Acoustical Report & Recommendation

Prepared for: Sample report
Date August 6, 2021
Room Boardroom

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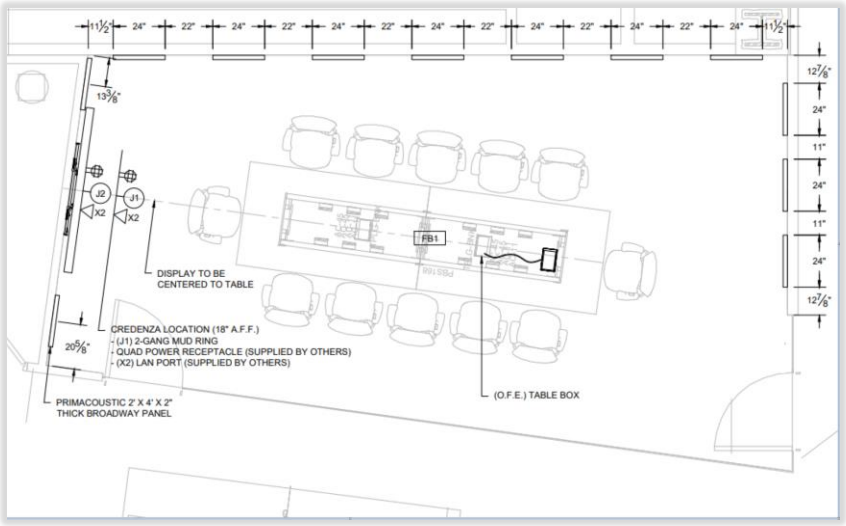
1.0 Request

The acoustics in the Boardroom are described as poor and problematic for meetings in the room and for remote attendees attending *via* a teleconference.

2.0 Room Information

- 27’ x 15’ x 8’11”
- Centered conference table
- One wall glass
- (12) 2’ x 4’ x 2” Primacoustic *Broadway* panels are installed
- Current teleconferencing system is a Poly Trio
- A ceiling array microphone is specified for this room as part of an upgrade
- Conversations are difficult to understand and / or fatiguing in the room



3.0 Definitions and Performance Criteria in this Report

3.1 **Noise Reduction Coefficient (NRC) Rating** – How much sound may be absorbed by a surface. An acoustic product with .50 NRC rating means that 50% of the sound is being absorbed by the acoustic surface and 50% is being reflected back into the room.

Common Materials:

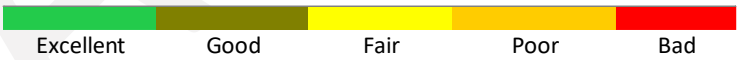
Glass	0
Sheetrock	.15
Carpet	.35 - .65
Acoustic Ceiling Tiles	.55 -.95
Acoustical Panels	1

3.2 **Absorbing Surfaces (AS)** – Surfaces that provide an NRC rating of **.50** or higher. The percentage of absorbing surfaces required in a given room varies based on several factors including size. If the AS of a room does not achieve a **GOOD** or **EXCELLENT** rating, VisionPoint will recommend acoustical treatment.

3.3 **Acoustical Treatment (AT)** – Surfaces that provide an NRC rating of **.85** or higher.

3.4 **Speech Intelligibility** – The term refers to how well an individual can be understood when they are speaking. Speech intelligibility is a concern of the percentage of consonants that will be lost or misunderstood in speech, and it is in these consonants that intelligibility lies. The recommended acceptable loss for speech communication would be 15%, as long as there is a minimum of 25dB of signal to noise ratio.

Our Approach to Objective Performance Criteria:
The American National Standards Institute (ANSI[1]) has adopted Speech Transmission Index (STI) as an objective measurement calculation of speech intelligibility.



VisionPoint uses an adaptation of STI to calculate microphone transmission quality over audio or video teleconferences in our system designs.

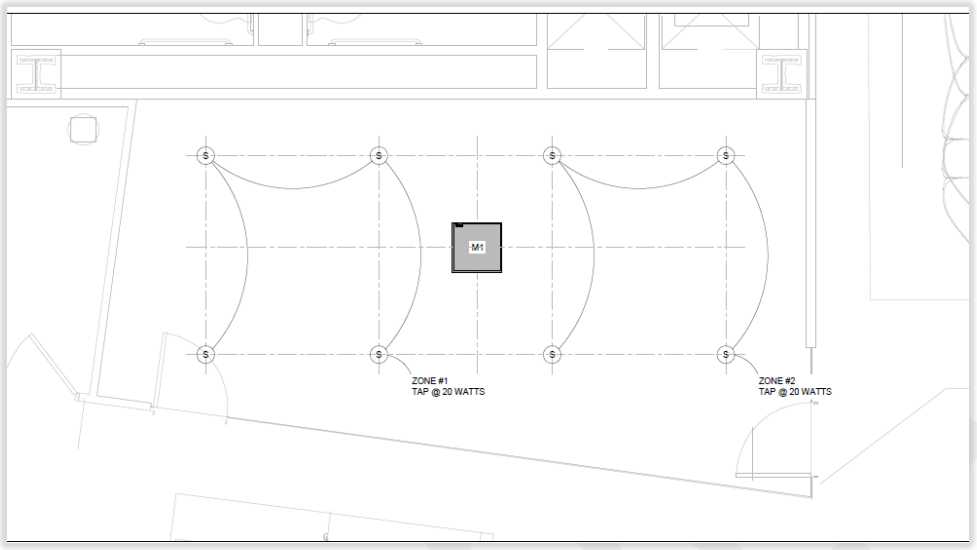
4.0 Room Evaluation & Recommendation

Acoustical Performance in the room's current state:

Current STI Rating	AS	AT	NOTE
BAD	31%	5%	The sheetrock ceiling presents the greatest opportunity for acoustical improvement.

[1] The ANSI logo is a registered trademark of the American National Standards institute and is not affiliated with VisionPoint LLC.

Recommendation: Based on the available ceiling space (pending the installation of ceiling speakers and a microphone), 50% of the ceiling will be available for acoustical treatment:



(1) Ceiling microphone and (8) speakers are scheduled to be installed in the Boardroom as part of the upgrade

The table represents 50% of the ceiling with acoustical treatment:

STI Rating with Panels	AS	AT	NOTE
GOOD	42%	16%	Considering the additional microphone and speakers shown above, 50% of the ceiling will be available for acoustic treatment. VisionPoint recommends ceiling clouds to achieve a **GOOD** rating. The clouds provide an aesthetic improvement, eliminate the reflections between the table and the ceiling, and require the least amount of work to install since they hang from the ceiling.

Twelve (12) Nimbus ceiling panels are required to cover 50% of the ceiling.

Nimbus

24" x 48" x 1.5" (610 x 1218 x 38mm)

Color options: 00 Black, 03 Beige, 08 Grey, 09 Paintable

Part #	Thickness	Edge	Panels per Box	Surface Area Coverage
Z840-1225-09	1.5" (38mm)	Square	2	16 sq-ft (1.4 sq-meters)

5.0 Additional Benefits of Treatment

An additional benefit to acoustical treatment in this room is *comfort*.

The WELL Building Standard ("WELL") establishes guidance to create a distraction free, productive and comfortable indoor environment. Acoustical contributions to WELL are Reverberation Time, Sound Reflecting Surfaces, Noise, Sound Barriers (STC) and Sound Masking. The addition of acoustical panels in this space will provide the following:

- Reduce acoustical distractions from internal (ambient noise) and external sources
- Improve speech intelligibility within the room
- Reduce fatigue by lowering cognitive requirements of deriving missed words out of context
- Lower stress

Please contact your VisionPoint sales representative at 860.436.9673 with any questions or a quote for the recommended acoustical treatment.

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