

**DEPARTMENT OF TRANSPORTATION**

**Office of the Secretary**

**14 CFR Part 382**

**[Docket No. DOT-OST-2021-0137]**

**RIN No. 2105-AE89**

**Accessible Lavatories on Single-Aisle Aircraft: Part 2**

**AGENCY:** Office of the Secretary (OST), U.S. Department of Transportation (DOT).

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The U.S. Department of Transportation (Department or DOT) proposes in this Notice of Proposed Rulemaking (NPRM) to require airlines to ensure that at least one lavatory on new single-aisle aircraft with 125 or more passenger seats is large enough to permit a passenger with a disability (with the help of an assistant, if necessary) to approach, enter, and maneuver within the aircraft lavatory, as necessary, to use all lavatory facilities and leave by means of the aircraft's on-board wheelchair.

**DATES:** Comments should be filed by [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. Late-filed comments will be considered to the extent practicable.

**ADDRESSES:** You may file comments identified by docket number DOT-OST-2021-0137 by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov> and follow the online instructions for submitting comments.

- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Ave. S.E., West Building Ground Floor, Room W12-140, Washington, D.C. 20590-0001.
- Hand Delivery or Courier: West Building Ground Floor, Room W12-140, 1200 New Jersey Ave. S.E., between 9:00 a.m. and 5:00 p.m. ET, Monday through Friday, except Federal holidays.
- Fax: (202) 493-2251.

*Instructions:* You must include the agency name and docket number DOT-OST-2021-0137 or the Regulatory Identification Number (RIN) for the rulemaking at the beginning of your comment. All comments received will be posted without change to <https://www.regulations.gov>, including any personal information provided.

*Confidential Business Information (CBI):* CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN” to indicate that it contains proprietary information. DOT will treat such marked submissions as confidential under the Freedom of Information Act (FOIA), and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Robert Gorman, Senior Trial Attorney, Office of Aviation Consumer

Protection, U.S. Department of Transportation, 1200 New Jersey Ave. SE, Washington, D.C. 20590, [robert.gorman@dot.gov](mailto:robert.gorman@dot.gov) (e-mail). Any commentary that DOT receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

*Privacy Act:* Anyone can search the electronic form of all comments received in any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act statement in the *Federal Register* published on April 11, 2000 (65 Fed. Reg. 19477-78), or you may visit <https://www.transportation.gov/privacy>.

*Docket:* For access to the docket to read background documents or comments received, go to <https://www.regulations.gov>, or to the street address listed above. Follow the online instructions for accessing the dockets.

**FOR FURTHER INFORMATION CONTACT:** Robert Gorman, Senior Trial Attorney, Office of Aviation Consumer Protection, U.S. Department of Transportation, 1200 New Jersey Ave. S.E., Washington, D.C. 20590, 202-366-9342, 202-366-7152 (fax), [robert.gorman@dot.gov](mailto:robert.gorman@dot.gov) (e-mail). You may also contact Blane Workie, Assistant General Counsel, Office of Aviation Consumer Protection, U.S. Department of Transportation, 1200 New Jersey Ave. S.E., Washington, D.C. 20590, 202-366-9342, 202-366-7152 (fax), [blane.workie@dot.gov](mailto:blane.workie@dot.gov).

## **SUPPLEMENTARY INFORMATION:**

### **I. Background**

Like all individuals, those with disabilities rely on transportation for all aspects of their lives. Transportation connects individuals to jobs and services, and it opens the door to

opportunity. The Department is committed to removing transportation barriers that exist for people with disabilities. This includes challenges posed by inaccessible lavatories on single-aisle aircraft.

The following proposed rule is the result of a negotiated rulemaking in 2016 that was produced through the consensus of multiple disability organizations, a wide variety of aviation industry members, and other stakeholders. As we explain below, the Department made a commitment to the stakeholders that if they reached consensus on the terms of a rulemaking, the Department would act in good faith to issue a proposed rule that reflects those terms as closely as possible. This NPRM is the product of the Department's commitment to stakeholders during that process.

At the same time that DOT honors its past commitments, the Department also recognizes that it is the affirmative responsibility of the Federal government to advance equity, civil rights, and equal opportunity for all individuals, including individuals with disabilities.<sup>1</sup> The Department has concerns that the considerable length of time that this NPRM proposes to allow for much-needed accessibility improvements may not advance equity, civil rights or equal opportunity for persons with disabilities quickly enough. Over 25 million Americans have mobility issues that may require accommodations when flying.<sup>2</sup> As the U.S. population ages

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<sup>1</sup> See Executive Order 13985 (January 20, 2021), Section 1.

<sup>2</sup> See U.S. Government Accountability Office, "Aviation Consumer Protection: Few U.S. Aircraft Have Lavatories Designed to Accommodate Passengers with Reduced Mobility" (GAO-20-258), available at <https://www.gao.gov/assets/710/703687.pdf>, at 5.

(with an estimated 30 percent of the population being over age 65 by 2030), it is expected that the need for accommodating passengers with mobility impairments will only increase.<sup>3</sup> As the Department moves forward with this rulemaking, including the drafting of any final rule, the Department will firmly bear in mind its commitment to equity, including seeking information relating to whether these accessibility improvements can be implemented more quickly than currently proposed. The Department now presents these terms for public comment and further recommendations that will enhance the rule and access of passengers with disabilities to the National Airspace System.

A. *Statutory Authority*

The Air Carrier Access Act (ACAA), 49 U.S.C. 41705, prohibits discrimination in airline service on the basis of disability by U.S. and foreign air carriers. However, it does not specify how U.S. and foreign air carriers must act to avoid such discrimination or how the Department should regulate with respect to these issues. The Department's authority to regulate nondiscrimination in airline service is found in the ACAA in conjunction with its rulemaking authority under 49 U.S.C. 40113, which states that the Department may take action that it considers necessary to carry out this part, including prescribing regulations. The Department, through reasonable interpretation of its statutory authority, has issued regulations that require carriers to provide nondiscriminatory service to individuals with disabilities.

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<sup>3</sup> *Id.* at 6.

B. *Need for a Rulemaking*

Single-aisle aircraft are increasingly being used by airlines for long-haul flights because the fuel efficiency and range of the aircraft have improved. The percentage of flights between 1,500 and 3,000 miles flown by single-aisle aircraft increased from 77 percent in 1997 to 89 percent in 2018.<sup>4</sup> These flights can last four or more hours. At present, there is no requirement that airlines provide accessible lavatories on single-aisle aircraft. Airlines are required to provide information on whether the aircraft expected to make a particular flight has an accessible lavatory to an individual with a disability who states that he or she uses a wheelchair for boarding.<sup>5</sup> The inability to access and use the lavatory on long flights can present significant challenges to passengers with disabilities and poses a deterrent for some passengers with disabilities to traveling by air, limiting their independence and freedom to travel.

On January 2, 2020, the Department published an NPRM titled “Accessible Lavatories on Single-Aisle Aircraft: Part 1” (Part 1 NPRM).<sup>6</sup> The Part 1 NPRM proposed various accessibility improvements for lavatories on single-aisle aircraft, but did not propose to expand the size of the lavatories themselves. This action – Accessible Lavatories on Single-Aisle Aircraft: Part 2 –

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<sup>4</sup> TS T-100 All Segment data, retrieved December 20, 2018 from [https://www.transtats.bts.gov/Tables.asp?DB\\_ID=111&DB\\_Name=Air%20Carrier%20Statistics%20%28Form%2041%20Traffic%29-%20All%20Carriers&DB\\_Short\\_Name=Air%20Carriers](https://www.transtats.bts.gov/Tables.asp?DB_ID=111&DB_Name=Air%20Carrier%20Statistics%20%28Form%2041%20Traffic%29-%20All%20Carriers&DB_Short_Name=Air%20Carriers).

<sup>5</sup> 14 CFR 382.41.

<sup>6</sup> 85 Fed. Reg. 27 (January 2, 2020); RIN 2105-AE88. Information on the Part 1 NPRM can be found at [www.regulations.gov](http://www.regulations.gov); Docket DOT-OST-2019-0180.

would substantially increase access for passengers with disabilities because it proposes to increase the size of lavatories on large single-aisle aircraft.

C. *History of Regulations Governing Accessible Lavatories on Aircraft*

In 1988, the Department conducted a negotiated rulemaking to develop ACAA regulations. The negotiated rulemaking included representatives of the airline industry, the disability community, and other stakeholders.<sup>7</sup> In March 1990, the Department issued final ACAA regulations, found at 14 CFR Part 382.

The 1990 ACAA rule required twin-aisle aircraft to have at least one accessible lavatory, if lavatories were installed on the aircraft. In the context of twin-aisle aircraft, an accessible lavatory is one that: (1) permits a qualified individual with a disability to enter, maneuver as necessary to use all lavatory facilities, and leave, by means of the aircraft's on-board wheelchair (OBW);<sup>8</sup> (2) affords privacy to persons using the OBW equivalent to that afforded ambulatory users; and (3) provides door locks, accessible call buttons, grab bars, faucets and other controls, and dispensers usable by qualified individuals with a disability, including wheelchair users and persons with manual impairments.<sup>9</sup> The 1990 ACAA rule, as written, does not expressly require the lavatory to be large enough to permit a passenger to enter the lavatory with an assistant who

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<sup>7</sup> 53 Fed. Reg. 23,574 (June 22, 1988).

<sup>8</sup> An OBW is a wheelchair that is used to transport a person with a disability between the aircraft seat and the lavatory. OBWs are stowed onboard the aircraft. An OBW should not be confused with an aisle chair, which is used for enplaning and deplaning. Aisle chairs transport passengers between the jet bridge and the passenger's seat on the aircraft. Aisle chairs are generally kept in the airport, rather than on the aircraft itself.

<sup>9</sup> 14 CFR 382.63(a).

can help the individual transfer from the OBW to and from the toilet seat (a “dependent transfer” or “assisted transfer”).

In the preamble to the 1990 ACAA rule, the Department stated that by requiring accessible lavatories on *twin* aisle aircraft, the result would be “new aircraft with the greatest passenger capacities, and which make the longest flights, having a lavatory that handicapped persons can readily use.”<sup>10</sup> However the Department noted airlines’ concerns that providing accessible lavatories on *single*-aisle aircraft may require airlines to remove seats in order to install a lavatory of sufficient size to meet the accessibility standards of the existing rule. The Department found that those “cost and feasibility concerns” were “worth serious consideration,”<sup>11</sup> and ultimately decided at the time that it was unable to “obtain sufficient information to make a sound decision” on whether requiring accessible lavatories on single-aisle aircraft would impose an undue burden on airlines.<sup>12</sup> Accordingly, at the time, the Department declined to require accessible lavatories on single-aisle aircraft due to lack of information regarding technical or economic feasibility.<sup>13</sup> Instead, accessible lavatories on single-aisle aircraft were made optional.<sup>14</sup>

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<sup>10</sup> 55 Fed. Reg. 8008, 8021 (March 6, 1990).

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> 14 CFR 382.63(b).



The 1990 ACAA rule also set standards for the availability and design of OBWs. The rule generally requires airlines to provide OBWs in two circumstances: (1) if the aircraft has an accessible lavatory; or (2) on the request of a passenger with a disability, even if the aircraft does not have an accessible lavatory.<sup>15</sup> The rule also sets basic standards for OBW design, including elements such as footrests, movable armrests, adequate restraint systems, handles, and wheel locks.<sup>16</sup> The rule provides that the OBW must be designed to be compatible with the aisle width, maneuvering space, and seat height of the aircraft on which it is used, and must be easily pushed, pulled, and turned within the aircraft by airline personnel.<sup>17</sup>

In the 1990 ACAA rule, the Department announced its intention to issue an advance notice of proposed rulemaking (ANPRM) to seek comment on the issue of whether to require accessible lavatories on single-aisle aircraft.<sup>18</sup> In 1992, the Department convened an advisory committee to study this issue. The committee issued a report that discussed various lavatory designs, along with potential associated costs.<sup>19</sup>

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<sup>15</sup> The requirement for airlines to provide an OBW is limited to aircraft with a design seat capacity of more than 60 passenger seats, with certain exceptions for specific types of smaller aircraft. 14 CFR 382.65(a). There are two limitations to the rule that airlines must provide OBWs on request when the lavatory itself is not accessible. First, the basis of the passenger's request must be that the passenger can use an inaccessible lavatory, but cannot reach it without the use of an OBW. Second, airlines may require passengers to provide up to 48 hours' advance notice to provide this service. 14 CFR 382.27(c)(7).

<sup>16</sup> 14 CFR 382.65(c).

<sup>17</sup> 14 CFR 382.65(c).

<sup>18</sup> 55 Fed. Reg. 8008, 8021.

<sup>19</sup> See attachment at <https://www.regulations.gov/document?D=DOT-OST-2015-0246-0194>.

As originally enacted, the ACAA covered only U.S. air carriers. However, on April 5, 2000, Congress enacted the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21), which, among other things, amended the ACAA to include foreign air carriers.<sup>20</sup> In response to the AIR-21 requirements, the Department, on May 18, 2000, issued a notice announcing the Department's plan to initiate a rulemaking modifying Part 382 to cover foreign carriers. On November 4, 2004, the Department issued an NPRM announcing its intention to apply the ACAA rule to foreign carriers.<sup>21</sup> During the course of this rulemaking, the Department received many comments expressing the view that the existing requirements concerning accessible lavatories were inadequate. Commenters at that time stated that accessible lavatories should be required in all aircraft, including single-aisle aircraft.

On May 13, 2008, the Department published a final rule amending Part 382 to cover foreign air carriers.<sup>22</sup> The 2008 final rule requires foreign air carriers operating twin-aisle aircraft to provide accessible lavatories with respect to new aircraft that were ordered after May 13, 2009, or which were delivered after May 13, 2010.<sup>23</sup> (For U.S. carriers, the requirement applies to twin-aisle aircraft that were initially ordered after April 5, 1990, or which were delivered after April 5, 1992.) In the preamble to the 2008 final rule, the Department

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<sup>20</sup> Pub. L. No. 106-181, § 707(c), 114 Stat. 61, 158 (2000).

<sup>21</sup> 69 Fed. Reg. 64364 (November 4, 2004).

<sup>22</sup> *Id.* at 27614.

<sup>23</sup> 14 CFR 382.63(d). The rule also extended the OBW requirements to foreign air carriers. 14 CFR 382.65(d).

acknowledged that single-aisle aircraft sometimes make lengthy flights, and that providing accessible lavatories on single-aisle aircraft would be a significant improvement in airline service for passengers with disabilities. However, the Department again ultimately declined to impose a requirement for accessible lavatories on single-aisle aircraft, given concerns that the “revenue loss and other cost impacts” could be too great.<sup>24</sup>

D. *DOT ACCESS Advisory Committee*

1. Formation and History of Committee

On December 7, 2015, the Department issued a *Federal Register* notice indicating that it was exploring the feasibility of conducting a negotiated rulemaking with respect to six accessibility issues, including accessibility of lavatories on single-aisle aircraft.<sup>25</sup> As part of this process, the Department hired a neutral convenor to assist the Department in determining whether any or all of the six issues would be appropriate for a negotiated rulemaking. The convenor found that the following three issues would be appropriate for a negotiated rulemaking: (1) whether to require accessible in-flight entertainment and strengthen accessibility requirements for other in-flight communications; (2) whether to require an accessible lavatory on

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<sup>24</sup> 73 Fed. Reg. 27614, 27625; available at [https://www.transportation.gov/sites/dot.gov/files/docs/Part%20382-2008\\_1.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/Part%20382-2008_1.pdf).

<sup>25</sup> 80 Fed. Reg. 75953 (December 7, 2015). The six issues were: (1) accessibility of in-flight entertainment; (2) supplemental medical oxygen; (3) service animals; (4) accessible lavatories on single-aisle aircraft; (5) seating accommodations; and (6) carrier reporting of disability service requests. *Id.*

new single-aisle aircraft over a certain size; and (3) whether to amend the definition of “service animals” that may accompany passengers with a disability on a flight.<sup>26</sup>

The Department established and appointed members to the Advisory Committee on Accessible Air Transportation (ACCESS Advisory Committee or Committee) to negotiate and develop proposed regulations addressing accessible in-flight entertainment, accessible lavatories, and service animals.<sup>27</sup> The Committee comprised members representing various stakeholders including the Department, airlines, flight attendants, disability advocacy groups, academic or nonprofit institutions having technical expertise in accessibility research and development, and aircraft manufacturers.<sup>28</sup> The Committee formed subcommittees of stakeholders to study and make recommendations on the three topics, depending on the stakeholders’ areas of interest and expertise. During the first meeting, the Department informed the Committee that if it came to a consensus on the terms of a proposed rule, the Department would exercise good faith efforts to implement that consensus to the extent possible.<sup>29</sup> The Committee gathered data, conducted meetings and site visits, and engaged in negotiations from May 2016 through November 2016.

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<sup>26</sup> 81 Fed. Reg. 20265 (April 7, 2016); see also <https://www.regulations.gov/document?D=DOT-OST-2015-0246-0092>.

<sup>27</sup> 81 Fed. Reg. 26178 (May 2, 2016).

<sup>28</sup> A full list of ACCESS Advisory Committee members and other information on the Committee may be found at <https://www.transportation.gov/access-advisory-committee>; see also <https://www.regulations.gov/docket?D=DOT-OST-2015-0246> (ACCESS Advisory Committee docket).

<sup>29</sup> Under the ground rules of the Committee, consensus was defined as “no more than two negative votes in each issue area,” with abstentions not counting as negative votes. <https://www.transportation.gov/office-general-counsel/negotiated-regulations/access-committee-ground-rules>.

## 2. Information Gathering

The Committee gathered information concerning the benefits of improving the accessibility of lavatories on single-aisle aircraft. The Committee learned that single-aisle aircraft were being increasingly used for longer-haul flights, on which accessible lavatories were not available.<sup>30</sup>

Paralyzed Veterans of America (PVA) presented survey data showing that for a majority of respondents, the inability to use a lavatory would be reason to choose not to fly.<sup>31</sup> PVA reported that some passengers with disabilities choose to fly shorter routes, go to the lavatory before entering the aircraft, or dehydrate themselves before flying to alleviate the need to use the lavatory on the aircraft.<sup>32</sup> More than 500 of 725 respondents to PVA's survey indicated that the biggest hindrance was the size and space/design of the lavatory itself.<sup>33</sup> A majority of survey respondents also indicated that an OBW would be necessary to reach the lavatory.<sup>34</sup> Survey respondents noted a number of issues with current OBWs, including lack of access to an OBW,

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<sup>30</sup> <https://www.transportation.gov/sites/dot.gov/files/docs/Minutes%20-%201st%20Plenary%20Meeting.pdf>.

<sup>31</sup> [https://www.transportation.gov/sites/dot.gov/files/docs/3a.P4.Lav\\_Advocate%20Survey%20Results.v2.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/3a.P4.Lav_Advocate%20Survey%20Results.v2.pdf).

<sup>32</sup> *Id.* at 4.

<sup>33</sup> *Id.* at 3.

<sup>34</sup> *Id.*

not knowing that OBWs are available, inability to transfer from the OBW to the toilet, and the narrowness of the aisle in relation to the OBW.<sup>35</sup>

### 3. Developments in Accessible Lavatory Design and OBW Design

The ACCESS Advisory Committee proceedings provided an opportunity for manufacturers to demonstrate improvements to the accessibility of lavatories on single-aisle aircraft. For example, at the first meeting on May 17-18, 2016, one aircraft manufacturer (Airbus) presented information about its SpaceFlex lavatories. During normal operations, they function as two lavatories, separated by a dividing wall. On request, however, the dividing wall can be removed by a flight attendant, creating a single large space for the passenger and an assistant to enter and use the facilities.<sup>36</sup> SpaceFlex lavatories are installed in the rear section of the aircraft against the back wall, in the area that is often used for galley space (where drinks, meals, snacks, and service carts are stowed). DOT has learned that SpaceFlex lavatories are used primarily, but not exclusively, by low-cost airlines.

Another aircraft manufacturer (Bombardier) presented information about the accessibility features of its single-aisle “C-Series” aircraft. This manufacturer explained that C-Series lavatories were designed to permit passengers with reduced mobility the ability to transfer

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<sup>35</sup> *Id.* at 3.

<sup>36</sup> <https://www.transportation.gov/sites/dot.gov/files/docs/Airbus%20Presentation%20on%20Lav.pdf>. This is the version of SpaceFlex known as “V1.” Airbus also produces a “SpaceFlex V2,” which does not increase the size of the lavatory, but provides a transfer seat to assist passengers in transitioning from the OBW to the aircraft toilet seat.

independently from the OBW to the toilet seat with the lavatory door closed.<sup>37</sup> The manufacturer explained that accessible lavatories were a design feature of the aircraft from its inception,<sup>38</sup> and that “clean sheet” designs can take many years to produce. The C-Series is now majority-owned by Airbus and is known as the Airbus A220; seating capacity ranges from 100 to 160 passengers. The accessibility lavatory feature of the Airbus 220 is optional for carriers.

The Committee also learned about a prototype OBW, developed by the University of Hamburg, with a cantilevered design that would permit the OBW to enter the lavatory space by positioning the OBW seat over the toilet lid.

#### 4. Development of a Tiered Approach to Accessibility

During the ACCESS Advisory Committee’s negotiations, stakeholders recognized that there were various ways to improve accessibility of lavatories, with varying costs and timelines for implementation. For example, the lavatory interior could be upgraded to include features such as accessible handles, faucets, and call buttons; airlines could also improve elements such as crew training and information about lavatory accessibility. Finally, the OBW design could be improved to enable a passenger with a disability to enter the lavatory. There was agreement that these improvements, which would not require increasing the floor dimensions (“footprint”) of

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<sup>37</sup>[https://www.transportation.gov/sites/dot.gov/files/docs/P3.Lav\\_2.Block\\_Bombardier%20Presentation.v2.2016.07.11.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/P3.Lav_2.Block_Bombardier%20Presentation.v2.2016.07.11.pdf).

<sup>38</sup> <https://www.transportation.gov/sites/dot.gov/files/docs/resources/individuals/aviation-consumer-protection/285871/july-meeting-minutes.pdf>.

the lavatory itself, could be implemented relatively quickly and thus became known as “short term” (or “Tier 1”) improvements.

The stakeholders also discussed various accessibility options that would increase the footprint of the lavatory, but not to the full size of a twin-aisle aircraft lavatory.<sup>39</sup> Finally, the stakeholders discussed the highest tier of accessibility: expansion of lavatories to have the footprint (and accessibility features) of lavatories on twin-aisle aircraft. Here, airlines took the position that lavatories with larger footprints would take up space that could otherwise be filled by a row of seats. Airlines and manufacturers argued that airlines would lose considerable revenue from increasing the footprint of the lavatory because it would result in the loss of a row of seats. Airlines and manufacturers calculated that an industry-wide loss of three seats could result in lost revenue of \$33.3 billion over 25 years (net present value).<sup>40</sup> They argued that these costs could only be incurred if implementation of these improvements took place over the span of many years. These accessibility improvements became known as “long term” (or “Tier 3”) improvements.

## 5. Consensus and Production of Term Sheet

On November 22, 2016, the ACCESS Advisory Committee reached consensus on recommendations for new regulatory proposals to improve the accessibility of lavatories on

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<sup>39</sup> These became known as “Tier 2” improvements, but were not adopted by the Committee.

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[https://www.transportation.gov/sites/dot.gov/files/docs/3a.OEM\\_Airline%20Accessible%20Lav.Position.8.15.16..pdf](https://www.transportation.gov/sites/dot.gov/files/docs/3a.OEM_Airline%20Accessible%20Lav.Position.8.15.16..pdf).



single-aisle aircraft.<sup>41</sup> The accessible lavatory Term Sheet states that the proposed standards would apply to new single-aisle aircraft. The agreement includes recommendations for both short-term and long-term accessibility improvements.

a. Recommendations on Short-Term Improvements

The Committee agreed to a series of improvements that would be required on new single-aisle aircraft delivered 3 years after the effective date of the DOT final rule that implements the agreement.<sup>42</sup> First, the Committee agreed that airlines operating aircraft with 60 or more passenger seats<sup>43</sup> would be required to: (1) train flight attendants to proficiency with respect to transfers to and from the OBW and with respect to accessibility features of the lavatory and the OBW; (2) publish lavatory accessibility information and provide it on request; and (3) remove the International Symbol of Accessibility from lavatories that are not capable of facilitating a seated independent transfer.

Next, single-aisle aircraft with 125 or more passenger seats would also be required to have at least one lavatory with a number of accessibility features, including accessible door locks, flush handles, call buttons, faucets, and assist handles.

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<sup>41</sup> <https://www.transportation.gov/office-general-counsel/negotiated-regulations/final-resolution-access-committee>.

<sup>42</sup> The proposed rule text refers to “all new single-aisle aircraft” above a specific seating capacity that are “delivered” on or after a certain date. This phrasing makes clear that the proposed rule is not limited to newly-certificated aircraft models. Instead, it also applies to newly-manufactured aircraft of existing models.

<sup>43</sup> All references to seat capacity in the Term Sheet are references to FAA-certificated maximum seat capacities.

Finally, single-aisle aircraft with 125 or more passenger seats<sup>44</sup> would also be required to include an OBW that: (1) permits passage in the aircraft aisle; (2) fits within an available certificated OBW stowage space; and (3) accomplishes its functions without requiring modification to the interior arrangement of the aircraft or the lavatory. The Term Sheet calls on the Department to develop OBW standards, in consultation with stakeholders, and to publish those standards in a proposed rule. The Term Sheet indicates that standards for an over-the-toilet design OBW should be established, if feasible.

b. Recommendations on Long-Term Improvements

The Committee also agreed to expand the footprint of lavatories on single-aisle aircraft, but with a longer time frame for implementation. Specifically, new single-aisle aircraft with 125 or more passenger seats would be required to include at least one lavatory of sufficient size to permit a qualified individual with a disability to perform a seated independent (unassisted) and dependent (assisted) transfer from the OBW to and from the toilet within a closed space. The lavatory would afford an equivalent level of privacy to the persons using the OBW as that afforded to ambulatory users. The lavatory would also include the interior accessibility improvements found in Tier 1.

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<sup>44</sup> The Committee accepted the airline industry's proposal that a 125-seat threshold was a reasonable proxy for relatively long flight times (over 2-3 hours), where the need to use the lavatory would be greatest. Airlines presented data that aircraft with 125-seats or more reflected 87% of single-aisle available seat miles, and that only a small proportion of flights lasting over 2-3 hours were conducted by aircraft under with a capacity under 125 seats. See [https://www.transportation.gov/sites/dot.gov/files/docs/3a.P4.Lav\\_OEM\\_Airline%20Accessible%20Lav.Position.8.15.16..pdf](https://www.transportation.gov/sites/dot.gov/files/docs/3a.P4.Lav_OEM_Airline%20Accessible%20Lav.Position.8.15.16..pdf), slide 20).

Under the agreement, these improvements would be required on qualifying aircraft: (1) that were initially ordered 18 years after the effective date of the final rule implementing the agreement, or (2) that were delivered 20 years after the effective date of such a final rule; or (3) for which an application for a new type-certificate is filed after 1 year from the effective date of the final rule. The agreement does not call for retrofitting of existing aircraft to meet the new expanded size requirements, but it does require that airlines comply with the Tier 1 standards if they replace lavatories on older aircraft.<sup>45</sup>

While the Department agreed in 2016 to propose these time frames for implementation, the Department remains very concerned about the length of time that individuals with disabilities have had to wait to receive these much-needed accessibility improvements. As we indicate in Part IV below, the Department requests comment on these requirements, including supporting data for any comments that suggest more rapid implementation intervals, criteria other than type-certification for required action, or for options that would require retrofitting of existing aircraft.

E. *Conducting Lavatory Rulemakings in Two Phases*

In June 2019, the Department announced that the most appropriate course of action was to conduct two separate accessible lavatory rulemakings: one for short-term improvements, and

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<sup>45</sup> See Term Sheet, “Tier 3” Agreement, section (c) (“You are not required to retrofit cabin interiors of existing aircraft to comply with the requirements of this section. However, if you replace a lavatory on a single aisle aircraft, you must replace it with an accessible lavatory as defined in section 382.xx (tier I section)”). [https://www.transportation.gov/sites/dot.gov/files/docs/Annex%20A.Lav\\_.Agreed%20Text.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/Annex%20A.Lav_.Agreed%20Text.pdf).

As with the current rule, accessible lavatories would not be required if the airline chooses not to install any lavatories on the aircraft. In practice, however, airlines generally choose to install at least one lavatory onboard aircraft.

one for long-term improvements. The NPRM addressing short-term improvements was published as the Part 1 NPRM. In that rulemaking, the Department proposed improvements to lavatory interiors, additional training and information procedures relating to lavatory accessibility, and improvements to the aircraft's OBW. The comment period to the Part 1 NPRM closed on March 2, 2020. During the comment period, a large majority of individuals expressed the view that the Department should issue a rule expanding the size of lavatories on single aisle aircraft, even though the NPRM itself did not seek comment on this issue.

After reviewing the comments from the Part 1 NPRM, the Department has determined that it is prudent to gather additional information about OBW design before issuing a final rule. Accordingly, the Department intends to hold a public hearing regarding OBW design. The Department will then review the information gathered in that public hearing, along with the comments that it received to the Part 1 NPRM and this NPRM, which is the Part 2 NPRM focused on long-term improvements. Any final rule on accessible lavatories would address the proposals in both these NPRMs.

F. *Government Accountability Office Review*

On January 7, 2020, the U.S. Government Accountability Office (GAO) published a review of commercial aircraft lavatories.<sup>46</sup> The report found that the fleets of the top eight

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<sup>46</sup> GAO, "Aviation Consumer Protection: Few U.S. Aircraft Have Lavatories Designed to Accommodate Passengers with Reduced Mobility" (GAO-20-258), available at <https://www.gao.gov/assets/710/703687.pdf>.

U.S. domestic carriers, as measured by the number of 2018 passenger trips, largely consist of single-aisle aircraft.<sup>47</sup> Of those eight carriers that were studied, five use single-aisle aircraft exclusively.<sup>48</sup> According to GAO, in 2018, 99 percent of U.S. aircraft departures for domestic flights occurred on single-aisle aircraft.<sup>49</sup>

GAO also surveyed various types of lavatories that are currently available to be installed on single-aisle aircraft, including the Airbus SpaceFlex V1, the SpaceFlex V2, the accessible design for the Airbus A220 (formerly the Bombardier C-Series), and the Boeing Pax Plus.<sup>50</sup> GAO found that, “[w]hile aircraft manufacturers offer lavatories designed to accommodate passengers with mobility impairments, carriers do not often choose to acquire them.”<sup>51</sup> In total, approximately 4.5 percent of the combined fleet of those eight carriers have lavatories designed to provide some measure of greater access for passengers with disabilities.<sup>52</sup> Specifically, according to GAO, of the eight carriers studied, four had single-aisle aircraft within their fleet with lavatories designed to accommodate passengers with mobility impairments.<sup>53</sup> Moreover, all of the aircraft in U.S. fleets with any lavatory accommodations for passengers with mobility

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<sup>47</sup> *Id.* at 3.

<sup>48</sup> *Id.* at 3 n.5.

<sup>49</sup> *Id.* at 6.

<sup>50</sup> *Id.* at 9-13.

<sup>51</sup> *Id.* at 14.

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

impairments were manufactured by Airbus.<sup>54</sup> According to GAO, “[d]espite Boeing’s offering of the Pax Plus lavatories since 2017, Boeing officials told us that no U.S. carriers have ordered these lavatories for their current or future single-aisle Boeing aircraft.”<sup>55</sup>

Consistent with the general findings of the ACCESS Advisory Committee, the carriers with the largest percentage of accessible lavatories in their fleets tend to be low-cost carriers with fewer requirements for galley space.<sup>56</sup> GAO confirmed that airlines take into account cost tradeoffs (in terms of lost revenue from removed seats) when determining whether to install accessible lavatories. According to GAO, some airline officials contend that fewer seats in circulation may lead to higher costs for carriers, and subsequently higher costs for consumers.<sup>57</sup>

Consistent with prior findings, GAO reports that according to stakeholder groups, passengers with disabilities may encounter significant difficulties when attempting to fly on single-aisle aircraft; that many report anxiety over flying, or that they avoid flying and choose to take ground transportation instead.<sup>58</sup> GAO reports that airlines and DOT receive few reports of inaccessible lavatories on single-aisle aircraft; however, that low number could be explained by

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<sup>54</sup> *Id.* at 15. According to the GAO report, three airlines have aircraft in their fleet with the SpaceFlex V1 installed. One airline has Airbus A220 aircraft in its fleet; these aircraft have lavatories that can accommodate an OBW, but not both an OBW and an assistant. *Id.*, at 13, 15.

<sup>55</sup> *Id.* at 14.

<sup>56</sup> *Id.* at 16.

<sup>57</sup> *Id.* at 15.

<sup>58</sup> *Id.* at 16-17.

passengers either knowing that such lavatories are not required, or avoiding air travel, or taking the precautionary measures described above.

## **II. Discussion of Proposed Rule Text**

In this NPRM, the Department proposes long-term improvements for accessible lavatories on single-aisle aircraft. The proposed rule text is intended to track the ACCESS Advisory Committee's consensus Term Sheet as closely as possible.

In keeping with the ACCESS Advisory Committee's agreement, these proposed improvements would apply to single-aisle aircraft with an FAA-certificated maximum seating capacity of 125 or more seats that are: (1) ordered 18 years after the effective date of the final rule; (2) delivered 20 years after the effective date of the final rule; or (3) of a new type-certificated design filed with the FAA or a foreign carrier's aviation safety authority more than one year after the effective date of the final rule. In general, the purpose of this requirement would be to afford airlines and aircraft manufacturers sufficient time to determine and implement a means of installing larger lavatories on *current* type-certificated aircraft, while also effectively requiring *new* type-certificated aircraft to incorporate larger lavatories as part of the aircraft's design.

The proposed rule would require the lavatory to be large enough to permit a qualified individual with a disability<sup>59</sup> to approach the lavatory, enter, maneuver within as necessary to use all lavatory facilities, and leave by means of the aircraft's OBW.<sup>60</sup> The lavatory would also be of sufficient size to permit an assistant to enter the lavatory along with the passenger to facilitate an assisted transfer between the OBW and the toilet. While the proposed rule does not explicitly state that the lavatory would need to be large enough to accommodate both individuals with the door closed, it does provide that the assisted transfer must take place within a closed space that affords to persons using the OBW privacy equivalent to that afforded ambulatory users.

The proposed rule would also require the lavatory to have certain accessible interior features. These features would be identical to those the Department proposed in the Part 1

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<sup>59</sup> The Term Sheet describes the passenger with a disability and the assistant as being “equivalent in size to a 95<sup>th</sup> percentile male,” but is unclear as to whether the term refers to height, weight, or both. The Department considers 95<sup>th</sup> percentile to apply to both height and weight. There does not appear to be a specific and universally-accepted method for calculating the height and weight of a 95<sup>th</sup> percentile male; moreover, that measurement may change over time. One recent publication from SAE International suggests that a 95<sup>th</sup> percentile male would be 6 feet 1 inches (1.86m) and 227 pounds (103kg). See <https://saemobilus.sae.org/content/2021-01-0918>. We seek comment on the appropriate method of calculating the height and weight of a 95<sup>th</sup> percentile male.

“Qualified individual with a disability” is defined in 14 CFR 382.3 in relevant part as an individual who “buys or otherwise validly obtains, or makes a good faith effort to obtain, a ticket for air transportation on a carrier and presents himself or herself at the airport for the purpose of traveling on the flight to which the ticket pertains; and meets reasonable, nondiscriminatory contract of carriage requirements applicable to all passengers.”

<sup>60</sup> In the Part 1 NPRM, the Department proposes various improvements to the design of the OBW itself. One of those proposed improvements is that the OBW include an “over-the-toilet” design. This feature would permit the passenger to enter the lavatory while seated on the OBW, with the seat of the OBW situated over the top of the closed toilet lid. This OBW design would permit passengers with disabilities to perform non-toileting functions in privacy, within smaller lavatories. One key benefit of the larger lavatory design is that it permits the OBW to be situated adjacent to the toilet seat, so that the passenger can transfer to and from the toilet to perform toileting functions.



NPRM (applicable to new single-aisle aircraft delivered 3 years after the effective date of the final rule derived from that NPRM).<sup>61</sup> Those features are set forth in the rule text.

The Department seeks comment on its proposal to increase the footprint of the lavatory on single-aisle aircraft to permit a passenger with a disability (with the help of an assistant, if necessary) to approach, enter, and maneuver within the aircraft lavatory, as necessary, to use all lavatory facilities and leave by means of the aircraft's on-board wheelchair. The Department specifically seeks comment on the costs, benefits, feasibility and compliance timeframes of this proposal.

The Department has identified an alternative that would be similar to the NPRM's proposal, with the only difference being that the lavatory would *not* be required to be large enough to also accommodate an attendant. Under this alternative, the lavatory would be required to be large enough to permit a passenger equivalent in size to a 95<sup>th</sup> percentile male to enter the lavatory using the OBW, transfer between the OBW and the toilet, use all facilities within a closed space that affords privacy equivalent to that afforded to ambulatory users, and exit using the OBW. Could such an alternative be implemented on an earlier time frame than the timeframe proposed for lavatories that would be large enough to accommodate a passenger with a disability and his or her attendant? The Department seeks comment on the costs, benefits, and

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<sup>61</sup> The Part 1 NPRM calls for airlines to provide a visual barrier, on request, to afford to passengers with disabilities to use the lavatory with the door open while providing a level of privacy equivalent to that provided to ambulatory users. This feature would not be required in this proposal as the Department is proposed to require a lavatory of sufficient size to permit equivalent levels of privacy. We seek comment, however, on whether and to what extent visual barriers would benefit passengers with disabilities if airlines were required to comply with this proposal.

feasibility of this alternative. Comments submitted in response to the Part 1 NPRM regarding changes to the interior of the lavatory, training requirements, and improvements to the OBW need not be resubmitted.

The Department notes that the ACCESS Advisory Committee's agreement would not result in high levels of accessibility in single-aisle aircraft lavatories for a long period of time, and that it would not guarantee such accessibility in aircraft outfitted for fewer than 125 seats which, based upon current trends and practices, are capable of performing an increasing number of missions in the U.S. domestic market, including mid-continental and trans-continental flights of significant duration. Failure to achieve consistent and high levels of accessibility could result in ongoing or increasing barriers to travel requiring future action, not to mention create hardships for persons with disabilities that all members of the ACCESS Advisory Committee wished to avoid. Accordingly, the Department solicits specific comments on whether there are different or more effective performance-based standards that could achieve the ACCESS Advisory Committee's and the Department's goals of improving accessibility on single-aisle aircraft more quickly.

### **III. Summary of Regulatory Impact Analysis**

The Department has prepared a preliminary regulatory evaluation in support of the NPRM, available in the docket. The Department's analysis builds on the approach to estimating impacts that the airlines and manufacturers prepared for the negotiated rulemaking proceedings. During the proceedings, industry maintained that accessible lavatories on single-aisle aircraft

would have larger footprints and take up space that could otherwise be filled by a row of seats. They presented an analysis of potential economic impacts assuming an industry-wide loss of one row of three seats per aircraft, a 2018 compliance date, and a requirement to retrofit existing aircraft.<sup>62</sup> The analysis estimated that airlines would experience a revenue loss of \$33.3 billion (\$35.9 billion in 2019 dollars) for the 25-year period from 2018 through 2042.<sup>63</sup>

The final terms of the negotiated rulemaking differ from the assumptions used in the industry analysis and affect the estimates. While the analysis assumed a 2018 compliance date and a requirement to retrofit existing aircraft, the proposed rule applies only to new deliveries of aircraft delivered beginning 20 years after the effective date of the final rule. The longer time horizon significantly reduces the industry estimate of impacts through the effects of discounting, as does removing the requirement for retrofitting of existing aircraft. While industry projected that traveling public would experience at least some of these impacts in the form of higher fares, reduced service to marginally profitable locations, and reduced seat availability, it did not provide an estimate of consumer impacts.

A key uncertainty in the Department's analysis is the degree of seat loss the industry will experience due to an accessible lavatory requirement. On the one hand, several existing designs

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<sup>62</sup> U.S. Department of Transportation (2016). "Aircraft Lavatory Accessibility Joint Airline and Manufacturer Presentation."  
[https://www.transportation.gov/sites/dot.gov/files/docs/3a.OEM\\_.Airline%20Accessible%20Lav.Position.8.15.16..pdf](https://www.transportation.gov/sites/dot.gov/files/docs/3a.OEM_.Airline%20Accessible%20Lav.Position.8.15.16..pdf)

<sup>63</sup> Adjusted for inflation using the Consumer Price Index for All Urban Consumers (CPI-U) annual averages for 2015 (237.0) and 2019 (255.7).

would not require carriers to remove seats, as discussed in the “Government Accountability Office Review” section, suggesting that a universal loss of three seats is likely an overestimate. Airlines could comply with the requirements of the proposed rule using existing aircraft and lavatory designs that would not require any seat removal. On the other hand, airlines have demonstrated a trend of reducing the size of lavatories on aircraft to fit as many seats as possible.<sup>64</sup> Given this trend, requiring accessible lavatories in place of shrinking lavatories may lead to losses of seats for future aircraft relative to the world without this proposed rule (the baseline scenario). According to industry, the loss of “even a small number of seats...has tremendous opportunity costs” and “a loss of even one seat affects the selling of all other seats.”<sup>65</sup> Total available seats, including unoccupied seats, are part of industry planning and business strategy, and the loss of seats could disrupt those processes.

In the absence of an alternative estimate of seat loss, we retain for the purposes of this NPRM the airlines’ estimate of an industry-wide loss of three seats per single-aisle aircraft for this analysis. However, in our judgment, given existing designs and practical limits to downsizing of existing lavatories, the loss of three seats likely overestimates the effects of the

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<sup>64</sup> Scott McCartney (August 29, 2018). “You’re Not Getting Bigger, the Airplane Bathroom Is Getting Smaller.” *Wall Street Journal*. Retrieved October 14, 2021 from <https://www.wsj.com/articles/youre-not-getting-bigger-the-airplane-bathroom-is-getting-smaller-1535553108>.

<sup>65</sup> “Aircraft Lavatory Accessibility Joint Airline and Manufacturer Presentation,” available at [https://www.transportation.gov/sites/dot.gov/files/docs/3a.OEM\\_Airline%20Accessible%20Lav.Position.8.15.16..pdf](https://www.transportation.gov/sites/dot.gov/files/docs/3a.OEM_Airline%20Accessible%20Lav.Position.8.15.16..pdf)

rule on cabin configuration and total available seats. We seek information, data, and comment on what estimates of the costs of seat loss would be most appropriate.

Manufacturing and installing accessible lavatories may impose additional costs. During the negotiated rulemaking meetings, aircraft manufacturers and airlines did not emphasize any cost differential between current lavatories and accessible lavatories, except for retrofitting and taking aircraft out of service to make modifications. Because the agreement only applies to new aircraft, we assume that any additional cost of manufacturing and installing an accessible lavatory at the design phase of aircraft production is *de minimis* relative to the cost of an aircraft.

The primary benefit of the proposed rule is that passengers with disabilities would have privacy and dignity while using the lavatory. These passengers would no longer have to consider risky alternatives such as dehydrating before flight or withholding bodily functions. Accessible lavatories could also expand the market for travel by people with disabilities if they have latent demand for air travel and the rule enables travel that was previously deterred. In addition, other passengers may also derive ancillary benefits from having larger lavatories, including the ability to perform tasks that might not be possible otherwise, such as changing a child's diaper or assisting a child using the toilet. Finally, members of the public may feel that improving accessibility for travelers with disabilities has a social value.

Given available data, we cannot currently quantify these benefits. There is significant uncertainty regarding the size of the affected population in the baseline and the extent to which this proposed rule will remove barriers to air travel for current and potential passengers. Without the ability to measure the size of the affected population, the extent to which the lack of

accessible lavatories creates barriers to air travel, and the degree that the requirements of this proposed rule improve travel experience and encourage additional travel, it is not currently possible to quantitatively evaluate or monetize impacts. However, we seek information that may help do so.

Other economic impacts of the proposed rule depend on the degree to which adding accessible lavatories reduces the number of passengers on flights. The Department preliminarily estimated the effects of removing three departure seats per aircraft based on industry feedback, although this estimate may overstate the economic effects of the rule. The Department also used published estimates of the price elasticity of air travel demand to estimate potential increases to airfare that would allow airlines to offset a portion of the revenue lost from the removal of seats by passing on impacts to passengers. As noted above, we seek additional data and information on these issues.

The Department's regulatory impact analysis, summarized in Table 1 and available in the docket, illustrates the potential economic effects of the proposed rule. Total societal (economic) costs are the sum of lost producer and consumer surplus due to the reduction in the number of passengers transported. The annualized costs, discounted to 2022, are \$212 million at a 3% discount rate or \$85 million at a 7% discount rate. The proposed rule would also result in a transfer from passengers to airlines due to airlines increasing airfare to recapture lost revenue. The annualized transfers are \$933 million at a 3% discount rate or \$373 million at a 7% discount rate.

**Table 1: Summary of economic impacts due to proposed rule (2019 dollars)**

	25-year total (3% discount)	Annualized (3% discount)	25-year total (7% discount)	Annualized (7% discount)
Benefits	Not quantified	Not quantified	Not quantified	Not quantified
Costs				
Lost producer surplus	\$3,563,259,980	\$204,630,435	\$954,736,436	\$81,926,427
Lost consumer surplus	\$136,530,910	\$7,840,679	\$33,459,393	\$2,871,168
<i>Total societal costs</i>	\$3,699,790,890	\$212,471,114	\$988,195,830	\$84,797,595
Transfers				
From passengers to airlines	\$16,241,111,323	\$932,692,447	\$4,352,911,148	\$373,525,557

Note: Estimates calculated using midpoint elasticities of domestic air travel demand identified in literature

Because we could not quantify and monetize benefits, it is not possible to make a judgment regarding the relationship between benefits and costs based upon a net benefits calculation. We conducted a supplementary analysis to provide some insight into how passengers and airlines might experience these costs.

Table 2 summarizes the results of the supplementary analysis. Passengers flying in 2066—the year when all single-aisle aircraft would be assumed to have accessible lavatories and fewer available seats—would experience the largest increases in ticket prices. Domestic passengers would pay an additional \$2.22 per ticket on average; international passengers would pay an additional \$9.13. Passengers flying in earlier years, when some aircraft would not have accessible lavatories and reduced seating, would experience smaller airfare increases. The

increase in ticket prices would more than offset any revenue loss that the airlines would directly experience due to a reduction in passenger seats, but the net revenue increase would be modest.

**Table 2: Other economic impacts due to proposed rule**

Item	Amount in 2066
Increase in ticket price (domestic)	\$2.66
Increase in ticket price (international)	\$10.88
Net revenue loss (gross revenue loss less transfer from passengers)	-\$24,010,938

Note: Estimates calculated using midpoint elasticities of domestic air travel demand identified in literature

#### **IV. Request for Data and Comments**

The Department solicits written data, analysis, views, and recommendations from interested persons concerning the information and issues addressed in this NPRM. Comments submitted in response to the Part 1 NPRM need not be resubmitted, as they are already being considered. The Department specifically seeks comment on the following questions related to this rulemaking:

##### *A. General*

The Department currently requires airlines to ensure that at least one lavatory on twin-aisle aircraft is accessible. To what extent do accessible lavatories on twin-aisle aircraft meet the needs of passengers with disabilities, particularly passengers with mobility impairments? Are accessible lavatories on twin-aisle aircraft large enough to accommodate an assistant to assist the passenger with transfers between the OBW and the toilet?



To what extent are lavatories meeting the size parameters of this proposal already available for installation on single-aisle aircraft? To the extent that such lavatories are available on the market but are not being installed, what are the market forces driving this decision?

How important is it for airlines to distinguish themselves in the marketplace based on factors such as robust galley service? What additional costs or revenue loss would be incurred if galley space were sacrificed in order to accommodate an accessible lavatory? How do airlines assess this tradeoff against the increase in the number of seats (typically an entire row) that could be added under such a design, in addition to providing accessibility?

What are the future trends for voluntary adoption of larger lavatories in single-aisle aircraft, particularly given demographic trends tending toward an aging population? What market incentives, if any, exist to encourage airlines to install accessible lavatories on single-aisle aircraft? Would airlines benefit from advertising (or otherwise indicating) that their aircraft have accessible lavatories? Are carriers able to distinguish themselves in the marketplace based on the availability of accessible lavatories? If a carrier does have aircraft in its fleet with accessible lavatories, how would passengers with disabilities know or ensure that their specific flight is being operated using an aircraft equipped with an accessible lavatory?

Are other innovative accessible lavatory options, not discussed in this NPRM, being developed? If so, what tradeoffs, costs, and benefits are associated with such lavatories? For example, could a side-by-side aisle-facing lavatory design (such as is found on the Boeing 737-900ER) be adapted (such as by including movable walls) to provide the desired level of accessibility while also preserving both existing galley space and total seating capacity?

B. *Time Frame for Adoption*

The ACCESS Advisory Committee agreed to require lavatories on new aircraft ordered 18 years or delivered 20 years after the effective date of a final rule. Airlines and aircraft manufacturers that participated in the ACCESS Advisory Committee indicated that this time frame was the earliest acceptable time frame for adopting new standards, but did not provide a thorough explanation for why implementation must be delayed to that degree. As a frame of reference, FAA regulations allow manufacturers 5 years from the date of application to finish designing (obtaining approval of) a new transport-category airplane.

If the useful life of an aircraft is roughly 25 years, then approximately 4 percent of aircraft would be replaced annually, on average. Under these assumptions and the current implementation dates of the rule, it would take approximately 25 years for one-quarter of all qualifying aircraft to be deployed with accessible features, 30 years for half of all qualifying aircraft, and 45 years for essentially all qualifying aircraft to have the accessibility features described in this NPRM.

Are these extended implementation timeframes appropriate or necessary? Why or why not? Specifically, we note that the negotiated rulemaking took place five years ago, in 2016. At that time, the Department expressed its intent to expeditiously issue an NPRM reflecting the stakeholders' Term Sheet. The Term Sheet itself contains compliance dates that are tied to the date that the Department issues a final rule. How should the Department take into account the lapse of time between the Term Sheet and this NPRM when drafting its final rule? Are there alternative timeframes that could yield benefits sooner without imposing an undue burden?

Are new type-certificated single-aisle aircraft currently being developed that would include lavatories of the size equivalent to that proposed here (i.e., lavatories that are large enough to permit a passenger with a disability to approach, enter, and maneuver within the aircraft lavatory with the help of an assistant if needed)? If so, when and how would such aircraft be placed into service? What share of the total commercial aircraft fleet and available seat miles would be represented by such aircraft at different points in the future?

Do any new type-certificated single-aisle aircraft include lavatories that would not be large enough to accommodate an assistant but large enough to permit a passenger equivalent in size to a 95<sup>th</sup> percentile male to enter the lavatory using the OBW, transfer between the OBW and the toilet, use all facilities within a closed space that affords privacy equivalent to that afforded to ambulatory users, and exit using the OBW? Do lavatories of this size already exist in the marketplace? What is a realistic timeframe for implementation of this alternative? If it is feasible to install lavatories that are large enough to accommodate a person with a disability unassisted on an earlier schedule than lavatories that are large enough to accommodate a person with a disability assisted and unassisted, would that be more beneficial to persons with disabilities? Why or why not?

Should the Department adopt a different tiered or phased model for implementation? For example, should the Department require tiered implementation of accessibility standards for different sizes of carriers, different sizes of aircraft, aircraft used for longer routes or aircraft used for routes that are busier than others? Should implementation of accessibility standards be phased in or should requirements be scoped based on the scheduled flight time? What are the

pros and cons of these various approaches? Is it appropriate to focus implementation of accessibility standards first on the entities that would be least burdened? Would a different approach allow technology or design principles to develop more efficiently than the Department's proposed approach? If so, how would the Department calculate the costs and benefits of a different approach?

C. *Applicability*

The agreement of the ACCESS Advisory Committee would apply the requirement for an accessible lavatory only to aircraft with maximum seating capacity of 125 seats or more. We seek comment on this recommended standard. Should the threshold for requiring an accessible lavatory be higher or lower than 125 seats? How would the application of a different threshold affect the potential costs and benefits of the rule?

The airlines' and manufacturers' analysis also presented information on the percentage of available seat miles (ASMs) on single-aisle aircraft on flights over 2 hours and over 3 hours in duration. However, the ACCESS Advisory Committee ultimately did not recommend setting a performance-based standard that would limit the applicability of the requirement for an accessible lavatory only to aircraft used on flights with a scheduled duration. It is the Department's understanding from discussions during the ACCESS Advisory Committee proceedings that both airlines and advocates favored the seating-capacity approach over the scheduled-duration approach because the Committee believed that seating-capacity approach provides greater predictability as to when accessible lavatories would be available, particularly in cases of unexpected aircraft swaps.

Therefore, the Department seeks updated comment on this conclusion. How can the rule be framed to provide the greatest predictability as to when accessible lavatories would be available for disabled passengers? The Department also seek comment on alternative performance-based standards, such as requiring only a certain percentage of a carrier's flights between city-pairs to have accessible lavatories. Such a percentage standard could be accompanied by a requirement for carriers to provide advance information on the accessibility of lavatories and to rebook and/or compensate disabled passengers if an aircraft change made accessible lavatories unavailable. How would the application of a performance-based standard affect the potential costs and benefits of the rule? What challenges would airlines face in managing their fleets to ensure such a standard is met? Have there been any changes in airline fleet management practices or capabilities since the time of the rulemaking committee's report that might make meeting such a standard more feasible today or in the future?

D. *Economic Information*

The Department seeks information to help it better understand the benefits of the rule, including data that would assist it in quantifying and/or monetizing those benefits. Relevant information to estimate benefits for people with disabilities includes the number of travelers with disabilities, estimates of latent air travel demand for people who do not currently travel due to inaccessible lavatories, and the associated costs to individuals from practices such as dehydrating or holding bodily functions for extended periods. Other relevant information includes information to quantify benefits for other passengers, who may benefit from having the additional space in accessible lavatories, as well as the public, who may derive value from

ensuring that people who need accessible lavatories on flights have them. Data on passenger use of lavatories for flights of varying duration would also be useful.

In the regulatory analysis, the Department assumed that aircraft ordered with accessible lavatory features had identical costs to aircraft ordered without accessible lavatories. The Department seeks information on whether any cost differential exists between the two types of aircraft and how that differential compares with the total cost of new aircraft.

Finally, the Department seeks additional information to evaluate the extent to which the proposed rule would require removal of passenger or revenue seats, and how the traveling public and industry would experience the economic impacts. The airlines and manufacturers noted that airlines may respond to seat losses by adjusting schedules, seat pitch, prices, and other aspects of their service but did not quantify these effects in their analysis. The Department estimated impacts to industry and consumers by using published estimates of the price elasticity of demand for air travel and assumed an industry-wide loss of three revenue seats per aircraft. In practical terms, what would be the size of a lavatory that accommodates a passenger with a disability and an attendant equivalent in size to a 95<sup>th</sup>-percentile male? How would these dimensions affect the features of lavatory interiors such as assist handles, faucets and other controls, if these features must meet the needs of and be usable by qualified individuals with a disability whether equivalent in size to a 95 percentile male or a 5 percentile female? What are the benefits of basing the size of a lavatory that accommodates a passenger with a disability and an attendant equivalent on the size of a 95<sup>th</sup>-percentile male? What are the cost effects of these dimensions,

including on potential seat loss? What additional data should the Department consider when determining cost impacts, including potential seat loss?

We seek comment on other approaches to or data that could be used for estimating effects on the industry and the market, as well as how these effects might be allocated between airlines and consumers.

## **V. Regulatory Analyses and Notices**

*A. Executive Order 12866 (Regulatory Planning and Review), Executive Order 13563 (Improving Regulation and Regulatory Review), and 49 CFR Part 5, Subpart B (DOT Rulemaking Procedures)*

Executive Orders 12866 (“Regulatory Planning and Review”) and 13563 (“Improving Regulation and Regulatory Review”) require agencies to regulate in the “most cost-effective manner,” to make a “reasoned determination that the benefits of the intended regulation justify its costs,” and to develop regulations that “impose the least burden on society.” The proposed rule, which implements the terms of a negotiated rulemaking agreement, is economically significant under Executive Order 12866 because the estimated economic effects exceed the \$100 million annual threshold for significance defined by the order. More information on the economic effects is available in the “Summary of Regulatory Impact Analysis” section, as well as the regulatory impact analysis available in the docket. Accordingly, the proposed rule has been reviewed by the Office of Management and Budget.

Executive Orders 12866 and 13563 also require agencies to provide a meaningful opportunity for public participation. Accordingly, the Department has asked commenters to answer a variety of questions to elicit practical information about relevant data and analytic

approaches, as described in “Request for Data and Comments.” These comments will help the Department evaluate the economic effects of the proposed rule.

B. *Regulatory Flexibility Act*

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review regulations to assess their impact on small entities unless the agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities. A direct air carrier or foreign air carrier is a small business if it provides air transportation only with small aircraft (i.e., aircraft with up to 60 seats/18,000-pound payload capacity). The regulatory initiative discussed in this NPRM would apply only to carriers that operate aircraft with FAA-certificated maximum capacity of more than 60 seats. Therefore, by definition, the initiative would not have a significant economic impact on a substantial number of small entities.

C. *Executive Order 13132 (Federalism)*

This NPRM has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (“Federalism”). This NPRM does not include any provision that: (1) has substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government; (2) imposes substantial direct compliance costs on State and local governments; or (3) preempts State law. States are already preempted from regulating in this area by the Airline Deregulation Act, 49 U.S.C. 41713. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.



D. *Executive Order 13175*

This NPRM has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 (“Consultation and Coordination with Indian Tribal Governments”). Because none of the topics on which we are seeking comment would significantly or uniquely affect the communities of the Indian Tribal governments or impose substantial direct compliance costs on them, the funding and consultation requirements of Executive Order 13175 do not apply.

E. *Paperwork Reduction Act*

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 *et seq.*), no person is required to respond to a collection of information unless it displays a valid OMB control number. This NPRM does not propose any new information collection burdens.

F. *Unfunded Mandates Reform Act*

The Department has determined that the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply to this NPRM.

Issued this \_\_\_\_\_ day of \_\_\_\_\_ 2022, in Washington, D.C., under authority delegated in 49 CFR 1.27(n).

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John E. Putnam,  
Deputy General Counsel.

In consideration of the foregoing, the Department seeks comment on the costs and benefits of amending Title 14, Code of Federal Regulations, Part 382, as follows:

## **PART 382 - NONDISCRIMINATION ON THE BASIS OF DISABILITY IN AIR**

### **TRAVEL**

#### **Subpart E – Accessibility of Aircraft**

1. The authority citation for Part 382 continues to read as follows:

**Authority:** 49 U.S.C § 41705.

2. Section 382.64 is added to Subpart E to read as follows:

#### **14 CFR 382.64. What are the requirements for large accessible lavatories on single-aisle aircraft?**

- (a) As a carrier, you must ensure that all new single-aisle aircraft that you operate with an FAA-certificated maximum seating capacity of 125 seats or more in which lavatories are provided, shall include at least one lavatory of sufficient size to:
  - 1. Permit a qualified individual with a disability equivalent in size to a 95<sup>th</sup> percentile male to approach, enter, maneuver within as necessary to use all lavatory facilities, and leave, by means of the aircraft's on-board wheelchair, in a closed space that affords privacy equivalent to that afforded to ambulatory users; and
  - 2. Permit an assistant equivalent in size to a 95<sup>th</sup> percentile male to assist a qualified individual with a disability, including assisting in transfers between the toilet and the aircraft's on-board wheelchair, within a closed space that affords privacy equivalent to that afforded to ambulatory users.
- (b) The lavatory required in paragraph (a) shall include the following features:
  - 1. Grab bars must be provided and positioned as required to meet the needs of individuals with disabilities.

2. Lavatory faucets must have controls with tactile information concerning temperature. Alternatively, carriers may comply with this requirement by ensuring that lavatory water temperature is adjusted to eliminate the risk of scalding for all passengers. Automatic or hand-operated faucets shall dispense water for a minimum of five seconds for each application or while the hand is below the faucet.
  3. Attendant call buttons and door locks must be accessible to an individual seated within the lavatory.
  4. Lavatory controls and dispensers must be discernible through the sense of touch. Operable parts within the lavatory must be operable with one hand and must not require tight grasping, pinching, or twisting of the wrist.
  5. The lavatory door sill must provide minimum obstruction to the passage of the on-board wheelchair across the sill while preventing the leakage of fluids from the lavatory floor and trip hazards during an emergency evacuation.
  6. Toe clearance must not be reduced from current measurements.
- (c) You are not required to retrofit cabin interiors of existing single-aisle aircraft to comply with the requirements of paragraph (a) of this section.
- (d) As a carrier, you must comply with the requirements of this section with respect to new aircraft that you operate that were originally ordered after [INSERT DATE 18 YEARS AFTER THE EFFECTIVE DATE OF THE FINAL RULE] or delivered after [INSERT DATE 20 YEARS AFTER THE EFFECTIVE DATE OF THE FINAL RULE] or are part of a new type-certificated design filed with the FAA or a foreign carrier's safety authority after [INSERT DATE ONE YEAR AFTER THE EFFECTIVE DATE OF THE FINAL RULE].