Appendix G

Noise Calculation Worksheets

Angels Landing Project

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Ambient Noise Measurements

Angels Landing Project - Ambient Noise Measurements

Leq	**Measured Leq Levels**		**Estimated**
Receptor	Daytime	Nighttime	CNEL
R1	68.0	63.3	69.4
R2	71.0	68.4	73.7
R3	67.3	64.2	69.7
R4	67.2	65.2	70.3
R6	63.7	59.3	67.0

CNEL levels estimated based on FTA guidelines (Transit Noise and Vibration Impact Assessment, 2006)

AES
Acoustical Engineering Services

Location: R1 -
Date: 11/13/2019

Time	Overload	Leq	Lmax	L10	L90
11:00:16 AM	No	65.6	70.0	69.4	60.5
11:01:16 AM	No	67.5	72.5	71.6	60.3
11:02:16 AM	No	66.9	73.5	69.3	60.9
11:03:16 AM	No	69.9	76.2	74.0	61.9
11:04:16 AM	No	66.6	77.2	69.7	59.4
11:05:16 AM	No	65.3	70.7	68.1	61.2
11:06:16 AM	No	67.5	75.7	71.4	61.6
11:07:16 AM	No	69.0	76.3	73.6	61.0
11:08:16 AM	No	65.0	73.0	68.1	60.6
11:09:16 AM	No	67.5	73.3	70.4	60.2
11:10:16 AM	No	72.9	81.5	77.3	63.3
11:11:16 AM	No	66.2	74.2	70.1	61.4
11:12:16 AM	No	67.8	75.2	72.0	61.9
11:13:16 AM	No	66.8	70.7	69.0	62.5
11:14:16 AM	No	68.1	74.9	72.1	63.4
		68.0			

Time	Overload	Leq	Lmax	L10	L90
11:00:15 PM	No	58.3	67.7	58.6	57.1
11:01:15 PM	No	63.0	68.8	67.6	57.5
11:02:15 PM	No	63.6	69.5	67.7	57.9
11:03:15 PM	No	63.6	69.8	67.7	57.6
11:04:15 PM	No	64.9	70.8	68.0	60.4
11:05:15 PM	No	58.1	63.4	59.6	57.1
11:06:15 PM	No	65.5	73.2	69.1	58.4
11:07:15 PM	No	64.5	70.0	68.1	60.3
11:08:15 PM	No	61.4	68.3	66.0	57.2
11:09:15 PM	No	61.2	68.4	64.3	57.6
11:10:15 PM	No	66.7	73.4	71.2	58.6
11:11:15 PM	No	59.5	65.9	63.4	57.0
11:12:15 PM	No	62.6	71.4	66.3	57.1
11:13:15 PM	No	63.6	68.7	67.4	59.3
11:14:15 PM	No	63.7	71.3	67.7	57.5
		63.3			

AES
Acoustical Engineering Services

Location: R2 -
Date: 11/13/2019

Time	Overload	Leq	Lmax	L10	L90
11:46:28 AM	No	70.7	78.8	75.6	61.3
11:47:28 AM	No	67.8	77.9	71.3	60.4
11:48:28 AM	No	71.1	80.6	75.3	60.8
11:49:28 AM	No	72.5	78.9	77.3	62.7
11:50:28 AM	No	69.0	76.9	75.0	60.3
11:51:28 AM	No	75.1	84.6	79.2	61.2
11:52:28 AM	No	70.2	78.2	74.5	62.3
11:53:28 AM	No	66.5	75.1	70.6	59.6
11:54:28 AM	No	72.4	81.0	76.3	60.3
11:55:28 AM	No	71.9	85.0	76.5	60.1
11:56:28 AM	No		87.5	85.0	64.8
11:57:28 AM	No	71.4	81.6	75.0	62.7
11:58:28 AM	No	69.5	77.5	73.8	62.7
11:59:28 AM	No	67.9	72.8	70.5	65.2
12:00:28 PM	No	70.4	78.4	73.6	63.3
		71.0			

Time	Overload	Leq	Lmax	L10	L90
10:22:29 PM	No	69.2	77.3	73.9	59.6
10:23:29 PM	No	68.8	77.8	73.4	57.4
10:24:29 PM	No	68.4	79.4	71.9	58.0
10:25:29 PM	No	69.3	78.0	74.7	58.8
10:26:29 PM	No	66.5	77.3	70.5	57.9
10:27:29 PM	No	66.7	77.5	72.0	57.4
10:28:29 PM	No	65.0	72.8	69.7	57.7
10:29:29 PM	No	68.5	77.6	73.0	60.4
10:30:29 PM	No	69.8	81.2	74.2	57.9
10:31:29 PM	No	69.2	76.7	73.6	57.7
10:32:29 PM	No	67.6	76.9	72.3	57.1
10:33:29 PM	No	68.0	77.9	72.9	57.4
10:34:29 PM	No	67.2	77.8	72.6	56.6
10:35:29 PM	No	70.2	80.2	75.2	57.8
10:36:29 PM	No	68.8	79.7	73.8	57.9
		68.4			

AES
Acoustical Engineering Services

Location: R3
Date: 11/13/2019

Time	Overload	Leq	Lmax	L10	L90
10:05:04 AM	No	69.3	78.6	71.8	63.7
10:06:04 AM	No	68.5	72.6	71.5	60.0
10:07:04 AM	No	66.4	71.6	70.2	59.9
10:08:04 AM	No	68.0	74.3	72.1	59.8
10:09:04 AM	No	62.5	73.4	65.8	59.1
10:10:04 AM	No	68.6	75.8	72.9	60.6
10:11:04 AM	No	61.9	66.9	64.1	59.8
10:12:04 AM	No	67.1	76.0	70.5	60.3
10:13:04 AM	No	66.7	74.0	69.7	60.6
10:14:04 AM	No	64.8	70.9	68.8	60.8
10:15:04 AM	No	69.2	75.0	72.4	63.1
10:16:04 AM	No	67.6	71.4	70.3	63.1
10:17:04 AM	No	65.8	73.7	70.1	61.1
10:18:04 AM	No	69.7	80.1	73.9	61.1
10:19:04 AM	No	66.1	70.7	69.2	60.9
		67.3			

Time	Overload	Leq	Lmax	L10	L90
10:40:12 PM	No	62.3	68.6	65.6	57.9
10:41:12 PM	No	67.3	76.7	70.3	59.8
10:42:12 PM	No	66.8	74.2	70.7	62.1
10:43:12 PM	No	62.6	69.1	65.9	58.4
10:44:12 PM	No	60.5	64.1	62.9	58.1
10:45:12 PM	No	63.0	70.1	67.0	58.4
10:46:12 PM	No	62.3	71.1	64.7	58.7
10:47:12 PM	No	65.1	74.5	68.4	59.2
10:48:12 PM	No	62.3	67.1	64.8	59.4
10:49:12 PM	No	61.3	65.1	63.7	59.0
10:50:12 PM	No	62.3	66.0	63.8	60.8
10:51:12 PM	No	63.9	74.0	64.5	60.0
10:52:12 PM	No	62.6	69.1	65.8	59.2
10:53:12 PM	No	62.8	70.4	66.9	58.4
10:54:12 PM	No	68.1	77.9	72.1	60.4
		64.2			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R4
Date: 11/13/2019

Time	Overload	Leq	Lmax	L10	L90
10:33:11 AM	No	65.1	70.3	69.7	59.5
10:34:11 AM	No	67.8	75.3	72.0	57.8
10:35:11 AM	No	65.8	71.0	68.8	61.5
10:36:11 AM	No	65.8	71.2	69.8	59.7
10:37:11 AM	No	65.9	70.5	68.9	60.8
10:38:11 AM	No	70.4	81.7	73.2	60.4
10:39:11 AM	No	65.0	72.6	67.8	58.8
10:40:11 AM	No	68.3	74.2	71.9	62.5
10:41:11 AM	No	66.1	72.6	69.6	60.8
10:42:11 AM	No	65.1	72.7	69.1	60.8
10:43:11 AM	No	67.7	77.1	70.7	60.0
10:44:11 AM	No	69.1	77.2	74.9	61.0
10:45:11 AM	No	66.1	73.8	70.1	60.9
10:46:11 AM	No	66.5	72.0	70.9	58.3
10:47:11 AM	No	68.1	77.3	72.4	57.2
		67.2			

Time	Overload	Leq	Lmax	L10	L90
10:04:55 PM	No	65.1	73.6	66.8	62.5
10:05:55 PM	No	63.9	70.9	66.6	61.8
10:06:55 PM	No	64.7	69.7	68.0	62.0
10:07:55 PM	No	64.2	68.8	67.3	61.8
10:08:55 PM	No	65.5	70.5	68.5	61.5
10:09:55 PM	No	63.6	69.8	66.5	60.0
10:10:55 PM	No	66.5	77.6	69.7	57.1
10:11:55 PM	No	63.1	67.9	66.6	57.7
10:12:55 PM	No	69.7	79.0	73.4	61.0
10:13:55 PM	No	63.8	71.6	67.4	58.8
10:14:55 PM	No	66.5	74.9	70.5	59.6
10:15:55 PM	No	66.0	70.7	69.4	59.9
10:16:55 PM	No	61.9	66.7	65.6	57.2
10:17:55 PM	No	61.2	67.8	63.4	57.2
10:18:55 PM	No				
		65.2			

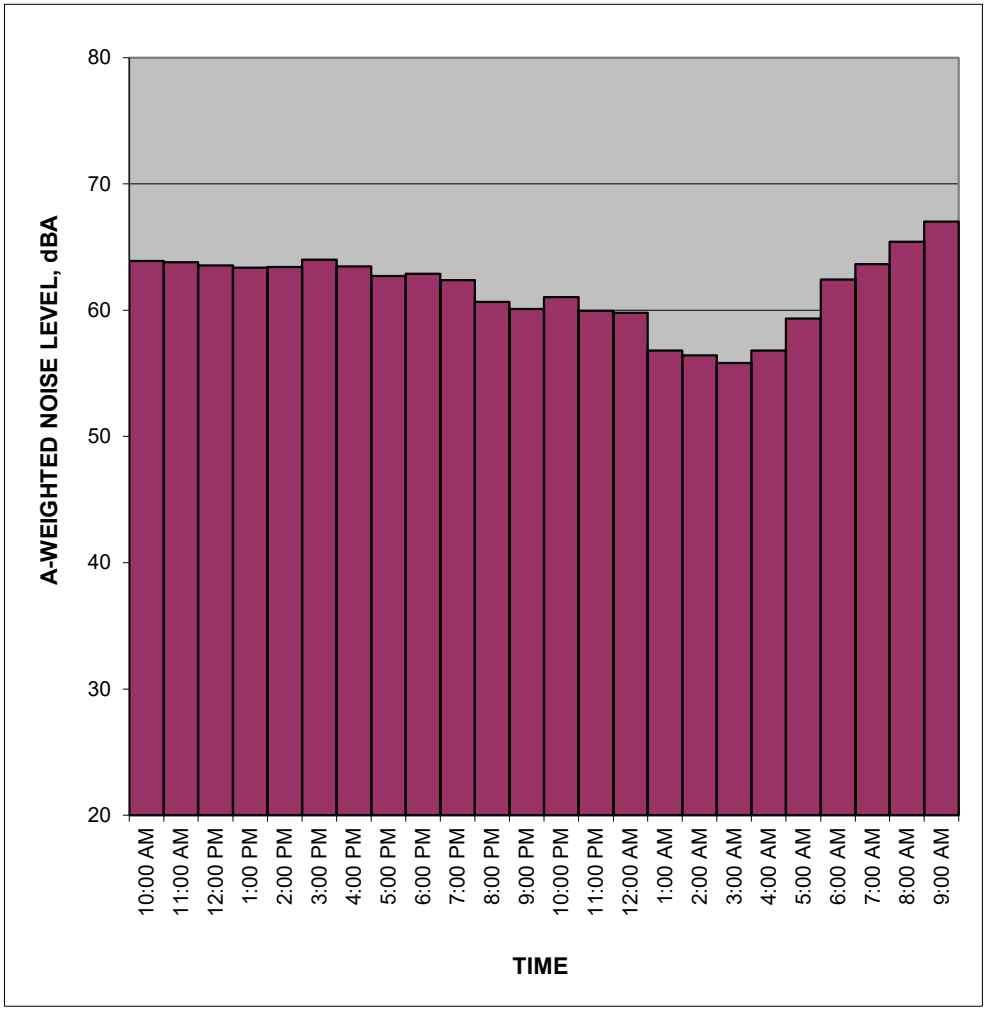
Measured Ambient Noise Levels

AES
Acoustical Engineering Services

Project: Angels Landing
Location: R6
Sources: Ambient

Date: 11/13 to 11/14/19

TIME	HNL, dB(A)
10:00 AM	63.9
11:00 AM	63.8
12:00 PM	63.5
1:00 PM	63.4
2:00 PM	63.4
3:00 PM	64.0
4:00 PM	63.5
5:00 PM	62.7
6:00 PM	62.9
7:00 PM	62.4
8:00 PM	60.7
9:00 PM	60.1
10:00 PM	61.0
11:00 PM	60.0
12:00 AM	59.8
1:00 AM	56.8
2:00 AM	56.4
3:00 AM	55.8
4:00 AM	56.8
5:00 AM	59.3
6:00 AM	62.4
7:00 AM	63.6
8:00 AM	65.4
9:00 AM	67.0
CNEL, dB(A):	**67.0**



NOTES:

Daytime Average: 63.7 dBA Leq
Nighttime Average: 59.3 dBA Leq

Construction Noise & Vibration Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Concrete/Industrial Saw	1	90	20%	110	0
Excavator	1	81	40%	110	0
Crawler Tractor	1	84	40%	135	0
Crushing/Proc. Equipment	1	85	50%	135	0
Dumpster/Tenders	1	76	40%	160	0
Generator Set	1	81	50%	160	0
Tractors/Loaders/Backhoes	1	84	40%	185	0
Rubber Tired Dozers	1	82	40%	185	0
Air Compressor	1	78	40%	210	0
Tractors/Loaders/Backhoes	1	84	40%	210	0
Rubber Tired Dozers	1	82	40%	235	0
Tractors/Loaders/Backhoes	1	84	40%	235	0
Rubber Tired Dozers	1	82	40%	260	0
	13				

Receptor: ***R1***

Results:

1-hour Leq: 80.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	110	0
Excavator	1	81	40%	110	0
Plate Compactors	1	83	20%	135	0
Dumpster/Tenders	1	76	40%	135	0
Tractors/Loaders/Backhoes	1	79	40%	160	0
Sweeper/Scrubbers	1	82	10%	160	0
Air Compressor	1	78	40%	185	0
Tractors/Loaders/Backhoes	1	84	40%	185	0
Plate Compactors	1	83	20%	210	0
	9				

Receptor: ***R1***

Results:

1-hour Leq: 77.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	110	0
Bore/Drill Rig	1	84	20%	110	0
Plate Compactors	2	83	20%	135	0
Dumpster/Tenders	1	76	40%	135	0
Tractors/Loaders/Backhoes	1	79	40%	160	0
Sweeper/Scrubbers	1	82	10%	160	0
Rough Terrain Forklift	1	83	40%	185	0
Tractors/Loaders/Backhoes	1	84	40%	185	0
Crane	1	81	16%	210	0
Excavator	3	81	40%	210	0
Rubber Tired Loader	2	79	40%	235	0
Skid Steer Loader	1	79	40%	235	0
Generator Set	1	81	50%	260	0
Crawler Tractor	1	84	40%	260	0
Bore/Drill Rig	1	84	20%	260	0
	19				

Receptor: ***R1***

Results:

1-hour Leq: 79.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Drainage/Utilities/Trenching***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rough Terrain Forklift	1	83	40%	110	0
Trencher	1	80	50%	110	0
Excavator	1	81	40%	135	0
Dumpster/Tenders	1	76	40%	135	0
	4				

Receptor: ***R1***

Results:

1-hour Leq: 75.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	110	0
Plate Compactors	1	83	20%	110	0
Crane (Mobile)	1	81	16%	135	0
Rough Terrain Forklifts	1	83	40%	135	0
Welders	1	74	40%	160	0
Dumpster/Tenders	1	76	40%	160	0
Generator Set	1	81	50%	185	0
Air Compressor	1	78	40%	185	0
Tractors/Loaders/Backhoes	1	84	40%	210	0
Rough Terrain Forklifts	1	83	40%	210	0
Dumpster/Tenders	1	76	40%	235	0
Generator Set	1	81	50%	235	0
Air Compressor	1	78	40%	260	0
Tractors/Loaders/Backhoes	1	84	40%	260	0
	14				

Receptor: ***R1***

Results:

1-hour Leq: 78.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Building Construction (to Podium Level)***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	110	0
Plate Compactors	1	83	20%	110	0
Crane (Mobile)	1	81	16%	135	0
Rough Terrain Forklifts	1	83	40%	135	0
Welders	1	74	40%	160	0
Dumpster/Tenders	1	76	40%	160	0
Generator Set	1	81	50%	185	0
Air Compressor	1	78	40%	185	0
Tractors/Loaders/Backhoes	1	84	40%	210	0
Rough Terrain Forklifts	1	83	40%	210	0
Dumpster/Tenders	1	76	40%	235	0
Generator Set	1	81	50%	235	0
Air Compressor	1	78	40%	260	0
Tractors/Loaders/Backhoes	1	84	40%	260	0
	14				

Receptor: ***R1***

Results:

1-hour Leq: 78.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Tractors/Loaders/Backhoes	1	84	40%	110	0
Plate Compactors	1	83	20%	110	0
Crane (Mobile)	1	81	16%	135	0
Rough Terrain Forklifts	1	83	40%	135	0
Welders	1	74	40%	160	0
Dumpster/Tenders	1	76	40%	160	0
Generator Set	1	81	50%	185	0
Air Compressor	1	78	40%	185	0
Trencher	1	80	50%	210	0
Rough Terrain Forklifts	3	83	40%	210	0
Dumpster/Tenders	1	76	40%	235	0
Generator Set	1	81	50%	235	0
Air Compressor	2	78	40%	260	0
Pump	2	81	50%	260	0
Plate Compactors	3	83	20%	260	0
	21				

Receptor: ***R1***

Results:

1-hour Leq: 79.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Surfacing Equipment	1	85	50%	110	0
Signal Board	1	73	50%	110	0
Roller	1	80	20%	135	0
Air Compressor	1	78	40%	135	0
Surfacing Equipment	1	85	50%	160	0
	5				

Receptor: ***R1***

Results:

1-hour Leq: 77.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Concrete/Industrial Saw	1	90	20%	75	0
Excavator	1	81	40%	75	0
Crawler Tractor	1	84	40%	95	0
Crushing/Proc. Equipment	1	85	50%	95	0
Dumpster/Tenders	1	76	40%	115	0
Generator Set	1	81	50%	115	0
Tractors/Loaders/Backhoes	1	84	40%	135	0
Rubber Tired Dozers	1	82	40%	135	0
Air Compressor	1	78	40%	155	0
Tractors/Loaders/Backhoes	1	84	40%	155	0
Rubber Tired Dozers	1	82	40%	175	0
Tractors/Loaders/Backhoes	1	84	40%	175	0
Rubber Tired Dozers	1	82	40%	195	0
	13				

Receptor: ***R2***

Results:

1-hour Leq: 84.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	75	0
Excavator	1	81	40%	100	0
Plate Compactors	1	83	20%	100	0
Dumpster/Tenders	1	76	40%	125	0
Tractors/Loaders/Backhoes	1	79	40%	125	0
Sweeper/Scrubbers	1	82	10%	150	0
Air Compressor	1	78	40%	150	0
Tractors/Loaders/Backhoes	1	84	40%	175	0
Plate Compactors	1	83	20%	175	0
	9				

Receptor: ***R2***

Results:

1-hour Leq: 79.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	75	0
Bore/Drill Rig	1	84	20%	100	0
Plate Compactors	2	83	20%	100	0
Dumpster/Tenders	1	76	40%	125	0
Tractors/Loaders/Backhoes	1	79	40%	125	0
Sweeper/Scrubbers	1	82	10%	150	0
Rough Terrain Forklift	1	83	40%	150	0
Tractors/Loaders/Backhoes	1	84	40%	175	0
Crane	1	81	16%	175	0
Excavator	3	81	40%	200	0
Rubber Tired Loader	2	79	40%	200	0
Skid Steer Loader	1	79	40%	225	0
Generator Set	1	81	50%	225	0
Crawler Tractor	1	84	40%	225	0
Bore/Drill Rig	1	84	20%	225	0
	19				

Receptor: ***R2***

Results:

1-hour Leq: 81.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Drainage/Utilities/Trenching***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rough Terrain Forklift	1	83	40%	75	0
Trencher	1	80	50%	100	0
Excavator	1	81	40%	100	0
Dumpster/Tenders	1	76	40%	125	0
	4				

Receptor: ***R2***

Results:

1-hour Leq: 78.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	75	0
Plate Compactors	1	83	20%	100	0
Crane (Mobile)	1	81	16%	100	0
Rough Terrain Forklifts	1	83	40%	125	0
Welders	1	74	40%	125	0
Dumpster/Tenders	1	76	40%	150	0
Generator Set	1	81	50%	150	0
Air Compressor	1	78	40%	175	0
Tractors/Loaders/Backhoes	1	84	40%	175	0
Rough Terrain Forklifts	1	83	40%	200	0
Dumpster/Tenders	1	76	40%	200	0
Generator Set	1	81	50%	225	0
Air Compressor	1	78	40%	225	0
Tractors/Loaders/Backhoes	1	84	40%	225	0
	14				

Receptor: ***R2***

Results:

1-hour Leq: 80.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Building Construction (to Podium Level)***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	75	0
Plate Compactors	1	83	20%	100	0
Crane (Mobile)	1	81	16%	100	0
Rough Terrain Forklifts	1	83	40%	125	0
Welders	1	74	40%	125	0
Dumpster/Tenders	1	76	40%	150	0
Generator Set	1	81	50%	150	0
Air Compressor	1	78	40%	175	0
Tractors/Loaders/Backhoes	1	84	40%	175	0
Rough Terrain Forklifts	1	83	40%	200	0
Dumpster/Tenders	1	76	40%	200	0
Generator Set	1	81	50%	225	0
Air Compressor	1	78	40%	225	0
Tractors/Loaders/Backhoes	1	84	40%	225	0
	14				

Receptor: ***R2***

Results:

1-hour Leq: 80.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Tractors/Loaders/Backhoes	1	84	40%	75	0
Plate Compactors	1	83	20%	100	0
Crane (Mobile)	1	81	16%	100	0
Rough Terrain Forklifts	1	83	40%	125	0
Welders	1	74	40%	125	0
Dumpster/Tenders	1	76	40%	150	0
Generator Set	1	81	50%	150	0
Air Compressor	1	78	40%	175	0
Trencher	1	80	50%	175	0
Rough Terrain Forklifts	3	83	40%	200	0
Dumpster/Tenders	1	76	40%	200	0
Generator Set	1	81	50%	225	0
Air Compressor	2	78	40%	225	0
Pump	2	81	50%	225	0
Plate Compactors	3	83	20%	225	0
	21				

Receptor: ***R2***

Results:

1-hour Leq: 80.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Surfacing Equipment	1	85	50%	75	0
Signal Board	1	73	50%	100	0
Roller	1	80	20%	100	0
Air Compressor	1	78	40%	125	0
Surfacing Equipment	1	85	50%	125	0
	5				

Receptor: ***R2***

Results:

1-hour Leq: 80.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Concrete/Industrial Saw	1	90	20%	90	0
Excavator	1	81	40%	90	0
Crawler Tractor	1	84	40%	110	0
Crushing/Proc. Equipment	1	85	50%	110	0
Dumpster/Tenders	1	76	40%	130	0
Generator Set	1	81	50%	130	0
Tractors/Loaders/Backhoes	1	84	40%	150	0
Rubber Tired Dozers	1	82	40%	150	0
Air Compressor	1	78	40%	170	0
Tractors/Loaders/Backhoes	1	84	40%	170	0
Rubber Tired Dozers	1	82	40%	190	0
Tractors/Loaders/Backhoes	1	84	40%	190	0
Rubber Tired Dozers	1	82	40%	210	0
	13				

Receptor: ***R3***

Results:

1-hour Leq: 82.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	90	0
Excavator	1	81	40%	90	0
Plate Compactors	1	83	20%	110	0
Dumpster/Tenders	1	76	40%	110	0
Tractors/Loaders/Backhoes	1	79	40%	130	0
Sweeper/Scrubbers	1	82	10%	130	0
Air Compressor	1	78	40%	150	0
Tractors/Loaders/Backhoes	1	84	40%	150	0
Plate Compactors	1	83	20%	170	0
	9				

Receptor: ***R3***

Results:

1-hour Leq: 79.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	90	0
Bore/Drill Rig	1	84	20%	90	0
Plate Compactors	2	83	20%	110	0
Dumpster/Tenders	1	76	40%	110	0
Tractors/Loaders/Backhoes	1	79	40%	130	0
Sweeper/Scrubbers	1	82	10%	130	0
Rough Terrain Forklift	1	83	40%	150	0
Tractors/Loaders/Backhoes	1	84	40%	150	0
Crane	1	81	16%	170	0
Excavator	3	81	40%	170	0
Rubber Tired Loader	2	79	40%	190	0
Skid Steer Loader	1	79	40%	190	0
Generator Set	1	81	50%	210	0
Crawler Tractor	1	84	40%	210	0
Bore/Drill Rig	1	84	20%	210	0
	19				

Receptor: ***R3***

Results:

1-hour Leq: 81.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Drainage/Utilities/Trenching***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rough Terrain Forklift	1	83	40%	90	0
Trencher	1	80	50%	90	0
Excavator	1	81	40%	110	0
Dumpster/Tenders	1	76	40%	110	0
	4				

Receptor: ***R3***

Results:

1-hour Leq: 77.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	90	0
Plate Compactors	1	83	20%	90	0
Crane (Mobile)	1	81	16%	110	0
Rough Terrain Forklifts	1	83	40%	110	0
Welders	1	74	40%	130	0
Dumpster/Tenders	1	76	40%	130	0
Generator Set	1	81	50%	150	0
Air Compressor	1	78	40%	150	0
Tractors/Loaders/Backhoes	1	84	40%	170	0
Rough Terrain Forklifts	1	83	40%	170	0
Dumpster/Tenders	1	76	40%	190	0
Generator Set	1	81	50%	190	0
Air Compressor	1	78	40%	210	0
Tractors/Loaders/Backhoes	1	84	40%	210	0
	14				

Receptor: ***R3***

Results:

1-hour Leq: 80.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Building Construction (to Podium Level)***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	90	0
Plate Compactors	1	83	20%	90	0
Crane (Mobile)	1	81	16%	110	0
Rough Terrain Forklifts	1	83	40%	110	0
Welders	1	74	40%	130	0
Dumpster/Tenders	1	76	40%	130	0
Generator Set	1	81	50%	150	0
Air Compressor	1	78	40%	150	0
Tractors/Loaders/Backhoes	1	84	40%	170	0
Rough Terrain Forklifts	1	83	40%	170	0
Dumpster/Tenders	1	76	40%	190	0
Generator Set	1	81	50%	190	0
Air Compressor	1	78	40%	210	0
Tractors/Loaders/Backhoes	1	84	40%	210	0
	14				

Receptor: ***R3***

Results:

1-hour Leq: 80.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Tractors/Loaders/Backhoes	1	84	40%	90	0
Plate Compactors	1	83	20%	90	0
Crane (Mobile)	1	81	16%	110	0
Rough Terrain Forklifts	1	83	40%	110	0
Welders	1	74	40%	130	0
Dumpster/Tenders	1	76	40%	130	0
Generator Set	1	81	50%	150	0
Air Compressor	1	78	40%	150	0
Trencher	1	80	50%	170	0
Rough Terrain Forklifts	3	83	40%	170	0
Dumpster/Tenders	1	76	40%	190	0
Generator Set	1	81	50%	190	0
Air Compressor	2	78	40%	210	0
Pump	2	81	50%	210	0
Plate Compactors	3	83	20%	210	0
	21				

Receptor: ***R3***

Results:

1-hour Leq: 81.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Surfacing Equipment	1	85	50%	90	0
Signal Board	1	73	50%	90	0
Roller	1	80	20%	110	0
Air Compressor	1	78	40%	110	0
Surfacing Equipment	1	85	50%	130	0
	5				

Receptor: ***R3***

Results:

1-hour Leq: 79.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Concrete/Industrial Saw	1	90	20%	230	0
Excavator	1	81	40%	230	0
Crawler Tractor	1	84	40%	250	0
Crushing/Proc. Equipment	1	85	50%	250	0
Dumpster/Tenders	1	76	40%	270	0
Generator Set	1	81	50%	270	0
Tractors/Loaders/Backhoes	1	84	40%	290	0
Rubber Tired Dozers	1	82	40%	290	0
Air Compressor	1	78	40%	310	0
Tractors/Loaders/Backhoes	1	84	40%	310	0
Rubber Tired Dozers	1	82	40%	330	0
Tractors/Loaders/Backhoes	1	84	40%	330	0
Rubber Tired Dozers	1	82	40%	350	0
	13				

Receptor: ***R4***

Results:

1-hour Leq: 75.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	230	0
Excavator	1	81	40%	230	0
Plate Compactors	1	83	20%	250	0
Dumpster/Tenders	1	76	40%	250	0
Tractors/Loaders/Backhoes	1	79	40%	270	0
Sweeper/Scrubbers	1	82	10%	270	0
Air Compressor	1	78	40%	290	0
Tractors/Loaders/Backhoes	1	84	40%	290	0
Plate Compactors	1	83	20%	310	0
	9				

Receptor: ***R4***

Results:

1-hour Leq: 72.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	230	0
Bore/Drill Rig	1	84	20%	230	0
Plate Compactors	2	83	20%	250	0
Dumpster/Tenders	1	76	40%	250	0
Tractors/Loaders/Backhoes	1	79	40%	270	0
Sweeper/Scrubbers	1	82	10%	270	0
Rough Terrain Forklift	1	83	40%	290	0
Tractors/Loaders/Backhoes	1	84	40%	290	0
Crane	1	81	16%	310	0
Excavator	3	81	40%	310	0
Rubber Tired Loader	2	79	40%	330	0
Skid Steer Loader	1	79	40%	330	0
Generator Set	1	81	50%	350	0
Crawler Tractor	1	84	40%	350	0
Bore/Drill Rig	1	84	20%	350	0
	19				

Receptor: ***R4***

Results:

1-hour Leq: 74.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Drainage/Utilities/Trenching***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rough Terrain Forklift	1	83	40%	230	0
Trencher	1	80	50%	230	0
Excavator	1	81	40%	250	0
Dumpster/Tenders	1	76	40%	250	0
	4				

Receptor: ***R4***

Results:

1-hour Leq: 69.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	230	0
Plate Compactors	1	83	20%	230	0
Crane (Mobile)	1	81	16%	250	0
Rough Terrain Forklifts	1	83	40%	250	0
Welders	1	74	40%	270	0
Dumpster/Tenders	1	76	40%	270	0
Generator Set	1	81	50%	290	0
Air Compressor	1	78	40%	290	0
Tractors/Loaders/Backhoes	1	84	40%	310	0
Rough Terrain Forklifts	1	83	40%	310	0
Dumpster/Tenders	1	76	40%	330	0
Generator Set	1	81	50%	330	0
Air Compressor	1	78	40%	350	0
Tractors/Loaders/Backhoes	1	84	40%	350	0
	14				

Receptor: ***R4***

Results:

1-hour Leq: 73.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Building Construction (to Podium Level)***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	230	0
Plate Compactors	1	83	20%	230	0
Crane (Mobile)	1	81	16%	250	0
Rough Terrain Forklifts	1	83	40%	250	0
Welders	1	74	40%	270	0
Dumpster/Tenders	1	76	40%	270	0
Generator Set	1	81	50%	290	0
Air Compressor	1	78	40%	290	0
Tractors/Loaders/Backhoes	1	84	40%	310	0
Rough Terrain Forklifts	1	83	40%	310	0
Dumpster/Tenders	1	76	40%	330	0
Generator Set	1	81	50%	330	0
Air Compressor	1	78	40%	350	0
Tractors/Loaders/Backhoes	1	84	40%	350	0
	14				

Receptor: ***R4***

Results:

1-hour Leq: 73.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Tractors/Loaders/Backhoes	1	84	40%	230	0
Plate Compactors	1	83	20%	230	0
Crane (Mobile)	1	81	16%	250	0
Rough Terrain Forklifts	1	83	40%	250	0
Welders	1	74	40%	270	0
Dumpster/Tenders	1	76	40%	270	0
Generator Set	1	81	50%	290	0
Air Compressor	1	78	40%	290	0
Trencher	1	80	50%	310	0
Rough Terrain Forklifts	3	83	40%	310	0
Dumpster/Tenders	1	76	40%	330	0
Generator Set	1	81	50%	330	0
Air Compressor	2	78	40%	350	0
Pump	2	81	50%	350	0
Plate Compactors	3	83	20%	350	0
	21				

Receptor: ***R4***

Results:

1-hour Leq: 74.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Surfacing Equipment	1	85	50%	230	0
Signal Board	1	73	50%	230	0
Roller	1	80	20%	250	0
Air Compressor	1	78	40%	250	0
Surfacing Equipment	1	85	50%	270	0
	5				

Receptor: ***R4***

Results:

1-hour Leq: 71.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Concrete/Industrial Saw	1	90	20%	50	10
Excavator	1	81	40%	50	10
Crawler Tractor	1	84	40%	75	10
Crushing/Proc. Equipment	1	85	50%	75	10
Dumpster/Tenders	1	76	40%	100	10
Generator Set	1	81	50%	100	10
Tractors/Loaders/Backhoes	1	84	40%	100	10
Rubber Tired Dozers	1	82	40%	100	10
Air Compressor	1	78	40%	125	10
Tractors/Loaders/Backhoes	1	84	40%	125	10
Rubber Tired Dozers	1	82	40%	150	10
Tractors/Loaders/Backhoes	1	84	40%	150	10
Rubber Tired Dozers	1	82	40%	175	10
	13				

Receptor: ***R5***

Results:

1-hour Leq: 76.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	50	10
Excavator	1	81	40%	50	10
Plate Compactors	1	83	20%	75	10
Dumpster/Tenders	1	76	40%	75	10
Tractors/Loaders/Backhoes	1	79	40%	100	10
Sweeper/Scrubbers	1	82	10%	100	10
Air Compressor	1	78	40%	100	10
Tractors/Loaders/Backhoes	1	84	40%	100	10
Plate Compactors	1	83	20%	125	10
	9				

Receptor: ***R5***

Results:

1-hour Leq: 73.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	50	10
Bore/Drill Rig	1	84	20%	50	10
Plate Compactors	2	83	20%	75	10
Dumpster/Tenders	1	76	40%	75	10
Tractors/Loaders/Backhoes	1	79	40%	100	10
Sweeper/Scrubbers	1	82	10%	100	10
Rough Terrain Forklift	1	83	40%	100	10
Tractors/Loaders/Backhoes	1	84	40%	100	10
Crane	1	81	16%	125	10
Excavator	3	81	40%	125	10
Rubber Tired Loader	2	79	40%	150	10
Skid Steer Loader	1	79	40%	150	10
Generator Set	1	81	50%	175	10
Crawler Tractor	1	84	40%	175	10
Bore/Drill Rig	1	84	20%	175	10
	19				

Receptor: ***R5***

Results:

1-hour Leq: 74.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Drainage/Utilities/Trenching***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rough Terrain Forklift	1	83	40%	50	10
Trencher	1	80	50%	50	10
Excavator	1	81	40%	75	10
Dumpster/Tenders	1	76	40%	75	10
	4				

Receptor: ***R5***

Results:

1-hour Leq: 72.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	50	10
Plate Compactors	1	83	20%	50	10
Crane (Mobile)	1	81	16%	75	10
Rough Terrain Forklifts	1	83	40%	75	10
Welders	1	74	40%	100	10
Dumpster/Tenders	1	76	40%	100	10
Generator Set	1	81	50%	100	10
Air Compressor	1	78	40%	100	10
Tractors/Loaders/Backhoes	1	84	40%	125	10
Rough Terrain Forklifts	1	83	40%	125	10
Dumpster/Tenders	1	76	40%	150	10
Generator Set	1	81	50%	150	10
Air Compressor	1	78	40%	175	10
Tractors/Loaders/Backhoes	1	84	40%	175	10
	14				

Receptor: ***R5***

Results:

1-hour Leq: 74.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Building Construction (to Podium Level)***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	50	10
Plate Compactors	1	83	20%	50	10
Crane (Mobile)	1	81	16%	75	10
Rough Terrain Forklifts	1	83	40%	75	10
Welders	1	74	40%	100	10
Dumpster/Tenders	1	76	40%	100	10
Generator Set	1	81	50%	100	10
Air Compressor	1	78	40%	100	10
Tractors/Loaders/Backhoes	1	84	40%	125	10
Rough Terrain Forklifts	1	83	40%	125	10
Dumpster/Tenders	1	76	40%	150	10
Generator Set	1	81	50%	150	10
Air Compressor	1	78	40%	175	10
Tractors/Loaders/Backhoes	1	84	40%	175	10
	14				

Receptor: ***R5***

Results:

1-hour Leq: 74.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Tractors/Loaders/Backhoes	1	84	40%	50	10
Plate Compactors	1	83	20%	50	10
Crane (Mobile)	1	81	16%	75	10
Rough Terrain Forklifts	1	83	40%	75	10
Welders	1	74	40%	100	10
Dumpster/Tenders	1	76	40%	100	10
Generator Set	1	81	50%	100	10
Air Compressor	1	78	40%	100	10
Trencher	1	80	50%	125	10
Rough Terrain Forklifts	3	83	40%	125	10
Dumpster/Tenders	1	76	40%	150	10
Generator Set	1	81	50%	150	10
Air Compressor	2	78	40%	175	10
Pump	2	81	50%	175	10
Plate Compactors	3	83	20%	175	10
	21				

Receptor: ***R5***

Results:

1-hour Leq: 74.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Surfacing Equipment	1	85	50%	50	10
Signal Board	1	73	50%	50	10
Roller	1	80	20%	75	10
Air Compressor	1	78	40%	75	10
Surfacing Equipment	1	85	50%	100	10
	5				

Receptor: ***R5***

Results:

1-hour Leq: 73.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Concrete/Industrial Saw	1	90	20%	20	0
Excavator	1	81	40%	45	0
Crawler Tractor	1	84	40%	45	0
Crushing/Proc. Equipment	1	85	50%	70	0
Dumpster/Tenders	1	76	40%	70	0
Generator Set	1	81	50%	95	0
Tractors/Loaders/Backhoes	1	84	40%	95	0
Rubber Tired Dozers	1	82	40%	120	0
Air Compressor	1	78	40%	120	0
Tractors/Loaders/Backhoes	1	84	40%	145	0
Rubber Tired Dozers	1	82	40%	145	0
Tractors/Loaders/Backhoes	1	84	40%	170	0
Rubber Tired Dozers	1	82	40%	170	0
	13				

Receptor: ***R6***

Results:

1-hour Leq: 92.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	20	0
Excavator	1	81	40%	20	0
Plate Compactors	1	83	20%	45	0
Dumpster/Tenders	1	76	40%	45	0
Tractors/Loaders/Backhoes	1	79	40%	70	0
Sweeper/Scrubbers	1	82	10%	70	0
Air Compressor	1	78	40%	95	0
Tractors/Loaders/Backhoes	1	84	40%	95	0
Plate Compactors	1	83	20%	120	0
	9				

Receptor: ***R6***

Results:

1-hour Leq: 90.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	20	0
Bore/Drill Rig	1	84	20%	20	0
Plate Compactors	2	83	20%	45	0
Dumpster/Tenders	1	76	40%	45	0
Tractors/Loaders/Backhoes	1	79	40%	70	0
Sweeper/Scrubbers	1	82	10%	70	0
Rough Terrain Forklift	1	83	40%	95	0
Tractors/Loaders/Backhoes	1	84	40%	95	0
Crane	1	81	16%	120	0
Excavator	3	81	40%	120	0
Rubber Tired Loader	2	79	40%	145	0
Skid Steer Loader	1	79	40%	145	0
Generator Set	1	81	50%	170	0
Crawler Tractor	1	84	40%	170	0
Bore/Drill Rig	1	84	20%	170	0
	19				

Receptor: ***R6***

Results:

1-hour Leq: 90.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Drainage/Utilities/Trenching***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rough Terrain Forklift	1	83	40%	20	0
Trencher	1	80	50%	20	0
Excavator	1	81	40%	45	0
Dumpster/Tenders	1	76	40%	45	0
	4				

Receptor: ***R6***

Results:

1-hour Leq: 89.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	20	0
Plate Compactors	1	83	20%	20	0
Crane (Mobile)	1	81	16%	45	0
Rough Terrain Forklifts	1	83	40%	45	0
Welders	1	74	40%	70	0
Dumpster/Tenders	1	76	40%	70	0
Generator Set	1	81	50%	95	0
Air Compressor	1	78	40%	95	0
Tractors/Loaders/Backhoes	1	84	40%	120	0
Rough Terrain Forklifts	1	83	40%	120	0
Dumpster/Tenders	1	76	40%	145	0
Generator Set	1	81	50%	145	0
Air Compressor	1	78	40%	170	0
Tractors/Loaders/Backhoes	1	84	40%	170	0
	14				

Receptor: ***R6***

Results:

1-hour Leq: 90.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Building Construction (to Podium Level)***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	20	0
Plate Compactors	1	83	20%	20	0
Crane (Mobile)	1	81	16%	45	0
Rough Terrain Forklifts	1	83	40%	45	0
Welders	1	74	40%	70	0
Dumpster/Tenders	1	76	40%	70	0
Generator Set	1	81	50%	95	0
Air Compressor	1	78	40%	95	0
Tractors/Loaders/Backhoes	1	84	40%	120	0
Rough Terrain Forklifts	1	83	40%	120	0
Dumpster/Tenders	1	76	40%	145	0
Generator Set	1	81	50%	145	0
Air Compressor	1	78	40%	170	0
Tractors/Loaders/Backhoes	1	84	40%	170	0
	14				

Receptor: ***R6***

Results:

1-hour Leq: 90.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

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
Tractors/Loaders/Backhoes	1	84	40%	20	0
Plate Compactors	1	83	20%	20	0
Crane (Mobile)	1	81	16%	45	0
Rough Terrain Forklifts	1	83	40%	45	0
Welders	1	74	40%	70	0
Dumpster/Tenders	1	76	40%	70	0
Generator Set	1	81	50%	95	0
Air Compressor	1	78	40%	95	0
Trencher	1	80	50%	120	0
Rough Terrain Forklifts	3	83	40%	120	0
Dumpster/Tenders	1	76	40%	145	0
Generator Set	1	81	50%	145	0
Air Compressor	2	78	40%	170	0
Pump	2	81	50%	170	0
Plate Compactors	3	83	20%	170	0
	21				

Receptor: ***R6***

Results:

1-hour Leq: 90.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Surfacing Equipment	1	85	50%	20	0
Signal Board	1	73	50%	20	0
Roller	1	80	20%	45	0
Air Compressor	1	78	40%	45	0
Surfacing Equipment	1	85	50%	70	0
	5				

Receptor: ***R6***

Results:

1-hour Leq: 90.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
Acoustical Engineering Services

Project: Angels Landing Project

Off-Site Construction Trucks

Phase	Maximum Number of Truck One Way Trips (delivery/haul) Per Day	Per Hour (8-hr day)	Worker Trips Daily Trips	Trips during Pk Hr.	Estimated Noise Levels, from TNM MODEL, dBA Leq 3rd St.	4th St.	7th St.	Hills St	Alameda St.
1. Demolition	80	5	30	12	55.2	59.3	--	61.4	--
2. Site Preparation	40	3	20	8	53.0	57.1	--	59.3	--
3. Grading/Excavation	420	35	45	18	63.3	67.4	--	69.6	--
4. Drainage/Utilities/Trenching	10	1	8	4	48.5	52.6	--	54.7	--
5. Mat Foundation	398	17	50	20	60.3	64.4	66.5	66.5	67.3
6. Building Construction (to Podium Level)	100	7	100	40	57.2	61.3	--	63.4	--
7. Building Construction	184	12	850	340	62.1	66.2	--	68.3	--
8. Paving Landscaping	20	2	13	6	51.3	55.4	--	57.6	--
				Ambient, dBA	71.0	71.0	65.3	67.2	72.0
Hauling 6 hours				Significance Criteria, dBA	76.0	76.0	70.3	72.2	77.0
Mat foundation 12 hours									
Trucks are one-way									

Project + Ambient Noise Levels, dBA Leq

	3rd St.	4th St.	7th St.	Hills St	Alameda St.
1. Demolition	71.1	71.3	--	68.2	--
2. Site Preparation	71.1	71.2	--	67.9	--
3. Grading/Excavation	71.7	72.6	--	71.6	--
4. Drainage/Utilities/Trenching	71.0	71.1	--	67.4	--
5. Mat Foundation	71.4	71.9	69.0	69.9	73.3
6. Building Construction (to Podium Level)	71.2	71.4	--	68.7	--
7. Building Construction	71.5	72.2	--	70.8	--
8. Paving Landscaping	71.5	72.2	--	70.8	--
Ambient, dBA	71.0	71.0	65.3	70.8	72.0
Significance Criteria, dBA	76.0	76.0	70.3	75.8	77.0

Increase over Ambient Noise Levels, dBA Leq

	3rd St.	4th St.	7th St.	Hills St	Alameda St.
1. Demolition	0.1	0.3	--	1.0	--
2. Site Preparation	0.1	0.2	--	0.7	--
3. Grading/Excavation	0.7	1.6	--	4.4	--
4. Drainage/Utilities/Trenching	0.0	0.1	--	0.2	--
5. Mat Foundation	0.4	0.9	3.7	2.7	1.3
6. Building Construction (to Podium Level)	0.2	0.4	--	1.5	--
7. Building Construction	0.5	1.2	--	3.6	--
8. Paving Landscaping	0.5	1.2	--	3.6	--
Impact	No	No	No	No	No

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Demo Phase

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 **29 January 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Demo Phase**

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	12	35	0	0	5	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Demo Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Angels Landing Project
RUN: Demo Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receptor at 25 feet	1	1	0.0	61.4	71	61.4	5	----	61.4	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Site Preparation Phase

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 29 January 2020
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Angels Landing Project
RUN: Site Preparation Phase

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	8	35	0	0	3	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Site Preparation Phase

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	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Angels Landing Project
RUN: Site Preparation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receptor at 25 feet	1	1	0.0	59.3	71	59.3	5	----	59.3	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	53.0	66	53.0	10	----	53.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 28 August 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Grading/Excavation Phase

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 August 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Grading/Excavation Phase**

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	18	35	0	0	35	35	0	0	0	0
	point2	2										

Eyestone Environmental **28 August 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Grading/Excavation Phase**

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	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 August 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Angels Landing Project
RUN: Grading/Excavation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	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
Receptor at 25 feet	1	1	0.0	69.6	71	69.6	5	----	69.6	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Drainage/Utilities/Trenching Phase

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 **29 January 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Drainage/Utilities/Trenching Phase**

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	4	35	0	0	1	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Drainage/Utilities/Trenching Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Angels Landing Project
RUN: Drainage/Utilities/Trenching Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receptor at 25 feet	1	1	0.0	54.7	71	54.7	5	----	54.7	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	52.6	66	52.6	10	----	52.6	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	48.5	66	48.5	10	----	48.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Mat Foundation Phase

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 29 January 2020
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Angels Landing Project
RUN: Mat Foundation Phase

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	17	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Mat Foundation Phase

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	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Angels Landing Project
RUN: Mat Foundation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receptor at 25 feet	1	1	0.0	66.5	71	66.5	5	----	66.5	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Mat Foundation Phase

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 **29 January 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Mat Foundation Phase**

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	34	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Mat Foundation Phase

Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Alameda St.	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Angels Landing Project
RUN: Mat Foundation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Alameda St.	10	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0

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

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Building Construction (Podium) Phase

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 29 January 2020
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Angels Landing Project
RUN: Building Construction (Podium) Phase

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	40	35	0	0	7	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Building Construction (Podium) Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Angels Landing Project
RUN: Building Construction (Podium) Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receptor at 25 feet	1	1	0.0	63.4	71	63.4	5	----	63.4	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Building Construction Phase

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 **29 January 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Building Construction Phase**

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	340	35	0	0	12	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Building Construction Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Angels Landing Project
RUN: Building Construction Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	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
Receptor at 25 feet	1	1	0.0	68.3	71	68.3	5	----	68.3	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Paving/Landscaping Phase

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 **29 January 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Paving/Landscaping Phase**

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	6	35	0	0	2	35	0	0	0	0
	point2	2										

Eyestone Environmental 29 January 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Angels Landing Project
RUN: Paving/Landscaping Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

29 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Angels Landing Project
RUN: Paving/Landscaping Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receptor at 25 feet	1	1	0.0	57.6	71	57.6	5	----	57.6	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	55.4	66	55.4	10	----	55.4	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	51.3	66	51.3	10	----	51.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project EIR

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 receptors 25 feet or greater)
n= **1.1** (for receptors less than 25 feet, per Caltrans procedure)

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**	**Cal Plaza to the west**	**Single-story commercial to the east**	**Residential tower to the north**	**Parking Structure to the north**	**Angels Flight to the north**	**12-Story Apt to the south**	**Parking Structure to the south**
		10	**90**	**110**	**20**	**10**	**75**	**75**
Large Bulldozer	0.089	0.244	0.013	0.010	0.114	0.244	0.017	0.017
Caisson Drilling	0.089	0.244	0.013	0.010	0.114	0.244	0.017	0.017
Loaded Trucks	0.076	0.208	0.011	0.008	0.097	0.208	0.015	0.015
Jackhammer	0.035	0.096	0.005	0.004	0.045	0.096	0.007	0.007
Small bulldozer	0.003	0.008	0.000	0.000	0.004	0.008	0.001	0.001
Significance Threshold, PPV		0.5	0.2	0.5	0.5	0.3	0.3	0.3

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

		Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB						
	Reference Vibration Levels at 25 ft., VdB	**R1**	**R2**	**R3**	**R4**	**R5**	**R6**	
Equipment		**110**	**75**	**90**	**230**	**50**	**20**	
Large Bulldozer	87	68	73	70	58	78	90	
Caisson Drilling	87	68	73	70	58	78	90	
Loaded Trucks	86	67	72	69	57	77	89	
Jackhammer	79	60	65	62	50	70	82	
Small bulldozer	58	39	44	41	29	49	61	
Significance Threshold, VdB		72	72	72	72	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						

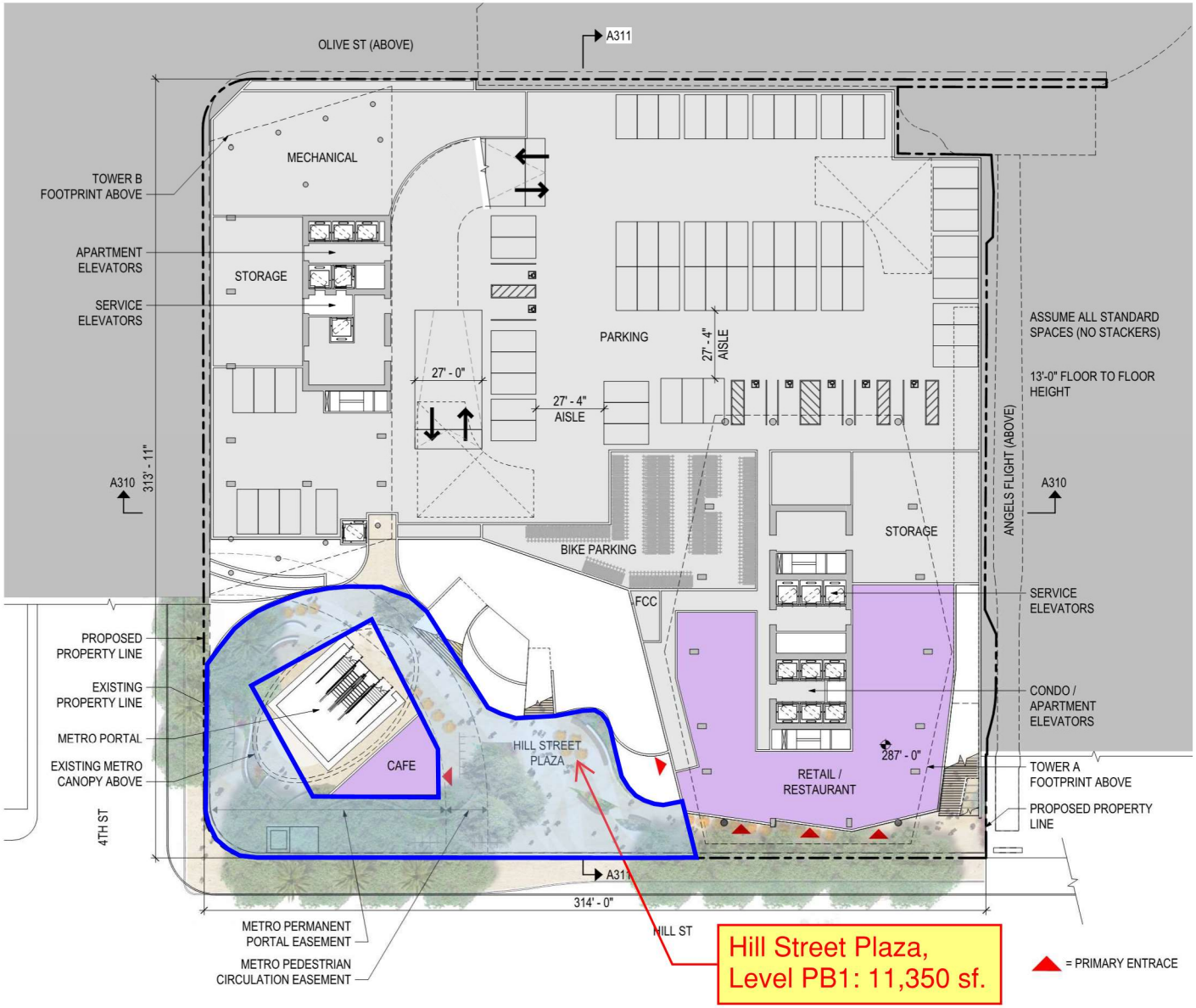
Ref. Levels based on FTA Figure 7-3 (converted from VdB to PPV)

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**	**25**	**30**	**50**			
Typical road surface	63	75	72	70	63			
Significance Threshold, VdB		72	72	72	72			

Ref. Levels based on FTA Figure 7-3

Operation Noise Calculations



ANGELS LANDIN

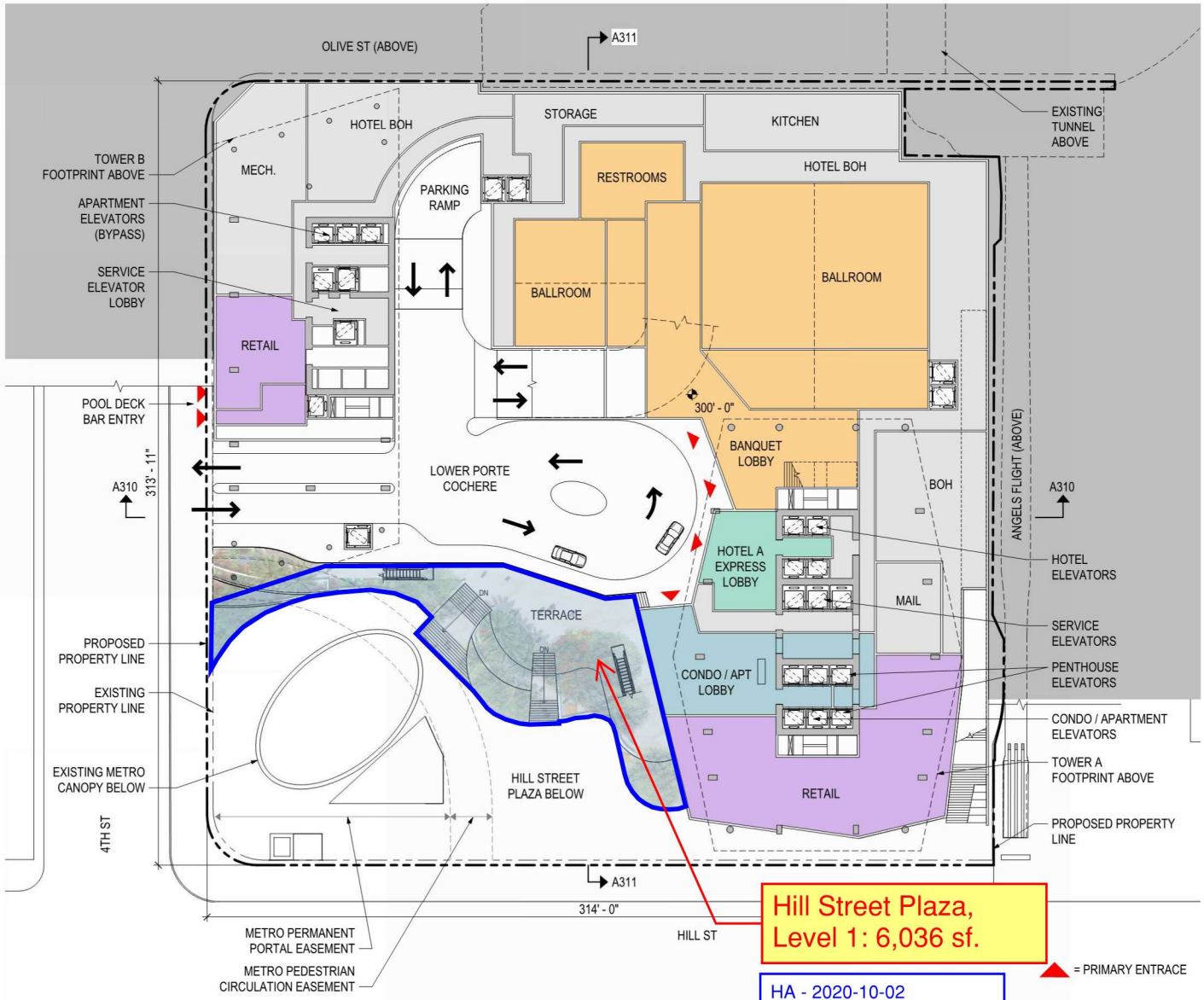
HA - 2020-10-02
11,350 SF IS COMFIRMED

LEVEL PB1 HILL ST PLAZA – A100

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



HA - 2020-10-02
6,036 SF IS COMFIRMED

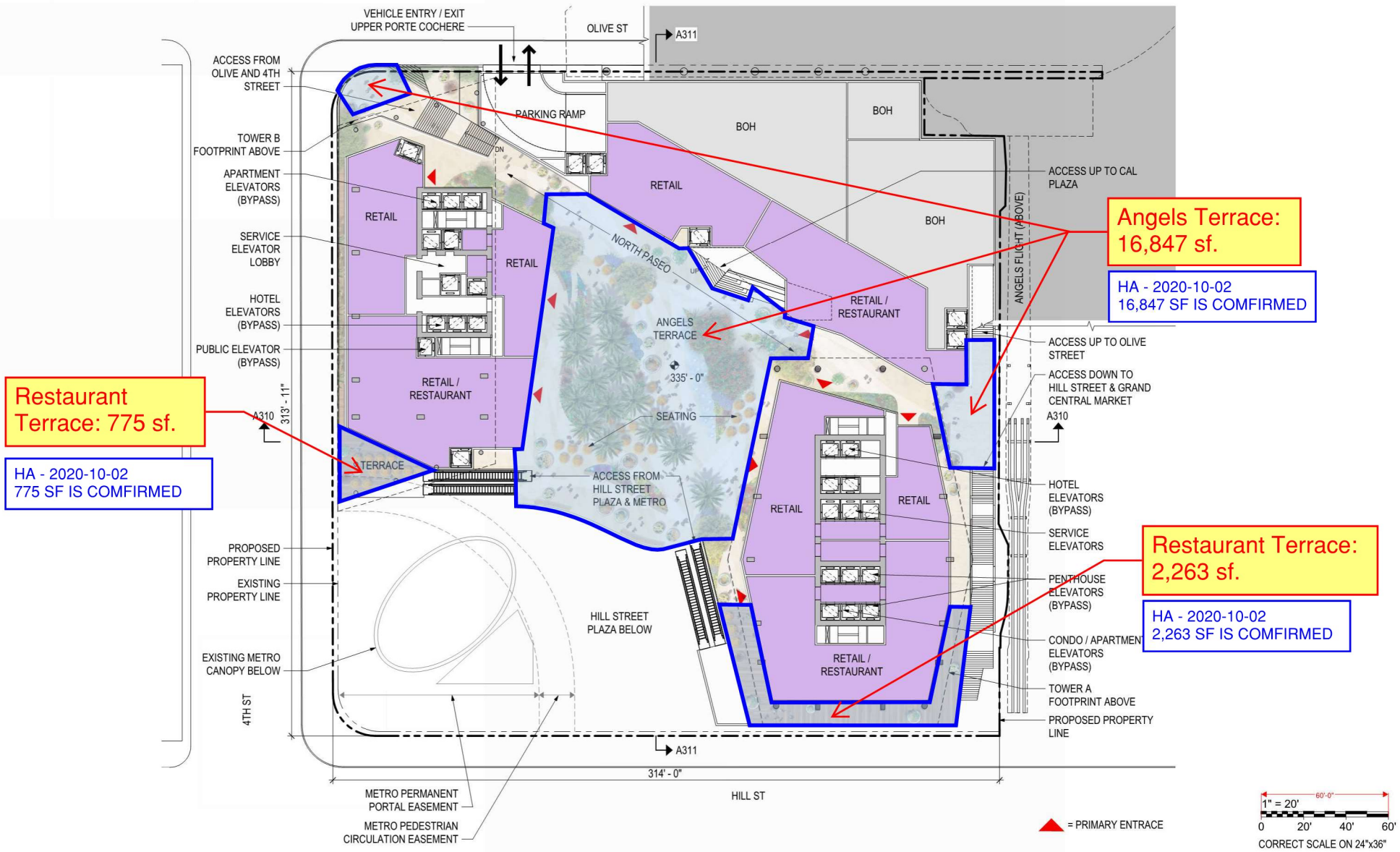
ANGELS LANDING

LEVEL 01 LOWER PORTE COCHERE – A101

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



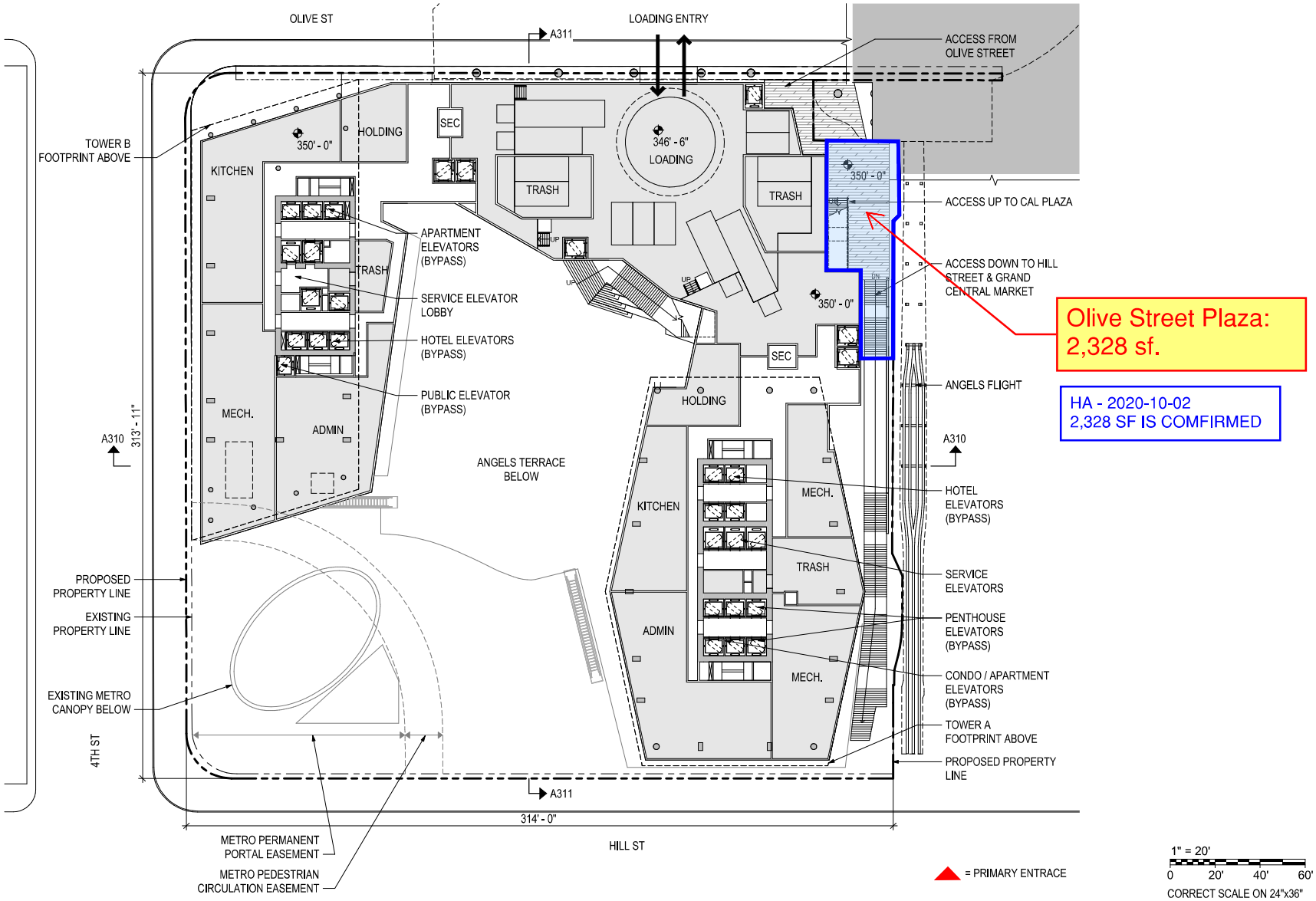
ANGELS LANDING

LEVEL 03 ANGELS TERRACE – A103

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



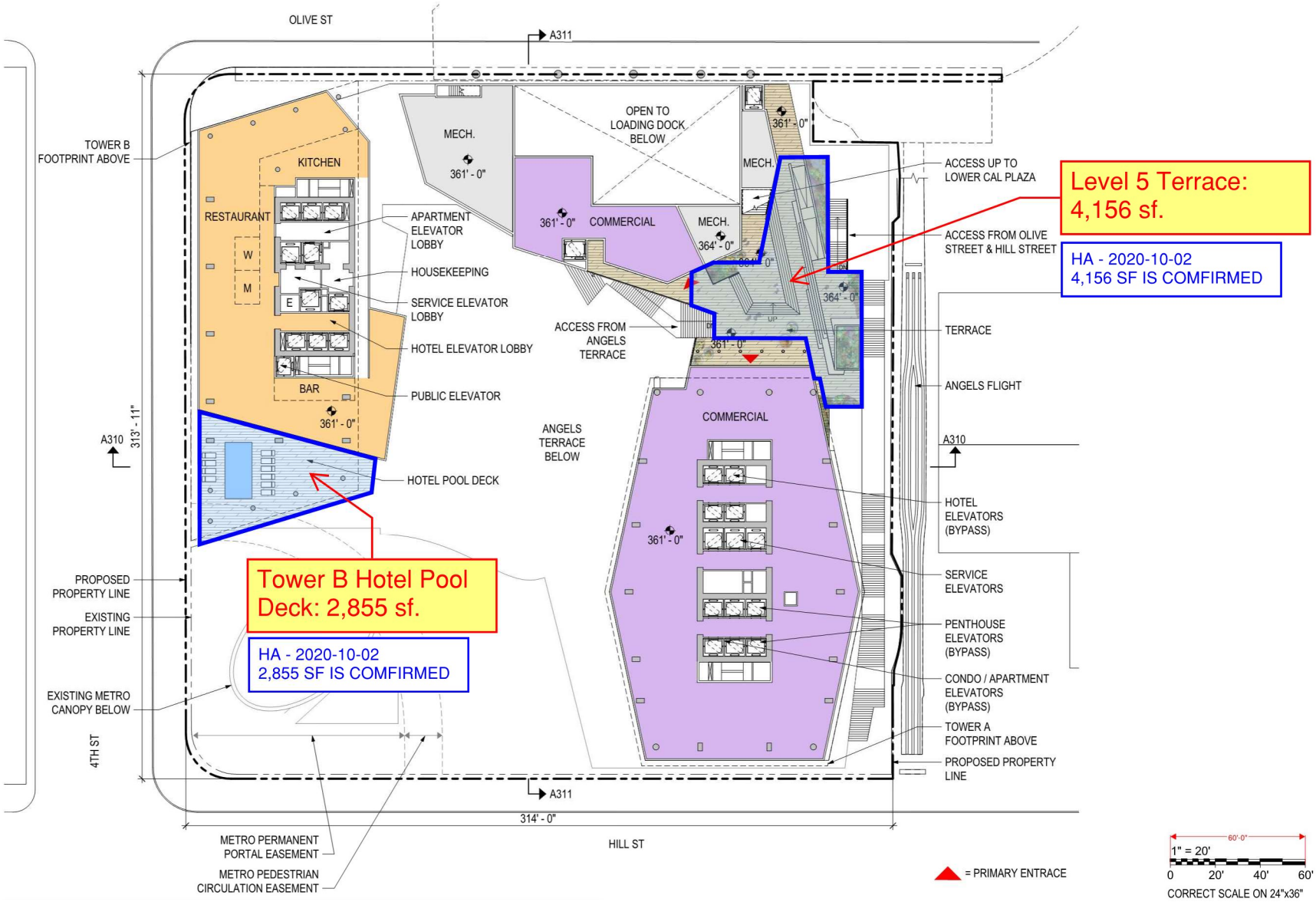
ANGELS LANDING

LEVEL 04 SERVICE/LOADING – A104

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



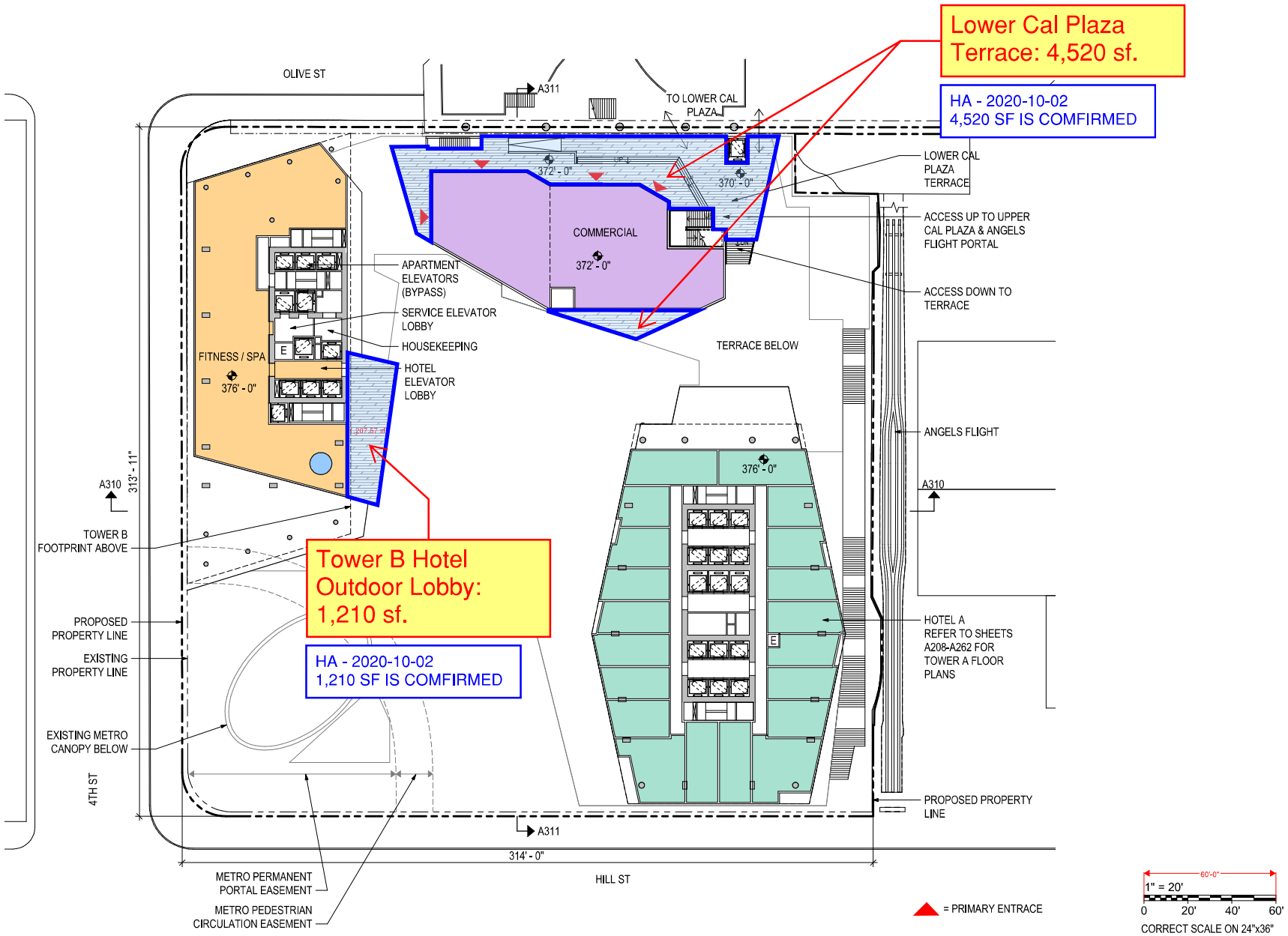
ANGELS LANDING

LEVEL 05 COMMERCIAL / HOTEL B AMENITY – A105

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



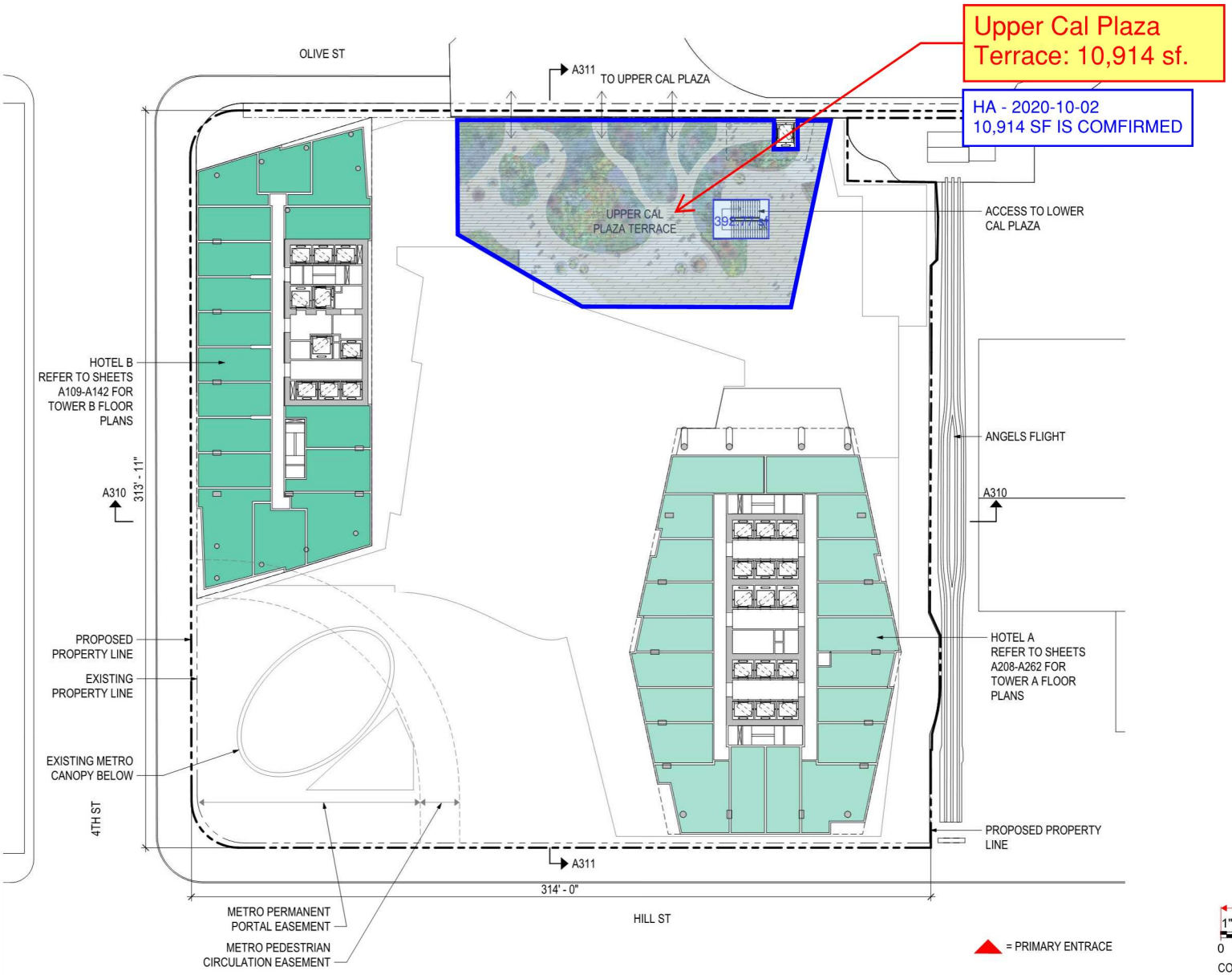
ANGELS LANDING

LEVEL 06 LOWER CAL PLAZA – A106

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



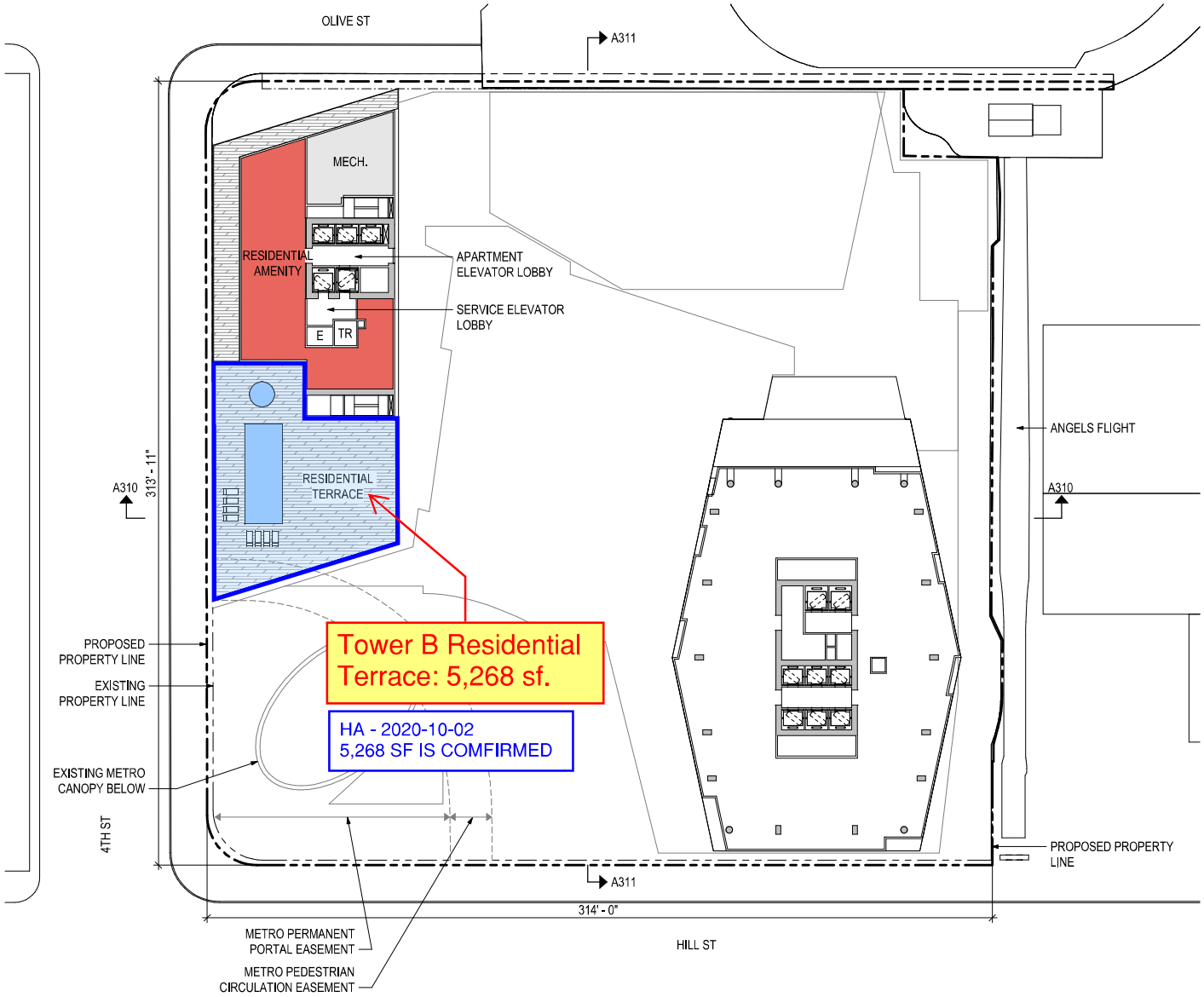
ANGELS LANDING

LEVEL 07 UPPER CAL PLAZA – A107

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



1" = 20'
0 20' 40' 60'
CORRECT SCALE ON 24"x36"

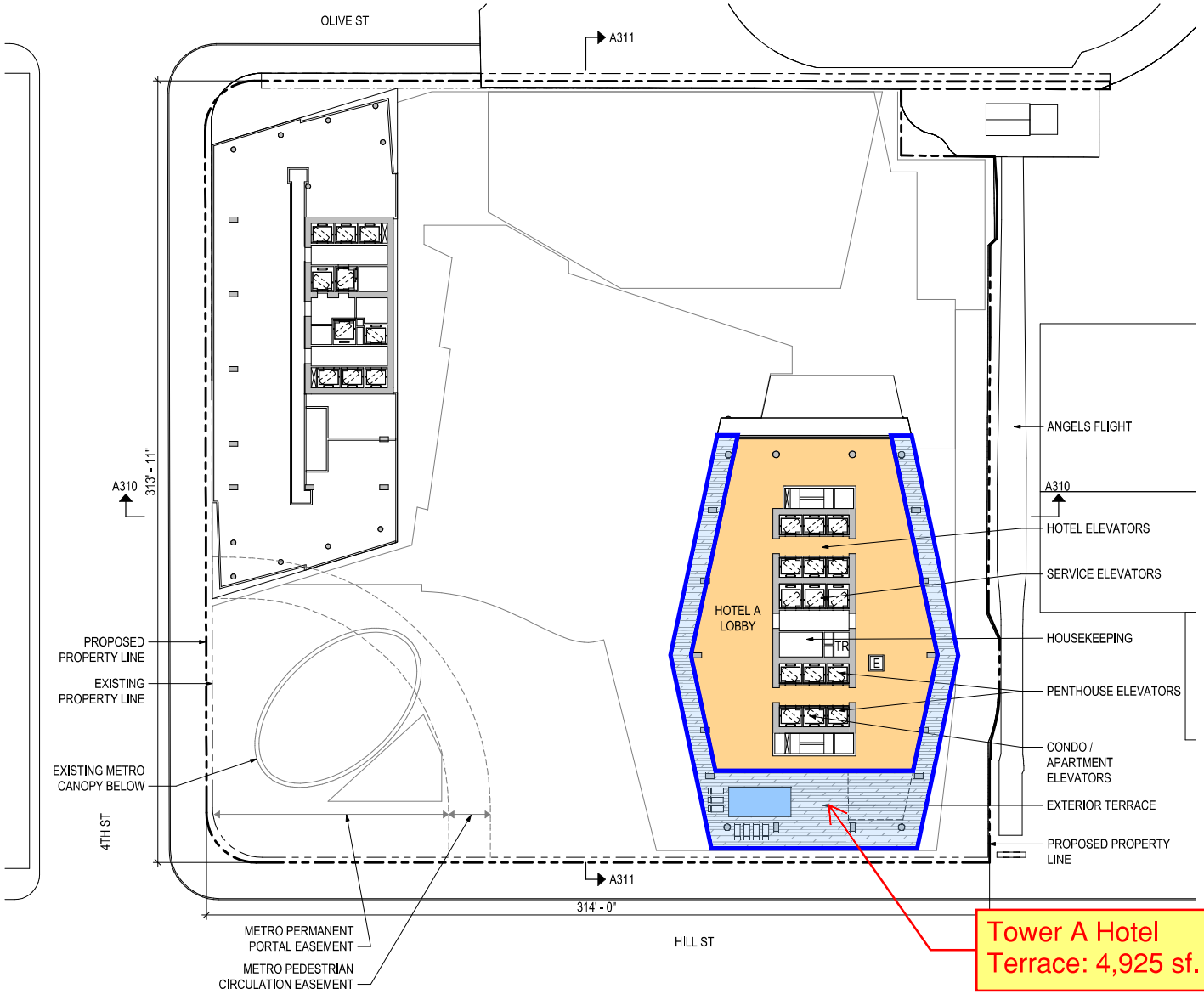
ANGELS LANDING

TOWER B ROOF DECK - LEVEL B42 – A142

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



Tower A Hotel
Terrace: 4,925 sf.

HA - 2020-10-02
4,925 SF IS COMFIRMED

1" = 20'
0 20' 40' 60'
CORRECT SCALE ON 24"x36"

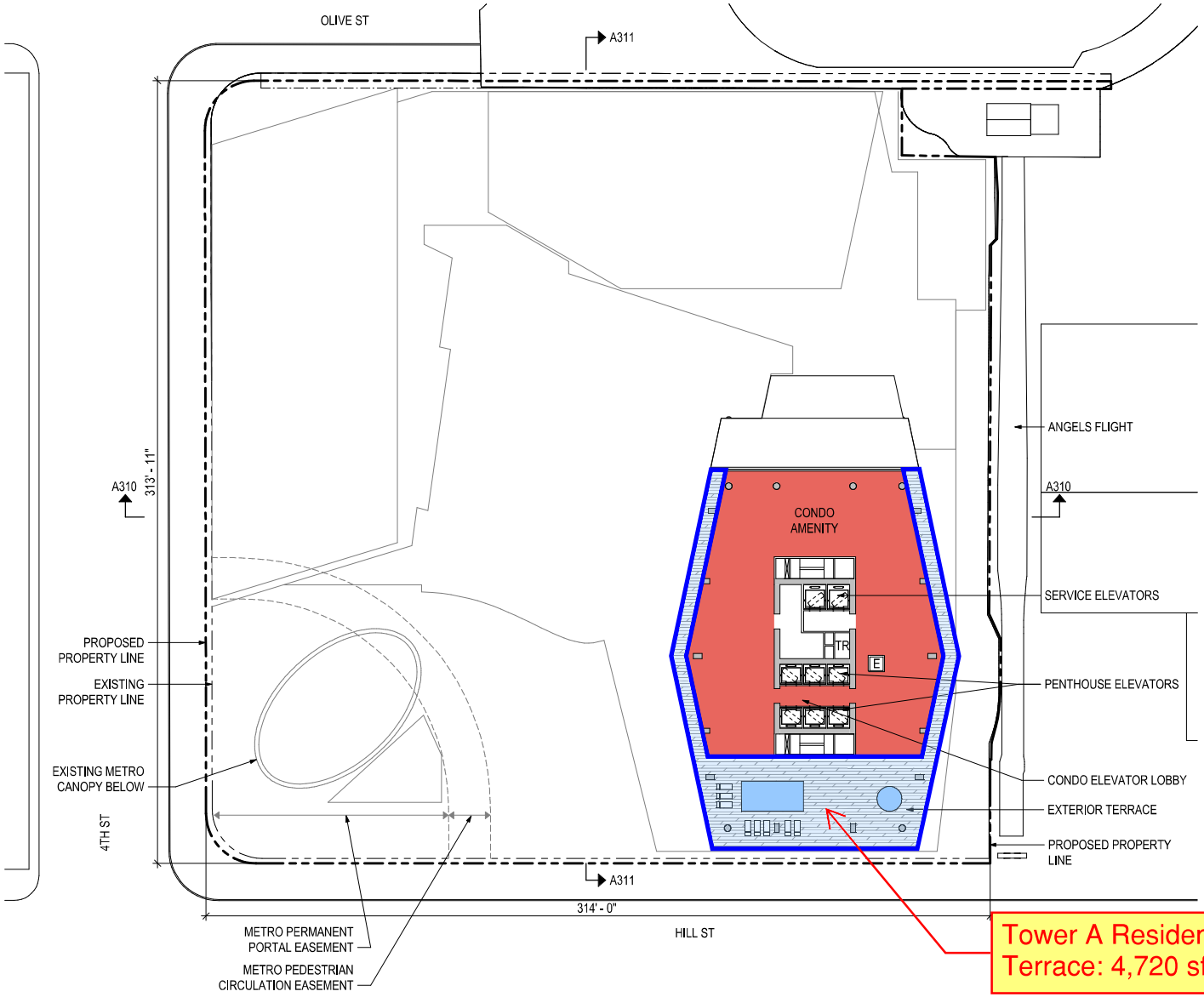
ANGELS LANDING

TO EVEL A20 – A220

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP



Tower A Residential Terrace: 4,720 sf.

1" = 20'
0 20' 40' 60'
CORRECT SCALE ON 24"x36"

ANGELS LANDING

TOWER A ... VEL A41 – A241

HA - 2020-10-02
4,720 SF IS COMFIRMED

5/21/2020 | ENTITLEMENT APPLICATION

361 S. HILL STREET ARB NUMBER: NONE

ANGELS LANDING PARTNERS | HANDEL ARCHITECTS LLP

AES
ACOUSTICAL ENGINEERING SERVICES

Project Composite Noise Calculations (CNEL)

Project: Angels Landing Project

Receptor	Ambient	Traffic[a]	Mechanical		Loading	Outdoor		Project Composite	Ambient + Project	Increase
R1	69.4	55.8	56.9		45.2	63.4		64.9	70.7	1.3
R1U	69.4	48.4	55.1		45.3	65.9		66.3	71.1	1.7
R2	73.7	60.2	49.9		47.1	59.7		63.3	74.1	0.4
R2U	73.7	54.0	50.2		47.4	61.8		62.8	74.0	0.3
R3	69.7	55.2	44.3		39.0	69.1		69.3	72.5	2.8
R3U	69.7	45.2	51.3		32.4	68.9		68.9	72.4	2.7
R4	70.3	55.2	44.1		33.0	63.3		64.0	71.2	0.9
R4U	70.3	49.4	47.3		40.6	64.7		64.9	71.4	1.1
R5	61.5	35.3	54.0		44.9	61.2		62.1	64.8	3.3
R6	67.0	47.3	59.2		42.8	65.0		66.1	69.6	2.6

[a] - Project traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor.
Project traffic noise level is equal to "Baseline+Project" minus "Baseline" traffic noise levels, as provided in the table below.

U - Represents upper levels.

Receptor	Roadway Segment	Traffic Noise Levels, CNEL			distance to roadway, ft	Existing	Existing + Project	barrier	distance to Center Line	adj. for distance
		Existing	Existing + Project	Project Only						
R1	Olive St.	69.1	69.3	55.8	10	69.1	69.3	0	35	0.0
R1U	Olive St.	61.6	61.8	48.4	170	69.1	69.3	0	35	-7.5
R2	4th St.	67.1	67.9	60.2	10	67.1	67.9	0	35	0.0
R2U	4th St.	60.9	61.7	54.0	120	67.1	67.9	0	35	-6.2
R3	Hill St.	68.5	68.7	55.2	10	68.5	68.7	0	35	0.0
R3U	Hill St.	58.4	58.6	45.2	330	68.5	68.7	0	35	-10.1
R4	Hill St.	68.5	68.7	55.2	10	68.5	68.7	0	35	0.0
R4U	Hill St.	62.6	62.8	49.4	110	68.5	68.7	0	35	-5.9
R5	Olive St.	48.6	48.8	35.3	100	69.1	69.3	15	35	-5.5
R6	Hill St.	60.6	60.8	47.3	190	68.5	68.7	0	35	-7.9

For Report

Receptor	Ambient	Traffic[a]	Mechanical		Loading	Outdoor		Project Composite	Ambient + Project	Increase
R1	69.4	48.4	55.1		45.3	65.9		66.3	71.1	1.7
R2	73.7	60.2	49.9		47.1	59.7		63.3	74.1	0.4
R3	69.7	55.2	44.3		39.0	69.1		69.3	72.5	2.8
R4	70.3	49.4	47.3		40.6	64.7		64.9	71.4	1.1
R5	61.5	35.3	54.0		44.9	61.2		62.1	64.8	3.3
R6	67.0	47.3	59.2		42.8	65.0		66.1	69.6	2.6

AES
ACOUSTICAL ENGINEERING SERVICES

Outdoor Mechanical Equipment Noise Calculations

Project: Angels Landing Project

	Estimated Noise Levels, Leq from SOUNDPLAN		Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	9
R1	50.2	56.9	50.2	50.2	50.2
R1U	48.4	55.1	48.4	48.4	48.4
R2	43.2	49.9	43.2	43.2	43.2
R2U	43.5	50.2	43.5	43.5	43.5
R3	37.6	44.3	37.6	37.6	37.6
R3U	44.6	51.3	44.6	44.6	44.6
R4	37.4	44.1	37.4	37.4	37.4
R4U	40.6	47.3	40.6	40.6	40.6
R5	47.3	54.0	47.3	47.3	47.3
R6	52.5	59.2	52.5	52.5	52.5

U - Represents upper levels

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)
R1	69.4	69.6	0.2	63.3	63.5
R1U	69.4	69.6	0.2	63.3	63.4
R2	73.7	73.7	0.0	68.4	68.4
R2U	73.7	73.7	0.0	68.4	68.4
R3	69.7	69.7	0.0	64.2	64.2
R3U	69.7	69.8	0.1	64.2	64.2
R4	70.3	70.3	0.0	65.2	65.2
R4U	70.3	70.3	0.0	65.2	65.2
R5	61.5	62.2	0.7	60.0	60.2
R6	67.0	67.7	0.7	63.7	64.0

Receptor	Ambient (Leq)	Project (Leq)	Amb+Project (Leq)	Criteria (Leq)	Exceedance
R1	63.3	50.2	63.5	68.3	0.0
R2	68.4	43.5	68.4	73.4	0.0
R3	64.2	44.6	64.2	69.2	0.0
R4	65.2	40.6	65.2	70.2	0.0
R5	60.0	47.3	60.2	65.0	0.0
R6	63.7	52.5	64.0	68.7	0.0

AES
Acoustical Engineering Services

Loading and Trash Compactor Noise Calculations

Project: Angels Landing Project

LOADING

	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	3	3	0
R1	48.0	45.2	42.0	48.0	0.0
R1U	48.1	45.3	42.1	48.1	0.0
R2	49.9	47.1	43.9	49.9	0.0
R2U	50.2	47.4	44.2	50.2	0.0
R3	41.8	39.0	35.8	41.8	0.0
R3U	35.2	32.4	29.2	35.2	0.0
R4	35.8	33.0	29.8	35.8	0.0
R4U	43.4	40.6	37.4	43.4	0.0
R5	47.7	44.9	41.7	47.7	0.0
R6	45.6	42.8	39.6	45.6	0.0

U - Represents upper levels

TRASH COMPACTOR

	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	3	3	0
R1	18.1	15.7	12.1	18.1	0.0
R1U	6.5	7.8	0.5	6.5	0.0
R2	14.3	12.5	8.3	14.3	0.0
R2U	11.6	10.5	5.6	11.6	0.0
R3	11.6	10.5	5.6	11.6	0.0
R3U	12.3	11.0	6.3	12.3	0.0
R4	-0.7	6.2	-6.7	-0.7	0.0
R4U	1.5	6.5	-4.5	1.5	0.0
R5	20.3	17.7	14.3	20.3	0.0
R6	13.1	11.6	7.1	13.1	0.0

TOTAL COMBINED

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	45.2	69.4	69.4	0.0	48.0	68.0	68.0
R1U	45.3	69.4	69.4	0.0	48.1	68.0	68.0
R2	47.1	73.7	73.7	0.0	49.9	71.0	71.0
R2U	47.4	73.7	73.7	0.0	50.2	71.0	71.0
R3	39.0	69.7	69.7	0.0	41.8	67.3	67.3
R3U	32.4	69.7	69.7	0.0	35.2	67.3	67.3
R4	33.0	70.3	70.3	0.0	35.8	67.2	67.2
R4U	40.6	61.5	61.5	0.0	43.4	67.2	67.2
R5	44.9	67.0	67.0	0.0	47.7	60.0	60.2
R6	42.8	0.0	42.8	42.8	45.6	63.7	63.8

Receptor	Ambient	Project	Amb+Project	Criteria	Exceedance
R1	68.0	48.1	68.0	73.0	0.0
R2	71.0	50.2	71.0	76.0	0.0
R3	67.3	41.8	67.3	72.3	0.0
R4	67.2	43.4	67.2	72.2	0.0
R5	60.0	47.7	60.2	65.0	0.0
R6	63.7	45.6	63.8	68.7	0.0

AES
Acoustical Engineering Services

Outdoor Noise Calculations

Project: Angels Landing Project

PEOPLE

	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	4
R1	52.3	56.4	52.3	52.3	48.8
R1U	55.6	59.7	55.6	55.6	52.1
R2	51.9	56.0	51.9	51.9	48.4
R2U	53.9	58.0	53.9	53.9	50.4
R3	59.4	63.5	59.4	59.4	55.9
R3U	56.3	60.4	56.3	56.3	52.8
R4	52.4	56.5	52.4	52.4	48.9
R4U	55.4	59.5	55.4	55.4	51.9
R5	54.5	58.6	54.5	54.5	51.0
R6	58.7	62.8	58.7	58.7	55.2

U - Represents upper levels

AMPLIFIED SOUND

	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	4
R1	58.3	62.4	58.3	58.3	54.8
R1U	60.6	64.7	60.6	60.6	57.1
R2	53.2	57.3	53.2	53.2	49.7
R2U	55.3	59.4	55.3	55.3	51.8
R3	63.6	67.7	63.6	63.6	60.1
R3U	64.1	68.2	64.1	64.1	60.6
R4	58.2	62.3	58.2	58.2	54.7
R4U	59.1	63.2	59.1	59.1	55.6
R5	53.7	57.8	53.7	53.7	50.2
R6	57.0	61.1	57.0	57.0	53.5

TOTAL COMBINED

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	63.4	69.4	70.4	1.0	59.3	63.3	64.7
R1U	65.9	69.4	71.0	1.6	61.8	63.3	65.6
R2	59.7	73.7	73.9	0.2	55.6	68.4	68.6
R2U	61.8	73.7	74.0	0.3	57.7	68.4	68.8
R3	69.1	69.7	72.4	2.7	65.0	64.2	67.6
R3U	68.9	69.7	72.3	2.6	64.8	64.2	67.5
R4	63.3	70.3	71.1	0.8	59.2	65.2	66.2
R4U	64.7	70.3	71.4	1.1	60.6	65.2	66.5
R5	61.2	61.5	64.4	2.9	57.1	60.0	61.8
R6	65.0	67.0	69.1	2.1	60.9	63.7	65.5

Receptor	Ambient	Project	Amb+Project	Criteria	Exceedance
R1	63.3	61.8	65.6	68.3	0.0
R2	68.4	57.7	68.8	73.4	0.0
R3	64.2	65.0	67.6	69.2	0.0
R4	65.2	60.6	66.5	70.2	0.0
R5	60.0	57.1	61.8	65.0	0.0
R6	63.7	60.9	65.5	68.7	0.0

Angels Landing
Source Levels in dB(A) - Mechanical

Name	Source type	Lw dB(A)	
Mechanical Room - Level 5	Point	90.0	
Mechanical Room - Level 5	Point	90.0	
Mechanical Room - Level 5	Point	90.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower A	Point	100.0	
Mechanical Tower B	Point	100.0	
Mechanical Tower B	Point	100.0	
Mechanical Tower B	Point	100.0	
Mechanical Tower B	Point	100.0	

Angels Landing
Assessed contribution level - Mechanical

Source	Source type	Leq dB(A)
Receiver R1 Fl G Leq,d 50.2 dB(A)		
Mechanical Tower A	Point	30.5
Mechanical Tower A	Point	29.5
Mechanical Tower A	Point	28.6
Mechanical Tower A	Point	27.8
Mechanical Tower A	Point	27.8
Mechanical Tower A	Point	28.1
Mechanical Tower A	Point	22.6
Mechanical Tower A	Point	27.1
Mechanical Tower A	Point	22.4
Mechanical Tower A	Point	21.4
Mechanical Tower A	Point	22.1
Mechanical Tower A	Point	22.1
Mechanical Tower B	Point	31.8
Mechanical Tower B	Point	30.8
Mechanical Tower B	Point	31.8
Mechanical Tower B	Point	31.4
Mechanical Room - Level 5	Point	27.4
Mechanical Room - Level 5	Point	48.5
Mechanical Room - Level 5	Point	43.5
Receiver R1 Fl F2 Leq,d 48.4 dB(A)		
Mechanical Tower A	Point	32.7
Mechanical Tower A	Point	31.7
Mechanical Tower A	Point	30.4
Mechanical Tower A	Point	30.3
Mechanical Tower A	Point	30.1
Mechanical Tower A	Point	30.6
Mechanical Tower A	Point	26.8
Mechanical Tower A	Point	28.8
Mechanical Tower A	Point	25.1
Mechanical Tower A	Point	25.1
Mechanical Tower A	Point	26.3
Mechanical Tower A	Point	25.0
Mechanical Tower B	Point	35.0
Mechanical Tower B	Point	34.5
Mechanical Tower B	Point	35.8
Mechanical Tower B	Point	35.2
Mechanical Room - Level 5	Point	26.2
Mechanical Room - Level 5	Point	34.3
Mechanical Room - Level 5	Point	46.3

Angels Landing
Assessed contribution level - Mechanical

Source	Source type	Leq dB(A)
Receiver R2 Fl G Leq,d 43.2 dB(A)		
Mechanical Tower A	Point	26.5
Mechanical Tower A	Point	24.6
Mechanical Tower A	Point	23.2
Mechanical Tower A	Point	21.0
Mechanical Tower A	Point	21.0
Mechanical Tower A	Point	21.5
Mechanical Tower A	Point	22.3
Mechanical Tower A	Point	25.0
Mechanical Tower A	Point	24.6
Mechanical Tower A	Point	22.7
Mechanical Tower A	Point	22.7
Mechanical Tower A	Point	22.7
Mechanical Tower B	Point	26.5
Mechanical Tower B	Point	26.1
Mechanical Tower B	Point	26.4
Mechanical Tower B	Point	25.6
Mechanical Room - Level 5	Point	42.2
Mechanical Room - Level 5	Point	18.2
Mechanical Room - Level 5	Point	19.8
Receiver R2 Fl F2 Leq,d 43.5 dB(A)		
Mechanical Tower A	Point	28.6
Mechanical Tower A	Point	27.7
Mechanical Tower A	Point	26.1
Mechanical Tower A	Point	24.7
Mechanical Tower A	Point	25.8
Mechanical Tower A	Point	24.9
Mechanical Tower A	Point	25.8
Mechanical Tower A	Point	27.8
Mechanical Tower A	Point	26.9
Mechanical Tower A	Point	26.1
Mechanical Tower A	Point	25.8
Mechanical Tower A	Point	26.1
Mechanical Tower B	Point	30.3
Mechanical Tower B	Point	30.5
Mechanical Tower B	Point	29.5
Mechanical Tower B	Point	30.5
Mechanical Room - Level 5	Point	41.0
Mechanical Room - Level 5	Point	19.9
Mechanical Room - Level 5	Point	21.5

Angels Landing
Assessed contribution level - Mechanical

9

Source	Source type	Leq dB(A)
Receiver R3 Fl G Leq,d 37.6 dB(A)		
Mechanical Tower A	Point	19.1
Mechanical Tower A	Point	19.5
Mechanical Tower A	Point	19.2
Mechanical Tower A	Point	19.5
Mechanical Tower A	Point	23.4
Mechanical Tower A	Point	24.8
Mechanical Tower A	Point	25.8
Mechanical Tower A	Point	23.4
Mechanical Tower A	Point	23.3
Mechanical Tower A	Point	23.8
Mechanical Tower A	Point	24.8
Mechanical Tower A	Point	26.4
Mechanical Tower B	Point	29.1
Mechanical Tower B	Point	28.3
Mechanical Tower B	Point	28.5
Mechanical Tower B	Point	27.9
Mechanical Room - Level 5	Point	19.4
Mechanical Room - Level 5	Point	20.4
Mechanical Room - Level 5	Point	16.0
Receiver R3 Fl F2 Leq,d 44.6 dB(A)		
Mechanical Tower A	Point	25.0
Mechanical Tower A	Point	25.6
Mechanical Tower A	Point	24.3
Mechanical Tower A	Point	24.8
Mechanical Tower A	Point	28.9
Mechanical Tower A	Point	30.9
Mechanical Tower A	Point	31.8
Mechanical Tower A	Point	29.2
Mechanical Tower A	Point	29.3
Mechanical Tower A	Point	29.7
Mechanical Tower A	Point	30.1
Mechanical Tower A	Point	32.0
Mechanical Tower B	Point	35.9
Mechanical Tower B	Point	36.4
Mechanical Tower B	Point	36.0
Mechanical Tower B	Point	36.1
Mechanical Room - Level 5	Point	34.5
Mechanical Room - Level 5	Point	14.4
Mechanical Room - Level 5	Point	15.3

Angels Landing
Assessed contribution level - Mechanical

Source	Source type	Leq dB(A)
Receiver R4 Fl G Leq,d 37.4 dB(A)		
Mechanical Tower A	Point	23.4
Mechanical Tower A	Point	19.9
Mechanical Tower A	Point	19.4
Mechanical Tower A	Point	19.5
Mechanical Tower A	Point	20.1
Mechanical Tower A	Point	23.8
Mechanical Tower A	Point	24.3
Mechanical Tower A	Point	27.4
Mechanical Tower A	Point	26.2
Mechanical Tower A	Point	26.0
Mechanical Tower A	Point	26.7
Mechanical Tower A	Point	26.7
Mechanical Tower B	Point	26.6
Mechanical Tower B	Point	25.0
Mechanical Tower B	Point	26.6
Mechanical Tower B	Point	25.4
Mechanical Room - Level 5	Point	27.2
Mechanical Room - Level 5	Point	12.0
Mechanical Room - Level 5	Point	13.5
Receiver R4 Fl F2 Leq,d 40.6 dB(A)		
Mechanical Tower A	Point	25.1
Mechanical Tower A	Point	21.5
Mechanical Tower A	Point	21.7
Mechanical Tower A	Point	22.3
Mechanical Tower A	Point	21.3
Mechanical Tower A	Point	25.6
Mechanical Tower A	Point	26.3
Mechanical Tower A	Point	29.0
Mechanical Tower A	Point	27.8
Mechanical Tower A	Point	27.6
Mechanical Tower A	Point	28.5
Mechanical Tower A	Point	28.7
Mechanical Tower B	Point	28.7
Mechanical Tower B	Point	27.7
Mechanical Tower B	Point	28.9
Mechanical Tower B	Point	28.3
Mechanical Room - Level 5	Point	35.4
Mechanical Room - Level 5	Point	15.8
Mechanical Room - Level 5	Point	22.8

Angels Landing
Assessed contribution level - Mechanical

9

Source	Source type	Leq dB(A)
Receiver R5 Fl G Leq,d 47.3 dB(A)		
Mechanical Tower A	Point	27.2
Mechanical Tower A	Point	26.5
Mechanical Tower A	Point	23.6
Mechanical Tower A	Point	23.2
Mechanical Tower A	Point	22.9
Mechanical Tower A	Point	22.8
Mechanical Tower A	Point	17.9
Mechanical Tower A	Point	25.3
Mechanical Tower A	Point	23.7
Mechanical Tower A	Point	23.2
Mechanical Tower A	Point	22.9
Mechanical Tower A	Point	18.3
Mechanical Tower B	Point	31.2
Mechanical Tower B	Point	32.0
Mechanical Tower B	Point	31.5
Mechanical Tower B	Point	32.5
Mechanical Room - Level 5	Point	31.8
Mechanical Room - Level 5	Point	43.9
Mechanical Room - Level 5	Point	42.7
Receiver R6 Fl G Leq,d 52.5 dB(A)		
Mechanical Tower A	Point	27.3
Mechanical Tower A	Point	28.2
Mechanical Tower A	Point	26.9
Mechanical Tower A	Point	26.8
Mechanical Tower A	Point	27.0
Mechanical Tower A	Point	27.5
Mechanical Tower A	Point	22.7
Mechanical Tower A	Point	21.9
Mechanical Tower A	Point	21.7
Mechanical Tower A	Point	21.4
Mechanical Tower A	Point	21.1
Mechanical Tower A	Point	21.4
Mechanical Tower B	Point	30.9
Mechanical Tower B	Point	28.5
Mechanical Tower B	Point	31.0
Mechanical Tower B	Point	30.6
Mechanical Room - Level 5	Point	21.8
Mechanical Room - Level 5	Point	50.0
Mechanical Room - Level 5	Point	48.4

Angels Landing
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speakers - Level 04 Olive St. Plaza	Point	94.2	
Speakers - Level 04 Olive St. Plaza	Point	94.2	
Speakers - Level 04 Olive St. Plaza	Point	94.2	
Speakers Level 01	Point	99.2	
Speakers Level 01	Point	99.2	
Speakers Level 01	Point	99.2	
Speakers Level 01	Point	99.2	
Speakers Level 01	Point	99.2	
Speakers Level 01	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 - Restaurant	Point	99.2	
Speakers Level 03 Angel Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 03 Angels Terrace	Point	99.2	
Speakers Level 05 Cultural Terrace	Point	94.2	
Speakers Level 05 Cultural Terrace	Point	94.2	
Speakers Level 05 Cultural Terrace	Point	94.2	
Speakers Level 05 Cultural Terrace	Point	94.2	
Speakers Level 05 Cultural Terrace	Point	94.2	
Speakers Level 05 Cultural Terrace	Point	94.2	
Speakers Level 05 Hotel Pool Deck	Point	99.2	
Speakers Level 05 Hotel Pool Deck	Point	99.2	
Speakers Level 05 Hotel Pool Deck	Point	99.2	
Speakers Level 05 Hotel Pool Deck	Point	99.2	
Speakers Level 05 Hotel Pool Deck	Point	99.2	
Speakers Level 05 Hotel Pool Deck	Point	99.2	

Angels Landing
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speakers Level 05 Hotel Pool Deck	Point	99.2	
Speakers Level 05 Hotel Pool Deck	Point	99.2	
Speakers Level 06 Hotel Lobby	Point	99.2	
Speakers Level 06 Hotel Lobby	Point	99.2	
Speakers Level 06 Hotel Lobby	Point	99.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	94.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	94.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	94.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	94.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	94.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	94.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 07 Upper Cal Plaza	Point	99.2	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower A	Point	113.6	
Speakers Level 41 Tower B	Point	113.6	
Speakers Level 41 Tower B	Point	113.6	
Speakers Level 41 Tower B	Point	113.6	
Speakers Level 41 Tower B	Point	113.6	
Speakers Level 41 Tower B	Point	113.6	
Speakers Level 41 Tower B	Point	113.6	
Speakers Level 41 Tower B	Point	113.6	
Speakers Level PB01-1	Point	99.2	
Speakers Level PB01-2	Point	99.2	
Speakers Level PB01-3	Point	99.2	
Speakers Level PB01-4	Point	99.2	
Speakers Level PB01-5	Point	99.2	

Angels Landing
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speakers Level PB01-6	Point	99.2	
Speakers Level PB01-7	Point	99.2	
Speakers Level PB01-8	Point	99.2	
Speakers Level PB01-9	Point	99.2	
Speakers Tower A Level 20 Terrace	Point	108.6	
Speakers Tower A Level 20 Terrace	Point	108.6	
Speakers Tower A Level 20 Terrace	Point	108.6	
Speakers Tower A Level 20 Terrace	Point	108.6	
Speakers Tower A Level 20 Terrace	Point	108.6	
Speakers Tower A Level 20 Terrace	Point	108.6	
Speakers Tower A Level 20 Terrace	Point	108.6	
Speakers Tower A Level 20 Terrace	Point	108.6	

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)	
Receiver R1 Fl G Leq,d 58.3 dB(A)			
Speakers - Level 04 Olive St. Plaza	Point	51.5	
Speakers - Level 04 Olive St. Plaza	Point	51.3	
Speakers Level 41 Tower B	Point	50.9	
Speakers - Level 04 Olive St. Plaza	Point	50.1	
Speakers Level 41 Tower B	Point	44.4	
Speakers Level 41 Tower B	Point	44.2	
Speakers Level 41 Tower A	Point	41.9	
Speakers Level 06 Hotel Lobby	Point	41.7	
Speakers Level 06 Hotel Lobby	Point	41.2	
Speakers Level 05 Cultural Terrace	Point	40.7	
Speakers Tower A Level 20 Terrace	Point	38.0	
Speakers Level 06 Lower Cal Plaza Ter.	Point	38.0	
Speakers Level 06 Hotel Lobby	Point	36.8	
Speakers Level 05 Cultural Terrace	Point	36.7	
Speakers Level 07 Upper Cal Plaza	Point	35.8	
Speakers Level 07 Upper Cal Plaza	Point	35.4	
Speakers Level 07 Upper Cal Plaza	Point	34.9	
Speakers Level 05 Cultural Terrace	Point	34.1	
Speakers Level 07 Upper Cal Plaza	Point	34.0	
Speakers Level 41 Tower B	Point	33.4	
Speakers Level 07 Upper Cal Plaza	Point	32.8	
Speakers Level 03 Angels Terrace	Point	32.8	
Speakers Level 07 Upper Cal Plaza	Point	32.6	
Speakers Tower A Level 20 Terrace	Point	32.1	
Speakers Level 07 Upper Cal Plaza	Point	31.8	
Speakers Level 05 Cultural Terrace	Point	31.3	
Speakers Level 05 Cultural Terrace	Point	31.2	
Speakers Level 05 Cultural Terrace	Point	30.9	
Speakers Level 06 Lower Cal Plaza Ter.	Point	30.1	
Speakers Tower A Level 20 Terrace	Point	29.4	
Speakers Level 07 Upper Cal Plaza	Point	28.8	
Speakers Tower A Level 20 Terrace	Point	28.5	
Speakers Level 03 Angels Terrace	Point	28.0	
Speakers Level 03 - Restaurant	Point	27.5	
Speakers Level 06 Lower Cal Plaza Ter.	Point	27.2	
Speakers Level 41 Tower B	Point	27.0	
Speakers Level 03 Angels Terrace	Point	26.8	
Speakers Level 06 Lower Cal Plaza Ter.	Point	26.8	
Speakers Level 03 - Restaurant	Point	26.1	
Speakers Tower A Level 20 Terrace	Point	26.1	

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)
Speakers Level 05 Hotel Pool Deck	Point	25.9
Speakers Level 05 Hotel Pool Deck	Point	25.7
Speakers Level 03 Angels Terrace	Point	25.7
Speakers Level 41 Tower B	Point	25.6
Speakers Level 41 Tower B	Point	25.4
Speakers Level 05 Hotel Pool Deck	Point	25.4
Speakers Level 05 Hotel Pool Deck	Point	25.3
Speakers Level 03 Angels Terrace	Point	25.3
Speakers Level 05 Hotel Pool Deck	Point	25.3
Speakers Level 03 Angels Terrace	Point	24.4
Speakers Level 03 Angel Terrace	Point	24.1
Speakers Level 41 Tower A	Point	23.8
Speakers Level 41 Tower A	Point	23.4
Speakers Level 41 Tower A	Point	23.4
Speakers Level PB01-9	Point	23.4
Speakers Level 41 Tower A	Point	23.1
Speakers Level 41 Tower A	Point	22.9
Speakers Level 41 Tower A	Point	22.7
Speakers Level 41 Tower A	Point	22.6
Speakers Level 06 Lower Cal Plaza Ter.	Point	22.3
Speakers Level 03 - Restaurant	Point	22.2
Speakers Level 03 - Restaurant	Point	21.9
Speakers Level 03 Angels Terrace	Point	21.5
Speakers Level 06 Lower Cal Plaza Ter.	Point	19.2
Speakers Level 03 Angels Terrace	Point	18.7
Speakers Level 03 - Restaurant	Point	18.3
Speakers Level 03 - Restaurant	Point	18.0
Speakers Level 03 Angels Terrace	Point	16.9
Speakers Tower A Level 20 Terrace	Point	16.7
Speakers Tower A Level 20 Terrace	Point	16.4
Speakers Level 03 - Restaurant	Point	16.2
Speakers Level 01	Point	15.7
Speakers Tower A Level 20 Terrace	Point	15.5
Speakers Level 01	Point	13.0
Speakers Level 01	Point	12.4
Speakers Level 01	Point	12.4
Speakers Level 01	Point	11.8
Speakers Level PB01-1	Point	11.0
Speakers Level 01	Point	10.3
Speakers Level 03 - Restaurant	Point	9.7
Speakers Level 05 Hotel Pool Deck	Point	9.2

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)	
Speakers Level PB01-5	Point	7.5	
Speakers Level PB01-6	Point	7.4	
Speakers Level PB01-4	Point	7.0	
Speakers Level PB01-7	Point	6.8	
Speakers Level PB01-3	Point	6.4	
Speakers Level 05 Hotel Pool Deck	Point	6.4	
Speakers Level PB01-8	Point	6.1	
Speakers Level 05 Hotel Pool Deck	Point	6.0	
Speakers Level PB01-2	Point	4.8	
Receiver R1 Fl F2 Leq,d 60.6 dB(A)			
Speakers Level 41 Tower B	Point	55.8	
Speakers Level 41 Tower B	Point	52.0	
Speakers Level 41 Tower B	Point	51.6	
Speakers Level 07 Upper Cal Plaza	Point	48.0	
Speakers Tower A Level 20 Terrace	Point	47.8	
Speakers Level 07 Upper Cal Plaza	Point	46.1	
Speakers Level 41 Tower A	Point	43.9	
Speakers Level 06 Hotel Lobby	Point	43.3	
Speakers Level 06 Hotel Lobby	Point	42.8	
Speakers Level 03 Angels Terrace	Point	42.5	
Speakers Level 06 Hotel Lobby	Point	42.5	
Speakers Level 07 Upper Cal Plaza	Point	42.2	
Speakers Level 03 Angels Terrace	Point	41.9	
Speakers Tower A Level 20 Terrace	Point	41.7	
Speakers Level 07 Upper Cal Plaza	Point	40.1	
Speakers Level 03 Angels Terrace	Point	39.8	
Speakers Level 07 Upper Cal Plaza	Point	39.6	
Speakers - Level 04 Olive St. Plaza	Point	39.6	
Speakers Level 03 Angels Terrace	Point	39.4	
Speakers Level 41 Tower B	Point	39.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	39.1	
Speakers Level 07 Upper Cal Plaza	Point	38.7	
Speakers - Level 04 Olive St. Plaza	Point	38.4	
Speakers Level 07 Upper Cal Plaza	Point	37.9	
Speakers Level 03 Angels Terrace	Point	37.8	
Speakers Tower A Level 20 Terrace	Point	37.6	
Speakers Level 05 Hotel Pool Deck	Point	37.4	
Speakers Level 05 Hotel Pool Deck	Point	37.2	
Speakers Level 03 Angel Terrace	Point	35.6	
Speakers Tower A Level 20 Terrace	Point	35.5	
Speakers Level 05 Cultural Terrace	Point	35.3	

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers Level 05 Cultural Terrace	Point	35.2
Speakers Level 05 Cultural Terrace	Point	35.2
Speakers Level 03 - Restaurant	Point	34.4
Speakers Level 07 Upper Cal Plaza	Point	33.5
Speakers Level 05 Cultural Terrace	Point	33.2
Speakers Level 41 Tower B	Point	33.1
Speakers Level 41 Tower A	Point	33.1
Speakers Level 05 Hotel Pool Deck	Point	32.9
Speakers Level 41 Tower A	Point	32.9
Speakers Level 41 Tower A	Point	32.8
Speakers Level 05 Hotel Pool Deck	Point	32.6
Speakers Level 05 Hotel Pool Deck	Point	32.2
Speakers Level 41 Tower A	Point	31.8
Speakers Tower A Level 20 Terrace	Point	31.7
Speakers Level 41 Tower A	Point	31.3
Speakers Level 41 Tower B	Point	31.0
Speakers Level 41 Tower B	Point	30.9
Speakers Level 03 - Restaurant	Point	30.5
Speakers Level 41 Tower A	Point	30.0
Speakers Level 01	Point	29.7
Speakers Level 06 Lower Cal Plaza Ter.	Point	29.6
Speakers Level 05 Cultural Terrace	Point	29.1
Speakers Level 41 Tower A	Point	28.9
Speakers Level 05 Cultural Terrace	Point	28.5
Speakers Level 06 Lower Cal Plaza Ter.	Point	28.0
Speakers Level 06 Lower Cal Plaza Ter.	Point	27.2
Speakers Tower A Level 20 Terrace	Point	26.1
Speakers Level 03 Angels Terrace	Point	25.1
Speakers Level 03 Angels Terrace	Point	24.3
Speakers Level 06 Lower Cal Plaza Ter.	Point	24.2
Speakers Level 03 Angels Terrace	Point	23.6
Speakers Tower A Level 20 Terrace	Point	23.3
Speakers - Level 04 Olive St. Plaza	Point	23.2
Speakers Level 03 Angels Terrace	Point	22.3
Speakers Tower A Level 20 Terrace	Point	22.0
Speakers Level 03 - Restaurant	Point	21.9
Speakers Level 03 - Restaurant	Point	21.7
Speakers Level 03 - Restaurant	Point	21.3
Speakers Level 03 - Restaurant	Point	21.0
Speakers Level 03 - Restaurant	Point	19.0
Speakers Level 01	Point	18.3

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)	
Speakers Level 03 - Restaurant	Point	18.2	
Speakers Level PB01-9	Point	17.0	
Speakers Level 01	Point	16.9	
Speakers Level PB01-1	Point	15.9	
Speakers Level 01	Point	14.4	
Speakers Level 05 Hotel Pool Deck	Point	12.6	
Speakers Level 05 Hotel Pool Deck	Point	11.5	
Speakers Level 01	Point	11.3	
Speakers Level 01	Point	10.8	
Speakers Level 06 Lower Cal Plaza Ter.	Point	10.4	
Speakers Level PB01-7	Point	10.3	
Speakers Level 05 Hotel Pool Deck	Point	7.9	
Speakers Level PB01-6	Point	5.2	
Speakers Level PB01-5	Point	5.1	
Speakers Level PB01-4	Point	2.1	
Speakers Level PB01-8	Point	1.8	
Speakers Level PB01-3	Point	1.4	
Speakers Level PB01-2	Point	1.0	
Receiver R2 Fl G Leq,d 53.2 dB(A)			
Speakers Level 03 Angels Terrace	Point	44.3	
Speakers Level 03 Angels Terrace	Point	44.2	
Speakers Level 03 Angels Terrace	Point	40.9	
Speakers Level 41 Tower B	Point	40.4	
Speakers Level 03 - Restaurant	Point	40.2	
Speakers Level 41 Tower B	Point	40.1	
Speakers Level 05 Hotel Pool Deck	Point	39.9	
Speakers Level 03 - Restaurant	Point	39.9	
Speakers Level 05 Hotel Pool Deck	Point	39.6	
Speakers Level 03 - Restaurant	Point	39.2	
Speakers Level 05 Hotel Pool Deck	Point	38.9	
Speakers Level 03 - Restaurant	Point	38.7	
Speakers Level PB01-3	Point	36.5	
Speakers Level PB01-4	Point	36.0	
Speakers Level PB01-9	Point	35.8	
Speakers Level 05 Hotel Pool Deck	Point	35.4	
Speakers Level PB01-8	Point	35.1	
Speakers Level PB01-7	Point	34.6	
Speakers Level 01	Point	34.1	
Speakers Level 41 Tower B	Point	34.1	
Speakers Level 41 Tower B	Point	33.7	
Speakers Level 41 Tower B	Point	33.5	

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers Level 41 Tower B	Point	33.5
Speakers Level 05 Hotel Pool Deck	Point	32.9
Speakers Tower A Level 20 Terrace	Point	32.6
Speakers Level 03 Angels Terrace	Point	32.5
Speakers Level 06 Lower Cal Plaza Ter.	Point	32.3
Speakers Level 05 Hotel Pool Deck	Point	31.5
Speakers Level 07 Upper Cal Plaza	Point	30.6
Speakers Level 01	Point	29.9
Speakers Level 07 Upper Cal Plaza	Point	29.9
Speakers Level 07 Upper Cal Plaza	Point	29.6
Speakers Tower A Level 20 Terrace	Point	29.6
Speakers Level 05 Hotel Pool Deck	Point	29.5
Speakers Level 41 Tower B	Point	29.0
Speakers Level 06 Lower Cal Plaza Ter.	Point	28.9
Speakers Level 05 Hotel Pool Deck	Point	28.6
Speakers Level PB01-2	Point	27.9
Speakers Level PB01-5	Point	27.3
Speakers Tower A Level 20 Terrace	Point	27.3
Speakers Level 06 Hotel Lobby	Point	27.1
Speakers Level PB01-6	Point	26.7
Speakers Level 07 Upper Cal Plaza	Point	26.6
Speakers Tower A Level 20 Terrace	Point	26.3
Speakers Tower A Level 20 Terrace	Point	26.2
Speakers Level 07 Upper Cal Plaza	Point	26.1
Speakers Level 05 Cultural Terrace	Point	25.1
Speakers Level 41 Tower A	Point	24.6
Speakers Level 07 Upper Cal Plaza	Point	24.4
Speakers Level 03 Angels Terrace	Point	23.9
Speakers Level PB01-1	Point	23.9
Speakers Level 03 Angels Terrace	Point	23.8
Speakers Level 41 Tower A	Point	23.6
Speakers Level 03 Angels Terrace	Point	23.3
Speakers Level 07 Upper Cal Plaza	Point	23.0
Speakers Level 06 Lower Cal Plaza Ter.	Point	22.9
Speakers Level 07 Upper Cal Plaza	Point	22.6
Speakers Level 05 Cultural Terrace	Point	22.5
Speakers Level 01	Point	22.5
Speakers Level 03 Angels Terrace	Point	22.2
Speakers Level 01	Point	21.3
Speakers Level 01	Point	21.2
Speakers Level 01	Point	21.1

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)	
Speakers Level 05 Cultural Terrace	Point	21.0	
Speakers Level 03 Angels Terrace	Point	20.1	
Speakers Level 06 Hotel Lobby	Point	19.7	
Speakers Level 03 Angel Terrace	Point	19.4	
Speakers Level 06 Lower Cal Plaza Ter.	Point	18.5	
Speakers Level 41 Tower A	Point	18.5	
Speakers Level 41 Tower A	Point	17.5	
Speakers Level 41 Tower A	Point	16.9	
Speakers Tower A Level 20 Terrace	Point	16.9	
Speakers Level 41 Tower A	Point	16.8	
Speakers Level 41 Tower A	Point	16.7	
Speakers Level 41 Tower A	Point	16.4	
Speakers Tower A Level 20 Terrace	Point	16.2	
Speakers Tower A Level 20 Terrace	Point	16.1	
Speakers Level 06 Lower Cal Plaza Ter.	Point	15.9	
Speakers Level 03 - Restaurant	Point	15.8	
Speakers Level 05 Cultural Terrace	Point	14.8	
Speakers - Level 04 Olive St. Plaza	Point	14.5	
Speakers Level 05 Cultural Terrace	Point	13.9	
Speakers - Level 04 Olive St. Plaza	Point	13.6	
Speakers Level 06 Hotel Lobby	Point	13.5	
Speakers Level 06 Lower Cal Plaza Ter.	Point	13.0	
Speakers Level 03 - Restaurant	Point	12.6	
Speakers - Level 04 Olive St. Plaza	Point	12.0	
Speakers Level 03 - Restaurant	Point	8.5	
Speakers Level 03 - Restaurant	Point	8.5	
Speakers Level 05 Cultural Terrace	Point	5.6	
Receiver R2 Fl F2 Leq,d 55.3 dB(A)			
Speakers Level 05 Hotel Pool Deck	Point	48.0	
Speakers Level 05 Hotel Pool Deck	Point	46.6	
Speakers Level 41 Tower B	Point	42.7	
Speakers Level 41 Tower B	Point	42.5	
Speakers Level 05 Hotel Pool Deck	Point	42.3	
Speakers Level 05 Hotel Pool Deck	Point	41.3	
Speakers Level 01	Point	41.2	
Speakers Level 03 - Restaurant	Point	40.2	
Speakers Level 03 - Restaurant	Point	40.0	
Speakers Level 05 Hotel Pool Deck	Point	39.9	
Speakers Level PB01-9	Point	39.8	
Speakers Level 05 Hotel Pool Deck	Point	38.5	
Speakers Level 41 Tower B	Point	38.5	

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)
Speakers Level 07 Upper Cal Plaza	Point	38.4
Speakers Level 05 Hotel Pool Deck	Point	38.3
Speakers Level 03 Angels Terrace	Point	38.0
Speakers Level 41 Tower B	Point	37.6
Speakers Level 05 Hotel Pool Deck	Point	37.3
Speakers Level 07 Upper Cal Plaza	Point	36.1
Speakers Level 41 Tower B	Point	35.7
Speakers Level 07 Upper Cal Plaza	Point	35.4
Speakers Level 41 Tower B	Point	35.2
Speakers Level PB01-7	Point	34.6
Speakers Level 06 Lower Cal Plaza Ter.	Point	34.5
Speakers Level PB01-8	Point	34.4
Speakers Tower A Level 20 Terrace	Point	33.7
Speakers Level PB01-2	Point	33.3
Speakers Level 01	Point	33.2
Speakers Level PB01-3	Point	33.2
Speakers Level 03 - Restaurant	Point	32.5
Speakers Level 41 Tower B	Point	32.5
Speakers Level PB01-4	Point	32.4
Speakers Level 06 Lower Cal Plaza Ter.	Point	32.0
Speakers Tower A Level 20 Terrace	Point	31.4
Speakers Tower A Level 20 Terrace	Point	31.2
Speakers Level 01	Point	30.9
Speakers Level 07 Upper Cal Plaza	Point	30.9
Speakers Level 41 Tower A	Point	30.8
Speakers Level PB01-5	Point	30.7
Speakers Level 41 Tower A	Point	30.7
Speakers Level 07 Upper Cal Plaza	Point	30.7
Speakers Level 41 Tower A	Point	30.5
Speakers Tower A Level 20 Terrace	Point	30.3
Speakers Level 41 Tower A	Point	29.9
Speakers Level 03 Angels Terrace	Point	29.8
Speakers Level 03 Angels Terrace	Point	29.7
Speakers Level PB01-6	Point	28.9
Speakers Level 07 Upper Cal Plaza	Point	28.8
Speakers Level 03 Angels Terrace	Point	28.7
Speakers Level 41 Tower A	Point	28.3
Speakers Tower A Level 20 Terrace	Point	28.3
Speakers Level 03 - Restaurant	Point	28.2
Speakers Level 41 Tower A	Point	27.6
Speakers Level 41 Tower A	Point	27.4

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)	
Speakers Level 06 Hotel Lobby	Point	27.1	
Speakers Level PB01-1	Point	26.9	
Speakers Level 07 Upper Cal Plaza	Point	25.9	
Speakers Level 05 Cultural Terrace	Point	24.6	
Speakers Level 06 Hotel Lobby	Point	24.4	
Speakers Level 03 Angels Terrace	Point	24.4	
Speakers Level 05 Cultural Terrace	Point	23.9	
Speakers Level 03 - Restaurant	Point	22.9	
Speakers Level 05 Cultural Terrace	Point	22.6	
Speakers Level 07 Upper Cal Plaza	Point	21.7	
Speakers Tower A Level 20 Terrace	Point	21.4	
Speakers Level 06 Hotel Lobby	Point	21.0	
Speakers Tower A Level 20 Terrace	Point	20.8	
Speakers Tower A Level 20 Terrace	Point	20.7	
Speakers Level 41 Tower A	Point	20.5	
Speakers Level 03 Angels Terrace	Point	20.3	
Speakers Level 01	Point	20.1	
Speakers Level 06 Lower Cal Plaza Ter.	Point	20.0	
Speakers Level 03 Angels Terrace	Point	19.9	
Speakers Level 06 Lower Cal Plaza Ter.	Point	19.8	
Speakers Level 03 - Restaurant	Point	19.5	
Speakers Level 01	Point	18.7	
Speakers Level 03 Angels Terrace	Point	18.5	
Speakers Level 06 Lower Cal Plaza Ter.	Point	18.3	
Speakers Level 03 - Restaurant	Point	18.3	
Speakers Level 01	Point	17.3	
Speakers Level 03 - Restaurant	Point	17.1	
Speakers Level 03 Angels Terrace	Point	16.3	
Speakers Level 05 Cultural Terrace	Point	16.1	
Speakers Level 03 Angel Terrace	Point	15.5	
Speakers Level 05 Cultural Terrace	Point	14.0	
Speakers - Level 04 Olive St. Plaza	Point	12.6	
Speakers - Level 04 Olive St. Plaza	Point	12.0	
Speakers Level 05 Cultural Terrace	Point	11.2	
Speakers - Level 04 Olive St. Plaza	Point	9.9	
Speakers Level 06 Lower Cal Plaza Ter.	Point	9.6	
Receiver R3 Fl G Leq,d 63.6 dB(A)			
Speakers Level PB01-6	Point	56.3	
Speakers Level PB01-5	Point	54.7	
Speakers Level 01	Point	53.5	
Speakers Level PB01-8	Point	52.7	

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)
Speakers Level 01	Point	52.6
Speakers Level 01	Point	52.1
Speakers Level 01	Point	51.0
Speakers Level PB01-7	Point	50.4
Speakers Level 03 - Restaurant	Point	48.7
Speakers Level PB01-1	Point	47.7
Speakers Level PB01-4	Point	45.9
Speakers Level 01	Point	45.7
Speakers Level 01	Point	45.4
Speakers Level PB01-2	Point	45.0
Speakers Level 03 - Restaurant	Point	44.2
Speakers Level PB01-3	Point	43.1
Speakers Level 03 - Restaurant	Point	42.9
Speakers Level 41 Tower B	Point	42.1
Speakers Level 03 - Restaurant	Point	41.3
Speakers Level 41 Tower B	Point	40.7
Speakers Level 41 Tower B	Point	40.4
Speakers Level 03 Angels Terrace	Point	40.1
Speakers Level 03 Angels Terrace	Point	39.7
Speakers Level 05 Hotel Pool Deck	Point	39.6
Speakers Level PB01-9	Point	39.4
Speakers Level 03 Angels Terrace	Point	39.4
Speakers Tower A Level 20 Terrace	Point	38.5
Speakers Tower A Level 20 Terrace	Point	38.3
Speakers Tower A Level 20 Terrace	Point	37.9
Speakers Level 41 Tower A	Point	37.5
Speakers Level 41 Tower A	Point	37.5
Speakers Tower A Level 20 Terrace	Point	37.5
Speakers Level 03 Angels Terrace	Point	37.4
Speakers Level 41 Tower A	Point	37.2
Speakers Level 06 Lower Cal Plaza Ter.	Point	37.1
Speakers Level 05 Hotel Pool Deck	Point	36.8
Speakers Level 41 Tower A	Point	36.8
Speakers Level 05 Hotel Pool Deck	Point	36.5
Speakers Level 03 Angels Terrace	Point	35.8
Speakers Level 05 Hotel Pool Deck	Point	35.7
Speakers Level 03 - Restaurant	Point	35.7
Speakers Level 03 Angels Terrace	Point	35.7
Speakers Level 03 Angel Terrace	Point	35.5
Speakers Level 05 Hotel Pool Deck	Point	35.3
Speakers Level 03 Angels Terrace	Point	34.8

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)
Speakers Level 03 Angels Terrace	Point	34.8
Speakers Level 05 Hotel Pool Deck	Point	34.6
Speakers Level 05 Hotel Pool Deck	Point	34.3
Speakers Level 06 Hotel Lobby	Point	34.2
Speakers Level 03 - Restaurant	Point	33.4
Speakers Level 05 Hotel Pool Deck	Point	32.7
Speakers Level 41 Tower B	Point	32.4
Speakers Level 03 Angels Terrace	Point	32.0
Speakers Tower A Level 20 Terrace	Point	31.7
Speakers Level 03 - Restaurant	Point	31.1
Speakers Tower A Level 20 Terrace	Point	31.0
Speakers Level 06 Hotel Lobby	Point	30.9
Speakers Level 06 Hotel Lobby	Point	30.9
Speakers Level 41 Tower B	Point	30.7
Speakers Level 41 Tower B	Point	30.5
Speakers Tower A Level 20 Terrace	Point	30.3
Speakers Level 41 Tower B	Point	30.1
Speakers Tower A Level 20 Terrace	Point	29.3
Speakers Level 07 Upper Cal Plaza	Point	28.8
Speakers Level 07 Upper Cal Plaza	Point	28.7
Speakers Level 07 Upper Cal Plaza	Point	28.2
Speakers Level 07 Upper Cal Plaza	Point	27.8
Speakers Level 06 Lower Cal Plaza Ter.	Point	26.8
Speakers Level 03 - Restaurant	Point	25.0
Speakers Level 41 Tower A	Point	24.6
Speakers Level 41 Tower A	Point	24.6
Speakers Level 07 Upper Cal Plaza	Point	23.9
Speakers Level 41 Tower A	Point	23.7
Speakers Level 41 Tower A	Point	23.0
Speakers - Level 04 Olive St. Plaza	Point	22.7
Speakers Level 07 Upper Cal Plaza	Point	22.5
Speakers Level 07 Upper Cal Plaza	Point	21.3
Speakers Level 05 Cultural Terrace	Point	21.2
Speakers Level 06 Lower Cal Plaza Ter.	Point	20.0
Speakers Level 07 Upper Cal Plaza	Point	19.2
Speakers - Level 04 Olive St. Plaza	Point	18.4
Speakers Level 05 Cultural Terrace	Point	14.9
Speakers Level 05 Cultural Terrace	Point	14.2
Speakers Level 05 Cultural Terrace	Point	13.9
Speakers Level 06 Lower Cal Plaza Ter.	Point	10.2
Speakers Level 05 Cultural Terrace	Point	10.0

Angels Landing
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)	
Speakers Level 06 Lower Cal Plaza Ter.	Point	6.3	
Speakers - Level 04 Olive St. Plaza	Point	6.3	
Speakers Level 06 Lower Cal Plaza Ter.	Point	3.0	
Speakers Level 05 Cultural Terrace	Point	1.3	
Receiver R3 Fl F2 Leq,d 64.1 dB(A)			
Speakers Tower A Level 20 Terrace	Point	55.6	
Speakers Tower A Level 20 Terrace	Point	54.9	
Speakers Tower A Level 20 Terrace	Point	54.7	
Speakers Tower A Level 20 Terrace	Point	54.3	
Speakers Level 41 Tower B	Point	54.2	
Speakers Tower A Level 20 Terrace	Point	53.0	
Speakers Level 41 Tower B	Point	52.9	
Speakers Level 41 Tower B	Point	51.9	
Speakers Tower A Level 20 Terrace	Point	49.8	
Speakers Tower A Level 20 Terrace	Point	49.1	
Speakers Tower A Level 20 Terrace	Point	46.9	
Speakers Level 41 Tower A	Point	45.9	
Speakers Level 41 Tower A	Point	45.3	
Speakers Level 41 Tower A	Point	45.2	
Speakers Level 41 Tower A	Point	44.5	
Speakers Level 41 Tower B	Point	44.5	
Speakers Level 41 Tower B	Point	42.0	
Speakers Level 41 Tower B	Point	40.0	
Speakers Level 41 Tower B	Point	38.9	
Speakers Level 05 Hotel Pool Deck	Point	38.1	
Speakers Level 03 Angels Terrace	Point	38.0	
Speakers Level 06 Hotel Lobby	Point	38.0	
Speakers Level 06 Hotel Lobby	Point	37.6	
Speakers Level 06 Hotel Lobby	Point	37.4	
Speakers Level 03 Angels Terrace	Point	37.2	
Speakers Level 01	Point	36.9	
Speakers Level 03 Angels Terrace	Point	36.6	
Speakers Level PB01-6	Point	36.2	
Speakers Level 03 Angels Terrace	Point	36.1	
Speakers Level PB01-5	Point	35.9	
Speakers Level 06 Lower Cal Plaza Ter.	Point	35.9	
Speakers Level PB01-1	Point	35.2	
Speakers Level 03 Angel Terrace	Point	34.9	
Speakers Level 05 Hotel Pool Deck	Point	34.8	
Speakers Level 01	Point	34.7	
Speakers Level 03 - Restaurant	Point	34.5	

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers Level PB01-8	Point	34.4
Speakers Level 01	Point	34.3
Speakers Level 01	Point	34.1
Speakers Level PB01-7	Point	34.1
Speakers Level 03 - Restaurant	Point	33.9
Speakers Level 41 Tower A	Point	33.8
Speakers Level 41 Tower A	Point	33.1
Speakers Level 41 Tower A	Point	33.1
Speakers Level 01	Point	33.0
Speakers Level PB01-2	Point	32.8
Speakers Level 07 Upper Cal Plaza	Point	32.8
Speakers Level 03 Angels Terrace	Point	32.5
Speakers Level 01	Point	32.4
Speakers Level PB01-4	Point	32.4
Speakers Level PB01-3	Point	32.1
Speakers Level 41 Tower A	Point	32.0
Speakers Level 07 Upper Cal Plaza	Point	32.0
Speakers Level 07 Upper Cal Plaza	Point	31.9
Speakers Level 07 Upper Cal Plaza	Point	31.6
Speakers Level PB01-9	Point	30.9
Speakers Level 05 Hotel Pool Deck	Point	30.4
Speakers Level 05 Hotel Pool Deck	Point	30.0
Speakers Level 05 Hotel Pool Deck	Point	29.9
Speakers Level 05 Hotel Pool Deck	Point	29.8
Speakers Level 06 Lower Cal Plaza Ter.	Point	28.5
Speakers Level 03 Angels Terrace	Point	27.2
Speakers Level 07 Upper Cal Plaza	Point	26.8
Speakers Level 05 Hotel Pool Deck	Point	25.5
Speakers Level 03 - Restaurant	Point	25.4
Speakers Level 05 Hotel Pool Deck	Point	24.6
Speakers Level 03 - Restaurant	Point	24.3
Speakers Level 03 - Restaurant	Point	24.0
Speakers Level 03 Angels Terrace	Point	22.0
Speakers Level 03 - Restaurant	Point	22.0
Speakers Level 03 Angels Terrace	Point	19.5
Speakers Level 03 - Restaurant	Point	16.7
Speakers Level 03 Angels Terrace	Point	16.2
Speakers Level 03 - Restaurant	Point	15.8
Speakers Level 07 Upper Cal Plaza	Point	15.4
Speakers Level 07 Upper Cal Plaza	Point	15.2
Speakers Level 05 Cultural Terrace	Point	12.4

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)	
Speakers Level 05 Cultural Terrace	Point	11.4	
Speakers Level 05 Cultural Terrace	Point	10.4	
Speakers Level 06 Lower Cal Plaza Ter.	Point	9.5	
Speakers Level 07 Upper Cal Plaza	Point	9.1	
Speakers Level 05 Cultural Terrace	Point	8.2	
Speakers Level 05 Cultural Terrace	Point	4.7	
Speakers - Level 04 Olive St. Plaza	Point	4.2	
Speakers Level 05 Cultural Terrace	Point	3.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	3.1	
Speakers Level 06 Lower Cal Plaza Ter.	Point	2.5	
Speakers - Level 04 Olive St. Plaza	Point	1.0	
Speakers Level 06 Lower Cal Plaza Ter.	Point	-0.2	
Speakers - Level 04 Olive St. Plaza	Point	-0.3	
Receiver R4 Fl G Leq,d 58.2 dB(A)			
Speakers Level PB01-3	Point	48.2	
Speakers Level PB01-2	Point	48.2	
Speakers Level PB01-4	Point	47.8	
Speakers Level PB01-7	Point	46.1	
Speakers Level 01	Point	45.8	
Speakers Level PB01-8	Point	45.7	
Speakers Level 01	Point	45.1	
Speakers Level 03 - Restaurant	Point	45.0	
Speakers Level 03 - Restaurant	Point	43.8	
Speakers Level PB01-9	Point	43.3	
Speakers Level 01	Point	43.0	
Speakers Level 03 Angels Terrace	Point	42.3	
Speakers Level 01	Point	42.3	
Speakers Level PB01-1	Point	41.9	
Speakers Level 41 Tower B	Point	41.8	
Speakers Level 41 Tower B	Point	41.5	
Speakers Level 01	Point	41.3	
Speakers Level PB01-5	Point	41.0	
Speakers Level PB01-6	Point	40.6	
Speakers Level 01	Point	40.5	
Speakers Level 03 Angels Terrace	Point	38.8	
Speakers Level 03 Angels Terrace	Point	38.3	
Speakers Level 05 Hotel Pool Deck	Point	37.4	
Speakers Level 41 Tower B	Point	37.1	
Speakers Level 41 Tower B	Point	36.8	
Speakers Level 05 Hotel Pool Deck	Point	36.7	
Speakers Level 41 Tower A	Point	36.7	

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers Level 05 Hotel Pool Deck	Point	36.7
Speakers Tower A Level 20 Terrace	Point	36.4
Speakers Level 03 Angels Terrace	Point	35.5
Speakers Level 05 Hotel Pool Deck	Point	35.1
Speakers Level 05 Hotel Pool Deck	Point	34.7
Speakers Tower A Level 20 Terrace	Point	34.5
Speakers Level 03 Angels Terrace	Point	34.4
Speakers Tower A Level 20 Terrace	Point	34.3
Speakers Level 05 Hotel Pool Deck	Point	34.2
Speakers Tower A Level 20 Terrace	Point	33.1
Speakers Level 05 Hotel Pool Deck	Point	33.1
Speakers Tower A Level 20 Terrace	Point	33.1
Speakers Level 03 Angels Terrace	Point	32.9
Speakers Tower A Level 20 Terrace	Point	32.6
Speakers Level 03 - Restaurant	Point	32.4
Speakers Level 07 Upper Cal Plaza	Point	31.9
Speakers Level 41 Tower A	Point	31.6
Speakers Level 41 Tower A	Point	31.3
Speakers Level 03 - Restaurant	Point	31.1
Speakers Level 41 Tower A	Point	31.0
Speakers Level 06 Lower Cal Plaza Ter.	Point	31.0
Speakers Level 03 Angel Terrace	Point	30.7
Speakers Level 05 Hotel Pool Deck	Point	28.9
Speakers Level 05 Cultural Terrace	Point	28.0
Speakers Level 06 Hotel Lobby	Point	27.4
Speakers Level 03 - Restaurant	Point	26.9
Speakers Level 07 Upper Cal Plaza	Point	26.8
Speakers Level 03 Angels Terrace	Point	26.7
Speakers Tower A Level 20 Terrace	Point	26.5
Speakers Level 05 Cultural Terrace	Point	26.2
Speakers Level 07 Upper Cal Plaza	Point	26.2
Speakers Level 41 Tower B	Point	25.2
Speakers Level 41 Tower A	Point	24.8
Speakers Level 03 - Restaurant	Point	24.7
Speakers Tower A Level 20 Terrace	Point	24.6
Speakers Level 03 Angels Terrace	Point	24.5
Speakers Level 07 Upper Cal Plaza	Point	24.3
Speakers Level 06 Lower Cal Plaza Ter.	Point	23.6
Speakers Level 05 Cultural Terrace	Point	23.5
Speakers Level 06 Hotel Lobby	Point	23.5
Speakers Level 07 Upper Cal Plaza	Point	23.1

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)	
Speakers Level 07 Upper Cal Plaza	Point	22.8	
Speakers Level 07 Upper Cal Plaza	Point	22.0	
Speakers Level 03 - Restaurant	Point	21.7	
Speakers Level 41 Tower B	Point	21.3	
Speakers Level 41 Tower B	Point	21.1	
Speakers Level 07 Upper Cal Plaza	Point	20.5	
Speakers Level 41 Tower A	Point	20.4	
Speakers Level 06 Lower Cal Plaza Ter.	Point	19.5	
Speakers Level 41 Tower A	Point	19.4	
Speakers Level 03 Angels Terrace	Point	19.4	
Speakers Level 41 Tower A	Point	18.4	
Speakers Level 03 - Restaurant	Point	16.8	
Speakers Level 05 Cultural Terrace	Point	10.3	
Speakers Level 05 Cultural Terrace	Point	9.2	
Speakers Level 06 Hotel Lobby	Point	8.2	
Speakers Level 06 Lower Cal Plaza Ter.	Point	8.0	
Speakers Level 05 Cultural Terrace	Point	6.5	
Speakers - Level 04 Olive St. Plaza	Point	2.2	
Speakers - Level 04 Olive St. Plaza	Point	1.7	
Speakers Level 06 Lower Cal Plaza Ter.	Point	0.9	
Speakers Level 06 Lower Cal Plaza Ter.	Point	-3.6	
Speakers - Level 04 Olive St. Plaza	Point	-4.1	
Receiver R4 Fl F2 Leq,d 59.1 dB(A)			
Speakers Level PB01-2	Point	47.2	
Speakers Level PB01-3	Point	47.0	
Speakers Level PB01-4	Point	46.7	
Speakers Level 05 Hotel Pool Deck	Point	46.3	
Speakers Level 05 Hotel Pool Deck	Point	46.2	
Speakers Level 05 Hotel Pool Deck	Point	45.8	
Speakers Level PB01-7	Point	45.3	
Speakers Level 01	Point	45.1	
Speakers Level PB01-8	Point	44.9	
Speakers Level 03 - Restaurant	Point	44.6	
Speakers Level 01	Point	44.4	
Speakers Level 03 Angels Terrace	Point	44.0	
Speakers Level 03 - Restaurant	Point	43.9	
Speakers Level 05 Hotel Pool Deck	Point	43.5	
Speakers Level 03 Angels Terrace	Point	42.8	
Speakers Level 05 Hotel Pool Deck	Point	42.8	
Speakers Level 03 Angels Terrace	Point	42.6	
Speakers Level 01	Point	42.3	

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers Level PB01-9	Point	42.2
Speakers Level 05 Hotel Pool Deck	Point	42.1
Speakers Level 01	Point	41.7
Speakers Level PB01-1	Point	41.5
Speakers Level 01	Point	40.6
Speakers Level PB01-5	Point	40.4
Speakers Level PB01-6	Point	40.2
Speakers Level 03 Angels Terrace	Point	40.1
Speakers Level 01	Point	39.9
Speakers Tower A Level 20 Terrace	Point	39.0
Speakers Level 41 Tower B	Point	38.6
Speakers Level 41 Tower A	Point	38.2
Speakers Tower A Level 20 Terrace	Point	37.9
Speakers Tower A Level 20 Terrace	Point	37.8
Speakers Level 03 Angels Terrace	Point	37.8
Speakers Level 41 Tower B	Point	37.6
Speakers Tower A Level 20 Terrace	Point	37.6
Speakers Level 07 Upper Cal Plaza	Point	37.2
Speakers Tower A Level 20 Terrace	Point	37.2
Speakers Level 41 Tower B	Point	37.0
Speakers Level 41 Tower B	Point	36.7
Speakers Level 03 - Restaurant	Point	36.5
Speakers Level 03 - Restaurant	Point	36.2
Speakers Tower A Level 20 Terrace	Point	36.1
Speakers Level 07 Upper Cal Plaza	Point	35.8
Speakers Level 03 Angels Terrace	Point	35.6
Speakers Level 05 Cultural Terrace	Point	34.4
Speakers Level 05 Hotel Pool Deck	Point	33.2
Speakers Tower A Level 20 Terrace	Point	32.9
Speakers Level 03 Angel Terrace	Point	32.8
Speakers Level 41 Tower A	Point	32.8
Speakers Level 41 Tower A	Point	32.5
Speakers Level 41 Tower A	Point	32.1
Speakers Level 05 Hotel Pool Deck	Point	31.9
Speakers Level 06 Lower Cal Plaza Ter.	Point	31.9
Speakers Level 07 Upper Cal Plaza	Point	31.0
Speakers Level 07 Upper Cal Plaza	Point	30.8
Speakers Level 06 Lower Cal Plaza Ter.	Point	30.2
Speakers Tower A Level 20 Terrace	Point	30.2
Speakers Level 05 Cultural Terrace	Point	29.4
Speakers Level 41 Tower B	Point	28.9

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)	
Speakers Level 03 - Restaurant	Point	28.8	
Speakers Level 41 Tower A	Point	28.0	
Speakers Level 05 Cultural Terrace	Point	27.4	
Speakers Level 03 - Restaurant	Point	27.0	
Speakers Level 07 Upper Cal Plaza	Point	26.8	
Speakers Level 07 Upper Cal Plaza	Point	26.4	
Speakers Level 07 Upper Cal Plaza	Point	24.9	
Speakers Level 07 Upper Cal Plaza	Point	24.7	
Speakers Level 41 Tower B	Point	24.1	
Speakers Level 41 Tower B	Point	24.0	
Speakers Level 03 Angels Terrace	Point	22.8	
Speakers Level 41 Tower A	Point	22.8	
Speakers Level 03 Angels Terrace	Point	22.8	
Speakers Level 41 Tower A	Point	22.3	
Speakers Level 05 Cultural Terrace	Point	21.1	
Speakers Level 03 Angels Terrace	Point	20.1	
Speakers Level 41 Tower A	Point	19.9	
Speakers Level 05 Cultural Terrace	Point	18.3	
Speakers Level 05 Cultural Terrace	Point	17.5	
Speakers Level 06 Lower Cal Plaza Ter.	Point	16.6	
Speakers Level 06 Hotel Lobby	Point	16.6	
Speakers Level 06 Hotel Lobby	Point	16.3	
Speakers Level 03 - Restaurant	Point	16.1	
Speakers Level 06 Hotel Lobby	Point	15.2	
Speakers Level 03 - Restaurant	Point	14.3	
Speakers - Level 04 Olive St. Plaza	Point	12.8	
Speakers Level 06 Lower Cal Plaza Ter.	Point	12.6	
Speakers - Level 04 Olive St. Plaza	Point	0.1	
Speakers Level 06 Lower Cal Plaza Ter.	Point	-0.6	
Speakers - Level 04 Olive St. Plaza	Point	-2.4	
Speakers Level 06 Lower Cal Plaza Ter.	Point	-2.5	
Receiver R5 Fl G Leq,d 53.7 dB(A)			
Speakers Level 07 Upper Cal Plaza	Point	44.0	
Speakers Level 05 Cultural Terrace	Point	43.4	
Speakers Level 06 Lower Cal Plaza Ter.	Point	43.2	
Speakers Level 07 Upper Cal Plaza	Point	43.0	
Speakers Level 41 Tower B	Point	42.3	
Speakers Level 07 Upper Cal Plaza	Point	42.2	
Speakers Level 07 Upper Cal Plaza	Point	42.0	
Speakers Level 07 Upper Cal Plaza	Point	41.2	
Speakers Level 07 Upper Cal Plaza	Point	40.9	

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers Level 06 Lower Cal Plaza Ter.	Point	40.8
Speakers Level 07 Upper Cal Plaza	Point	39.1
Speakers Level 07 Upper Cal Plaza	Point	36.5
Speakers Level 06 Lower Cal Plaza Ter.	Point	36.4
Speakers Tower A Level 20 Terrace	Point	36.2
Speakers Level 05 Cultural Terrace	Point	35.4
Speakers Level 41 Tower B	Point	35.4
Speakers Level 05 Cultural Terrace	Point	33.8
Speakers Level 05 Cultural Terrace	Point	33.6
Speakers Level 05 Cultural Terrace	Point	33.1
Speakers - Level 04 Olive St. Plaza	Point	33.0
Speakers Level 06 Hotel Lobby	Point	32.9
Speakers Level 41 Tower A	Point	32.4
Speakers Level 05 Cultural Terrace	Point	31.9
Speakers Level 06 Lower Cal Plaza Ter.	Point	31.8
Speakers Level 06 Lower Cal Plaza Ter.	Point	31.7
Speakers Tower A Level 20 Terrace	Point	31.7
Speakers Level 03 - Restaurant	Point	31.2
Speakers Tower A Level 20 Terrace	Point	31.0
Speakers Tower A Level 20 Terrace	Point	31.0
Speakers Level 03 - Restaurant	Point	30.9
Speakers Level 03 Angels Terrace	Point	30.3
Speakers Level 03 Angels Terrace	Point	27.7
Speakers Level 03 Angels Terrace	Point	27.5
Speakers Level 06 Lower Cal Plaza Ter.	Point	27.4
Speakers Level 41 Tower B	Point	27.4
Speakers Level 05 Hotel Pool Deck	Point	27.3
Speakers - Level 04 Olive St. Plaza	Point	27.0
Speakers Level 03 Angels Terrace	Point	27.0
Speakers Level 06 Hotel Lobby	Point	26.8
Speakers Level 05 Hotel Pool Deck	Point	26.6
Speakers - Level 04 Olive St. Plaza	Point	26.4
Speakers Level 05 Hotel Pool Deck	Point	26.2
Speakers Level 06 Hotel Lobby	Point	25.9
Speakers Level 03 Angels Terrace	Point	24.1
Speakers Level 41 Tower B	Point	23.8
Speakers Level 41 Tower B	Point	23.4
Speakers Tower A Level 20 Terrace	Point	23.4
Speakers Level 41 Tower B	Point	23.2
Speakers Level 41 Tower B	Point	23.1
Speakers Level 03 Angels Terrace	Point	22.6

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)	
Speakers Level 03 Angels Terrace	Point	22.5	
Speakers Level 03 Angels Terrace	Point	22.1	
Speakers Level 03 Angel Terrace	Point	21.9	
Speakers Level 41 Tower A	Point	20.2	
Speakers Level 03 Angels Terrace	Point	20.1	
Speakers Level 41 Tower A	Point	19.7	
Speakers Level 41 Tower A	Point	19.0	
Speakers Level 41 Tower A	Point	18.8	
Speakers Level PB01-9	Point	18.7	
Speakers Level 41 Tower A	Point	18.4	
Speakers Level 03 - Restaurant	Point	18.4	
Speakers Level 41 Tower A	Point	18.2	
Speakers Level 41 Tower A	Point	18.1	
Speakers Level 05 Hotel Pool Deck	Point	17.8	
Speakers Level 03 - Restaurant	Point	17.3	
Speakers Level 03 - Restaurant	Point	17.3	
Speakers Level 05 Hotel Pool Deck	Point	17.3	
Speakers Level 01	Point	17.1	
Speakers Level 03 - Restaurant	Point	17.1	
Speakers Level 01	Point	16.5	
Speakers Tower A Level 20 Terrace	Point	13.4	
Speakers Tower A Level 20 Terrace	Point	13.4	
Speakers Tower A Level 20 Terrace	Point	13.2	
Speakers Level 01	Point	12.9	
Speakers Level 01	Point	12.8	
Speakers Level 01	Point	12.6	
Speakers Level PB01-1	Point	12.4	
Speakers Level 01	Point	12.4	
Speakers Level PB01-8	Point	10.8	
Speakers Level PB01-2	Point	10.8	
Speakers Level 03 - Restaurant	Point	10.0	
Speakers Level 03 - Restaurant	Point	9.7	
Speakers Level PB01-4	Point	9.7	
Speakers Level PB01-3	Point	9.4	
Speakers Level 05 Hotel Pool Deck	Point	6.9	
Speakers Level 05 Hotel Pool Deck	Point	6.6	
Speakers Level 05 Hotel Pool Deck	Point	6.3	
Speakers Level PB01-7	Point	5.8	
Speakers Level PB01-6	Point	5.3	
Speakers Level PB01-5	Point	4.9	
Receiver R6 Fl G Leq,d 57.0 dB(A)			

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers - Level 04 Olive St. Plaza	Point	47.7
Speakers Level 06 Hotel Lobby	Point	46.8
Speakers Level 03 - Restaurant	Point	46.4
Speakers Level 03 - Restaurant	Point	45.2
Speakers - Level 04 Olive St. Plaza	Point	45.2
Speakers Level 05 Cultural Terrace	Point	44.7
Speakers Level 06 Hotel Lobby	Point	43.6
Speakers Level 05 Cultural Terrace	Point	43.6
Speakers Level 06 Lower Cal Plaza Ter.	Point	43.1
Speakers Level 07 Upper Cal Plaza	Point	43.0
Speakers Level 05 Cultural Terrace	Point	42.8
Speakers Level 07 Upper Cal Plaza	Point	41.2
Speakers - Level 04 Olive St. Plaza	Point	41.2
Speakers Level 05 Cultural Terrace	Point	41.2
Speakers Level 03 Angels Terrace	Point	40.7
Speakers Level 07 Upper Cal Plaza	Point	39.5
Speakers Tower A Level 20 Terrace	Point	39.5
Speakers Level 07 Upper Cal Plaza	Point	38.8
Speakers Level 05 Cultural Terrace	Point	38.3
Speakers Level 07 Upper Cal Plaza	Point	38.2
Speakers Level 05 Cultural Terrace	Point	37.9
Speakers Level 07 Upper Cal Plaza	Point	36.2
Speakers Level 03 Angel Terrace	Point	35.6
Speakers Level 06 Lower Cal Plaza Ter.	Point	34.9
Speakers Level 07 Upper Cal Plaza	Point	34.3
Speakers Tower A Level 20 Terrace	Point	34.2
Speakers Level 07 Upper Cal Plaza	Point	34.0
Speakers Level 06 Hotel Lobby	Point	32.7
Speakers Level 41 Tower B	Point	32.7
Speakers Level 06 Lower Cal Plaza Ter.	Point	32.4
Speakers Level 41 Tower B	Point	31.9
Speakers Level 03 Angels Terrace	Point	31.7
Speakers Level 41 Tower B	Point	31.6
Speakers Level 41 Tower A	Point	31.4
Speakers Tower A Level 20 Terrace	Point	31.2
Speakers Level 41 Tower B	Point	30.5
Speakers Level 41 Tower B	Point	30.1
Speakers Level 41 Tower B	Point	29.9
Speakers Level 41 Tower B	Point	29.9
Speakers Tower A Level 20 Terrace	Point	29.8
Speakers Level 03 Angels Terrace	Point	29.5

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)
Speakers Level 03 Angels Terrace	Point	29.5
Speakers Level 03 Angels Terrace	Point	29.3
Speakers Level 03 Angels Terrace	Point	28.5
Speakers Level 03 Angels Terrace	Point	28.2
Speakers Level 03 - Restaurant	Point	27.6
Speakers Tower A Level 20 Terrace	Point	27.5
Speakers Level 05 Hotel Pool Deck	Point	27.1
Speakers Level 03 - Restaurant	Point	26.8
Speakers Level PB01-9	Point	26.8
Speakers Level 03 - Restaurant	Point	26.2
Speakers Level 03 - Restaurant	Point	25.9
Speakers Level 05 Hotel Pool Deck	Point	25.9
Speakers Level 03 - Restaurant	Point	25.9
Speakers Level 41 Tower A	Point	25.2
Speakers Level 03 Angels Terrace	Point	25.1
Speakers Level 41 Tower A	Point	24.8
Speakers Level 41 Tower A	Point	24.7
Speakers Level 41 Tower A	Point	24.6
Speakers Level 06 Lower Cal Plaza Ter.	Point	24.1
Speakers Level 41 Tower A	Point	23.9
Speakers Level 03 Angels Terrace	Point	23.8
Speakers Level 41 Tower A	Point	23.8
Speakers Level 03 - Restaurant	Point	23.2
Speakers Level 41 Tower A	Point	22.2
Speakers Tower A Level 20 Terrace	Point	20.7
Speakers Level 01	Point	19.3
Speakers Tower A Level 20 Terrace	Point	19.1
Speakers Level 05 Hotel Pool Deck	Point	18.9
Speakers Tower A Level 20 Terrace	Point	18.9
Speakers Level PB01-3	Point	17.3
Speakers Level PB01-4	Point	17.0
Speakers Level PB01-2	Point	16.9
Speakers Level 05 Hotel Pool Deck	Point	16.8
Speakers Level 05 Hotel Pool Deck	Point	16.2
Speakers Level PB01-7	Point	15.9
Speakers Level PB01-8	Point	15.6
Speakers Level 01	Point	15.3
Speakers Level 01	Point	15.2
Speakers Level PB01-5	Point	14.5
Speakers Level 01	Point	14.4
Speakers Level PB01-6	Point	14.2

Angels Landing
Assessed contribution level - Speakers

9

Source	Source type	Leq dB(A)	
Speakers Level 01	Point	13.4	
Speakers Level PB01-1	Point	13.3	
Speakers Level 01	Point	13.1	
Speakers Level 06 Lower Cal Plaza Ter.	Point	13.0	
Speakers Level 05 Hotel Pool Deck	Point	11.4	
Speakers Level 05 Hotel Pool Deck	Point	10.8	
Speakers Level 05 Hotel Pool Deck	Point	9.5	
Speakers Level 06 Lower Cal Plaza Ter.	Point	5.8	

Angels Landing
Source Levels in dB(A) - People

Name	Source type	Lw dB(A)	
People - Level 03 Angels Terrace	Area	99.3	
People - Level 04 Olive St Plaza	Area	90.7	
People - Level 05 Terrace	Area	93.2	
People Level 05 - Tower B Pool Deck	Area	91.6	
People Level 06 Hotel Loby	Area	87.9	
People Level 06 Lower Cal Plaza Terrace	Area	84.1	
People Level 06 Lower Cal Plaza Terrace	Area	93.1	
People Level 07 Upper Cal Plaza	Area	97.4	
People Level 20 Terrace	Area	93.9	
People Level 41 Tower A Terrace	Area	93.8	
People Level 41 Tower B Roof Deck	Area	94.3	
People-Hill Street Plaza (lower)	Area	97.6	
People-Hill Street Plaza (upper)	Area	94.9	
People-Level 03 Restaurant (south)	Area	90.6	
People-Level 03 Restaurant (west)	Area	85.9	

Angels Landing
Assessed contribution level - People

Source	Source type	Leq dB(A)
Receiver R1 Fl G Leq,d 52.3 dB(A)		
People - Level 04 Olive St Plaza	Area	49.5
People - Level 05 Terrace	Area	46.0
People Level 07 Upper Cal Plaza	Area	41.7
People Level 06 Lower Cal Plaza Terrace	Area	40.5
People - Level 03 Angels Terrace	Area	36.3
People Level 20 Terrace	Area	34.2
People Level 06 Hotel Loby	Area	33.5
People Level 06 Lower Cal Plaza Terrace	Area	33.1
People Level 41 Tower A Terrace	Area	28.9
People-Level 03 Restaurant (south)	Area	27.1
People Level 05 - Tower B Pool Deck	Area	24.8
People-Hill Street Plaza (lower)	Area	24.6
People-Hill Street Plaza (upper)	Area	24.4
People Level 41 Tower B Roof Deck	Area	23.0
People-Level 03 Restaurant (west)	Area	13.9
Receiver R1 Fl F2 Leq,d 55.6 dB(A)		
People Level 07 Upper Cal Plaza	Area	51.6
People - Level 03 Angels Terrace	Area	48.2
People - Level 05 Terrace	Area	48.0
People - Level 04 Olive St Plaza	Area	44.7
People Level 20 Terrace	Area	42.3
People Level 06 Lower Cal Plaza Terrace	Area	40.7
People Level 06 Hotel Loby	Area	39.9
People Level 05 - Tower B Pool Deck	Area	37.0
People-Level 03 Restaurant (south)	Area	37.0
People Level 06 Lower Cal Plaza Terrace	Area	35.3
People Level 41 Tower A Terrace	Area	31.6
People-Hill Street Plaza (lower)	Area	29.5
People-Hill Street Plaza (upper)	Area	28.4
People Level 41 Tower B Roof Deck	Area	28.1
People-Level 03 Restaurant (west)	Area	21.8
Receiver R2 Fl G Leq,d 51.9 dB(A)		
People-Hill Street Plaza (lower)	Area	48.0
People-Level 03 Restaurant (west)	Area	45.5
People - Level 03 Angels Terrace	Area	44.7
People Level 05 - Tower B Pool Deck	Area	41.1
People-Hill Street Plaza (upper)	Area	35.4
People Level 07 Upper Cal Plaza	Area	34.7
People-Level 03 Restaurant (south)	Area	33.8

Angels Landing
Assessed contribution level - People

9

Source	Source type	Leq dB(A)
People Level 06 Lower Cal Plaza Terrace	Area	33.0
People Level 20 Terrace	Area	27.7
People Level 41 Tower B Roof Deck	Area	27.5
People - Level 05 Terrace	Area	27.0
People Level 06 Hotel Loby	Area	23.9
People Level 41 Tower A Terrace	Area	21.4
People - Level 04 Olive St Plaza	Area	20.4
People Level 06 Lower Cal Plaza Terrace	Area	16.7
Receiver R2 Fl F2 Leq,d 53.9 dB(A)		
People Level 05 - Tower B Pool Deck	Area	50.7
People-Hill Street Plaza (lower)	Area	48.3
People-Level 03 Restaurant (west)	Area	42.9
People Level 07 Upper Cal Plaza	Area	42.2
People - Level 03 Angels Terrace	Area	39.2
People-Hill Street Plaza (upper)	Area	38.0
People Level 06 Lower Cal Plaza Terrace	Area	36.7
People-Level 03 Restaurant (south)	Area	35.6
People Level 41 Tower B Roof Deck	Area	29.6
People Level 20 Terrace	Area	28.6
People - Level 05 Terrace	Area	27.5
People Level 06 Hotel Loby	Area	25.8
People Level 41 Tower A Terrace	Area	24.5
People - Level 04 Olive St Plaza	Area	21.2
People Level 06 Lower Cal Plaza Terrace	Area	19.8
Receiver R3 Fl G Leq,d 59.4 dB(A)		
People-Hill Street Plaza (lower)	Area	56.3
People-Hill Street Plaza (upper)	Area	54.8
People - Level 03 Angels Terrace	Area	48.6
People-Level 03 Restaurant (south)	Area	46.2
People Level 05 - Tower B Pool Deck	Area	38.5
People Level 07 Upper Cal Plaza	Area	36.3
People-Level 03 Restaurant (west)	Area	36.2
People Level 06 Hotel Loby	Area	33.8
People Level 06 Lower Cal Plaza Terrace	Area	31.0
People Level 20 Terrace	Area	29.5
People - Level 05 Terrace	Area	28.0
People Level 06 Lower Cal Plaza Terrace	Area	25.5
People Level 41 Tower B Roof Deck	Area	24.9
People Level 41 Tower A Terrace	Area	23.2
People - Level 04 Olive St Plaza	Area	20.6

Angels Landing
Assessed contribution level - People

9

Source	Source type	Leq dB(A)
Receiver R3 Fl F2 Leq,d 56.3 dB(A)		
People Level 20 Terrace	Area	51.8
People - Level 03 Angels Terrace	Area	49.7
People-Hill Street Plaza (lower)	Area	47.6
People-Hill Street Plaza (upper)	Area	46.1
People Level 07 Upper Cal Plaza	Area	44.9
People Level 06 Hotel Loby	Area	41.9
People-Level 03 Restaurant (south)	Area	41.8
People Level 05 - Tower B Pool Deck	Area	41.3
People Level 41 Tower A Terrace	Area	35.3
People Level 06 Lower Cal Plaza Terrace	Area	34.8
People Level 41 Tower B Roof Deck	Area	34.4
People Level 06 Lower Cal Plaza Terrace	Area	32.7
People - Level 05 Terrace	Area	27.8
People-Level 03 Restaurant (west)	Area	26.1
People - Level 04 Olive St Plaza	Area	15.9
Receiver R4 Fl G Leq,d 52.4 dB(A)		
People-Hill Street Plaza (lower)	Area	49.3
People-Hill Street Plaza (upper)	Area	46.1
People - Level 03 Angels Terrace	Area	44.2
People-Level 03 Restaurant (south)	Area	37.3
People Level 05 - Tower B Pool Deck	Area	37.0
People Level 07 Upper Cal Plaza	Area	33.9
People Level 20 Terrace	Area	32.3
People-Level 03 Restaurant (west)	Area	31.6
People - Level 05 Terrace	Area	30.6
People Level 06 Lower Cal Plaza Terrace	Area	29.0
People Level 06 Hotel Loby	Area	26.1
People Level 41 Tower A Terrace	Area	25.7
People Level 41 Tower B Roof Deck	Area	25.1
People Level 06 Lower Cal Plaza Terrace	Area	21.2
People - Level 04 Olive St Plaza	Area	16.1
Receiver R4 Fl F2 Leq,d 55.4 dB(A)		
People-Hill Street Plaza (lower)	Area	51.6
People-Hill Street Plaza (upper)	Area	48.7
People - Level 03 Angels Terrace	Area	47.3
People Level 05 - Tower B Pool Deck	Area	44.8
People-Level 03 Restaurant (south)	Area	41.0
People-Level 03 Restaurant (west)	Area	40.0
People Level 07 Upper Cal Plaza	Area	37.8

Angels Landing
Assessed contribution level - People

9

Source	Source type	Leq dB(A)
People - Level 05 Terrace	Area	35.9
People Level 20 Terrace	Area	34.7
People Level 06 Lower Cal Plaza Terrace	Area	32.1
People Level 06 Hotel Loby	Area	29.4
People Level 06 Lower Cal Plaza Terrace	Area	28.8
People Level 41 Tower A Terrace	Area	28.2
People Level 41 Tower B Roof Deck	Area	28.0
People - Level 04 Olive St Plaza	Area	23.6
Receiver R5 Fl G Leq,d 54.5 dB(A)		
People Level 07 Upper Cal Plaza	Area	51.7
People Level 06 Lower Cal Plaza Terrace	Area	49.3
People - Level 05 Terrace	Area	45.2
People - Level 04 Olive St Plaza	Area	39.4
People - Level 03 Angels Terrace	Area	35.9
People Level 20 Terrace	Area	33.3
People-Level 03 Restaurant (south)	Area	29.2
People-Hill Street Plaza (upper)	Area	27.4
People Level 06 Hotel Loby	Area	27.3
People-Hill Street Plaza (lower)	Area	26.8
People Level 06 Lower Cal Plaza Terrace	Area	25.3
People Level 41 Tower A Terrace	Area	24.1
People Level 05 - Tower B Pool Deck	Area	23.7
People Level 41 Tower B Roof Deck	Area	21.2
People-Level 03 Restaurant (west)	Area	11.7
Receiver R6 Fl G Leq,d 58.7 dB(A)		
People - Level 04 Olive St Plaza	Area	53.4
People - Level 03 Angels Terrace	Area	53.0
People - Level 05 Terrace	Area	52.7
People Level 07 Upper Cal Plaza	Area	47.6
People Level 06 Lower Cal Plaza Terrace	Area	46.0
People-Level 03 Restaurant (south)	Area	42.3
People Level 06 Lower Cal Plaza Terrace	Area	41.6
People Level 06 Hotel Loby	Area	36.8
People Level 20 Terrace	Area	31.8
People-Hill Street Plaza (lower)	Area	30.1
People-Hill Street Plaza (upper)	Area	26.3
People Level 41 Tower A Terrace	Area	25.1
People Level 05 - Tower B Pool Deck	Area	22.4
People Level 41 Tower B Roof Deck	Area	19.8
People-Level 03 Restaurant (west)	Area	16.3

Angels Landing
Source Levels in dB(A) - Loading

Name	Source type	Lw dB(A)	
Loading 1	Point	101.9	
Loading 2	Point	101.9	
Loading 3	Point	101.9	
Loading 4	Point	101.9	
Loading 5	Point	101.9	
Loading 6	Point	101.9	
Loading 7	Point	101.9	

Angels Landing
Assessed contribution level - Loading

Source	Source type	Leq dB(A)
Receiver R1 Fl G Leq,d 48.0 dB(A)		
Loading 1	Point	33.4
Loading 2	Point	
Loading 3	Point	41.7
Loading 4	Point	42.0
Loading 5	Point	41.8
Loading 6	Point	40.5
Loading 7	Point	35.4
Receiver R1 Fl F2 Leq,d 48.1 dB(A)		
Loading 1	Point	24.9
Loading 2	Point	
Loading 3	Point	31.9
Loading 4	Point	33.5
Loading 5	Point	33.8
Loading 6	Point	38.5
Loading 7	Point	47.1
Receiver R2 Fl G Leq,d 49.9 dB(A)		
Loading 1	Point	46.0
Loading 2	Point	31.7
Loading 3	Point	26.3
Loading 4	Point	41.8
Loading 5	Point	41.3
Loading 6	Point	42.1
Loading 7	Point	40.4
Receiver R2 Fl F2 Leq,d 50.2 dB(A)		
Loading 1	Point	48.4
Loading 2	Point	33.1
Loading 3	Point	26.8
Loading 4	Point	40.9
Loading 5	Point	38.7
Loading 6	Point	40.1
Loading 7	Point	36.2
Receiver R3 Fl G Leq,d 41.8 dB(A)		
Loading 1	Point	25.7
Loading 2	Point	26.0
Loading 3	Point	25.9
Loading 4	Point	32.3
Loading 5	Point	34.3
Loading 6	Point	36.8
Loading 7	Point	37.0

Angels Landing
Assessed contribution level - Loading

Source	Source type	Leq dB(A)
Receiver R3 Fl F2 Leq,d 35.2 dB(A)		
Loading 1	Point	28.5
Loading 2	Point	27.9
Loading 3	Point	23.7
Loading 4	Point	27.3
Loading 5	Point	27.2
Loading 6	Point	26.8
Loading 7	Point	24.1
Receiver R4 Fl G Leq,d 35.8 dB(A)		
Loading 1	Point	30.8
Loading 2	Point	24.0
Loading 3	Point	29.1
Loading 4	Point	27.7
Loading 5	Point	26.6
Loading 6	Point	23.1
Loading 7	Point	24.4
Receiver R4 Fl F2 Leq,d 43.4 dB(A)		
Loading 1	Point	37.6
Loading 2	Point	26.3
Loading 3	Point	36.9
Loading 4	Point	35.9
Loading 5	Point	35.5
Loading 6	Point	32.7
Loading 7	Point	31.7
Receiver R5 Fl G Leq,d 47.7 dB(A)		
Loading 1	Point	41.4
Loading 2	Point	41.8
Loading 3	Point	38.2
Loading 4	Point	40.6
Loading 5	Point	37.0
Loading 6	Point	35.7
Loading 7	Point	34.0
Receiver R6 Fl G Leq,d 45.6 dB(A)		
Loading 1	Point	29.2
Loading 2	Point	22.3
Loading 3	Point	21.7
Loading 4	Point	21.9
Loading 5	Point	19.8
Loading 6	Point	43.5
Loading 7	Point	40.8

Angels Landing
Source Levels in dB(A) - Trash

Name	Source type	Lw dB(A)	
Level 04 - Trash	Point	77.7	
Level 04 - Trash	Point	77.7	

Angels Landing
Assessed contribution level - Trash

Source	Source type	Leq dB(A)
Receiver R1 Fl G Leq,d 18.1 dB(A)		
Level 04 - Trash	Point	18.1
Level 04 - Trash	Point	-0.4
Receiver R1 Fl F2 Leq,d 6.5 dB(A)		
Level 04 - Trash	Point	5.5
Level 04 - Trash	Point	-0.3
Receiver R2 Fl G Leq,d 14.3 dB(A)		
Level 04 - Trash	Point	-9.2
Level 04 - Trash	Point	14.3
Receiver R2 Fl F2 Leq,d 11.6 dB(A)		
Level 04 - Trash	Point	-14.6
Level 04 - Trash	Point	11.6
Receiver R3 Fl G Leq,d 11.6 dB(A)		
Level 04 - Trash	Point	10.2
Level 04 - Trash	Point	6.0
Receiver R3 Fl F2 Leq,d 12.3 dB(A)		
Level 04 - Trash	Point	12.3
Level 04 - Trash	Point	-10.3
Receiver R4 Fl G Leq,d -0.7 dB(A)		
Level 04 - Trash	Point	-1.2
Level 04 - Trash	Point	-10.3
Receiver R4 Fl F2 Leq,d 1.5 dB(A)		
Level 04 - Trash	Point	1.2
Level 04 - Trash	Point	-10.4
Receiver R5 Fl G Leq,d 20.3 dB(A)		
Level 04 - Trash	Point	17.7
Level 04 - Trash	Point	16.9
Receiver R6 Fl G Leq,d 13.1 dB(A)		
Level 04 - Trash	Point	1.8
Level 04 - Trash	Point	12.7

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Angeles Landing 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 8%

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
Olive Street										
- Between 2nd St. and 4th St.	50	10	35	35	1,638	20,475	8%	0	0	69.1
- Between 4th St. and 5th St.	50	10	35	35	1,572	19,650	8%	0	0	68.9
- Between 5th St. and 6th St.	50	10	35	35	1,670	20,875	8%	0	0	69.2
Hill Street										
- Between 2nd St. and 3rd St.	60	10	40	35	4,701	58,763	8%	0	0	73.0
- Between 3rd St. and 4th St.	60	10	40	35	2,905	36,313	8%	0	0	71.0
- Between 4th St. and 5th St.	60	10	40	35	1,643	20,538	8%	0	0	68.5
Broadway										
- Between 2nd St. and 3rd St.	50	10	35	35	1,308	16,350	8%	0	0	68.1
- Between 3rd St. and 4th St.	40	10	30	35	1,199	14,988	8%	0	0	68.4
- Between 4th St. and 5th St.	40	10	30	35	1,220	15,250	8%	0	0	68.5
2nd Street										
- Between Grand Ave. and Olive St.	50	10	35	35	382	4,775	8%	0	0	62.7
- Between Olive St. and Hill St.	70	10	45	35	356	4,450	8%	0	0	61.2
3rd Street										
- Between Hill St. and Broadway	40	10	30	35	2,517	31,463	8%	0	0	71.6
- Between Broadway and Spring St.	40	10	30	35	1,264	15,800	8%	0	0	68.6
4th Street										
- Between Olive St. and Hill St.	60	10	40	35	1,199	14,988	8%	0	0	67.1
- Between Hill St. Broadway	40	10	30	35	1,233	15,413	8%	0	0	68.5
5th Street										
- Between Grand Ave. and Olive St.	40	10	30	35	1,748	21,850	8%	0	0	70.1
- Between Olive St. and Hill St.	40	10	30	35	1,169	14,613	8%	0	0	68.3
- Between Hill St. and Broadway	40	10	30	35	1,048	13,100	8%	0	0	67.8

* Estimated based on Google Earth map.

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

Date Printed: 8/31/2020

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Angeles Landing 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 8%

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
Olive Street										
- Between 2nd St. and 4th St.	50	10	35	35	1,735	21,688	8%	0	0	69.3
- Between 4th St. and 5th St.	50	10	35	35	1,679	20,988	8%	0	0	69.2
- Between 5th St. and 6th St.	50	10	35	35	1,753	21,913	8%	0	0	69.4
Hill Street										
- Between 2nd St. and 3rd St.	60	10	40	35	4,731	59,138	8%	0	0	73.1
- Between 3rd St. and 4th St.	60	10	40	35	2,909	36,363	8%	0	0	71.0
- Between 4th St. and 5th St.	60	10	40	35	1,734	21,675	8%	0	0	68.7
Broadway										
- Between 2nd St. and 3rd St.	50	10	35	35	1,345	16,813	8%	0	0	68.2
- Between 3rd St. and 4th St.	40	10	30	35	1,293	16,163	8%	0	0	68.7
- Between 4th St. and 5th St.	40	10	30	35	1,220	15,250	8%	0	0	68.5
2nd Street										
- Between Grand Ave. and Olive St.	50	10	35	35	410	5,125	8%	0	0	63.1
- Between Olive St. and Hill St.	70	10	45	35	377	4,713	8%	0	0	61.5
3rd Street										
- Between Hill St. and Broadway	40	10	30	35	2,564	32,050	8%	0	0	71.7
- Between Broadway and Spring St.	40	10	30	35	1,275	15,938	8%	0	0	68.7
4th Street										
- Between Olive St. and Hill St.	60	10	40	35	1,448	18,100	8%	0	0	67.9
- Between Hill St. Broadway	40	10	30	35	1,349	16,863	8%	0	0	68.9
5th Street										
- Between Grand Ave. and Olive St.	40	10	30	35	1,807	22,588	8%	0	0	70.2
- Between Olive St. and Hill St.	40	10	30	35	1,218	15,225	8%	0	0	68.5
- Between Hill St. and Broadway	40	10	30	35	1,054	13,175	8%	0	0	67.9

* Estimated based on Google Earth map.

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

Date Printed: 5/21/2020

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Angeles Landing 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 8%

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
Olive Street										
- Between 2nd St. and 4th St.	50	10	35	35	2,941	36,763	8%	0	0	71.6
- Between 4th St. and 5th St.	50	10	35	35	2,583	32,288	8%	0	0	71.0
- Between 5th St. and 6th St.	50	10	35	35	2,240	28,000	8%	0	0	70.4
Hill Street										
- Between 2nd St. and 3rd St.	60	10	40	35	6,065	75,813	8%	0	0	74.2
- Between 3rd St. and 4th St.	60	10	40	35	4,017	50,213	8%	0	0	72.4
- Between 4th St. and 5th St.	60	10	40	35	2,932	36,650	8%	0	0	71.0
Broadway										
- Between 2nd St. and 3rd St.	50	10	35	35	2,240	28,000	8%	0	0	70.4
- Between 3rd St. and 4th St.	40	10	30	35	2,200	27,500	8%	0	0	71.0
- Between 4th St. and 5th St.	40	10	30	35	2,240	28,000	8%	0	0	71.1
2nd Street										
- Between Grand Ave. and Olive St.	50	10	35	35	773	9,663	8%	0	0	65.8
- Between Olive St. and Hill St.	70	10	45	35	542	6,775	8%	0	0	63.1
3rd Street										
- Between Hill St. and Broadway	40	10	30	35	3,331	41,638	8%	0	0	72.9
- Between Broadway and Spring St.	40	10	30	35	1,994	24,925	8%	0	0	70.6
4th Street										
- Between Olive St. and Hill St.	60	10	40	35	2,257	28,213	8%	0	0	69.9
- Between Hill St. Broadway	40	10	30	35	2,132	26,650	8%	0	0	70.9
5th Street										
- Between Grand Ave. and Olive St.	40	10	30	35	2,971	37,138	8%	0	0	72.4
- Between Olive St. and Hill St.	40	10	30	35	1,810	22,625	8%	0	0	70.2
- Between Hill St. and Broadway	40	10	30	35	1,822	22,775	8%	0	0	70.2

* Estimated based on Google Earth map.

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

Date Printed: 5/21/2020

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Angeles Landing 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 8%

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
Olive Street										
- Between 2nd St. and 4th St.	50	10	35	35	3,038	37,975	8%	0	0	71.8
- Between 4th St. and 5th St.	50	10	35	35	2,690	33,625	8%	0	0	71.2
- Between 5th St. and 6th St.	50	10	35	35	2,323	29,038	8%	0	0	70.6
Hill Street										
- Between 2nd St. and 3rd St.	60	10	40	35	6,095	76,188	8%	0	0	74.2
- Between 3rd St. and 4th St.	60	10	40	35	4,021	50,263	8%	0	0	72.4
- Between 4th St. and 5th St.	60	10	40	35	3,023	37,788	8%	0	0	71.1
Broadway										
- Between 2nd St. and 3rd St.	50	10	35	35	2,277	28,463	8%	0	0	70.5
- Between 3rd St. and 4th St.	40	10	30	35	2,294	28,675	8%	0	0	71.2
- Between 4th St. and 5th St.	40	10	30	35	2,240	28,000	8%	0	0	71.1
2nd Street										
- Between Grand Ave. and Olive St.	50	10	35	35	801	10,013	8%	0	0	66.0
- Between Olive St. and Hill St.	70	10	45	35	563	7,038	8%	0	0	63.2
3rd Street										
- Between Hill St. and Broadway	40	10	30	35	3,378	42,225	8%	0	0	72.9
- Between Broadway and Spring St.	40	10	30	35	2,020	25,250	8%	0	0	70.7
4th Street										
- Between Olive St. and Hill St.	60	10	40	35	2,505	31,313	8%	0	0	70.3
- Between Hill St. Broadway	40	10	30	35	2,248	28,100	8%	0	0	71.1
5th Street										
- Between Grand Ave. and Olive St.	40	10	30	35	3,030	37,875	8%	0	0	72.4
- Between Olive St. and Hill St.	40	10	30	35	1,859	23,238	8%	0	0	70.3
- Between Hill St. and Broadway	40	10	30	35	1,828	22,850	8%	0	0	70.2

* Estimated based on Google Earth map.

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

Date Printed: 5/21/2020

Alternatives Analysis

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project
Alternatives Analysis (50% Reduction)
Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	110	0
Bore/Drill Rig		84	20%		
Plate Compactors	1	83	20%	135	0
Dumpster/Tenders		76	40%		
Tractors/Loaders/Backhoes	1	79	40%	160	0
Sweeper/Scrubbers		82	10%		
Rough Terrain Forklift	1	83	40%	185	0
Tractors/Loaders/Backhoes		84	40%		
Crane	1	81	16%	210	0
Excavator		81	40%		
Rubber Tired Loader	2	79	40%	235	0
Skid Steer Loader	1	79	40%	235	0
Generator Set	1	81	50%	260	0
Crawler Tractor		84	40%		
Bore/Drill Rig	1	84	20%	260	0
	10				

Receptor: ***R1***

Results:

1-hour Leq: 76.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project
Alternatives Analysis (50% Reduction)
Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	75	0
Bore/Drill Rig		84	20%		
Plate Compactors	1	83	20%	100	0
Dumpster/Tenders		76	40%		
Tractors/Loaders/Backhoes	1	79	40%	125	0
Sweeper/Scrubbers		82	10%		
Rough Terrain Forklift	1	83	40%	150	0
Tractors/Loaders/Backhoes		84	40%		
Crane	1	81	16%	175	0
Excavator		81	40%		
Rubber Tired Loader	2	79	40%	200	0
Skid Steer Loader	1	79	40%	225	0
Generator Set	1	81	50%	225	0
Crawler Tractor		84	40%		
Bore/Drill Rig	1	84	20%	225	0
	10				

Receptor: ***R2***

Results:

1-hour Leq: 79.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project
Alternatives Analysis (50% Reduction)
Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	90	0
Bore/Drill Rig		84	20%		
Plate Compactors	1	83	20%	110	0
Dumpster/Tenders		76	40%		
Tractors/Loaders/Backhoes	1	79	40%	130	0
Sweeper/Scrubbers		82	10%		
Rough Terrain Forklift	1	83	40%	150	0
Tractors/Loaders/Backhoes		84	40%		
Crane	1	81	16%	170	0
Excavator		81	40%		
Rubber Tired Loader	2	79	40%	190	0
Skid Steer Loader	1	79	40%	190	0
Generator Set	1	81	50%	210	0
Crawler Tractor		84	40%		
Bore/Drill Rig	1	84	20%	210	0
	10				

Receptor: ***R3***

Results:

1-hour Leq: 78.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project
Alternatives Analysis (50% Reduction)
Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	230	0
Bore/Drill Rig		84	20%		
Plate Compactors	1	83	20%	250	0
Dumpster/Tenders		76	40%		
Tractors/Loaders/Backhoes	1	79	40%	270	0
Sweeper/Scrubbers		82	10%		
Rough Terrain Forklift	1	83	40%	290	0
Tractors/Loaders/Backhoes		84	40%		
Crane	1	81	16%	310	0
Excavator		81	40%		
Rubber Tired Loader	2	79	40%	330	0
Skid Steer Loader	1	79	40%	330	0
Generator Set	1	81	50%	350	0
Crawler Tractor		84	40%		
Bore/Drill Rig	1	84	20%	350	0
	10				

Receptor: ***R4***

Results:

1-hour Leq: 71.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project
Alternatives Analysis (50% Reduction)
Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	50	10
Bore/Drill Rig		84	20%		
Plate Compactors	1	83	20%	75	10
Dumpster/Tenders		76	40%		
Tractors/Loaders/Backhoes	1	79	40%	100	10
Sweeper/Scrubbers		82	10%		
Rough Terrain Forklift	1	83	40%	100	10
Tractors/Loaders/Backhoes		84	40%		
Crane	1	81	16%	125	10
Excavator		81	40%		
Rubber Tired Loader	2	79	40%	150	10
Skid Steer Loader	1	79	40%	150	10
Generator Set	1	81	50%	175	10
Crawler Tractor		84	40%		
Bore/Drill Rig	1	84	20%	175	10
	10				

Receptor: ***R5***

Results:

1-hour Leq: 72.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project
Alternatives Analysis (50% Reduction)
Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	20	0
Bore/Drill Rig		84	20%		
Plate Compactors	1	83	20%	45	0
Dumpster/Tenders		76	40%		
Tractors/Loaders/Backhoes	1	79	40%	70	0
Sweeper/Scrubbers		82	10%		
Rough Terrain Forklift	1	83	40%	95	0
Tractors/Loaders/Backhoes		84	40%		
Crane	1	81	16%	120	0
Excavator		81	40%		
Rubber Tired Loader	2	79	40%	145	0
Skid Steer Loader	1	79	40%	145	0
Generator Set	1	81	50%	170	0
Crawler Tractor		84	40%		
Bore/Drill Rig	1	84	20%	170	0
	10				

Receptor: ***R6***

Results:

1-hour Leq: 88.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
Acoustical Engineering Services

Project: Angels Landing Project

Off-Site Construction Trucks - Alternatives Analysis (50% Reduction)

Phase	Maximum Number of Truck One Way Trips (delivery/haul) Per Day	Per Hour (8-hr day)	Worker Trips Daily Trips	Trips during Pk Hr.	Estimated Noise Levels, from TNM MODEL, dBA Leq 3rd St.	4th St.	7th St.	Hills St	Alameda St.
3. Grading/Excavation	210	18	22.5	9	60.4	64.5	--	66.7	--
				Ambient, dBA	71.0	71.0	65.3	67.2	72.0
Hauling 6 hours				Significance Criteria, dBA	76.0	76.0	70.3	72.2	77.0
Mat foundation 12 hours									
Trucks are one-way									

	Project + Ambient Noise Levels, dBA Leq				
	3rd St.	4th St.	7th St.	Hills St	Alameda St.
3. Grading/Excavation	71.4	71.9	--	70.0	--
Ambient, dBA	71.0	71.0	65.3	70.8	72.0
Significance Criteria, dBA	76.0	76.0	70.3	75.8	77.0

Eyestone Environmental 27 October 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Angels Landing Project
RUN: Grading/Excavation Phase (50% Reduc.)

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				**27 October 2020**								
Sean Bui				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**Angels Landing Project**											
RUN:	**Grading/Excavation Phase (50% Reduc.)**											
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	9	35	0	0	18	35	0	0	0	0
	point2	2										

Eyestone Environmental **27 October 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Grading/Excavation Phase (50% Reduc.)**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receptor at 25 feet	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Receptor at 40 feet	10	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor at 100 feet	11	1	250.0	100.0	0.00	4.92	0.00	66	10.0	8.0	Y

RESULTS: SOUND LEVELS **Angels Landing Project**

Eyestone Environmental **27 October 2020**
Sean Bui **TNM 2.5**
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: **Angels Landing Project**
RUN: **Grading/Excavation Phase (50% Reduc.)**
BARRIER DESIGN: **INPUT HEIGHTS**
ATMOSPHERICS: **68 deg F, 50% RH**

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

Receiver												
Name	**No.**	**#DUs**	**Existing**	**No Barrier**					**With Barrier**			
			LAeq1h	**LAeq1h**		**Increase over existing**		**Type**	**Calculated**	**Noise Reduction**		
				Calculated	**Crit'n**	**Calculated**	**Crit'n**	**Impact**	**LAeq1h**	**Calculated**	**Goal**	**Calculated**
							Sub'l Inc					**minus**
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receptor at 25 feet	1	1	0.0	66.7	71	66.7	5	----	66.7	0.0	0	0.0
Receptor at 40 feet	10	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
Receptor at 100 feet	11	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	3	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Angels Landing Project
Alternative 2 Analysis - Off-site Traffic

Project Alternative	Daily Vehicle Trips (per VMT Calcs)	Increase Relative to Project
Proposed Project	5410	--
Alternative 2	6364	17.6%

	Traffic Volume				Noise Increase		
4th Street (btwn Olive and Hill)	Existing	EWP	FNP	FWP	EWP	FWP	Cum
Proposed Project	14988	18100	28213	31313			
Estimated Noise Levels	*67.1*	*67.9*	*69.9*	*70.3*	*0.8*	*0.4*	*3.2*
Alternative 2	14988	18634	28213	31859			
Estimated Noise Levels	*67.1*	*68.0*	*69.9*	*70.4*	*0.9*	*0.5*	*3.3*

EWP - Existing With Project
FNP - Future No Project
FWP - Future With Project
Cum - Cumulative