WESTERN ELECTRO - ACOUSTIC LABORATORY
TESTING • CALIBRATION • RESEARCH
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. TL20-413r1

CLIENT: **ClarkDietrich**
9050 Centre Point Drive, #400
West Chester, Ohio 45069

Revised 1 April 2021

TEST DATE: 13 August 2020

INTRODUCTION

The test was performed in accordance with ASTM E 90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04 (2020), *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*. Copies of the test standard are available at 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 the United States Department of Commerce, National Institute of Standards and Technology under the National Voluntary Accreditation Program (NVLAP) Lab Code 100256-0 for this test procedure. This test report relates only to the item(s) tested. This report must not be used to claim product certification, approval, or endorsement by WEAL, NVLAP, NIST or any agency of the federal government.

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of a ClarkDietrich ProSTUD® and ProTRAK® 30mil single steel stud wall assembly Type 'X' gypsum board installed on both sides of the assembly and R-13 batt insulation in the cavity.

Specimen Make-up (Source to Receive)	
Layer 1	16 mm (5/8 inch) Type 'X' gypsum board
Framing and Insulation	92 mm (3-5/8 inch) ClarkDietrich ProSTUD® and ProTRAK® 30mil single steel studs and track with R-13 batt insulation in the cavity
Layer 2	16 mm (5/8 inch) Type 'X' gypsum board
Installation Information	
Layer Installation	- **Layers 1 and 2:** 29 mm (1-1/8 inch) long #6 drywall screws spaced 203 mm (8 inches) on center (o.c.) at the perimeter and 305 mm (12 inches) o.c. in the field. - All gypsum board was oriented vertically with joints staggered on opposite sides of the wall - All joints and perimeters were sealed with a bead of caulking and metal foil tape - All screw heads were covered with metal foil tape.
Framing and Insulation Installation	- Studs were spaced 610 mm (24 inches) o.c. - The studs were screwed to the track with 12 mm (1/2 inch) truss screws - The frame was isolated from the test chamber opening via 6 mm (1/4 inch) neoprene pads - Unfaced R-13 fiberglass batt insulation was installed in the stud cavities

- The overall dimensions of the specimen were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 124 mm (4-7/8 inches) thick.
- The overall weight of the assembly was estimated to be 151.3 kg (333.7 lbs) for a calculated surface density of 25.5 kg/m^2 5.2 lbs./ft^2).

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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 Outdoor-Indoor Transmission Class rating determined in accordance with ASTM E 1332-10a was OITC-31. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-40.

Respectfully submitted,
Approved:

Western Electro-Acoustic Laboratory

Stephen A. Martin, Ph.D., P.E.
Laboratory Director

Raul Martinez
Acoustical Test Technician

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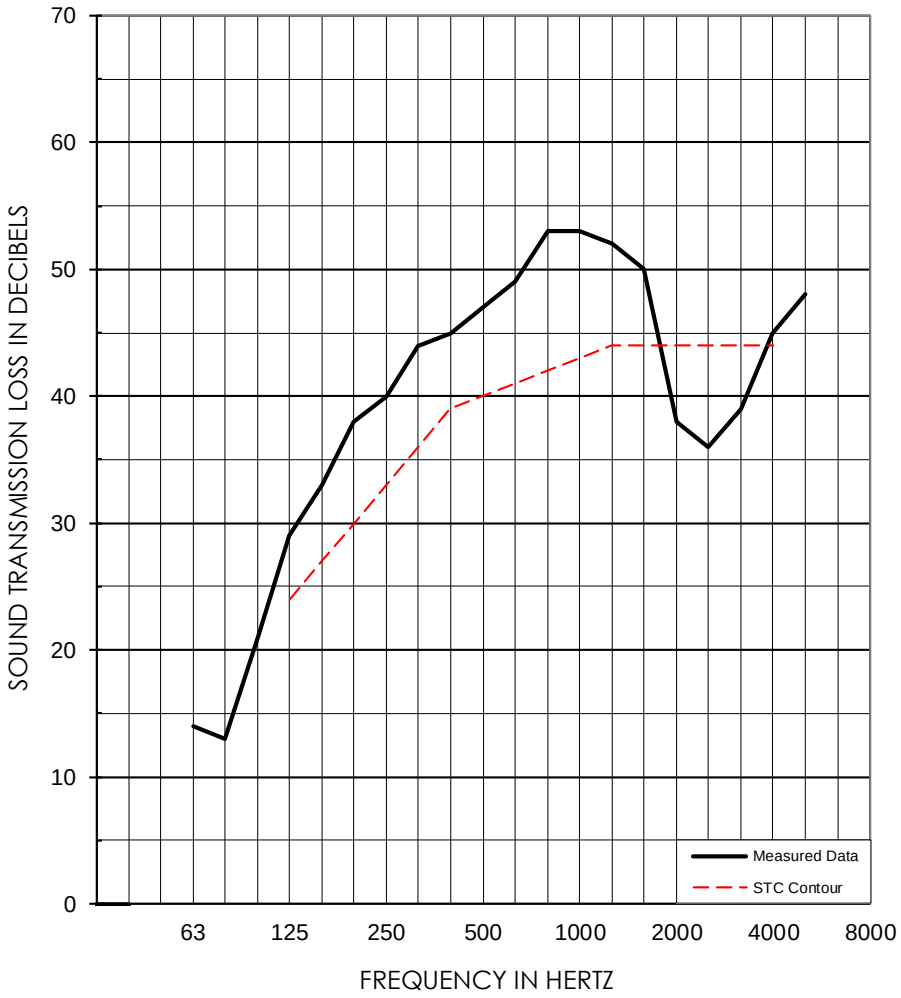

1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	14	13	21	29	33	38	40	44	45	47
95% Confidence in dB	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
deficiencies										

1/3 OCT BAND CNTR FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB	49	53	53	52	50	38	36	39	45	48
95% Confidence in dB	0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
deficiencies						(6)	(8)	(5)		

EWR	OITC
46	31

Test Date: 13 August 2020
Specimen Area: 64 sq.ft.
Temperature: 80.2 deg. F
Relative Humidity: 32 %

STC
40
(19)