

AMENDMENT NO. _____ Calendar No. _____

Purpose: In the nature of a substitute.

IN THE SENATE OF THE UNITED STATES—118th Cong., 2d Sess.

S. 4062

To establish a pilot program to assess the use of technology to speed up and enhance the cargo inspection process at land ports of entry along the border.

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 _____

Viz:

1 Strike all after the enacting clause and insert the fol-
2 lowing:

3 **SECTION 1. SHORT TITLES.**

4 This Act may be cited as the “Contraband Awareness
5 Technology Catches Harmful Fentanyl Act” or the
6 “CATCH Fentanyl Act”.

7 **SEC. 2. DEFINITIONS.**

8 In this Act:

9 (1) APPROPRIATE CONGRESSIONAL COMMIT-
10 TEES.—The term “appropriate congressional com-
11 mittees” means—

1 (A) the Committee on Homeland Security
2 and Governmental Affairs of the Senate; and

3 (B) the Committee on Homeland Security
4 of the House of Representatives.

5 (2) ARTIFICIAL INTELLIGENCE; AI.—The terms
6 “artificial intelligence” and “AI” have the meaning
7 given the term “artificial intelligence” in section
8 238(g) of the John S. McCain National Defense Au-
9 thorization Act for Fiscal Year 2019 (Public Law
10 115–232; 10 U.S.C. 4061 note).

11 (3) CBP INNOVATION TEAM.—The term “CBP
12 Innovation Team” means the U.S. Customs and
13 Border Protection Innovation Team within the Of-
14 fice of the Commissioner.

15 (4) NONINTRUSIVE INSPECTION TECHNOLOGY;
16 NII TECHNOLOGY.—The terms “nonintrusive inspec-
17 tion technology” and “NII technology” means tech-
18 nical equipment and machines, such as X-ray or
19 gamma-ray imaging equipment, that allow cargo in-
20 spections without the need to open the means of
21 transport and unload the cargo.

22 (5) PILOT PROJECTS.—The term “pilot
23 projects” means the projects required under section
24 3(a) for testing and assessing the use of technologies

1 to improve the inspection process at land ports of
2 entry.

3 **SEC. 3. PILOT PROJECTS ALLOWING ADDITIONAL TECH-**
4 **NOLOGY PROVIDERS TO PARTICIPATE IN IN-**
5 **SPECTING CARS, TRUCKS, AND CARGO CON-**
6 **TAINERS AT CERTAIN PORTS OF ENTRY.**

7 (a) ESTABLISHMENT.—

8 (1) IN GENERAL.—Not later than 1 year after
9 the date of the enactment of this Act, the Secretary
10 of Homeland Security, acting through CBP Innova-
11 tion Team, and in coordination with the Office of
12 Field Operations and the Department of Homeland
13 Security Science and Technology Directorate, shall
14 begin the implementation of pilot projects for testing
15 and assessing the use of technologies or technology
16 enhancements to improve the process for inspecting,
17 including by increasing efficiencies of such inspec-
18 tions, any conveyance or mode of transportation at
19 land ports of entry along the borders of the United
20 States. The technologies or technology enhancements
21 tested and assessed under the pilot projects shall be
22 for the purpose of assisting U.S. Customs and Bor-
23 der Protection personnel to detect contraband, illegal
24 drugs, illegal weapons, human smuggling, and
25 threats on inbound and outbound traffic, in conjunc-

1 tion with the use of imaging equipment, radiation
2 portal monitors, and chemical detectors.

3 (2) REQUIREMENTS.—

4 (A) IN GENERAL.—In implementing the
5 pilot projects at ports of entry, the CBP Inno-
6 vation Team, in coordination with the Depart-
7 ment of Homeland Security Science and Tech-
8 nology Directorate, shall test and collect data
9 regarding not fewer than 5 types of nonintru-
10 sive inspection technology enhancements that
11 can be deployed at land ports of entry. The
12 CBP Innovation Team shall test technology en-
13 hancements from not fewer than 1 of the fol-
14 lowing categories:

15 (i) Artificial intelligence.

16 (ii) Machine learning.

17 (iii) High-performance computing.

18 (iv) Quantum information sciences, in-
19 cluding quantum sensing.

20 (v) Other emerging technologies.

21 (B) IDENTIFICATION OF EFFECTIVE EN-
22 HANCEMENTS.—The pilot projects shall identify
23 the most effective types of technology enhance-
24 ments to improve the capabilities of nonintru-

1 sive inspection systems and other inspection
2 systems used at land ports of entry based on—

3 (i) the technology enhancement’s abil-
4 ity to assist U.S. Customs and Border
5 Protection accurately detect contraband, il-
6 legal drugs, illegal weapons, human smug-
7 gling, or threats in inbound and outbound
8 traffic;

9 (ii) the technology enhancement’s abil-
10 ity to increase efficiencies of inspections to
11 assist U.S. Customs and Border Protection
12 address long wait times;

13 (iii) the technology enhancement’s
14 ability to improve capabilities of aging de-
15 tection equipment and infrastructure at
16 land ports of entry;

17 (iv) the technology enhancement’s
18 safety relative to As Low As Reasonably
19 Achievable (ALARA) standard practices;

20 (v) the ability to integrate the new
21 technology into the existing workflow and
22 infrastructure;

23 (vi) the technology enhancement’s
24 ability to incorporate automatic threat rec-

1 ognition technology using standard formats
2 and open architecture;

3 (vii) the mobility of technology en-
4 hancements; and

5 (viii) other performance measures
6 identified by the CBP Innovation Team.

7 (C) PRIVATE SECTOR INVOLVEMENT.—The
8 CBP Innovation Team may solicit input from
9 representatives of the private sector regarding
10 commercially viable technologies.

11 (D) COST EFFECTIVENESS REQUIRE-
12 MENT.—In identifying the most effective types
13 of technology enhancements under subpara-
14 graph (B), the pilot projects shall prioritize so-
15 lutions that demonstrate the highest cost-effec-
16 tiveness in achievement the objectives described
17 in clauses (i) through (ix) of subparagraph (B).
18 Cost effectiveness shall account for improved
19 detection capabilities, increased inspection effi-
20 ciencies, reduced wait times, and total cost of
21 implementation (including infrastructure up-
22 grades and maintenance expenses).

23 (3) NONINTRUSIVE INSPECTION SYSTEMS PRO-
24 GRAM.—The CBP Innovation Team shall work with
25 existing nonintrusive inspection systems programs

1 within U.S. Customs and Border Protection when
2 planning and developing the pilot projects required
3 under paragraph (1).⁸

4 (4) SCIENCE AND TECHNOLOGY DIREC-
5 TORATE.—The CBP Innovation Team shall work
6 with the Department of Homeland Security Science
7 and Technology Directorate to align existing non-
8 intrusive inspection research and development efforts
9 within the Science and Technology Directorate when
10 planning and developing pilot projects required
11 under paragraph (1).

12 (b) TERMINATION.—The pilot projects shall termi-
13 nate on the date that is 5 years after the date of the enact-
14 ment of this Act.

15 (c) REPORTS REQUIRED.—Not later than 3 years
16 after the date of the enactment of this Act, and 180 days
17 after the termination of the pilot projects pursuant to sub-
18 section (b), the Secretary of Homeland Security shall sub-
19 mit a report to the appropriate congressional committees
20 that contains—

21 (1) an analysis of the effectiveness of tech-
22 nology enhancements tested based on the require-
23 ments described in subsection (a)(2);

1 (2) any recommendations from the testing and
2 analysis concerning the ability to utilize such tech-
3 nologies at all land ports of entry;

4 (3) a plan to utilize new technologies that meet
5 the performance goals of the pilot projects across all
6 U.S. Customs and Border Protection land ports of
7 entry at the border, including total costs and a
8 breakdown of the costs of such plan, including any
9 infrastructure improvements that may be required to
10 accommodate recommended technology enhance-
11 ments;

12 (4) a comprehensive list of existing technologies
13 owned and utilized by U.S. Customs and Border
14 protection for cargo and vehicle inspection, includ-
15 ing—

16 (A) details on the implementation status of
17 such technologies, such as whether the tech-
18 nologies have been fully installed and utilized,
19 or whether there are challenges with the instal-
20 lation and utilization of the technology;

21 (B) an evaluation of the compatibility,
22 interoperability, and scalability of existing cargo
23 and vehicle inspection technologies within U.S.
24 Customs and Border Protection's physical and
25 information technology infrastructure; and

1 (C) identification of any obstacles to the
2 effective deployment and integration of such
3 technologies; and

4 (5) the analysis described in subsection (d).

5 (d) AREAS OF ANALYSIS.—The report required under
6 subsection (c) shall include an analysis containing—

7 (1) quantitative measurements of performance
8 based on the requirements described in subsection
9 (a)(2) of each technology tested compared with the
10 status quo to reveal a broad picture of the perform-
11 ance of technologies and technology enhancements,
12 such as—

13 (A) the probability of detection, false alarm
14 rate, and throughput; and

15 (B) an analysis determining whether such
16 observed performance represents a significant
17 increase, decrease, or no change compared with
18 current systems;

19 (2) an assessment of the relative merits of each
20 such technology;

21 (3) any descriptive trends and patterns ob-
22 served; and

23 (4) performance measures for—

24 (A) the technology enhancement's ability to
25 assist with the detection of contraband on in-

1 bound and outbound traffic through automated
2 (primary) inspection by measuring and report-
3 ing the probability of detection and false alarm
4 rate for each NII system under operational con-
5 ditions;

6 (B) the throughput of cargo through each
7 NII system with a technology enhancement, in-
8 cluding a breakdown of the time needed for
9 U.S. Customs and Border Protection—

10 (i) to complete the image review proc-
11 ess and clear low-risk shipments; and

12 (ii) to complete additional inspections
13 of high-risk items;

14 (C) changes in U.S. Customs and Border
15 Protection officer time commitments and per-
16 sonnel needs to sustain high volume NII scan-
17 ning operations when technology enhancements
18 are utilized; and

19 (D) operational costs, including—

20 (i) estimated implementation costs for
21 each NII system with technology enhance-
22 ments; and

23 (ii) estimated cost savings due to im-
24 proved efficiency due to technology en-
25 hancements, if applicable.

1 (e) PRIVACY AND CIVIL LIBERTIES REPORTS.—The
2 DHS Privacy Officer and Civil Rights and Civil Liberties
3 Officer, in consultation with the CBP Innovation Team
4 and other appropriate CBP offices, shall—

5 (1) prior to the implementation of these tech-
6 nologies, provide—

7 (A) a report or reports to the appropriate
8 congressional committees on the potential pri-
9 vacy, civil liberties, and civil rights impacts of
10 technologies being tested under the pilot
11 projects pursuant to subsection (b); and

12 (B) recommendations for mitigation meas-
13 ures to address identified impacts; and

14 (2) not later than 180 days after the termi-
15 nation of the pilot projects pursuant to subsection
16 (b), provide—

17 (A) findings on the impacts to privacy,
18 civil rights, and civil liberties resulting from the
19 pilot projects;

20 (B) recommendations for mitigating these
21 impacts in implementation of approved tech-
22 nologies; and

23 (C) any additional recommendations based
24 on the lessons learned from the pilot projects.