

AMENDMENT NO. \_\_\_\_\_

Calendar No. \_\_\_\_\_

Purpose: In the nature of a substitute.

**IN THE SENATE OF THE UNITED STATES—116th Cong., 2d Sess.****S. 3969**

To amend title 49, United States Code, to reform the Federal Aviation Administration's aircraft certification process, and for other purposes.

Referred to the Committee on \_\_\_\_\_ and  
ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT IN THE NATURE OF A SUBSTITUTE intended  
to be proposed by Mr. WICKER (for himself and Ms.  
CANTWELL)

Viz:

- 1 Strike all after the enacting clause and insert the fol-
- 2 lowing:
- 3 **SECTION 1. SHORT TITLE.**
- 4 This Act may be cited as the "Aircraft Safety and
- 5 Certification Reform Act of 2020".
- 6 **SEC. 2. TABLE OF CONTENTS.**
- 7 The table of contents of this Act is as follows:

- Sec. 1. Short title.
- Sec. 2. Table of contents.
- Sec. 3. Definitions.
- Sec. 4. Safety management system for manufacturers.
- Sec. 5. Organization designation authorization.
- Sec. 6. Best practices for organization designation authorizations.
- Sec. 7. Review of human factors assumptions.
- Sec. 8. Human factors research.

- Sec. 9. FAA center of excellence for automated systems and human factors in aircraft.
- Sec. 10. Pilot operational evaluations.
- Sec. 11. FAA continuing education and training.
- Sec. 12. Authorization of appropriations for scientific and technical advisors.
- Sec. 13. Prohibition on certain performance-based incentives.
- Sec. 14. Safety reporting program.
- Sec. 15. Protection of whistleblowers.
- Sec. 16. Repeal of design and production organization certificate authority.
- Sec. 17. Ensuring appropriate responsibility of aircraft certification and flight standards performance objectives and metrics.
- Sec. 18. Review of FAA certification expertise.
- Sec. 19. Transport airplane risk assessment methodology.
- Sec. 20. Foreign civil aviation authority assistance.
- Sec. 21. National Air Grant Fellowship Program.
- Sec. 22. Changed product rule.
- Sec. 23. Technical certification board.
- Sec. 24. Emerging safety trends in aviation.
- Sec. 25. Federal Aviation Administration accountability enhancement.
- Sec. 26. Systems safety assessment document traceability procedures and clarity of procedures for revisions.
- Sec. 27. Required submission of outline of system changes at the beginning of the certification process.
- Sec. 28. Authorization of appropriations for the Advanced Materials Center of Excellence.
- Sec. 29. Promoting Aviation Regulations for Technical Training.
- Sec. 30. Limitation on delegation.
- Sec. 31. Independent study on type certification reform.

1 **SEC. 3. DEFINITIONS.**

2 In this Act:

3 (1) ADMINISTRATOR.—The term “Adminis-  
4 trator” means the Administrator of the FAA.

5 (2) APPROPRIATE COMMITTEES OF CON-  
6 GRESS.—The term “appropriate committees of Con-  
7 gress” means the Committee on Commerce, Science,  
8 and Transportation of the Senate and the Com-  
9 mittee on Transportation and Infrastructure of the  
10 House of Representatives.

11 (3) FAA.—The term “FAA” means the Fed-  
12 eral Aviation Administration.

1           (4) ICAO.—The term “ICAO” means the  
2 International Civil Aviation Organization.

3 **SEC. 4. SAFETY MANAGEMENT SYSTEM FOR MANUFACTUR-**  
4 **ERS.**

5 (a) RULEMAKING PROCEEDING.—

6           (1) IN GENERAL.—The Administrator shall con-  
7 duct a rulemaking proceeding to require that manu-  
8 facturers that hold both a type certificate and a pro-  
9 duction certificate issued pursuant to section 44704  
10 of title 49, United States Code, where the United  
11 States is the State of Design and State of Manufac-  
12 ture, have in place a safety management system that  
13 is consistent with the standards established by ICAO  
14 for such systems.

15           (2) AVIATION RULEMAKING COMMITTEE.—

16           (A) IN GENERAL.—Not later than 90 days  
17 after the date of enactment of this Act, the Ad-  
18 ministrator shall establish an aviation rule-  
19 making committee to make recommendations on  
20 the rulemaking to be carried out under para-  
21 graph (1).

22           (B) DUTIES.—In making such rec-  
23 ommendations, the aviation rulemaking com-  
24 mittee shall consider how to—

1 (i) ensure safety management systems  
2 are consistent with, and complementary to,  
3 existing safety managements systems; and

4 (ii) include provisions in such rec-  
5 ommendations that would permit oper-  
6 ational feedback from operators and pilots  
7 qualified on the manufacturers' equipment  
8 to ensure that the operational assumptions  
9 made during design and certification re-  
10 main valid.

11 (b) FINAL RULE DEADLINE.—Not later than 24  
12 months after establishing the aviation rulemaking com-  
13 mittee under subsection (a)(2), the Administrator shall  
14 issue a final rule pursuant to the rulemaking proceeding  
15 required under subsection (a).

16 (c) SURVEILLANCE AND AUDIT REQUIREMENT.—  
17 The final rule issued pursuant to subsection (b) shall in-  
18 clude a requirement for the Administrator to implement  
19 a systems approach to risk-based surveillance by defining  
20 and planning inspections, audits, and monitoring activities  
21 on a continuous basis, to ensure that design and produc-  
22 tion approval holders of aviation products meet and con-  
23 tinue to meet safety management system requirements  
24 under the rule.

1 (d) ENGAGEMENT WITH ICAO.—The Administrator  
2 shall engage with ICAO and foreign civil aviation authori-  
3 ties to help ensure the adoption of safety management sys-  
4 tems for manufacturers on a global basis, consistent with  
5 ICAO standards.

6 **SEC. 5. ORGANIZATION DESIGNATION AUTHORIZATION.**

7 (a) APPROVAL OF ODA UNIT MEMBERS.—Section  
8 44736 of title 49, United States Code, is amended by add-  
9 ing at the end the following:

10 “(d) APPROVAL OF ODA UNIT MEMBERS.—

11 “(1) IN GENERAL.—Beginning on the date that  
12 is 1 year after the date of enactment of this sub-  
13 section, each individual who is a new member of an  
14 ODA unit of an ODA holder and performs an au-  
15 thorized function pursuant to a delegation by the  
16 Administrator under section 44702(d) shall be an  
17 employee, a contractor, a consultant, or the em-  
18 ployee of a supplier of the ODA holder who is ap-  
19 proved to be a member of the unit by the Adminis-  
20 trator. The ODA holder may make provisional ap-  
21 pointments of ODA unit members pending final ap-  
22 proval by the Administrator. The Administrator  
23 shall approve or reject appointments within 90 days.  
24 If the Administrator rejects an appointment, the Ad-  
25 ministrator shall provide the ODA holder with a

1 written document stating the reasons for the rejection.  
2

3 “(2) QUALIFICATIONS.—In approving appointments  
4 to an ODA unit, the Administrator shall take  
5 into account the technical proficiency, relevant work  
6 experience, educational background, license requirements  
7 (as appropriate), and expertise of individuals.  
8 The Administrator shall issue minimum qualifications,  
9 including appropriate and relevant work experience,  
10 education, and license requirements, for ODA  
11 unit members and designees which are comparable  
12 to the same level required for FAA engineers within  
13 the same authorized areas, as appropriate, that are  
14 subject to approval by the Administrator pursuant to  
15 paragraph (1).

16 “(3) RESCISSION OF APPROVAL.—The Administrator  
17 may rescind an approval of an appointment to  
18 an ODA unit at any time for any reason the Administrator  
19 considers appropriate. The Administrator  
20 shall develop procedures to provide for proper notice  
21 and opportunity to appeal rescission decisions made  
22 by the Administrator. Such decisions by the Administrator  
23 are not subject to judicial review.

1           “(4) RECORDS AND REPORTS.—An ODA holder  
2 shall maintain, in a manner and for a period to be  
3 determined by the Administrator—

4           “(A) any data, applications, records, or  
5 manuals required by the ODA holder’s ap-  
6 proved procedures manual;

7           “(B) the name, responsibilities, qualifica-  
8 tions, and example signature of each member of  
9 the ODA unit who performs an authorized  
10 function pursuant to a delegation by the Ad-  
11 ministrator under section 44702(d);

12           “(C) training records for ODA unit mem-  
13 bers and ODA administrators; and

14           “(D) any other data, applications, records,  
15 or manuals determined appropriate by the Ad-  
16 ministrator.

17           “(5) AUDITS.—

18           “(A) IN GENERAL.—The Administrator  
19 shall perform a periodic audit of each ODA unit  
20 and its procedures.

21           “(B) DURATION.—An audit required under  
22 subparagraph (A) shall be performed with re-  
23 spect to an ODA holder once every 3 years (or  
24 more frequently as determined appropriate by  
25 the Administrator).

1           “(C) RECORDS.—The ODA holder shall  
2 maintain, for a period to be determined by the  
3 Administrator, a record of—

4           “(i) each audit conducted under this  
5 paragraph; and

6           “(ii) any corrective actions resulting  
7 from each such audit.

8           “(e) FEDERAL AVIATION SAFETY ADVISORS.—

9           “(1) IN GENERAL.—In the case of an ODA  
10 holder described in paragraph (2), the Administrator  
11 shall assign FAA aviation safety personnel with ap-  
12 propriate expertise to be advisors to the ODA unit  
13 members that are authorized to make findings of  
14 compliance on behalf of the Administrator. The advi-  
15 sors shall—

16           “(A) communicate with assigned unit  
17 members on an ongoing basis to ensure that the  
18 assigned unit members are knowledgeable of  
19 relevant FAA policies and acceptable methods  
20 of compliance; and

21           “(B) monitor the performance of the as-  
22 signed unit members to ensure consistency with  
23 such policies.

24           “(2) ODA HOLDERS DESCRIBED.—An ODA  
25 holder described in this paragraph is—



1           “(A) a manufacturer that holds both a  
2           type and a production certificate for—

3                   “(i) transport category airplanes with  
4                   a maximum takeoff gross weight greater  
5                   than 150,000 pounds; or

6                   “(ii) airplanes produced and delivered  
7                   to operators operating under part 121 of  
8                   title 14, Code of Federal Regulations, for  
9                   air carrier service under such part 121;  
10                  and

11                  “(B) a manufacturer of engines for an air-  
12                  plane described in subparagraph (A).

13           “(f) COMMUNICATION WITH THE FAA.—Neither the  
14 Administrator nor an ODA holder may prohibit—

15                   “(1) an ODA unit member from communicating  
16                   with, or seeking the advice of, the Administrator or  
17                   FAA staff; or

18                   “(2) the Administrator or FAA staff from com-  
19                   municating with an ODA unit member.”.

20           “(b) REPORT.—Not later than September 30, 2022,  
21 the Administrator shall submit to the appropriate commit-  
22 tees of Congress a report on the implementation of sub-  
23 sections (d) through (f) of section 44736 of title 49,  
24 United States Code, as added by subsection (a).

1 **SEC. 6. BEST PRACTICES FOR ORGANIZATION DESIGNA-**  
2 **TION AUTHORIZATIONS.**

3 (a) IN GENERAL.—Section 213 of the FAA Reau-  
4 thorization Act of 2018 (Public Law 115–254, 132 Stat.  
5 3249) is amended—

6 (1) by striking subsection (g);

7 (2) by redesignating subsections (e) through (f)  
8 as subsections (d) through (g), respectively;

9 (3) by inserting after subsection (b), the fol-  
10 lowing:

11 “(c) **BEST PRACTICES REVIEW.**—In addition to con-  
12 ducting the survey required under subsection (b), the  
13 Panel shall conduct a review of all ODA holders to identify  
14 and develop best practices. At a minimum, the best prac-  
15 tices shall address preventing and deterring instances of  
16 undue pressure on or by an ODA unit member, within an  
17 ODA, or by an ODA holder, or instances of perceived reg-  
18 ulatory coziness or other failures to maintain independ-  
19 ence between the FAA and an ODA holder or an ODA  
20 unit member. In carrying out such review, the Panel  
21 shall—

22 “(1) examine other government regulated indus-  
23 tries to gather lessons learned, procedures, or proc-  
24 esses that address undue pressure of employees, per-  
25 ceived regulatory coziness, or other failures to main-  
26 tain independence;

1           “(2) identify ways to improve communications  
2           between an ODA Administrator, ODA unit mem-  
3           bers, and FAA engineers and inspectors, consistent  
4           with section 44736(g) of title 49, United States  
5           Code, in order to enable direct communication of  
6           technical concerns that arise during a certification  
7           project without fear of reprisal to the ODA Adminis-  
8           trator or ODA unit member; and

9           “(3) examine FAA designee programs, includ-  
10          ing the assignment of FAA advisors to designees, to  
11          determine which components of the program may  
12          improve the FAA’s oversight of ODA units, ODA  
13          unit members, and the ODA program.”;

14          (4) in subsection (d) (as redesignated by para-  
15          graph (2))—

16                 (A) by striking paragraph (3) and redesign-  
17                 ating paragraphs (4) through (6) as para-  
18                 graphs (3) through (5), respectively;

19                 (B) in paragraph (4) (as redesignated by  
20                 subparagraph (A)), by striking “and” at the  
21                 end;

22                 (C) in paragraph (5) (as so redesignated),  
23                 by striking the period at the end and inserting  
24                 “; and”; and

25                 (D) by adding at the end the following:

1           “(6) the results of the review conducted under  
2 subsection (c).”; and

3           (5) by inserting after subsection (g) (as redesign-  
4 nated by paragraph (2)), the following:

5           “(h) BEST PRACTICES ADOPTION.—

6           “(1) IN GENERAL.—Not later than 180 days  
7 after the date on which the Administrator receives  
8 the report required under subsection (e), the Admin-  
9 istrator shall establish best practices for all ODA  
10 holders and require such practices to be incor-  
11 porated, as appropriate, into each ODA holder’s ap-  
12 proved procedures manual.

13           “(2) NOTICE AND COMMENT PERIOD.—The Ad-  
14 ministrator shall publish the established best prac-  
15 tices for public notice and comment for not fewer  
16 than 60 days prior to requiring the practices, as ap-  
17 propriate, be incorporated into each ODA holder’s  
18 approved procedures manual.

19           “(i) SUNSET.—The Panel shall terminate on the ear-  
20 lier of—

21           “(1) the date of submission of the report under  
22 subsection (e); or

23           “(2) the date that is 2 years after the date on  
24 which the Panel is first convened under subsection  
25 (a).”.

1 (b) PROCEDURES MANUAL.—Section 44736(b)(3) of  
2 title 49, United States Code, is amended—

3 (1) in subparagraph (E), by striking “and”  
4 after the semicolon at the end;

5 (2) in subparagraph (F), by striking the period  
6 at the end and inserting “; and”; and

7 (3) by adding at the end the following:

8 “(G) ensure the ODA holders procedures  
9 manual contains procedures and policies based  
10 on best practices established by the Adminis-  
11 trator of the FAA to mitigate undue pressure  
12 and regulatory coziness or other failures to  
13 maintain independence.”.

14 **SEC. 7. REVIEW OF HUMAN FACTORS ASSUMPTIONS.**

15 (a) HUMAN FACTORS IN CERTIFICATION.—Not later  
16 than 60 days after the date of enactment of this Act, the  
17 Administrator shall initiate a review and may, after such  
18 review and as necessary, revise existing regulations, in-  
19 cluding, but not limited to, sections 25.1302, 25.1309,  
20 25.1322, 25.1323, 25.1324, and 25.1329 of title 14, Code  
21 of Federal Regulations, and supporting policies, guide-  
22 lines, and advisory circulars, to integrate and emphasize  
23 human factors and human system integration, particularly  
24 those related to pilot and aircraft interfaces.

1 (b) REVIEW.—In carrying out subsection (a), the Ad-  
2 ministrator shall—

3 (1) review existing assumptions on pilot rec-  
4 ognition and response, including response to safety-  
5 significant failure conditions and failure scenarios  
6 that trigger multiple, and possibly conflicting, warn-  
7 ings and alerts, as part of the certification process;

8 (2) validate such assumptions with applicable  
9 operational data, human factors research and the  
10 input of human factors experts and FAA operational  
11 data, and as necessary, modify the existing assump-  
12 tions;

13 (3) ensure that when carrying out the certifi-  
14 cation of a new aircraft type, an amended type, or,  
15 as appropriate, supplemental type, the cumulative  
16 impact that new technologies, and the interaction be-  
17 tween new technologies and unchanged systems for  
18 an amended type certificate, may have on pilot inter-  
19 actions with aircraft systems are properly assessed  
20 through system safety assessments or otherwise;

21 (4) ensure that any action carried out under  
22 this section accounts for the necessary adjustments  
23 to system safety assessments, pilot procedures and  
24 training needs, and design requirements; and

1           (5) notify other international regulators that  
2           certify transport-category airplane type designs of  
3           the review and encourage them to evaluate any regu-  
4           latory changes to their processes and address any  
5           changes, if applicable.

6           (c) **REPORT.**—Not later than 180 days after com-  
7           pleting the review required under subsection (a), the Ad-  
8           ministrators shall submit a report to the appropriate com-  
9           mittees of Congress detailing the results of the review and  
10          what revisions or other changes were made as a result of  
11          such review.

12          **SEC. 8. HUMAN FACTORS RESEARCH.**

13          (a) **HUMAN FACTORS.**—Not later than 180 days  
14          after the date of enactment of this Act, the Administrator,  
15          in consultation with aircraft manufacturers, operators,  
16          and pilots, and in coordination with the Administrator of  
17          the National Aeronautics and Space Administration, shall  
18          develop research requirements to address the integration  
19          of human factors in the design and certification of aircraft  
20          that are intended for use in air transportation.

21          (b) **REQUIREMENTS.**—In developing such research  
22          requirements, the Administrator shall—

23                  (1) establish goals for research in areas of  
24                  study relevant to advancing technology, improving  
25                  design engineering and certification practices, and

1       facilitating better understanding of human factors  
2       concepts in the context of the growing development  
3       and reliance on automated or complex flight deck  
4       systems in aircraft operations, including, but not  
5       limited to, the development of tools to validate pilot  
6       recognition and response assumptions and diagnostic  
7       tools to improve the clarity of failure indications pre-  
8       sented to pilots;

9               (2) take into consideration and leverage any ex-  
10       isting or planned research that is conducted by, or  
11       conducted in partnership with, the FAA; and

12              (3) focus on—

13                   (A) preventing a recurrence of the types of  
14                   recent accidents that have involved transport  
15                   category airplanes designed and manufactured  
16                   in the United States; and

17                   (B) increasingly complex aircraft systems  
18                   and designs.

19       (c) IMPLEMENTATION.—In implementing the re-  
20       search requirements developed under this section, the Ad-  
21       ministrators shall work with appropriate organizations and  
22       authorities with expertise including , to the maximum ex-  
23       tent practicable, the Center of Excellence for Technical  
24       Training and Human Performance and the Center of Ex-  
25       cellence focused on automated systems and human factors



1 in aircraft that are intended for use in air transportation  
2 established under section 9.

3 (d) **AUTHORIZATION OF APPROPRIATIONS.**—There  
4 are authorized to be appropriated to the Administrator  
5 such sums as may be necessary to carry out this section.

6 **SEC. 9. FAA CENTER OF EXCELLENCE FOR AUTOMATED**  
7 **SYSTEMS AND HUMAN FACTORS IN AIR-**  
8 **CRAFT.**

9 (a) **CENTER.**—

10 (1) **IN GENERAL.**—The Administrator shall de-  
11 velop a Center of Excellence focused on automated  
12 systems and human factors in aircraft that are in-  
13 tended for use in air transportation.

14 (2) **DUTIES.**—The Center of Excellence shall,  
15 as appropriate—

16 (A) promote and facilitate collaboration  
17 among academia, the FAA, and the aircraft  
18 and airline industries, including aircraft, en-  
19 gine, and equipment manufacturers, air car-  
20 riers, and representatives of the pilot commu-  
21 nity;

22 (B) establish goals for research in areas of  
23 study relevant to advancing technology, improv-  
24 ing engineering practices, and facilitating better  
25 understanding of human factors concepts in the

1 context of the growing development and reliance  
2 on automated or complex systems in commer-  
3 cial aircraft, including continuing education and  
4 training;

5 (C) examine issues related to human sys-  
6 tem integration and flight crew and aircraft  
7 interfaces; and

8 (D) assist the FAA by reviewing safety re-  
9 ports to identify human factors issues for re-  
10 search.

11 (3) AVOIDING DUPLICATION OF WORK.—In de-  
12 veloping the Center of Excellence, the Administrator  
13 shall ensure the work of the Center of Excellence  
14 does not duplicate or overlap with the work of any  
15 other established center of excellence.

16 (4) MEMBER PRIORITIZATION.—

17 (A) IN GENERAL.—The Administrator,  
18 when developing the Center of Excellence, shall  
19 prioritize the inclusion of subject-matter experts  
20 whose professional experience enables them to  
21 be objective and impartial in their contributions  
22 to the greatest extent possible.

23 (B) REPRESENTATION.—The Adminis-  
24 trator shall require that the membership of the  
25 Center of Excellence reflect a balanced view-

1 point across broad disciplines in the aviation in-  
2 dustry.

3 (C) INDEPENDENCE CLAUSE.—Any mem-  
4 ber of the Center of Excellence who is a Boeing  
5 Company or FAA employee who participated in  
6 the certification of the Maneuvering Character-  
7 istics Augmentation System for the 737 MAX  
8 8 airplane must disclose such involvement to  
9 the FAA prior to performing any work on be-  
10 half of the FAA.

11 (D) TRANSPARENCY.—In developing and  
12 administering the Center of Excellence, the Ad-  
13 ministrator shall develop procedures to facilitate  
14 transparency and appropriate maintenance of  
15 records to the maximum extent practicable.

16 (b) AUTHORIZATION OF APPROPRIATIONS.—There  
17 are authorized to be appropriated to the Administrator  
18 such sums as may be necessary to carry out this section.

19 **SEC. 10. PILOT OPERATIONAL EVALUATIONS.**

20 (a) PILOT OPERATIONAL EVALUATIONS.—Not later  
21 than 1 year after the date of enactment of this Act, the  
22 Administrator shall revise existing policies for manufac-  
23 turers of transport category airplanes that are expected  
24 to be operated for scheduled passenger air transportation  
25 to ensure that pilot operational evaluations for new air-

1 planes that are in the process of being certified use pilots  
2 from air carriers that are expected to operate such air-  
3 planes.

4 (b) REQUIREMENT.—The air carrier pilots used for  
5 such evaluations shall include a representative sample of  
6 such carriers' pilots with respect to levels of experience.  
7 Such sampling of pilots shall come from foreign and do-  
8 mestic air carriers, if necessary, to produce such rep-  
9 resentative sampling.

10 **SEC. 11. FAA CONTINUING EDUCATION AND TRAINING.**

11 (a) IN GENERAL.—Chapter 445 of title 49, United  
12 States Code, is amended by adding at the end the fol-  
13 lowing:

14 **“§ 44519. Certification personnel continuing edu-  
15 cation and training**

16 “(a) OFFICE.—Not later than 120 days after the  
17 date of enactment of this section, the Administrator of the  
18 FAA shall establish an Office of Continuing Education.

19 “(b) PROGRAM.—The Office of Continuing Education  
20 shall administer a continuing education and training pro-  
21 gram.

22 “(c) PURPOSE OF PROGRAM.—The purpose of the  
23 continuing education and training program shall be to pro-  
24 vide continuing education and training to FAA personnel  
25 who hold positions involving aircraft certification and

1 flight standards, including human factors specialists, engi-  
2 neers, flight test pilots, inspectors, and, as determined ap-  
3 propriate by the Administrator, industry personnel who  
4 may be responsible for compliance activities including des-  
5 ignees.

6 “(d) FUNCTIONS.—In administering the continuing  
7 education and training program, the Office of Continuing  
8 Education shall—

9 “(1) in consultation with outside experts, de-  
10 velop—

11 “(A) an education and training curriculum  
12 on current and new aircraft technologies,  
13 human factors, project management, and the  
14 roles and responsibilities associated with over-  
15 sight of designees; and

16 “(B) recommended practices for compli-  
17 ance with FAA regulations; and

18 “(2) hire and manage a staff of qualified indi-  
19 viduals to educate and train FAA personnel de-  
20 scribed in subsection (c) using the education and  
21 training curriculum and best practices developed  
22 under paragraph (1).

23 “(e) AUTHORIZATION OF APPROPRIATIONS.—There  
24 are authorized to be appropriated to the Administrator,  
25 \$10,000,000 for each of fiscal years 2021 through 2025

1 to carry out this section. Amounts appropriated under the  
2 preceding sentence for any fiscal year shall remain avail-  
3 able until expended.

4 “(f) DEFINITION OF FAA.—In this section, the term  
5 ‘FAA’ means the Federal Aviation Administration.”.

6 (b) TABLE OF CONTENTS.—The analysis for chapter  
7 445 of title 49, United States Code, is amended by insert-  
8 ing after the item relating to section 44518 the following:  
“44519. Certification personnel continuing education and training.”.

9 **SEC. 12. AUTHORIZATION OF APPROPRIATIONS FOR SCI-**  
10 **ENTIFIC AND TECHNICAL ADVISORS.**

11 There are authorized to be appropriated to the Ad-  
12 ministrator, \$10,000,000 for each of fiscal years 2021  
13 through 2030 for salaries of specialized technical per-  
14 sonnel with expertise in new and emerging technologies  
15 for such personnel to advise the Administrator on the de-  
16 velopment of technical standards for new technologies and  
17 operations to be implemented in the FAA’s regulatory and  
18 certification programs. Amounts appropriated under the  
19 preceding sentence for any fiscal year shall remain avail-  
20 able until expended.

21 **SEC. 13. PROHIBITION ON CERTAIN PERFORMANCE-BASED**  
22 **INCENTIVES.**

23 Section 106(l) of title 49, United States Code, is  
24 amended by adding at the end the following:

1           “(7) PROHIBITION ON CERTAIN PERFORMANCE-  
2           BASED INCENTIVES.—No employee of the Adminis-  
3           tration shall be given an award, financial incentive,  
4           other compensation, or recognition as a result of ac-  
5           tions to meet performance goals related to meeting  
6           schedules or quotas for certificates issued under sec-  
7           tion 44704.”.

8           **SEC. 14. SAFETY REPORTING PROGRAM.**

9           (a) IN GENERAL.—Not later than 1 year after the  
10          date of enactment of this Act, in order to improve safety  
11          in the individual certification application review process  
12          and potential trends relating to safety concerns, the Ad-  
13          ministrator shall maintain a voluntary safety reporting  
14          program for FAA employees to confidentially and volun-  
15          tarily report instances where they have identified safety  
16          concerns during certification or oversight processes.

17          (b) SAFETY REPORTING PROGRAM REQUIRE-  
18          MENTS.—In maintaining the safety reporting program  
19          under subsection (a), the Administrator shall ensure the  
20          following:

21                 (1) The FAA maintains a reporting culture that  
22                 encourages human factors specialists, engineers,  
23                 flight test pilots, inspectors, and other appropriate  
24                 FAA employees to voluntarily report concerns that

1 an aspect of an aircraft design may be noncompli-  
2 ant, nonconforming, or unsafe.

3 (2) The safety reporting program is non-puni-  
4 tive, confidential, and protects employees from ad-  
5 verse employment actions related to their participa-  
6 tion in the program.

7 (3) The safety reporting program identifies ex-  
8 clusionary criteria for the program.

9 (4) Collaborative development of the program  
10 with bargaining representatives of employees under  
11 section 7111 of title 5, United States Code, who are  
12 employed in the Aircraft Certification Service or  
13 Flight Standards Service of the Administration (or,  
14 if unable to reach an agreement collaboratively, the  
15 Administrator shall negotiate with the representa-  
16 tives in accordance with section 40122(a) of title 49,  
17 United States Code, regarding the development of  
18 the program).

19 (5) Full and collaborative participation in the  
20 program by the bargaining representatives of em-  
21 ployees described in subparagraph (4).

22 (6) The Administrator thoroughly reviews safe-  
23 ty reports to determine whether there is a hazard,  
24 defect, noncompliance, nonconformance, or process  
25 error.



1           (7) The Administrator thoroughly reviews safe-  
2           ty reports to determine whether potential weaknesses  
3           in the aircraft certification processes led to safety  
4           concerns being raised regarding aircraft, engine,  
5           propeller, and appliance designs, including systems,  
6           components, parts, and materials.

7           (8) If the Administrator determines that a haz-  
8           ard, defect, noncompliance, nonconformance, or  
9           process error exists, the root cause is identified and  
10          appropriate corrective action is taken to rectify the  
11          defect, noncompliance, nonconformance, or process  
12          error.

13          (c) **OUTCOMES.**—Results of safety report reviews  
14          under this section may be used to—

15               (1) improve—

16                   (A) safety systems, hazard control, and  
17                   risk reduction;

18                   (B) certification systems;

19                   (C) FAA oversight; and

20                   (D) compliance and conformance; and

21               (2) implement lessons learned.

22          (d) **REPORT FILING.**—The Administrator shall estab-  
23          lish requirements for when in the certification process re-  
24          ports may be filed, which may include certification mile-  
25          stones, timelines, or other decision-making points, with the

1 goals of ensuring that identified issues can be timely ad-  
2 dressed and fostering open dialogue between applicants  
3 and FAA employees throughout the certification process.

4 (e) INTEGRATION WITH OTHER SAFETY REPORTING  
5 PROGRAMS.—The Administrator shall harmonize the safe-  
6 ty reporting program maintained under subsection (a)  
7 with other internal safety reporting programs the FAA  
8 maintains.

9 (f) REPORT TO CONGRESS.—Not later than 2 years  
10 after the date of enactment of this Act, and annually  
11 thereafter, the Administrator shall submit to the appro-  
12 priate committees of Congress a report on the effective-  
13 ness of the safety reporting program maintained under  
14 subsection (a).

15 **SEC. 15. PROTECTION OF WHISTLEBLOWERS.**

16 Section 42121(a) of title 49, United States Code, is  
17 amended—

18 (1) by redesignating paragraphs (1) through  
19 (4) as subparagraphs (A) through (D), respectively,  
20 and moving the margins of such subparagraphs 2  
21 ems to the right;

22 (2) in the subsection heading, by striking “AIR-  
23 LINE”;

24 (3) by striking “No air carrier” and inserting  
25 the following:

1           “(1) AIR CARRIERS.—No air carrier”; and  
2           (4) by adding at the end the following:

3           “(2) AIRCRAFT MANUFACTURERS.—No aircraft,  
4           engine, or propeller manufacturer that holds a cer-  
5           tificate issued pursuant to section 44704 of title 49,  
6           United States Code, or contractor of, subcontractor  
7           of, or supplier to, such a manufacturer may dis-  
8           charge an employee or otherwise discriminate  
9           against an employee with respect to compensation,  
10          terms, conditions, or privileges of employment be-  
11          cause the employee (or any person acting pursuant  
12          to a request of the employee)—

13                   “(A) provided, caused to be provided, or is  
14                   about to provide (with any knowledge of the  
15                   employer) or cause to be provided to the em-  
16                   ployer or Federal Government information re-  
17                   lating to any violation or alleged violation of  
18                   any order, regulation, or standard of the Fed-  
19                   eral Aviation Administration or any other provi-  
20                   sion of Federal law relating to aircraft, engine,  
21                   or propeller manufacturer safety (including  
22                   parts or components provided by contractors,  
23                   subcontractors, or suppliers) under this subtitle  
24                   or any other law of the United States;

1           “(B) has filed, caused to be filed, or is  
2           about to file (with any knowledge of the em-  
3           ployer) or cause to be filed a proceeding relat-  
4           ing to any violation or alleged violation of any  
5           order, regulation, or standard of the Federal  
6           Aviation Administration or any other provision  
7           of Federal law, relating to aircraft, engine, or  
8           propeller manufacturer safety (including parts  
9           or components provided by contractors, sub-  
10          contractors, or suppliers) under this subtitle or  
11          any other law of the United States;

12           “(C) testified or is about to testify in such  
13          a proceeding; or

14           “(D) assisted or participated or is about to  
15          assist or participate in such a proceeding.”.

16   **SEC. 16. REPEAL OF DESIGN AND PRODUCTION ORGANIZA-**  
17                           **TION CERTIFICATE AUTHORITY.**

18          (a) **IN GENERAL.**—Section 44704 of title 49, United  
19          States Code, is amended—

20           (1) in the section heading, by striking “**air-**  
21           **worthiness certificates, and design and**  
22           **production organization certificates**” and  
23           inserting “**and airworthiness certificates**”;  
24           and

25           (2) by striking subsection (e).

1 (b) CONFORMING AMENDMENT.—Section 44702(a)  
2 of title 49, United States Code, is amended, in the matter  
3 preceding paragraph (1), by striking “design organization  
4 certificates,”.

5 **SEC. 17. ENSURING APPROPRIATE RESPONSIBILITY OF AIR-**  
6 **CRAFT CERTIFICATION AND FLIGHT STAND-**  
7 **ARDS PERFORMANCE OBJECTIVES AND**  
8 **METRICS.**

9 (a) REPEALS.—Sections 211 and 221 of the FAA Re-  
10 authorization Act of 2018 (49 U.S.C. 44701 note) are re-  
11 pealed.

12 (b) CONFORMING REPEALS.—Paragraphs (8) and (9)  
13 of section 202(c) of the FAA Reauthorization Act of 2018  
14 (49 U.S.C. 44701 note) are repealed.

15 **SEC. 18. REVIEW OF FAA CERTIFICATION EXPERTISE.**

16 (a) IN GENERAL.—Not later than 60 days after the  
17 date of enactment of this Act, and without duplicating any  
18 recently completed or ongoing reviews, the Administrator  
19 shall initiate a review of—

20 (1) the inspectors, human factors specialists,  
21 flight test pilots, engineers, managers, and execu-  
22 tives in the FAA who are responsible for the certifi-  
23 cation of the design, manufacture, and operation of  
24 aircraft intended for air transportation for purposes  
25 of determining whether the FAA has the expertise

1 and capability to adequately understand the safety  
2 implications of, and oversee the adoption of, new or  
3 innovative technologies, materials, and procedures  
4 that designers and manufacturers of such aircraft  
5 may adopt or introduce;

6 (2) the Chief Scientific and Technical Advisors  
7 program to determine whether the program should  
8 be enhanced or expanded to bolster and support the  
9 programs of the FAA's Office of Aviation Safety,  
10 with particular focus placed on the Aircraft Certifi-  
11 cation Service and the Flight Standards Service (or  
12 any successor organizations), particularly with re-  
13 spect to understanding the safety implications of  
14 new or innovative technologies, materials, aircraft  
15 operations, and procedures, that designers and man-  
16 ufacturers of such aircraft may adopt or introduce;  
17 and

18 (3) the FAA's compensation policies for aircraft  
19 certification engineers, human factors specialists,  
20 flight test pilots, and aviation safety inspectors rel-  
21 ative to those of industry to determine whether com-  
22 pensation is adequate to attract personnel with ade-  
23 quate experience.

24 (b) DEADLINE FOR COMPLETION.—Not later than  
25 270 days after the date of enactment of this Act, the Ad-

1 administrator shall complete the review required by sub-  
2 section (a).

3 (c) BRIEFING.—Not later than 30 days after the  
4 completion of the review required by subsection (a), the  
5 Administrator shall brief the appropriate committees of  
6 Congress on the results of the review and any other related  
7 review. The briefing shall include the following:

8 (1) An analysis of the FAA's ability to hire  
9 safety inspectors, human factors specialists, flight  
10 test pilots, engineers, managers, executives, sci-  
11 entists, and technical advisors, who have the req-  
12 uisite expertise to oversee new developments in aero-  
13 space design and manufacturing.

14 (2) A plan for the FAA to improve the overall  
15 expertise of the FAA's personnel who are responsible  
16 for the oversight of the design and manufacture of  
17 aircraft.

18 (3) Recommendations for such legislation, if  
19 any, as the Administrator determines necessary to  
20 carry out the plan required under paragraph (2).

21 (d) CONSULTATION REQUIREMENT.—In completing  
22 the review under subsection (a), the Administrator shall  
23 consult and collaborate with appropriate stakeholders, in-  
24 cluding labor organizations (including those representing  
25 aviation workers, FAA aviation safety engineers, human

1 factors specialists, flight test pilots, and FAA aviation  
2 safety inspectors), air carriers and aircraft and aviation  
3 manufacturers.

4 **SEC. 19. TRANSPORT AIRPLANE RISK ASSESSMENT METH-**  
5 **ODOLOGY.**

6 (a) **DEADLINES.—**

7 (1) **AGREEMENT.—**Not later than 15 days after  
8 the date of enactment of this Act, the Administrator  
9 shall enter into an agreement with the Transpor-  
10 tation Research Board to develop a report regarding  
11 the methodology and effectiveness of the Transport  
12 Airplane Risk Assessment Methodology (TARAM)  
13 process used by the FAA.

14 (2) **REPORT.—**Not later than 180 days after  
15 the date of enactment of this Act, the Transpor-  
16 tation Research Board shall deliver such report to  
17 the appropriate committees of Congress.

18 (b) **ELEMENTS.—**The report under subsection (a)  
19 shall include the following elements:

20 (1) An assessment of the Transport Airplane  
21 Risk Assessment Methodology (TARAM) method-  
22 ology.

23 (2) An assessment of the effectiveness of the  
24 Transport Airplane Risk Assessment Methodology



1 (TARAM) for the purposes of improving aviation  
2 safety.

3 (3) Recommendations to improve the method-  
4 ology and effectiveness of the Transport Airplane  
5 Risk Assessment Methodology (TARAM) as an ele-  
6 ment of aviation safety.

7 (c) REQUIRED BRIEFINGS.—

8 (1) IN GENERAL.—Not later than 7 days after  
9 the completion of any Transport Airplane Risk As-  
10 sessment Methodology (TARAM) conducted pursu-  
11 ant to an aviation incident in which loss of life oc-  
12 curred, the Administrator shall provide a briefing to  
13 the appropriate committees of Congress on the find-  
14 ings and recommendations of the Transport Air-  
15 plane Risk Assessment Methodology (TARAM).

16 (2) REQUIRED SUBMISSION.—Any briefing re-  
17 quired under paragraph (1) shall include the provi-  
18 sion of copies of the Transport Airplane Risk As-  
19 sessment Methodology (TARAM) to the appropriate  
20 committees of Congress.

21 (3) NO DELEGATION.—The requirement for the  
22 Administrator to provide a briefing under paragraph  
23 (1) shall not be delegated to any other official of the  
24 FAA.

1 **SEC. 20. FOREIGN CIVIL AVIATION AUTHORITY ASSIST-**  
2 **ANCE.**

3 (a) **INTERNATIONAL AVIATION SAFETY.—**

4 (1) **IN GENERAL.—**Section 40104(b) of title 49,  
5 United States Code, is amended—

6 (A) by striking “The Administrator shall”  
7 and inserting the following:

8 “(1) **IN GENERAL.—**The Administrator shall”;

9 and

10 (B) by adding at the end the following:

11 “(2) **BILATERAL AND MULTILATERAL ENGAGE-**  
12 **MENT; TECHNICAL ASSISTANCE.—**The Administrator  
13 shall—

14 “(A) with the concurrence of the Secretary  
15 of State, engage bilaterally and multilaterally,  
16 including with the International Civil Aviation  
17 Organization (ICAO), on an ongoing basis to  
18 bolster international collaboration, data sharing,  
19 and harmonization of international aviation  
20 safety requirements including through—

21 “(i) sharing of continued operational  
22 safety information;

23 “(ii) prioritization of pilot training de-  
24 ficiencies, including manual flying skills  
25 and flight crew training, to discourage over

1 reliance on automation, further bolstering  
2 the components of airmanship;

3 “(iii) encouraging the consideration of  
4 the safety advantages of appropriate Fed-  
5 eral regulations, which may include rel-  
6 evant Federal regulations pertaining to  
7 flight crew training and qualifications; and

8 “(iv) prioritizing any other flight crew  
9 training areas that the Administrator be-  
10 lieves will enhance all international avia-  
11 tion safety; and

12 “(B) seek to expand technical assistance  
13 provided by the Federal Aviation Administra-  
14 tion in support of enhancing international avia-  
15 tion safety, including by—

16 “(i) promoting and enhancing effec-  
17 tive oversight systems, including oper-  
18 ational safety enhancements identified  
19 through data collection and analysis;

20 “(ii) promoting and encouraging com-  
21 pliance with international safety standards  
22 by counterpart civil aviation authorities;

23 “(iii) minimizing cybersecurity threats  
24 and vulnerabilities across the aviation eco-  
25 system;

1                   “(iv) supporting the sharing of safety  
2 information, best practices, risk assess-  
3 ments, and mitigations through established  
4 international aviation safety groups; and

5                   “(v) providing technical assistance on  
6 any other aspect of aviation safety that the  
7 Administrator determines is likely to en-  
8 hance international aviation safety.”.

9                   (2) AUTHORIZATION OF APPROPRIATIONS.—

10                   There are authorized to be appropriated such sums  
11 as may be necessary to carry out the amendments  
12 made by this subsection.

13                   (b) ASSISTANCE TO FOREIGN AVIATION AUTHORI-  
14 TIES.—

15                   (1) IN GENERAL.—Section 40113(e)(1) of title  
16 49, United States Code, is amended by inserting  
17 “The Administrator also may provide technical as-  
18 sistance related to all aviation safety-related training  
19 and operational services in connection with bilateral  
20 and multilateral agreements, including further bol-  
21 stering the components of airmanship.” after the  
22 first sentence.

23                   (2) AUTHORIZATION OF APPROPRIATIONS.—

24                   Section 40113(e) of title 49, United States Code, is  
25 amended by adding at the end the following:

1           “(5) AUTHORIZATION OF APPROPRIATIONS.—

2           There are authorized to be appropriated to the Ad-  
3           ministrators, \$10,000,000 for each of fiscal years  
4           2021 through 2026 to carry out this subsection.  
5           Amounts appropriated under the preceding sentence  
6           for any fiscal year shall remain available until ex-  
7           pended.”.

8           (c) SUPPORT FOR IMPLEMENTATION OF IMPROVE-  
9           MENTS TO INTERNATIONAL PILOT TRAINING TO ADDRESS  
10          FLIGHT DECK AUTOMATION AND HUMAN FACTORS.—

11           (1) AUTHORIZATION OF APPROPRIATIONS.—

12           There are authorized to be appropriated to the  
13           International Organizations and Programs (IO&P)  
14           account of the Department of State, \$2,000,000 for  
15           each of fiscal years 2021 through 2026, to remain  
16           available until expended. Amounts appropriated  
17           under the authority of the preceding sentence should  
18           be used for expenditures attributable to supporting  
19           implementation of recommendations included in the  
20           working paper titled, “Pilot Training Improvements  
21           to Address Automation Dependency” offered by the  
22           United States at the 40th Assembly of ICAO and re-  
23           lated to human-machine interface.

24           (2) SENSE OF CONGRESS REGARDING INTER-  
25          NATIONAL PILOT TRAINING STANDARDS.—

1 (A) FINDINGS.—Congress makes the fol-  
2 lowing findings:

3 (i) Increased reliance on automation  
4 in commercial aviation risks a degradation  
5 of pilot skills in flight path management  
6 using manual flight control.

7 (ii) Manual flight skills are essential  
8 for pilot confidence and competence.

9 (iii) During the 40th Assembly of  
10 ICAO, the United States, Canada, Peru,  
11 and Trinidad and Tobago presented a  
12 working paper titled, “Pilot Training Im-  
13 provements to Address Automation De-  
14 pendency”.

15 (iv) The working paper outlines rec-  
16 ommendations for the Assembly to miti-  
17 gate the consequences of automation de-  
18 pendency, including identifying competency  
19 requirements for flight path management  
20 using manual flight control and assessing  
21 the need for new or amended international  
22 standards or guidance.

23 (B) SENSE OF CONGRESS.—It is the sense  
24 of Congress that, as soon as practicable—

1 (i) the recommendations included in  
2 the working paper titled "Pilot Training  
3 Improvements to Address Automation De-  
4 pendency" offered by the United States at  
5 the 40th Assembly of ICAO should be car-  
6 ried out by the Assembly; and

7 (ii) the United States should work  
8 with ICAO and other international aviation  
9 safety groups, further bolstering the com-  
10 ponents of airmanship.

11 **SEC. 21. NATIONAL AIR GRANT FELLOWSHIP PROGRAM.**

12 (a) PROGRAM.—

13 (1) PROGRAM MAINTENANCE.—The Adminis-  
14 trator shall maintain within the FAA a program to  
15 be known as the "National Air Grant Fellowship  
16 Program".

17 (2) PROGRAM ELEMENTS.—The National Air  
18 Grant Fellowship Program shall provide support for  
19 the fellowship program under subsection (b).

20 (3) RESPONSIBILITIES OF ADMINISTRATOR.—

21 (A) GUIDELINES.—The Administrator  
22 shall establish guidelines related to the activi-  
23 ties and responsibilities of air grant fellowships  
24 under subsection (b).

1           (B) QUALIFICATIONS.—The Administrator  
2 shall by regulation prescribe the qualifications  
3 required for designation of air grant fellowships  
4 under subsection (b).

5           (C) AUTHORITY.—In order to carry out  
6 the provisions of this section, the Administrator  
7 may—

8           (i) appoint, assign the duties, trans-  
9 fer, and fix the compensation of such per-  
10 sonnel as may be necessary, in accordance  
11 with civil service laws;

12           (ii) make appointments with respect  
13 to temporary and intermittent services to  
14 the extent authorized by section 3109 of  
15 title 5, United States Code;

16           (iii) enter into contracts, cooperative  
17 agreements, and other transactions without  
18 regard to section 6101 of title 41, United  
19 States Code;

20           (iv) notwithstanding section 1342 of  
21 title 31, United States Code, accept dona-  
22 tions and voluntary and uncompensated  
23 services;

24           (v) accept funds from other Federal  
25 departments and agencies, including agen-



1                   cies within the FAA, to pay for and add to  
2                   activities authorized by this section; and

3                   (vi) promulgate such rules and regula-  
4                   tions as may be necessary and appropriate.

5                   (4) DIRECTOR OF NATIONAL AIR GRANT FEL-  
6                   LOWSHIP PROGRAM.—

7                   (A) IN GENERAL.—The Administrator  
8                   shall appoint, as the Director of the National  
9                   Air Grant Fellowship Program, a qualified indi-  
10                  vidual who has appropriate administrative expe-  
11                  rience and knowledge or expertise in fields re-  
12                  lated to aerospace. The Director shall be ap-  
13                  pointed and compensated, without regard to the  
14                  provisions of title 5 governing appointments in  
15                  the competitive service, at a rate payable under  
16                  section 5376 of title 5, United States Code.

17                  (B) DUTIES.—Subject to the supervision  
18                  of the Administrator, the Director shall admin-  
19                  ister the National Air Grant Fellowship Pro-  
20                  gram. In addition to any other duty prescribed  
21                  by law or assigned by the Administrator, the  
22                  Director shall—

23                         (i) cooperate with institutions of high-  
24                         er education that offer degrees in fields re-  
25                         lated to aerospace;

1 (ii) encourage the participation of  
2 graduate and post-graduate students in the  
3 National Air Grant Fellowship Program;  
4 and

5 (iii) cooperate and coordinate with  
6 other Federal activities in fields related to  
7 aerospace.

8 (b) FELLOWSHIPS.—

9 (1) IN GENERAL.—The Administrator shall  
10 support a program of fellowships for qualified indi-  
11 viduals at the graduate and post-graduate level. The  
12 fellowships shall be in fields related to aerospace and  
13 awarded pursuant to guidelines established by the  
14 Administrator. The Administrator shall strive to en-  
15 sure equal access for minority and economically dis-  
16 advantaged students to the program carried out  
17 under this paragraph.

18 (2) AEROSPACE POLICY FELLOWSHIP.—

19 (A) IN GENERAL.—The Administrator  
20 shall award aerospace policy fellowships to sup-  
21 port the placement of individuals at the grad-  
22 uate level of education in fields related to aero-  
23 space in positions with—

24 (i) the executive branch of the United  
25 States Government; and

1 (ii) the legislative branch of the  
2 United States Government.

3 (B) PLACEMENT PRIORITIES FOR LEGISLA-  
4 TIVE FELLOWSHIPS.—

5 (i) IN GENERAL.—In considering the  
6 placement of individuals receiving a fellow-  
7 ship for a legislative branch position under  
8 subparagraph (A)(ii), the Administrator  
9 shall give priority to placement of such in-  
10 dividuals in the following:

11 (I) Positions in offices of, or with  
12 Members on, committees of Congress  
13 that have jurisdiction over the FAA.

14 (II) Positions in offices of Mem-  
15 bers of Congress that have a dem-  
16 onstrated interest in aerospace policy.

17 (ii) EQUITABLE DISTRIBUTION.—In  
18 placing fellows in positions described under  
19 clause (i), the Administrator shall ensure  
20 that placements are equally distributed  
21 among the political parties.

22 (C) DURATION.—A fellowship awarded  
23 under this paragraph shall be for a period of  
24 not more than 1 year.

1           (3) RESTRICTION ON USE OF FUNDS.—

2           Amounts available for fellowships under this sub-  
3           section, including amounts accepted under sub-  
4           section (a)(3)(C)(v) or appropriated under sub-  
5           section (d) to carry out this subsection, shall be used  
6           only for award of such fellowships and administra-  
7           tive costs of implementing this subsection.

8           (c) INTERAGENCY COOPERATION.—Each depart-  
9           ment, agency, or other instrumentality of the Federal Gov-  
10          ernment that is engaged in or concerned with, or that has  
11          authority over, matters relating to aerospace—

12           (1) may, upon a written request from the Ad-  
13          ministrator, make available, on a reimbursable basis  
14          or otherwise, any personnel (with their consent and  
15          without prejudice to their position and rating), serv-  
16          ice, or facility that the Administrator deems nec-  
17          essary to carry out any provision of this section;

18           (2) shall, upon a written request from the Ad-  
19          ministrator, furnish any available data or other in-  
20          formation that the Administrator deems necessary to  
21          carry out any provision of this section; and

22           (3) shall cooperate with the FAA and duly au-  
23          thorized officials thereof.

24           (d) AUTHORIZATION OF APPROPRIATIONS.—There  
25          are authorized to be appropriated to the Administrator

1 \$15,000,000 for each of fiscal years 2021 through 2025  
2 to carry out this section. Amounts appropriated under the  
3 preceding sentence shall remain available until expended.

4 (e) DEFINITIONS.—In this section:

5 (1) DIRECTOR.—The term “Director” means  
6 the Director of the National Air Grant Fellowship  
7 Program, appointed pursuant to subsection (a)(4).

8 (2) FIELDS RELATED TO AEROSPACE.—The  
9 term “fields related to aerospace” means any dis-  
10 cipline or field that is concerned with, or likely to  
11 improve, the development, assessment, operation,  
12 safety, or repair of aircraft and other airborne ob-  
13 jects and systems, including the following:

14 (A) Aerospace engineering.

15 (B) Aerospace physiology.

16 (C) Aeronautical engineering.

17 (D) Airworthiness engineering.

18 (E) Electrical engineering.

19 (F) Human factors.

20 (G) Software engineering.

21 (H) Systems engineering.

22 **SEC. 22. CHANGED PRODUCT RULE.**

23 (a) RULEMAKING PROCEEDING.—

24 (1) IN GENERAL.—The Administrator shall con-  
25 duct a rulemaking proceeding to revise the certifi-

1 cation basis for changed aeronautical products estab-  
2 lished under part 21 of title 14 of the Code of Fed-  
3 eral Regulations, in order to ensure an adequate as-  
4 sessment of how proposed design changes integrate  
5 with existing systems and the associated impact of  
6 such interaction at the aircraft level.

7 (2) CERTIFICATION MANAGEMENT TEAM.—

8 (A) RE-CHARTER.—Not later than 30 days  
9 after the date of enactment of this Act, the Ad-  
10 ministrator shall, in cooperation with foreign  
11 civil aviation authorities, re-charter the Certifi-  
12 cation Management Team to make rec-  
13 ommendations on the rulemaking to be carried  
14 out under paragraph (1).

15 (B) REQUIREMENTS.—In developing rec-  
16 ommendations under subparagraph (A), the Ad-  
17 ministrator, through the Certificate Manage-  
18 ment Team, shall consider, at a minimum—

19 (i) requiring a comprehensive inte-  
20 grated system-level analysis, recognizing  
21 that with complex interactive systems,  
22 every change could interact with other  
23 parts of the system;

24 (ii) requiring an assessment of pro-  
25 posed design changes on existing systems

1 at the aircraft level that includes using de-  
2 velopment assurance principles, system  
3 safety principles, and validation and  
4 verification techniques;

5 (iii) whether the level of assessment  
6 should be proportional to the impact of the  
7 change at the aircraft level; and

8 (iv) what to include in the training  
9 and qualification of flight and maintenance  
10 personnel, as well as detailed and appro-  
11 priate procedures for the safe operation of  
12 the aircraft.

13 (C) CERTIFICATION MANAGEMENT TEAM  
14 DEFINED.—In this section, the term “Certifi-  
15 cation Management Team” means the team  
16 framework under which the FAA, the European  
17 Aviation Safety Agency, the Transport Canada  
18 Civil Aviation, and the National Civil Aviation  
19 Agency of Brazil, manage the technical, policy,  
20 certification, manufacturing, export, and contin-  
21 ued airworthiness issues common among the 4  
22 authorities.

23 (D) BRIEFINGS.—Not later than 12  
24 months after the date on which the Certifi-  
25 cation Management Team is re-chartered in ac-

1 cordance with subparagraph (A), and annually  
2 thereafter until the date on which all rec-  
3 ommendations required under subparagraph  
4 (B) are developed, the Administrator shall brief  
5 the appropriate committees of Congress on the  
6 work and status of the development of such rec-  
7 ommendations by the Certification Management  
8 Team.

9 (3) OBJECTIVES.—The Administrator, when  
10 conducting the rulemaking under paragraph (1),  
11 shall address the following objectives:

12 (A) Ensure that changes are evaluated  
13 from an integrated, whole aircraft-human sys-  
14 tem engineering perspective and assume the  
15 whole aircraft is affected by the proposed de-  
16 sign change until the FAA finds otherwise.

17 (B) Develop criteria for determining when  
18 attributes of an existing design make it incapa-  
19 ble of supporting the safety advancements codi-  
20 fied in title 14 of the Code of Federal Regula-  
21 tions , as in effect on the date of application for  
22 the change, and therefore warrant consideration  
23 of a design change or certification under a new  
24 type certificate.



1           (C) Develop criteria for determining what  
2           constitutes a substantial change and a signifi-  
3           cant change to address changes in software,  
4           changes in the roles and responsibilities of the  
5           flight crew, changes to maintenance practices,  
6           and other safety critical design features which  
7           may include changes in thrust, engine location,  
8           wing size, body length, and aircraft control sur-  
9           faces size, function, and travel authority that  
10          result in changes to aircraft performance and  
11          handling qualities.

12          (D) Define key terms used for the changed  
13          product process under sections 21.19 and  
14          21.101 of title 14, Code of Federal Regulations.

15          (E) Implement mandatory aircraft-level re-  
16          views throughout the certification process to  
17          validate the certification basis and assumptions  
18          to include risk and failure analyses at the inte-  
19          grated aircraft system-level, including the flight  
20          crew when appropriate.

21          (F) Define objective criteria for FAA's fa-  
22          miliarization with design details.

23          (G) Require maintenance of relevant  
24          records of interactions between certification au-  
25          thorities and applicants that lead to agreements

1           affecting documentation and certification  
2           deliverables.

3                   (H) Ensure appropriate documentation of  
4           the designation of applicable regulations to in-  
5           clude FAA's assessment of any exceptions such  
6           as whether a change is significant, and any re-  
7           quest for exemptions from airworthiness re-  
8           quirements codified in title 14 of the Code of  
9           Federal Regulations, as in effect on the date of  
10          application for the change.

11          (b) FINAL RULE DEADLINE.—Not later than 24  
12 months after the date on which all recommendations re-  
13 quired under subsection (a)(2)(B) are developed by the  
14 Certification Management Team, the Administrator shall  
15 issue a final rule pursuant to the rulemaking proceeding  
16 required under subsection (a).

17          (c) GUIDANCE MATERIAL.—The Administrator shall  
18 consider the following for developing orders and regulatory  
19 guidance, including advisory circulars, where appropriate:

20                   (1) Early FAA involvement and feedback paths  
21           in the aircraft certification process to ensure the  
22           FAA is aware of changes to design assumptions and  
23           product design impacting a changed product assess-  
24           ment.

1           (2) Feedback paths in the aircraft certification  
2 process to ensure that compliance, system safety,  
3 and flight deck and human factors aspects are con-  
4 sidered for the product design throughout its devel-  
5 opment and certification.

6           (3) Presentation to the FAA of new technology,  
7 novel design, or safety critical features or systems,  
8 initially and throughout the certification process,  
9 when development and certification prompt design or  
10 compliance method revision.

11          (4) Roles and responsibilities of the applicant  
12 and the FAA in assessing cross-functional interface  
13 assumptions in determining what constitutes a sig-  
14 nificant change or a substantial change.

15          (5) Examples of key terms used for the changed  
16 product process under sections 21.19 and 21.101 of  
17 title 14, Code of Federal Regulations.

18          (6) The intent and expected use of additional  
19 design requirements and conditions, including the  
20 application of these additional design requirements  
21 and conditions in future application modifications  
22 and supplemental type certificates.

23          (7) Type certificate data sheet improvements to  
24 accurately state which regulations and amendment

1 level the aircraft complies to and when compliance is  
2 limited to a subset of the aircraft.

3 (8) Policies to guide applicants on proper visi-  
4 bility, clarity, and consistency of key design and  
5 compliance information that is submitted for certifi-  
6 cation, particularly with new design features.

7 (9) Early coordination processes with the FAA  
8 for the functional hazard assessments validation and  
9 preliminary system safety assessments review to en-  
10 sure the proposed system architecture can reason-  
11 ably meet the functional hazard safety requirements.

12 (10) The development, validation, and imple-  
13 mentation of analytical tools appropriate for the  
14 analysis of complex system for the FAA and appli-  
15 cants.

16 (11) Adequate and complete functional descrip-  
17 tions, organized in a clear and understandable for-  
18 mat, particularly regarding integrated systems and  
19 how the functions interact.

20 (12) Early coordination processes to highlight  
21 and properly describe any functional change at the  
22 earliest stage possible in the certification process re-  
23 gardless of the preliminary functional hazard classi-  
24 fication.

1 (d) TRAINING MATERIALS.—The Administrator  
2 shall—

3 (1) develop training materials for establishing  
4 the certification basis for changed aeronautical prod-  
5 ucts pursuant to section 21.10 of title 14, Code of  
6 Federal Regulations, applications for a new type cer-  
7 tificate pursuant to section 21.19 of such title, and  
8 the regulatory guidance developed under subsection  
9 (c); and

10 (2) procedures for disseminating such materials  
11 to implementing personnel of the FAA, designees  
12 and applicants.

13 (e) INTERNATIONAL ENGAGEMENT.—The Adminis-  
14 trator shall engage with ICAO and foreign civil aviation  
15 authorities to help ensure the adoption of an amended  
16 changed product rule on a global basis, consistent with  
17 ICAO standards.

18 **SEC. 23. TECHNICAL CERTIFICATION BOARD.**

19 Section 44702 of title 49, United States Code, is  
20 amended by adding at the end the following:

21 “(e) TECHNICAL CERTIFICATION BOARD.—

22 “(1) IN GENERAL.—For any new, amended,  
23 and supplemental type certification projects for  
24 transport category airplanes that involve new tech-  
25 nology or novel design, the Administrator shall, if it

1 is determined to be in the interest of safety, estab-  
2 lish a Technical Certification Board.

3 “(2) MEMBERS.—The Board shall be comprised  
4 of independent qualified subject matter experts ap-  
5 pointed by the Administrator. Such appointments  
6 may include FAA engineers, aviation safety inspec-  
7 tors, senior technical specialists, and Chief Scientist  
8 and Technical Advisors, and outside qualified sub-  
9 ject matter experts, including from the U.S. Air  
10 Force, Volpe National Transportation Systems Cen-  
11 ter, and the National Aeronautics and Space Admin-  
12 istration.

13 “(3) AVAILABILITY.—In order to carry out its  
14 duties with respect to the areas specified in para-  
15 graph (4), the Board shall be available to the Ad-  
16 ministrator, upon request, any time during the cer-  
17 tification process.

18 “(4) DUTIES.—The Board shall advise the Ad-  
19 ministrator and make written recommendations to  
20 the FAA, to be retained in the certification project  
21 file, including recommendations for any plans, anal-  
22 yses, assessments, and reports required to support  
23 and document the certification project, in the fol-  
24 lowing areas associated with the new technology or  
25 novel design:

1           “(A) Initial review of design proposals pro-  
2           posed by the applicant and the establishment of  
3           the certification basis.

4           “(B) Identification of new technology,  
5           novel design, or safety critical design features  
6           or systems that are potentially catastrophic, ei-  
7           ther alone or in combination with another fail-  
8           ure.

9           “(C) Determination of compliance findings,  
10          system safety assessments, and safety critical  
11          functions the FAA should retain in terms of  
12          new technology, novel design, or safety critical  
13          design features or systems.

14          “(D) Evaluation of the FAA’s expertise or  
15          experience necessary to support the project.

16          “(E) Review and evaluation of an appli-  
17          cant’s request for exceptions or exemptions  
18          from compliance with airworthiness standards  
19          codified in title 14 of the Code of Federal Reg-  
20          ulations, as in effect on the date of application  
21          for the change.

22          “(F) Conduct of design reviews, procedure  
23          evaluations, and training evaluations.

1           “(G) Review of the applicant’s final design  
2           documentation and other data to evaluate com-  
3           pliance with all FAA regulations.

4           “(5) DOCUMENTATION OF FAA RESPONSE.—  
5           The Administrator shall document in writing the  
6           FAA’s response to each recommendation of each  
7           Board and shall retain such response in the certifi-  
8           cation project file.

9           “(6) REPORT.—Not later than 1 year after the  
10          date of enactment of this subsection, and annually  
11          thereafter, the Administrator shall submit to the ap-  
12          propriate committees of Congress a report on the es-  
13          tablishment of each Board in accordance with this  
14          subsection, including the role, performance, and  
15          composition of each Board and any instances in  
16          which the Administrator declined to establish a  
17          Board for a certification project.

18          “(7) DEFINITION.—In this subsection, the term  
19          ‘Board’ means a Technical Certification Board es-  
20          tablished under paragraph (1).”.

21 **SEC. 24. EMERGING SAFETY TRENDS IN AVIATION.**

22          (a) GENERAL.—Not later than 180 days after the  
23          date of enactment of this Act, the Administrator shall  
24          enter into an agreement with the Transportation Research  
25          Board for the purposes of developing an annual report



1 identifying, categorizing, and analyzing emerging safety  
2 trends in air transportation.

3 (b) FACTORS.—The emerging safety trends report  
4 should be based on the following data:

5 (1) The National Transportation Safety  
6 Board's investigation of accidents under section  
7 1132 of title 49, United States Code.

8 (2) The Administrator's investigations of acci-  
9 dents and incidents under section 40113 of title 49,  
10 United States Code.

11 (3) Information provided by air operators pur-  
12 suant to safety management systems.

13 (4) International investigations of accidents and  
14 incidents, including reports, data, and information  
15 from foreign authorities and ICAO.

16 (5) Other sources deemed appropriate for estab-  
17 lishing emerging safety trends in the aviation sector,  
18 including the FAA's annual safety culture assess-  
19 ment required under subsection (c).

20 (c) SAFETY CULTURE ASSESSMENT.—The Adminis-  
21 trator shall conduct an annual safety culture assessment,  
22 which shall include surveying all employees in the FAA's  
23 Aviation Safety organization (AVS) to determine the em-  
24 ployees' collective opinion regarding, and to assess the

1 health of, AVS' safety culture and implementation of any  
2 voluntary safety reporting program.

3 (d) EXISTING REPORTING SYSTEMS.—The Executive  
4 Director , in consultation with the Secretary and Adminis-  
5 trator, may take into account and, as necessary, har-  
6 monize data and sources from existing reporting systems  
7 within the Department of Transportation and FAA.

8 (e) ANNUAL REPORT TO CONGRESS.—One year after  
9 the Administrator enters into the agreement with the  
10 Transportation Research Board as set forth in subsection  
11 (a), and annually thereafter, the Executive Director, in  
12 consultation with the Secretary and Administrator, shall  
13 submit to the appropriate committees of Congress a report  
14 identifying the emerging safety trends in air transpor-  
15 tation.

16 (f) DEFINITIONS.—In this section:

17 (1) EXECUTIVE DIRECTOR.—The term “Execu-  
18 tive Director” means the Executive Director of the  
19 Transportation Research Board.

20 (2) SECRETARY.—The term “Secretary” means  
21 the Secretary of Transportation.

1 **SEC. 25. FEDERAL AVIATION ADMINISTRATION ACCOUNT-**  
2 **ABILITY ENHANCEMENT.**

3 (a) **ENHANCEMENT OF THE AVIATION SAFETY WHIS-**  
4 **TLEBLOWER INVESTIGATION OFFICE IN THE FEDERAL**  
5 **AVIATION ADMINISTRATION.—**

6 (1) **RENAMING OF THE OFFICE.—**Section  
7 106(t)(1) of title 49, United States Code, is amend-  
8 ed by striking “an Aviation Safety Whistleblower In-  
9 vestigation Office” and inserting “the Office of Ac-  
10 countability and Whistleblower Protection”.

11 (2) **DUTIES.—**

12 (A) **IN GENERAL.—**Section 106(t)(3) of  
13 title 49, United States Code, is amended—

14 (i) in subparagraph (A)—

15 (I) in clause (i)—

16 (aa) by inserting “and inves-  
17 tigate in accordance with sub-  
18 section (w)” after “receive”; and

19 (bb) by striking “(if the cer-  
20 tificate holder does not have a  
21 similar in-house whistleblower or  
22 safety and regulatory noncompli-  
23 ance reporting process)”;

24 (II) in clause (ii), by striking  
25 “and” at the end;

1 (III) in clause (iii), by striking  
2 the period at the end and inserting “;  
3 and”; and

4 (IV) adding at the end the fol-  
5 lowing:

6 “(iv) investigate in accordance with  
7 subsection (w) any misconduct alleged or  
8 discovered as a result of an investigation  
9 conducted pursuant to clause (i);

10 “(v) receive and investigate in accord-  
11 ance with subsection (w) complaints and  
12 information concerning whistleblower retal-  
13 iation by employees of the Agency;

14 “(vi) assess the results of any inves-  
15 tigation under clause (i), (iv), or (v), and  
16 if there is a finding of whistleblower retal-  
17 iation or related misconduct, provide a rec-  
18 ommendation for a range of disciplinary  
19 actions to the Agency proposing official;

20 “(vii) if the Agency proposing official  
21 deviates from the recommended range of  
22 disciplinary action described in clause (vi),  
23 or if the Agency deciding official deviates  
24 from the range of disciplinary actions pro-  
25 posed by the Agency proposing official, no-

1           tify Congress in writing not later than 10  
2           days after such deviation; and

3                   “(viii) comply with all legal require-  
4           ments concerning disciplinary actions re-  
5           lated to whistleblower retaliation.”;

6                   (ii) in subparagraph (B), by striking  
7           “subparagraph (A)(i)” and inserting  
8           “clause (i), (iv), or (v) of subparagraph  
9           (A)”;

10                   (iii) in subparagraph (C), by striking  
11           “subparagraph (A)(i)” and inserting  
12           “clause (i), (iv), or (v) of subparagraph  
13           (A)”;

14                   (iv) in subparagraph (D)—

15                           (I) by striking “assessment” and  
16                           inserting “investigation”;

17                           (II) by striking “subparagraph  
18                           (A)(i)” and inserting “clause (i), (iv),  
19                           or (v) of subparagraph (A)”;

20                           (III) by inserting “, misconduct,  
21                           or whistleblower retaliation” after  
22                           “aviation safety”.

23                   (B) LIMITATION.—Section 106(t)(2) of  
24           title 49, United States Code, is amended by  
25           adding at the end the following:

1           “(E) LIMITATION OF DUTIES.— The Ad-  
2           ministrators may only assign to the Director re-  
3           sponsibilities relating to the duties of the Office  
4           described in paragraph (3).”.

5           (C) CONFORMING AMENDMENTS.—Section  
6           106(t) of title 49, United States Code, is  
7           amended—

8                   (i) in paragraph (5), by inserting “,  
9                   misconduct, or whistleblower retaliation”  
10                  after “aviation safety”;

11                  (ii) in paragraph (7)—

12                   (I) in the matter preceding sub-  
13                   paragraph (A), by striking “October  
14                   1” and inserting “November 15”;

15                   (II) in subparagraph (A), by  
16                   striking “paragraph (3)(A)(i) in the  
17                   preceding 12-month period” and in-  
18                   serting “clause (i), (iv), or (v) of para-  
19                   graph 3(A) in the preceding fiscal  
20                   year”; and

21                   (III) by adding at the end the  
22                   following flush sentence:

23           “Each report to Congress required under this para-  
24           graph shall be provided directly to Congress without  
25           prior review or comment by the Administrator, the

1 Secretary, or the Director of the Office of Manage-  
2 ment and Budget.”; and

3 (iii) by adding at the end the fol-  
4 lowing:

5 “(8) STAFF AND RESOURCES.—The Adminis-  
6 trator shall ensure that the Director has such staff,  
7 resources, and access to information as may be nec-  
8 essary to carry out the functions of the Office.”.

9 (b) OFFICE OF THE WHISTLEBLOWER OMBUDSMAN  
10 IN THE FEDERAL AVIATION ADMINISTRATION.—Section  
11 106 of title 49, United States Code, is amended by adding  
12 at the end the following:

13 “(u) OFFICE OF THE WHISTLEBLOWER OMBUDS-  
14 MAN.—

15 “(1) ESTABLISHMENT.—The Administrator  
16 shall establish in the Federal Aviation Administra-  
17 tion (in this subsection referred to as the ‘Agency’)  
18 an Office of the Whistleblower Ombudsman (in this  
19 subsection referred to as the ‘Office’).

20 “(2) OMBUDSMAN.—

21 “(A) IN GENERAL.—The Office shall be  
22 headed by an Ombudsman, who shall be se-  
23 lected by the Administrator.

24 “(B) QUALIFICATIONS.—The individual se-  
25 lected as Ombudsman shall have knowledge of

1 Federal labor law and demonstrated govern-  
2 ment experience in human resource manage-  
3 ment, conflict resolution, and delivering training  
4 for a geographically dispersed organization.

5 “(C) RESTRICTION.—An individual may  
6 not be selected as the Ombudsman if such indi-  
7 vidual was an officer or employee of the Agency  
8 during the 2-year period that precedes the date  
9 of such selection.

10 “(3) DUTIES.—

11 “(A) IN GENERAL.—The Ombudsman shall  
12 carry out the following duties:

13 “(i) Educate Agency employees about  
14 prohibitions on retaliation and any specific  
15 rights or remedies with respect to any re-  
16 taliatory practice.

17 “(ii) Serve as an independent con-  
18 fidential resource for Agency employees to  
19 discuss any specific retaliation allegation  
20 and available rights or remedies based on  
21 the circumstances.

22 “(iii) Coordinate with Human Re-  
23 source Management, the Office of Account-  
24 ability and Whistleblower Protection, the  
25 Office of Professional Responsibility, and



1 the Office of the Chief Counsel, as nec-  
2 essary.

3 “(iv) Coordinate with the Office of the  
4 Inspector General of the Department of  
5 Transportation’s Whistleblower Protection  
6 Coordinator and the Office of the Special  
7 Counsel, as necessary.

8 “(v) Conduct outreach and training  
9 within the Agency to mitigate retaliation  
10 and promote timely and appropriate proc-  
11 essing of any protected disclosure or alle-  
12 gation of retaliation.

13 “(B) LIMITATION.—The Administrator  
14 may only assign to the Ombudsman responsibil-  
15 ities relating to the duties of the Office de-  
16 scribed in subparagraph (A).

17 “(4) STAFF AND RESOURCES.—The Adminis-  
18 trator shall ensure that the Ombudsman has such  
19 staff, resources, and access to information as may be  
20 necessary to carry out the functions of the Office.

21 “(5) REPORT TO CONGRESS.—

22 “(A) IN GENERAL.—Not later than No-  
23 vember 15 of each year, the Ombudsman shall  
24 submit to the Committee on Commerce,  
25 Science, and Transportation of the Senate and

1 the Committee on Transportation and Infra-  
2 structure of the House of Representatives a re-  
3 port regarding the duties carried out during the  
4 preceding fiscal year. Each report shall include  
5 the following:

6 “(i) The number of employee con-  
7 sultations during such fiscal year and a  
8 summary of such consultations.

9 “(ii) The number of reported incidents  
10 of retaliation during such fiscal year and,  
11 if applicable, a description of the disposi-  
12 tion of such incidents during such fiscal  
13 year.

14 “(iii) Recommendations for such legis-  
15 lation and administrative action as the  
16 Ombudsman determines appropriate.

17 “(B) DIRECT REPORTING.—Each report  
18 required under this paragraph shall be provided  
19 directly to the committees of Congress de-  
20 scribed in subparagraph (A) without prior re-  
21 view or comment by the Administrator, the Sec-  
22 retary of Transportation, or the Director of the  
23 Office of Management and Budget.”.

24 (c) OFFICE OF PROFESSIONAL RESPONSIBILITY IN  
25 THE FEDERAL AVIATION ADMINISTRATION.—Section 106

1 of title 49, United States Code, as amended by subsection  
2 (b), is amended by adding at the end the following:

3 “(v) OFFICE OF PROFESSIONAL RESPONSIBILITY.—

4 “(1) ESTABLISHMENT.—The Administrator  
5 shall establish in the Federal Aviation Administra-  
6 tion (in this subsection referred to as the ‘Agency’)  
7 an Office of Professional Responsibility (in this sub-  
8 section referred to as the ‘Office’).

9 “(2) DUTIES.—The Office shall carry out the  
10 following duties:

11 “(A) Receive any complaints and informa-  
12 tion concerning misconduct by managers within  
13 the Agency.

14 “(B) Assess any complaint and informa-  
15 tion concerning misconduct by managers re-  
16 ceived under this paragraph and determine  
17 whether sufficient information exists to initiate  
18 an investigation in accordance with subsection  
19 (w).

20 “(C) Except as provided in subparagraph  
21 (D), refer each misconduct case, based on the  
22 nature of the allegations, to—

23 “(i) the Office of the Inspector Gen-  
24 eral of the Department of Transportation

1 for investigation and appropriate referral,  
2 as necessary; or

3 “(ii) the appropriate venue within the  
4 Agency for investigation in accordance  
5 with subsection (w) and adjudication in ac-  
6 cordance with subsection (x), unless the  
7 Office decides to retain such case.

8 “(D) Retain and independently investigate  
9 in accordance with subsection (w) any allega-  
10 tion, other than an allegation investigated by  
11 the Office of Accountability and Whistleblower  
12 Protection or referred outside of the Agency,  
13 that carries a possible penalty of suspension of  
14 pay for more than 14 days.

15 “(E) Record and track the disposition of  
16 each misconduct case received under this para-  
17 graph.

18 “(3) STAFF AND RESOURCES.—The Adminis-  
19 trator shall ensure that the Office has such staff, re-  
20 sources, and access to information as may be nec-  
21 essary to carry out the functions of the Office.

22 “(4) DEFINITION.—For purposes of this sub-  
23 section, the term ‘manager’ means an employee of  
24 the Agency who is a supervisor or management offi-

1 cial, as defined in section 7103(a) of title 5, United  
2 States Code.”.

3 (d) MISCONDUCT INVESTIGATIONS AND ADJUDICA-  
4 TIONS IN THE FEDERAL AVIATION ADMINISTRATION.—  
5 Section 106 of title 49, United States Code, as amended  
6 by subsection (c), is amended by adding at the end the  
7 following:

8 “(w) MISCONDUCT INVESTIGATIONS.—

9 “(1) ESTABLISHMENT OF POLICY.—

10 “(A) IN GENERAL.—The Administrator  
11 shall establish an investigative policy that gov-  
12 erns any investigation of misconduct by a man-  
13 ager conducted by the Federal Aviation Admin-  
14 istration (in this subsection referred to as the  
15 ‘Agency’).

16 “(B) PRESERVATION OF COLLECTIVE BAR-  
17 GAINING AGREEMENTS.—The investigative pol-  
18 icy established under subparagraph (A) shall  
19 not apply to, or in the future, be extended by  
20 the Administrator to apply to, any employee  
21 covered by or eligible to be covered by a collec-  
22 tive bargaining agreement entered into by the  
23 Agency.

24 “(2) REQUIREMENTS.—The investigative policy  
25 established under paragraph (1) shall require the

1 utilization of investigative best practices to ensure  
2 independent and objective investigation and accurate  
3 recording and reporting of such investigation, in-  
4 cluding—

5 “(A) managing case files to ensure the in-  
6 tegrity of the information contained in such  
7 case files;

8 “(B) conducting interviews in a manner  
9 that ensures truthful answers and accurate  
10 records of such interviews;

11 “(C) coordinating with the Office of the  
12 Inspector General of the Department of Trans-  
13 portation, the Office of the Special Counsel,  
14 and the Attorney General, as necessary; and

15 “(D) completing investigations in a timely  
16 manner.

17 “(3) DEFINITION.—For purposes of this sub-  
18 section, the term ‘manager’ has the meaning given  
19 such term in subsection (v)(4).

20 “(x) DISCIPLINE MANAGEMENT.—

21 “(1) ESTABLISHMENT OF POLICY.—

22 “(A) IN GENERAL.—The Administrator  
23 shall establish a discipline management policy  
24 that governs any adjudication of an investiga-  
25 tion of misconduct by a manager conducted by

1 the Federal Aviation Administration (in this  
2 subsection referred to as the 'Agency').

3 “(B) PRESERVATION OF COLLECTIVE BAR-  
4 GAINING AGREEMENTS.—The discipline man-  
5 agement policy established under subparagraph  
6 (A) shall not apply to, or in the future, be ex-  
7 tended by the Administrator to apply to, any  
8 employee covered by or eligible to be covered by  
9 a collective bargaining agreement entered into  
10 by the Agency.

11 “(2) REQUIREMENTS.—The discipline manage-  
12 ment policy established under paragraph (1) shall  
13 require—

14 “(A) except as provided in subsection  
15 (t)(3)(A) or in a case where the allegation in-  
16 volved carries a possible penalty of suspension  
17 of pay for 14 days or less, the Administrator to  
18 appoint an individual to serve as the Agency  
19 proposing official in any adjudication conducted  
20 by the Agency;

21 “(B) except in a case where the allegation  
22 involved carries a possible penalty of suspension  
23 of pay for 14 days or less, the Administrator to  
24 appoint an individual to serve as the Agency de-

1 ciding official in any adjudication conducted by  
2 the Agency;

3 “(C) the Agency to conduct any adjudica-  
4 tion in accordance with best practices; and

5 “(D) the Agency to complete—

6 “(i) the discipline proposal process,  
7 including an opportunity for employee re-  
8 sponse, not later than 60 days after the re-  
9 ceipt of a completed misconduct investiga-  
10 tion; and

11 “(ii) the decision process, including  
12 any employee appeal, not later than 60  
13 days after the conclusion of the discipline  
14 proposal process.

15 “(3) DEFINITION.—For purposes of this sub-  
16 section, the term ‘manager’ has the meaning given  
17 such term in subsection (v)(4).”.

18 **SEC. 26. SYSTEMS SAFETY ASSESSMENT DOCUMENT**  
19 **TRACEABILITY PROCEDURES AND CLARITY**  
20 **OF PROCEDURES FOR REVISIONS.**

21 (a) IN GENERAL.—Not later than 90 days after the  
22 date of enactment of this Act, the Administrator shall  
23 begin developing guidance for document traceability and  
24 clarity of explanations for changes to aircraft type designs  
25 and system safety assessment certification documents.



1 The Administrator shall finalize such guidance not later  
2 than 1 year after the date of enactment of this Act.

3 (b) REQUIREMENT.—In developing the guidance re-  
4 quired under subsection (a), the Administrator shall con-  
5 sider existing guidance, and the implications for con-  
6 ducting a systems safety assessment, and emphasize the  
7 importance of adequate documentation of how and when  
8 changes to aircraft type designs are made, with particular  
9 attention to changes resulting in a functional hazard as-  
10 sessment classification of major and above, as that term  
11 is defined by the FAA Advisory Circular 25.1309.1A (or  
12 any successor or replacement circular).

13 **SEC. 27. REQUIRED SUBMISSION OF OUTLINE OF SYSTEM**  
14 **CHANGES AT THE BEGINNING OF THE CER-**  
15 **TIFICATION PROCESS.**

16 (a) IN GENERAL.—Not later than 180 days after the  
17 date of enactment of this Act, the Administrator shall ini-  
18 tiate a process to update type certification procedures to  
19 require a manufacturer to submit a document at the be-  
20 ginning of the process for certification of an aircraft type,  
21 including an amended or supplemental type, that outlines,  
22 to the maximum extent practicable, all intended changes  
23 to new and existing systems. The Administrator shall fi-  
24 nalize the updating of type certification procedures not  
25 later than 18 months after initiating such process.

1 (b) APPLICATION.—Compliance with the type certifi-  
2 cation procedures updated under subsection (a) shall not  
3 limit a manufacturer to the anticipated revisions sub-  
4 mitted in a document or prohibit a manufacturer from  
5 making necessary changes as the design process proceeds.  
6 Non-inclusion of an unanticipated change shall not con-  
7 stitute noncompliance with such procedures, nor shall the  
8 Administrator have the ability to approve or deny the revi-  
9 sion based solely on such non-inclusion.

10 **SEC. 28. AUTHORIZATION OF APPROPRIATIONS FOR THE**  
11 **ADVANCED MATERIALS CENTER OF EXCEL-**  
12 **LENCE.**

13 Section 44518 of title 49, United States Code, is  
14 amended by adding at the end the following:

15 “(c) AUTHORIZATION OF APPROPRIATIONS.—There  
16 are authorized to be appropriated to the Administrator  
17 \$10,000,000 for each of fiscal years 2021 through 2025  
18 to carry out this section. Amounts appropriated under the  
19 preceding sentence for each fiscal year shall remain avail-  
20 able until expended.”.

21 **SEC. 29. PROMOTING AVIATION REGULATIONS FOR TECH-**  
22 **NICAL TRAINING.**

23 (a) NEW REGULATIONS REQUIRED.—

24 (1) INTERIM FINAL REGULATIONS.—Not later  
25 than 90 days after the date of enactment of this sec-

1       tion, the Administrator shall issue interim final reg-  
2       ulations to establish requirements for issuing avia-  
3       tion maintenance technician school certificates and  
4       associated ratings and the general operating rules  
5       for the holders of those certificates and ratings in  
6       accordance with the requirements of this section.

7           (2) REPEAL OF CURRENT REGULATIONS.—  
8       Upon the effective date of the interim final regula-  
9       tions required under paragraph (1), part 147 of title  
10      14, Code of Federal Regulations (as in effect on the  
11      date of enactment of this Act) and any regulations  
12      issued under section 624 of the FAA Reauthoriza-  
13      tion Act of 2018 (Public Law 115–254) shall have  
14      no force or effect on or after the effective date of  
15      such interim final regulations.

16      (b) AVIATION MAINTENANCE TECHNICIAN SCHOOL  
17      CERTIFICATION REQUIRED.—No person may operate an  
18      aviation maintenance technician school without, or in vio-  
19      lation of, an aviation maintenance technician school cer-  
20      tificate and the operations specifications issued under the  
21      interim final regulations required under subsection (a)(1).

22      (c) CERTIFICATE AND OPERATIONS SPECIFICATIONS  
23      REQUIREMENTS.—

1           (1) APPLICATION REQUIREMENTS.—An applica-  
2           tion for a certificate to operate an aviation mainte-  
3           nance technician school shall include the following:

4                   (A) A description of the facilities, including  
5                   the physical address of the certificate holder's  
6                   primary location for operation of the school,  
7                   any additional fixed locations where training  
8                   will be provided, and the equipment and mate-  
9                   rials to be used at each location.

10                   (B) A description of the manner in which  
11                   the school's curriculum will ensure students are  
12                   capable of attaining a mechanic certificate and  
13                   associated ratings under subpart D of part 65  
14                   of title 14, Code of Federal Regulations (or any  
15                   successor regulation).

16                   (C) A description of the manner in which  
17                   the school will ensure it provides the necessary  
18                   qualified instructors to meet the requirements  
19                   of subsection (d)(4).

20           (2) CHANGE APPLICATIONS.—An application  
21           for an additional rating or amended certificate shall  
22           include only the information necessary to substan-  
23           tiate the reason for the requested additional rating  
24           or change.

1           (3) DURATION OF CERTIFICATE.—An aviation  
2 maintenance technician school certificate issued  
3 under the interim final regulations required under  
4 subsection (a)(1) shall be effective from the date of  
5 issue until the certificate is surrendered, suspended,  
6 or revoked.

7           (4) CERTIFICATE RATINGS.—An aviation main-  
8 tenance technician school certificate issued under the  
9 interim final regulations required under subsection  
10 (a)(1) shall specify which of the 1 or more following  
11 ratings apply to the aviation maintenance technician  
12 school:

13                   (A) Airframe.

14                   (B) Powerplant.

15                   (C) Airframe and Powerplant.

16           (5) OPERATIONS SPECIFICATIONS.—An aviation  
17 maintenance technician school shall operate in ac-  
18 cordance with operations specifications that include  
19 the following:

20                   (A) The certificate holder's name.

21                   (B) The certificate holder's air agency cer-  
22 tificate number.

23                   (C) The name and contact information of  
24 the certificate holder's primary point of contact.

1 (D) The physical address of the certificate  
2 holder's primary location, as provided under  
3 paragraph (1)(A).

4 (E) The physical address of any additional  
5 location of the certificate holder, as provided  
6 under subsection (d)(2).

7 (F) The ratings held, as provided under  
8 paragraph (4).

9 (G) Any regulatory exemption granted to  
10 the school by the Administrator.

11 (d) OPERATIONS REQUIREMENTS.—

12 (1) FACILITIES, EQUIPMENT, AND MATERIAL  
13 REQUIREMENTS.—Each aviation maintenance tech-  
14 nician school shall provide and maintain the facili-  
15 ties, equipment, and materials that are appropriate  
16 to the 1 or more ratings held by the school and the  
17 number of students taught.

18 (2) TRAINING PROVIDED AT ANOTHER LOCA-  
19 TION.—An aviation maintenance technician school  
20 may provide training at any additional location that  
21 meets the requirements of the interim final regula-  
22 tions required under subsection (a)(1) and is listed  
23 in the certificate holder's operations specifications.

24 (3) TRAINING REQUIREMENTS.—Each aviation  
25 maintenance technician school shall—

1           (A) establish and maintain curriculum de-  
2 signed to continually align with mechanic air-  
3 man certification standards as appropriate for  
4 the ratings held;

5           (B) provide training of a quality that  
6 meets the requirements of subsection (f)(1);  
7 and

8           (C) ensure students are eligible for a me-  
9 chanic certificate and associated ratings under  
10 subpart D of part 65 of title 14, Code of Fed-  
11 eral Regulations (or any successor regulation).

12           (4) INSTRUCTOR REQUIREMENTS.—Each avia-  
13 tion maintenance technician school shall—

14           (A) provide qualified instructors to teach  
15 in a manner that ensures positive educational  
16 outcomes are achieved;

17           (B) ensure instructors hold a mechanic  
18 certificate with 1 or more appropriate ratings  
19 (or, with respect to instructors who are not cer-  
20 tified mechanics, ensure instructors are other-  
21 wise specifically qualified to teach their as-  
22 signed content); and

23           (C) ensure the student-to-instructor ratio  
24 does not exceed 25:1 for any shop class.

1           (5) CERTIFICATE OF COMPLETION.—Each avia-  
2           tion maintenance technician school shall provide au-  
3           thenticated documentation to each graduating stu-  
4           dent, indicating the student's date of graduation and  
5           curriculum completed, as described in paragraph  
6           (3)(A).

7           (e) QUALITY CONTROL SYSTEM.—

8           (1) ACCREDITATION.—Each aviation mainte-  
9           nance technician school shall—

10                   (A) be accredited as meeting the definition  
11                   of an institution of higher education provided  
12                   for in section 101 of the Higher Education Act  
13                   of 1965 (20 U.S.C. 1001); or

14                   (B) establish and maintain a quality con-  
15                   trol system that meets the requirements speci-  
16                   fied in paragraph (2) and is approved by the  
17                   Administrator.

18           (2) FAA-APPROVED SYSTEM REQUIREMENTS.—

19           In the case of an aviation maintenance technician  
20           school that is not accredited as set forth in para-  
21           graph (1), the Administrator shall approve a quality  
22           control system that provides procedures for record-  
23           keeping, assessment, issuing credit, issuing of final  
24           course grades, ensuring sufficient number of instruc-



1       tors, granting of graduation documentation, and cor-  
2       rective action for addressing deficiencies.

3       (f) ADDITIONAL REQUIREMENTS.—

4           (1) MINIMUM PASSAGE RATE.—An aviation  
5       maintenance technician school shall maintain a pass  
6       rate of at least 70 percent of students that take the  
7       written, oral, or practical (or any combination there-  
8       of) FAA mechanic tests within 60 days of gradua-  
9       tion for the most recent 3-year period .

10          (2) FAA INSPECTION.—An aviation mainte-  
11       nance technician school shall allow the Adminis-  
12       trator such access as the Administrator determines  
13       necessary to inspect the 1 or more locations of the  
14       school for purposes of determining the school's com-  
15       pliance with the interim final regulations required  
16       under subsection (a)(1) and the aviation mainte-  
17       nance technician school certificate issued for the  
18       school.

19          (3) DISPLAY OF CERTIFICATE.—An aviation  
20       maintenance technician school shall display its avia-  
21       tion maintenance technician school certificate at a  
22       location in the school that is visible by and normally  
23       accessible to the public.

24          (4) EARLY TESTING.—An aviation maintenance  
25       technician school may issue authenticated docu-

1       mentation demonstrating a student's satisfactory  
2       progress, completion of corresponding portions of  
3       the curriculum, and preparedness to take the avia-  
4       tion mechanic written general knowledge test, even  
5       if the student has not met the experience require-  
6       ments of section 65.77 of title 14, Code of Federal  
7       Regulations (or any successor regulation). Any such  
8       documentation shall specify the curriculum the stu-  
9       dent completed and the completion date.

10 **SEC. 30. LIMITATION ON DELEGATION.**

11       Section 44702(d) of title 49, United States Code, is  
12 amended by adding at the end the following:

13       “(4)(A) With respect to a critical system design fea-  
14 ture of a transport category airplane, the Administrator  
15 may not delegate any finding of compliance with applica-  
16 ble airworthiness standards or review of any system safety  
17 assessment required for the issuance of a certificate, in-  
18 cluding a type certificate, or amended or supplemental  
19 type certificate, under section 44704, until the Adminis-  
20 trator has reviewed and validated any underlying assump-  
21 tions related to human factors.

22       “(B) The requirement under subparagraph (A) shall  
23 not apply if the Administrator determines the matter in-  
24 volved is a routine task.

1           “(C) For purposes of subparagraph (A), the term  
2 ‘critical system design feature’ includes any feature (in-  
3 cluding a novel or unusual design feature) for which the  
4 failure of such feature, either independently or in com-  
5 bination with other failures, could result in catastrophic  
6 or hazardous failure conditions, as those terms are defined  
7 by the Administrator.”.

8   **SEC. 31. INDEPENDENT STUDY ON TYPE CERTIFICATION**  
9                                   **REFORM.**

10           (a) **REPORT AND DEADLINES.**—Not later than 30  
11 days after the date of enactment of this Act, the Adminis-  
12 trator shall enter into an agreement with the Transpor-  
13 tation Research Board to review, develop, and submit a  
14 report to the Administrator in accordance with the re-  
15 quirements and elements set forth in this section.

16           (b) **ELEMENTS.**—The review and report under sub-  
17 section (a) shall set forth analyses, assessments, and rec-  
18 ommendations addressing the following elements for  
19 transport category airplanes:

20                   (1) Placement of time or other limits on type  
21 certificates or amendments to an original type cer-  
22 tificate.

23                   (2) Requiring the Administrator, when issuing  
24 an amended or supplemental type certificate for a  
25 design not in compliance with the latest amendments

1 of the applicable airworthiness standards, to docu-  
2 ment any exception from the latest amendment,  
3 issue an exemption in accordance with section 44701  
4 of title 14, United States Code, or make a finding  
5 of an equivalent level of safety in accordance with  
6 section 21.21(a)(1) of title 14, Code of Federal Reg-  
7 ulations.

8 (3) Safety benefits and costs for certification of  
9 transport category airplanes resulting from the im-  
10 plementation of paragraphs (1) and (2).

11 (4) Impact on the development and introduction  
12 of advancements in new safety enhancing design and  
13 technologies, and continued operation and oper-  
14 ational safety support of products in service in the  
15 United States and worldwide, resulting from the im-  
16 plementation of paragraphs (1) and (2).

17 (c) INVESTIGATIONS AND REPORTS.—The review and  
18 report under subsection (a) shall take into consideration  
19 investigations, reports, and assessments concerning the  
20 Boeing 737 MAX, including but not limited to investiga-  
21 tions, reports, and assessments by the Joint Authorities  
22 Technical Review, the National Transportation Safety  
23 Board, the Department of Transportation Office of the In-  
24 spector General, the Department of Transportation Spe-  
25 cial Committee, the appropriate committees of Congress

1 and other congressional committees, and foreign authori-  
2 ties. The review and report under subsection (a) also shall  
3 consider the impact of changes made by this Act and the  
4 amendments made by this Act.

5 (d) **STAKEHOLDER COMMENTS.**—The Transportation  
6 Research Board shall provide stakeholders with adequate  
7 opportunity to comment on the report developed under  
8 subsection (a) as it is being prepared and finalized. The  
9 Transportation Research Board shall include all stake-  
10 holder comments received as part of the report developed  
11 under subsection (a) and submitted to the Administrator.

12 (e) **REPORT TO CONGRESS.**—Not later than 270 days  
13 after the report developed under subsection (a) is sub-  
14 mitted to the Administrator, the Administrator shall sub-  
15 mit a report to the appropriate committees of Congress  
16 regarding the FAA's response to the findings and rec-  
17 ommendations of the report, what actions the FAA will  
18 take as a result of such findings and recommendations,  
19 and the FAA rationale for not taking action on any spe-  
20 cific recommendation.