Wide Angle of Lobby

LOBBY

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Immediately as I move into the lobby of the hall, a cool rush of air runs over me as my eyes adjust to the warmly dimmed lights. There is a silence in air, but the smallest voice echoes through the space and up to the highest of balconies. As people move and quietly chat, the lobby is a vessel that commands presence and solicits attention. There is no doubt that what lies beyond, my original destination, will be of the highest of caliber. As I move forward, each step is reverberated along the glass walls. I look up to see people moving along the upper balconies as they are ready to take their seat for the performance.

The auditorium is intended for performances in opera, symphony, and solo recitals or lectures. Therefore the space must be of the strictest nature in terms of isolating sound from the exterior of the auditorium. The main issue regaurding noise is that of the lobby. Data was gathered using a sound pressure meter in a lobby of a top-rated concert hall. The levels are as followed:

DATA SAMPLES:

31.5Hz	62.5	125	250	500
58.8dB	53.4	64.0	69.4	72.8

1000	2000	4000	8000	16k
69.6	65.8	57.4	45.1	34.9

The selection of the wall assembly is two-fold. One goal is to create a chamber-like ambiance in the lobby. The brick will be highly reflective for the lobby. This quality can also be used in the auditorium to scatter sound when used in an offset pattern. This assembly is also structure, and at preliminary calculations, meets the needs of construction.

The auditorium, due to its nature, will be designed to NC-10.

REVERBERATION TIMES

LOBBY

MATERIALS
- Brick
- Glass, heavy plate
- Wood Flooring
- Glass - exterior wall
- 1" hp vinyl-faced fiber glass ceiling panels

The lobby is designed to engage many senses. High reverb times allow a cathedral style effect which should silence the visitor is part of a cool and almost chilling experience that brings awe to the opera house

125Hz	250	500	1000	2000	4000
1.98sec.	2.10	2.61	2.13	1.89	1.53

Wall Section between Lobby & Auditorium

LOBBY - AUDITORIUM BARRIER

SECTION

Auditorium Interior with NC-15

12" Solid Core Brick Wall Assembly

Heavy Plate Glass

Lobby

Lobby Interior with NC-30

1/8" Glass
0.030" Lamination
1/8" Glass

4" Air Space

3/8" Glass

Wall Section between Lobby & Exterior

ENVIRONMENT - LOBBY BARRIER

SECTION

Exterior noise levels are critical from the street. It greatly effects the atmosphere of the lobby. There is also a four track train that is located 1000 feet from the site. This issue was not ignored but rather plugged into a spreadsheet prepared by Saflex (a manufacturer of glazing materials). The design sound level came to be 77dBA wich produced a NRc of 42 when using a Noise Criteria of 30. This design uses NC30 to avoid distractions and tend to the special client of an opera house.

This product produces and STC of 49 and an OITC of 45. The lobby is a gathering space for people pre- and post-concert. Attention should be given to the space and to social interaction while environmental noise is left virtually unnoticed. This assembly effectively accomplishes this task. Tests are from Riverbank Acoustical Laboratoies.

Transmission Loss at NC-10:

31.5Hz	62.5	125	250	500
-2.2dB	4.4	29.0	43.4	52.8

1000	2000	4000	8000	16k
55.6	53.8	48.4	38.1	n/a

Effective TL of 12" Brick Wall:

31.5Hz	62.5	125	250	500
n/a	n/a	45dB	45	53

1000	2000	4000	8000	16k
58	60	61	n/a	n/a