

Field Impact Sound Transmission Test Report

Apparent Impact Insulation Class (AIIIC)

Report Date:	April 18, 2024	Source Room:	2nd Floor Great Room, Volume: 3949 cu. ft.
Test Date:	April 04, 2024	Receiver Room:	1st Floor Great Room/Kitchen, Volume: 3949 cu. ft.
DLAA Test No:	1.1.1	Test Assembly:	Floor-ceiling, Area: 428 sq. ft.
Test Site:	Ka'ulu by Gentry		
Client:	Gentry Builders, LLC		

STANDARDS

ASTM E1007-14	Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structure
ASTM E989-06(2012)	Standard Classification for Determination of Impact Insulation Class (IIC)
ASTM E2235-04(2012)	Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods

STATEMENT OF CONFORMANCE:

Testing was conducted in general accordance with ASTM E1007-14, with all exceptions noted below. All requirements for measuring and reporting Absorption Normalized Impact Sound Pressure Level (ANISPL) and Apparent Impact Insulation Class (AIIIC) were met.

TEST ENVIRONMENT:

The source room was 2nd Floor Great Room. The space was finished, unfurnished. The floor was Carpet. The ceiling was gyp. The walls were gyp. All doors and windows were closed during the testing period. The source room had a volume of approximately 3949 cu. ft.

The receiver room was 1st Floor Great Room/Kitchen. The space was finished unfurnished. The floor was LVT. The ceiling was gyp. The walls were gyp. All doors and windows were closed during the testing period. The receiver room had a volume of approximately 3949 cu. ft.

The test assembly measured approximately 14.8x29.583, and had an approximate area of 428 sq. ft.

TEST ASSEMBLY:

The tested assembly was the Floor-ceiling The assembly was not field verified, and was based on information provided by the client and drawings for the project. The client advised that no slab treatment or self-leveling was applied. Results may vary if slab treatment or self-leveling or any adhesive is used in other installations.

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TEST PROCEDURE:

The test was performed in general accordance with ASTM E1007-14. Determination of Space-Average Levels performed via the manually scanned microphones technique, described in ASTM E1007-14, Paragraph 11.4.2.2.

Flanking transmission was not evaluated.

To evaluate room absorption, 1 microphone was used to measure 4 decays at 4 locations around the receiving room for a total of 16 measurements, per ASTM E2235-04(2012).

TEST INSTRUMENTATION:

Equipment Type	Manufacturer	Model Number	Serial Number	Last NIST Traceable Calibration	Last Local Calibration
Tapping Machine:	Norsonics	CAL200	2775671	9/19/2022	N/A
Sound Level Meter	Larson Davis	831	4328	10/24/2022	4/4/2024
Microphone Pre-Amp	Larson Davis	PRM831	046469	10/24/2022	4/4/2024
Microphone	Larson Davis	377B20	168830	10/20/2022	4/4/2024
Calibrator	Larson Davis	CAL200	5955	10/26/2022	N/A
Amplified Loudspeaker	QSC	K10	GAA530909	N/A	N/A
Noise Generator	NTi Audio	MR-PRO	0162	N/A	N/A

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STATEMENT OF TEST RESULTS:

Frequency	Absorption Normalized Impact Sound Pressure Level, ANISPL (dB)	Average Receiver Background Level	Average RT60 (Seconds)	Exceptions noted to ASTM E1007-14	
100 Hz	54.0	35.4	0.62		
125 Hz	51.0	39.2	0.85		2
160 Hz	47.0	33.0	0.63		2
200 Hz	40.0	37.1	1.00	1	2
250 Hz	44.0	34.4	1.02		2
315 Hz	48.0	33.7	1.14		2
400 Hz	40.0	33.3	1.34		2
500 Hz	33.0	32.5	1.26	1	2
630 Hz	30.0	31.2	1.14	1	2
800 Hz	29.0	30.6	1.12	1	2
1000 Hz	27.0	29.6	1.29	1	
1250 Hz	26.0	28.9	1.46	1	
1600 Hz	26.0	28.5	1.52	1	
2000 Hz	23.0	24.9	1.46	1	
2500 Hz	20.0	20.6	1.39	1	
3150 Hz	19.0	18.5	1.40	1	
4000 Hz	18.0	17.6	1.39		
5000 Hz	17.0	15.1	1.32		

*This test does not fully conform to the requirements of ASTM E1007-13, so the calculated AIIC rating should be considered a minimum.

Notes:

1. The signal-to-noise ratio is less < 5 dB at this frequency band.
2. Airborne sound flanking is within 10 dB of impact sound pressure measurements at this frequency band.

AIIC: 66

An Apparent Impact Insulation Class (AIIC) of 66 and an Impact Sound Rating (ISR) of 71 was calculated. The AIIC rating is based on Absorption Normalized Impact Sound Pressure Level (ANISPL), and includes the effects of noise flanking. The AIIC reference contour is shown on the next page, and has been "fit" to the ANISPL values, in accordance with the procedure of ASTM E989-06(2012).

The results stated in this report represent only the specific construction and acoustical conditions present at the time of the test. Measurements performed in accordance with this test method on nominally identical constructions and acoustical conditions may produce different results.

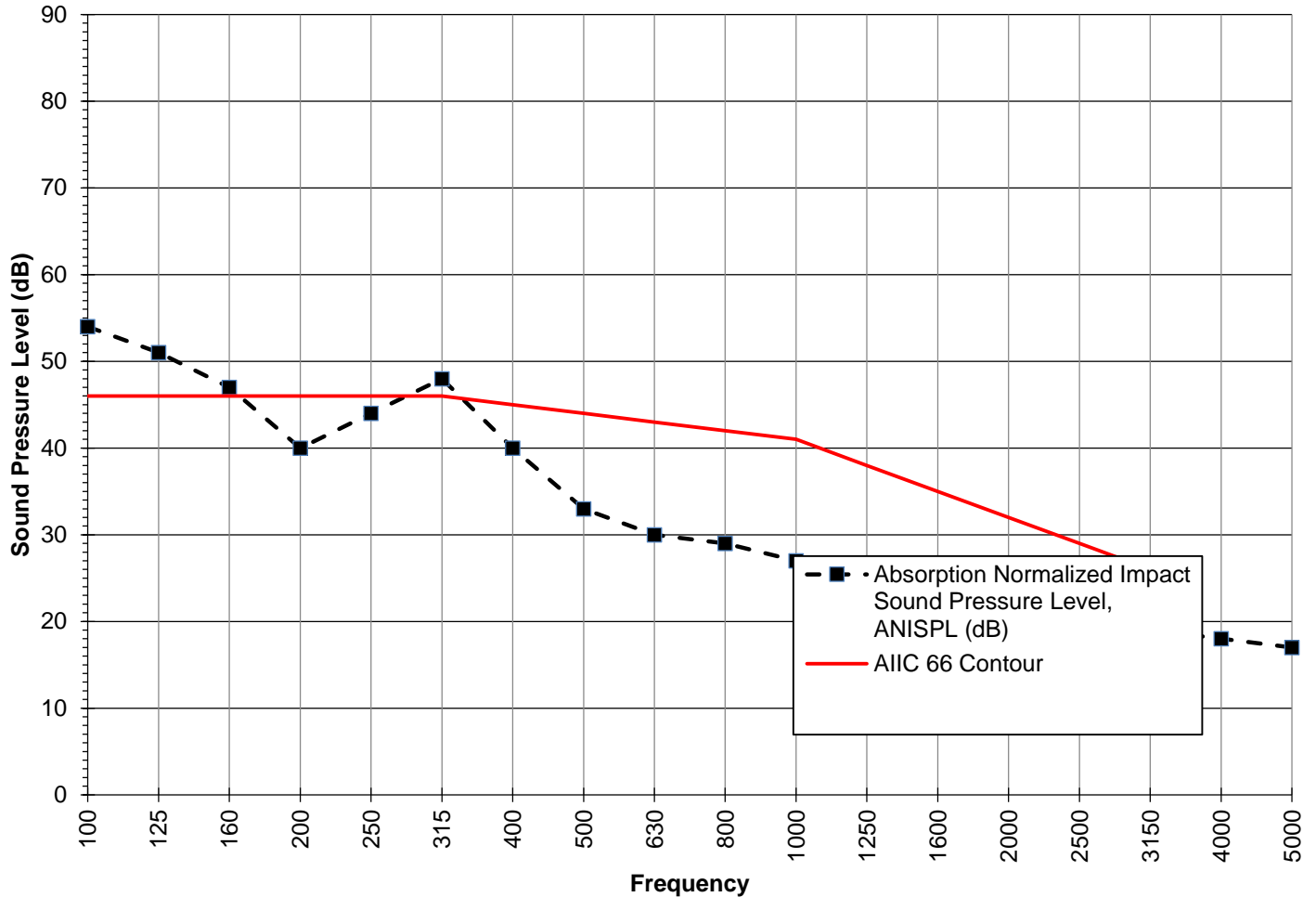
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AIIC: 66

Test Conducted By:

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Jake Pfitsch, Project Consultant