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TESTING • CALIBRATION • RESEARCH

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# SOUND TRANSMISSION LOSS TEST REPORT NO. TL10-586

CLIENT: **Super Stud Building Products**
2960 Woodbridge Ave.
Edison, NJ 08837
TEST DATE: 1 September 2010


7 September 2010

## INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04$^{\varepsilon 1}$, *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 was a wall assembly constructed from metal studs and type X gypsum board. The studs were The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal and were spaced at 406 mm (16 inches) O.C. The head and sill tracks were also The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal. The frame was isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. Owens Corning R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On both sides, two layers of 15.9 mm (5/8 inch) thick USG type X gypsum board were screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8) drywall screws on the first layer and 41.3 mm (1-5/8 inch) drywall screws on the second layer. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall and between layers. On both sides, the joints and perimeters were sealed with a bead of caulking and metal foil tape. All screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 156 mm (6-1/8 inches) thick. The overall weight of the assembly was estimated to be 280 kg (619 lbs) for a calculated surface density of 47.2 kg/m$^2$ (9.66 lbs./ft$^2$).

## 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 1332-90(2003) was OITC-39. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-57.

Approved:

Gary E. Mange
Laboratory Director

Respectfully submitted,
Western Electro-Acoustic Laboratory

Raul Martinez
Acoustical Test Technician

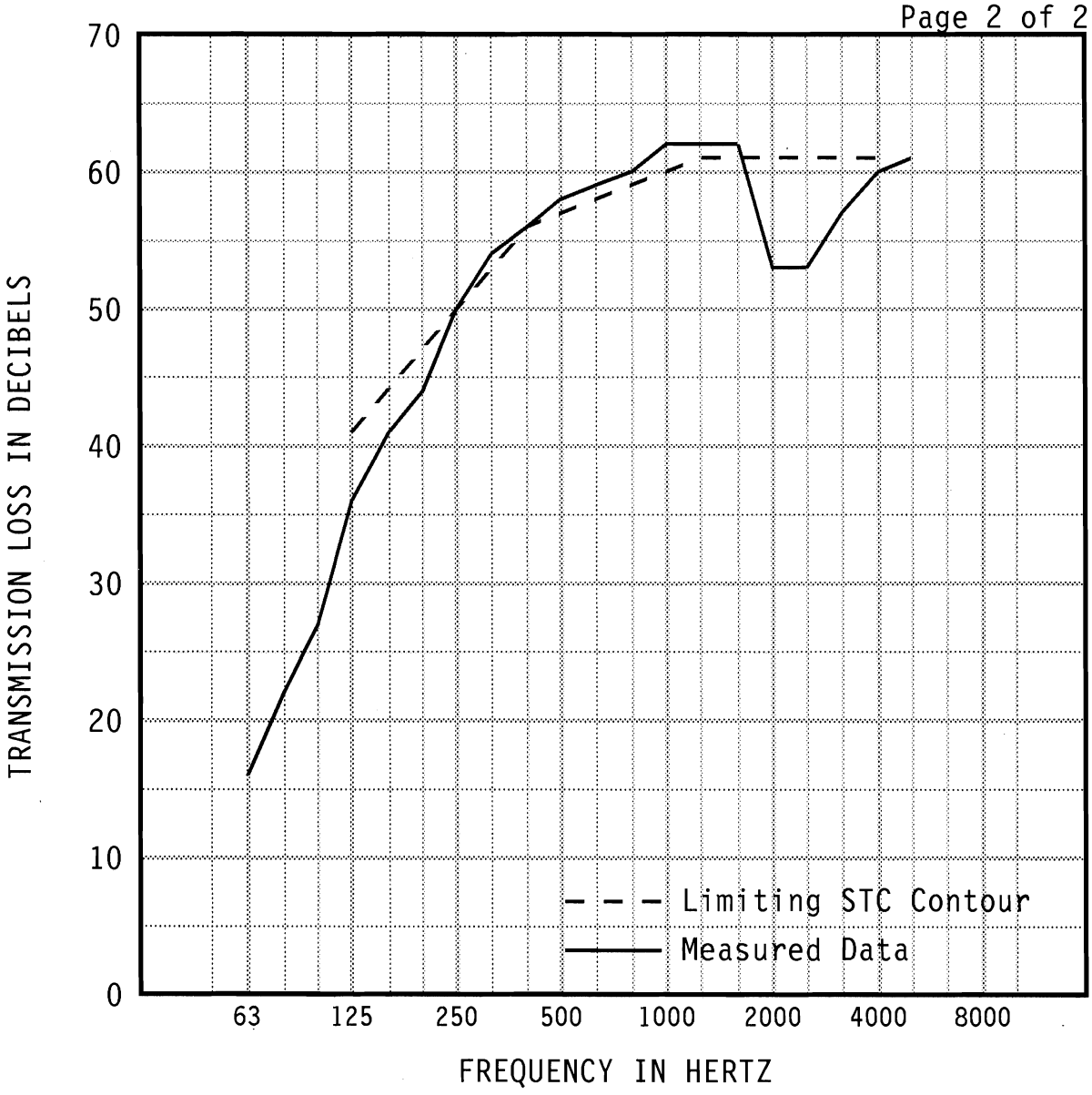


NVLAP LAB CODE 100256-0

# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL10-586






| 1/3 OCT BND CNTR FREQ | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 16 | 22 | 27 | 36 | 41 | 44 | 50 | *54 | 56 | 58 |
| 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 | | | | (5) | (3) | (3) | (0) | | (0) | |

| 1/3 OCT BND CNTR FREQ | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 59 | 60 | 62 | 62 | 62 | 53 | 53 | 57 | 60 | 61 |
| 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 | | | | | | (8) | (8) | (4) | (1) | |

| EWR | OITC |
|---|---|
| 57 | 39 |

* Minimum estimate of transmission loss. Measurement limited by filler wall. Actual TL will be equal to or greater than value reported.

Specimen Area: 64 sq.ft.
Temperature: 77.5 deg. F
Relative Humidity: 43 %
Test Date: 01 September 2010

| STC |
|---|
| 57 |
| (32) |



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# SOUND TRANSMISSION LOSS TEST REPORT NO. TL10-587

CLIENT: **Super Stud Building Products**
2960 Woodbridge Ave.
Edison, NJ 08837
TEST DATE: 1 September 2010


7 September 2010

## INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04$^{\varepsilon 1}$, *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 was a wall assembly constructed from metal studs and type X gypsum board. The studs were The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal and were spaced at 406 mm (16 inches) O.C. The head and sill tracks were also The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal. The frame was isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. Owens Corning R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On the source room side, one layer of 15.9 mm (5/8 inch) thick USG type X gypsum board was screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8 inch) drywall screws. On the receiving room side, two layers of 15.9 mm (5/8 inch) thick USG type X gypsum board were screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8) drywall screws on the first layer and 41.3 mm (1-5/8 inch) drywall screws on the second layer. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall and between layers. On both sides, the 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 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 140 mm (5-1/2 inches) thick. The overall weight of the assembly was estimated to be 214 kg (473 lbs) for a calculated surface density of 36.0 kg/m$^2$ (7.38 lbs./ft$^2$).

## 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 1332-90(2003) was OITC-36. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-53.

Respectfully submitted,
Western Electro-Acoustic Laboratory

Approved:

Gary E. Mange
Laboratory Director

Raul Martinez
Acoustical Test Technician

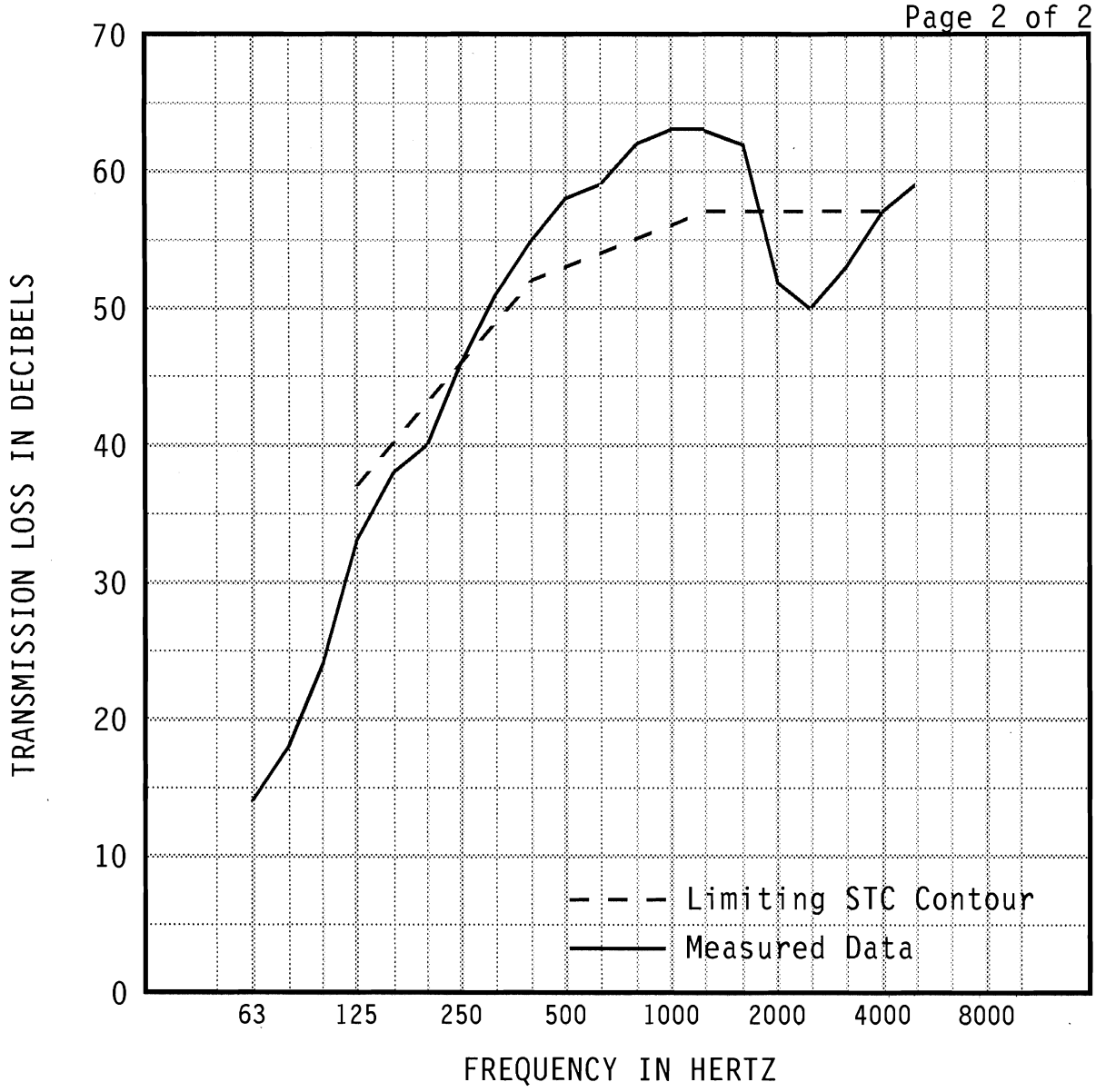


NVLAP LAB CODE 100256-0

# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL10-587






| 1/3 OCT BND CNTR FREQ | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 14 | 18 | 24 | 33 | 38 | 40 | 46 | 51 | 55 | 58 |
| 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 | | | | (4) | (2) | (3) | (0) | | | |

| 1/3 OCT BND CNTR FREQ | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 59 | 62 | 63 | 63 | 62 | 52 | 50 | 53 | 57 | 59 |
| 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 | | | | | | (5) | (7) | (4) | (0) | |

| EWR | OITC |
|---|---|
| 54 | 36 |

Specimen Area: 64 sq.ft.
Temperature: 77.7 deg. F
Relative Humidity: 43 %
Test Date: 01 September 2010

| STC |
|---|
| 53 |
| (25) |



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# SOUND TRANSMISSION LOSS TEST REPORT NO. TL10-588

CLIENT: **Super Stud Building Products**
2960 Woodbridge Ave.
Edison, NJ 08837
TEST DATE: 1 September 2010


7 September 2010

## INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04$^{\varepsilon 1}$, *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 was a wall assembly constructed from metal studs and type X gypsum board. The studs were The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal and were spaced at 406 mm (16 inches) O.C. The head and sill tracks were also The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal. The frame was isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. Owens Corning R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On both sides, one layer of 15.9 mm (5/8 inch) thick USG type X gypsum board was screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8 inch) drywall screws. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall. On both sides, the joints and perimeters were sealed with a bead of caulking and metal foil tape. All screw heads were covered with metal foil tape. The overall dimensions of the wall assembly 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 148 kg (327 lbs) for a calculated surface density of 24.9 kg/m$^2$ (5.10 lbs./ft$^2$).

## 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 1332-90(2003) was OITC-31. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-49.

Respectfully submitted,
Western Electro-Acoustic Laboratory

Approved:

Gary E. Mange
Laboratory Director

Raul Martinez
Acoustical Test Technician

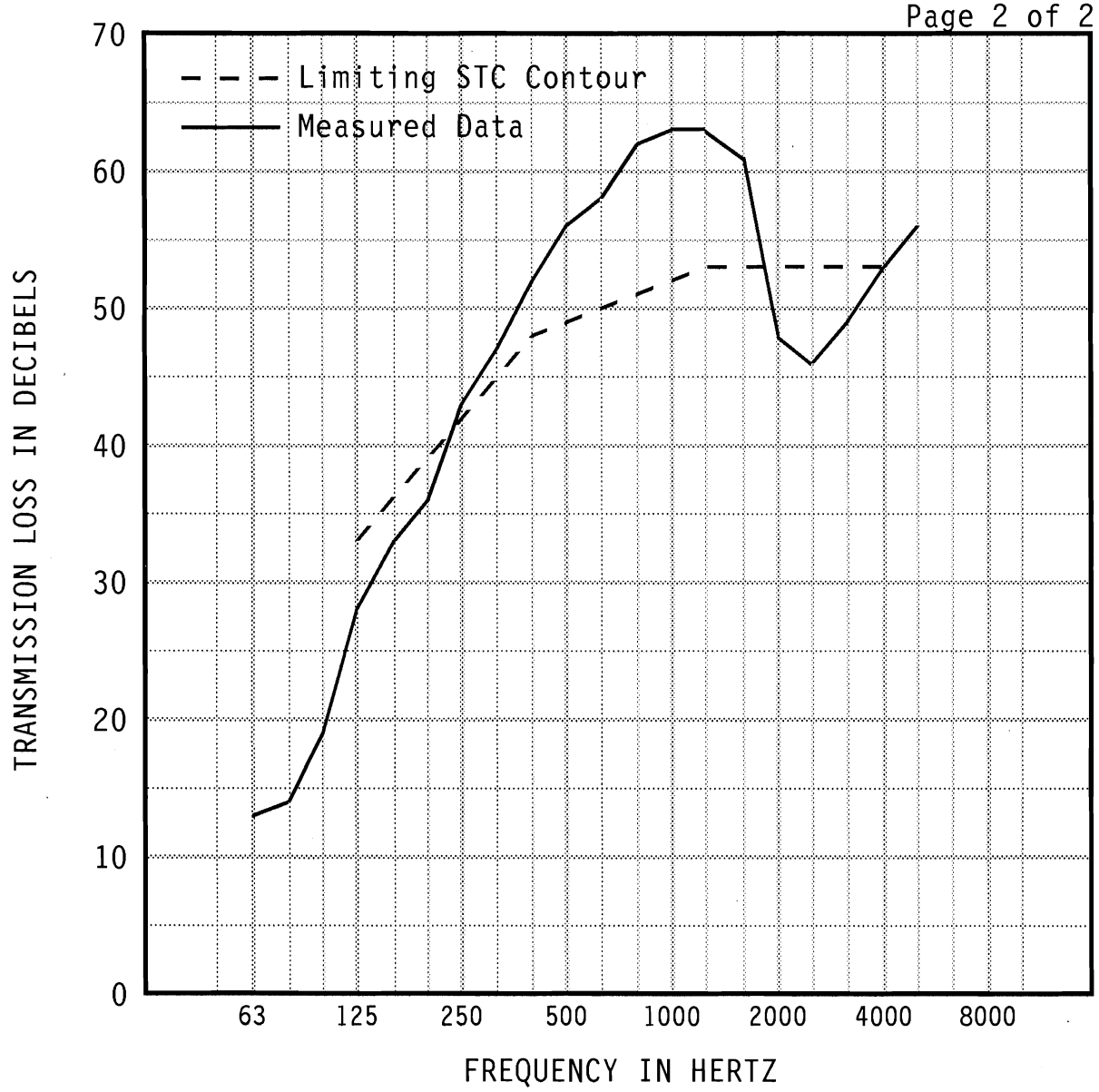


NVLAP LAB CODE 100256-0

# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL10-588






| 1/3 OCT BND CNTR FREQ | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 13 | 14 | 19 | 28 | 33 | 36 | 43 | 47 | 52 | 56 |
| 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 | | | | (5) | (3) | (3) | | | | |

| 1/3 OCT BND CNTR FREQ | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 58 | 62 | 63 | 63 | 61 | 48 | 46 | 49 | 53 | 56 |
| 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 | | | | | | (5) | (7) | (4) | (0) | |

| EWR | OITC |
|---|---|
| 50 | 31 |

Specimen Area: 64 sq.ft.
Temperature: 77.9 deg. F
Relative Humidity: 46 %
Test Date: 01 September 2010

| STC |
|---|
| 49 |
| (27) |



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# SOUND TRANSMISSION LOSS TEST REPORT NO. TL10-589

CLIENT: **Super Stud Building Products**
2960 Woodbridge Ave.
Edison, NJ 08837
TEST DATE: 1 September 2010


7 September 2010

## INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04$^{\varepsilon 1}$, *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 was a wall assembly constructed from metal studs and type X gypsum board. The studs were The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal and were spaced at 610 mm (24 inches) O.C. The head and sill tracks were also The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal. The frame was isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. Owens Corning R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On both sides, two layers of 15.9 mm (5/8 inch) thick USG type X gypsum board were screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8) drywall screws on the first layer and 41.3 mm (1-5/8 inch) drywall screws on the second layer. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall and between layers. On both sides, the joints and perimeters were sealed with a bead of caulking and metal foil tape. All screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 156 mm (6-1/8 inches) thick. The overall weight of the assembly was estimated to be 278 kg (615 lbs) for a calculated surface density of 46.9 kg/m$^2$ (9.60 lbs./ft$^2$).

## 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 1332-90(2003) was OITC-43. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-58.

Approved:

Gary E. Mange
Laboratory Director

Respectfully submitted,
Western Electro-Acoustic Laboratory

Raul Martinez
Acoustical Test Technician

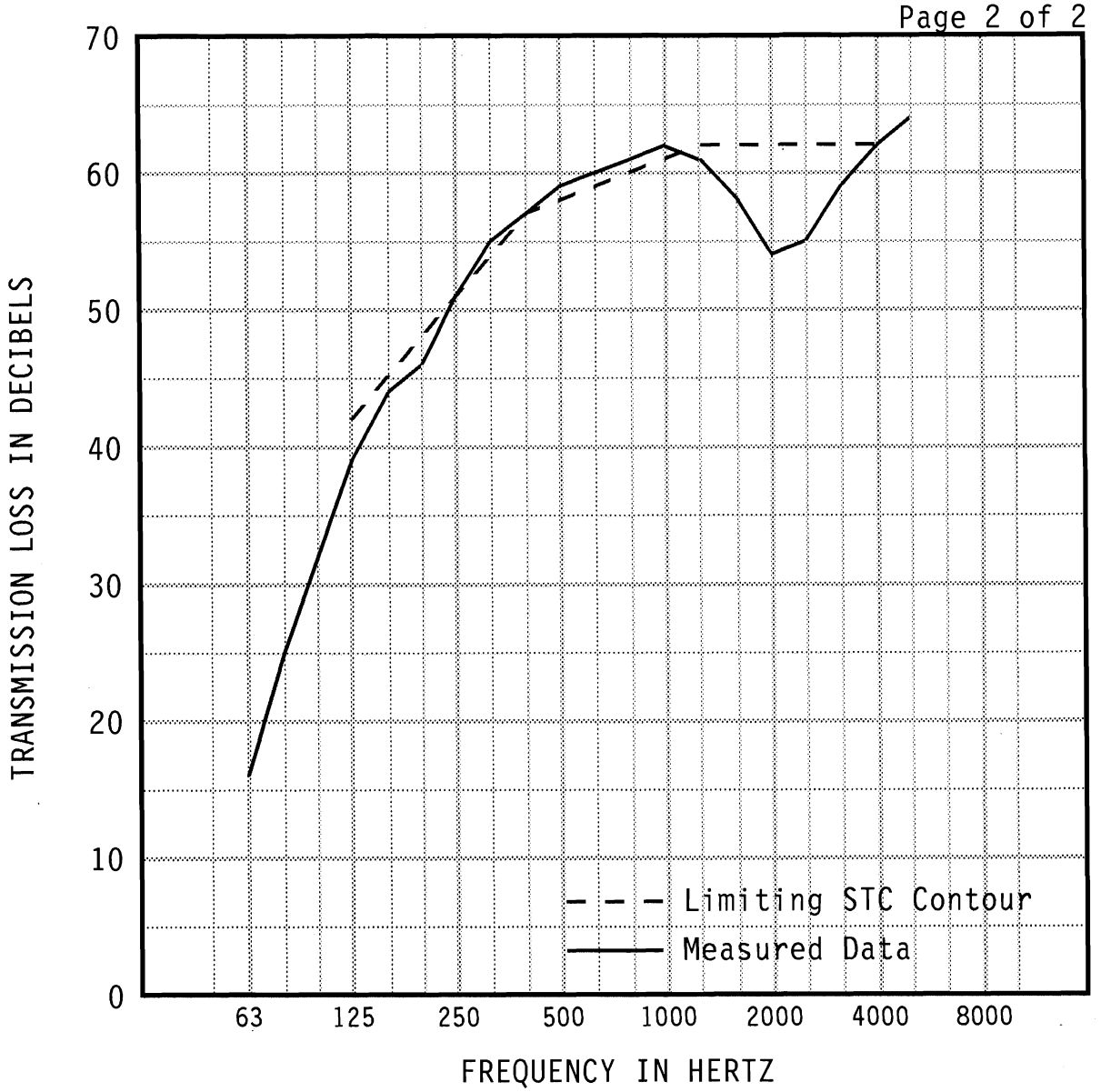


NVLAP LAB CODE 100256-0

# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL10-589






| 1/3 OCT BND CNTR FREQ | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 16 | 25 | 32 | 39 | 44 | 46 | 51 | *55 | *57 | 59 |
| 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 | | | | (3) | (1) | (2) | (0) | | (0) | |

| 1/3 OCT BND CNTR FREQ | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 60 | 61 | 62 | 61 | 58 | 54 | 55 | 59 | 62 | 64 |
| 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 | | | | (1) | (4) | (8) | (7) | (3) | (0) | |

| EWR | OITC |
|---|---|
| 59 | 43 |

* Minimum estimate of transmission loss. Measurement limited by filler wall. Actual TL will be equal to or greater than value reported.

Specimen Area: 64 sq.ft.
Temperature: 75 deg. F
Relative Humidity: 41 %
Test Date: 01 September 2010

| STC |
|---|
| 58 |
| (29) |

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# SOUND TRANSMISSION LOSS TEST REPORT NO. TL10-590

CLIENT: **Super Stud Building Products**
2960 Woodbridge Ave.
Edison, NJ 08837
TEST DATE: 2 September 2010


7 September 2010

## INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04$^{\varepsilon 1}$, *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 was a wall assembly constructed from metal studs and type X gypsum board. The studs were The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal and were spaced at 610 mm (24 inches) O.C. The head and sill tracks were also The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal. The frame was isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. Owens Corning R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On the source room side, one layer of 15.9 mm (5/8 inch) thick USG type X gypsum board was screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8 inch) drywall screws. On the receiving room side, two layers of 15.9 mm (5/8 inch) thick USG type X gypsum board were screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8) drywall screws on the first layer and 41.3 mm (1-5/8 inch) drywall screws on the second layer. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall and between layers. On both sides, the 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 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 140 mm (5-1/2 inches) thick. The overall weight of the assembly was estimated to be 213 kg (469 lbs) for a calculated surface density of 35.7 kg/m$^2$ (7.32 lbs./ft$^2$).

## 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 1332-90(2003) was OITC-37. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-56.

Respectfully submitted,
Western Electro-Acoustic Laboratory

Approved:

Gary E. Mange
Laboratory Director

Raul Martinez
Acoustical Test Technician

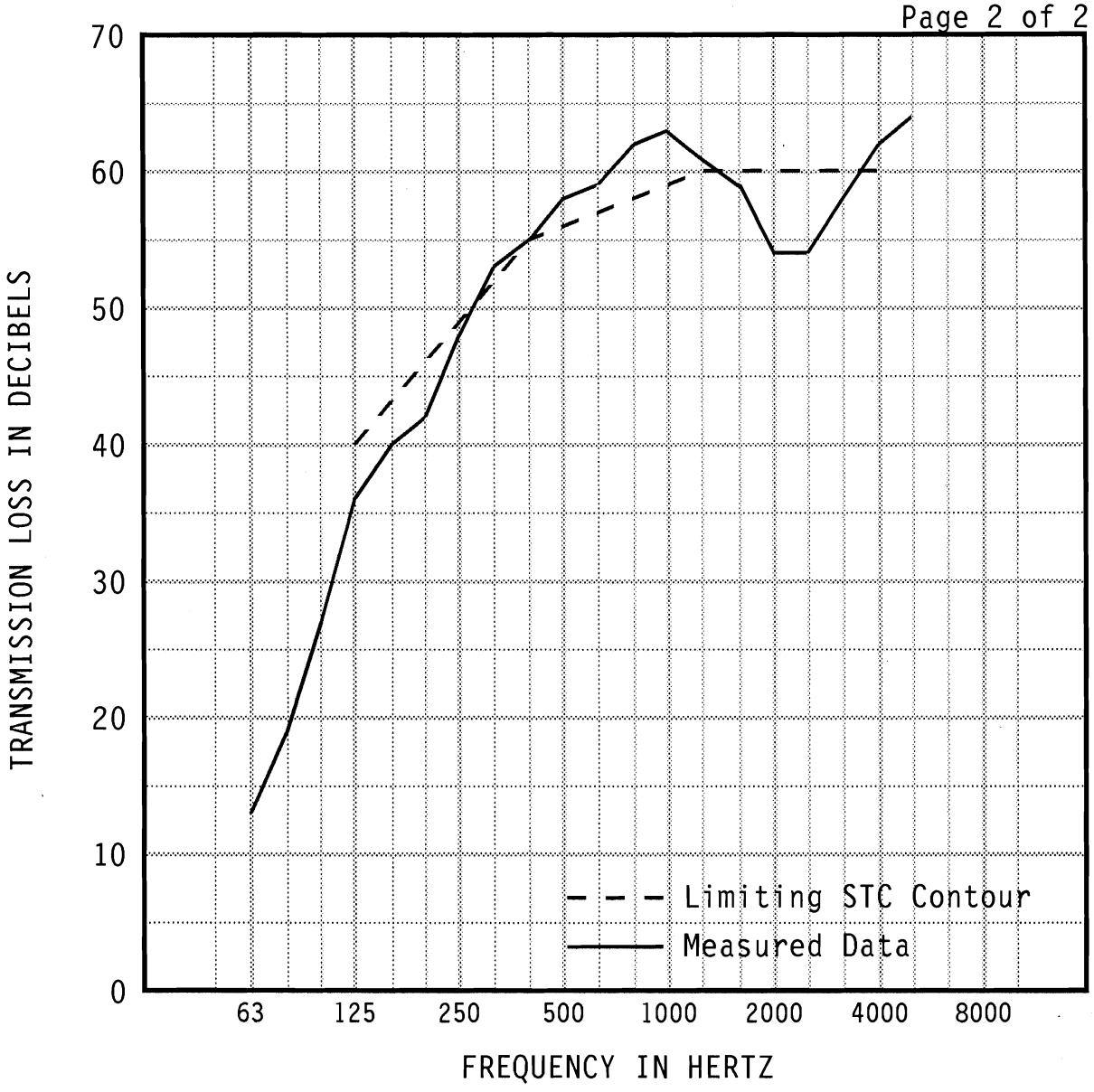


NVLAP LAB CODE 100256-0

# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL10-590






| 1/3 OCT BND CNTR FREQ | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 13 | 19 | 27 | 36 | 40 | 42 | 48 | 53 | 55 | 58 |
| 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 | | | | (4) | (3) | (4) | (1) | | (0) | |

| 1/3 OCT BND CNTR FREQ | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 59 | 62 | 63 | 61 | 59 | 54 | 54 | 58 | 62 | 64 |
| 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 | | | | | (1) | (6) | (6) | (2) | | |

| EWR | OITC |
|---|---|
| 57 | 37 |

Specimen Area: 64 sq.ft.
Temperature: 77.4 deg. F
Relative Humidity: 34 %
Test Date: 02 September 2010

| STC |
|---|
| 56 |
| (27) |

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# SOUND TRANSMISSION LOSS TEST REPORT NO. TL10-591

CLIENT: **Super Stud Building Products**
2960 Woodbridge Ave.
Edison, NJ 08837
TEST DATE: 2 September 2010


7 September 2010

## INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04$^{\varepsilon 1}$, *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 was a wall assembly constructed from metal studs and type X gypsum board. The studs were The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal and were spaced at 610 mm (24 inches) O.C. The head and sill tracks were also The EDGE™ 25 (15 mil) 92 mm (3-5/8 inch) metal. The frame was isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. Owens Corning R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On both sides, one layer of 15.9 mm (5/8 inch) thick USG type X gypsum board was screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 28.6 mm (1-1/8 inch) drywall screws. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall. On both sides, the joints and perimeters were sealed with a bead of caulking and metal foil tape. All screw heads were covered with metal foil tape. The overall dimensions of the wall assembly 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 146 kg (323 lbs) for a calculated surface density of 24.6 kg/m$^2$ (5.04 lbs./ft$^2$).

## 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 1332-90(2003) was OITC-31. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-51.

Respectfully submitted,
Western Electro-Acoustic Laboratory

Approved:

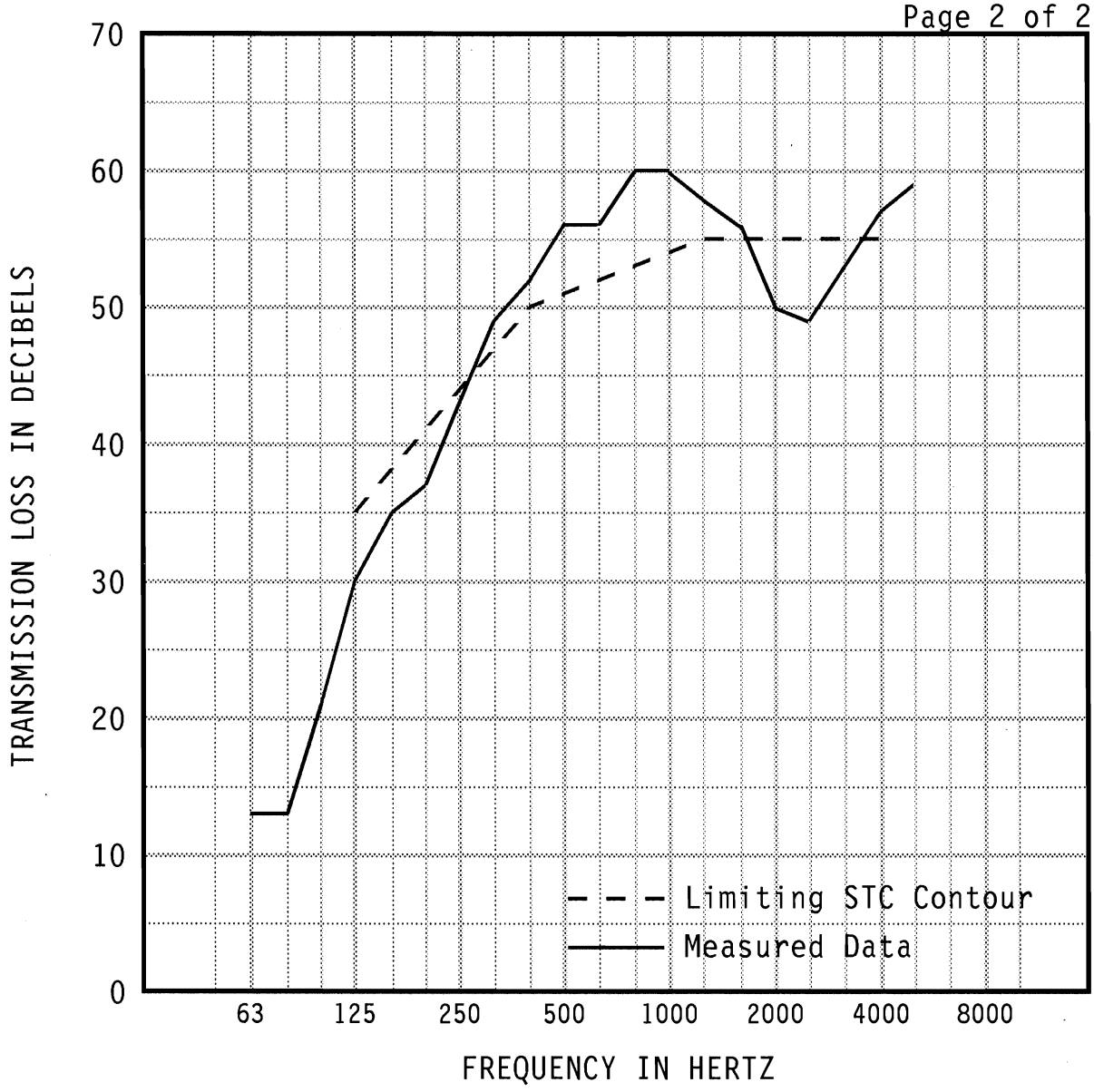
Gary E. Mange
Laboratory Director

Raul Martinez
Acoustical Test Technician

# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL10-591






| 1/3 OCT BND CNTR FREQ | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
|---|---|---|---|---|---|---|---|---|---|---|
| TL in dB | 13 | 13 | 21 | 30 | 35 | 37 | 43 | 49 | 52 | 56 |
| 95% Confidence in dB deficiencies | 1.42 | 1.92 | 2.07 | 1.47 (5) | 0.89 (3) | 0.76 (4) | 0.80 (1) | 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 | 56 | 60 | 60 | 58 | 56 | 50 | 49 | 53 | 57 | 59 |
| 95% Confidence in dB deficiencies | 0.29 | 0.44 | 0.38 | 0.39 | 0.36 | 0.56 (5) | 0.55 (6) | 0.31 (2) | 0.32 | 0.50 |

| EWR | OITC |
|---|---|
| 52 | 31 |

Specimen Area: 64 sq.ft.
Temperature: 78.1 deg. F
Relative Humidity: 35 %
Test Date: 02 September 2010

| STC |
|---|
| 51 (26) |