

<u>Rogelio Madan</u>, Chief of Community Planning & Sustainability Planning Department City of Miami Beach 1700 Convention Center Drive, 2nd Floor Miami Beach, Florida 33139

#### Reference: Shelborne Hotel – Miami Beach, Florida Lobby Bar Sound Propagation Outdoors - Acoustical Modeling Report

#### Dear Mr. Madan,

Electro-Media Design has been engaged by Claro Development to model the outdoor sound propagation from the Shelborne Hotel Lobby Bar in order to evaluate the impact on nearby properties. Based on the attained results, we offer the comments below.

#### **MODELING CONSIDERATIONS**

#### Noise Propagation Models

Noise propagation was modeled with iNoise Pro (2022.1) using the ISO 9613 (1/3 oct) calculation method since it allows for building surfaces to be model as emitting surfaces (which is not possible using the Harmonoise calculation method).

#### Hotel Lobby & Lobby Bar Envelope

The hotel entrance wall faces the residential building across the street (1800 Collins Ave) and provides the lowest Outdoor-Indoor Transmission Class (OITC) of the Lobby & Lobby Bar envelope.

For the purpose of this study, the curved 9/16" laminated glass wall was modeled as an emitting façade for which sound transmission loss, sound flanking paths, and sound radiation efficiency were considered.

### Lobby Bar Hours of Operation

For modeling purposes, we did not consider the regular opening hours for the Lobby Bar. Instead, we consider the unlikely worst-case scenario of 24-7 operation from which the Day Evening Night Sound Level (Lden) was calculated.

### Lobby Bar AV System Average Sound Levels

Based on preliminary AV system drawings and equipment selection information, an electro-acoustic model of the Lobby Bar speakers has shown that typical A-weighted sound levels in the 80-90 dB(A) range can be achieved with low distortion levels.

## **SIMULATION RESULTS**

Figure 1 provides the attained L<sub>den</sub> noise contours for the entire area using a 1m-by-1m grid. Likewise, Figure 2 provides the numerical values for a 5m-by-5m grid.

Figure 3 provides the modeled L<sub>den</sub> noise contours on the façade of the residential building across the road (1800 Collins Avenue) using a 5m-by-5m grid.

Figures 4 through 6 provide the L<sub>den</sub> noise contours (1m-by-1m grid) when exported to Google Earth.



Figure 1 – Lden noise contours (1m-by-1m grid)



Figure 2 – Detailed Lden noise contours (5m-by-5m grid)



Figure 3 – Lden noise contours on the façade of 1800 Collins Avenue



Figure 4 – Lden noise contours (1m-by-1m grid) exported to Google Earth – top view



Figure 5 – L<sub>den</sub> noise contours (1m-by-1m grid) – Google Earth view from The Raileigh Hotel



Figure 6 – L<sub>den</sub> noise contours (1m-by-1m grid) – Google Earth view from The Redbury Hotel

# **DISCUSSION OF RESULTS**

Computer models of the sound propagation from the Shelborne Lobby Bar indicate that the resulting L<sub>den</sub> at the opposite side of the street do not exceed 50dB when interior sound levels are kept below 90 dB(A), regardless of the time of the day.

For comparison purposes, sound levels impinging upon the façade of 1800 Collins Avenue are lower than the average traffic noise levels for that area.

Based on the attained results, emitted sound levels from the Shelborne Lobby Bar (limited to 90 dB(A) inside) are unlikely to cause complaints from residents of 1800 Collins Avenue. Respectfully submitted,

Dr

Luis-Eduardo Soares Principal Acoustical Consultant