EDWARD DUGGER + ASSOCIATES, P.A.
Consultants in Architectural Acoustics

Acoustic Study – ED+A 17957

December 11, 2017

Applicant:

Palace Bar LLC

1052 Ocean Drive
Miami Beach, Florida 33139

Prepared for:
Thomas R. Mooney – Director
City of Miami Beach Planning Department
1700 Convention Center Drive, Second Floor
Miami Beach, Florida 33139

Prepared by:
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Date: 11 December 2017

To: Thomas R. Mooney, Director
City of Miami Beach Planning Department
1700 Convention Center Drive, 2nd Floor
Miami Beach, Florida 33139

From: Sam Shroyer, ASA
Edward Dugger, FAIA ASA NCAC INCE

Re: **Acoustic Study – City of Miami Beach**
Palace
1052 Ocean Drive
Miami Beach, Florida 33139
ED+A 17941

Mr. Mooney,

The following report has been prepared by Edward Dugger + Associates, P.A. (ED+A) to provide an analysis of noise and potential acoustical impact at 1052 Ocean Drive in conjunction with the Palace Bar LLC's request for a Neighborhood Impact Establishment and an Open Air/Outdoor Entertainment Establishment. This study consisted of site visits to the Applicant's previous and future locations, review of multiple reports prepared by The Audio Bug, Inc., data analysis, and review of the project's design and operational plan.

Ultimately, ED+A believe that Palace will operate in compliance with the Code of the City of Miami Beach.

ED+A anticipate further discussion with the City of Miami Beach Planning Department and their peer-review acoustical consultant and welcome any questions or comments pertaining to this study.

Introduction

Palace Bar LLC (the Applicant) is seeking a Conditional Use Permit for a Neighborhood Impact Establishment and an Open Air/Outdoor Entertainment Establishment. The property will operate as a bar with entertainment indoors and on its front patio outside. The following pages detail ED+A's review of previous sound studies, analyses of acoustical measurements which were performed at various locations, and conclusions pertaining to any acoustical impacts which may be created by the proposed project.

Project Location

The proposed venue – Palace – is to be located in an existing building at 1052 Ocean Drive in Miami Beach, Florida. The project property and all immediately adjacent properties are zoned as Commercial – Mixed Use Entertainment. Several properties on Ocean Drive and Collins Avenue to the north and the south are designated as Hotel or Motel land uses.

Operation

Hours of operation will vary between the indoor and outdoor areas of the venue, but the outdoor entertainment component will not operate beyond 12:00 a.m. each night. The same entertainment music will be played outside that is played indoors, though the levels produced in each area can be controlled independently of one another.

The outdoor entertainment is characterized by short and intermittent shows which last approximately three to five minutes. The live performances consist of dancing and "lip-syncing" to recorded music, not musical instruments. Therefore, the loudspeakers, which will remain in a single location in excess of 20-ft. from the eastern property boundary, are the determining factor of compliance with the criteria of the City of Miami Beach's Noise Ordinance. Compliance will not be difficult to achieve as the generated sound levels can simply be controlled by the management.

There is no outdoor bar counter; servers will cater to patrons whom are seated in the front patio area.

Previous Studies

ED+A has been provided with two reports prepared by The Audio Bug, Inc. for the Applicant at a previous location (1200 Ocean Drive) and one report prepared for the prior tenant at 1052 Ocean Drive (Amarillo Restaurant).

1200 Ocean Drive – November 8, 2008

This report provided recommendations to the Applicant to ensure that the venue would operate in compliance with the City of Miami Beach's Noise Ordinance, ultimately stating that "music played at The Palace Bar between shows, especially after 11:00 p.m., should be reduced in level by at least 6 to 8 decibels. This simple action will minimize the impact of The Palace Bar on neighboring facilities and eliminate code enforcement violations." The report also recommended that a sound monitoring system be utilized to monitor sound levels at the venue.

1200 Ocean Drive – February 23, 2009

This report detailed observations made by The Audio Bug, Inc. during an inspection of the venue's audio system as required by a Conditional Use Permit. It was concluded that "the sound system and method of operation meet the specified conditions set forth in [the] report submitted November 8, 2008." Additionally, this report states that the Conditional Use Permit required that sound control systems be accessible by management only.

1052 Ocean Drive – April 20, 2015

This study was prepared for Amarillo Restaurant "to enable the Restaurant to provide outdoor live entertainment for dining patrons," concluding that "the introduction of live entertainment at Amarillo Restaurant will have no additional noise impact on neighboring properties" and that "this change in use will have no adverse impact nor will it present any violation of the City of Miami Beach's Noise Ordinance" as "music from the venue was not audible at any point of observation outside the property, including the second and third floor walkways around the Congress Hotel units or in the alley west of the venue."

The Audio Bug, Inc. measured an average equivalent-continuous sound pressure level (L_{eq}) of 84 dBA along Ocean Drive, stating that the music would not interfere with conversational levels and that the sound "was well contained to within the restaurant's perimeter, blending into that of adjacent properties along the sidewalk." The awning structure that was present during these measurements is to remain on the property.

Methodology

Long-term acoustical measurements were performed on a balcony above Palace's previous location at 1200 Ocean Drive from Friday, March 31 to Monday, April 3, 2017 and nearby 1060 Ocean Drive from Wednesday, September 27 to Monday, October 2, 2017. In both cases, the measurement system logged A-weighted and C-weighted one-minute L_{eq} for the measurement durations.

Hourly and daily L_{eq} (L_{24h}) were calculated from these smaller data to ultimately represent the measurement period for each day, though the first and last days of each measurement did not include a full twenty-four-hour measurement. Day-night average sound pressure levels (DNL or L_{dn}) were also calculated for each of the six days. L_{dn} is also a time-average value, but a 10 dB penalty is applied to sound pressure levels measured during nighttime periods – 10:00 pm to 7:00 am – to account for the general public's increased sensitivity to sound during these hours.

Discussion

Noise-Sensitive Receivers

The nearest noise-sensitive receivers would be hotels in the area, many of which feature outdoor entertainment and dining on their own properties. Therefore, outdoor entertainment at Palace would not be expected to impact these establishments.

Audio System

As mentioned previously, the volume of indoor and outdoor loudspeakers will be controlled separately though the same music will be played in each area. The audio system will also feature a digital signal processor capable of limiting the output of the loudspeakers. The Audio Bug, Inc.'s studies have indicated that a limit was established and adhered to at the former Palace location.

The indoor speakers will not be directed toward the building's exterior and will not have any substantial effect on the sound levels in the outdoor patio area. Outdoor speakers will be near the bar entrance, which was measured to be 27-ft. from the eastern property line. ED+A estimate that the speakers will be located between 23-ft. and 25-ft. from the property line, meeting the criteria for outdoor entertainment speakers.

Data Analysis

Long-term acoustical measurements have informed ED+A of sound pressure levels associated with Palace's operations as well as the existing ambient sound environment

near its location at 1052 Ocean Drive. Data measured at both locations have been included in numerical and graphical form in the Appendix of this document.

Further north of the subject property at 1060 Ocean Drive, ED+A consistently measured L_{eq} of 65 to 72 dBA. These levels are representative of the existing ambient sound environment along this stretch of Ocean Drive.

Sound levels measured at the previous Palace location were similar to those measured by The Audio Bug, Inc. in 2009, ranging from the upper-70's to lower-80's. These levels declined substantially after 11:00 p.m. on two of the three nights which were measured. Coincidentally, these levels are comparable to and mostly lower than the 84 dBA measured at Amarillo Restaurant in 2015 – a level which was determined by The Audio Bug, Inc. to be compliant with the City of Miami Beach's Noise Ordinance. It should be noted that The Audio Bug, Inc. had stated that crowd noise is a significant contributor to these measured sound levels and they are not solely resultant of entertainment music.

Ultimately, ED+A's measurements at these locations have confirmed that the findings and conclusions of The Audio Bug, Inc. remain relevant to the Applicant's operations at its new location.

Conclusion

Review of the proposed 1052 Ocean Drive project, its design and operational plan, and review of multiple acoustical studies and sets of measurement data have enabled ED+A to state that the entertainment operations presented at Palace will comply with the requirements of the Code of the City of Miami Beach Article IV – Noise as the sound output can be controlled by management and the loudspeakers are located beneath an awning structure at a substantial distance from the property line. Indoor sound will be controlled independently of outdoor sound and is expected to be contained within the building structure. Furthermore, Palace's operational plan has proved to be compliant in the past.

The findings of The Audio Bug, Inc., documented in three separate acoustical studies, also support ED+A's conclusion.

APPENDIX

1200 Ocean Drive – March 31, 2017 to April 3, 2017

Sound Pressure Level [dBA]	Fri 3/31/2017	Sat 4/1/2017	Sun 4/2/2017	Mon 4/3/2017	Average
$L_{0000 - 0100}$		68	75	67	70
$L_{0100 - 0200}$		68	68	68	68
$L_{0200 - 0300}$		64	67	62	64
$L_{0300 - 0400}$		62	64	61	62
$L_{0400 - 0500}$		63	61	60	61
$L_{0500 - 0600}$		60	62	60	61
$L_{0600 - 0700}$		64	63	64	64
$L_{0700 - 0800}$		62	65	65	64
$L_{0800 - 0900}$		62	60	61	61
$L_{0900 - 1000}$		66	62	66	65
$L_{1000 - 1100}$		66	65	68	66
$L_{1100 - 1200}$		69	69	65	68
$L_{1200 - 1300}$		81	81	65	76
$L_{1300 - 1400}$		85	82		84
$L_{1400 - 1500}$		79	81		80
$L_{1500 - 1600}$		80	82		81
$L_{1600 - 1700}$		82	82		82
$L_{1700 - 1800}$		77	79		78
$L_{1800 - 1900}$	77	81	82		80
$L_{1900 - 2000}$	78	83	84		82
$L_{2000 - 2100}$	79	81	84		81
$L_{2100 - 2200}$	78	79	83		80
$L_{2200 - 2300}$	81	83	81		82
$L_{2300 - 2400}$	71	81	76		76
L_{24h}	78	79	79	65	75
L_d	78	80	80	65	76
L_n	79	76	74	64	73
L_{dn}	85	83	82	72	81
L_{min}	71	60	60	60	63
L_{max}	81	85	84	68	80

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1060 Ocean Drive – September 27, 2017 to October 2, 2017

Sound Pressure Level	Wed 9/27/2017	Thurs 9/28/2017	Fri 9/29/2017	Sat 9/30/2017	Sun 10/1/2017	Mon 10/2/2017	Average
$L_{0000-0100}$		65	67	69	72	67	68
$L_{0100-0200}$		65	62	68	72	67	67
$L_{0200-0300}$		59	59	71	67	63	64
$L_{0300-0400}$		60	57	60	63	59	60
$L_{0400-0500}$		57	59	60	62	60	59
$L_{0500-0600}$		55	56	56	59	58	57
$L_{0600-0700}$		60	61	67	64	68	64
$L_{0700-0800}$		69	67	70	68	69	68
$L_{0800-0900}$		62	62	63	62	62	62
$L_{0900-1000}$		62	63	64	63	64	63
$L_{1000-1100}$		64	63	65	65	65	64
$L_{1100-1200}$		64	68	65	65	66	65
$L_{1200-1300}$		64	66	67	67	65	66
$L_{1300-1400}$		64	67	66	65	65	65
$L_{1400-1500}$		67	65	67	66	65	66
$L_{1500-1600}$	67	67	66	72	67		68
$L_{1600-1700}$	65	67	68	68	67		67
$L_{1700-1800}$	64	67	67	70	70		67
$L_{1800-1900}$	64	67	66	71	70		68
$L_{1900-2000}$	63	69	66	69	69		67
$L_{2000-2100}$	64	70	66	68	68		67
$L_{2100-2200}$	65	69	67	68	68		67
$L_{2200-2300}$	66	67	67	69	67		67
$L_{2300-2400}$	67	67	67	70	69		68
L_{24h}	65	66	65	68	67	65	66
L_d	65	67	66	68	67	66	66
L_n	67	64	63	68	68	65	66
L_{dn}	71	71	70	74	74	72	73
L_{min}	63	55	56	56	59	58	57
L_{max}	67	70	68	72	72	69	68

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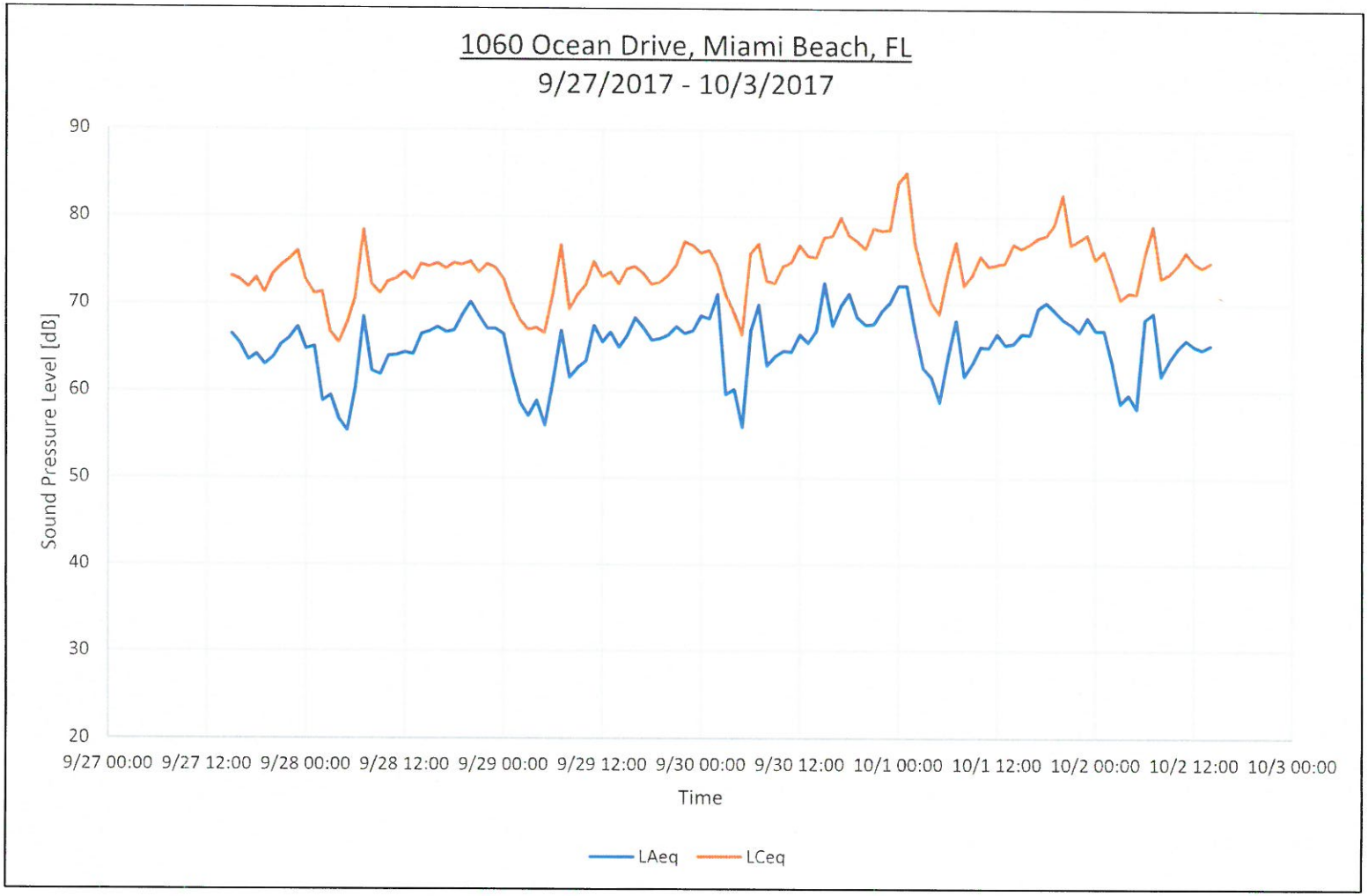

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Three-way bi-amped sculpted loudspeaker array

Key Features

- Visually striking appearance for style-led environments
- Exceptionally balanced waveform transmission
- Fibreglass Kevlar composite construction
- Standard red finish, optional custom colours
- Integrated flying and mounting system
- Optional floor stand or flying bracket
- Internal electronic control prevents overdriving

Applications

HIGH IMPACT NIGHTCLUB VIP ROOM

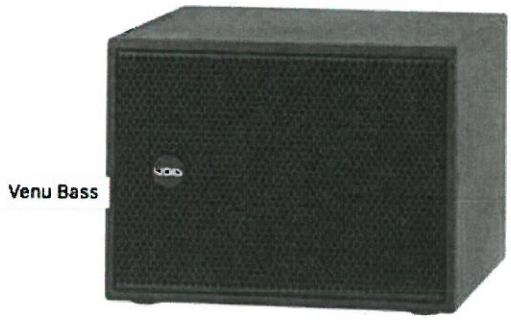
INDOOR AND OUTDOOR DANCE EVENTS

BAR, CLUB, LOUNGE LIVE MUSIC VENUES

Overview Specifications Image Gallery Documents

Specifications

Frequency Response	140Hz - 20kHz ±3dB
Efficiency	LF: 106dB 1w/1m, HMF: 108dB 1w/1m
Crossover Points	LF: 140Hz and 600Hz, HMF: 600Hz - Passive 1.7kHz
Impedance	LF: 8 ohms, HMF: 8 ohms
Power Handling	LF: 500 Watts RMS, HMF: 250 Watts RMS
Maximum Output	134dB cont, 138dB peak
Driver Configuration	1 x 12" LF, 1 x 8" MF, 1 x 1.5" HF compression driver
Dispersion	60°H x 50°V
Protection	Internal Electronic Control
Connectors	2 x 4-pole speakON™ NL4
Height	600mm (23.6")
Width	850mm (33.5")
Depth	760mm (29.9")
Weight	35.4kg (77.9lbs)
Enclosure	Fibreglass Kevlar composite
Rigging	Integral mounting system
Colour	Custom colours available



Venu Bass

Reflex-loaded 12" low frequency loudspeaker

Key Features

- Compact and unobtrusive appearance
- 1 x 12" low frequency driver
- Recessed connector panel
- Textured polyurethane finish, optional custom colours
- Weather-resistant perforated steel grille

Applications

BAR, CLUB, LOUNGE HOTEL, RESTAURANT

Overview Specifications Image Gallery Documents

Specifications

Frequency Response	34Hz - 160Hz ±3dB
Efficiency	99dB 1w/1m
Crossover Point	80Hz - 160Hz active
Impedance	8 ohms
Power Handling	600 Watts RMS
Maximum Output	123dB cont, 126dB peak
Driver Configuration	1 x 12" LF
Connectors	1 x Phoenix with link out
Height	370mm (14.6")
Width	430mm (16.9")
Depth	490mm (19.3")
Weight	24kg (52.9lbs)
Enclosure	15mm birch plywood
Finish	Textured polyurethane
Grille	Weather-resistant perforated steel with foam filter

Specifications and appearance are subject to change without notice