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ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

[Docket No. ATBCB-2019-0002]

Advisory Guidelines for Aircraft Onboard Wheelchairs; Reopening of Comment Period; Notice of Public Meeting

AGENCY: Architectural and Transportation Barriers Compliance Board.

ACTION: Reopening of comment period; notice of meeting.

SUMMARY: The Architectural and Transportation Barriers Compliance Board (Access Board or Board), jointly with the U.S. Department of Transportation (DOT), is hosting a virtual public meeting to obtain further information on the Access Board's proposed advisory guidelines for aircraft onboard wheelchairs (OBW) issued on August 20, 2019, and the portion of DOT's notice of proposed rulemaking (NPRM) issued on January 2, 2020 that relates to OBW performance standards. DOT's January 2, 2020 NPRM proposed OBW performance standards as one of various measures for improving accessibility of lavatories on single-aisle aircraft for passengers with disabilities. The Board's draft advisory guidelines provided technical specifications for an OBW that would serve as one means of complying with DOT's proposed performance standards for OBW. This public meeting will serve as a forum for the Access Board and DOT to jointly gather additional information on their respective proposed OBW advisory guidelines and proposed OBW performance standards. A proposed rule from DOT relating to this public meeting and reopening of the comment period on its NPRM containing OBW performance standards is published elsewhere in this issue of the *Federal Register.*

DATES: *Public Comments:* The comment period on the Board's draft advisory guidelines on OBW published at 84 FR 43100 (Aug. 20, 2019) is reopened for

supplemental comments from December 16, 2021 (i.e., date of public meeting) to January 17, 2022.

Public meeting: December 16, 2021, 9:30 a.m. to 11:30 a.m. and 1 p.m. to 3 p.m., Eastern Time.

Public attendance and testimony: Requests to attend the meeting must be received by December 9, 2021. Communication access real-time translation and sign language interpretation will be provided, but requests for additional accommodations because of a disability must be received by December 9, 2021. If you wish to present oral testimony during the meeting, you must submit a request by December 9, 2021. Requests to submit written materials to be reviewed during the meeting must be received no later than December 9, 2021.

ADDRESSES: *Public Meeting:* Requests to attend the meeting must be submitted to https://usdot.zoomgov.com/webinar/register/WN_8PChAZcLQsmDm1xathLEjw. Requests for additional accommodations because of a disability must be submitted to OBWpublicmeeting@dot.gov. Requests to submit written materials to be reviewed during the meeting must be submitted to OBWpublicmeeting@dot.gov. If you wish to speak during the meeting, you must submit a request to DOT at OBWpublicmeeting@dot.gov. The virtual meeting will be open to the public, subject to any technical and/or capacity limitations, and held via the Zoom Webinar Platform. Virtual attendance information will be provided upon registration. An agenda will be provided to registered participants and placed in the docket in advance of the meeting.

Public Comments: You may submit comments, identified by docket number (ATBCB-2019-0002), by any of the following methods:

- *Federal rulemaking Portal: https://www.regulations.gov/.* Follow the instructions for submitting comments.

- *Email: docket@access-board.gov.* Include docket number ATBCB-2019-0002 in the subject line of the message.
- *Mail:* Office of Technical and Information Services, U.S. Access Board, 1331 F Street NW, Suite 1000, Washington, DC 20004-1111.

Instructions: All submissions must include the docket number (ATBCB-2019-0002) for this regulatory action. All comments received will be posted without change to https://www.regulations.gov/, including any personal information provided.

Docket: For access to the docket to read background documents or comments received, go to https://www.regulations.gov/document/ATBCB-2019-0002-0001.

FOR FURTHER INFORMATION CONTACT: To register and attend this virtual meeting, please contact DOT at: https://usdot.zoomgov.com/webinar/register/WN_8PChAZcLQsmDm1xathLEjw . For further information, contact Wendy Marshall of the Access Board by email at marshall@access-board.gov or by phone at 202-272-0043. You may also contact Robert Gorman, DOT Senior Attorney, by email at robert.gorman@dot.gov.

SUPPLEMENTARY INFORMATION:

Background

In April 2016, DOT established and appointed members to the Advisory Committee on Accessible Air Transportation (ACCESS Advisory Committee or Committee) to negotiate and develop proposed regulations addressing, among other things, accessible lavatories on single-aisle aircraft.[1] During the first meeting, DOT committed to the Committee that if it came to a consensus on the terms of a proposed rule and the Department does not cast a dissenting vote on the consensus product, DOT would

[1] 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).

exercise good faith efforts to issue a proposed rule reflecting that consensus to the extent possible. The Committee gathered data, conducted meetings and site visits, and engaged in negotiations from May 2016 through November 2016.

On November 22, 2016, the ACCESS Advisory Committee reached consensus on recommendations for new regulatory proposals to improve the accessibility of lavatories on single-aisle aircraft and the Department does not cast a dissenting vote.[2] The accessible lavatory Term Sheet included agreements for both short-term and long-term accessibility improvements. The short-term improvements would be required on new single-aisle aircraft delivered three years after the effective date of the DOT final rule that implements the agreement. The short-term improvements included a proposed requirement that single-aisle aircraft with 125 or more passenger seats would have at least one lavatory with a number of accessibility features, including accessible door locks, flush handles, call buttons, faucets, and assist handles. Single-aisle aircraft with 125 or more passenger seats 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 called on the DOT to "consult with advocates, airlines, aircraft manufacturers, manufacturers of OBW, flight attendant association(s) and other stakeholders in developing these standards," and to "include the proposed new standards for an OBW and replacement of OBW on existing aircraft as described above in its notice of proposed rulemaking."[3]

DOT determined that the most appropriate method for developing initial OBW design standards was to seek technical assistance from the Access Board, the federal

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[2] https://www.transportation.gov/office-general-counsel/negotiated-regulations/final-resolution-access-committee.

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[3] https://www.transportation.gov/sites/dot.gov/files/docs/Annex%20A.Lav_.Agreed%20Text.pdf.

agency that specializes in producing accessible design specifications for the built environment, transportation systems, information and communication technology, and medical diagnostic equipment.[4] See 29 U.S.C. 792. In response to DOT's request, on August 20, 2019, the Access Board published in the Federal Register "Proposed Advisory Guidelines for Aircraft Onboard Wheelchairs," and sought public comment.[5] The Access Board's guidelines provide design criteria for onboard wheelchair seats, back support, armrests, footrests, movement, stowage, stability, loads, caster wheels, assist handles, and torso and leg restraints. These guidelines provided for the OBW to be backed fully into the lavatory and positioned over the closed toilet so that the lavatory door can be completely closed. The guidelines also provided for the OBW to be maneuvered partially into lavatories in a forward direction to allow users the option to make a stand-and-pivot transfer to the toilet.

The Access Board held a public hearing on these advisory guidelines on September 12, 2019. In response to its proposed guidelines, the Access Board received over 40 comments from various interest groups and stakeholders, including people with disabilities, advocacy groups, aircraft manufacturers, trade associations, manufacturers of onboard wheelchairs, researchers, and others.[6]

On January 2, 2020, DOT published a notice of proposed rulemaking (NPRM) titled "Accessible Lavatories on Single-Aisle Aircraft: Part 1."[7] This NPRM included proposals for short-term improvements to lavatory accessibility, including new proposed requirements for OBWs. In developing its own proposed rules for OBWs, DOT started

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[4] https://www.access-board.gov .

[5] See 84 FR 43100; https://www.federalregister.gov/documents/2019/08/20/2019-17873/advisory-guidelines-for-aircraft-onboard-wheelchairs. The Access Board's Docket for OBW standards is found at https://www.regulations.gov/docket?D=ATBCB-2019-0002.

[6] See Docket No. ATBCB-2019-0002 at *https://www.regulations.gov/docket/ATBCB-2019-0002* .

[7] See 85 FR 27; https://www.federalregister.gov/documents/2020/01/02/2019-27631/accessible-lavatories-on-single-aisle-aircraft-part-1.

with the Access Board's design-based guidelines and adapted them into more flexible performance standards. The performance standards were designed to allow manufacturers to find efficient and innovative means for meeting performance expectations. At the same time, the proposed rule states that airlines may use the Access Board's advisory guidelines for technical assistance in furnishing an OBW that meets the DOT's performance standards.

Under the proposed rule, OBWs meeting the new standards must be installed on new single-aisle aircraft with an FAA-certificated maximum capacity of 125 seats or more that enter service three years after the effective date of a final rule issued by DOT in this proceeding. The proposed rule would require the OBW to be designed in such a manner as to enable the OBW to completely enter the lavatory in a backward orientation. Specifically, the rule would require the OBW to fit over the closed toilet lid in a manner that permits the lavatory door to close completely. It is anticipated that the attendant would push the OBW backward into the lavatory by means of handles on the front of the OBW. After the OBW is situated over the closed toilet lid, the door would be closed and the passenger would be able to perform non-toileting lavatory functions in privacy.

The proposed rule would also require that the OBW be designed such that it could, at a minimum, partially enter the lavatory in a forward orientation. The purpose of this provision is to facilitate a stand-and-pivot maneuver from the OBW to the toilet seat, for passengers who are able to do so. With a stand-and-pivot maneuver, the passenger would partially enter the lavatory by means of the OBW, stand up, and pivot 180 degrees to reach the toilet seat.

The proposed OBW rule also contained safety elements. For example, the rule would require that the height of the OBW seat must align with the height of the aircraft seat to the maximum extent practicable, in order to permit a safe transfer between the OBW and the aircraft seat. The rule would require the wheels of the OBW to lock in the

direction of travel, in order to avoid contact with aircraft seats and other obstructions as it moves down the aisle. Any other moving parts of the OBW would need to be capable of being secured such that they do not move while the occupied onboard wheelchair is being maneuvered. The wheels would also be required to lock in place so as to provide stability during transfers. The OBW would be required not to tip or fall in any direction under normal operating conditions when occupied for use.

The OBW would also be required to have a padded seat and backrest, in order to preserve skin integrity, and to prevent spasticity and injury.[8] The rule would also require the OBW to be free of sharp or abrasive components. The OBW would also be required to have arm supports that are sufficient to facilitate transfers; arm supports that are repositionable to permit unobstructed transfers between the OBW and the aircraft seat; torso and leg restraints to ensure stability and prevent injury; as well as a unitary foot support that would provide adequate clearance over the lavatory threshold and also allow for an unobstructed transfer between the OBW and the lavatory. Under the proposed rule, restraints would be operable by the passenger in order to permit the passenger the option to adjust the restraints unassisted. Finally, the rule would require the OBW to have instructions prominently displayed for proper use.

In keeping with the ACCESS Advisory Committee's Term Sheet, airlines would not be required to modify aircraft interiors, including lavatories and existing OBW stowage spaces, in order to comply with these OBW provisions. DOT sought comment on all aspects of this critical issue of OBW stowage space. Specifically, DOT sought further data regarding: (1) The folded dimensions of OBWs currently in use on single-aisle aircraft; (2) the locations and dimensions of current OBW stowage spaces; and (3) the feasibility of designing and constructing an OBW that meets the listed performance

[8] DOT specifically sought comment on whether the proposed rule text adequately conveys the degree of back support and seat support necessary to properly accommodate passengers with disabilities, and if not, whether additional standards should be specified.

standards, particularly including the ability to enter the lavatory in a backward orientation, while fitting into the existing OBW stowage space for that aircraft. DOT also sought comment on an alternative proposal: Whether to require OBWs to meet the new performance standards set forth in the NPRM even if stowage space must be expanded to accommodate the OBW. DOT sought comment on the costs of expanding OBW stowage spaces to meet these performance standards.

Again, in keeping with the ACCESS Advisory Committee's Term Sheet, the proposed rule provided that an airline would not be responsible for the failure of third parties to furnish an OBW that complies with these proposed standards, so long as the airline notifies and substantiates to DOT the efforts it expended to obtain compliant OBWs. DOT recognized that, at present, no commercially available OBW exists that permits backward passage into an aircraft lavatory, and that while airlines may seek to procure an OBW that meets DOT's performance standards, airlines do not design or produce OBWs themselves.[9]

Finally, the proposed rule provided that if an airline replaces an OBW on an aircraft with an FAA-certificated maximum capacity of 125 seats or more three years after the effective date of the rule, then the replacement OBW must comply with DOT's new OBW standards. DOT sought comment on all aspects of the OBW proposal, including costs, benefits, and feasibility.

The comment period to the NPRM closed on March 2, 2020. DOT received relatively few comments about OBW design, and almost no comments that estimated the

[9] DOT sought comment on whether there should be a deadline for an airline to notify DOT that the airline has expended its efforts to obtain compliant OBWs, and if so, how many days after an airline becomes aware of such commercial unavailability (e.g., 30 days) would be appropriate for airlines to notify DOT. DOT also recognized the uncertainties surrounding the issue of whether OBWs meeting DOT's new standards can fit within existing OBW stowage spaces. The intent of the proposal was to encourage innovation in meeting the proposed standards by affirmatively requiring airlines to engage in reasonable efforts to obtain compliant OBWs from third parties. DOT sought comment on whether the "reasonable efforts" clause is the most appropriate means of reaching the overarching goal of ensuring that OBWs with the new accessibility features are acquired.

costs of developing or manufacturing an OBW that would comply with the standards set forth in the proposed rule. Certain disability advocates argued, among other things, that DOT's OBW standards should have tracked more closely the Access Board's design standards.[10] Representatives of the airline industry contended that DOT failed to take into account considerations such as aviation safety and the impact on flight attendants of unpacking, using, and stowing the OBW while in flight.[11] They also argued that DOT failed to adequately consult with stakeholders before issuing its OBW proposal.[12] DOT received no comments from OBW manufacturers.

Announcement of Public Meeting

Under these circumstances, the Access Board and DOT are jointly of the view that it is appropriate to hold a public hearing to gather additional information on the OBW design from disability advocates, airlines, aircraft manufacturers, manufacturers of OBWs, flight attendant associations, and other stakeholders. Specifically, the Access Board seeks information on OBW loads and caster wheel size that will help it finalize its advisory guidelines for OBWs. DOT seeks comment on all aspects of OBW design before issuing any final binding regulation on the topic.

Questions Relating to Access Board's Proposed Voluntary Design Standards

The Access Board is seeking additional information regarding OBW loads and OBW casters.

Onboard Wheelchair Loads

The overall weight capacity or load of current OBW varies greatly and ranges from approximately 200 to 800 pounds. In trying to determine the appropriate load, the

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[10] See, e.g., Comment of Paralyzed Veterans of America, https://www.regulations.gov/comment/DOT-OST-2019-0180-0335, at 5.

[11] See, e.g., Comment of Airlines for America, https://www.regulations.gov/comment/DOT-OST-2019-0180-0337, at 2-3.

[12] Id.

Access Board looked to its *Guidelines for Aircraft Boarding Chairs* (1987), which recommend that seats support at least 723 pounds (weight of a 99th percentile male with a 3.0 safety factor). See *https://www.access-board.gov/research/completed-research/guidelines-for-aircraft-boarding-chairs*. Using updated anthropometrics, the weight of a 99th percentile male with a 3.0 safety factor would be 826 pounds. See Department of Health and Human Service Centers for Disease Control and Prevention's Anthropometric Reference Data for Children and Adults: United States, 2011-2014, Table 6, Line 1 (Aug. 2016). However, the boarding chair (used to transfer passengers from their personal wheelchairs to the airplane seat) differs from the proposed OBW in that a boarding chair does not need to fold for storage on the aircraft or fit over the seat of a toilet in a cantilever design.

The Board is not aware of existing industry standards for OBW that are designed to allow over-the-toilet positioning. In its proposed advisory guidelines, the Board reserved provisions for loads pending further information as to what loads are appropriate for an OBW design that accomplishes the proposed functions.

The Board received comments from the public, including aircraft manufacturers, recommending that the Board's guidelines reference load specifications in SAE International's standard entitled, "Foldable On-Board Wheelchairs for Passengers with Disabilities," ARP 4120C (Stabilized 2013)." The SAE standard specifies loads for onboard wheelchair seats, seat backs, arm and foot supports, wheels, and assist handles.

Based on its review of the comments on the proposed guidelines, the Board is considering referencing the SAE International's standard for loads for seats (3.2.9.1), arm supports (3.2.9.3), foot support (3.2.9.4), casters (3.2.9.2), and assist handles of onboard wheelchairs (3.2.9.6). The Board seeks comment on whether the loads specified in the SAE International ARP 4120C Standard are appropriate for an onboard wheelchair design that allows the chair to be positioned over the closed lavatory toilet. SAE

International has made these referenced provisions publicly available without cost (read-only, not for distribution) until the close of the comment period on January 17, 2022, at: https://www.sae.org/binaries/content/assets/cm/content/standards/arp4120c_review.pdf.

In addition to comments on loads stated in the above-referenced SAE International standard, the Access Board seeks information on alternative appropriate standards for OBW loads.

Onboard Wheelchair Casters (Size)

The draft advisory guidelines require that caster wheels of onboard wheelchairs move independently to facilitate maneuvering within the confined space of aircraft aisles and lavatories. For safety and stability, the guidelines also require each caster to have wheel locks and swivel locks. In its proposal, the Board sought comment on whether the guidelines should specify a minimum size for caster wheels so that they are large enough to readily traverse thresholds at lavatory entrances. Commenters recommended that the guidelines specify a performance requirement instead of a minimum caster size. However, the threshold at the lavatory entrance may significantly impact an assistant's ability to back the occupied OBW into the lavatory using the front assist handles and to pull it back out.

The Access Board requests information on the minimum caster wheel diameter that would ensure stability of the occupied OBW and allow the chair to easily traverse the lavatory doorway threshold when propelled using solely the front assist handles. The Board also requests information on the standard height of lavatory thresholds on single-aisle aircraft with 125 or more passenger seats.

Questions Relating to DOT's NPRM regarding OBW design

In a notice published elsewhere in this issue of the *Federal Register*, DOT seeks further information on all aspects of its NPRM relating to OBW design, including but not limited to:

- Whether the proposed OBW design elements adequately address accessibility concerns;
- The cost and feasibility of designing, manufacturing, and implementing compliant OBWs;
- The cost of developing and implementing procedures for training crew in unloading, using, and stowing the OBW;
- The dimensions of current OBW stowage spaces in single-aisle aircraft;
- Whether OBWs that meet DOT's proposed accessibility standards can be stowed in existing stowage spaces; and
- Aviation safety considerations relating to unloading, using, and stowing the OBW while in flight.

Invitation for the Submission of Additional Written Comments

The Access Board encourages stakeholders, including disability advocates, airlines, aircraft manufacturers, manufacturers of OBWs, flight attendant associations, public meeting participants, and others to submit written comments to the regulatory docket on its proposed OBW advisory guidelines, oral testimony or written materials discussed at the public hearing, or related matters, during the supplemental period for comment from December 16, 2021 to January 17, 2022.

Gretchen Jacobs,

General Counsel.

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