Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS

123 Columbia Court North • Suite 201 • Chaska, MN 55318
(952) 448-5300 • Fax (952) 448-2613 • (800) 448-0121
Email: sales@acousticalsurfaces.com
Visit our Website: www.acousticalsurfaces.com

We Identify and S.T.O.P. Your Noise Problems

Acoustical • Analytical • Fire • Structural
NGC Testing Services™

Acoustical Testing Laboratory

NVLAP®
Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 200291

TEST REPORT

For

Rendered by Manufacturer and Released to:
Acoustical Surfaces, Inc.
123 Columbia Court North
Chaska, MN 55318

Sound Transmission Loss Test
ASTM E 90 – 04 / E 413 - 04
On

Single Layer of 1/2 Inch SoundBreak® Gypsum Wallboard Over
Single Layer of 1/2 Inch Regular Gypsum Wallboard - Side 1
Single Layer of 1/2 Inch Regular Gypsum Wallboard - Side 2
On Nominal 2 Inch by 4 Inch (24 Inch o.c.) Wood Studs, Fiberglass Batt Insulation

Report Number: NGC 2009028

Assignment Number: G-307N

Test Date: 07/20/2009

Report Date: 08/03/2009

Submitted by: _____
Steven M. Armenia
Test Technician

Reviewed by: _____
Robert J. Menichetti
Director

The results reported above apply to specific samples submitted for measurement.
No responsibility is assumed for performance of any other specimen.
This report may not be reproduced except in full, without the written approval of the laboratory.
The laboratory's accreditation or any of it's test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

1650 Military Road • Buffalo, NY 14217-1198
(716)873-9750 • Fax (716)873-9753 • www.ngctestingservices.com

Acoustical Surfaces, Inc.
We Identify and S.T.O.P. Your Noise Problems
Sound Transmission Obscuring Products
Soundproofing, Acoustics, Noise & Vibration Control Specialists ™

Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS
123 Columbia Court North • Suite 201 • Chaska, MN 55318
(952) 448-5300 • Fax (952) 448-2613 • (800) 448-0121
Email: sales@acousticalsurfaces.com
Visit our Website: www.acousticalsurfaces.com

We Identify and S.T.O.P. Your Noise Problem

Acoustical • Analytical • Fire • Structural
NGC Testing Services™

Acoustical Testing Laboratory

NVLAP®
Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 200291

Report Number: NGC 2009028

Test Method: This test method conforms explicitly with the American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements - Designation: E 90 - 04 / E 413 - 04.

Specimen Description: The test specimen was a partition assembly constructed within the 12 ft. Wide by 9 ft. High (3657mm W by 2743mm H) test opening. The test specimen was described by client as, wood stud framing 24 in. on center with a single layer of 1/2 inch gypsum board on receive side and single layer of 1/2 inch SoundBreak® gypsum over a single layer of 1/2 inch gypsum board on source side. Un-faced fiberglass insulation placed into the cavities formed by the framing members

Standard direction of sound from Source Room (Room 1) to Receiving Room (Room 2). The wall system was constructed in the test opening and consisted of:
From Room 1 to Room 2.

- 1 layer of 12.7mm (1/2 in.) SoundBreak® gypsum wallboard. Sample weight was 10.8 kg/m^2 (2.2 PSF) mounted vertically. Screw spacing was 304.8mm (12 in.) on center with 41.3mm (1-5/8 in.) coarse thread bugle head drywall screws.
- 1 layer of 12.7mm (1/2 in.) regular gypsum wallboard. Sample weight was 6.3 kg/m^2 (1.3 PSF) mounted vertically and attached directly to the wood framing members. Screw spacing was 609.6mm (24 in.) on center with 31.2mm (1-1/4 in.) coarse thread bugle head drywall screws.
- 89mm (3-1/2 in.) wide by 38mm (1-1/2 in.) thick wood studs mounted vertically 406.4mm (24 in.) on center between the top and bottom plates 2.5 kg/m^2 (0.52 PSF).
- 89mm (3-1/2 in.) wide by 38mm (1-1/2 in.) thick wood top and bottom plates 1.2 kg/m^2 (0.23 PSF). A bead of acoustical caulk was placed between plate and test assembly.
- 1 layer of 89mm (3-1/2 in.) un-faced fiberglass insulation was friction fit into stud cavities. The sample weight was found to be 1.1 kg/m^2 (0.23 PSF).
- 1 layer of 12.7mm (1/2 in.) regular gypsum wallboard. Sample weight was 6.3 kg/m^2 (1.3 PSF) mounted vertically and attached directly to the wood framing members. Screw spacing was 304.8mm (12 in.) on center with 31.2mm (1-1/4 in.) coarse thread bugle head drywall screws.

Total weight of the wall system was 28.2 kg/m^2 (5.78 PSF)

The perimeter of the wall system was sealed with acoustical caulk and exposed board joints were taped.

Specimen size: 3657mm x 2743mm (12 ft x 9 ft.)

Conditioning: Boards were tested as received.

Test Results: The results of the tests are given on pages 3 and 4.

The results reported above apply to specific samples submitted for measurement.
No responsibility is assumed for performance of any other specimen.
This report may not be reproduced except in full, without the written approval of the laboratory.
The laboratory's accreditation or any of it's test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

1650 Military Road • Buffalo, NY 14217-1198
(716)873-9750 • Fax (716)873-9753 • www.ngctestingservices.com

Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS

123 Columbia Court North • Suite 201 • Chaska, MN 55318
(952) 448-5300 • Fax (952) 448-2613 • (800) 448-0121
Email: sales@acousticalsurfaces.com
Visit our Website: www.acousticalsurfaces.com

We Identify and S.T.O.P. Your Noise Problem

Acoustical • Analytical • Fire • Structural
NGC Testing Services™

Acoustical Testing Laboratory

NVLAP®
Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 200291

Sound Transmission Loss Test Data

Test: ASTM E 90 - 04 / ASTM E 413 - 04

Test Report: NGC2009028 Date: 07/20//09
Specimen Size [m²]: 10.1

Source room		Receiving room	
Volume [m³]:	91.2	Volume [m³]:	98.7
Rm Temp [°C]:	22.5	Rm Temp [°C]:	23.5
Humidity [%]:	54	Humidity [%]:	53

Sound Transmission Class STC [dB]: 51
Sum of Unfavorable Deviations [dB]: 32
Max. Unfavorable Deviation [dB]: 8 at 250 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
50	19	93.7	75.5	23.4	0.8		
63	18	98.9	83.5	18.3	2.6		
80	19	101.6	83.4	32.2	0.8		0.0
100	24	101.6	80.5	22.0	2.9		0.0
125	34	103.0	71.6	18.7	2.6	1	1.1
160	39	101.0	66.8	12.6	4.8		2.5
200	38	100.8	67.9	13.2	5.1	3	1.5
250	36	98.9	67.6	14.4	4.7	8	0.9
315	41	99.5	63.4	13.4	4.9	6	0.5
400	43	98.4	59.9	13.2	4.5	7	0.3
500	47	98.8	56.6	12.5	4.8	4	0.1
630	49	99.3	54.8	12.3	4.5	3	0.1
800	53	99.1	51.2	12.9	5.1		0.1
1000	55	98.3	48.2	13.8	4.9		0.1
1250	58	99.3	45.6	14.9	4.3		0.1
1600	61	99.0	41.6	17.2	3.6		0.0
2000	62	99.4	39.7	20.6	2.3		0.0
2500	60	101.4	43.5	23.6	2.1		0.0
3150	55	99.2	46.1	26.4	1.9		0.1
4000	56	99.4	44.6	29.4	1.2		0.0
5000	58	97.1	39.2	33.2	0.1		0.0

STL = Sound Transmission Loss, dB
L1 = Source Room Level, dB
L2 = Receiving Room Level, dB
d = Decay Time, dB/second
Δ STL = Uncertainty for 95% Confidence Level

The results reported above apply to specific samples submitted for measurement.
No responsibility is assumed for performance of any other specimen.
This report may not be reproduced except in full, without the written approval of the laboratory.
The laboratory's accreditation or any of it's test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

1650 Military Road • Buffalo, NY 14217-1198
(716)873-9750 • Fax (716)873-9753 • www.ngctestingservices.com

Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS

123 Columbia Court North • Suite 201 • Chaska, MN 55318
(952) 448-5300 • Fax (952) 448-2613 • (800) 448-0121
Email: sales@acousticalsurfaces.com
Visit our Website: www.acousticalsurfaces.com

We Identify and S.T.O.P. Your Noise Problem

Acoustical • Analytical • Fire • Structural
NGC Testing Services™

Acoustical Testing Laboratory

NVLAP®
Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 200291

Sound Transmission Loss Test Data

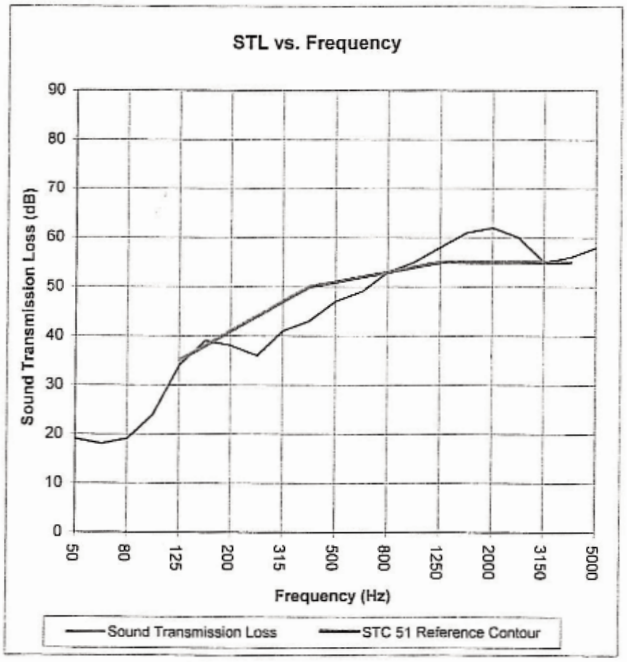
Per: ASTM E 90 - 04 / ASTM E 413 - 04

Test Report: NGC2009028
Test Date: 07/20//09
Specimen Size [m²]: 10.1

Sound Transmission Class STC = 51 dB

Frequency [Hz]	STL [dB]	ΔSTL
50	19	
63	18	
80	19	1.1
100	24	2.5
125	34	1.5
160	39	0.9
200	38	0.5
250	36	0.3
315	41	0.1
400	43	0.1
500	47	0.1
630	49	0.1
800	53	0.1
1000	55	0.0
1250	58	0.0
1600	61	0.0
2000	62	0.1
2500	60	0.0
3150	55	0.0
4000	56	0.0
5000	58	0.0

* Due to high insulating value of specimen, background levels limit results at these frequencies.



STL = Sound Transmission Loss, dB
Δ STL = Uncertainty for 95% Confidence Level

The results reported above apply to specific samples submitted for measurement.
No responsibility is assumed for performance of any other specimen.
This report may not be reproduced except in full, without the written approval of the laboratory.
The laboratory's accreditation or any of it's test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

1650 Military Road • Buffalo, NY 14217-1198
(716)873-9750 • Fax (716)873-9753 • www.ngctestingservices.com