



# WESTERN ELECTRO - ACOUSTIC LABORATORY

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25132 Rye Canyon Loop Santa Clarita, California 91355 Tel: (661) 775-3741 Fax: (661) 775-3742 www.weal.com

## SOUND TRANSMISSION LOSS TEST REPORT NO. TL09-578

CLIENT: **DMFCWBS, LLC**  
9100 Centre Pointe Drive, Suite 210  
West Chester, OH 45069

Page 1 of 2  
25 September 2009

TEST DATE: 22 September 2009

### INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM E 90-04, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*. Copies of the test standard are available at [www.astm.org](http://www.astm.org). The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). This test report relates only to the item(s) tested. Any advertising that utilizes this test report or test data must not imply product certification or endorsement by WEAL, NVLAP, NIST or the U.S. Government.

### DESCRIPTION OF TEST SPECIMEN

The test specimen was a wall assembly constructed from metal studs, resilient channel, and type X gypsum board. The studs and tracks were ProSTUD-015 (25 GA equivalent) 2-1/2 inch (64 mm) metal. The studs were spaced horizontally at 24 inches (610 mm) O.C. The frame was isolated from the test opening with 1/4 inch (6.4 mm) neoprene pads. 3-1/2 inch (89 mm) thick, 23 inch (584 mm) wide R-13 unfaced fiberglass batts were installed in the stud cavities. On the receiving room side, Dietrich RCSD single leg resilient channels were screwed to the studs horizontally at 24 inches (610 mm) O.C. The center of the top channel was 2 inches (50.8 mm) below the top of the wall and the center of the bottom channel was 2 inches (50.8 mm) above the bottom of the wall. The top four channels were oriented with the resilient leg above the attachment flange and the bottom channel was oriented with the resilient leg below the attachment flange. One layer of 5/8 inch (15.9 mm) thick type X gypsum board was screwed to the channels at 12 inches (305 mm) O.C. with 1 inch (25.4 mm) #6 drywall screws. On the source room side, one layer of 5/8 inch (15.9 mm) thick type X gypsum board was screwed to the studs at 8 inches (203 mm) O.C. around the perimeter and 12 inches (305 mm) O.C. in the field with 1-1/4 inch (31.8 mm) #6 drywall screws. All gypsum board was oriented vertically and joints were staggered on opposite sides of the wall. All joints and perimeters were sealed with a bead of caulking and metal foil tape. Screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 96 inches (2.44 m) wide by 96 inches (2.44 m) high by 4-1/4 inches (108 mm) thick. The overall weight of the assembly was estimated to be 326 lbs (148 kg) for a calculated surface density of 5.09 lbs./ft<sup>2</sup> (24.9 kg/m<sup>2</sup>).

### RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-51.

Approved:

Respectfully submitted,  
Western Electro-Acoustic Laboratory

Gary E. Mange  
Laboratory Director

Raul Martinez  
Acoustical Test Technician

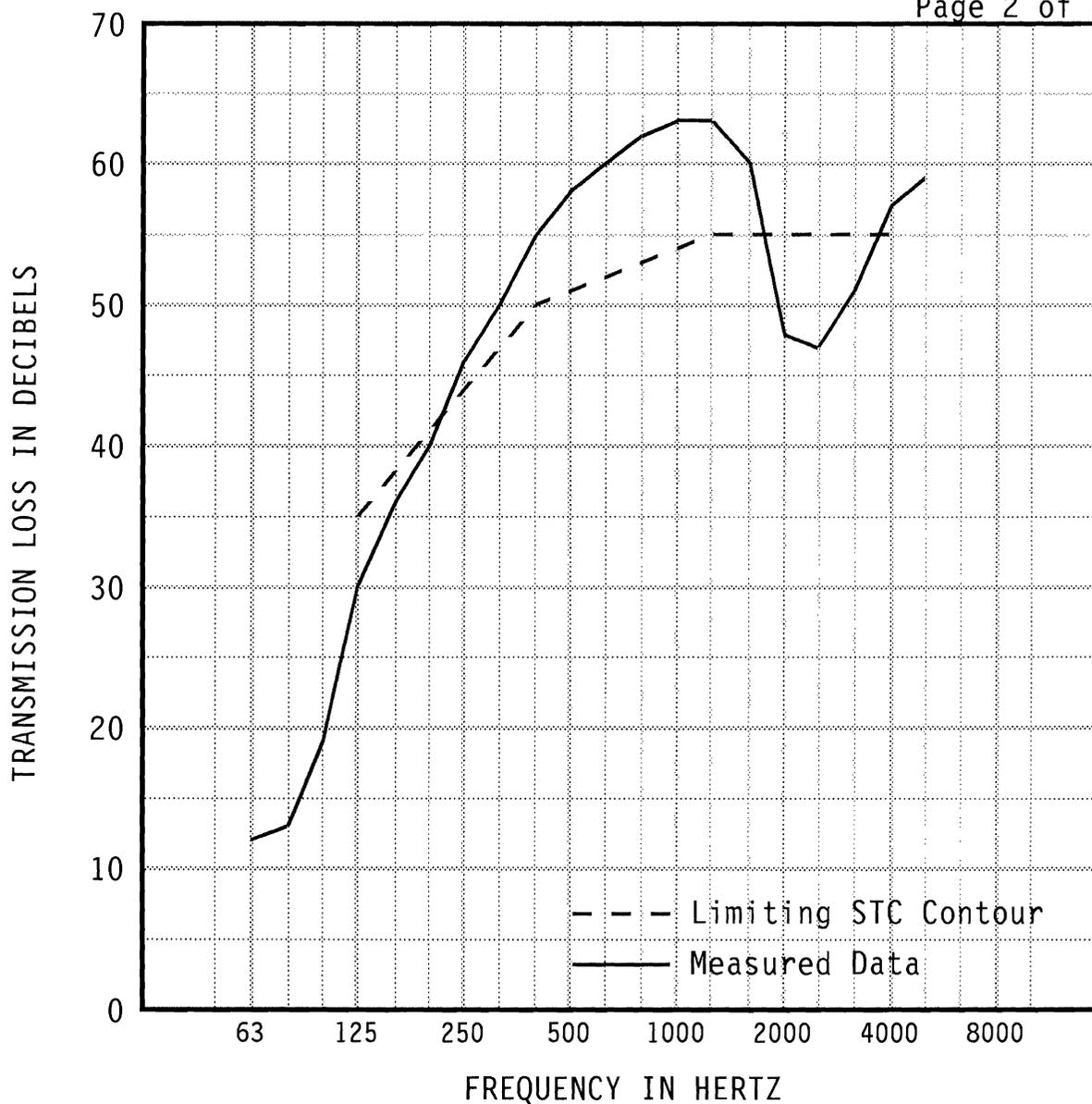
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1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		12	13	19	30	36	40	46	50	55	58
95% Confidence in dB deficiencies		1.42	1.92	2.07	1.47 (5)	0.89 (2)	0.76 (1)	0.80	0.52	0.36	0.38
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		60	62	63	63	60	48	47	51	57	59
95% Confidence in dB deficiencies		0.29	0.44	0.38	0.39	0.36	0.56 (7)	0.55 (8)	0.31 (4)	0.32	0.50

EWR	OITC	Specimen Area: 64 sq.ft.	STC
52	31	Temperature: 76.6 deg. F	51
		Relative Humidity: 32 %	(27)
		Test Date: 22 September 2009	

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