

REPORT NO. 3097026CRT-001

SOUND TRANSMISSION LOSS TESTS AND  
CLASSIFICATION OF FIBERGRATE  
SOUNDSCAPE SOUND BARRIER SYSTEMS

RENDERED TO

FIBERGRATE CORPORATION  
900 FM 205  
STEPHENVILLE, TX 76401

**INTRODUCTION**

This report gives the results of Sound Transmission Loss tests and the determination of the Sound Transmission Class on Fibergrate Soundscape barrier systems. The test specimens were selected and supplied by the client and were received at the laboratories on April 21, 2006. The test barriers appeared to be in a new, unused condition upon arrival.

**TEST METHOD**

The specimens were tested in accordance with the American Society for Testing and Materials designation ASTM E90-2004, "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions", and classified in accordance with the American Society for Testing and Materials designation ASTM E413-04, "Classification for Rating Sound Insulation." The barriers were also classified in accordance with ASTM Standard E1332-90 (Re-Approved 2003) entitled, "Standard Classification for Determination of Outdoor-Indoor Transmission Class.

**GENERAL**

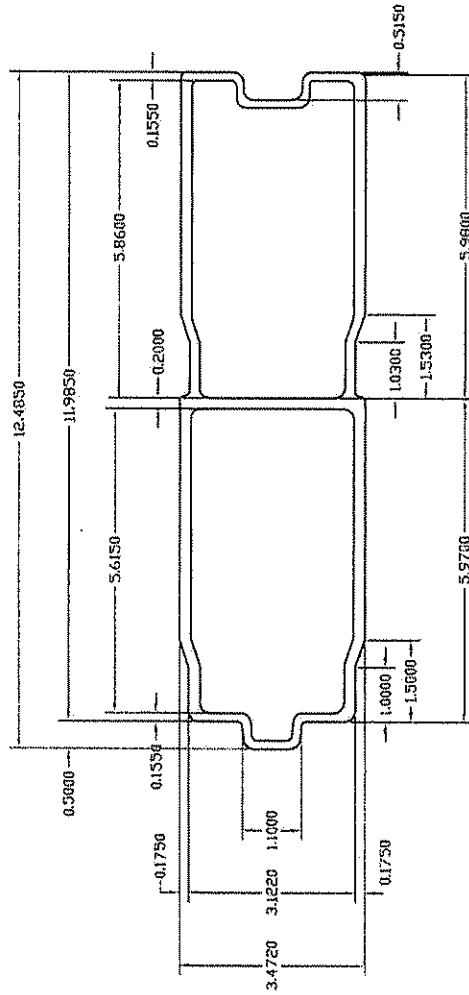
The sound-insulating property of a partition element is expressed in terms of the sound transmission loss. The procedure for determining this quantity is to mount (and perimeter seal) the test specimen as a partition between two reverberation rooms. Sound is introduced in one of the rooms (the source room) and measurements are made of the noise reduction between source room (10,000 cu. ft) and receiving room (16,640 cu. Ft.). The rooms are so arranged and constructed that the only significant sound transmission between them is through the test specimen.

The purpose of the Sound Transmission Class (STC) is to provide a single figure rating that can be used for comparing the sound-insulating properties of partition elements used for general building design purposes. The higher the rating (STC) the greater the sound insulating properties of the partition.

**DESCRIPTION OF TEST SPECIMENS**

The specimen consisted of a 96 inch wide by 96 inch high by 3.47 inch thick Fibergrate Soundscape Sound Barrier.

Sample #2 – Unfilled/UV-protective coating on both sides



Checked by: *qic*



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## RESULTS OF TEST

### Sound Transmission Loss in dB

<u>1/3 Octave Band Center Frequency Hz</u>	<u>Sample #2</u>
80	21
100	20
125	21
160	25
200	24
250	23
315	23
400	21
500	22
630	29
800	31
1000	31
1250	32
1600	33
2000	33
2500	33
3150	34
4000	35
5000	36
Sound Transmission Class	30
Outdoor-Indoor Transmission Class	26

## CONCLUSION

The test method employed for this test has no pass-fail criteria; therefore, the evaluation of the test results is left to the discretion of the client.

Dates of Tests: May 8, 2006 through May 15, 2006

Report Approved By:

James H. Nickelsen  
Senior Project Engineer  
Acoustical Testing

Report Reviewed By:

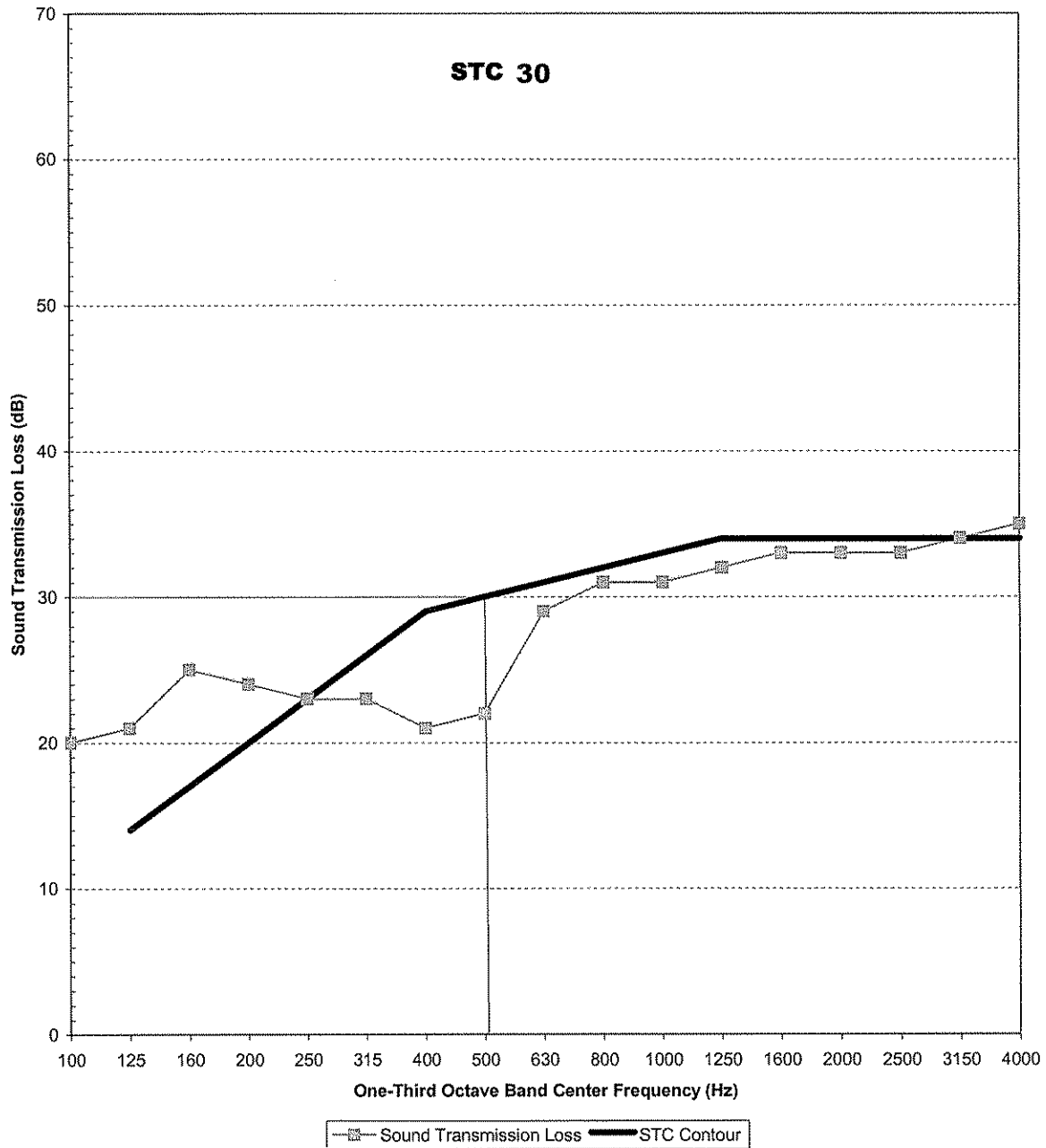
James R. Kline  
Engineer/Quality Supervisor  
Acoustical Testing

*For the complete test reports, please contact Custom Fiberglass Forms -  
designnteam@customfiberglassforms.com*

**RESULTS OF TESTS** – cont'd.

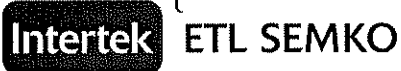
**Sample #2**

**Sound Transmission Loss**



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