

Appendix K

Noise Measurement Calculations

Project: 21611 Perry Street (Unmitigated)
Construction Noise Impact on Sensitive Receptors

Parameters

Construction Hours:	8 Daytime hours (7 am to 7 pm) 0 Evening hours (7 pm to 10 pm) 0 Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3

Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	R1				R2				R3				R4							
				Distanc e (ft)	Lmax	Leq	Estimated Noise Shieldin g, dBA	Distanc e (ft)	Lmax	Leq	Estimated Noise Shieldin g, dBA	Distanc e (ft)	Lmax	Leq	Estimated Noise Shieldin g, dBA	Distanc e (ft)	Lmax	Leq	Estimated Noise Shielding, dBA				
Demolition				77	74			75	71			77	73			70	67						
Compressor (air)	2	80	40%	400	60	56	59	5	600	61	57	60	0	500	63	59	62	0	700	60	56	59	0
Tractor/Loader/Backhoe	1	78	40%	400	55	51	54	5	600	56	52	55	0	500	58	54	57	0	700	55	51	54	0
Dump Truck	2	76	40%	200	62	58	61	5	250	65	61	64	0	200	67	63	66	0	500	59	55	58	0
Excavator	1	81	40%	400	58	54	57	5	600	59	55	58	0	500	61	57	60	0	700	58	54	57	0
Generator	1	81	50%	50	76	73	76	5	150	71	68	71	0	120	73	70	73	0	250	67	64	67	0
Tractor/Loader/Backhoe	2	78	40%	200	64	60	63	5	250	67	63	66	0	200	69	65	68	0	500	61	57	60	0
Tractor/Loader/Backhoe	1	78	40%	200	61	57	60	5	250	64	60	63	0	200	66	62	65	0	500	58	54	57	0
Vacuum Street Sweeper	1	80	10%	200	63	57	56	5	250	66	56	59	0	200	68	58	61	0	500	60	50	53	0
Grading/Excavation				85	79				82	76				84	78				77	71			
Tractor/Loader/Backhoe	1	78	40%	200	61	57	60	5	250	64	60	63	0	200	66	62	65	0	500	58	54	57	0
Concrete Saw	1	90	20%	50	85	78	81	5	150	80	73	76	0	120	82	75	78	0	250	76	69	72	0
Compactor (ground)	1	83	20%	200	66	59	62	5	250	69	62	65	0	200	71	64	67	0	500	63	56	59	0
Tractor/Loader/Backhoe	2	78	40%	200	64	60	63	5	250	67	63	66	0	200	69	65	68	0	500	61	57	60	0
Dump Truck	2	76	40%	200	62	58	61	5	250	65	61	64	0	200	67	63	66	0	500	59	55	58	0
Excavator	1	81	40%	200	64	60	63	5	250	67	63	66	0	200	69	65	68	0	500	61	57	60	0
Grader	1	85	40%	200	68	64	67	5	250	71	67	70	0	200	73	69	72	0	500	65	61	64	0
Tractor/Loader/Backhoe	2	78	40%	400	58	54	57	5	600	59	55	58	0	500	61	57	60	0	700	58	54	57	0
Scraper	3	84	40%	400	66	62	65	5	600	67	63	66	0	500	69	65	68	0	700	66	62	65	0
Roller	1	80	20%	400	57	50	53	5	600	58	51	54	0	500	60	53	56	0	700	57	50	53	0
Vacuum Street Sweeper	1	80	10%	400	57	47	50	5	600	58	48	51	0	500	60	50	53	0	700	57	47	50	0
Drainage/Utilities/Trenching				80	76				77	74				79	76				72	69			
Compressor (air)	1	78	40%	400	55	51	54	5	600	56	52	55	0	500	58	54	57	0	700	55	51	54	0
Tractor/Loader/Backhoe	2	78	40%	400	58	54	57	5	600	59	55	58	0	500	61	57	60	0	700	58	54	57	0
Compactor (ground)	1	83	20%	400	60	53	56	5	600	61	54	57	0	500	63	56	59	0	700	60	53	56	0
Dump Truck	2	76	40%	200	62	58	61	5	250	65	61	64	0	200	67	63	66	0	500	59	55	58	0
Excavator	1	81	40%	200	64	60	63	5	250	67	63	66	0	200	69	65	68	0	500	61	57	60	0
Generator	2	81	50%	50	79	76	79	5	150	74	71	74	0	120	76	73	76	0	250	70	67	70	0
Pumps	2	81	50%	200	67	64	67	5	250	70	67	70	0	200	72	69	72	0	500	64	61	64	0
Forklift	1	75	10%	200	58	48	51	5	250	61	51	54	0	200	63	53	56	0	500	55	45	48	0
Vacuum Street Sweeper	1	80	10%	400	57	47	50	5	600	58	48	51	0	500	60	50	53	0	700	57	47	50	0
Foundation/Concrete Pour				85	78				81	75				83	77				77	70			
Compressor (air)	1	78	40%	200	61	57	60	5	250	64	60	63	0	200	66	62	65	0	500	58	54	57	0
Tractor/Loader/Backhoe	1	78	40%	200	61	57	60	5	250	64	60	63	0	200	66	62	65	0	500	58	54	57	0
Concrete Saw	1	90	20%	50	85	78	81	5	150	80	73	76	0	120	82	75	78	0	250	76	69	72	0
Compactor (ground)	1	83	20%	200	66	59	62	5	250	69	62	65	0	200	71	64	67	0	500	63	56	59	0
Dump Truck	2	76	40%	200	62	58	61	5	250	65	61	64	0	200	67	63	66	0	500	59	55	58	0
Tractor/Loader/Backhoe	2	78	40%	200	64	60	63	5	250	67	63	66	0	200	69	65	68	0	500	61	57	60	0
Pumps	1	81	50%	400	58	55	58	5	600	59	56	59	0	500	61	58	61	0	700	58	55	58	0
Forklift	1	75	10%	400	52	42	45	5	600	53	43	46	0	500	55	45	48	0	700	52	42	45	0
Vacuum Street Sweeper	1	80	10%	400	57	47	50	5	600	58	48	51	0	500	60	50	53	0	700	57	47	50	0
Building Construction				85	78				82	76				84	78				78	71			
Compressor (air)	2	78	40%	200	64	60	63	5	250	67	63	66	0	200	69	65	68	0	500	61	57	60	0
Drum Mixer	2	80	50%	400	60	57	60	5	600	61	58	61	0	500	63	60	63	0	700	60	57	60	0
Concrete Saw	1	90	20%	200	73	66	69	5	250	76	69	72	0	200	78	71	74	0	500	70	63	66	0
Concrete Saw	1	90	20%	50	85	78	81	5	150	80	73	76	0	120	82	75	78	0	250	76	69	72	0
Crane	1	81	16%	400	58	50	53	5	400	63	55	58	0	400	63	55	58	0	400	63	55	58	0
Dump Truck	2	76	40%	400	56	52	55	5	600	57	53	56	0	500	59	55	58	0	700	56	52	55	0
Forklift	4	75	10%	400	58	48	51	5	600	59	49	52	0	500	61	51	54	0	700	58	48	51	0
Generator	1	81	50%	400	58	55	58	5	600	59	56	59	0	500	61	58	61	0	700	58	55	58	0
Pumps	1	81	50%	200	64	61	64	5	250	67	64	67	0	200	69	66	69	0	500	61	58	61	0
Forklift	2	75	10%	200	61	51	54	5	250	64	54	57	0	200	66	56	59	0	500	58	48	51	0
Paving				81	78				78	75				80	77				74	70			
Tractor/Loader/Backhoe	1	78	40%	400	55	51	54	5	600	56	52	55	0	500	58	54	57	0	700	55	51	54	0
Dump Truck	2	76	40%	400	56	52	55	5	600	57	53	56	0	500	59	55	58	0	700	56	52	55	0
Tractor/Loader/Backhoe	2	78	40%	200	64	60	63	5	250	67	63	66	0	200	69	65	68	0	500	61	57	60	0
Paver	1	77	50%	200	60	57	60	5	250	63	60	63	0	200	65	62	65	0	500	57	54	57	0
Other Equipment	2	85	50%	200	71	68	71	5	250	74	71	74	0	200	76	73	76	0	500	68	65	68	0
Other Equipment	1	85	50%	50	80	77	80	5	150	75	72	75	0	120	77	74	77	0	250	71	68	71	0
Roller	2	80	20%	400	60	53	56	5	600	61	54	57	0	500	63	56							

Project: 21611 Perry Street (Mitigated)

Construction Noise Impact on Sensitive Receptors

Parameters

Construction Hours:	8 Daytime hours (7 am to 7 pm) 0 Evening hours (7 pm to 10 pm) 0 Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3

Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	R1				R2				R3				R4							
				Distanc e (ft)	Lmax	Leq	L10	Estimat ed Noise Shieldin g, dBA	Distanc e (ft)	Lmax	Leq	L11	Estimat ed Noise Shieldin g, dBA	Distanc e (ft)	Lmax	Leq	L12	Estimat ed Noise Shieldin g, dBA	Distanc e (ft)	Lmax	Leq	L11	Estimat ed Noise Shieldin g, dBA
Demolition																							
Compressor (air)	2	80	40%	400	47	43	46	18	600	44	40	43	17	500	44	40	43	19	700	60	56	59	0
Tractor/Loader/Backhoe	1	78	40%	400	42	38	41	18.2322	600	39	35	38	17.1973	500	39	35	38	19.3247	700	55	51	54	0
Dump Truck	2	76	40%	200	49	45	48	18.2322	250	48	44	47	17.1973	300	44	40	43	19.3247	500	59	55	58	0
Excavator	1	81	40%	400	45	41	44	18.2322	600	42	38	41	17.1973	500	42	38	41	19.3247	700	58	54	57	0
Generator	1	81	50%	120	55	52	55	18.2322	200	52	49	52	17.1973	170	51	48	51	19.3247	300	65	62	65	0
Tractor/Loader/Backhoe	2	78	40%	200	51	47	50	18.2322	250	50	46	49	17.1973	300	46	42	45	19.3247	500	61	57	60	0
Tractor/Loader/Backhoe	1	78	40%	200	48	44	47	18.2322	250	47	43	46	17.1973	300	43	39	42	19.3247	500	58	54	57	0
Vacuum Street Sweeper	1	80	10%	200	50	40	43	18.2322	250	49	39	42	17.1973	300	45	35	38	19.3247	500	60	50	53	0
Grading/Excavation																							
Tractor/Loader/Backhoe	1	78	40%	200	48	44	47	18.2322	250	47	43	46	17.1973	300	43	39	42	19.3247	500	58	54	57	0
Concrete Saw	1	90	20%	120	64	57	60	18.2322	200	61	54	57	17.1973	170	60	53	56	19.3247	300	74	67	70	0
Compactor (ground)	1	83	20%	200	53	46	49	18.2322	250	52	45	48	17.1973	300	48	41	44	19.3247	500	63	56	59	0
Tractor/Loader/Backhoe	2	78	40%	200	51	47	50	18.2322	250	50	46	49	17.1973	300	46	42	45	19.3247	500	61	57	60	0
Dump Truck	2	76	40%	200	49	45	48	18.2322	250	48	44	47	17.1973	300	44	40	43	19.3247	500	59	55	58	0
Excavator	1	81	40%	200	51	47	50	18.2322	250	50	46	49	17.1973	300	46	42	45	19.3247	500	61	57	60	0
Grader	1	85	40%	200	55	51	54	18.2322	250	54	50	53	17.1973	300	50	46	49	19.3247	500	65	61	64	0
Tractor/Loader/Backhoe	2	78	40%	400	45	41	44	18.2322	600	42	38	41	17.1973	500	42	38	41	19.3247	700	58	54	57	0
Scraper	3	84	40%	400	52	48	51	18.2322	600	50	46	49	17.1973	500	49	45	48	19.3247	700	66	62	65	0
Roller	1	80	20%	400	44	37	40	18.2322	600	41	34	37	17.1973	500	41	34	37	19.3247	700	57	50	53	0
Vacuum Street Sweeper	1	80	10%	400	44	34	37	18.2322	600	41	31	34	17.1973	500	41	31	34	19.3247	700	57	47	50	0
Drainage/Utilities/Trenching																							
Compressor (air)	1	78	40%	400	42	38	41	18.2322	600	39	35	38	17.1973	500	39	35	38	19.3247	700	55	51	54	0
Tractor/Loader/Backhoe	2	78	40%	400	45	41	44	18.2322	600	42	38	41	17.1973	500	42	38	41	19.3247	700	58	54	57	0
Compactor (ground)	1	83	20%	400	47	40	43	18.2322	600	44	37	40	17.1973	500	44	37	40	19.3247	700	60	53	56	0
Dump Truck	2	76	40%	200	49	45	48	18.2322	250	48	44	47	17.1973	300	44	40	43	19.3247	500	59	55	58	0
Excavator	1	81	40%	200	51	47	50	18.2322	250	50	46	49	17.1973	300	46	42	45	19.3247	500	61	57	60	0
Generator	2	81	50%	120	58	55	58	18.2322	200	55	52	55	17.1973	170	54	51	54	19.3247	300	68	65	68	0
Pumps	2	81	50%	200	54	51	54	18.2322	250	53	50	53	17.1973	300	49	46	49	19.3247	500	64	61	64	0
Forklift	1	75	10%	200	45	35	38	18.2322	250	44	34	37	17.1973	300	40	30	33	19.3247	500	55	45	48	0
Vacuum Street Sweeper	1	80	10%	400	44	34	37	18.2322	600	41	31	34	17.1973	500	41	31	34	19.3247	700	57	47	50	0
Foundation/Concrete Pour																							
Compressor (air)	1	78	40%	200	48	44	47	18.2322	250	47	43	46	17.1973	300	43	39	42	19.3247	500	58	54	57	0
Tractor/Loader/Backhoe	1	78	40%	200	48	44	47	18.2322	250	47	43	46	17.1973	300	43	39	42	19.3247	500	58	54	57	0
Concrete Saw	1	90	20%	120	64	57	60	18.2322	200	61	54	57	17.1973	170	60	53	56	19.3247	300	74	67	70	0
Compactor (ground)	1	83	20%	200	53	46	49	18.2322	250	52	45	48	17.1973	300	48	41	44	19.3247	500	63	56	59	0
Dump Truck	2	76	40%	200	49	45	48	18.2322	250	48	44	47	17.1973	300	44	40	43	19.3247	500	59	55	58	0
Tractor/Loader/Backhoe	2	78	40%	200	51	47	50	18.2322	250	50	46	49	17.1973	300	46	42	45	19.3247	500	61	57	60	0
Pumps	1	81	50%	400	45	42	45	18.2322	600	42	39	42	17.1973	500	42	39	42	19.3247	700	58	55	58	0
Forklift	1	75	10%	400	39	29	32	18.2322	600	36	26	29	17.1973	500	36	26	29	19.3247	700	52	42	45	0
Vacuum Street Sweeper	1	80	10%	400	44	34	37	18.2322	600	41	31	34	17.1973	500	41	31	34	19.3247	700	57	47	50	0
Building Construction																							
Compressor (air)	2	78	40%	200	51	47	50	18.2322	250	50	46	49	17.1973	300	46	42	45	19.3247	500	61	57	60	0
Drum Mixer	2	80	50%	400	47	44	47	18.2322	600	44	41	44	17.1973	500	44	41	44	19.3247	700	60	57	60	0
Concrete Saw	1	90	20%	200	60	53	56	18.2322	250	59	52	55	17.1973	300	55	48	51	19.3247	500	70	63	66	0
Concrete Saw	1	90	20%	120	64	57	60	18.2322	200	61	54	57	17.1973	170	60	53	56	19.3247	300	74	67	70	0
Crane	1	81	16%	400	45	37	40	18.2322	400	46	38	41	17.1973	400	44	36	39	19.3247	400	63	55	58	0
Dump Truck	2	76	40%	400	43	39	42	18.2322	600	40	36	39	17.1973	500	40	36	39	19.3247	700	56	52	55	0
Forklift	4	75	10%	400	45	35	38	18.2322	600	42	32	35	17.1973	500	42	32	35	19.3247	700	58	48	51	0
Generator	1	81	50%	400	45	42	45	18.2322	600	42	39	42	17.1973	500	42	39	42	19.3247	700	58	55	58	0
Pumps	1	81	50%	200	51	48	51	18.2322	250	50	47	50	17.1973	300	46	43	46	19.3247	500	61	58	61	0
Forklift	2	75	10%	200	48	38	41	18.2322	250	47	37	40	17.1973	300	43	33	36	19.3247	500	58	48	51	0
Paving																							
Tractor/Loader/Backhoe	1	78	40%	400	42	38	41	18.2322	600	39	35	38	17.1973	500	39	35	38	19.3247	700	55	51	54	0
Dump Truck	2	76	40%	400	43	39	42	18.2322	600	40	36	39	17.1973	500	40	36	39	19.3247	700	56	52	55	0
Tractor/Loader/Backhoe	2	78	40%	200	51	47	50	18.2322	250	50	46	49	17.1973	300	46	42	45	19.3247	500	61	57	60	0
Paver	1	77	50%	200	47	44	47	18.2322	250	46	43	46	17.1973	300	42	39	42	19.3247	500	57	54	57	0
Other Equipment	2	85	50%	200	58	55	58	18.2322	250	57	54	57	17.1973	300	53	50	53	19.3247	500	68	65	68	0
Other Equipment	1	85	50%	120	59	56	59	18.2322	200	56	53	56	17.1973	170	55	52	55	19.3247	300	69	66	69	0
Roller	2	8																					

21611 Perry Street Barrier Calculations

horizontal dist (feet)			source height (Hs) (feet)	Receiver Height (feet)	Barrier Height (feet)		source to receiver (C) (feet)	true distance source to barrier (A) (feet)	barrier to receiver (B) (feet)	path length difference: P A+B-C (feet)
DSB+DBR	DSB	DBR		HR	HB	°C				
70	50	20	4	5	18	15	70.01	51.92	23.85	5.77
150	50	100	4	5	18	15	150.00	51.92	100.84	2.76
80	50	30	4	5	18	15	80.01	51.92	32.70	4.61
250	50	200	4	5	18	15	250.00	51.92	200.42	2.34
70	50	20	4	5	15	15	70.01	51.20	22.36	3.55
150	50	100	4	5	15	15	150.00	51.20	100.50	1.69
80	50	30	4	5	15	15	80.01	51.20	31.62	2.81
250	50	200	4	5	15	15	250.00	51.20	200.25	1.44
50	50		4	5		15	50.01	50.16	5.00	5.15
50	50		4	5		15	50.01	50.16	5.00	5.15
50	50		4	5		15	50.01	50.16	5.00	5.15
50	50		4	5		15	50.01	50.16	5.00	5.15

Barrier Attenuation				
Barrier Height				
	20 ft	15 ft	10 ft	5 ft
R1	20.3	18.2		
R2	17.2	15.2		
R3	19.3	17.3		
R2	16.5	14.6		

path length
difference: z

C2	C3	A+B-C (meter)	Kmet	Speed of Sound		wavelength in meter (λ)							
				(m/s)		63	125	250	500	1000	2000	4000	8000
20	1	1.76	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	0.84	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	1.41	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	0.71	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	1.08	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	0.52	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	0.86	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	0.44	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	1.57	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	1.57	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04
20	1	1.57	1.00	340.4		5.40	2.72	1.36	0.68	0.34	0.17	0.09	0.04

	Dz Barrier Attenuation								Line of Sight		
	63	125	250	500	1000	2000	4000	8000	Auto	MT	HT
	10	12	15	17	20	23	26	29	YES	YES	YES
	8	10	12	14	17	20	23	26	YES	YES	YES
	9	11	14	16	19	22	25	28	YES	YES	YES
	8	9	11	14	17	19	22	25	YES	YES	YES
	8	10	13	15	18	21	24	27	YES	YES	YES
	7	8	10	13	15	18	21	24	YES	YES	YES
	8	10	12	14	17	20	23	26	YES	YES	YES
	7	8	10	12	15	17	20	23	YES	YES	YES
	0	0	0	0	0	0	0	0	NO	NO	NO
	0	0	0	0	0	0	0	0	NO	NO	NO
	0	0	0	0	0	0	0	0	NO	NO	NO
	0	0	0	0	0	0	0	0	NO	NO	NO

Roadway Traffic Noise - Existing

Street	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL)			Significant Impact?
		Existing	Existing with Project	Increase over Existing	
Avalon Blvd n/o Carson St	Commercial/Mixed Use	70.9	70.9	0.0	No
Avalon Blvd s/o Carson St	Commercial/Mixed Use	71.1	71.1	0.0	No
Carson St between Avalon Blvd and I-405 SB Ramps	Commercial	73.0	73.0	0.0	No
Carson St between I-405 NB Ramps and Perry St	Manufacturing	71.9	71.9	0.1	No
Carson St between I-405 SB Ramps and I-405 NB Ramps	Commercial	72.7	72.7	0.0	No
Carson St between Perry St and Wilmington Ave	Commercial/Residential	71.6	71.7	0.0	No
Carson St e/o Wilmington Ave	Manufacturing	71.0	71.0	0.0	No
Carson St w/o Avalon Blvd	Commercial/Mixed Use	72.0	72.0	0.0	No
I-405 NB Ramps n/o Carson St	Commercial/OpenSpace	68.8	68.9	0.0	No
I-405 NB Ramps s/o Carson St	Commercial/OpenSpace	61.0	61.0	0.0	No
I-405 SB Ramps n/o Carson St	Commercial/OpenSpace	47.3	47.3	0.0	No
I-405 SB Ramps s/o Carson St	Commercial/OpenSpace	69.1	69.1	0.0	No
Perry St between Project Driveway and Carson St	Commercial/Mixed Use	58.4	59.0	0.6	No
Perry St n/o Project Driveway	Residential/Open Space	58.3	58.4	0.1	No
Wilmington Ave n/o Carson St	Manufacturing/Commercial/Residential	71.1	71.1	0.0	No
Wilmington Ave s/o Carson St	Manufacturing/Commercial/Residential	69.3	69.3	0.0	No

Roadway Traffic Noise - Future

Street	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL)			Significant Impact?
		Future Year (2029)	Future Year (2029) with Project	Increase over Existing	
Avalon Blvd n/o Carson St	Commercial/Mixed Use	72.3	72.3	0.0	No
Avalon Blvd s/o Carson St	Commercial/Mixed Use	71.7	71.7	0.0	No
Carson St between Avalon Blvd and I-405 SB Ramps	Commercial	73.6	73.6	0.0	No
Carson St between I-405 NB Ramps and Perry St	Manufacturing	72.5	72.5	0.1	No
Carson St between I-405 SB Ramps and I-405 NB Ramps	Commercial	73.3	73.3	0.0	No
Carson St between Perry St and Wilmington Ave	Commercial/Residential	72.2	72.2	0.0	No
Carson St e/o Wilmington Ave	Manufacturing	71.7	71.7	0.0	No
Carson St w/o Avalon Blvd	Commercial/Mixed Use	72.9	72.9	0.0	No
I-405 NB Ramps n/o Carson St	Commercial/OpenSpace	69.1	69.2	0.0	No
I-405 NB Ramps s/o Carson St	Commercial/OpenSpace	61.1	61.1	0.0	No
I-405 SB Ramps n/o Carson St	Commercial/OpenSpace	47.4	47.4	0.0	No
I-405 SB Ramps s/o Carson St	Commercial/OpenSpace	69.3	69.4	0.0	No
Perry St between Project Driveway and Carson St	Commercial/Mixed Use	58.5	59.0	0.6	No
Perry St n/o Project Driveway	Residential/Open Space	58.4	58.5	0.1	No
Wilmington Ave n/o Carson St	Manufacturing/Commercial/Residential	71.2	71.2	0.0	No
Wilmington Ave s/o Carson St	Manufacturing/Commercial/Residential	69.4	69.4	0.0	No

TRAFFIC NOISE ANALYSIS TOOL



Project Name: 21611 Perry Street
Analysis Scenario: Existing
Source of Traffic Volumes: Fehr Peers

Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Avalon Blvd n/o Carson St	Hard	30	35	35	30	2202	45	23	70.6	70.9
Avalon Blvd s/o Carson St	Hard	30	35	35	30	2312	48	24	70.8	71.1
Carson St between Avalon Blvd and I-405 SB Ramps	Hard	30	40	40	35	2486	51	26	72.7	73.0
Carson St between I-405 NB Ramps and Perry St	Hard	30	40	40	35	1926	40	20	71.6	71.9
Carson St between I-405 SB Ramps and I-405 NB Ramps	Hard	30	40	40	35	2316	48	24	72.4	72.7
Carson St between Perry St and Wilmington Ave	Hard	30	40	40	35	1831	38	19	71.3	71.6
Carson St e/o Wilmington Ave	Hard	30	40	40	35	1593	33	16	70.7	71.0
Carson St w/o Avalon Blvd	Hard	30	40	40	35	2003	41	21	71.7	72.0
I-405 NB Ramps n/o Carson St	Hard	30	40	40	35	965	20	10	68.5	68.8
I-405 NB Ramps s/o Carson St	Hard	30	40	40	35	157	3	2	60.7	61.0
I-405 SB Ramps n/o Carson St	Hard	30	40	40	35	7	0	0	47.0	47.3
I-405 SB Ramps s/o Carson St	Hard	30	40	40	35	1022	21	11	68.8	69.1
Perry St between Project Driveway and Carson St	Hard	30	25	25	25	251	5	3	58.1	58.4
Perry St n/o Project Driveway	Hard	30	25	25	25	246	5	3	58.0	58.3
Wilmington Ave n/o Carson St	Hard	30	40	40	35	1632	34	17	70.8	71.1
Wilmington Ave s/o Carson St	Hard	30	40	40	35	1060	22	11	69.0	69.3

TRAFFIC NOISE ANALYSIS TOOL



Project Name: 21611 Perry Street
Analysis Scenario: Existing +Project
Source of Traffic Volumes: Fehr Peers

Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Avalon Blvd n/o Carson St	Hard	30	35	35	30	2204	45	23	70.6	70.9
Avalon Blvd s/o Carson St	Hard	30	35	35	30	2314	48	24	70.8	71.1
Carson St between Avalon Blvd and I-405 SB Ramps	Hard	30	40	40	35	2496	51	26	72.7	73.0
Carson St between I-405 NB Ramps and Perry St	Hard	30	40	40	35	1955	40	20	71.6	71.9
Carson St between I-405 SB Ramps and I-405 NB Ramps	Hard	30	40	40	35	2336	48	24	72.4	72.7
Carson St between Perry St and Wilmington Ave	Hard	30	40	40	35	1841	38	19	71.4	71.7
Carson St e/o Wilmington Ave	Hard	30	40	40	35	1596	33	16	70.7	71.0
Carson St w/o Avalon Blvd	Hard	30	40	40	35	2007	41	21	71.7	72.0
I-405 NB Ramps n/o Carson St	Hard	30	40	40	35	974	20	10	68.6	68.9
I-405 NB Ramps s/o Carson St	Hard	30	40	40	35	157	3	2	60.7	61.0
I-405 SB Ramps n/o Carson St	Hard	30	40	40	35	7	0	0	47.0	47.3
I-405 SB Ramps s/o Carson St	Hard	30	40	40	35	1031	21	11	68.8	69.1
Perry St between Project Driveway and Carson St	Hard	30	25	25	25	288	6	3	58.7	59.0
Perry St n/o Project Driveway	Hard	30	25	25	25	253	5	3	58.1	58.4
Wilmington Ave n/o Carson St	Hard	30	40	40	35	1636	34	17	70.8	71.1
Wilmington Ave s/o Carson St	Hard	30	40	40	35	1065	22	11	69.0	69.3

TRAFFIC NOISE ANALYSIS TOOL



Project Name: 21611 Perry Street
Analysis Scenario: Future
Source of Traffic Volumes: Fehr Peers

Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Avalon Blvd n/o Carson St	Hard	30	35	35	30	3046	63	31	72.0	72.3
Avalon Blvd s/o Carson St	Hard	30	35	35	30	2655	55	27	71.4	71.7
Carson St between Avalon Blvd and I-405 SB Ramps	Hard	30	40	40	35	2871	59	30	73.3	73.6
Carson St between I-405 NB Ramps and Perry St	Hard	30	40	40	35	2219	46	23	72.2	72.5
Carson St between I-405 SB Ramps and I-405 NB Ramps	Hard	30	40	40	35	2659	55	27	73.0	73.3
Carson St between Perry St and Wilmington Ave	Hard	30	40	40	35	2101	43	22	71.9	72.2
Carson St e/o Wilmington Ave	Hard	30	40	40	35	1854	38	19	71.4	71.7
Carson St w/o Avalon Blvd	Hard	30	40	40	35	2434	50	25	72.6	72.9
I-405 NB Ramps n/o Carson St	Hard	30	40	40	35	1027	21	11	68.8	69.1
I-405 NB Ramps s/o Carson St	Hard	30	40	40	35	160	3	2	60.8	61.1
I-405 SB Ramps n/o Carson St	Hard	30	40	40	35	7	0	0	47.1	47.4
I-405 SB Ramps s/o Carson St	Hard	30	40	40	35	1082	22	11	69.0	69.3
Perry St between Project Driveway and Carson St	Hard	30	25	25	25	256	5	3	58.2	58.5
Perry St n/o Project Driveway	Hard	30	25	25	25	251	5	3	58.1	58.4
Wilmington Ave n/o Carson St	Hard	30	40	40	35	1664	34	17	70.9	71.2
Wilmington Ave s/o Carson St	Hard	30	40	40	35	1085	22	11	69.1	69.4

TRAFFIC NOISE ANALYSIS TOOL



Project Name: 21611 Perry Street
Analysis Scenario: Future+Project
Source of Traffic Volumes: Fehr Peers

Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
			Auto	MT	HT	Auto	MT	HT		
Avalon Blvd n/o Carson St	Hard	30	35	35	30	3048	63	31	72.0	72.3
Avalon Blvd s/o Carson St	Hard	30	35	35	30	2657	55	27	71.4	71.7
Carson St between Avalon Blvd and I-405 SB Ramps	Hard	30	40	40	35	2881	59	30	73.3	73.6
Carson St between I-405 NB Ramps and Perry St	Hard	30	40	40	35	2247	46	23	72.2	72.5
Carson St between I-405 SB Ramps and I-405 NB Ramps	Hard	30	40	40	35	2678	55	28	73.0	73.3
Carson St between Perry St and Wilmington Ave	Hard	30	40	40	35	2111	44	22	71.9	72.2
Carson St e/o Wilmington Ave	Hard	30	40	40	35	1858	38	19	71.4	71.7
Carson St w/o Avalon Blvd	Hard	30	40	40	35	2438	50	25	72.6	72.9
I-405 NB Ramps n/o Carson St	Hard	30	40	40	35	1035	21	11	68.9	69.2
I-405 NB Ramps s/o Carson St	Hard	30	40	40	35	160	3	2	60.8	61.1
I-405 SB Ramps n/o Carson St	Hard	30	40	40	35	7	0	0	47.1	47.4
I-405 SB Ramps s/o Carson St	Hard	30	40	40	35	1091	22	11	69.1	69.4
Perry St between Project Driveway and Carson St	Hard	30	25	25	25	293	6	3	58.7	59.0
Perry St n/o Project Driveway	Hard	30	25	25	25	258	5	3	58.2	58.5
Wilmington Ave n/o Carson St	Hard	30	40	40	35	1669	34	17	70.9	71.2
Wilmington Ave s/o Carson St	Hard	30	40	40	35	1089	22	11	69.1	69.4