

# **Appendix J**

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## Noise Worksheets



**Ford Theatres Project  
Draft EIR**

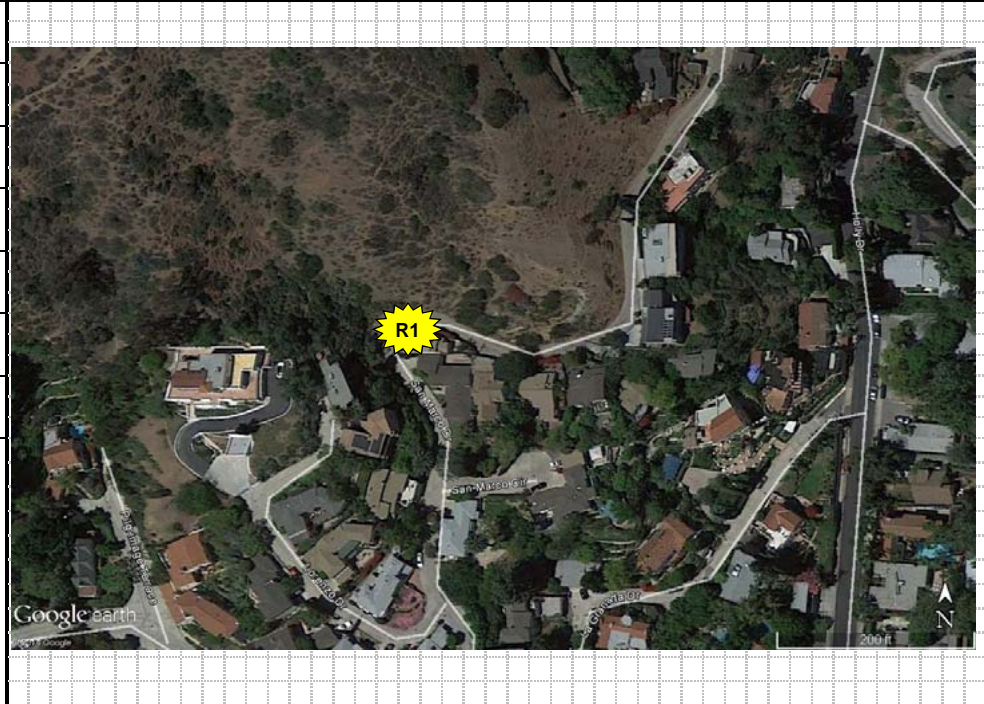
**Noise Calculations Worksheets**

Provided by Acoustical Engineering Services

# **Ambient Noise Measurements**

22801 Crespi Street, Woodland Hills, California 91364 - 818.239.4600

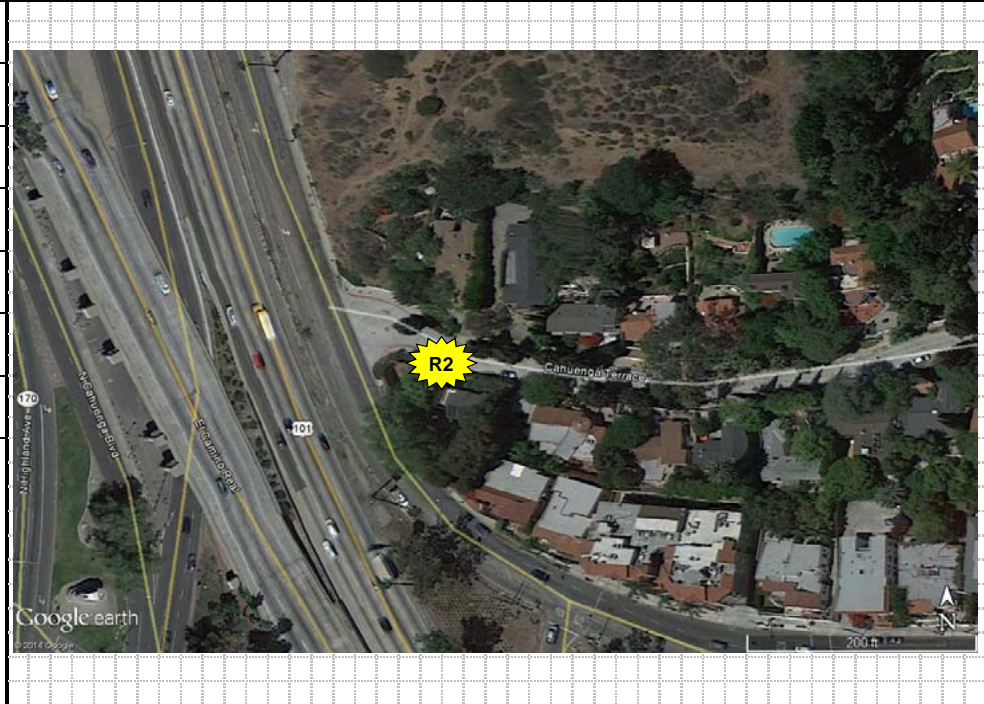
Client: Matrix Environmental	Job No: 2013109
Job Title: Ford Theatres Project	Sheet No: 1
Location: R1 - Residence on San Marcos Dr., Southeast of Project Site	
Made By: SB	Date: 2/19/2014
Sound Meter: Quest 2900	S/N: CD0090030
Calibrator: Quest QC 10	S/N: Q10090010
Calibration Before: 114	Calibration After: 114
Notes:	



Time		Wind		Noise Level, dB(A)									Comments
Start	Finish	Speed	Dir'n	--	--	L90	L50	L10	L1	Lmin	Lmax	Leq	
12:16 PM	12:31 PM	Calm	--			43.0	45.7	48.2	66.0	41.5	70.2	51.3	Traffic on San Marcos Dr., and distance traffic (101 Freeway)
10:08 PM	10:23 PM	Calm	--			47.8	49.5	52.6	58.1	45.6	68.4	50.9	Traffic on San Marcos Dr., and distance traffic (101 Freeway)

22801 Crespi Street, Woodland Hills, California 91364 - 818.239.4600

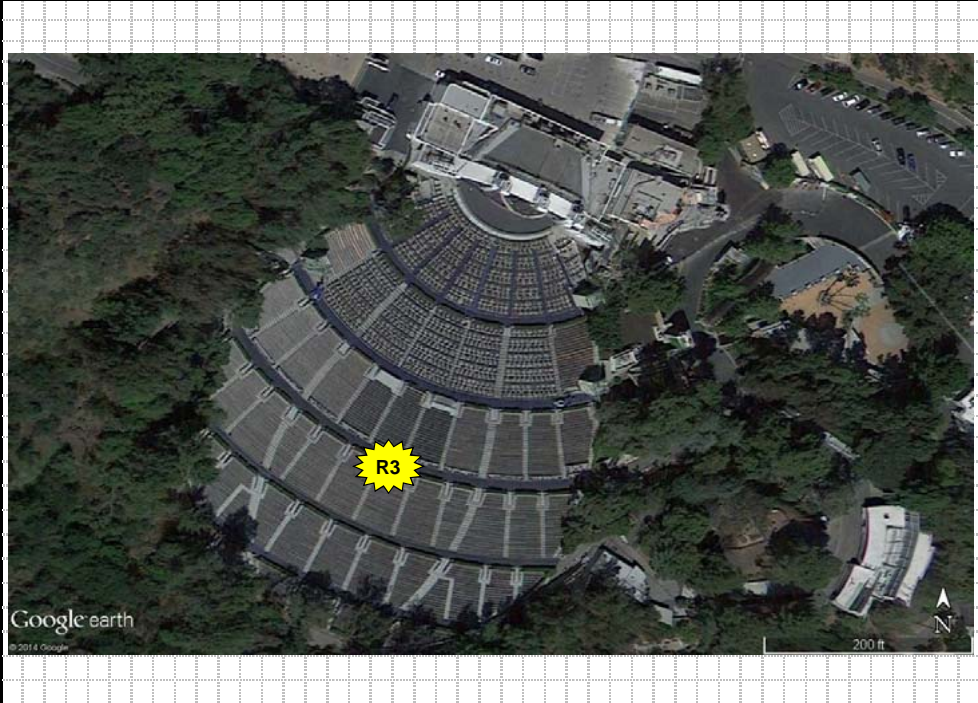
Client: Matrix Environmental	Job No: 2013109
Job Title: Ford Theatres Project	Sheet No: 2
Location: R2 - Residence on Cahuenga Terrace, South of Project Site	
Made By: SB	Date: 2/19/2014
Sound Meter: Quest 2900	S/N: CD0090030
Calibrator: Quest QC 10	S/N: Q10090010
Calibration Before: 114	Calibration After: 114
Notes:	



Time		Wind		Noise Level, dB(A)									Comments
Start	Finish	Speed	Dir'n	--	--	L90	L50	L10	L1	Lmin	Lmax	Leq	
11:32 AM	11:47 AM	Calm	--			73.5	75.1	76.6	78.3	71.4	81.9	75.3	Traffic on 101 Freeway and Cahuenga Blvd. East
10:27 PM	10:42 PM	Calm	--			73.5	75.1	76.6	78	70.9	81.2	75.3	Traffic on 101 Freeway and Cahuenga Blvd. East

22801 Crespi Street, Woodland Hills, California 91364 - 818.239.4600

Client: Matrix Environmental	Job No: 2013109
Job Title: Ford Theatres Project	Sheet No: 3
Location: R3 - Hollywood Bowl (audience seating area)	
Made By: SB	Date: 2/19/2014
Sound Meter: Quest 2900	S/N: CD0090010
Calibrator: Quest QC 10	S/N: Q10090010
Calibration Before: 114	Calibration After: 114
Notes: Long-Term 24-hour measurements	



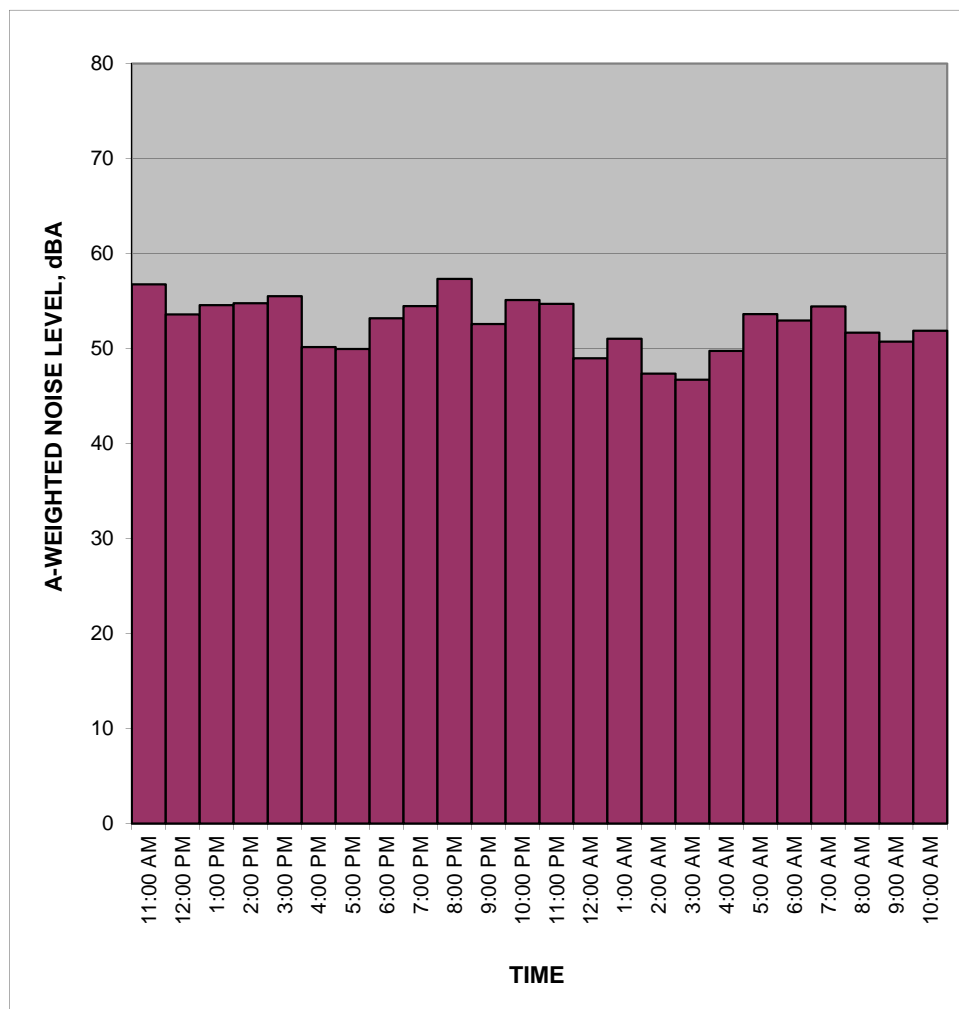
Time		Wind		Noise Level, dB(A)									Comments
Start	Finish	Speed	Dir'n			L90	L50	L10	L1	Lmin	Lmax	Leq	

# Measured Ambient Noise Levels

Project: Ford Theatres Project EIR  
 Location: R3 - Hollywood Bowl  
 Sources: Ambient

Date: 2/19/2014

<i>TIME</i>	<i>HNL, dB(A)</i>
11:00 AM	56.8
12:00 PM	53.6
1:00 PM	54.6
2:00 PM	54.8
3:00 PM	55.5
4:00 PM	50.1
5:00 PM	50.0
6:00 PM	53.2
7:00 PM	54.5
8:00 PM	57.3
9:00 PM	52.6
10:00 PM	55.1
11:00 PM	54.7
12:00 AM	49.0
1:00 AM	51.0
2:00 AM	47.4
3:00 AM	46.7
4:00 AM	49.7
5:00 AM	53.6
6:00 AM	53.0
7:00 AM	54.4
8:00 AM	51.7
9:00 AM	50.7
10:00 AM	51.9
<b>CNEL, dB(A):</b>	<b>59.3</b>



**NOTES:**

22801 Crespi Street, Woodland Hills, California 91364 - 818.239.4600

Client: Matrix Environmental	Job No: 2013109
Job Title: Ford Theatres Project	Sheet No: 4
Location: R4 - MF Residence on Cahuenga Blvd. East, North of Project Site	
Made By: SB	Date: 2/19/2014
Sound Meter: Quest 2900	S/N: CD0090030
Calibrator: Quest QC 10	S/N: Q10090010
Calibration Before: 114	Calibration After: 114
Notes:	



Time		Wind		Noise Level, dB(A)									Comments
Start	Finish	Speed	Dir'n			L90	L50	L10	L1	Lmin	Lmax	Leq	
11:51 AM	12:06 PM	Calm	--			73.7	75.6	77.6	80.0	69.8	83.1	75.9	Traffic on 101 Freeway and Cahuenga Blvd. East
10:47 PM	11:02 PM	Calm	--			73.9	75.7	77.3	79.0	71.2	83.3	75.9	Traffic on 101 Freeway and Cahuenga Blvd. East



22801 Crespi Street, Woodland Hills, California 91364 - 818.239.4600

Client: Matrix Environmental	Job No: 2013109
Job Title: Ford Theatres Project	Sheet No: 5
Location: R5 - Project Site	
Made By: SB	Date: 2/19/2014
Sound Meter: Quest 2900	S/N: CD0090020
Calibrator: Quest QC 10	S/N: Q10090010
Calibration Before: 114	Calibration After: 114
Notes: Long-Term 24-hour measurements	



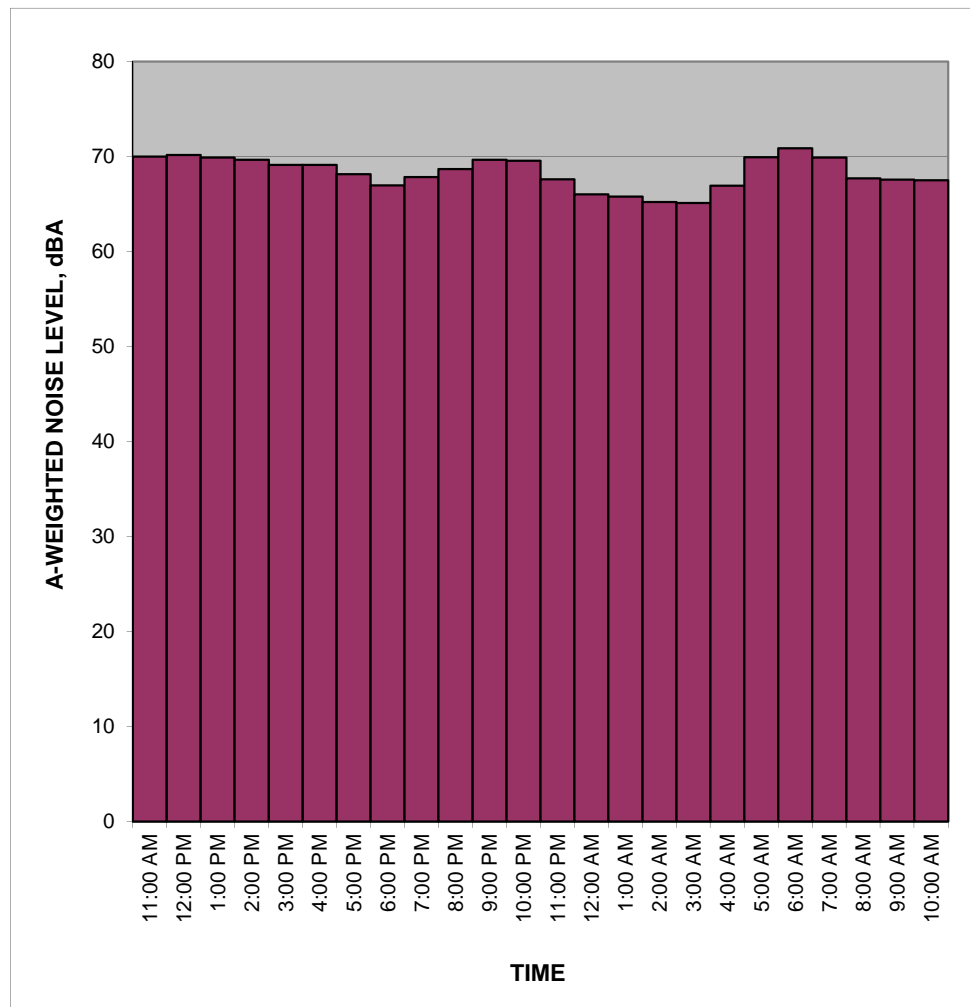
Time		Wind		Noise Level, dB(A)									Comments
Start	Finish	Speed	Dir'n			L90	L50	L10	L1	Lmin	Lmax	Leq	

# Measured Ambient Noise Levels

Project: Ford Theatres Project EIR  
 Location: R5 - Project Site  
 Sources: Ambient

Date: 2/19/2014

<i>TIME</i>	<i>HNL, dB(A)</i>
11:00 AM	70.0
12:00 PM	70.2
1:00 PM	69.9
2:00 PM	69.7
3:00 PM	69.1
4:00 PM	69.1
5:00 PM	68.1
6:00 PM	66.9
7:00 PM	67.8
8:00 PM	68.7
9:00 PM	69.7
10:00 PM	69.6
11:00 PM	67.6
12:00 AM	66.0
1:00 AM	65.8
2:00 AM	65.2
3:00 AM	65.1
4:00 AM	66.9
5:00 AM	69.9
6:00 AM	70.9
7:00 AM	69.9
8:00 AM	67.7
9:00 AM	67.6
10:00 AM	67.5
<b>CNEL, dB(A):</b>	<b>74.8</b>



**NOTES:**

# Construction Noise Calculations

**Project: Ford Theater Master Plan Project**

**Construction Phase: Demolition**

<b>Description</b>	<b>No. of Equip.</b>	<b>Reference Noise Level at 50ft, Lmax</b>	<b>Acoustical Usage Factor</b>
Loader	1	79	40%
Dozer	1	82	40%
Backhoe	1	78	40%
Water Truck	1	76	40%
Bobcat	1	78	40%
Concrete Saw	1	90	20%
Street Sweeper	1	82	10%
Air Compressor	1	78	40%

<b>Receptor</b>	<b>Distance to Equipment, ft</b>	<b>Estimated Noise Shielding, dBA</b>	<b>Calculated Noise Levels, dBA Leq</b>
R1	675	20	43.4
R2	240	10	62.4
R3	1000	10	50.0
R4	325	15	54.8

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Source for Ref. Noise Levels: FHWA, RCNM 2005

**Project: Ford Theater Master Plan Project**

**Construction Phase:      Excavation**

<b>Description</b>	<b>No. of Equip.</b>	<b>Reference Noise Level at 50ft, Lmax</b>	<b>Acoustical Usage Factor</b>
Drill Rig	1	84	20%
Hydro Crane	1	81	16%
Forklift	1	75	20%
Loader	1	79	40%
Water Truck	1	76	40%
Excavator	1	81	40%
Backhoe	1	78	40%
Air Compressor	1	78	40%

<b>Receptor</b>	<b>Distance to Equipment, ft</b>	<b>Estimated Noise Shielding, dBA</b>	<b>Calculated Noise Levels, dBA Leq</b>
R1	675	20	40.9
R2	240	10	59.9
R3	1000	10	47.5
R4	325	15	52.3

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Source for Ref. Noise Levels: FHWA, RCNM 2005

**Project: Ford Theater Master Plan Project**

**Construction Phase: Building Construction**

<b>Description</b>	<b>No. of Equip.</b>	<b>Reference Noise Level at 50ft, Lmax</b>	<b>Acoustical Usage Factor</b>
Excavator	1	81	40%
Loader	1	79	40%
Backhoe	1	78	40%
Hydro Crane	1	81	16%
Forklift	1	75	20%
Air Compressor	1	78	40%
Welder Generator	1	81	50%

<b>Receptor</b>	<b>Distance to Equipment, ft</b>	<b>Estimated Noise Shielding, dBA</b>	<b>Calculated Noise Levels, dBA Leq</b>
R1	675	20	40.9
R2	240	10	59.8
R3	1000	10	47.4
R4	325	15	52.2

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Source for Ref. Noise Levels: FHWA, RCNM 2005

**Project: Ford Theater Master Plan Project**

**Construction Phase:      Landscaping**

<b>Description</b>	<b>No. of Equip.</b>	<b>Reference Noise Level at 50ft, Lmax</b>	<b>Acoustical Usage Factor</b>
Bobcat	1	78	40%
Backhoe	1	78	40%
Loader	1	79	40%
Roller	1	80	20%
Street Sweeper	1	82	10%
Forklift	1	75	20%
Air Compressor	1	78	40%

<b>Receptor</b>	<b>Distance to Equipment, ft</b>	<b>Estimated Noise Shielding, dBA</b>	<b>Calculated Noise Levels, dBA Leq</b>
R1	675	20	39.1
R2	240	10	58.1
R3	1000	10	45.7
R4	325	15	50.5

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Source for Ref. Noise Levels: FHWA, RCNM 2005

**INPUT: ROADWAYS**

**Ford Theatres Project EIR**

<b>Matrix Environmental</b>											
<b>SKB</b>											
<b>INPUT: ROADWAYS</b>											
<b>PROJECT/CONTRACT:</b>		<b>Ford Theatres Project EIR</b>								<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA</b>	
<b>RUN:</b>		<b>TNM - Haul Trucks</b>									
<b>Roadway</b>		<b>Points</b>									
<b>Name</b>	<b>Width</b>	<b>Name</b>	<b>No.</b>	<b>Coordinates (pavement)</b>		<b>Flow Control</b>				<b>Segment</b>	
				<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Control</b>	<b>Speed</b>	<b>Percent</b>	<b>Pvmt</b>	<b>On</b>
							<b>Device</b>	<b>Constraint</b>	<b>Vehicles</b>	<b>Type</b>	<b>Struct?</b>
									<b>Affected</b>		
	ft			ft	ft	ft		mph	%		
Cahuenga Blvd. East	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,500.0	0.0	0.00					



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Ford Theatres Project EIR**

<b>Matrix Environmental</b>													
<b>SKB</b>													
<b>INPUT: TRAFFIC FOR LAeq1h Volumes</b>													
<b>PROJECT/CONTRACT:</b>	<b>Ford Theatres Project EIR</b>												
<b>RUN:</b>	<b>TNM - Haul Trucks</b>												
<b>Roadway</b>	<b>Points</b>												
<b>Name</b>	<b>Name</b>	<b>No.</b>	<b>Segment</b>										
			<b>Autos</b>		<b>MTrucks</b>		<b>HTrucks</b>		<b>Buses</b>		<b>Motorcycles</b>		
			<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Cahuenga Blvd. East	point1	1	0	0	0	0	12	35	0	0	0	0	
	point2	2											

**INPUT: RECEIVERS**

**Ford Theatres Project EIR**

Matrix Environmental SKB							13 June 2014 TNM 2.5				
INPUT: RECEIVERS											
PROJECT/CONTRACT:		Ford Theatres Project EIR									
RUN:		TNM - Haul Trucks									
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receptor R2	1	1	250.0	-25.0	0.00	4.92	0.00	66	10.0	8.0	Y
Receptor R4	3	1	900.0	-170.0	0.00	4.92	0.00	66	10.0	8.0	Y

**RESULTS: SOUND LEVELS**

**Ford Theatres Project EIR**

<b>Matrix Environmental</b>						<b>13 June 2014</b>						
<b>SKB</b>						<b>TNM 2.5</b>						
						<b>Calculated with TNM 2.5</b>						
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b>		<b>Ford Theatres Project EIR</b>										
<b>RUN:</b>		<b>TNM - Haul Trucks</b>										
<b>BARRIER DESIGN:</b>		<b>INPUT HEIGHTS</b>					<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.</b>					
<b>ATMOSPHERICS:</b>		<b>68 deg F, 50% RH</b>										
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>Type Impact</b>	<b>With Barrier</b>			
						<b>Calculated</b>	<b>Crit'n</b>		<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated minus Goal</b>
							<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
			<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>		<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>
Receptor R2	1	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
Receptor R4	3	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		2	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

# Operation Noise Calculations

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

**EXISTING CONDITIONS - WEEKDAY**

<b>Roadway Segment</b>	<b>Roadway Width*, ft</b>	<b>Distance to Edge of Roadway, ft</b>	<b>Distance to Centerline, feet</b>	<b>Speed mph</b>	<b>Traffic Volume</b>		<b>Barrier Atten.</b>	<b>Site Adjust., dBA</b>	<b>Traffic Control</b>	<b>Peak Hour, Leq**</b>	<b>24-Hour CNEL</b>
					<b>PHV</b>	<b>ADT</b>					
<b>Barham Boulevard</b>											
- East of Cahuenga Blvd. E	60	10	40	35	4,534	45,340	0	0	Yes	76.0	75.0
<b>Cahuenga Boulevard East</b>											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,461	24,610	0	0	Yes	75.1	74.1
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,577	25,770	0	0	Yes	75.3	74.3
<b>Cahuenga Boulevard W</b>											
- South of Barham Blvd.	40	50	70	40	2,842	28,420	0	0	Yes	71.9	71.0
- North of Pilgrimage Bridge	40	50	70	40	3,869	38,690	0	0	Yes	73.3	72.3
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	3,897	38,970	0	0	Yes	73.3	72.3
<b>Cahuenga Boulevard N</b>											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	3,462	34,620	0	0	Yes	75.9	74.9
- South of Odin Ave.	60	10	40	40	4,030	40,300	0	0	Yes	76.0	75.0
<b>Odin Avenue</b>											
- South of Cahuenga Blvd. N	50	10	35	40	402	4,020	0	0	Yes	66.5	65.6
<b>Highland Avenue</b>											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	5,184	51,840	0	0	Yes	73.4	72.5
- South of Odin Ave.	70	10	45	40	5,392	53,920	0	0	Yes	76.6	75.6

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

**EXISTING CONDITIONS - WEEKDAY EVENT**

<b>Roadway Segment</b>	<b>Roadway Width*, ft</b>	<b>Distance to Edge of Roadway, ft</b>	<b>Distance to Centerline, feet</b>	<b>Speed mph</b>	<b>Traffic Volume</b>		<b>Barrier Atten.</b>	<b>Site Adjust., dBA</b>	<b>Traffic Control</b>	<b>Peak Hour, Leq**</b>	<b>24-Hour CNEL</b>
					<b>PHV</b>	<b>ADT</b>					
<b>Barham Boulevard</b>											
- East of Cahuenga Blvd. E	60	10	40	35	4,049	40,490	0	0	Yes	75.5	74.5
<b>Cahuenga Boulevard East</b>											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,019	20,190	0	0	Yes	74.3	73.3
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,408	24,080	0	0	Yes	75.0	74.0
<b>Cahuenga Boulevard W</b>											
- South of Barham Blvd.	40	50	70	40	2,368	23,680	0	0	Yes	71.1	70.2
- North of Pilgrimage Bridge	40	50	70	40	2,715	27,150	0	0	Yes	71.7	70.8
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	2,797	27,970	0	0	Yes	71.9	70.9
<b>Cahuenga Boulevard N</b>											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	2,313	23,130	0	0	Yes	74.1	73.2
- South of Odin Ave.	60	10	40	40	2,304	23,040	0	0	Yes	73.5	72.5
<b>Odin Avenue</b>											
- South of Cahuenga Blvd. N	50	10	35	40	477	4,770	0	0	Yes	67.3	66.3
<b>Highland Avenue</b>											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	4,145	41,450	0	0	Yes	72.5	71.5
- South of Odin Ave.	70	10	45	40	4,123	41,230	0	0	Yes	75.5	74.5

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

**EXISTING CONDITIONS- WEEKEND**

<b>Roadway Segment</b>	<b>Roadway Width*, ft</b>	<b>Distance to Edge of Roadway, ft</b>	<b>Distance to Centerline, feet</b>	<b>Speed mph</b>	<b>Traffic Volume</b>		<b>Barrier Atten.</b>	<b>Site Adjust., dBA</b>	<b>Traffic Control</b>	<b>Peak Hour, Leq**</b>	<b>24-Hour CNEL</b>
					<b>PHV</b>	<b>ADT</b>					
<b>Barham Boulevard</b>											
- East of Cahuenga Blvd. E	60	10	40	35	2,549	25,490	0	0	Yes	73.5	72.5
<b>Cahuenga Boulevard East</b>											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	967	9,670	0	0	Yes	71.1	70.1
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	1,134	11,340	0	0	Yes	71.7	70.8
<b>Cahuenga Boulevard W</b>											
- South of Barham Blvd.	40	50	70	40	1,546	15,460	0	0	Yes	69.3	68.3
- North of Pilgrimage Bridge	40	50	70	40	2,743	27,430	0	0	Yes	71.8	70.8
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	3,004	30,040	0	0	Yes	72.2	71.2
<b>Cahuenga Boulevard N</b>											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	1,137	11,370	0	0	Yes	71.1	70.1
- South of Odin Ave.	60	10	40	40	1,075	10,750	0	0	Yes	70.2	69.2
<b>Odin Avenue</b>											
- South of Cahuenga Blvd. N	50	10	35	40	254	2,540	0	0	Yes	64.5	63.6
<b>Highland Avenue</b>											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	4,071	40,710	0	0	Yes	72.4	71.4
- South of Odin Ave.	70	10	45	40	4,447	44,470	0	0	Yes	75.8	74.8

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

**EXISTING CONDITIONS - WEEKEND EVENT**

<b>Roadway Segment</b>	<b>Roadway Width*, ft</b>	<b>Distance to Edge of Roadway, ft</b>	<b>Distance to Centerline, feet</b>	<b>Speed mph</b>	<b>Traffic Volume</b>		<b>Barrier Atten.</b>	<b>Site Adjust., dBA</b>	<b>Traffic Control</b>	<b>Peak Hour, Leq**</b>	<b>24-Hour CNEL</b>
					<b>PHV</b>	<b>ADT</b>					
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	2,741	27,410	0	0	Yes	73.8	72.8
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	1,093	10,930	0	0	Yes	71.6	70.6
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	1,786	17,860	0	0	Yes	73.7	72.7
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	1,697	16,970	0	0	Yes	69.7	68.7
- North of Pilgrimage Bridge	40	50	70	40	2,537	25,370	0	0	Yes	71.4	70.5
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	2,344	23,440	0	0	Yes	71.1	70.1
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	1,671	16,710	0	0	Yes	72.7	71.8
- South of Odin Ave.	60	10	40	40	1,789	17,890	0	0	Yes	72.4	71.5
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	514	5,140	0	0	Yes	67.6	66.6
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	3,503	35,030	0	0	Yes	71.7	70.8
- South of Odin Ave.	70	10	45	40	3,427	34,270	0	0	Yes	74.6	73.7

\* Estimated based on Google Earth map.

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



Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>EXISTING + PROJECT CONDITIONS - WEEKDAY</b> Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume		Barrier Atten.	Site Adjust., dBA	Traffic Control	Peak Hour, Leq**	24-Hour CNEL
					PHV	ADT					
Barham Boulevard - East of Cahuenga Blvd. E	60	10	40	35	4,537	45,370	0	0	Yes	76.0	75.0
Cahuenga Boulevard East - Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,476	24,760	0	0	Yes	75.1	74.2
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,592	25,920	0	0	Yes	75.3	74.4
Cahuenga Boulevard W - South of Barham Blvd.	40	50	70	40	2,855	28,550	0	0	Yes	72.0	71.0
- North of Pilgrimage Bridge	40	50	70	40	3,886	38,860	0	0	Yes	73.3	72.3
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	3,897	38,970	0	0	Yes	73.3	72.3
Cahuenga Boulevard N - Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	3,478	34,780	0	0	Yes	75.9	74.9
- South of Odin Ave.	60	10	40	40	4,034	40,340	0	0	Yes	76.0	75.0
Odin Avenue - South of Cahuenga Blvd. N	50	10	35	40	421	4,210	0	0	Yes	66.7	65.8
Highland Avenue - Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	5,197	51,970	0	0	Yes	73.5	72.5
- South of Odin Ave.	70	10	45	40	5,398	53,980	0	0	Yes	76.6	75.6

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>EXISTING + PROJECT CONDITIONS - WEEKDAY EVENT</b>	<b>Distance to Roadway Width*, ft</b>	<b>Distance to Edge of Roadway, ft</b>	<b>Distance to Centerline, feet</b>	<b>Speed mph</b>	<b>Traffic Volume</b>		<b>Barrier Atten.</b>	<b>Site Adjust., dBA</b>	<b>Traffic Control</b>	<b>Peak Hour, Leq**</b>	<b>24-Hour CNEL</b>
<b>Roadway Segment</b>					<b>PHV</b>	<b>ADT</b>					
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	4,051	40,510	0	0	Yes	75.5	74.5
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,021	20,210	0	0	Yes	74.3	73.3
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,413	24,130	0	0	Yes	75.0	74.1
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	2,373	23,730	0	0	Yes	71.2	70.2
- North of Pilgrimage Bridge	40	50	70	40	2,722	27,220	0	0	Yes	71.7	70.8
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	2,797	27,970	0	0	Yes	71.9	70.9
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	2,319	23,190	0	0	Yes	74.2	73.2
- South of Odin Ave.	60	10	40	40	2,306	23,060	0	0	Yes	73.5	72.6
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	480	4,800	0	0	Yes	67.3	66.3
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	4,147	41,470	0	0	Yes	72.5	71.5
- South of Odin Ave.	70	10	45	40	4,125	41,250	0	0	Yes	75.5	74.5

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>EXISTING + PROJECT CONDITIONS - WEEKEND</b>	Distance to	Distance to	Speed	Traffic Volume		Barrier	Site	Traffic	Peak	24-Hour
Roadway Segment	Roadway	Edge of	mph	PHV	ADT	Atten.	Adjust.,	Control	Hour,	CNEL
	Width*, ft	Roadway, ft					dBA		Leq**	
Barham Boulevard										
- East of Cahuenga Blvd. E	60	10	35	2,558	25,580	0	0	Yes	73.5	72.5
Cahuenga Boulevard East										
- Between Barham Blvd. and Pilgrimage Bridge	40	10	40	970	9,700	0	0	Yes	71.1	70.1
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	40	1,157	11,570	0	0	Yes	71.8	70.9
Cahuenga Boulevard W										
- South of Barham Blvd.	40	50	40	1,577	15,770	0	0	Yes	69.4	68.4
- North of Pilgrimage Bridge	40	50	40	2,782	27,820	0	0	Yes	71.8	70.9
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	40	3,004	30,040	0	0	Yes	72.2	71.2
Cahuenga Boulevard N										
- Between US 101 NB off-ramp and Odin Ave.	50	10	40	1,160	11,600	0	0	Yes	71.1	70.2
- South of Odin Ave.	60	10	40	1,084	10,840	0	0	Yes	70.3	69.3
Odin Avenue										
- South of Cahuenga Blvd. N	50	10	40	268	2,680	0	0	Yes	64.8	63.8
Highland Avenue										
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	40	4,075	40,750	0	0	Yes	72.4	71.4
- South of Odin Ave.	70	10	40	4,456	44,560	0	0	Yes	75.8	74.8

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>EXISTING + PROJECT CONDITIONS - WEEKEND EVENT</b>	<b>Distance to Roadway Width*, ft</b>	<b>Distance to Edge of Roadway, ft</b>	<b>Distance to Centerline, feet</b>	<b>Speed mph</b>	<b>Traffic Volume</b>		<b>Barrier Atten.</b>	<b>Site Adjust., dBA</b>	<b>Traffic Control</b>	<b>Peak Hour, Leq**</b>	<b>24-Hour CNEL</b>
<b>Roadway Segment</b>					<b>PHV</b>	<b>ADT</b>					
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	2,750	27,500	0	0	Yes	73.8	72.8
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	1,096	10,960	0	0	Yes	71.6	70.6
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	1,810	18,100	0	0	Yes	73.8	72.8
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	1,729	17,290	0	0	Yes	69.8	68.8
- North of Pilgrimage Bridge	40	50	70	40	2,577	25,770	0	0	Yes	71.5	70.5
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	2,344	23,440	0	0	Yes	71.1	70.1
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	1,693	16,930	0	0	Yes	72.8	71.8
- South of Odin Ave.	60	10	40	40	1,798	17,980	0	0	Yes	72.4	71.5
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	527	5,270	0	0	Yes	67.7	66.7
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	3,507	35,070	0	0	Yes	71.7	70.8
- South of Odin Ave.	70	10	45	40	3,436	34,360	0	0	Yes	74.7	73.7

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE NO PROJECT CONDITIONS - WEEKDAY</b> Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume		Barrier Atten.	Site Adjust., dBA	Traffic Control	Peak Hour, Leq**	24-Hour CNEL
					PHV	ADT					
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	4,860	48,600	0	0	Yes	76.3	75.3
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,942	29,420	0	0	Yes	75.9	74.9
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	3,158	31,580	0	0	Yes	76.2	75.2
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	3,295	32,950	0	0	Yes	72.6	71.6
- North of Pilgrimage Bridge	40	50	70	40	4,677	46,770	0	0	Yes	74.1	73.1
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	5,352	53,520	0	0	Yes	74.7	73.7
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	4,303	43,030	0	0	Yes	76.8	75.9
- South of Odin Ave.	60	10	40	40	5,111	51,110	0	0	Yes	77.0	76.0
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	431	4,310	0	0	Yes	66.8	65.9
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	7,153	71,530	0	0	Yes	74.8	73.9
- South of Odin Ave.	70	10	45	40	7,378	73,780	0	0	Yes	78.0	77.0

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE NO PROJECT CONDITIONS - WEEKDAY EVEN'</b>	<b>Distance to Roadway</b>	<b>Distance to Edge of Roadway</b>	<b>Distance to Centerline</b>	<b>Speed</b>	<b>Traffic Volume</b>		<b>Barrier</b>	<b>Site</b>	<b>Traffic</b>	<b>Peak</b>	<b>24-Hour</b>
<b>Roadway Segment</b>	<b>Width*, ft</b>	<b>ft</b>	<b>feet</b>	<b>mph</b>	<b>PHV</b>	<b>ADT</b>	<b>Atten.</b>	<b>Adjust., dBA</b>	<b>Control</b>	<b>Hour, Leq**</b>	<b>CNEL</b>
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	4,341	43,410	0	0	Yes	75.8	74.8
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,416	24,160	0	0	Yes	75.0	74.1
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,977	29,770	0	0	Yes	75.9	75.0
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	2,950	29,500	0	0	Yes	72.1	71.1
- North of Pilgrimage Bridge	40	50	70	40	4,031	40,310	0	0	Yes	73.5	72.5
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	4,355	43,550	0	0	Yes	73.8	72.8
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	2,876	28,760	0	0	Yes	75.1	74.1
- South of Odin Ave.	60	10	40	40	2,865	28,650	0	0	Yes	74.5	73.5
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	511	5,110	0	0	Yes	67.6	66.6
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	6,039	60,390	0	0	Yes	74.1	73.1
- South of Odin Ave.	70	10	45	40	6,018	60,180	0	0	Yes	77.1	76.1

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE NO PROJECT CONDITIONS - WEEKEND</b> Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume		Barrier Atten.	Site Adjust., dBA	Traffic Control	Peak Hour, Leq**	24-Hour CNEL
					PHV	ADT					
Barham Boulevard - East of Cahuenga Blvd. E	60	10	40	35	2,733	27,330	0	0	Yes	73.8	72.8
Cahuenga Boulevard East - Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	1,455	14,550	0	0	Yes	72.8	71.9
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	1,874	18,740	0	0	Yes	73.9	73.0
Cahuenga Boulevard W - South of Barham Blvd.	40	50	70	40	2,169	21,690	0	0	Yes	70.8	69.8
- North of Pilgrimage Bridge	40	50	70	40	4,214	42,140	0	0	Yes	73.6	72.7
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	4,881	48,810	0	0	Yes	74.3	73.3
Cahuenga Boulevard N - Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	1,877	18,770	0	0	Yes	73.2	72.3
- South of Odin Ave.	60	10	40	40	1,810	18,100	0	0	Yes	72.5	71.5
Odin Avenue - South of Cahuenga Blvd. N	50	10	35	40	273	2,730	0	0	Yes	64.9	63.9
Highland Avenue - Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	6,415	64,150	0	0	Yes	74.4	73.4
- South of Odin Ave.	70	10	45	40	6,822	68,220	0	0	Yes	77.6	76.7

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE + PROJECT CONDITIONS - WEEKEND EVENT</b>	<b>Distance to Roadway</b>	<b>Distance to Edge of Roadway</b>	<b>Distance to Centerline</b>	<b>Speed</b>	<b>Traffic Volume</b>		<b>Barrier</b>	<b>Site</b>	<b>Traffic</b>	<b>Peak</b>	<b>24-Hour</b>
<b>Roadway Segment</b>	<b>Width*, ft</b>	<b>ft</b>	<b>feet</b>	<b>mph</b>	<b>PHV</b>	<b>ADT</b>	<b>Atten.</b>	<b>Adjust., dBA</b>	<b>Control</b>	<b>Hour, Leq**</b>	<b>CNEL</b>
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	2,938	29,380	0	0	Yes	74.1	73.1
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	1,590	15,900	0	0	Yes	73.2	72.2
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,573	25,730	0	0	Yes	75.3	74.3
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	2,332	23,320	0	0	Yes	71.1	70.1
- North of Pilgrimage Bridge	40	50	70	40	3,994	39,940	0	0	Yes	73.4	72.4
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	4,173	41,730	0	0	Yes	73.6	72.6
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	2,449	24,490	0	0	Yes	74.4	73.4
- South of Odin Ave.	60	10	40	40	2,576	25,760	0	0	Yes	74.0	73.0
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	551	5,510	0	0	Yes	67.9	66.9
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	5,806	58,060	0	0	Yes	73.9	73.0
- South of Odin Ave.	70	10	45	40	5,729	57,290	0	0	Yes	76.9	75.9

\* Estimated based on Google Earth map.

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



Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE + PROJECT CONDITIONS - WEEKDAY</b>		Distance to	Distance to	Speed	Traffic Volume		Barrier	Site	Traffic	Peak	24-Hour
Roadway Segment	Roadway Width*, ft	Edge of Roadway, ft	Centerline, feet	mph	PHV	ADT	Atten.	Adjust., dBA	Control	Hour, Leq**	CNEL
<b>Barham Boulevard</b>											
- East of Cahuenga Blvd. E	60	10	40	35	4,863	48,630	0	0	Yes	76.3	75.3
<b>Cahuenga Boulevard East</b>											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,956	29,560	0	0	Yes	75.9	74.9
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	3,173	31,730	0	0	Yes	76.2	75.2
<b>Cahuenga Boulevard W</b>											
- South of Barham Blvd.	40	50	70	40	3,308	33,080	0	0	Yes	72.6	71.6
- North of Pilgrimage Bridge	40	50	70	40	4,694	46,940	0	0	Yes	74.1	73.1
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	5,352	53,520	0	0	Yes	74.7	73.7
<b>Cahuenga Boulevard N</b>											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	4,320	43,200	0	0	Yes	76.9	75.9
- South of Odin Ave.	60	10	40	40	5,115	51,150	0	0	Yes	77.0	76.0
<b>Odin Avenue</b>											
- South of Cahuenga Blvd. N	50	10	35	40	450	4,500	0	0	Yes	67.0	66.1
<b>Highland Avenue</b>											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	7,166	71,660	0	0	Yes	74.9	73.9
- South of Odin Ave.	70	10	45	40	7,384	73,840	0	0	Yes	78.0	77.0

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE + PROJECT CONDITIONS - WEEKDAY EVENT</b>	<b>Distance to Roadway</b>	<b>Distance to Edge of Roadway</b>	<b>Distance to Centerline</b>	<b>Speed</b>	<b>Traffic Volume</b>		<b>Barrier</b>	<b>Site</b>	<b>Traffic</b>	<b>Peak</b>	<b>24-Hour</b>
<b>Roadway Segment</b>	<b>Width*, ft</b>	<b>ft</b>	<b>feet</b>	<b>mph</b>	<b>PHV</b>	<b>ADT</b>	<b>Atten.</b>	<b>Adjust., dBA</b>	<b>Control</b>	<b>Hour, Leq**</b>	<b>CNEL</b>
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	4,343	43,430	0	0	Yes	75.8	74.8
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	2,417	24,170	0	0	Yes	75.0	74.1
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,982	29,820	0	0	Yes	75.9	75.0
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	2,955	29,550	0	0	Yes	72.1	71.1
- North of Pilgrimage Bridge	40	50	70	40	4,038	40,380	0	0	Yes	73.5	72.5
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	4,355	43,550	0	0	Yes	73.8	72.8
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	2,881	28,810	0	0	Yes	75.1	74.1
- South of Odin Ave.	60	10	40	40	2,867	28,670	0	0	Yes	74.5	73.5
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	514	5,140	0	0	Yes	67.6	66.6
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	6,041	60,410	0	0	Yes	74.1	73.1
- South of Odin Ave.	70	10	45	40	6,020	60,200	0	0	Yes	77.1	76.1

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE + PROJECT CONDITIONS - WEEKEND</b>											
<b>Roadway Segment</b>	<b>Roadway Width*, ft</b>	<b>Distance to Edge of Roadway, ft</b>	<b>Distance to Centerline, feet</b>	<b>Speed mph</b>	<b>Traffic Volume</b>		<b>Barrier Atten.</b>	<b>Site Adjust., dBA</b>	<b>Traffic Control</b>	<b>Peak Hour, Leq**</b>	<b>24-Hour CNEL</b>
					<b>PHV</b>	<b>ADT</b>					
<b>Barham Boulevard</b>											
- East of Cahuenga Blvd. E	60	10	40	35	2,742	27,420	0	0	Yes	73.8	72.8
<b>Cahuenga Boulevard East</b>											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	1,459	14,590	0	0	Yes	72.8	71.9
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	1,897	18,970	0	0	Yes	74.0	73.0
<b>Cahuenga Boulevard W</b>											
- South of Barham Blvd.	40	50	70	40	2,200	22,000	0	0	Yes	70.8	69.8
- North of Pilgrimage Bridge	40	50	70	40	4,253	42,530	0	0	Yes	73.7	72.7
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	4,881	48,810	0	0	Yes	74.3	73.3
<b>Cahuenga Boulevard N</b>											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	1,900	19,000	0	0	Yes	73.3	72.3
- South of Odin Ave.	60	10	40	40	1,819	18,190	0	0	Yes	72.5	71.5
<b>Odin Avenue</b>											
- South of Cahuenga Blvd. N	50	10	35	40	287	2,870	0	0	Yes	65.1	64.1
<b>Highland Avenue</b>											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	6,419	64,190	0	0	Yes	74.4	73.4
- South of Odin Ave.	70	10	45	40	6,831	68,310	0	0	Yes	77.6	76.7

\* Estimated based on Google Earth map.

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

Off-Site Traffic Noise Calculations

**Project: Ford Theatres**

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

PHV to  
ADT factor  
10%

<b>FUTURE + PROJECT CONDITIONS - WEEKEND EVENT</b>	<b>Distance to Roadway</b>	<b>Distance to Edge of Roadway</b>	<b>Distance to Centerline</b>	<b>Speed</b>	<b>Traffic Volume</b>		<b>Barrier</b>	<b>Site</b>	<b>Traffic</b>	<b>Peak</b>	<b>24-Hour</b>
<b>Roadway Segment</b>	<b>Width*, ft</b>	<b>ft</b>	<b>feet</b>	<b>mph</b>	<b>PHV</b>	<b>ADT</b>	<b>Atten.</b>	<b>Adjust., dBA</b>	<b>Control</b>	<b>Hour, Leq**</b>	<b>CNEL</b>
Barham Boulevard											
- East of Cahuenga Blvd. E	60	10	40	35	2,947	29,470	0	0	Yes	74.1	73.1
Cahuenga Boulevard East											
- Between Barham Blvd. and Pilgrimage Bridge	40	10	30	40	1,593	15,930	0	0	Yes	73.2	72.2
- Between Pilgrimage Bridge and US 101 NB off-ramp	40	10	30	40	2,596	25,960	0	0	Yes	75.3	74.4
Cahuenga Boulevard W											
- South of Barham Blvd.	40	50	70	40	2,364	23,640	0	0	Yes	71.1	70.2
- North of Pilgrimage Bridge	40	50	70	40	4,034	40,340	0	0	Yes	73.5	72.5
- Between Pilgrimage Bridge and Hollywood Bowl Rd.	40	50	70	40	4,173	41,730	0	0	Yes	73.6	72.6
Cahuenga Boulevard N											
- Between US 101 NB off-ramp and Odin Ave.	50	10	35	40	2,472	24,720	0	0	Yes	74.4	73.5
- South of Odin Ave.	60	10	40	40	2,585	25,850	0	0	Yes	74.0	73.0
Odin Avenue											
- South of Cahuenga Blvd. N	50	10	35	40	564	5,640	0	0	Yes	68.0	67.0
Highland Avenue											
- Between Hollywood Bowl Rd. and Odin Ave.	160	10	90	40	5,810	58,100	0	0	Yes	73.9	73.0
- South of Odin Ave.	70	10	45	40	5,738	57,380	0	0	Yes	76.9	75.9

\* Estimated based on Google Earth map.

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

### Project Composite Noise Calculations (CNEL)

Project: Ford Theatres Project EIR

Receptor	Ambient	Traffic <sup>a</sup>	Mechanical	Parking	Transit Center	Amphitheatre	299-Seat Theater	Flex-Space Theater	Restaurant	Outdoor Plazas	Loading	Project Composite	Ambient + Project	Increase
R1	55.7	36.1	32.7	23.9	26.5	50.8	20.3	16.8	40.9	31.0	15.1	51.4	57.1	1.4
R2	80.0	58.0	35.2	27.5	28.8	51.6	23.8	18.5	46.4	36.2	15.2	59.2	80.0	0.0
R3	59.3	45.1	32.0	23.9	25.7	52.0	20.9	15.9	40.8	38.0	28.1	53.3	60.3	1.0
R4	80.6	50.9	36.4	37.7	33.8	48.0	22.1	24.8	48.4	34.7	12.5	54.3	80.6	0.0

<sup>a</sup> - traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor.

Receptor	Roadway Segment	Traffic Noise Levels, CNEL				Traffic Noise Levels, CNEL at 10 feet from roadway				
		Existing	Existing + Project	Project Only	distance to roadway, ft	Existing	Existing + Project	barrier	distance to CL	adj. for distance
R1	Cahuenga Blvd., North	52.4	52.5	36.1	600	74.9	75	10	35	-12.52
R2	Cahuenga Blvd., East	74.3	74.4	58.0	10	74.3	74.4		30	0.00
R3	Cahuenga Blvd, West	61.4	61.5	45.1	800	72.3	72.4		70	-10.89
R4	Cahuenga Blvd., East	67.2	67.3	50.9	10	74.1	74.2		30	0.00

Receptor	Ambient	Traffic <sup>a</sup>	Mechanical	Transportation	Outdoor Areas	Performance Spaces	Loading	Project Composite	Ambient + Project	Increase
R1	55.7	36.1	32.7	28.4	41.3	50.8	15.1	51.4	57.1	1.4
R2	80.0	58.0	35.2	31.2	46.8	51.6	15.2	59.2	80.0	0.0
R3	59.3	45.1	32.0	27.9	42.6	52.0	28.1	53.3	60.3	1.0
R4	80.6	50.9	36.4	39.2	48.6	48.1	12.5	54.3	80.6	0.0

## Mechanical Noise Calculations

Project: Ford Theatres Project EIR

Receptor	Distance from Project Site	Noise Reduction, from ONPM	Source Noise Levels, at 50ft	Estimated Noise Levels	Hours of Operations		
					Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
					12	3	3
R1	1080	50.6	80.0	29.4	29.4	29.4	24.6
R2	910	48.1	80.0	31.9	31.9	31.9	27.1
R3	1290	51.3	80.0	28.7	28.7	28.7	23.9
R4	910	46.9	80.0	33.1	33.1	33.1	28.3

Receptor	Project CNEL	Ambient CNEL	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	32.7	55.7	55.7	0.0	29.4	50.9	50.9	0.0
R2	35.2	80.0	80.0	0.0	31.9	75.3	75.3	0.0
R3	32.0	59.3	59.3	0.0	28.7	50.0	50.0	0.0
R4	36.4	80.6	80.6	0.0	33.1	75.9	75.9	0.0

50 dBA at the Project Property Line

Measured nighttime ambient noise levels, at nearest receptor is 50.9 dBA (Leq)

Therefore, to meet the maximum 5dBA above ambient, the project's noise shall be limit to:

Ambient	50
Project	50
Total	53.0
	3.0

## Parking Structure Noise Calculations

Project: Ford Theatres Project EIR

						Hours of Operations				
NORTH PARKING						Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)		
Receptor	Distance from Project Site	Noise Levels at Parking Structure, at 50 feet	Noise Reduction from ONPM		Estimated Noise Leves, hourly Leq				CNEL	
R1	1450	79	53.9		25	17.3	23.3	15.6	23.9	
R2	1350	79	50.3		29	20.9	26.9	19.2	27.5	
R3	1500	79	53.9		25	17.3	23.3	15.6	23.9	
R4	470	79	40.1		39	31.1	37.1	29.4	37.7	

						Hours of Operations				
SOUTH PARKING						Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)		
Receptor	Distance from Project Site	Noise Levels at Parking Structure, at 50 feet	Noise Reduction from ONPM		Estimated Noise Leves, hourly Leq				CNEL	
R1	940	69	49.1		20	12.1	18.1	10.4	18.7	
R2	590	69	43		26	18.2	24.2	16.5	24.8	
R3	1120	69	48.6		20	12.6	18.6	10.9	19.2	
R4	1230	69	45.1		24	16.1	22.1	14.4	22.7	

Receptor	CNEL	Ambient	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	25.1	55.7	55.7	0.0	26.2	50.9	50.9	0.0
R2	29.4	80.0	80.0	0.0	30.6	75.3	75.3	0.0
R3	25.2	59.3	59.3	0.0	26.4	50.0	50.0	0.0
R4	37.9	80.6	80.6	0.0	39.0	75.9	75.9	0.0

Parking Related Noise

65 dBA at 25 feet (Lmax)

55 Assumed -10 dBA adjustment from Lmax to Leq

79 Adjustment for 250 cars

## Transit Plaza Noise Calculations

Project: Ford Theatres Project EIR

Receptor	Distance from Project Site	Noise Levels at Transit Plaza, at 50 feet	Noise Reduction from ONPM	Estimated Noise Leves, hourly Leq	Hours of Operations		
					Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
					1	1	1
R1	1250	81	52.2	29	18.0	24.0	19.3
R2	1120	81	49.9	31	20.3	26.3	21.6
R3	1380	81	53	28	17.2	23.2	18.5
R4	700	81	44.9	36	25.3	31.3	26.6

Receptor	CNEL	Ambient	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	26.5	55.7	55.7	0.0	28.8	50.9	50.9	0.0
R2	28.8	80.0	80.0	0.0	31.1	75.3	75.3	0.0
R3	25.7	59.3	59.3	0.0	28.0	50.0	50.0	0.0
R4	33.8	80.6	80.6	0.0	36.1	75.9	75.9	0.0

Transit Plaza Noise

71 dBA at 50 feet, bus  
81 adjustment for 10 buses



## Amphitheater Noise Calculations

Project: Ford Theatres Project EIR

Main Theater					Hours of Operations					
					Source Levels, at 96ft			Estimated noise levels, Leq		
Receptor	Distance	Noise Reduction from ONPM	Sound System, Leq	Occupants	Sound System	Occupants	Total	1	3	1
R1	680	39.2	95	82	50.8	42.8	51.4	40.6	51.4	41.9
R2	770	40.1	95	82	51.9	41.9	52.3	41.5	52.3	42.8
R3	1,520	42.5	95	82	52.5	39.5	52.7	41.9	52.7	43.2
R4	1,210	43.7	95	82	48.3	38.3	48.7	37.9	48.7	39.2

Receptor	CNEL	Ambient	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase	dBC Leq
R1	50.8	55.7	56.9	1.2	51.4	50.9	54.2	3.3	61.7
R2	51.6	80.0	80.0	0.0	52.3	75.3	75.3	0.0	65.0
R3	52.0	59.3	60.0	0.7	52.7	50.0	54.6	4.6	69.4
R4	48.0	80.6	80.6	0.0	48.7	75.9	75.9	0.0	63.9

### Occupancy Noise Calcs Leq at 3.3 ft (1m)

Reference noise level	raised	loud	Shouting
Male	65	75	88
Female	62	71	85
total number of people	1196.0	1196.0	1196.0
people talk at the same time	0.5	0.5	0.25
% of male	0.5	0.5	0.5
% of female	0.5	0.5	0.5
Male	90	100	110
Female	87	96	107
Estimated noise levels at 50 feet			
Male	66	76	86
Female	63	72	83
Total	68	78	88

Main Theater Seating Capacity **1196** people  
100% shouting for 25% of the time

0.25 81.881039

82.0 adjusted to 96 ft to match the sound system reference

## 299-Seat Theater Noise Calculations

Project: Ford Theatres Project EIR

Main Theater					Estimated noise levels, Leq			Hours of Operations		
								Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Distance	Noise Reduction from ONPM	Sound System, Leq	Occupants	Sound System	Occupants	Total			
R1	950	49.2	70	57	20.8	7.7	21.0	10.2	21.0	11.5
R2	710	45.7	70	57	24.3	11.2	24.5	13.7	24.5	15.0
R3	1,210	48.6	70	57	21.4	8.3	21.6	10.8	21.6	12.1
R4	1,110	47.4	70	57	22.6	9.5	22.8	12.0	22.8	13.3

Receptor	CNEL	Ambient	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	20.3	55.7	55.7	0.0	21.0	50.9	50.9	0.0
R2	23.8	80.0	80.0	0.0	24.5	75.3	75.3	0.0
R3	20.9	59.3	59.3	0.0	21.6	50.0	50.0	0.0
R4	22.1	80.6	80.6	0.0	22.8	75.9	75.9	0.0

### Occupancy Noise Calcs Leq at 3.3 ft (1m)

Reference noise level	raised	loud	Shouting
Male	65	75	88
Female	62	71	85
total number of people	299.0	299.0	299.0
people talk at the same time	0.5	0.5	0.25
% of male	0.5	0.5	0.5
% of female	0.5	0.5	0.5
Male	84	94	104
Female	81	90	101
Estimated noise levels at 50 feet			
Male	60	70	80
Female	57	66	77
Total	62	72	82

Main Theater Seating Capacity **299** people  
100% shouting for 25% of the time

## Flex-Space (99-Seat) Theater Noise Calculations

Project: Ford Theatres Project EIR

Main Theater					Hours of Operations					
					Source Levels, at 50ft			Estimated noise levels, Leq		
Receptor	Distance	Noise Reduction from ONPM	Sound System, Leq	Occupants	Sound System	Occupants	Total	1	3	1
R1	1,290	52.6	70	52	17.4	-0.5	17.5	6.7	17.5	7.9
R2	1,200	50.9	70	52	19.1	1.2	19.2	8.4	19.2	9.6
R3	1,450	53.5	70	52	16.5	-1.4	16.6	5.8	16.6	7.0
R4	630	44.6	70	52	25.4	7.5	25.5	14.7	25.5	15.9

Receptor	CNEL	Ambient	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	16.8	55.7	55.7	0.0	17.5	50.9	50.9	0.0
R2	18.5	80.0	80.0	0.0	19.2	75.3	75.3	0.0
R3	15.9	59.3	59.3	0.0	16.6	50.0	50.0	0.0
R4	24.8	80.6	80.6	0.0	25.5	75.9	75.9	0.0

### Occupancy Noise Calcs Leq at 3.3 ft (1m)

Reference noise level	raised	loud	Shouting
Male	65	75	88
Female	62	71	85
total number of people	99.0	99.0	99.0
people talk at the same time	0.5	0.5	0.25
% of male	0.5	0.5	0.5
% of female	0.5	0.5	0.5
Male	79	89	99
Female	76	85	96
Estimated noise levels at 50 feet			
Male	55	65	75
Female	52	61	72
Total	57	67	77

Theater Seating Capacity **99** people  
100% shouting for 25% of the time

## Restaurant Noise Calculations

Project: Ford Theatres Project EIR

Receptor	Distance	Noise Reduction from ONPM	Source Levels, at 50ft			Estimated noise levels, Leq			Hours of Operations		
			Sound System, Leq	Occupants		Sound System	Occupants	Total	Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
R1	1,050	50.3	90	65		39.7	14.7	39.7	2	3	2
R2	760	44.8	90	65		45.2	20.2	45.2			
R3	1,150	50.4	90	65		39.6	14.6	39.6			
R4	1,060	42.8	90	65		47.2	22.2	47.2			

Receptor	CNEL	Ambient	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	40.9	55.7	55.8	0.1	39.7	50.9	51.2	0.3
R2	46.4	80.0	80.0	0.0	45.2	75.3	75.3	0.0
R3	40.8	59.3	59.4	0.1	39.6	50.0	50.4	0.4
R4	48.4	80.6	80.6	0.0	47.2	75.9	75.9	0.0

### Occupancy Noise Calcs Leq at 3.3 ft (1m)

Reference noise level	normal	raised	loud
Male	58	65	75
Female	55	62	71
total number of people	100.0	100.0	100.0
people talk at the same time	0.5	0.5	0.5
% of male	0.5	0.5	0.5
% of female	0.5	0.5	0.5
Male	72	79	89
Female	69	76	85
Estimated noise levels at 50 feet			
Male	48	55	65
Female	45	52	61
Total	50	57	67

Restaurant Seating Capacity **100** people

Sound system, 90 dBA maximum levels

### Plazas Noise Calcs

Project: Ford Theatres Project EIR

LOWER PLAZA					Source Levels, at 50ft			Estimated noise levels, Leq			Hours of Operations			Project CNEL	Ambient CNEL	Ambient + Project	Increase
Receptor	Distance	Noise Reduction from ONPM	Sound System, Leq	Occupants	Sound System	Occupants	Total	Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)							
R1	940	49.1	0	78	-49.1	28.5	28.5	20.7	28.5	22.0	29.7	55.7	55.7	0.0			
R2	590	43	0	78	-43.0	34.6	34.6	26.8	34.6	28.1	35.8	80.0	80.0	0.0			
R3	1,120	48.6	0	78	-48.6	29.0	29.0	21.2	29.0	22.5	30.2	59.3	59.3	0.0			
R4	1,230	45.1	0	78	-45.1	32.5	32.5	24.7	32.5	26.0	33.7	80.6	80.6	0.0			

TRANSIT PLAZA					Source Levels, at 50ft			Estimated noise levels, Leq			Hours of Operations			Project CNEL	Ambient CNEL	Ambient + Project	Increase
Receptor	Distance	Noise Reduction from ONPM	Sound System, Leq	Occupants	Sound System	Occupants	Total	Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)							
R1	1250	52.2	0	71	-52.2	18.6	18.6	10.8	18.6	12.1	19.8	55.7	55.7	0.0			
R2	1120	49.9	0	71	-49.9	20.9	20.9	13.1	20.9	14.4	22.1	80.0	80.0	0.0			
R3	1380	53	0	71	-53.0	17.8	17.8	10.0	17.8	11.3	19.0	59.3	59.3	0.0			
R4	700	44.9	0	71	-44.9	25.9	25.9	18.1	25.9	19.4	27.1	80.6	80.6	0.0			

UPPER PLAZA					Source Levels, at 50ft			Estimated noise levels, Leq			Hours of Operations			Project CNEL	Ambient CNEL	Ambient + Project	Increase
Receptor	Distance	Noise Reduction from ONPM	Sound System, Leq	Occupants	Sound System	Occupants	Total	Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)							
R1	810	47.5	0	70	-47.5	22.3	22.3	14.6	22.3	15.8	23.5	55.7	55.7	0.0			
R2	810	47.4	0	70	-47.4	22.4	22.4	14.7	22.4	15.9	23.6	80.0	80.0	0.0			
R3	1440	33.9	0	70	-33.9	35.9	35.9	28.2	35.9	29.4	37.1	59.3	59.3	0.0			
R4	1110	50.6	0	70	-50.6	19.2	19.2	11.5	19.2	12.7	20.4	80.6	80.6	0.0			

#### TOTAL COMBINED

Receptor	Project CNEL	Ambient CNEL	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	31.0	55.7	55.7	0.0	29.8	50.9	50.9	0.0
R2	36.2	80.0	80.0	0.0	35.0	75.3	75.3	0.0
R3	38.0	59.3	59.3	0.0	36.8	50.0	50.2	0.2
R4	34.7	80.6	80.6	0.0	33.5	75.9	75.9	0.0

LOWER PLAZA

Occupancy Noise Calcs	Leq at 3.3 ft (1m)		
Reference noise level	normal	raised	loud
Male	58	65	75
Female	55	62	71
total number of people	1200.0	1200.0	1200.0
people talk at the same time	0.5	0.5	0.5
% of male	0.5	0.5	0.5
% of female	0.5	0.5	0.5
Male	83	90	100
Female	80	87	96
Estimated noise levels at 50 feet			
Male	59	66	76
Female	56	63	72
Total	61	68	78

Lower Plaza	45,000 sf
Upper Plaza	3,750 sf
Transit Plaza	5,200 sf

40 sf/person	1200	people
20 sf/person	200	people
20 sf/person	250	people

TRANSIT PLAZA

Occupancy Noise Calcs	Leq at 3.3 ft (1m)		
Reference noise level	normal	raised	loud
Male	58	65	75
Female	55	62	71
total number of people	250	250	250
people talk at the same time	0.5	0.5	0.5
% of male	0.5	0.5	0.5
% of female	0.5	0.5	0.5
Male	76	83	93
Female	73	80	89
Estimated noise levels at 50 feet			
Male	52	59	69
Female	49	56	65
Total	54	61	71

UPPER PLAZA

Occupancy Noise Calcs	Leq at 3.3 ft (1m)		
Reference noise level	normal	raised	loud
Male	58	65	75
Female	55	62	71
total number of people	200	200	200
people talk at the same time	0.5	0.5	0.5
% of male	0.5	0.5	0.5
% of female	0.5	0.5	0.5
Male	75	82	92
Female	72	79	88
Estimated noise levels at 50 feet			
Male	51	58	68
Female	48	55	64
Total	53	60	70

## Loading Noise Calculations

Project: Ford Theatres Project EIR

Receptor	Distance from Project Site	Noise Levels at Transit Plaza, at 50 feet	Noise Reduction from ONPM	Estimated Noise Leves, hourly Leq	Hours of Operations		
					Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
					3	0	0
R1	810	71	47.5	24	17.5	0.0	0.0
R2	810	71	47.4	24	17.6	0.0	0.0
R3	1440	71	33.9	37	31.1	0.0	0.0
R4	1110	71	50.6	20	14.4	0.0	0.0

Receptor	CNEL	Ambient	Ambient + Project	Increase	Project Noise, Leq	nighttime ambient (Leq)	Ambient + Project	Increase
R1	15.1	55.7	55.7	0.0	23.5	50.9	50.9	0.0
R2	15.2	80.0	80.0	0.0	23.6	75.3	75.3	0.0
R3	28.1	59.3	59.3	0.0	37.1	50.0	50.2	0.2
R4	12.5	80.6	80.6	0.0	20.4	75.9	75.9	0.0

Loading noise levels

71 dBA at 50 feet

### **QUALIFICATIONS & CERTIFICATIONS**

B.S., Mechanical Engineering,  
Kansas State University

B.S., Civil Engineering,  
Kansas State University

Registered Professional Engineer (P.E.),  
State of California, #M26982

### **PROFESSIONAL HISTORY**

Principal, Acoustical Engineering  
Services, 2009 - Present

Director of Acoustics, Associate  
Principal, PCR Services Corporation,  
2006 - 2009

Associate Principal, Arup Acoustics/  
Ove Arup, 1992 - 2006

Senior Consultant, Bolt Beranek &  
Newman/Acentech, 1986 - 1992

Consultant, Coffeen Anderson Fricke &  
Associates, 1984 - 1986

### **PROFESSIONAL AFFILIATIONS**

Acoustical Society of America

Institute of Noise Control Engineering

American Society of Heating,  
Refrigerating and Air-Conditioning  
Engineers

National Council of Acoustical  
Consultants

### **PAPERS & PUBLICATIONS**

"Deep Dynamic Compaction Ground-  
borne Vibration Generation",  
Noise-Con, 2010

"Mechanical Systems Noise Issues -  
Case Studies," Presented at the  
Buildings for Advanced Technology  
Workshop II, 2005

"Design of Vibration Sensitive  
Laboratory Floors," Architectural  
Engineering, 2003

"Noise Control in Research  
Laboratories," Noise-Con, 1994

"Railroad Track Noise and Vibration  
Impact Study and Soundwall  
Design," Transportation Research  
Board, 1993

"Aircraft Sound Insulation Study of a  
School Building," Sound and  
Vibration, 1993

### **PROFESSIONAL EXPERIENCE**

Amir Yazdanniyaz has 29 years experience consulting in California and throughout the United States as well Hong Kong, and the United Kingdom. During his career, Mr. Yazdanniyaz has demonstrated experience in all aspects of building acoustics, noise control, environmental assessment, and transportation analysis. In addition, he has developed a particular expertise in designing noise and vibration control measures for building services mechanical equipment.

Mr. Yazdanniyaz has managed numerous environmental noise impact studies involving complex noise issues. He has participated in public presentations of noise assessment documents on behalf of community groups, facility owners and environmental consultants. In addition, Mr. Yazdanniyaz has managed noise impact studies for various types of mixed-use/hotels developments throughout Southern California.

### **REPRESENTATIVE PROJECTS**

- Convention and Event Center, Los Angeles, California – Technical noise study for a proposed 72,000-seat multi-purpose Event Center (Farmers Field), renovation/construction of approx. 500,000 square feet of convention spaces, and parking structures.
- Wilshire Grand Redevelopment EIR, Los Angeles, California – Technical noise impact study for the proposed mixed-used development, including office spaces, hotel and residential uses.
- USC Development Plan EIR, Los Angeles, California – Technical noise impact analysis for the proposed development, including academic and university uses, commercial/retails, hotel and residential uses.
- The Village at Westfield Topanga EIR, Los Angeles, California - Noise impact analysis for a mixed-use commercial/hotel development, including shopping and dining, hotel, and community/cultural center.
- Columbia Square Project EIR, Hollywood, California – Technical noise impact study for the proposed mixed-used development, including hotel, office spaces, and residential uses.
- Century City Mixed Use Development EIR, Los Angeles, California - Technical noise study for a mixed-use residential/commercial development, including hotel and residential development.
- Il Villaggio Toscano Project, Sherman Oaks, California –Technical noise study in support of the EIR for the proposed mixed use development.



### **QUALIFICATIONS & CERTIFICATIONS**

B.S., Electrical Engineering,  
California State University  
Northridge, 1989

Registered Professional Engineer (P.E.),  
State of California, #M32529

### **PROFESSIONAL HISTORY**

Principal, Acoustical Engineering  
Services, 2009 - Present

Principal Consultant, PCR Services  
Corporation,  
2006 - 2009

Senior Consultant, Arup Acoustics, 1997  
- 2006

Senior Engineer, Parsons, 1994 - 1997

Consultant, Bolt Beranek &  
Newman/Acentech, 1988 - 1994

### **PROFESSIONAL AFFILIATIONS**

Acoustical Society of America

Institute of Noise Control Engineering

American Society of Heating,  
Refrigerating and Air-Conditioning  
Engineers

### **PAPERS & PUBLICATIONS**

"Deep Dynamic Compaction Ground-  
borne Vibration Generation", Noise-  
Con, 2010

"Mechanical Systems Noise Issues -  
Case Studies," Presented at the  
Buildings for Advanced Technology  
Workshop II, 2005

"A Case Study of Noise Generation by  
an Outdoor, Cable Driven Team,"  
Inter-Noise, 1999

"Determining a Construction Vibration  
Criteria and Monitoring Procedure  
for a Hospital Located Near a Transit  
way Project," Inter-Noise, 1995

"Siting the NIST Advanced Technology  
Laboratories: Consideration of  
Transportation-Induced Vibration,"  
Transportation Research Board, 1995

"Aircraft Sound Insulation Study of a  
School Building," Sound and  
Vibration, 1993

### **PROFESSIONAL EXPERIENCE**

Sean Bui has 25 years of experience in the field of noise and vibration with emphasis in building services noise and vibration control, building structural vibration, environmental noise studies, and transportation noise. During his career, Mr. Bui has conducted and prepared numerous technical noise impact studies for a wide range of project involving complex noise issues. He has extensive experience in preparing technical noise and vibration study for compliance with California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) requirements.

Mr. Bui has prepared technical noise impact studies for various types of projects including general master-plan, entertainment developments, hospital buildings, residential and commercial development, highways, and airports, in support of Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) documents. Mr. Bui has extensive working experience with various computer modeling programs, including FHWA's *TNM* traffic noise model. U.S. Air Force's NOISEMAP and FAA's INM aircraft noise models.

### **REPRESENTATIVE PROJECTS**

- Convention and Event Center, Los Angeles, California – Technical noise study for a proposed 72,000-seat multi-purpose Event Center (Farmers Field), renovation/construction of approx. 500,000 square feet of convention spaces, and parking structures.
- Wilshire Grand Redevelopment, Los Angeles, California – Technical noise impact study for the proposed mixed-used development, including office spaces, hotel and residential uses.
- USC Development Plan, Los Angeles, California – Technical noise impact analysis for the proposed development, including academic and university uses, commercial/retails, hotel and residential uses.
- Forest Lawn Memorial Park – Hollywood Hills Master Plan EIR, Los Angeles, California – Noise impact study for the Forest Lawn 40-year master plan.
- The Village at Westfield Topanga, Los Angeles, California - Noise impact analysis for a mixed-use commercial/hotel development, including shopping and dining, hotel, and community/cultural center.
- Columbia Square Project, Hollywood, California – Technical noise impact study for the proposed mixed-used development, including hotel, office spaces, and residential uses.
- Century City Mixed Use Development EIR, Los Angeles, California - Technical noise study for a mixed-use residential/commercial development, including hotel and residential development.