		x	
Ms. Strickland	x			Mr. Moore		x	
Mr. Veasey	x			Mr. Fallon		x	
Mr. Panetta	x						
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	29	30	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 11

H.R. 4350

On Wittman Log 1502 (Substitute to Norcross Log 699)—To require a report on the effect of increasing enhanced domestic content requirements for major defense acquisition programs.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler		x	
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	27	32	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 12

H.R. 4350

On Turner Log 865—To extend the prohibition on use of funds for transfer or release of individuals detained at United States Naval Base, Guantanamo Bay, Cuba.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 13

H.R. 4350

On Turner Log 866—To extend the prohibition on the use of funds to construct or modify facilities in the United States to house detainees transferred from United States Naval Base, Guantanamo Bay, Cuba.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 14

H.R. 4350

On Norcross Log 699—To require enhanced domestic content requirements for major defense acquisition programs.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers		x	
Mr. Langevin	x			Mr. Wilson		x	
Mr. Larsen	x			Mr. Turner		x	
Mr. Cooper	x			Mr. Lamborn		x	
Mr. Courtney	x			Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler	x		
Ms. Speier	x			Mr. Scott		x	
Mr. Norcross	x			Mr. Brooks		x	
Mr. Gallego	x			Mr. Graves		x	
Mr. Moulton	x			Ms. Stefanik		x	
Mr. Carbajal	x			Dr. DesJarlais		x	
Mr. Brown	x			Mr. Kelly		x	
Mr. Khanna	x			Mr. Gallagher		x	
Mr. Keating	x			Mr. Gaetz	x		
Mr. Vela	x			Mr. Bacon	x		
Mr. Kim	x			Mr. Banks	x		
Ms. Houlahan	x			Ms. Cheney		x	
Mr. Crow	x			Mr. Bergman		x	
Ms. Slotkin	x			Mr. Waltz	x		
Ms. Sherrill	x			Mr. Johnson		x	
Ms. Escobar	x			Mr. Green		x	
Mr. Golden	x			Mrs. Bice		x	
Mrs. Luria	x			Mr. Franklin		x	
Mr. Morelle	x			Mrs. McClain		x	
Ms. Jacobs	x			Mr. Jackson		x	
Mr. Kahele	x			Mr. Carl		x	
Ms. Strickland	x			Mr. Moore		x	
Mr. Veasey	x			Mr. Fallon		x	
Mr. Panetta	x						
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	36	23	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 15

H.R. 4350

On Fallon Log 1062—To express the sense of Congress that border security is a matter of national security.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlihan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin	x			Mr. Waltz	x		
Ms. Sherrill	x			Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden	x			Mrs. Bice	x		
Mrs. Luria	x			Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy	x						
Mr. Horsford		x					
Roll Call Vote Total:	33	26	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 16

H.R. 4350

On Cheney Log 1506—To restore funding for the B83-1 warhead.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 17

H.R. 4350

On Houlahan Log 835—To modernize the Selective Service System.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers		x	
Mr. Langevin	x			Mr. Wilson		x	
Mr. Larsen	x			Mr. Turner		x	
Mr. Cooper	x			Mr. Lamborn		x	
Mr. Courtney	x			Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler		x	
Ms. Speier	x			Mr. Scott		x	
Mr. Norcross	x			Mr. Brooks		x	
Mr. Gallego	x			Mr. Graves		x	
Mr. Moulton	x			Ms. Stefanik		x	
Mr. Carbajal	x			Dr. DesJarlais		x	
Mr. Brown	x			Mr. Kelly		x	
Mr. Khanna	x			Mr. Gallagher		x	
Mr. Keating	x			Mr. Gaetz		x	
Mr. Vela	x			Mr. Bacon		x	
Mr. Kim		x		Mr. Banks		x	
Ms. Houlahan	x			Ms. Cheney	x		
Mr. Crow	x			Mr. Bergman	x		
Ms. Slotkin	x			Mr. Waltz	x		
Ms. Sherrill	x			Mr. Johnson		x	
Ms. Escobar	x			Mr. Green		x	
Mr. Golden	x			Mrs. Bice		x	
Mrs. Luria	x			Mr. Franklin	x		
Mr. Morelle	x			Mrs. McClain		x	
Ms. Jacobs	x			Mr. Jackson		x	
Mr. Kahele	x			Mr. Carl		x	
Ms. Strickland	x			Mr. Moore		x	
Mr. Veasey	x			Mr. Fallon	x		
Mr. Panetta	x						
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	35	24	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 18

H.R. 4350

On Waltz Log 1514 (Perfecting to Green Log 1494)—To express the sense of Congress that Congress has lost confidence in President Biden's ability to perform his duties as Commander in Chief of the United States Armed Forces.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 19

H.R. 4350

On Banks Log 816—To prohibit the promotion of anti-American and racist theories in the Armed Forces.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 20

H.R. 4350

On Green Log 928—To prohibit Federal funds from being obligated or expended to provide training or education based on critical race theory at a Federal service academy.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 21

H.R. 4350

On Hartzler Log 936—To prohibit schools operated by the Department of Defense Education Activity from teaching critical race theory.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith		x		Mr. Rogers	x		
Mr. Langevin		x		Mr. Wilson	x		
Mr. Larsen		x		Mr. Turner	x		
Mr. Cooper		x		Mr. Lamborn	x		
Mr. Courtney		x		Mr. Wittman	x		
Mr. Garamendi		x		Mrs. Hartzler	x		
Ms. Speier		x		Mr. Scott	x		
Mr. Norcross		x		Mr. Brooks	x		
Mr. Gallego		x		Mr. Graves	x		
Mr. Moulton		x		Ms. Stefanik	x		
Mr. Carbajal		x		Dr. DesJarlais	x		
Mr. Brown		x		Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating		x		Mr. Gaetz	x		
Mr. Vela		x		Mr. Bacon	x		
Mr. Kim		x		Mr. Banks	x		
Ms. Houlahan		x		Ms. Cheney	x		
Mr. Crow		x		Mr. Bergman	x		
Ms. Slotkin		x		Mr. Waltz	x		
Ms. Sherrill		x		Mr. Johnson	x		
Ms. Escobar		x		Mr. Green	x		
Mr. Golden		x		Mrs. Bice	x		
Mrs. Luria		x		Mr. Franklin	x		
Mr. Morelle		x		Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele		x		Mr. Carl	x		
Ms. Strickland		x		Mr. Moore	x		
Mr. Veasey		x		Mr. Fallon	x		
Mr. Panetta		x					
Ms. Murphy		x					
Mr. Horsford		x					
Roll Call Vote Total:	28	31	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 22

H.R. 4350

On Brown Log 1252r4— To counter extremism in the Armed Forces by establishing a dedicated office within the Department of Defense, training requirements, data collection and reporting, and by requiring the Secretary of Defense to develop a definition for extremism.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers		x	
Mr. Langevin	x			Mr. Wilson		x	
Mr. Larsen	x			Mr. Turner		x	
Mr. Cooper	x			Mr. Lamborn		x	
Mr. Courtney	x			Mr. Wittman		x	
Mr. Garamendi	x			Mrs. Hartzler		x	
Ms. Speier	x			Mr. Scott		x	
Mr. Norcross	x			Mr. Brooks		x	
Mr. Gallego	x			Mr. Graves		x	
Mr. Moulton	x			Ms. Stefanik		x	
Mr. Carbajal	x			Dr. DesJarlais		x	
Mr. Brown	x			Mr. Kelly		x	
Mr. Khanna	x			Mr. Gallagher		x	
Mr. Keating	x			Mr. Gaetz		x	
Mr. Vela	x			Mr. Bacon		x	
Mr. Kim	x			Mr. Banks		x	
Ms. Houlahan	x			Ms. Cheney		x	
Mr. Crow	x			Mr. Bergman		x	
Ms. Slotkin	x			Mr. Waltz		x	
Ms. Sherrill	x			Mr. Johnson		x	
Ms. Escobar	x			Mr. Green		x	
Mr. Golden	x			Mrs. Bice		x	
Mrs. Luria	x			Mr. Franklin		x	
Mr. Morelle	x			Mrs. McClain		x	
Ms. Jacobs	x			Mr. Jackson		x	
Mr. Kahele	x			Mr. Carl		x	
Ms. Strickland	x			Mr. Moore		x	
Mr. Veasey	x			Mr. Fallon		x	
Mr. Panetta	x						
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	31	28	0				

COMMITTEE ON ARMED SERVICES

ROLL CALL VOTE NO. 23

H.R. 4350

On the Motion to Report the Bill Favorably to the House, As Amended.

Member	Aye	No	Present	Member	Aye	No	Present
Mr. Smith	x			Mr. Rogers	x		
Mr. Langevin	x			Mr. Wilson	x		
Mr. Larsen	x			Mr. Turner	x		
Mr. Cooper	x			Mr. Lamborn	x		
Mr. Courtney	x			Mr. Wittman	x		
Mr. Garamendi	x			Mrs. Hartzler	x		
Ms. Speier	x			Mr. Scott	x		
Mr. Norcross	x			Mr. Brooks	x		
Mr. Gallego	x			Mr. Graves	x		
Mr. Moulton	x			Ms. Stefanik	x		
Mr. Carbajal	x			Dr. DesJarlais	x		
Mr. Brown	x			Mr. Kelly	x		
Mr. Khanna		x		Mr. Gallagher	x		
Mr. Keating	x			Mr. Gaetz	x		
Mr. Vela	x			Mr. Bacon	x		
Mr. Kim	x			Mr. Banks	x		
Ms. Houlahan	x			Ms. Cheney	x		
Mr. Crow	x			Mr. Bergman	x		
Ms. Slotkin	x			Mr. Waltz	x		
Ms. Sherrill	x			Mr. Johnson	x		
Ms. Escobar	x			Mr. Green	x		
Mr. Golden	x			Mrs. Bice	x		
Mrs. Luria	x			Mr. Franklin	x		
Mr. Morelle	x			Mrs. McClain	x		
Ms. Jacobs		x		Mr. Jackson	x		
Mr. Kahele	x			Mr. Carl	x		
Ms. Strickland	x			Mr. Moore	x		
Mr. Veasey	x			Mr. Fallon	x		
Mr. Panetta	x						
Ms. Murphy	x						
Mr. Horsford	x						
Roll Call Vote Total:	57	2	0				

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

The committee has taken steps to make available the analysis of changes in existing law made by the bill, as required by clause 3(e) of rule XIII of the Rules of the House of Representatives, and will make the analysis available as soon as possible.

ADDITIONAL VIEWS OF MR. LARSEN:

The National Defense Authorization Act (NDAA) for Fiscal Year 2022 includes my amendment to increase funding for Preservation of the Force and Family (POTFF).

Over the last several months, there have been increased reports of substantial cultural issues within the Special Operations Forces (SOF) ranks, from Coronado to Ft. Bragg. While there are many amazing women and men across SOF, it is painfully clear far more needs to be done in terms of civilian oversight of SOF to initiate a cultural change for what is acceptable, and what is not. Part of this effort includes Special Operations Command taking better care of its forces prior to, during and after deployment.

The NDAA as reported included my amendment to Section 4301 of division D, relating to Operations and Maintenance, Defense-Wide, to increase funding for Special Operations Command Theater Forces, Line 110, by \$10 million and decrease funding for Special Operations Management/Operational Headquarters, Line 090, by \$10 million.

It is my intent that the additional funding added to Line 110 be used for POTFF. Congress must increase funding for POTFF to ensure Special Operations Command (SOCOM) prioritizes the health of its force. To date, SOCOM has utilized POTFF to develop and implement initiatives to ensure comprehensive emotional, physical, and neurological health of special operations forces and their families. However, much more can and should be done to grow this initiative. Congress must continue to invest in POTFF, prepare the women and men of the military for deployment and take care of them when they come home.

RICK LARSEN (WA).

ADDITIONAL VIEWS OF MR. BROWN

I submit this letter as an Additional View to the Report by the House Armed Services Committee on H.R. 4350, the National Defense Authorization Act for Fiscal Year 2022, as amended.

This nation was founded to form a more perfect Union, and in doing so to provide for the common defense and promote the general welfare. For 233 years, Congress has endeavored to balance these responsibilities, and in doing so has often found a way to secure our democracy and freedoms while at the same time investing in America as the land of opportunity. Our national security, whether viewed through our military posture or our domestic strength, is at a greater risk than has been seen in decades.

This committee has received substantial testimony from the Department of Defense and outside experts on the emerging and extant threats from great power competition with China and Russia, asymmetric threats from North Korea and Iran, and the ever-

present threat of terrorism. This committee rightly acted through amendments to this bill to increase the budget of the Department to meet these challenges, including ensuring that the servicemembers who bravely serve our country are cared for and they have the resources that they and their families need.

The threats our nation faces are not merely from great power competition or non-state actors; our democracy and our military is threatened from within. While the vast majority of men and women who serve in uniform do so with honor, integrity, and character, there is a growing contingent of servicemembers who espouse extremist views, degrading the readiness of our armed services and diminishing the security of our nation. An October 2020 Department report to Congress detailed how domestic extremists actively recruit military personnel, a 2020 Gang and Domestic Extremist Activity Threat Assessment from the Army Criminal Investigation Command found a 66% increase in gang or domestic extremist activity from the previous year, and a 2019 Military Times survey found more than one-third of all active-duty service members have witnessed instances of white nationalism or ideologically driven racism in the ranks. This committee, in conference with the Senate, in the report for FY2021 NDAA noted the growing threat and stated that additional legislation may be necessary. This bill addresses these threats through comprehensive, substantive measures to ensure that no member of a supremacist organization, extremist organization, designated terrorist organization, criminal gang, or anti-Semitic organization is allowed to serve within our ranks by increasing institutional capacity, requiring training and education, improving data collection and reporting, and clarifying the Secretary's inherent authority to prohibit extremist behaviors.

This bill simultaneously makes the most significant reform of the Uniform Code of Military Justice (UCMJ) since 1968, when we created the modern military judiciary. Repeated study, reports, and testimony over several decades have documented how our military justice system has failed our men and women in uniform, whether they are survivors of sexual assault or a servicemember of color. The Department's Independent Review Commission identified the root cause, finding that the "[b]readth and depth of the lack of trust by junior enlisted Service members in commanders, it was determined that the status quo [on sexual assault related cases would fail to offer the change required to restore confidence in the system." While this committee has taken action to address the issues regarding sexual assault and special victim crimes, the approach included in this bill is insufficient when compared to both what is demanded by the persistent level of racial disparity under military law and the measures taken by the Senate Armed Services Committee. These disparities are not found in the likelihood of conviction or severity of punishment, indicating that the issues are likely limited to the reporting, investigation, preferral, and referral stages in the process. Furthermore, these issues are well established. From a 1972 Task Force commissioned by President Nixon that found "until the proportion of minority members in the officer corps approximates that of minority strength in the ranks, the sources of distrusts and disaffection . . . will continue" to an evaluation conducted by the Department last year that found "these

limited statistics, understood in the context of other studies' findings on racial disparities, call for immediate action," we have known of the over-prosecution of Black and brown servicemembers for decades and have failed to take meaningful action to address it. The conference process must result in a court-martial decision authority that exists outside of the chain of command and ensure that these reforms cover all serious offenses which carry a maximum punishment of more than one year, as was done by our counterparts in the Senate.

Lastly, the bill continues the progress that began last year on diversity, equity, and inclusion within the national security enterprise. It expands the reporting established last year on demographics of the military into the defense industrial base, it creates new surveys to understand relationships between servicemembers and their communities, and it requires a landmark 10-year plan to elevate a consortium of Historically Black Colleges and Universities or minority institutions to the research capacity of a University Affiliated Research Center. These initiatives come as last years bipartisan advances in diversity and inclusion and the broader discussion on racial equity have been unrightly challenged by Members of Congress as detrimental to our readiness. The conference process must protect the decisive, bipartisan action taken to date and continue forward the long arc of progress so that all service members and civilians in the national security enterprise have the opportunity to contribute their voice and background to the strength of our nation.

In summary, this bill ensures the Department of Defense is ready to meet our adversaries in all theaters, it starts reforms to the military justice system to guarantee that all servicemembers have equal justice under military law, and it takes needed measures so that those who do not embody the values enshrined in our Constitution cannot serve within our military. It rightly recognizes the two million service members and civilians who devote their lives to our defense, and ensures the Department is authorized to fund the everyday needs for them and their families: health care for 10 million Americans, childcare for 200,000 children, retirement for 1.5 million veterans and K-12 education in about 160 schools worldwide. It is a necessary and proper action and must be paired with simultaneous investment in our domestic strength through the work in the jurisdiction of the other committees. We maintain our national security not only through the defense accounts in this bill, but also by the resources we dedicate to international diplomacy and development, and the investments we make at home in infrastructure and education, climate change mitigation, health care, public safety, and our democratic institutions.

I commend Chairman Smith and Ranking Member Rogers for their leadership on this committee and look forward to working with them to further these objectives as the Fiscal Year 2022 National Defense Authorization Act moves through the legislative process.

ANTHONY G. BROWN.

DISSENTING VIEWS FROM REP. RO KHANNA, MEMBER OF
THE HOUSE ARMED SERVICES COMMITTEE

I am proud to have served on the House Armed Services Committee for over four years. This is my fifth NDAA markup and have always voted to advance the legislation out of committee. I support a strong and robust defense budget and appreciate the important investments in technology and innovation that have been included by Chairman Adam Smith in this budget. Although I've never supported bloated defense budgets on the floor, I've found it important to advance the legislation to the floor. This year however, I cannot advance a defense bill that spends more on the Pentagon than the Pentagon asked for.

We just ended the longest war in American history, now is the time to decrease defense spending, not increase it. A \$23.9 billion increase—\$35.9 billion more than we're spending this year—is more than what President Biden and the Pentagon asked for, would be nothing but a handout to defense contractors upset by our exit from Afghanistan. While I strongly support additional investments in emerging technologies, surely those investments can come out of the money we are saving from ending the war in Afghanistan.

We are already spending three times as much on our military as China did, and that doesn't even account for over \$400 billion in additional spending by major U.S. allies. One would think our defense budget would decrease or at least stay the same after ending our longest war. To increase it goes against all logic.

That \$23.9 billion would be much better spent taking care of our veterans who fought that war and came home to struggle with PTSD, Traumatic Brain Injuries, homelessness, and a general lack of economic opportunity.

Or, we could use that money to help resettle our Afghan allies and refugees, the very people our brave service members put their lives on the line to protect.

Now that we have ended our longest war, we need to grapple with the clear and present threats we find ourselves facing today. Over the last year and a half, 640,000 people, with tens of thousands more expected yet to come, have lost their lives to the covid pandemic.

This \$23.9 billion could be used to vaccinate the world, protect ourselves from COVID and future pandemics and tackle the greatest national security threat of our time: the climate crisis. The same day that the House Armed Services Committee voted to approve this enormous increase to the Pentagon budget, the Cost of War Project published a new report finding that the budgetary cost of the post-9/11 wars continues to mount to more than \$8 trillion, underscoring the need for a new approach.

There is no question that our country is also facing grave and multi-faceted threats from terrorism, cyber attacks, and other threats from our geopolitical competitors, but we need smaller investments in 21st century defense.

RO KHANNA.

DISSENTING VIEWS OF CONGRESSWOMAN STEPHANIE
BICE

I dissent with Section 132—Limitation of Availability of Funds for the B-52 Commercial Engine Replacement Program (CERP). This section would direct the Department of Defense to apply requirements associated with traditional acquisition programs to a program under the expedited middle tier of acquisition (MTA) pathway and would arbitrarily deem an early cost projection as an “original baseline estimate” for the purposes of measuring cost growth and applying reporting and program termination requirements under the Nunn-McCurdy Act (10 USC 2433). But, an early cost projection for a streamlined acquisition is not the same as a formal original baseline estimate for a traditional Major Defense Acquisition Program, and should not be treated as such.

This section repeats mistakes of the past—once again, giving the Department of Defense (DoD) with one hand authorities to execute faster, at the speed of relevance so that we can effectively compete with China, and with the other hand piling on regulations and requirements that undermine the entire reason Congress established streamlined acquisitions in the first place. The practical impact of the provision is to require unnecessary reports and studies, and increase program costs. But more importantly, this provision effectively ends the ongoing rapid prototyping and unnecessarily delays fielding urgently needed new engines on the B-52 Stratofortress to our men and women in uniform.

I am troubled by the harmful policy precedents this provision sets for both MTA programs and traditional major capability acquisition guided by Department of Defense Instruction (DoDI) 5000.85.

First, Section 132 would undermine the expedited acquisition authorities provided by Congress under Section 804 of the National Defense Authorization Act for 2016 (P.L. 114-92), requiring, for the first time, that the Nunn-McCurdy Act be applied to an MTA program. The Nunn-McCurdy Act, first established forty years ago, is intended for traditional major defense acquisition programs, not streamlined MTA programs. In the Joint Explanatory Statement accompanying P.L. 114-92, Congress made explicit its intent that the “expedited and streamlined” MTA pathway be differentiated from the policies and procedures that apply to traditional acquisitions, such as the Nunn-McCurdy Act. This provision moves MTAs closer to being cumbersome traditional major defense acquisition programs.

Second, Section 132 would set a bad precedent for traditional major capability acquisition guided by DoDI 5000.85 by deeming an early phase cost projection from 2018 as an “original baseline estimate” as that term is defined in 10 USC 2435(d)(1). In the traditional acquisition process, the original baseline estimate is established at milestone B (MSB). The B-52 CERP is not at a stage of

development akin to MSB in 2021, let alone in 2018. The program's work on prototyping at this stage is more akin to the pre-MSB technology maturation and risk reduction phase in major capability acquisition. Deeming a CERP cost projection from 2018 as an original baseline estimate in this way, would be like deeming cost projections from a traditional program's early analysis of alternatives as an appropriate baseline against which to measure Nunn-McCurdy cost breaches. Such a change applied widely would cause additional delays to the slow-lane buying process that Congress, and the House Armed Services Committee in particular, have so often criticized on a bipartisan basis.

Third and finally, Section 132 would effectively terminate the ongoing rapid prototyping, rapid fielding effort to get much-needed new engines on the B-52. The youngest Stratofortress still flying today was delivered in 1962, when John F. Kennedy was president, and it was delivered with the TF-33 engine. There have been many changes to the B-52 in the last sixty years, but re-engining the fleet has not been among them. That's not for lack of trying. According to Air Force Materiel Command, the Air Force and Congress have been studying and proposing different re-engining options for the B-52 for at least fifty years. In 1971, the Air Force and Boeing conducted a study on engine replacement for all B-52G and H variants. In 1975, Congress debated a re-engined B-52I variant. Studies and debate continued throughout the 1980s and 1990s to no effect. In 2003, the idea saw a resurgence with some initial investment, but in the end, re-engining was once again put off.

During the past fifty years of debate and delays, the current TF-33 engines have become increasingly difficult to sustain due to diminished manufacturing sources and obsolete technologies. The Air Force now projects the B-52's TF-33s will become unsustainable by 2030. That's a mere nine years for an effort under CERP that entails not just new engines, but also associated changes to the aircraft's power generation and distribution, flight systems, and cockpit. The time has come to stop debating a new engine for the B-52, and start replacing them. Delays caused by this amendment will not only add cost to the acquisition process, but also force the Air Force through program delays to retain the legacy engines longer, driving up sustainment, maintenance, and operations costs. New commercial engines will allow a ninety-five percent decrease in sustainment costs while increasing fuel efficiency by thirty percent, delivering added range and loiter time in support of long-range strike capability. Engines do more than just propel an aircraft, they power it. Modern commercial engines will bring significantly increased power generation to support advanced mission systems needed to keep the B-52 lethal and survivable to 2050 and beyond under the Air Force's bomber roadmap. Furthermore, because of the impact of engine-generated power on other systems throughout the aircraft, delays to re-engining can have downstream impacts on other ongoing B-52 modernization efforts.

B-52s will continue to make up half the Air Force's bomber inventory for years to come. Re-engining is not just critical to the future of the platform, it's essential to keep bombers mission-ready and available to combatant commanders around the world. In the past year alone, B-52s have operated in Europe, the Middle East,

and the Indo-Pacific. Whether in maintaining a credible nuclear deterrent, demonstrating force projection in support of our allies, or delivering precision-guided munitions in combat, the B-52 provides capabilities vital to our national security.

These factors and others informed the decision to pursue a rapid prototyping, rapid fielding approach for CERP using congressionally-established authorities for the MTA programs. That decision was backed up by the National Defense Authorization Act for Fiscal Year 2020 and the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 and funded by corresponding appropriations.

I look forward to working with the committee to ensure that the National Defense Authorization Act for Fiscal Year 2022 includes clear and straightforward acquisition policy and avoids unnecessary delays to high-priority modernization efforts like the B-52 Commercial Engine Replacement Program. The alternative is another missed opportunity in the 50-year effort to re-engine the Stratofortress.

STEPHANIE BICE.

