

# WESTERN ELECTRO - ACOUSTIC LABORATORY

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# SOUND TRANSMISSION LOSS TEST REPORT NO. TL09-577

#### CLIENT: **DMFCWBS, LLC** 9100 Centre Pointe Drive, Suite 210 West Chester, OH 45069 TEST DATE: 22 September 2009

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## 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 <u>www.astm.org</u>. 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 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 both sides, 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 3-3/4 inches (95 mm) thick. The overall weight of the assembly was estimated to be 317 lbs (144 kg) for a calculated surface density of 4.95 lbs./ft<sup>2</sup> (24.2 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-45.

Approved:

Mange Gary E. Mange

Laboratory Director

Respectfully submitted, Western Electro-Acoustic Laboratory

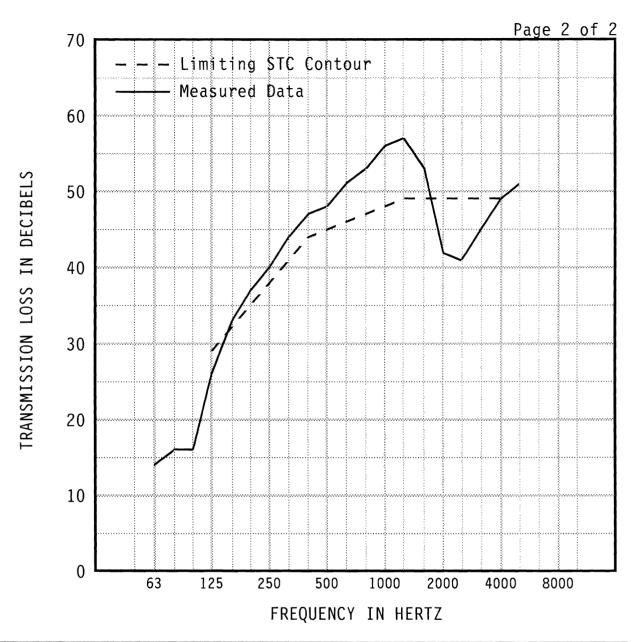
Raul Martinez Acoustical Test Technician

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63	80	100	125	160	200	250	315	400	500
14 1.42	16 1.92	16 2.07	26 1.47 (3)		37 0.76	40 0.80	44 0.52	47 0.36	48 0.38
630	800	1000	1250	1600	2000	2500	3150	4000	5000
51 0.29	53 0.44				42 0.56 (7)	41 0、55 (8)	-		51 0.50
EWR OITC 48 31 Polativo Humidity: 32 %									STC 45 (22)
	14 1.42 630 51 0.29 S	14 16 1.42 1.92 630 800 51 53 0.29 0.44 Specim Temper	14 16 16   1.42 1.92 2.07   630 800 1000   51 53 56   0.29 0.44 0.38   Specimen Ar Temperature	14 16 16 26   1.42 1.92 2.07 1.47   630 800 1000 1250   51 53 56 57   0.29 0.44 0.38 0.39   Specimen Area: 6   Temperature: 75	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				

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