

# PS5 Provide Enhanced Speech Intelligibility

## Technical Document (Individual)

WELL Performance Rating™, Q4 2022 Addenda








### WHAT IS THIS DOCUMENT:

This document is intended to serve as a guide on how to create a **technical document to improve speech intelligibility and accessibility by providing dedicated, high-performance audio technology.**

This document and similar tools are intended to assist projects in their pursuit of the WELL Performance Rating™ but use of this document and/or similar tools are in no way a guarantee of achievement of any rating or designation, and no representation or warranty is made regarding the likelihood of achieving any rating or designation.

Note: The below document is based on the Q4 2022 addenda of the WELL Performance Rating™. Project teams are required to implement the feature requirements from the addenda version assigned to their project or any more recent addenda version.

### HOW TO USE THIS DOCUMENT:

- ☐  Read the [below feature requirements](#) (or the feature requirements from the [addenda version assigned to your project](#), as relevant) and determine how your project addresses each requirement.
  - a. If your project is a WELL Core project, read through and ensure that your project follows the “WELL Core Guidance.”
  - b. Make sure to apply the feature requirements appropriate to your project’s space types. For example, if your project has both dwelling units and other space types, ensure your project is applying the requirements under “For Dwelling Units” to the dwelling unit spaces and applying the requirements under “For All Spaces except Dwelling Units” to the other space types. Check out the [WELL Performance Rating™ digital standard](#) for the exact language on your project’s space types.
- ☐  Refer to the [below example document](#) to get an idea of how to set up your documentation.
- ☐  Collaborate with your stakeholders to gather the [relevant documentation](#) that demonstrates the project’s compliance with the feature. Some examples of relevant documentation include:
  - a. a letter from a hired professional outlining services provided
  - b. the project’s floor plans
  - c. a modeling report
- ☐  Create a technical document using existing documentation where relevant, annotating it to clarify where feature requirements are met. Some examples of annotating include:
  - a. highlight the sections relevant to WELL requirements
  - b. circle or add boxes around particular data
  - c. add notes to confirm WELL requirements
  - d. add labels to draw attention to particular sections
  - e. provide an explanation of the connection to WELL requirements using a different colored font
  - f. check out the [WELL Documentation Annotation Guide](#) for more
- ☐  Name the document so that it is easily identifiable. Some examples for naming include:
  - a. name the document using the WELL feature code
  - b. name the document using the WELL feature name
  - c. name the document using the WELL document type
- ☐  Review the document you’ve created and ensure that all the necessary WELL requirements are fully and clearly addressed.
  - a. Note: the level of detail is up to the discretion of the project team, but the document must include specific details demonstrating that the actual requirements have been enacted in the project boundary. Features cannot be demonstrated solely through a written confirmation that the WELL requirements have been or will be implemented.
- ☐  Upload the document to the checklist in the WELL digital platform, after you’ve confirmed that the document fully and clearly addresses all the necessary WELL requirements.



## FEATURE REQUIREMENTS:

### **For All Spaces**

The following requirements are met, as applicable:

- a. *Telecommunication and AV systems, which utilize speech enhancement technology (e.g., active digital signal processing, noise cancellation) are provided in all rooms used for conferencing, distance learning or similar remote communications and commissioned by a professional in audio engineering.*
- b. *Public address systems meet the following:*
  1. *All public address systems are commissioned by a professional in audio engineering in accordance with NFPA 72 (Annex D), BS 5839 Part 8, ISO 7240 Parts 16 and 19 or equivalent.<sup>235</sup>*
  2. *A commissioning report, acoustical model or similar indicates that a minimum STI 0.50 or CIS 0.75 is achieved in at least 50% of regularly occupied acoustically distinguishable spaces (ADS) when measured in accordance with IEC 60268-16 or equivalent.<sup>236</sup>*
- c. *Speech reinforcement systems are installed in at least 80% of classrooms and all spaces for large presentation spaces (e.g., lecture hall, conference center). All speech reinforcement systems are commissioned by a professional in acoustics or audio engineering and a commissioning report indicates that systems are designed to meet audio distribution requirements in accordance with ANSI/ASA S12.60 Part 1 and commissioned in accordance with ANSI/INFOCOMM A102.01:2017 or equivalent.<sup>237,238</sup>*

#### WELL Core Guidance:

Meet these requirements in non-leased spaces, provided these areas comprise at least 2.5% of the total project area.

Otherwise, meet these requirements in non-leased space plus sufficient leased space to sum to 2.5% of the total project area.



The below sample documentation is intended to provide guidance in creating a technical document. It is not a template. You may note included components that are not required to demonstrate compliance with this feature.



#### Example document for PS5 Provide Enhanced Speech Intelligibility

[PROJECT ADMINISTRATOR NAME] was responsible for coordinating the commissioning of public address systems throughout the airport project, [PROJECT] located at [PROJECT ADDRESS].

Prior to testing, our commissioning team was able to confirm the following factors that would affect our measurements in advance:

- All furnishings have been installed, including waiting area seating, carpeted floors, acoustic drop ceilings, and various other amenities throughout the terminal testing areas.
- HVAC systems have been commissioned, are balanced, and are operating at typical speeds.
- All speakers and microphones associated with the public address systems have been installed and commissioned by the audio engineer and a representative member of the installation team will be present during testing to answer any questions.
- WiFi is available on site and will be used during the commissioning process.
- Testing has been scheduled during a time with the lowest reported foot traffic so as to avoid disruption in the measurement process.

The following floor plan shows the labeled zones where public address system speech intelligibility tests were performed:

[insert floor plan of airport project with PA zones labeled]

The following table details our measured PA speech intelligibility values taken from each zone:

Reverberation Time tests:

Zone Location	Speech Transmission Index (STI)
Zone 1 (Gates 21-24)	0.50
Zone 2 (Gates 31-34)	0.51
Zone 3 (Gates 90-96)	0.59
Zone 4 (Gates 12-17)	0.62

Below are photographs from testing indicating the proper positioning of talk box and sound level meter for STI(PA) testing:

[insert photographs]

#### TIPS FOR MULTIPLE LOCATIONS

- For organizations pursuing the WELL Performance Rating for multiple locations, a technical document must be submitted for each project pursuing this feature part; it is not considered shareable.