BEFORE THE
ARCHITECTURAL AND TRANSPORTATION BARRIERS
COMPLIANCE BOARD

Americans with Disabilities Act	)	
Accessibility Guidelines for	)	Docket No. ATBCB-2020-0002
Transportation Vehicles; Rail Vehicles	)	RIN 3014-AA42

COMMENTS OF HEARING LOSS ASSOCIATION OF AMERICA

The Hearing Loss Association of America (HLAA) submits these Comments in response to the Architectural and Transportation Barriers Compliance Board (Access Board) request for public comment on its Advanced Notice of Proposed Rulemaking (ANPRM) to inform the process of updating existing accessibility guidelines for rail vehicles covered by the Americans with Disabilities Act (ADA). HLAA provides information, education, support and advocacy for some 48 million people with hearing loss and represents their interests in communication access on rail vehicles.

HLAA applauds the Access Board for their ongoing efforts to review and update existing guidelines for fixed guideway systems (e.g., rapid rail, light rail, commuter rail, and intercity rail) in light of new accessibility-related technologies that did not exist when the guidelines were written nearly three decades ago, in 1991 and have not been revised or updated since that time.

According to the Access Board, currently, "the only provisions regarding communication for rail vehicles in the existing guidelines specify that each vehicle be equipped with a public

address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other information, with some exceptions."

For people with hearing loss, such guidelines are woefully inadequate. Anecdotal reports reveal over the years that people with hearing loss who have had to make do with the current provisions has resulted in missed connections, misinformation, and/or simply ending up on the wrong train. Lack of access has the potential to have tragic results in an emergency.

Hearing loss is the third most prevalent chronic health condition facing older American adults and one of the most common disabilities. Hearing loss not only affects the ability to hear but often the ability to distinguish speech in situations from background noise. Research has demonstrated that hard-of-hearing listeners may require an increase in the signal-to-noise ratio of more than 10 dB, some as high as 25 dB, to achieve the same word recognition as normal-hearing persons in the *same* situation. In public situations, and listening to public announcements, this leads to the typical hearing aid user reporting being able to *hear* but not *understand* what was said. This is because while hearing devices can make sounds louder, they cannot improve the signal-noise ratio to the extent needed to make comprehension possible. Situations that involve background noise, noise that may be deemed *minor* to the normal hearing ear, *significantly* affect the ability of the hard of hearing traveler to comprehend speech.

Hearing loops (previously known as audio frequency induction loops and likened to ramps for wheelchair users) offer a practical and typically cost-effective solution to improve the signal-to-noise ratio and speech understanding in public railcars by directly broadcasting audio

announcements, free of background noise, wirelessly into the telecoil receptor found in hearing aids, cochlear implants, bone conduction hearing devices, and some over the counter devices. For people with hearing loss who do use hearing aids, cochlear implants or bone conduction hearing devices with a telecoil, it is an ideal solution.

In 2013, the Access Board convened the Rail Vehicles Access Advisory Committee (RVAAC). HLAA was a contributing member of RVAAC. After careful deliberations, RVAAC issued a report in 2015. HLAA served on the Communications Committee seeking to find and recommend accessible communication solutions for people with hearing loss on board rail vehicles.

HLAA agreed with and signed onto the RVAA Report issued in 2015. We continue to support the guidelines provided in the report, particularly as it relates to communication access, including, but not limited to, the following:

- Ensuring that both audible and visual announcements are accessible. The report indicates where live or pre-recorded audible announcements are provided to passengers via public address systems, they shall also be provided visually. Where live or pre-recorded visible announcements are provided via variable message signage (VMS) systems, they shall also be provided audibly. All rail cars must provide a sufficient number of variable message signs, but no less than two, such that every seat has a view of at least one sign.

- Audible announcements, including stop announcements, must be pre-recorded, high quality messages to the extent feasible, limiting live human announcements except in emergencies.

- Wherever audible announcements are provided, hearing assistive technology (e.g., hearing induction loops) that has the capability of coupling directly without an additional receiver to hearing aids and cochlear implants or other personal hearing devices (or future technologies benefiting deaf persons and persons with hearing loss) must be provided in the entire car, and in every car in which it is technically feasible to do so. The induction loop signal shall meet IEC Standard 60118-4:2014.

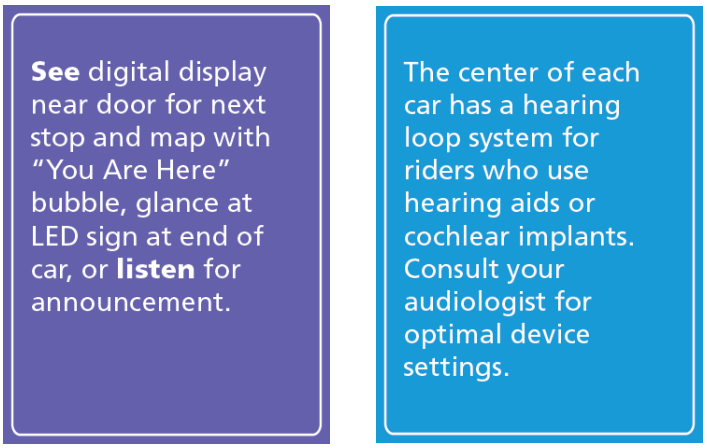
- Notification of emergency alarms should be provided via the VMS.

- Signage for hearing induction loops must be included in each car that it is provided.

As noted above and understanding the importance of communication access in rail vehicles, the RVAAC Report recommended a robust expansion of requirements for accessible communications, including provisions for variable message signage (VMS) and hearing induction loops. It also recommended requiring VMS and real-time route map tracking (where provided) to be located in at least two locations in each car, so that every seat has a view of one or more of the accessible signs. (RVAAC Report, Chap. 2, Sec. Sec. I-XI)

HLAA continues to support the RVAAC Report and provide additional comments for this ANPRM.

Question 4: What solutions or technologies are commercially available that, if implemented, would be capable of providing access to public communications onboard rail vehicles?



The above notices are placed on the BART website at

https://www.bart.gov/about/projects/cars

Hearing loop systems offer an accessible solution to provision of on board communications. It's our understanding that this is commercially available to transportation providers in the US as well as those overseas. The Bay Area Rapid Transit (BART) system has purchased rail cars from Bombardier Transportation that have loop systems installed. According to the BART website, "The first of 775 new BART train cars went into service January 2018."[1] Those cars included a hearing loop system installed in the center of each car. In addition LED signs and digital train

[1] New Train Car Project, https://www.bart.gov/about/projects/cars downloaded 7/14/2020

maps provide additional visual information for riders, particularly for people who do not use hearing aids, or who are Deaf. We believe these two accessible solutions go hand in hand.

The RVAAC recommended that rail cars install hearing loops in the entire rail car. HLAA supports that positon. In an emergency, someone with hearing loss might not be able to reach the location of the loop if it is situated in only one area of the rail car. However, we applaud BART for taking this first step toward communication accessibly on their trains. In addition, the use of LED signs and train maps with visual information point to the currently commercially available technology being used to provide a more accessible experience for people with hearing loss.

Question 5: What solutions or technologies are commercially available that, if implemented on rail vehicles, would provide accessible emergency information to passengers in real-time?

HLAA believes that hearing loops are ideal for providing information in real time. Because they would be linked to the public announcement system, should an emergency happen, people with hearing loss who use a hearing aid with a telecoil would have access to the same information at the same time as everyone else, provided the loop covers the entire car, and/or the person with hearing loss is in close proximity to the hearing loop should that be situated in one portion of the car.

We have also seen a surge of automated speech recognition (ASR) technology that makes use of Artificial Intelligence. Although this technology is still not perfect, is a vast improvement over

prior ASR products. Google's "Live Transcribe," Microsoft's "Translator Live", Ava and Otter.ai are just a few examples of the explosion in this market. That said, we are not aware of any of these applications being currently being used for rail car announcements. If and when such applications are ready for commercial use, we are eager to see it tested and successfully used in rail cars.

It's our understanding that VMS currently can be used with prerecorded announcements and can serve even in an emergency if the display has the capability and staff are trained in how to change announcements in real time. VMS that can be changed in real time are a significant and useful alongside hearing loops to provide equal access to communications on rail cars.

We thank the Access Board for the opportunity to provide these Comments for consideration.

Respectfully submitted,

/S/

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