

LOG ID	REV	MEMBER	MARKUP LOC	DESCRIPTION	MARKUP ACT
756	1	Panetta, Jimmy	STR	Amends DRL regarding identifying the combatant commands most in need of taskless daily global imagery to support mission requirements.	EB 1
764	2	Turner, Michael	STR	Bill language limiting the availability of certain funds until SECNAV submission of information relating to the proposed budget or limitation for nuclear-armed sea-launched cruise missile	EB 1
767	2	Turner, Michael	STR	Bill language limiting availability of certain funds until SECDEF submission of the analysis of alternatives for the nuclear-armed sea-launched cruise missile.	EB 1
769	1	Turner, Michael	STR	DRL directing the Secretary of the Air Force and the Missile Defense Agency, in consultation with the Commander, U.S. Northern Command, to report on efforts to develop the ability to detect low-flying hypersonic weapons via radar.	EB 1
772	1	Jackson, Ronny	STR	DRL regarding management and operation contracts for NNSA facilities and trying to address the uncertainty that the transition in M&O contractor can cause. The DRL seeks a report on how to improve the process and better meet the NNSA mission.	EB 1
782	0	Turner, Michael	STR	DRL directing the Administrator of the National Nuclear Security Administration to report on plans to improve and more accurately represent project cost estimates.	EB 1
789	2	Turner, Michael	STR	DRL directing the Secretary of Energy report on leveraging artificial intelligence and innovative commercially available technology to secure Department of Energy installations.	EB 1
808	0	Turner, Michael	STR	Bill language clarifying congressional intent of Section 1612, FY 2021 National Defense Authorization Act related to domestic services and capabilities in leveraging commercial satellite remote sensing.	EB 1
812	1	DesJarlais, Scott	STR	Requires the Secretary of Defense to identify each facility and capability within the MRTFB that is primarily concerned with the test and evaluation of hypersonic technologies that could be designated a "Hypersonic Facility Base".	EB 1
819	3	Banks, Jim	STR	DRL on the fielding of Navy's Conventional Prompt Strike Weapons Systems	EB 1
895	0	Bacon, Don	STR	Directs the Defense Department to brief the committee on its plans to increase resilience for positioning, navigation and timing.	EB 1
934	1	Cheney, Liz	STR	Certification of Readiness of Minuteman III Intercontinental Ballistic Missiles	EB 1
938	1	Cheney, Liz	STR	Directs the Secretary of the Air Force shall develop a cost estimate with respect to re-alerting long-range bombers in the absence of a ground-based leg of the nuclear triad.	EB 1

LOG ID	REV	MEMBER	MARKUP LOC	DESCRIPTION	MARKUP ACT
942	2	Turner, Michael	STR	Bill language directing the Secretary of Defense to submit documents and reports from the 2021 Integrated Deterrence Reviews (IDR). Would require certification from the Chairman and Vice Chairman of the Joint Chiefs of Staff and the Commander of USSTRATCOM regarding the 2021 IDR.	EB 1
949	1	Waltz, Michael	STR	Requires the Commander of the United States Strategic Command to notify the defense committees of Congress should China's stockpile of intercontinental ballistic missiles, or nuclear warheads, exceeds the number in the US stockpile, along with a deterrence strategy	EB 1
1012	1	Cheney, Liz	STR	Sense of Congress Regarding the Next Generation Interceptor program	EB 1
1091	0	Moulton, Seth	STR	This DRL 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 and funding for LTAMDS.	EB 1
1105	1	Moore, Blake D.	STR	Limitation on availability of funds until Receipt of Certain Report on Guam.	EB 1
1141	2	Lamborn, Doug	STR	Requires the Chief of Space Operations to provide a report to the congressional defense committees on the most likely and most dangerous threats to US space dominance in the short and long term, a plan to mitigate them, and the capabilities needed to implement that plan.	EB 1
1157	2	Waltz, Michael	STR	Report on SATCOM's transition path for future capabilities	EB 1
1163	1	Wilson, Joe	STR	Direct GAO to issue recommendations on incentivizing disposition of radioactive sources.	EB 1
1192	2	Bacon, Don	STR	Requires the Secretary of Defense to notify Congress if the Department undertakes a review of the Minuteman III weapon system	EB 1
1306	1	Strickland, Marilyn	STR	An amendment directing a report on a satellite ground station in the Arctic.	EB 1
1352	1	Franklin, C. Scott	STR	Report of the assessed impact of space debris on the National Defense Space Architecture, risk of commercial and military Lower Earth Orbit, the extent to which the Department of Defense is engaging allies and partners on efforts to develop technologies that reduce space debris	EB 1
1427	0	Rogers, Mike	STR	The Space Force may not establish a program of record unless the Service Acquisition Executive first—determines that there is no commercially available capability that would meet the threshold objectives for that proposed program.	EB 1
1447	0	Cooper, Jim	STR	Would require the NNSA Administrator to provide a briefing on its plans to manage growing energy consumption and computation code run times stemming from computer modeling related to mission critical stockpile stewardship.	EB 1

LOG ID	REV	MEMBER	MARKUP LOC	DESCRIPTION	MARKUP ACT
1479	1	Brooks, Mo	STR	Directs report on Space Development Agency's Defense in Depth as Mission Assurance for Spacecraft program	EB 1

**Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022**

Offered by: Mr. Panetta

Commercial Imagery Capabilities

In the portion of the report to accompany H.R. 4350 titled “Commercial Imagery Capabilities”, insert in the third paragraph, following “and reconnaissance capacity,” the following new text: “the Department of Defense combatant commands most in need of taskless global daily imagery to support mission requirements”.

AMENDMENT TO H.R. 4350
OFFERED BY MR. TURNER OF OHIO

At the appropriate place in title XVI, insert the following new section:

1 **SEC. 16 ____ . LIMITATION ON AVAILABILITY OF CERTAIN**
2 **FUNDS UNTIL SUBMISSION OF INFORMATION**
3 **RELATING TO PROPOSED BUDGET FOR NU-**
4 **CLEAR-ARMED SEA-LAUNCHED CRUISE MIS-**
5 **SILE.**

6 Of the funds authorized to be appropriated by this
7 Act or otherwise made available for fiscal year 2022 for
8 the Department of Defense for travel by any personnel
9 of the Office of the Secretary of the Navy, not more than
10 75 percent may be obligated or expended until the Sec-
11 retary of the Navy submits to the congressional defense
12 committees all written communications by personnel of the
13 Department of Defense regarding the proposed budget
14 amount or limitation for the nuclear-armed sea-launched
15 cruise missile contained in the defense budget materials
16 (as defined by section 231(f) of title 10, United States
17 Code) for fiscal year 2022.



AMENDMENT TO H.R. 4350
OFFERED BY MR. TURNER OF OHIO

At the appropriate place in title XVI, insert the following new section:

1 **SEC. 16 ____ . LIMITATION ON AVAILABILITY OF CERTAIN**
2 **FUNDS UNTIL SUBMISSION OF INFORMATION**
3 **RELATING TO NUCLEAR-ARMED SEA-**
4 **LAUNCHED CRUISE MISSILE.**

5 Of the funds authorized to be appropriated by this
6 Act or otherwise made available for fiscal year 2022 for
7 the Department of Defense for travel by any personnel
8 of the Office of the Secretary of Defense (other than travel
9 by the Secretary of Defense or the Deputy Secretary of
10 Defense), not more than 75 percent may be obligated or
11 expended until the Secretary—

12 (1) submits to the congressional defense com-
13 mittees the analysis of alternatives for the nuclear-
14 armed sea-launched cruise missile; and

15 (2) provides to such committees a briefing on
16 such analysis of alternatives.



Amendment to H.R. 4350 National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Turner

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

Amendment to H.R. 4350 National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Jackson of Texas

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

Amendment to H.R. 4350 National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Turner

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Turner

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

**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 section 3307 of title 41, United States Code, to assess these capabilities to enhance security and reduce overall security costs.

AMENDMENT TO H.R. 4350
OFFERED BY MR. Turner

Add at the appropriate place in subtitle A of title XVI the following new section:

1 SEC. 16 . CLARIFICATION OF DOMESTIC SERVICES AND
2 CAPABILITIES IN LEVERAGING COMMERCIAL
3 SATELLITE REMOTE SENSING.

4 (a) DOMESTIC DEFINED.—Section 1612(c) of the
5 William M. (Mac) Thornberry National Defense Author-
6 ization Act for Fiscal Year 2021 (Public Law 116–283;
7 10 U.S.C. 441 note) is amended—

8 (1) by redesignating paragraph (4) as para-
9 graph (5); and

10 (2) by inserting after paragraph (3) the fol-
11 lowing new paragraph (4):

12 “(4) The term ‘domestic’ includes, with respect
13 to commercial capabilities or services covered by this
14 section, capabilities or services provided by compa-
15 nies that operate in the United States and have ac-
16 tive mitigation agreements pursuant to the National
17 Industrial Security Program.”.

18 (b) EFFECTIVE DATE.—The amendments made by
19 subsection (a) shall take effect as if included in the enact-

1 ment of the William M. (Mac) Thornberry National De-
2 fense Authorization Act for Fiscal Year 2021 (Public Law
3 116–283), including with respect to any requests for pro-
4 posals or rules issued pursuant to section 1612 of such
5 Act.



AMENDMENT TO H.R. 4350
OFFERED BY MR. DESJARLAIS OF TENNESSEE

At the appropriate place in title II, insert the following new section:

1 **SEC. 2 ____ . IDENTIFICATION OF THE HYPERSONICS FACILI-**
2 **TIES AND CAPABILITIES OF THE MAJOR**
3 **RANGE AND TEST FACILITY BASE.**

4 (a) IDENTIFICATION REQUIRED.—Not later than 180
5 days after the date of the enactment of this Act, the Sec-
6 retary of Defense shall—

7 (1) identify each facility and capability of the
8 Major Range and Test Facility Base that is pri-
9 marily concerned with the ground-based simulation
10 of hypersonic atmospheric flight conditions and the
11 test and evaluation of hypersonic technology in open
12 air flight; and

13 (2) identify such facilities and capabilities that
14 the Secretary would propose to designate, collec-
15 tively, as the “Hypersonics Facility Base”.

16 (b) MAJOR RANGE AND TEST FACILITY BASE.—In
17 this section, the term “Major Range and Test Facility

2

- 1 Base” has the meaning given that term in section 196(i)
- 2 of title 10, United States Code.



Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Jim Banks

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by Mr. Bacon of Nebraska

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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 resilience. 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.

AMENDMENT TO H.R. 4350
OFFERED BY MS. CHENEY OF WYOMING

Add at the appropriate place in title XVI the following new section:

1 **SEC. 16 ____ . ANNUAL CERTIFICATION ON READINESS OF**
2 **MINUTEMAN III INTERCONTINENTAL BAL-**
3 **LISTIC MISSILES.**

4 Not later than March 1, 2022, and annually there-
5 after until the date on which the ground-based strategic
6 deterrent weapon achieves initial operating capability, the
7 Chairman of the Joint Chiefs of Staff shall certify to the
8 congressional defense committees whether the state of the
9 readiness of Minuteman III intercontinental ballistic mis-
10 siles requires placing heavy bombers equipped with nuclear
11 gravity bombs or air-launched nuclear cruise missiles, and
12 associated refueling tanker aircraft, on alert status.



AMENDMENT TO H.R. 4350
OFFERED BY MS. CHENEY OF WYOMING

Add at the appropriate place in title XVI the following new section:

1 **SEC. 16 ____ . COST ESTIMATE TO RE-ALERT LONG-RANGE**
2 **BOMBERS.**

3 (a) FINDINGS.—Congress finds the following:

4 (1) On April 20th, 2021, before the Committee
5 on Armed Services of the Senate, the Commander of
6 the United States Strategic Command, Admiral
7 Charles A. Richard, said that the basic design cri-
8 teria in the triad is that “you cannot allow a failure
9 of any one leg of the triad to prevent you from being
10 able to do everything the President has ordered you
11 to do.”.

12 (2) Admiral Richard further stated that in the
13 event of one leg atrophying, “You are completely de-
14 pendent on the submarine leg, and I’ve already told
15 the Secretary of Defense that under those conditions
16 I would request to re-alert the bombers.”.

17 (b) COST ESTIMATE.—The Secretary of the Air
18 Force shall develop a cost estimate with respect to re-

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- 1 alerting long-range bombers in the absence of a ground-
- 2 based leg of the nuclear triad.



AMENDMENT TO H.R. 4350
OFFERED BY MR. TURNER OF OHIO

Add at the appropriate place in title XVI the following new section:

1 **SEC. 16 ____ . MATTERS REGARDING INTEGRATED DETER-**
2 **RENCE REVIEW.**

3 (a) **REPORTS.**—Not later than 30 days after the date
4 on which the Integrated Deterrence Review that com-
5 menced during 2021 is submitted to the congressional de-
6 fense committees, the Secretary of Defense shall submit
7 to the congressional defense committees the following:

8 (1) Each report, assessment, and guidance doc-
9 ument produced by the Department of Defense pur-
10 suant to the Integrated Deterrence Review or during
11 subsequent actions taken to implement the conclu-
12 sions of the Integrated Deterrence Review, including
13 with respect to each covered review.

14 (2) A report explaining how each such covered
15 review differs from the previous such review.

16 (b) **CERTIFICATIONS.**—Not later than 30 days after
17 the date on which a covered review is submitted to the
18 congressional defense committees, the Chairman of the
19 Joint Chiefs of Staff, the Vice Chairman of the Joint

1 Chiefs of Staff, and the Commander of the United States
2 Strategic Command shall each directly submit to such
3 committees—

4 (1) a certification regarding whether the Chair-
5 man, Vice Chairman, or Commander, as the case
6 may be, had the opportunity to provide input into
7 the covered review; and

8 (2) a description of the degree to which the cov-
9 ered reviews differ from the military advice con-
10 tained in such input (or, if there was no opportunity
11 to provide such input, would have been contained in
12 the input if so provided).

13 (c) COVERED REVIEW DEFINED.—In this section,
14 the term “covered review” means—

15 (1) the Missile Defense Review that commenced
16 during 2021; and

17 (2) the Nuclear Posture Review that com-
18 menced during 2021.



AMENDMENT TO H.R. 4350
OFFERED BY MR. WALTZ OF FLORIDA

Add at the appropriate place in subtitle D of title
XVI the following new section:

1 **SEC. 16___. NOTIFICATION REGARDING INTERCONTI-**
2 **NENTAL BALLISTIC MISSILES OF CHINA.**

3 (a) REQUIREMENT.—If the Commander of the
4 United States Strategic Command determines that the
5 number of intercontinental ballistic missiles in the active
6 inventory of China exceeds the number of intercontinental
7 ballistic missiles in the active inventory of the United
8 States, or that the number of nuclear warheads equipped
9 on such missiles of China exceeds the number of nuclear
10 warheads equipped on such missiles of the United States,
11 the Commander shall submit to the congressional defense
12 committees—

- 13 (1) a notification of such determination;
- 14 (2) an assessment of the composition of the
15 intercontinental ballistic missiles of China, including
16 the types of nuclear warheads equipped on such mis-
17 siles; and
- 18 (3) a strategy for deterring China.

1 (b) FORM.—The notification under paragraph (1) of
2 subsection (a) shall be submitted in unclassified form, and
3 the assessment and strategy under paragraphs (2) and (3)
4 of such subsection may be submitted in classified form.

5 (c) TERMINATION.—The requirement under sub-
6 section (a) shall terminate on the date that is four years
7 after the date of the enactment of this Act.



AMENDMENT TO H.R. 4350
OFFERED BY MS. CHENEY OF WYOMING

At the appropriate place in subtitle D of title XVI,
insert the following new section:

1 **SEC. 16 ____ . SENSE OF CONGRESS ON NEXT GENERATION**
2 **INTERCEPTOR PROGRAM.**

3 It is the sense of Congress that—

4 (1) in accordance with the national missile de-
5 fense policy under section 1681 of the National De-
6 fense Authorization Act for Fiscal Year 2017 (Pub-
7 lic Law 114– 328; 10 U.S.C. 2431 note), it is in the
8 national security interest of the United States to de-
9 sign, test, and begin deployment of the next genera-
10 tion interceptor by not later than September 30,
11 2028; and

12 (2) the Secretary of Defense should—

13 (A) maintain competition for the next gen-
14 eration interceptor program through, at a min-
15 imum, the critical design reviews of the pro-
16 gram;

17 (B) uphold “fly before you buy” principals
18 in carrying out such program;

1 (C) continue to incorporate lessons learned
2 from the redesigned kill vehicle program to
3 avoid any similar technical issues; and

4 (D) continue to maintain continuous en-
5 gagement with the intelligence community to
6 ensure the next generation interceptor program
7 is outpacing intercontinental ballistic missile
8 threats to the homeland of the United States
9 posed by rogue nations.



Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Seth Moulton of Massachusetts

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

AMENDMENT TO H.R. 4350
OFFERED BY MR. MOORE OF UTAH

Add at the appropriate place in subtitle C of title XVI the following new section:

1 **SEC. 16** ____. **LIMITATION ON AVAILABILITY OF FUNDS**
2 **UNTIL RECEIPT OF CERTAIN REPORT ON**
3 **GUAM.**

4 Of the funds authorized to be appropriated by this
5 Act or otherwise made available for fiscal year 2022 for
6 the Department of Defense for the Office of Cost Assess-
7 ment and Program Evaluation, not more than 75 percent
8 may be obligated or expended until the date on which the
9 Secretary of Defense submits to the congressional defense
10 committees the report on the defense of Guam from inte-
11 grated air and missile threats required by section 1650
12 of the William M. (Mac) Thornberry National Defense Au-
13 thorization Act for Fiscal Year 2021(Public Law 116-
14 283).



Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Lamborn of Colorado

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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 he chooses 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.

Amendment to H.R. 4350 National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Waltz

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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 FY30 to achieve IOC by end FY32.

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.

**Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022**

Offered by: Mr. Wilson of South Carolina

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

AMENDMENT TO H.R. 4350
OFFERED BY MR. BACON OF NEBRASKA

Add at the appropriate place in title XVI the following new section:

1 **SEC. 16 ____ . INFORMATION REGARDING REVIEW OF MIN-**
2 **UTEMAN III SERVICE LIFE EXTENSION PRO-**
3 **GRAM.**

4 (a) **REQUIREMENT.**—The Secretary of Defense shall
5 submit to the congressional defense committees all scoping
6 documents relating to any covered review, including the
7 names, titles, and backgrounds of the individuals of the
8 federally funded research and development center who are
9 conducting the review. The Secretary shall submit such
10 information by the date that is the later of the following:

11 (1) 15 days after the date on which the covered
12 review is initiated.

13 (2) 15 days after the date of the enactment of
14 this Act.

15 (b) **COVERED REVIEW.**—In this section, the term
16 “covered review” means any review initiated in 2021 or
17 2022 by a federally funded research and development cen-

2

1 ter regarding a service life extension program for Minute-
2 man III intercontinental ballistic missiles.



Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by: Ms. Strickland

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

Amendment to H.R. 4350 National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Franklin

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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 non-toxic 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.

AMENDMENT TO H.R. 4350
OFFERED BY Mr . Rogers

Add at the appropriate place in subtitle A of title
XVI the following new section:

1 **SEC. 16** . **PROGRAMS OF RECORD OF SPACE FORCE AND**
2 **COMMERCIAL CAPABILITIES.**

3 Section 957(c) of the National Defense Authorization
4 Act for Fiscal Year 2020 (Public Law 116–92; 10 U.S.C.
5 9016 note) is amended by adding at the end the following
6 new paragraph:

7 “(5) PROGRAMS OF RECORD AND COMMERCIAL
8 CAPABILITIES.—The Service Acquisition Executive
9 for Space Systems and Programs may not establish
10 a program of record for the Space Force unless the
11 Service Acquisition Executive first—

12 “(A) determines that there is no commer-
13 cially available capability that would meet the
14 threshold objectives for that proposed program;
15 and

16 “(B) submits to the congressional defense
17 committees such determination.”.



Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. COOPER OF TENNESSEE

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.

Amendment to H.R. 4350
National Defense Authorization Act for Fiscal Year 2022

Offered by: Mr. Brooks

In the appropriate place in the report to accompany H.R. 4350, insert the following new Directive Report Language:

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.”