Appendix F

Noise Calculation Worksheets

citizenM Hollywood & Vine Project EIR

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Ambient Noise Measurements

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R1
Date: 10/31/2016

Time	Overload	Leq	Lmax	L10	L90
10:34:10 AM	No	59	62.7	60.6	57.4
10:35:10 AM	No	59.6	66.4	61.5	57.5
10:36:10 AM	No	64.2	71.5	69	58.4
10:37:10 AM	No	60.5	66	63.2	56.5
10:38:10 AM	No	59.1	67.6	60.6	56.2
10:39:10 AM	No	58.7	61.2	59.9	56.9
10:40:10 AM	No	58.6	63.5	61.2	56.1
10:41:10 AM	No	61	66.7	62.7	58.4
10:42:10 AM	No	60.2	63	61.7	58.3
10:43:10 AM	No	61.1	65.7	62.4	59.1
10:44:10 AM	No	60.6	65.1	62.7	58.8
10:45:10 AM	No	59.1	63.5	60.4	56.9
10:46:10 AM	No	60.4	63.8	62	58.4
10:47:10 AM	No	61.2	63.9	62.7	59.6
10:48:10 AM	No	61.5	66.2	63.7	59.3
		60.6			

Time	Overload	Leq	Lmax	L10	L90
10:12:33 PM	No	58.7	62.3	59.7	57.7
10:13:33 PM	No	58.9	61.7	60.7	56.6
10:14:33 PM	No	58.9	61.5	59.8	58.1
10:15:33 PM	No	58	59.6	58.8	57.4
10:16:33 PM	No	57.6	59.8	58.4	56.8
10:17:33 PM	No	58	62.5	60	56.4
10:18:33 PM	No	58	60.2	58.8	57.2
10:19:33 PM	No	58.7	60.7	59.8	57.7
10:20:33 PM	No	58	59.8	58.8	57.2
10:21:33 PM	No	59.2	65.2	61.1	57.6
10:22:33 PM	No	58.1	62.6	59.4	57
10:23:33 PM	No	59	62.1	60.4	57.2
10:24:33 PM	No	57.8	59.3	58.6	56.7
10:25:33 PM	No	58.4	61.7	59.6	57.5
10:26:33 PM	No	58.5	61	59.7	57.5
		58.4			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R2
Date: 10/31/2016

Time	Overload	Leq	Lmax	L10	L90
10:54:27 AM	No	59.7	63.6	60.7	58.5
10:55:27 AM	No	59.9	62.5	61.8	58.5
10:56:27 AM	No	60.7	65.1	63.3	56.9
10:57:27 AM	No	59.9	65	62	58.2
10:58:27 AM	No	59.8	64.6	61.6	58
10:59:27 AM	No	60.8	64.1	62.5	58.3
11:00:27 AM	No	60.4	64.4	62.5	58.6
11:01:27 AM	No	58.4	60.9	59.3	57.7
11:02:27 AM	No	58.7	61.8	60.9	57.5
11:03:27 AM	No	59.4	63	60.6	58.2
11:04:27 AM	No	60.5	68.9	61.9	57.5
11:05:27 AM	No	61.2	77.1	62.4	56.1
11:06:27 AM	No	61.4	75.6	62.3	56.5
11:07:27 AM	No	59.2	63.4	61.1	57.3
11:08:27 AM	No	65.6	71.9	69.8	60
		60.8			

Time	Overload	Leq	Lmax	L10	L90
10:48:20 PM	No	57.6	59.9	59.1	56.5
10:49:20 PM	No	58.4	62.3	59.4	57.3
10:50:20 PM	No	57.5	63.4	58.1	56.6
10:51:20 PM	No	59.3	63.5	61.1	58.1
10:52:20 PM	No	58	59.9	58.6	57.3
10:53:20 PM	No	57.2	58.8	58	56.3
10:54:20 PM	No	59.1	68	60.4	56.1
10:55:20 PM	No	57.5	60	58.6	56.3
10:56:20 PM	No	58.7	60.9	59.7	57.6
10:57:20 PM	No	59.4	63.9	61.1	57.3
10:58:20 PM	No	59.4	67	62	56.9
10:59:20 PM	No	57.9	63.2	58.6	57
11:00:20 PM	No	58.6	61.8	59.5	57.3
11:01:20 PM	No	60.4	67.8	62.5	58
11:02:20 PM	No	58.5	61.7	59.4	57.7
		58.6			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R3
Date: 10/31/2016

Time	Overload	Leq	Lmax	L10	L90
11:23:27 AM	No	69.4	73.9	72.1	62
11:24:27 AM	No	71.4	79.5	75.8	65
11:25:27 AM	No	67.8	71.5	70.3	64
11:26:27 AM	No	67	72.3	69.2	62.7
11:27:27 AM	No	65.9	71.3	69.4	62.3
11:28:27 AM	No	68.1	73.1	70.8	63.5
11:29:27 AM	No	69.3	75.7	72.6	64.2
11:30:27 AM	No	72.2	82.5	75.4	66.7
11:31:27 AM	No	68.8	73.5	71.2	63.3
11:32:27 AM	No	70.2	76.4	73.4	63.6
11:33:27 AM	No	70.3	75.9	74.1	65.4
11:34:27 AM	No	66.9	72.6	69.9	63.7
11:35:27 AM	No	67.7	71.4	70.3	64.8
11:36:27 AM	No	72.5	81.4	78.2	64.1
11:37:27 AM	No	68.6	77.6	72	64.7
		69.5			

Time	Overload	Leq	Lmax	L10	L90
11:09:06 PM	No	68.9	78	70.3	66.4
11:10:06 PM	No	69.2	73.3	70.1	67.9
11:11:06 PM	No	66.5	69.2	67.8	65.5
11:12:06 PM	No	70.4	83	71.1	67.1
11:13:06 PM	No	68.6	71.7	70	67.2
11:14:06 PM	No	71.3	74.5	72.8	70
11:15:06 PM	No	68	73.8	70.8	65.3
11:16:06 PM	No	69.1	76.3	70.9	66
11:17:06 PM	No	66.7	70.9	68	65.5
11:18:06 PM	No	64.9	71.6	66.6	62.6
11:19:06 PM	No	65.4	69.2	67.2	63.3
11:20:06 PM	No	65.9	69.6	67.2	63.7
11:21:06 PM	No	67.1	74.7	68.5	65
11:22:06 PM	No	67.2	73.4	69.5	63.9
11:23:06 PM	No	68.5	80.2	71	64.3
		68.2			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R4
Date: 10/31/2016

Time	Overload	Leq	Lmax	L10	L90
10:15:22 AM	No	68.5	73.5	72.4	60
10:16:22 AM	No	68	73.4	72.1	59.9
10:17:22 AM	No	67.6	72.4	70.9	58.9
10:18:22 AM	No	62.1	66	64.9	58.5
10:19:22 AM	No	67.5	73.3	71.3	62.6
10:20:22 AM	No	63.9	72.8	68.3	59.8
10:21:22 AM	No	68.1	78.9	71.9	57.4
10:22:22 AM	No	63.2	68.5	66.6	58.6
10:23:22 AM	No	66.2	73.7	70.4	59.8
10:24:22 AM	No	67.4	73.6	71	58.5
10:25:22 AM	No	65	70.3	68.3	59.6
10:26:22 AM	No	67	73.5	71.4	60.3
10:27:22 AM	No	65.2	70.5	68	60.3
10:28:22 AM	No	68.9	78.3	71.8	61.3
10:29:22 AM	No	68.2	74.2	71.5	59
		66.9			

Time	Overload	Leq	Lmax	L10	L90
10:30:13 PM	No	66.7	69.5	68.2	65.2
10:31:13 PM	No	70.4	74.6	73.8	65.6
10:32:13 PM	No	67	70.5	68.7	65.1
10:33:13 PM	No	67.9	74.2	70.1	64.1
10:34:13 PM	No	65.6	70	67.5	63.7
10:35:13 PM	No	64.9	67.1	65.7	63.8
10:36:13 PM	No	69.2	78.2	72.1	64.4
10:37:13 PM	No	67.4	72.7	69.5	64.5
10:38:13 PM	No	66.9	74.5	69.4	63.9
10:39:13 PM	No	71.9	82	75.7	64.9
10:40:13 PM	No	65.4	69	66.8	64.1
10:41:13 PM	No	66.5	69.6	68.5	64.5
10:42:13 PM	No	74.5	88.1	74.9	63.9
10:43:13 PM	No	66.5	71.4	68.7	64.5
10:44:13 PM	No	67.8	76.7	69.3	65.8
		68.8			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R5
Date: 10/31/2016

Time	Overload	Leq	Lmax	L10	L90
12:05:58 PM	No	75.1	85.3	79.6	64.5
12:06:58 PM	No	67.3	72.3	70.1	64.4
12:07:58 PM	No	69.8	76.9	73.4	65.5
12:08:58 PM	No	72	83.6	74.5	63.8
12:09:58 PM	No	67.7	74.2	70.5	64.7
12:10:58 PM	No	77.8	86.4	82.8	65.5
12:11:58 PM	No	72.6	76.7	74.4	67.7
12:12:58 PM	No	72.2	81.1	77.3	63.3
12:13:58 PM	No	69.6	76.9	73.4	61.9
12:14:58 PM	No	70	80	73.7	61.6
12:15:58 PM	No	67.2	72.3	70.2	64.2
12:16:58 PM	No	69.7	74.9	72.6	66.2
12:17:58 PM	No	71.6	78.9	75	66.8
12:18:58 PM	No	68.8	79.8	72.4	64.7
12:19:58 PM	No	72.5	80.2	76.5	65.2
		72			

Time	Overload	Leq	Lmax	L10	L90
11:48:22 PM	No	66	73.7	69.4	60.2
11:49:22 PM	No	67.7	73.7	71.5	60.2
11:50:22 PM	No	69	74.7	71.5	65.1
11:51:22 PM	No	70	74.9	73	62.1
11:52:22 PM	No	67.7	74.7	69.6	62.9
11:53:22 PM	No	65.8	71.4	69.3	61.8
11:54:22 PM	No	66.4	73.9	70.3	61.5
11:55:22 PM	No	68.8	75.3	72.1	63.3
11:56:22 PM	No	66.3	75.3	68.9	61.3
11:57:22 PM	No	75.3	83.4	80.9	64.5
11:58:22 PM	No	64.5	68.9	67	61.8
11:59:22 PM	No	67	72.6	69.9	62.4
12:00:22 AM	No	67.9	78.2	70.9	61.2
12:01:22 AM	No	64.3	68.8	67.8	59.7
12:02:22 AM	No	65.5	72.1	69.9	60.1
		68.6			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R6
Date: 10/31/2016

Time	Overload	Leq	Lmax	L10	L90
11:45:06 AM	No	68.7	74.1	71.1	66
11:46:06 AM	No	71.6	80.2	74	66.8
11:47:06 AM	No	72.2	78.7	75.6	66.8
11:48:06 AM	No	73.1	84.9	74.8	65.6
11:49:06 AM	No	74.9	83.9	79.5	67.5
11:50:06 AM	No	67.7	72.3	71.2	63.7
11:51:06 AM	No	69	74.6	73.3	65.3
11:52:06 AM	No	70.2	74.1	72.2	67.6
11:53:06 AM	No	69.1	71.6	70.8	67.2
11:54:06 AM	No	69.2	72.9	70.8	67.6
11:55:06 AM	No	70.3	74.5	72.2	67.4
11:56:06 AM	No	72	78.1	74.8	68.8
11:57:06 AM	No	72.5	81.5	76.3	68.9
11:58:06 AM	No	73.1	78.8	76.3	69.6
11:59:06 AM	No	74.1	85	76.3	67.4
		71.7			

Time	Overload	Leq	Lmax	L10	L90
11:27:59 PM	No	71.8	78.7	74.6	68.5
11:28:59 PM	No	71.6	78.2	75.9	66.6
11:29:59 PM	No	72.2	78	75.5	67.9
11:30:59 PM	No	71.6	77.8	74.8	68.1
11:31:59 PM	No	69	77	69.8	67.2
11:32:59 PM	No	65.2	72.4	67.4	63.4
11:33:59 PM	No	75.9	88.3	78.8	66.3
11:34:59 PM	No	70.2	77.5	72.3	67
11:35:59 PM	No	71.5	83.1	73.3	66.6
11:36:59 PM	No	69.3	77.5	71.3	66.9
11:37:59 PM	No	71.2	77.9	74.1	68.5
11:38:59 PM	No	69.2	72.7	70.9	67.1
11:39:59 PM	No	71.3	76.5	73.8	68.8
11:40:59 PM	No	70.9	76.8	72.6	68.8
11:41:59 PM	No	69.3	74.5	71.8	67
		71.2			

Construction Noise Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	10	0
Tractor/Loader/Backhoe	1	79	40%	30	0
Loader	1	79	40%	50	0
Air Compressor	1	78	40%	75	0
Trash Truck	1	76	40%	75	0
Tractor/Loader/Backhoe	1	79	40%	100	0

6

Receptor: ***R1***

Results:

1-hour Leq: 91.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	10	0
Excavator	1	81	40%	30	0
Crane	1	81	16%	50	0
Concrete Pump	1	81	20%	75	0
Concrete Truck	2	79	40%	75	0
Excavator	1	81	40%	100	0
Skip Loader	1	79	40%	100	0
Welder	1	74	40%	125	0
Conveyor	1	85	50%	125	0
Dozer/Loader	1	82	40%	150	0

11

Receptor: ***R1***

Results:

1-hour Leq: 91.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Plate Compactor	1	83	20%	10	0
Concrete Pump	1	81	20%	30	0
Crane	1	81	16%	50	0
Cement & Mortar Mixer	1	80	50%	75	0
Tractor/Loader/Backhoe	1	79	40%	75	0
Air Compressor	1	78	40%	100	0
Plate Compactor	1	83	20%	100	0
Cement & Mortar Mixer	1	80	50%	125	0
Aerial Lift	2	75	20%	125	0

10

Receptor: ***R1***

Results:

1-hour Leq: 90.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crane	1	81	16%	10	0
Air Compressor	2	78	40%	30	0
Cement & Mortar Mixer	2	80	50%	50	0
Concrete Pump	1	81	20%	75	0
Aerial Lifts	2	75	20%	75	0
Vibrator (Roller)	1	80	20%	100	0
Fork Lift	2	75	20%	100	0
Plate Compactor	1	83	20%	125	0
Welder	3	74	40%	125	0
Crane	1	81	16%	150	0

16

Receptor: ***R1***

Results:

1-hour Leq: 88.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: Paving/Concrete/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	79	40%	10	0
Skid Steer Loader	1	79	40%	30	0

Receptor: ***R1***

Results:

1-hour Leq: 89.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	10	0
Tractor/Loader/Backhoe	1	79	40%	30	0
Loader	1	79	40%	50	0
Air Compressor	1	78	40%	75	0
Trash Truck	1	76	40%	75	0
Tractor/Loader/Backhoe	1	79	40%	75	0

6

Receptor: ***R2***

Results:

1-hour Leq: 91.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	10	0
Excavator	1	81	40%	30	0
Crane	1	81	16%	50	0
Concrete Pump	1	81	20%	75	0
Concrete Truck	2	79	40%	75	0
Excavator	1	81	40%	75	0
Skip Loader	1	79	40%	100	0
Welder	1	74	40%	100	0
Conveyor	1	85	50%	125	0
Dozer/Loader	1	82	40%	125	0
	11				

Receptor: ***R2***

Results:

1-hour Leq: 91.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Plate Compactor	1	83	20%	10	0
Concrete Pump	1	81	20%	30	0
Crane	1	81	16%	50	0
Cement & Mortar Mixer	1	80	50%	75	0
Tractor/Loader/Backhoe	1	79	40%	75	0
Air Compressor	1	78	40%	75	0
Plate Compactor	1	83	20%	100	0
Cement & Mortar Mixer	1	80	50%	100	0
Aerial Lift	2	75	20%	125	0

10

Receptor: ***R2***

Results:

1-hour Leq: 90.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crane	1	81	16%	10	0
Air Compressor	2	78	40%	30	0
Cement & Mortar Mixer	2	80	50%	50	0
Concrete Pump	1	81	20%	75	0
Aerial Lifts	2	75	20%	75	0
Vibrator (Roller)	1	80	20%	75	0
Fork Lift	2	75	20%	100	0
Plate Compactor	1	83	20%	100	0
Welder	3	74	40%	125	0
Crane	1	81	16%	125	0

16

Receptor: ***R2***

Results:

1-hour Leq: 89.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: Paving/Concrete/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	79	40%	10	0
Skid Steer Loader	1	79	40%	30	0

Receptor: ***R2***

Results:

1-hour Leq: 89.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: *Demolition*

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	105	0
Tractor/Loader/Backhoe	1	79	40%	105	0
Loader	1	79	40%	125	0
Air Compressor	1	78	40%	125	0
Trash Truck	1	76	40%	150	0
Tractor/Loader/Backhoe	1	79	40%	150	0

6

Receptor: ***R3***

Results:

1-hour Leq: 75.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	105	0
Excavator	1	81	40%	105	0
Crane	1	81	16%	125	0
Concrete Pump	1	81	20%	125	0
Concrete Truck	2	79	40%	150	0
Excavator	1	81	40%	150	0
Skip Loader	1	79	40%	150	0
Welder	1	74	40%	150	0
Conveyor	1	85	50%	150	0
Dozer/Loader	1	82	40%	150	0

11

Receptor: ***R3***

Results:

1-hour Leq: 78.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Plate Compactor	1	83	20%	105	0
Concrete Pump	1	81	20%	105	0
Crane	1	81	16%	125	0
Cement & Mortar Mixer	1	80	50%	125	0
Tractor/Loader/Backhoe	1	79	40%	150	0
Air Compressor	1	78	40%	150	0
Plate Compactor	1	83	20%	150	0
Cement & Mortar Mixer	1	80	50%	150	0
Aerial Lift	2	75	20%	150	0
	10				

Receptor: ***R3***

Results:

1-hour Leq: **76.4**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crane	1	81	16%	105	0
Air Compressor	2	78	40%	105	0
Cement & Mortar Mixer	2	80	50%	125	0
Concrete Pump	1	81	20%	125	0
Aerial Lifts	2	75	20%	150	0
Vibrator (Roller)	1	80	20%	150	0
Fork Lift	2	75	20%	150	0
Plate Compactor	1	83	20%	150	0
Welder	3	74	40%	150	0
Crane	1	81	16%	150	0

16

Receptor: ***R3***

Results:

1-hour Leq: 77.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: Paving/Concrete/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	79	40%	105	0
Skid Steer Loader	1	79	40%	105	0

Receptor: ***R3***

Results:

1-hour Leq: 71.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: *Demolition*

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	180	0
Tractor/Loader/Backhoe	1	79	40%	180	0
Loader	1	79	40%	180	0
Air Compressor	1	78	40%	180	0
Trash Truck	1	76	40%	180	0
Tractor/Loader/Backhoe	1	79	40%	180	0

6

Receptor: ***R4***

Results:

1-hour Leq: 71.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	180	0
Excavator	1	81	40%	180	0
Crane	1	81	16%	180	0
Concrete Pump	1	81	20%	180	0
Concrete Truck	2	79	40%	180	0
Excavator	1	81	40%	180	0
Skip Loader	1	79	40%	180	0
Welder	1	74	40%	180	0
Conveyor	1	85	50%	180	0
Dozer/Loader	1	82	40%	180	0

11

Receptor: ***R4***

Results:

1-hour Leq: 76.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Plate Compactor	1	83	20%	180	0
Concrete Pump	1	81	20%	180	0
Crane	1	81	16%	180	0
Cement & Mortar Mixer	1	80	50%	180	0
Tractor/Loader/Backhoe	1	79	40%	180	0
Air Compressor	1	78	40%	180	0
Plate Compactor	1	83	20%	180	0
Cement & Mortar Mixer	1	80	50%	180	0
Aerial Lift	2	75	20%	180	0

10

Receptor: ***R4***

Results:

1-hour Leq: 73.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crane	1	81	16%	180	0
Air Compressor	2	78	40%	180	0
Cement & Mortar Mixer	2	80	50%	180	0
Concrete Pump	1	81	20%	180	0
Aerial Lifts	2	75	20%	180	0
Vibrator (Roller)	1	80	20%	180	0
Fork Lift	2	75	20%	180	0
Plate Compactor	1	83	20%	180	0
Welder	3	74	40%	180	0
Crane	1	81	16%	180	0

16

Receptor: ***R4***

Results:

1-hour Leq: 74.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: Paving/Concrete/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	79	40%	180	0
Skid Steer Loader	1	79	40%	180	0

Receptor: ***R4***

Results:

1-hour Leq: 66.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	275	15
Tractor/Loader/Backhoe	1	79	40%	275	15
Loader	1	79	40%	275	15
Air Compressor	1	78	40%	275	15
Trash Truck	1	76	40%	275	15
Tractor/Loader/Backhoe	1	79	40%	275	15

6

Receptor: ***R5***

Results:

1-hour Leq: 52.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: *Grading*

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	275	15
Excavator	1	81	40%	275	15
Crane	1	81	16%	275	15
Concrete Pump	1	81	20%	275	15
Concrete Truck	2	79	40%	275	15
Excavator	1	81	40%	275	15
Skip Loader	1	79	40%	275	15
Welder	1	74	40%	275	15
Conveyor	1	85	50%	275	15
Dozer/Loader	1	82	40%	275	15

11

Receptor: ***R5***

Results:

1-hour Leq: 57.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Plate Compactor	1	83	20%	275	15
Concrete Pump	1	81	20%	275	15
Crane	1	81	16%	275	15
Cement & Mortar Mixer	1	80	50%	275	15
Tractor/Loader/Backhoe	1	79	40%	275	15
Air Compressor	1	78	40%	275	15
Plate Compactor	1	83	20%	275	15
Cement & Mortar Mixer	1	80	50%	275	15
Aerial Lift	2	75	20%	275	15

10

Receptor: ***R5***

Results:

1-hour Leq: 54.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crane	1	81	16%	275	15
Air Compressor	2	78	40%	275	15
Cement & Mortar Mixer	2	80	50%	275	15
Concrete Pump	1	81	20%	275	15
Aerial Lifts	2	75	20%	275	15
Vibrator (Roller)	1	80	20%	275	15
Fork Lift	2	75	20%	275	15
Plate Compactor	1	83	20%	275	15
Welder	3	74	40%	275	15
Crane	1	81	16%	275	15

16

Receptor: ***R5***

Results:

1-hour Leq: 55.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: Paving/Concrete/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	79	40%	275	15
Skid Steer Loader	1	79	40%	275	15

Receptor: ***R5***

Results:

1-hour Leq: 48.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	240	0
Tractor/Loader/Backhoe	1	79	40%	240	0
Loader	1	79	40%	240	0
Air Compressor	1	78	40%	240	0
Trash Truck	1	76	40%	240	0
Tractor/Loader/Backhoe	1	79	40%	240	0

6

Receptor: ***R6***

Results:

1-hour Leq: 69.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Grading***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	240	0
Excavator	1	81	40%	240	0
Crane	1	81	16%	240	0
Concrete Pump	1	81	20%	240	0
Concrete Truck	2	79	40%	240	0
Excavator	1	81	40%	240	0
Skip Loader	1	79	40%	240	0
Welder	1	74	40%	240	0
Conveyor	1	85	50%	240	0
Dozer/Loader	1	82	40%	240	0

11

Receptor: ***R6***

Results:

1-hour Leq: 73.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Plate Compactor	1	83	20%	240	0
Concrete Pump	1	81	20%	240	0
Crane	1	81	16%	240	0
Cement & Mortar Mixer	1	80	50%	240	0
Tractor/Loader/Backhoe	1	79	40%	240	0
Air Compressor	1	78	40%	240	0
Plate Compactor	1	83	20%	240	0
Cement & Mortar Mixer	1	80	50%	240	0
Aerial Lift	2	75	20%	240	0
	10				

Receptor: ***R6***

Results:

1-hour Leq: 71.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crane	1	81	16%	240	0
Air Compressor	2	78	40%	240	0
Cement & Mortar Mixer	2	80	50%	240	0
Concrete Pump	1	81	20%	240	0
Aerial Lifts	2	75	20%	240	0
Vibrator (Roller)	1	80	20%	240	0
Fork Lift	2	75	20%	240	0
Plate Compactor	1	83	20%	240	0
Welder	3	74	40%	240	0
Crane	1	81	16%	240	0

16

Receptor: ***R6***

Results:

1-hour Leq: 71.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Phase: Paving/Concrete/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	79	40%	240	0
Skid Steer Loader	1	79	40%	240	0

Receptor: ***R6***

Results:

1-hour Leq: 64.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

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ACOUSTICAL ENGINEERING SERVICES

Project: citizenM Hotel

Construction Vibration Impacts

Reference Levels at 25 feet are based on FTA, 2006 (Transit Noise and Vibration Impact Assessment)
Calculations using FTA procedure with n= **1.5** for structure at 25 feet for further
1.2 For structure at distances closer than 25 feet (per Caltrans, 2004)

ON-SITE CONSTRUCTION ACTIVITIES

Table 1: Construction Equipment Vibration Levels (PPV) - Building Damages

		Estimated Vibration Levels at nearest off-site building structures (distance in feet), PPV						
Equipment	**Reference Vibration Levels at 25 ft., PPV**	**North (Capitol Records)**	**South (Mixed-Use Tower)**	**East (Pantages Theater)**	**West (Rebury Hotel)**			
		175	**6**	**11**	**105**			
Large Bulldozer	0.089	0.005	0.493	0.238	0.010			
Caisson Drilling	0.089	0.005	0.493	0.238	0.010			
Loaded Trucks	0.076	0.004	0.421	0.204	0.009			
Jackhammer	0.035	0.002	0.194	0.094	0.004			
Small bulldozer	0.003	0.000	0.017	0.008	0.000			
Significance Threshold, PPV		0.3	0.3	0.12	0.2			

Table 2: Construction Equipment Vibration Levels (VdB) - Human Annoyance

		Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB						
Equipment	**Reference Vibration Levels at 25 ft., VdB**	**R1**	**R2**	**R3**	**R4**	**R5**	**R6**	
		11	**6**	**105**	**180**	**275**	**240**	
Large Bulldozer	87	98	106	68	61	56	58	
Caisson Drilling	87	98	106	68	61	56	58	
Loaded Trucks	86	97	105	67	60	55	57	
Jackhammer	79	90	98	60	53	48	50	
Small bulldozer	58	69	77	39	32	27	29	
Significance Threshold, VdB		72	72	72	65	72	72	

OFF-SITE CONSTRUCTION HAUL TRUCKS

Table 3: Off-Site Haul Trucks - Building Damage

		Estimated Vibration Levels at noted distance in feet, PPV						
Equipment	**Reference Vibration Levels at 50 ft., PPV**	**20**						
Typical road surface	0.00565	0.022						
Significance Threshold, PPV		0.12						

Ref. Levels based on FTA Figure 7-3 (converted from VdB to PPV)

Table 4: Off-Site Haul Trucks - Human Annoyance

		Estimated Vibration Levels at noted distance in feet, VdB						
Equipment	**Reference Vibration Levels at 50 ft., VdB**	**20**						
Typical road surface	63	75						
Significance Threshold, VdB		72						

Ref. Levels based on FTA Figure 7-3

Eyestone Environmental 28 May 2019
SKB TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: citizenM Hotel
RUN: TNM - Haul Trucks

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **28 May 2019**
SKB **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **citizenM Hotel**
RUN: **TNM - Haul Trucks**

Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	20	35	0	0	18	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 May 2019
SKB TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: citizenM Hotel
RUN: TNM - Haul Trucks

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Haul Routes	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
28 May 2019
SKB
TNM 2.5
Calculated with TNM 2.5
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: citizenM Hotel
RUN: TNM - Haul Trucks
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Haul Routes	8	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Operation Noise Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: citizenM Hollywood & Vine Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- North of Hollywood Blvd.	50	10	35	35	2,222	22,220	10%	0	0	72.9
- South of Hollywood Blvd.	50	10	35	35	1,951	19,510	10%	0	0	72.4
Ivar Avenue										
- North of Hollywood Blvd.	40	10	30	25	486	4,860	10%	0	0	67.1
- South of Hollywood Blvd.	40	10	30	25	467	4,670	10%	0	0	66.9
Vine Street										
- Between Franklin Ave. and Yucca St.	70	10	45	35	1,814	18,140	10%	0	0	70.9
- Between Yucca St. and Hollywood Blvd.	70	10	45	35	2,085	20,850	10%	0	0	71.5
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,336	23,360	10%	0	0	72.0
- South of Sunset Blvd.	70	10	45	35	2,543	25,430	10%	0	0	72.4
Argyle Avenue										
- North of Franklin Ave.	50	10	35	25	304	3,040	10%	0	0	64.4
- Between Franklin Ave. and Yucca St.	50	10	35	25	856	8,560	10%	0	0	68.9
- Between Yucca St. and Hollywood Blvd.	50	10	35	25	707	7,070	10%	0	0	68.0
- South of Hollywood Blvd.	50	10	35	25	724	7,240	10%	0	0	68.2
Gower Street										
- North of Franklin Ave.	50	10	35	30	291	2,910	10%	0	0	64.0
- Between Franklin Ave. and Yucca St.	50	10	35	30	1,243	12,430	10%	0	0	70.3
- Between Yucca St. and Hollywood Blvd.	50	10	35	30	1,300	13,000	10%	0	0	70.5
- South of Hollywood Blvd.	50	10	35	30	1,257	12,570	10%	0	0	70.3
Bronson Avenue										
- North of Franklin Ave.	40	10	30	30	628	6,280	10%	0	0	68.0
- Between Franklin Ave. and Hollywood Blvd.	40	10	30	30	746	7,460	10%	0	0	68.8
- South of Hollywood Blvd.	50	10	35	30	873	8,730	10%	0	0	68.8
Franklin Avenue										
- West of Vine	50	10	35	35	1,631	16,310	10%	0	0	71.6

AES
ACOUSTICAL ENGINEERING SERVICES

EXISTING CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
- Between Vine and Gower St.	50	10	35	35	2,034	20,340	10%	0	0	72.5
- Between Gower St. and Bronson Ave.	50	10	35	35	2,380	23,800	10%	0	0	73.2
- East of Bronson Ave.	50	10	35	35	2,485	24,850	10%	0	0	73.4
Yucca Street										
- West of Vine	60	10	40	30	635	6,350	10%	0	0	66.8
- Between Vine and Argyle Ave.	60	10	40	30	499	4,990	10%	0	0	65.7
- Between Argyle Ave. and Gower St.	40	10	30	30	251	2,510	10%	0	0	64.1
Hollywood Boulevard										
- West of Cahuenga Blvd.	70	10	45	35	1,894	18,940	10%	0	0	71.1
- Between Cahuenga Blvd. and Vine St.	70	10	45	35	1,823	18,230	10%	0	0	71.0
- Between Vine St. and Gower St.	70	10	45	35	2,098	20,980	10%	0	0	71.6
- Between Gower St. and Bronson Ave.	60	10	40	35	1,864	18,640	10%	0	0	71.6
- East of Bronson Ave.	60	10	40	35	1,987	19,870	10%	0	0	71.8
Selma Avenue										
- West of Vine St.	40	10	30	30	574	5,740	10%	0	0	67.6
- East of Vine St.	40	10	30	30	582	5,820	10%	0	0	67.7
Sunset Boulevard										
- West of Vine St.	70	10	45	35	2,588	25,880	10%	0	0	72.5
- East of Vine St.	70	10	45	35	2,803	28,030	10%	0	0	72.8

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 11/19/2018

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: citizenM Hollywood & Vine Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- North of Hollywood Blvd.	50	10	35	35	2,222	22,220	10%	0	0	72.9
- South of Hollywood Blvd.	50	10	35	35	1,951	19,510	10%	0	0	72.4
Ivar Avenue										
- North of Hollywood Blvd.	40	10	30	25	486	4,860	10%	0	0	67.1
- South of Hollywood Blvd.	40	10	30	25	467	4,670	10%	0	0	66.9
Vine Street										
- Between Franklin Ave. and Yucca St.	70	10	45	35	1,840	18,400	10%	0	0	71.0
- Between Yucca St. and Hollywood Blvd.	70	10	45	35	2,132	21,320	10%	0	0	71.6
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,354	23,540	10%	0	0	72.1
- South of Sunset Blvd.	70	10	45	35	2,552	25,522	10%	0	0	72.4
Argyle Avenue										
- North of Franklin Ave.	50	10	35	25	304	3,040	10%	0	0	64.4
- Between Franklin Ave. and Yucca St.	50	10	35	25	865	8,650	10%	0	0	68.9
- Between Yucca St. and Hollywood Blvd.	50	10	35	25	707	7,070	10%	0	0	68.0
- South of Hollywood Blvd.	50	10	35	25	724	7,240	10%	0	0	68.2
Gower Street										
- North of Franklin Ave.	50	10	35	30	291	2,910	10%	0	0	64.0
- Between Franklin Ave. and Yucca St.	50	10	35	30	1,243	12,430	10%	0	0	70.3
- Between Yucca St. and Hollywood Blvd.	50	10	35	30	1,300	13,000	10%	0	0	70.5
- South of Hollywood Blvd.	50	10	35	30	1,257	12,570	10%	0	0	70.3
Bronson Avenue										
- North of Franklin Ave.	40	10	30	30	628	6,280	10%	0	0	68.0
- Between Franklin Ave. and Hollywood Blvd.	40	10	30	30	746	7,460	10%	0	0	68.8
- South of Hollywood Blvd.	50	10	35	30	873	8,730	10%	0	0	68.8
Franklin Avenue										
- West of Vine	50	10	35	35	1,640	16,402	10%	0	0	71.6

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EXISTING + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
- Between Vine and Gower St.	50	10	35	35	2,037	20,370	10%	0	0	72.5
- Between Gower St. and Bronson Ave.	50	10	35	35	2,384	23,840	10%	0	0	73.2
- East of Bronson Ave.	50	10	35	35	2,489	24,891	10%	0	0	73.4
Yucca Street										
- West of Vine	60	10	40	30	647	6,473	10%	0	0	66.9
- Between Vine and Argyle Ave.	60	10	40	30	515	5,150	10%	0	0	65.9
- Between Argyle Ave. and Gower St.	40	10	30	30	255	2,550	10%	0	0	64.1
Hollywood Boulevard										
- West of Cahuenga Blvd.	70	10	45	35	1,918	19,176	10%	0	0	71.2
- Between Cahuenga Blvd. and Vine St.	70	10	45	35	1,842	18,420	10%	0	0	71.0
- Between Vine St. and Gower St.	70	10	45	35	2,109	21,090	10%	0	0	71.6
- Between Gower St. and Bronson Ave.	60	10	40	35	1,873	18,730	10%	0	0	71.6
- East of Bronson Ave.	60	10	40	35	1,999	19,993	10%	0	0	71.9
Selma Avenue										
- West of Vine St.	40	10	30	30	574	5,740	10%	0	0	67.6
- East of Vine St.	40	10	30	30	582	5,820	10%	0	0	67.7
Sunset Boulevard										
- West of Vine St.	70	10	45	35	2,592	25,921	10%	0	0	72.5
- East of Vine St.	70	10	45	35	2,807	28,071	10%	0	0	72.8

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 11/19/2018

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Off-Site Traffic Noise Calculations
Project: citizenM Hollywood & Vine Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE NO PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- North of Hollywood Blvd.	50	10	35	35	2,621	26,210	10%	0	0	73.6
- South of Hollywood Blvd.	50	10	35	35	2,296	22,960	10%	0	0	73.1
Ivar Avenue										
- North of Hollywood Blvd.	40	10	30	25	517	5,170	10%	0	0	67.4
- South of Hollywood Blvd.	40	10	30	25	496	4,960	10%	0	0	67.2
Vine Street										
- Between Franklin Ave. and Yucca St.	70	10	45	35	2,121	21,210	10%	0	0	71.6
- Between Yucca St. and Hollywood Blvd.	70	10	45	35	2,600	26,000	10%	0	0	72.5
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,790	27,900	10%	0	0	72.8
- South of Sunset Blvd.	70	10	45	35	3,095	30,950	10%	0	0	73.3
Argyle Avenue										
- North of Franklin Ave.	50	10	35	25	324	3,240	10%	0	0	64.7
- Between Franklin Ave. and Yucca St.	50	10	35	25	1,017	10,170	10%	0	0	69.6
- Between Yucca St. and Hollywood Blvd.	50	10	35	25	872	8,720	10%	0	0	69.0
- South of Hollywood Blvd.	50	10	35	25	814	8,140	10%	0	0	68.7
Gower Street										
- North of Franklin Ave.	50	10	35	30	312	3,120	10%	0	0	64.3
- Between Franklin Ave. and Yucca St.	50	10	35	30	1,389	13,890	10%	0	0	70.8
- Between Yucca St. and Hollywood Blvd.	50	10	35	30	1,484	14,840	10%	0	0	71.1
- South of Hollywood Blvd.	50	10	35	30	1,561	15,610	10%	0	0	71.3
Bronson Avenue										
- North of Franklin Ave.	40	10	30	30	679	6,790	10%	0	0	68.4
- Between Franklin Ave. and Hollywood Blvd.	40	10	30	30	811	8,110	10%	0	0	69.1
- South of Hollywood Blvd.	50	10	35	30	1,054	10,540	10%	0	0	69.6
Franklin Avenue										
- West of Vine	50	10	35	35	1,917	19,170	10%	0	0	72.3

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FUTURE NO PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
- Between Vine and Gower St.	50	10	35	35	2,322	23,220	10%	0	0	73.1
- Between Gower St. and Bronson Ave.	50	10	35	35	2,610	26,100	10%	0	0	73.6
- East of Bronson Ave.	50	10	35	35	2,730	27,300	10%	0	0	73.8
Yucca Street										
- West of Vine	60	10	40	30	717	7,170	10%	0	0	67.3
- Between Vine and Argyle Ave.	60	10	40	30	628	6,280	10%	0	0	66.7
- Between Argyle Ave. and Gower St.	40	10	30	30	378	3,780	10%	0	0	65.8
Hollywood Boulevard										
- West of Cahuenga Blvd.	70	10	45	35	2,520	25,200	10%	0	0	72.4
- Between Cahuenga Blvd. and Vine St.	70	10	45	35	2,603	26,030	10%	0	0	72.5
- Between Vine St. and Gower St.	70	10	45	35	2,802	28,020	10%	0	0	72.8
- Between Gower St. and Bronson Ave.	60	10	40	35	2,666	26,660	10%	0	0	73.1
- East of Bronson Ave.	60	10	40	35	2,798	27,980	10%	0	0	73.3
Selma Avenue										
- West of Vine St.	40	10	30	30	639	6,390	10%	0	0	68.1
- East of Vine St.	40	10	30	30	652	6,520	10%	0	0	68.2
Sunset Boulevard										
- West of Vine St.	70	10	45	35	3,455	34,550	10%	0	0	73.7
- East of Vine St.	70	10	45	35	3,873	38,730	10%	0	0	74.2

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 11/19/2018

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Off-Site Traffic Noise Calculations
Project: citizenM Hollywood & Vine Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Cahuenga Boulevard										
- North of Hollywood Blvd.	50	10	35	35	2,621	26,210	10%	0	0	73.6
- South of Hollywood Blvd.	50	10	35	35	2,296	22,960	10%	0	0	73.1
Ivar Avenue										
- North of Hollywood Blvd.	40	10	30	25	517	5,170	10%	0	0	67.4
- South of Hollywood Blvd.	40	10	30	25	496	4,960	10%	0	0	67.2
Vine Street										
- Between Franklin Ave. and Yucca St.	70	10	45	35	2,147	21,470	10%	0	0	71.7
- Between Yucca St. and Hollywood Blvd.	70	10	45	35	2,647	26,470	10%	0	0	72.6
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,808	28,080	10%	0	0	72.8
- South of Sunset Blvd.	70	10	45	35	3,104	31,042	10%	0	0	73.3
Argyle Avenue										
- North of Franklin Ave.	50	10	35	25	324	3,240	10%	0	0	64.7
- Between Franklin Ave. and Yucca St.	50	10	35	25	1,027	10,270	10%	0	0	69.7
- Between Yucca St. and Hollywood Blvd.	50	10	35	25	872	8,720	10%	0	0	69.0
- South of Hollywood Blvd.	50	10	35	25	814	8,140	10%	0	0	68.7
Gower Street										
- North of Franklin Ave.	50	10	35	30	312	3,120	10%	0	0	64.3
- Between Franklin Ave. and Yucca St.	50	10	35	30	1,389	13,890	10%	0	0	70.8
- Between Yucca St. and Hollywood Blvd.	50	10	35	30	1,484	14,840	10%	0	0	71.1
- South of Hollywood Blvd.	50	10	35	30	1,561	15,610	10%	0	0	71.3
Bronson Avenue										
- North of Franklin Ave.	40	10	30	30	679	6,790	10%	0	0	68.4
- Between Franklin Ave. and Hollywood Blvd.	40	10	30	30	811	8,110	10%	0	0	69.1
- South of Hollywood Blvd.	50	10	35	30	1,054	10,540	10%	0	0	69.6
Franklin Avenue										
- West of Vine	50	10	35	35	1,926	19,262	10%	0	0	72.3

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FUTURE + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
- Between Vine and Gower St.	50	10	35	35	2,325	23,250	10%	0	0	73.1
- Between Gower St. and Bronson Ave.	50	10	35	35	2,614	26,140	10%	0	0	73.6
- East of Bronson Ave.	50	10	35	35	2,734	27,341	10%	0	0	73.8
Yucca Street										
- West of Vine	60	10	40	30	729	7,293	10%	0	0	67.4
- Between Vine and Argyle Ave.	60	10	40	30	644	6,440	10%	0	0	66.8
- Between Argyle Ave. and Gower St.	40	10	30	30	382	3,820	10%	0	0	65.9
Hollywood Boulevard										
- West of Cahuenga Blvd.	70	10	45	35	2,539	25,395	10%	0	0	72.4
- Between Cahuenga Blvd. and Vine St.	70	10	45	35	2,622	26,220	10%	0	0	72.5
- Between Vine St. and Gower St.	70	10	45	35	2,811	28,110	10%	0	0	72.8
- Between Gower St. and Bronson Ave.	60	10	40	35	2,675	26,750	10%	0	0	73.1
- East of Bronson Ave.	60	10	40	35	2,807	28,072	10%	0	0	73.3
Selma Avenue										
- West of Vine St.	40	10	30	30	639	6,390	10%	0	0	68.1
- East of Vine St.	40	10	30	30	652	6,520	10%	0	0	68.2
Sunset Boulevard										
- West of Vine St.	70	10	45	35	3,459	34,591	10%	0	0	73.7
- East of Vine St.	70	10	45	35	3,877	38,771	10%	0	0	74.2

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 11/19/2018

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Project Composite Noise Calculations (CNEL)

Project: citizenM Hotel

Receptor	Ambient	Traffic[a]	Mechanical	Parking	Loading	Courtyard		Project Composite	Ambient + Project	Increase
R1	63.6	48.4	56.7	39.3	37.0	38.8		57.4	64.5	0.9
R2	63.8	51.5	58.4	56.8	57.0	51.6		62.9	66.4	2.6
R3	73.2	55.2	49.6	51.2	42.3	60.8		62.5	73.6	0.4
R4	73.2	55.2	44.2	39.6	25.6	46.9		56.2	73.3	0.1
R5	74.2	41.6	37.9	12.0	13.0	28.4		43.3	74.2	0.0
R6	76.0	47.6	49.8	40.3	30.4	56.5		57.9	76.1	0.1

[a] - traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor.

		Traffic Noise Levels, CNEL								
Receptor	Roadway Segment	Existing	Existing + Project	Project Only	distance to roadway, ft	Existing	Existing + Project	barrier	distance to Center Line	adj. for distance
R1	Vine Street	64.7	64.8	48.4	180	71.5	71.6	0	45	-6.8
R2	Vine Street	67.8	67.9	51.5	70	71.5	71.6	0	45	-3.7
R3	Vine Street	71.5	71.6	55.2	10	71.5	71.6	0	45	0.0
R4	Vine Street	71.5	71.6	55.2	10	71.5	71.6	0	45	0.0
R5	Argyle Avenue	68.0	68.0	41.6	10	68.0	68.0	0	35	0.0
R6	Hollywood Boulevard	71.0	71.0	47.6	10	71.0	71.0	0	35	0.0

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Outdoor Mechanical Equipment Noise Calculations

Project: citizenM Hotel

Estimated noise levels, Leq (FROM SOUNDPLAN)					Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor				Estimated Noise Levels	12	3	9
R1				50.0	50.0	50.0	50.0
R2				51.7	51.7	51.7	51.7
R3				42.9	42.9	42.9	42.9
R4				37.5	37.5	37.5	37.5
R5				31.2	31.2	31.2	31.2
R6				43.1	43.1	43.1	43.1

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Lowest ambient (Leq)	Ambient + Project (Leq)
R1	56.7	63.6	64.4	0.8	50.0	58.4	59.0
R2	58.4	63.8	64.9	1.1	51.7	58.6	59.4
R3	49.6	73.2	73.2	0.0	42.9	68.2	68.2
R4	44.2	73.2	73.2	0.0	37.5	66.9	66.9
R5	37.9	74.2	74.2	0.0	31.2	68.6	68.6
R6	49.8	76.0	76.0	0.0	43.1	71.2	71.2

58.4 dBA at the Project Property Line

Measured lowest ambient noise levels, at nearest receptor is 58.4 dBA (Leq)
Therefore, to meet the maximum 5dBA above ambient, the project's noise shall be limit to:

Ambient	58.4	
Project	60	(60 dBA at 50 feet distance)
Total	62.3	
	3.9	

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Parking Noise Calculations

Project: citizenM Hotel

Estimated noise levels, Leq (FROM SOUNDPLAN)						Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor					Estimated Noise Leves, (Leq)	12	3	9
R1					38.1	38.1	35.1	30.3
R2					55.6	55.6	52.5	47.8
R3					50.0	50.0	47.0	42.2
R4					38.4	38.4	35.4	30.6
R5					10.8	10.8	7.8	3.0
R6					39.1	39.1	36.1	31.3

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	nighttime ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	39.3	63.6	63.6	0.0	38.1	58.4	58.4	0.0
R2	56.8	63.8	64.6	0.8	55.6	58.6	60.4	1.8
R3	51.2	73.2	73.2	0.0	50.0	68.2	68.3	0.1
R4	39.6	73.2	73.2	0.0	38.4	68.8	68.8	0.0
R5	12.0	74.2	74.2	0.0	10.8	68.6	68.6	0.0
R6	40.3	76.0	76.0	0.0	39.1	71.2	71.2	0.0

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Loading and Trash Compactor Noise Calculations

Project: citizenM Hotel

					Hours of Operations						
Estimated noise levels, Leq (FROM SOUNDPLAN)					Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)				
Receptor				Total	3	1	0	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)
R1				42.9	36.9	38.1	0.0	37.0	63.6	63.6	0.0
R2				62.9	56.9	58.1	0.0	57.0	63.8	64.6	0.8
R3				48.2	42.2	43.4	0.0	42.3	73.2	73.2	0.0
R4				31.4	25.4	26.6	0.0	25.5	73.2	73.2	0.0
R5				16.6	10.6	11.8	0.0	11.9	74.2	74.2	0.0
R6				36.3	30.3	31.5	0.0	30.4	76.0	76.0	0.0

TOTAL COMBINED

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	daytime ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)	Significance threshold (Leq)
R1	37.0	63.6	63.6	0.0	42.9	60.6	60.7	0.1	65.6
R2	57.0	63.8	64.6	0.8	62.9	60.8	65.0	4.2	65.8
R3	42.3	73.2	73.2	0.0	48.2	69.5	69.5	0.0	74.5
R4	25.6	73.2	73.2	0.0	31.4	66.9	66.9	0.0	71.9
R5	13.0	74.2	74.2	0.0	16.7	72.0	72.0	0.0	77.0
R6	30.4	76.0	76.0	0.0	36.3	71.7	71.7	0.0	76.7

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Outdoor Spaces Noise Calculations

Project: citizenM Hotel

						Hours of Operations		
Estimated noise levels, Leq (FROM SOUNDPLAN)						Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor			Sound System	Occupants	Total	12	**3**	**4**
R1			33.8	27.3	34.7	34.7	34.7	31.2
R2			47.2	35.4	47.5	47.5	47.5	44.0
R3			56.6	42.0	56.7	56.7	56.7	53.2
R4			41.8	36.2	42.9	42.9	42.9	39.3
R5			23.1	18.2	24.3	24.3	24.3	20.8
R6			52.4	32.4	52.4	52.4	52.4	48.9

TOTAL COMBINED

Receptor	Project (CNEL)	Ambient (CNEL)	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	38.8	63.6	63.6	0.0	34.7	58.4	58.4	0.0
R2	51.6	63.8	64.1	0.3	47.5	58.6	58.9	0.3
R3	60.8	73.2	73.4	0.2	56.7	68.2	68.5	0.3
R4	46.9	73.2	73.2	0.0	42.9	66.9	66.9	0.0
R5	28.4	74.2	74.2	0.0	24.3	68.6	68.6	0.0
R6	56.5	76.0	76.0	0.0	52.4	71.2	71.3	0.1

citizenM Hotel
Assessed contribution level - People - Rev. 518

Source	Leq,d dB(A)	
Receiver R1	Leq,d 27.3	dB(A)
People Level 1	17.3	
People Level 13 West	21.1	
People Level 13 East	25.5	
Receiver R2	Leq,d 35.4	dB(A)
People Level 1	24.6	
People Level 13 West	32.9	
People Level 13 East	30.9	
Receiver R3	Leq,d 42.0	dB(A)
People Level 1	41.2	
People Level 13 West	33.4	
People Level 13 East	27.5	
Receiver R4	Leq,d 36.2	dB(A)
People Level 1	35.7	
People Level 13 West	26.6	
People Level 13 East	12.2	
Receiver R5	Leq,d 18.2	dB(A)
People Level 1	5.1	
People Level 13 West	11.4	
People Level 13 East	16.9	
Receiver R6	Leq,d 32.4	dB(A)
People Level 1	7.7	
People Level 13 West	18.0	
People Level 13 East	32.2	

citizenM Hotel
Assessed contibution level - Parking

Source	Leq,d dB(A)	
Receiver R1	Leq,d 38.1	dB(A)
CarToParking	38.1	
Receiver R2	Leq,d 55.6	dB(A)
CarToParking	55.6	
Receiver R3	Leq,d 50.0	dB(A)
CarToParking	50.0	
Receiver R4	Leq,d 38.4	dB(A)
CarToParking	38.4	
Receiver R5	Leq,d 10.8	dB(A)
CarToParking	10.8	
Receiver R6	Leq,d 39.1	dB(A)
CarToParking	39.1	

citizenM Hotel
Assessed contribution level - Mechanical - Rev. 518

Source	Leq,d dB(A)	
Receiver R1	**Leq,d 50.0**	**dB(A)**
Mechanical Level 12-1	24.4	
Mechanical Level 12-2	49.7	
Mechanical Roof 1-1	27.8	
Mechanical Roof 1-2	26.9	
Mechanical Roof 1-3	26.9	
Mechanical Roof 1-4	26.9	
Mechanical Roof 1-5	26.9	
Mechanical Roof 1-6	26.9	
Mechanical Roof 1-7	27.8	
Mechanical Roof 1-8	25.2	
Mechanical Roof 1-9	25.1	
Mechanical Roof 1-10	24.9	
Mechanical Roof 1-11	27.0	
Mechanical Roof 1-12	27.0	
Receiver R2	**Leq,d 51.7**	**dB(A)**
Mechanical Level 12-1	51.5	
Mechanical Level 12-2	31.3	
Mechanical Roof 1-1	23.9	
Mechanical Roof 1-2	24.1	
Mechanical Roof 1-3	25.7	
Mechanical Roof 1-4	25.8	
Mechanical Roof 1-5	25.9	
Mechanical Roof 1-6	26.3	
Mechanical Roof 1-7	24.1	
Mechanical Roof 1-8	24.2	
Mechanical Roof 1-9	25.9	
Mechanical Roof 1-10	26.0	
Mechanical Roof 1-11	26.4	
Mechanical Roof 1-12	26.5	
Receiver R3	**Leq,d 42.9**	**dB(A)**
Mechanical Level 12-1	42.7	
Mechanical Level 12-2	19.7	
Mechanical Roof 1-1	17.7	
Mechanical Roof 1-2	15.6	
Mechanical Roof 1-3	15.4	
Mechanical Roof 1-4	15.3	
Mechanical Roof 1-5	15.2	
Mechanical Roof 1-6	15.3	
Mechanical Roof 1-7	17.9	

Source	Leq,d dB(A)	
Mechanical Roof 1-8	17.7	
Mechanical Roof 1-9	15.5	
Mechanical Roof 1-10	15.4	
Mechanical Roof 1-11	15.3	
Mechanical Roof 1-12	15.3	
Receiver R4	Leq,d 37.5	dB(A)
Mechanical Level 12-1	16.4	
Mechanical Level 12-2	21.8	
Mechanical Roof 1-1	28.6	
Mechanical Roof 1-2	28.2	
Mechanical Roof 1-3	28.2	
Mechanical Roof 1-4	28.1	
Mechanical Roof 1-5	28.2	
Mechanical Roof 1-6	28.2	
Mechanical Roof 1-7	24.2	
Mechanical Roof 1-8	24.3	
Mechanical Roof 1-9	24.8	
Mechanical Roof 1-10	24.7	
Mechanical Roof 1-11	24.5	
Mechanical Roof 1-12	17.4	
Receiver R5	Leq,d 31.2	dB(A)
Mechanical Level 12-1	11.5	
Mechanical Level 12-2	26.2	
Mechanical Roof 1-1	21.5	
Mechanical Roof 1-2	19.5	
Mechanical Roof 1-3	18.4	
Mechanical Roof 1-4	17.2	
Mechanical Roof 1-5	16.6	
Mechanical Roof 1-6	16.2	
Mechanical Roof 1-7	21.5	
Mechanical Roof 1-8	19.5	
Mechanical Roof 1-9	18.4	
Mechanical Roof 1-10	17.3	
Mechanical Roof 1-11	16.6	
Mechanical Roof 1-12	16.2	
Receiver R6	Leq,d 43.1	dB(A)
Mechanical Level 12-1	41.9	
Mechanical Level 12-2	35.2	
Mechanical Roof 1-1	22.3	
Mechanical Roof 1-2	22.3	

citizenM Hotel
Assessed contribution level - Mechanical - Rev. 518

Source	Leq,d dB(A)	
Mechanical Roof 1-3	20.0	
Mechanical Roof 1-4	20.5	
Mechanical Roof 1-5	19.7	
Mechanical Roof 1-6	19.7	
Mechanical Roof 1-7	23.6	
Mechanical Roof 1-8	23.3	
Mechanical Roof 1-9	23.3	
Mechanical Roof 1-10	21.3	
Mechanical Roof 1-11	21.2	
Mechanical Roof 1-12	21.0	

citizenM Hotel
Assessed contribution level - Loading & Trash Compactor - Rev. 518

Source	Leq,d dB(A)	
Receiver R1	Leq,d 42.9	dB(A)
Loading	42.8	
Trash Compactors	26.9	
Receiver R2	Leq,d 62.9	dB(A)
Loading	62.5	
Trash Compactors	53.1	
Receiver R3	Leq,d 48.2	dB(A)
Loading	48.0	
Trash Compactors	34.7	
Receiver R4	Leq,d 31.4	dB(A)
Loading	31.4	
Trash Compactors	12.6	
Receiver R5	Leq,d 16.6	dB(A)
Loading	16.0	
Trash Compactors	7.4	
Receiver R6	Leq,d 36.3	dB(A)
Loading	33.2	
Trash Compactors	33.3	

citizenM Hotel
Assessed contribution level - Amplified Sound - Rev. 518

Source	Leq,d dB(A)	
Receiver R1	**Leq,d 33.8**	**dB(A)**
Speaker Level 1-1	12.6	
Speakers Level 13-1	23.1	
Speakers Level 13-2	24.6	
Speakers Level 13-3	27.4	
Speakers Level 13-4	31.2	
Receiver R2	**Leq,d 47.2**	**dB(A)**
Speaker Level 1-1	21.0	
Speakers Level 13-1	29.0	
Speakers Level 13-2	29.5	
Speakers Level 13-3	45.2	
Speakers Level 13-4	42.4	
Receiver R3	**Leq,d 56.6**	**dB(A)**
Speaker Level 1-1	55.6	
Speakers Level 13-1	45.5	
Speakers Level 13-2	45.7	
Speakers Level 13-3	30.0	
Speakers Level 13-4	42.4	
Receiver R4	**Leq,d 41.8**	**dB(A)**
Speaker Level 1-1	36.7	
Speakers Level 13-1	39.3	
Speakers Level 13-2	32.3	
Speakers Level 13-3	19.5	
Speakers Level 13-4	18.1	
Receiver R5	**Leq,d 23.1**	**dB(A)**
Speaker Level 1-1	1.4	
Speakers Level 13-1	13.8	
Speakers Level 13-2	13.5	
Speakers Level 13-3	17.9	
Speakers Level 13-4	19.8	
Receiver R6	**Leq,d 52.4**	**dB(A)**
Speaker Level 1-1	4.3	
Speakers Level 13-1	18.0	
Speakers Level 13-2	18.1	
Speakers Level 13-3	35.7	
Speakers Level 13-4	52.3	